

**FUNDAMENTAL STUDY OF KĀYIKA VIHĀRA VAIṢAMYA
AND ITS OBSERVATIONAL STUDY IN GIT
(GASTRO INTESTINAL TRACT) DISEASES**

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Under the Board of Ayurved Studies



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APRIL - 2022

CERTIFICATE

This is to certify that the thesis entitled '**Fundamental Study of Kāyika Vihāra Vaiṣamya and its Observational Study in GIT (Gastro Intestinal Tract) Diseases**' Which is being submitted herewith for the award of the degree of Vidyavachaspati (Ph.D.) in **Samhitā Siddhant** in the **Department of Āyurveda** of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by **Dr. Ranibala Motiram Nemade** under my supervision and guidance.

To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him.

Place: Pune

Date :

Signature of the Research Guide

(Dr. Sadanand P. Sardeshmukh)

DECLARATION

I hereby declare that the thesis entitled '**Fundamental Study of Kāyika Vihāra Vaiṣamya and its Observational Study in GIT (Gastro Intestinal Tract) Diseases**' completed and written by me has not previously been formed for the award of any degree or other similar title upon me of this or any other Vidyapeeth or examining body. I understand that if my Ph.D. thesis (or part of it) is found duplicate at any point of time my research degree will be withdrawn.

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LIST OF ABBRIVATIONS

Texts

च.सं.	Ch.Sa. Charak Samhita	(चरक संहिता)
सु.सं.	Su.Sa. Sushrut Samhita	(सुश्रुत संहिता)
अ.हृ.	Ah.Hru.Ashtang Hrudaya	(अष्टांगहृदय)
अ.स.	As.Sa.Ashtang Sangraha	(अष्टांगसंग्रह)
का.सं.	Ka.Sa. Kashyapa Samhita	(काश्यप संहिता)
भा.प्र.	Bh.P. Bhavaprakash	(भावप्रकाश)
यो.र.	Y.R.Yogaratanakara	(योगरत्नाकर)
भै.र.	Bh.Ra.Bhaishajya Ratnavali	(भैष्यज्यरत्नावली)
शा.सं.	Sh.Sa.Sharagdhara Samhita	(शारंगधर संहिता)

Topics

सू.स्था.	Su	Sutrasthana	(सूत्रस्थान)
नि.स्था.	Ni	Nidansthana	(निदानस्थान)
वि.स्था.	Vi	Vimansthana	(विमानस्थान)
शा.स्था.	Sha.	Sharirasthana	(शारीरस्थान)
चि.स्था.	Chi	Chikitsasthana	(चिकित्सास्थान)
उ.स्था.	U	Uttarsthana	(उत्तरस्थान)

DICRITICAL MARKS

अ	a	ग	ga
आ	ā	घ	gha
इ	i	ङ	ṅa
ई	ī	च	ca
उ	u	छ	cha
ऊ	ū	ज	ja
ए	e	झ	jha
ऐ	ai	ञ	ña
ओ	o	क्ष	kṣa
औ	au	त्र	tra
क	ka	ज्ञ	jña
ख	kha	श्र	śra
ऋ	ṛ	फ	pha
अं	ṁ	ब	ba
ट	ṭa	भ	bha
ठ	ṭha	म	m
ड	ḍa	य	ya
ढ	ḍha	र	ra
ण	ṇa	ल	la
त	ta	व	va
थ	tha	श	śa
द	da	ष	ṣa
ध	dha	स	sa
न	na	ह	ha
प	pa		

Chapter - 1
INTRODUCTION

The modern world is currently facing an epidemic of life style related diseases as a result of stress, improper diet and irregular or sedentary lifestyle.

Over 61% of all deaths in India are due to lifestyle or Non-Communicable Diseases (NCDs). The main types of NCD are Cardiovascular diseases, Cancers, Chronic respiratory diseases and Diabetes. ^[1]

The changed living habits due to increasing job requirement and competitive living are the main culprits coming in the way of golden rules of good living.

According to World Health Organization (WHO), Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity^[2]

It is described in the texts that the intake of Hīta Āhāra (beneficial diet) and Vihāra (beneficial activities) are responsible for Ārogya (health).^[3]

Āhāra and Vihāra are elaborately described in Āyurveda. Ācāryās have given equal importance to Āhāra and Vihāra; as Nidrā and Abramhacārya from Trayopstambha (three pillars of life) come under the category of Vihāra. ^[4]

According to Āyurveda, all the activities done by an individual are included in the term Vihāra. ^[5]

In order to achieve and maintain Ārogya (healthy living), it is essential to practice a healthy Vihāra (activities) like Dinacaryā (daily regimen), Rātricaryā (night regimen), Rūtucaryā (seasonal regimen), Āhāraavidhi (diet rules), Sadvṛutta (code of conduct), etc. according to principles of Āyurveda. Āyurveda emphasizes more upon preventive aspect than curative aspect to maintain the health of an individual.

Vihāra is a very broad concept. There are three types of Vihāra- Kāyika (done by Śarīra i.e. body), Vācika (related to speech) and Mānasika (related to mind).^[6] Among them Kāyika Vihāra is included in this study. Vyāyāma (exercise), Maithuna (copulation) and such other activities are included in the term Kāyika Vihāra.^[7]

Now a day's due to change in lifestyle Rātrijāgaraṇa (keeping awake at night), Divāsvāpa (daysleep), Avyāyāma (lack of exercise), Vegadhāraṇa (suppression of natural urges) mainly of Kṣudhā (hunger), Truṣṇā (thirst), Purīṣa (defecation) and Mūtra (urination) are commonly observed. All these activities fall under the category of Kāyika Vihāra. Thus these Kāyika Vihāra were taken for the observational study.

The activities which are performed by an individual can be categorized as Vidhiyukta (following the normal rules) and Vidhiviparīta (not following the rules). If the activities are done as Hīna Karma (less amount), Atikarma (excess amount) and Mithyā Karma (improper manner) then it is considered as Vidhiviparīta. This is a Vaiṣamya of the activities performed by an individual. So the meaning of the term 'Vaiṣamya' is accepted as Vidhiviparīta in the present study.^[8] Vidhiviparīta means not following the rules mentioned in Āyurveda regarding these Kāyika Vihāra in daily life.

If Rātrijāgaraṇa and Divāsvāpa are done for the longer duration (excess), it may affect the normal status of human body. In case of Vyāyāma, Avyāyāma (lack of physical exercise) or Ativyāyāma (excess exercise) can disturb healthy body constitution. Vegadhāraṇa (suppression of the natural urges) is contraindicated in Āyurveda. If it is done for a longer duration (excess), it may cause diseased condition of the body.

The term 'Hīna' can be only referred to the Vihāra- Vyāyāma and it is not related to the other three Vihāra (Rātrijāgaraṇa, Divāsvāpa and Vegdhāraṇa). Whereas the term 'Atiyoga' can be useful to describe Vaiṣamya of all Kāyika Vihārās which were undertaken for the observational study.

According to Āyurveda, improper Āhāra and Vihāra are mainly responsible for Srotoduṣṭi^[9]. There are innumerable Srotas in the body. Among them, Annavaha Srotas and Puriṣavaha Srotas together can be correlated to Gastro Intestinal Tract (GIT). The main function of Gastro Intestinal Tract is digestion and absorption of the

nutrients. According to Āyurveda Agni is the main factor in the process of digestion. Variation in Āhāra and Vihāra affects Agni. Vitiated Agni is the root cause of all the diseases.^[10]

Gastro Intestinal Tract diseases are commonly observed among all diseases. Though Gastro Intestinal Tract diseases are always directly associated with Āhāra Vaiṣamya, it is observed practically that Vihāra Vaiṣamya also plays an important role in manifestation of Gastro Intestinal Tract diseases.

Amlapitta, Grahāṇi, Atisāra, Arśa, Pravāhikā and Ajīrṇa are commonly observed GIT diseases. Thus these diseases diagnosed from the Āyurvedic perspective were taken for the observational study.

Cancer, one of the most deadly challenges spreading drastically in 21st century, has now officially become the most dangerous killer in the world according to World Health Organisation. Reserchers are trying to find out the risk factors for the Cancer.

Digestion is the prime function of GIT system. When it gets affected due to improper diet and activities, it leads to various GIT diseases right from IBS, Indigestion, and Hemorrhoids to GIT Malignancies. Therefore GIT Cancers were selected for the present study.

Cancer is Anukta (not stated directly) Vyādhī according to Āyurveda but it can be correlated to DuṣṭaVraṇa, Duṣṭa Arbuda, Duṣṭa Granthī, Gulma, Śoṭha, Visarpa etc. In Āyurvedic Samhitās the Vihāraja Hetu (causative factor) which are mentioned in these diseases are Divāsvāpa, Rātrijāgarāṇa, Ativyāyāma, Avyāyāma, Vegadhāraṇa, etc.

Taking into consideration above facts, the study was focused to find out the association of these Kāyika Vihāra Vaiṣamya and manifestation of GIT diseases namely Amlapitta, Grahāṇi, Atisāra, Arśa, Pravāhikā, Ajīrṇa and GIT malignancies.

Need of Study-

Among Life style disorders, Cancer is the second leading cause of death globally.

Cancer Statistics in India -

1. Estimated number of people living with the disease: around 2.25 million
2. Every year, new Cancer participants registered: Over 11, 57,294 lakh
3. Cancer-related deaths: 7, 84,821 (Male-413519, Female-371302)
4. Risk of developing Cancer before the age of 75 years is (Male: 9.81%, Female: 9.42%)
5. Risk of dying from Cancer before the age of 75 years is (Male: 7.34% Female: 6.28%).^[11]

The absolute number of Cancer deaths in India is projected to increase because of population growth, urbanization, industrialization, lifestyle changes and increasing life expectancy. The digestive tract is a major site of Cancer in humans. There are great differences in incidence among the component sites from the esophagus to the anus. The most prevalent of these is Colorectal Cancer in the Western world and Gastric Cancer in the Eastern world. About 630,000 deaths occur due to Colorectal Cancer worldwide, accounting for 8% of all Cancer deaths. Gastric Cancer accounts for approximately 800,000 deaths each year worldwide. In India, Esophageal Cancer is highest in northeastern region of India than other parts of the world for both males and females. Gastric Cancer is also prominent problem in northeastern and southern states of the Indian subcontinent. Comparison of the data from the various urban population-based Cancer registries in India indicates that Gallbladder Cancer is more common in northern India whereas Rectal Cancer among men is one among the ten leading sites of Cancer in the southern India. Higher rates of Liver Cancer are seen in the male urban populations of western and northern India. However, the prevalence of Pancreatic Cancer is low in India and squamous cell carcinoma of the anal canal is an under recognized malignancy in India.^[12]

Modern science has explained the risk factors in Cancer. They are more related to diet, addictions, infections, etc. Lack of physical activity is said to be the risk factor for many Cancers.

According to Āyurveda, Vidhiviparīta Āhāra as well as Vihāra are responsible factors to vitiate Doṣa which is the cause of all diseases. All the activities of an individual have effect on body and mind. This is the unique theory laid down by Āyurveda.

These Cancers can be prevented at an early stage. For the prevention of Cancer, lifestyle intervention is important. According to modern researcher's healthy diet, avoiding addictions and being physically active can reduce the risk of Cancer.

All types of GIT diseases hamper food intake and digestion which leads to emaciation, debility and consequently quality of life of the patients.

Āyurveda is the only science which has explained importance of Dinacaryā (daily regimen), Rutucaryā (seasonal regimen), Sadvṛutta (ethical code of conduct) etc. to prevent the diseases. Also Nidāna Parīvarjana (avoiding the cause) is the main method of keeping one self-free from diseases. This helps individuals to take care of diet and lifestyle. In the present study, effort was made to explore the relationship between Kāyika Vihāra Vaiṣamya and GIT diseases, which will ultimately help to create a sense of awareness about Kāyika Vihāra in today's generation and promote Ayurvedic principles of healing in the society.

Scope of the Study (Probable Benefits)

1. The information about the Vihāra may be important to prevent the Gastrointestinal Tract diseases described in Āyurveda and GIT Malignancies.
2. It may be beneficial for the society for awareness regarding risk factors of GIT Cancers.
3. It may also help the healthy person to continue following appropriate behavioral pattern (Vihāra) to maintain health.

Research Question :

Whether Kāyika Vihāra Vaiṣamya is responsible for Gastrointestinal Tract diseases.

Null Hypothesis :

There is no significant association between Kāyika Vihāra Vaiṣamya and GIT Diseases.

Alternative Hypothesis :

There is significant association between Kāyika Vihāra Vaiṣamya and GIT Diseases.

Concept Note : Vihāra is a very vast concept in Āyurveda. According to Hemadrī, all the activities done by an individual are included in the term Vihāra. Vihāra is of three types namely Kāyika, Vācika and Mānasika. The meaning of the Kāya is Śarīra. The activities performed by body are considered under the term Kāyika Vihāra which include Divāsvāpa (day sleep), Rātrijāgarāṇa (keeping awake at night), Vegadhāraṇa (suppression of the natural urges), Vyāyāma etc.

Dictionary meaning of the term Vaiṣamya is Viṣamatā (irregularity, difference, deviated from normal). For the present study the meaning of the word Vaiṣamya is considered as deviated from normal. In Āyurveda, rules regarding diet, exercise, intake of water, etc. are described elaborately. These rules are known as ‘Vidhi’. When an individual fails to follow these rules given in the Āyurvedic Classics, it is stated as Vidhiviparīta. The meaning of the term Vaiṣamya is considered as Vidhiviparīta (in excess, in less or in improper manner) for the present study. In context to present study the term Kāyika Vihāra Vaiṣamya can be applied in the following manner.

The term Atikarma (excess) can be applied to – Rātrijāgarāṇa, Divāsvāpa, Vyāyāma and Vegadhāraṇa.

The term Hīnakarma (less) can be applied to Vyāyāma only.

In the present era many people are habitual to follow a combination of two or more Vidhiviparīta Vihāra, for example Rātrijāgarāṇa and working on computer in Air Condition. Such conditions are also labeled as Vaiṣamya (improper manner).

Due to fast life a person is modifying his life style which is affecting his health. An association between Āhāra Vaiṣamya (food) and GIT diseases is well documented whereas Vihāra (physical activities) also plays an important role in manifestation of GIT diseases. Present study was mainly aimed at focusing the role of Kāyika Vihāra Vaiṣamya in GIT diseases.

Cancer is a very fast growing disease worldwide. Cancer is not directly mentioned in Āyurveda. The diseases correlated with Cancer in Āyurvedic texts are Duṣṭa Vraṇa, Duṣṭa Arbuda, Duṣṭa Granthī, Gulma, Śoṭha, Visarpa, etc. The Vihāra risk factors

which were considered for the present study, are stated as Hetu (cause) of above mentioned diseases.

Vihāra is a unique concept of Āyurveda. A tailor made questionnaire was prepared to find out the Vaiṣamya of these Kāyika Vihāras which may be responsible for producing GIT diseases from Āyurvedic point of view and GIT Cancers. The study was focused on observing the intensity of these Vihārā Vaiṣamya in terms of Kāla (years), Mātrā (time in minutes) and Vāranvāratā (frequency per week) which may be responsible for GIT diseases from Ayurvedic perspective and GIT Cancers.

Aim :

To study the fundamental concept of Kāyika Vihāra Vaiṣamya and its observational study in Gastro Intestinal Tract diseases.

Objectives :

1. To study the concept of Kāyika Vihāra Vaiṣamya from Bṛuhatrayī.
2. To study Kāyika Vihāra Vaiṣamya with special reference to Divāsvāpa, Rātrijāgaraṇa, Vyayāma, Vegadhāraṇa- Kṣudhā, Tṛṣṇā, Purīṣa and Mūtra.
3. To observe and study the significance of Kāyika Vihāra Vaiṣamya in Gastro Intestinal Tract Diseases.

REVIEW OF PREVIOUS WORK DONE

1. Vihāra Chikitsa through Yoga Procedures - by B.V. Sathye-1983- University Of Pune.
2. Joshi Rakhi D. - Study the effect of Matraja Aahara-Vihāra on the foetal development of foetus w.s.r. to Shada-Bhava Samudaya-2002- R.K.Toshaniwal Ayurveda Mahavidyalaya Amravati University.
3. Deshpande Pragya R. - Effect of Matruja Aahara-Vihāra on the foetal development of fetus w.s.r. to Dauhrdavashtha-2003- R.K.Toshaniwal Ayurveda Mahavidyalaya Amravati University.
4. Nemade Ranibala M. - Study of Vihāra Sankalpana in Aśtāṅga Hṛdaya w.s.r. to Mithya- Vihāra-2003- B.V.College of Ayurveda.
5. Shah (ms) B .B. – A study of the concept of Vegavarodha with particular reference to its impact on gastrointestinal tract and assessment of the management principles.L-1925.-Jamnagar.
6. Tewari S.K. – Comparative studies on gastro-duodenal diseases (Amlapitta and Parinama Shoola) in Ayurveda and modern medicine with therapeutic evaluation of Bhringaraja in peptic ulcer and non ulcer dyspepsia.

Modern Research-Pubmed (www.ncbi.nlm.nih.gov/pubmed)

1. Sleep duration-Chen Y, Tan F, Wei L, Li X, Lyu Z, Feng X, Wen Y, Guo L, He J, Dai M, Li N. BMC Cancer. 2018 Nov 21; 18(1):1149. doi: 10.1186/s12885-018-5025y, PMID:30463535,PMCID:**PMC6249821**
Conclusion-Categorical meta-analysis indicated that short sleep duration increased cancer risk in Asians and long sleep duration increased the risk of colorectal cancer, but these findings were not consistent in the dose-response meta-analysis. Long-term randomized controlled trials and well-designed prospective studies are needed to establish causality and to elucidate the mechanism underlying the association between sleep duration and cancer risk.
2. Schmid D, Leitzmann MF. J Natl, Television viewing and time spent sedentary in relation to cancer risk: a meta-analysis, **Cancer** Inst. 2014 Jun 16;106(7). pii: dju098. doi: 10.1093/jnci/dju098. Print 2014 Jul. PMID:24935969

Conclusion-Prolonged TV viewing and time spent in other sedentary pursuits is associated with increased risks of certain types of cancer.

3. Shen D, Mao W, Liu T, Lin Q, Lu X, Wang Q, Lin F, Ekelund U, Wijndaele K., Sedentary behavior and incident cancer: a meta-analysis of prospective studies, PLoS One. 2014 Aug 25; 9(8):e105709. doi: 10.1371/journal.pone.0105709, eCollection 2014, PMID,25153314.

Conclusion-The present meta-analysis suggested that prolonged sedentary behavior was independently associated with an increased risk of incident endometrial, colorectal, breast, and lung cancers, but not with ovarian cancer, renal cell carcinoma or non-Hodgkin lymphoid neoplasms.

4. VR Gajamer, Tiwari HK, Prevalence of gastrointestinal disease and its associated risk factors in Sikkim and Darjeeling Districts. J Community Health. 2014 Aug;39(4):767-74. doi: 10.1007/s10900-014-9826-x PMID:24488671

Conclusion-The various associated risk factors for gastrointestinal disease which was observed during the study were frequency of diet, diet type, consumption of spicy food, fermented food, smoking, consumption of alcohol, consumption of fruits available in market and an inappropriate sanitary condition.

Knowlwdgw Gap - All these references show that the topic Vihāra has been studied by Samhitā, Śārīra Rachana, Kāyachikitsa etc. departments separately. But the conceptual study of Kayika Vihāra Vaishamya and its significance in GIT diseases has not been done so far. So the topic is selected for the study.

Chapter-2

LITERATURE REVIEW

1. Concept of Kāyika Vihāra Vaiṣamya

a) Concept of Vihāra :

The concept of Vihāra is explained thoroughly in Āyurveda. In Aṣṭāṅga Saṃgraha and Aṣṭāṅga Hṛudaya, Ācārya Vāgbhata has given more emphasis on Vihāra. He has explained Dinacaryā, Rutucaryā Adhyāya (Niyatakālika Vihāra), Rogonutpādaniya Adhyāya (Aniyatakālika Vihāra-Vegadhāraṇa, Udīraṇa, etc) firstly and later on about Āhāra (diet). In Caraka Samhitā these Adhyāyās are explained in Svāsthya Catuṣka. This shows the importance of Vihāra in maintaining health.

Vihāra plays an important role as Hetu (cause) as well as it has significant role as Cikītsā (treatment) in many diseases. Therefore it is necessary to know the concept of Vihāra, its types and its different aspects in Svasthavṛutta, Nidāna and Cikītsā. Present study mainly focuses on Nidāna (reason) aspect of Vihāra.

Kāyika Vihāra Vaiṣamya is a key factor of the present study. Hence it is important to know these concepts from Āyurvedic Literature.

Meaning of the word Vihāra :

There are different meanings of Vihāra in different texts. Some of them are as follows-

1. Vachaspatyam- विहार (पु) वि+ह + घञ् । ऋडार्थ पादाभ्यां-१.गमने भ्रमरः २.भ्रमणे ३.स्कन्धे ४.लीलायां ५.बौद्धदेवालये मेदि. ^[13]

2. Amarkosha- विहारस्तु परिक्रमः ॥१६॥ पैर से चलने के २ नाम-विहार २.परिक्रम.

विहारः (पु.) (वि+ह+ घञ्) ऋडार्थ पद्भ्यां गमनम् । तत्पर्यायः । परिक्रमः । इत्यमरः ॥ ^[14]

3. Geervanlaghukosha-

विहारः- हिंडणे, सहल ; ऋडा २.६.४८;गी११.४२ ; हातवारे, अंगविक्षेप कि ४.१५ ; बौद्धांचे देऊळ किंवा मठ मा.१. ^[15]

4. आयुर्वेदीय-शब्दकोश:-

विहार-पु.,(परिव.) कायविहारश्चतुर्विधः-गमनचङ्क्रमणस्थानासनभेदेन (ड.सु.चि.२९.१०) ^[16]

5. A Sanskrit English Dictionary by Monier Williams-

Vihāra- walking for pleasure amusement, wandering, roaming, sport play, pastime, enjoyment, pleasure, water for sporting or playing about it. ^[17]

All these dictionary meanings show that the literary meaning of the term Vihāra is wandering on feet and it is extended to any physical activity done by an individual.

Defination of Vihāra :

चरक संहिता-

विहारः अङ्गक्षेपणादिका चेष्टा । च.चि.१५/२३९ चक्रपाणि

सुश्रुत संहिता-

१. विहारः कायवाङ्मनोव्यापारः । सु.नि.१/४० डल्हण

२. गमनस्थानासनशयनानि हि सर्वेषामेव विहारः । सु.नि.६/२५ न्यायचंद्रीका

अष्टांगसंग्रह-

विहारश्चङ्क्रमणादिः । अ.स.सू.२७/३९

अष्टांगहृदय-

१. क्रियाप्रधानो हि विहारः । अ.ह.सू.२/१९ हेमाद्रि

२. विहरणं – विहारो-वाङ्गमनश्चेष्टालक्षणोऽनेकप्रकारः । अ.ह.शा.३/७८ अरुणदत्त

३. विहारो-वाङ्देहमनोनिर्वर्तितश्चेष्टविशेषो व्यायामव्यवायजागरणाध्ययनगीतभाषणध्यानधारणादिरूपः । अ.ह.नि.१/६ अरुणदत्त

४. चेष्टयत इति चेष्टा-कायवाङ्मनोव्यापारो,विहार इत्यर्थः । अ.ह.नि.२/७४

These definitions show that different types of activities done by Śarīra (body), Mana (mind) and Vācā (speech) are included in the term Vihāra. Krīyā, Ceṣatā, Ācāra are the different terms used for Vihāra.

Types of Vihāra :

A. Ācārya Hemādri has explained two types of Vihāra-

विहारो द्वेधा-नियतकालोऽनियतकालश्च । नियतकालो द्वेधा-दैर्घ्येन आर्तवश्च । अ.ह.सू.२ गद्यसूत्र २ हेमाद्रि.

इहानियतकालः । स च पञ्चधा,—वेगधारणं, वेगोदीरणं, शोधनं, बृहणं, भूताद्यस्पर्शनं चेति । अ.ह.सू.४ गद्यसूत्र२ हेमाद्रि.

- i. **Niyatakālika Vihāra** - includes Dinacaryā (daily regimen) and Rutucaryā (seasonal regimen).
- ii. **Aniyatakālika Vihāra** - consists of Vegadhāraṇa (suppression of natural urges), Vegodīraṇa (forcible execution of the natural urges), Śodhana (purification therapy), Bṛuḥaṇa (nourishing therapy) and Bhutādhyasparśana (abstinence from Bhūtās).

B. There are three types of Vihāra-Kāyika, Vācika and Mānasika.

चरक संहिता—

१. मनोवाक्कायकर्मणामित्यतरकर्मशब्दोव्यापारवचनः ॥ च.सू.७/२६
२. कर्मणः कायवाङ्मनःप्रवृत्तेः । च.सू.११/३७

सुश्रुत संहिता—

१. कायवाङ्गमनसां भेदाद्विहारत्रिविधो मतः । सु.नि.१/१ डल्हण
२. कायवाङ्मनसां भेदाद्विहारस्त्रिविधो मतः । सु.सू.नि.१/२ गयदास
३. आचारः कायवाङ्मनोभेदेन त्रिविधो विहारः । सु.नि.५/३ न्यायचंद्रीका
४. आचारः कायवाङ्मनोभेदेन त्रिविधो विहारः । सु.सू.नि.५/३ गयदास
५. तत्र विहारो बहुविधोऽपि त्रिविध एव, कायवाङ्मनोभेदात् । सु.चि.३३/१० डल्हण
६. क्रियाणां कायवाङ्मानसीनाम् । सु.नि.१/१० डल्हण

अष्टांगसंग्रह—

कायवाङ्मनसां क्रिया कर्म । अ.स.सू.१/३० इंदु

अष्टांगहृदय—

१. क्रिया—देहवाङ्मनोव्यापारः । तत्र धावनप्लवनाद्यनेकरूपोव्यायामो नृत्यस्थानकादिः—कायिको व्यापारः । गीताध्ययनादि वाचिको व्यापारः । रागद्वेषभयेर्ष्यादि मानसः । अ.ह.शा.५/४ अरुणदत्त
२. विहारो—वाग्देहमनोनिर्वर्तितश्चेष्टाविशेषो व्यायामव्यवायजागरणाध्ययनगीतभाषणध्यानधारणादिरूपः । अ.ह.नि.१/६ अरुणदत्त

- I. Kāyika Vihāra consists of – Dhāvana (running), Plavana (swimming), Vyāyāma (exercise), Nṛutya (dance), Sthāna (standing position) etc.

- II. Vācika Vihāra - includes Gīta (singing), Adhyayana (learning, speaking) etc.
- III. Mānasika Vihāra - includes Rāga (attachment in subjects), Bhaya (fear), Dveṣa (hatred), Īrṣa (jealousy) etc.

This shows the extensiveness of the term Vihāra. Therefore only Kāyika Vihāra is included in the present study.

b) Concept of Kāyika Vihāra :

Meaning of the word Kayika :

१. गीर्वाणलघुकोश-

काय- देह गी.५.११

काय(यि)क-शारीरिक म.१२.८ (स्त्री..यिका) ^[18]

२. आयुर्वेदीय-शब्दकोश:-

काय-पु.,शरीरम् (अ.ह.१.१) ^[19]

३. संहिता-

सुश्रुत संहिता-

१. चेष्टा कायव्यापार इति । सु.सू.२/३ चक्रपाणिदत्त

२. कायो देहः । सु.सू.१/७ डल्हण

३. चेष्टा कायपरिस्पन्दः । सु.सू.२/३

४. चेष्टा गमनादिकाः । सु.नि.१/३८

अष्टांगहृदय-

१. कायः शरीरम् । अ.ह.सू.१/२० अरुणदत्त

२. तत्र कायशब्देन सर्वावस्थं सर्वावयवं च शरीरं गृह्यते । अ.ह.सू. १/५ हेमाद्रि

There are different meanings of the word Kāya. From above references the literary meaning of the word Kāya is Deha/Śarīra (body). The different activities done by Śarīra fall under the term KāyikaVihāra.

Śarīraka, Kāyavyāpāra, Ceṣṭa etc. are the different terms used as synonyms for the word Kāyika.

KāyikaVihāra-**चरक संहिता-**

१. कायनिरोधो वेगानां निरोध... । च.चि.१७/६३ चक्रपाणि

२. हर्षम् उत्साहं कायिकम् । च.चि.२४/६१ चक्रपाणि

सुश्रुत संहिता-

१. कायिकं कर्म गमनव्यवायनृत्यादि.... । सु.सू.१/२५ चक्रपाणिदत्त

२. आचारः कायवाङ्मानसं कर्म; तत्रोत्क्षेपणावक्षेपणादिकं कायिकं कर्म पाठस्वाध्यायादि वाचिकं, ध्येयचिन्त्यसङ्कल्पादि मानसम् । सु.सू.१/२७ डल्हण

३. स्थानासनं चङ्क्रमणं दिवास्वप्नं तथैव च । सु.सू.१९/१२

चतुर्विधानपि व्रणिनः कायचेष्टां नियमयन्नाह- स्थानासनमित्यादि। स्थानम् उर्ध्वीभूतस्य स्थितिः आसनम् उपविष्टस्य स्थितिः । सु.सू.१९/१२ डल्हण

४. व्यायाममैथुने कायकर्मणी, कोपो मानसं कर्म । सु.चि.५/१७ डल्हण

५. तत्र कायविहारश्चतुर्विधो गमनचङ्क्रमणस्थानासनभेदेन । सु.चि.२९/१०-१२ डल्हण

अष्टांगसंग्रह-

१. तत्र हिंसा चौर्यगगम्यागमनं कायिकम् । अ.स.सू.

२. कायस्य मलाः मूत्रशकृत्स्वेदादयः । अ.स.१/१९ इंदु

अष्टांगहृदय-

१. हिंसा-प्राण्युपघातः स्तेयं-चौर्यम् अन्यथाकामो-निषिद्धकामसेवा पशुस्त्रीगुरुदारगमनादि एतन्निविधं कायिकं पाप कर्म । अ.ह.सू. २/ अरुणदत्त

२. तत्र धावनप्लवनाद्यनेकरूपोव्यायामो नृत्यस्थानकादिः-कायिको व्यापारः । अ.ह.शा.५/४ अरुणदत्त

KāyikaVihāra includes following Śarīra activities-

1. Utkṣepaṇa (upward movement)
2. Apakṣepaṇa (downward movement)
3. Sthāna (standing position)
4. Āsana (sitting position)
5. Cankramaṇa (walking)
6. Divāsvāpa (day sleep)
7. Vyāyāma (exercise)
8. Maithuna (copulation)

9. Gamana (movement, walk)
10. Dhāvana (running)
11. Plavana (swimming)
12. Nṛutya (dance)
13. Vegadhāraṇa (suppression of natural urges) etc.

Among these Kāyika Vihārās the present study includes Divāsvāpa, Rātrijāgarāṇa, Vyāyāma and Vegadhāraṇa mainly - Kṣudhā, Tṛṣṇā, Puriṣa and Mūtra. Rātrijāgarāṇa is just opposite phenomenon of Divāsvāpa and included in the category of Akālanidrā.

c) Concept of Vaiṣamya :

Meaning of the word Vaishamya-

१. गीर्वाण लघुकोश-

वैषम्यं-भिन्नपणा, विषमपणा [20]

२. आयुर्वेदीय-शब्दकोश:-

वैषम्य-वि. विषमस्य भावः, विषमता (च.सू.१७.५४)

गमन-वि., विषमावस्थाप्राप्तिः, वृद्धिर्हासगमनमिह वैषम्यं ज्ञेयम् (ड.च.शा.६.४) [21]

३. संहिता-

चरक संहिता-

१. वैषम्यं व्यवहियमाणस्वास्थ्यहेतोः स्वमानान्न्यूनत्वमधिकत्वं वा । च.सू.९/४ चक्रपाणि.

२. वैषम्यगमनं हि पुनर्धातूनां वृद्धिर्हासगमनकात्स्न्येन प्रकृत्या च । च.शा.६/४

वैषम्यगमनं वैषम्यावस्थाप्राप्तिः,.....। वृद्धिर्हासगमनं चेह व्यस्तं समस्तं च वैषम्यं ज्ञेयम् । च.शा.६/४ चक्रपाणि.

सुश्रुत संहिता-

१. वैषम्यम् अन्यथोपयोगः । सु.सू.४६/३ डल्हण

२. तच्च वैषम्यं क्षयेण वृद्ध्या वा । सु.सू.१/२४ (२) डल्हण

अष्टांगसंग्रह-

वैषम्यं स्वरूपात् वृद्धिः क्षयो वा । अ.स.सू.१९/३३ इंदु

अष्टांगहृदय-

१. वैषम्यं च वृद्धिरेव, क्षीणानामीदृक्कार्यादर्शनात् । १/८ हेमाद्रि
२. वैषम्यं स्वप्रमाणादेकस्य द्वयोस्त्रयाणां वा वृद्धिः क्षयो वा... । वैषम्यं विषमता स्वरूपाच्च्यावः । १/१९ अरुणदत्त
३. अथावस्था । सा च द्वेधा, -साम्यं वैषम्यं च । वैषम्यं द्वेधा, -क्षयो वृद्धिश्च । अ.ह.सू.१२/१९ अरुणदत्त
४. वैषम्यं विषमता स्वरूपाच्च्यावः । अ.ह.सू.१/२० अरुणदत्त

There are different meanings of the term Vaiṣamya. But for the present study the meaning of the term Vaiṣamya is considered as विषम deviated from normal way i.e. in excess or less than normal or improper manner.

d) Concept of Kāyika Vihāra Vaiṣamya**चरक संहिता-**

कर्म वाङ्मनःशरीरप्रवृत्तिः । तत्र वाङ्मनःशरीरातिप्रवृत्तिरतियोगः; सर्वशोऽप्रवृत्तिरयोगः; वेगधारणोदीरणविषमस्खलनपतनाङ्गप्रणिधानङ्गप्रदूषणप्रहारमर्दनप्राणोपरोधसंक्लेशनादिः शारीरो मिथ्यायोगः सूचकानृताकालकलहाप्रियाबध्दानुपचारपरुषवचनादिर्वाङ्मिथ्यायोगः, भयशोकक्रोधलोभमोहमानेर्ष्यामिथ्यादर्शनादिर्मानसो मिथ्यायोगः ॥ च.सू.११/३९

सुश्रुत संहिता-

तेन कालवैषम्यं कायवाङ्मनोविहारवैषम्यमिन्द्रियार्थवैषम्यं च लक्षयति । सु.सू.१/२४ (२) उल्हण कर्मादीनां तु वैषम्यं त्रिविधेन मिथ्याहीनातियोगेन, कर्मादिसम्यग्योगेन पुनरेकेन दोषसाम्यं, तदेकमेव स्वास्थ्यकारणम् । कर्मादिमिथ्यादियोगेऽप्यसति सात्म्यीभावे दोषकोपः । कर्म पुनः कायवाङ्मनोभेदेन त्रिविधम् । सु.नि.१/१-२ उल्हण

मिथ्याहाराचारस्य शास्त्रोक्तविधिभ्रष्टाहाराचारस्येत्यर्थः । सु.नि.५/३ उल्हण

आचारः कायवाङ्मनोभेदेन त्रिविधो विहारः, तस्य स्वस्थवृत्तानागताबाधविधानादन्यथाकरणं मिथ्याचारः ।

ते च प्रकोपहेतवः सर्वेषामेवात्र गृह्यन्ते मिथ्याहाराचारभेदेन द्विविध्यात् । न्यायचन्द्रिका

अन्ये त्वन्यथा द्विविधं हेतुमिच्छन्ति-विप्रकृष्टं, सन्निकृष्टं चेति । तत्र विप्रकृष्टा अनन्तरोक्ता

दोषरोगोभयहेतवः; सन्निकृष्टाः पुनः कर्मेन्द्रियार्थकालैर्विषमा वातादयः । कर्मादीनां तु वैषम्यं त्रिविधेन

मिथ्याहीनातियोगेन, कर्मादिसम्यग्योगेन पुनरेकेन दोषसाम्यं, तदेकमेव स्वास्थ्यकारणम् ।

कर्मादिमिथ्यादियोगेऽप्यसति सात्म्यीभावे दोषकोपः । कर्म पुनः कायवाङ्मनोभेदेन त्रिविधम् ।..... भवन्ति

चात्र- विषमा विषमैरेव दोषा रोगस्य हेतवः । कर्मेन्द्रियार्थकालैः स्युस्ते स्वास्थाय समाः समैः ।

समयोगात् समाः स्वास्थ्ये, मिथ्याहीनतियोगतः । दोषाः स्युर्विषमा रोगे तत्र साम्यं सुखावहम् ।
कायवाङ्मानसां भेदाद्विहारस्त्रिविधो मतः ॥ सु.नि.१/१ गयदास

अष्टांगसंग्रह-

कायादिभेदेन त्रिविधं कर्म । तत्र कायवाङ्मानसां स्वेस्वे धावनभाषणचिन्तनादिके कर्मण्यतिप्रवृत्तिः
प्रज्ञापराधाख्यं कर्माऽतियोगः । एवं स्वल्पं नैव वा संयोगोऽयोगः । वेगोदीरणादिकर्म यथास्वं कायादिभेदेन
प्रज्ञापराधो मिथ्यायोगः । वेगोदीरणादिप्राणायामान्तं क्षुदादिभाणान्तं भयाद्यकुशलान्तं यथासंख्येन
कायवाङ्मानसां मिथ्यायोग इति यथास्वशब्दार्थः । अ.स.सू.२२/१४ इंदु

अष्टांगहृदय-

कायादिकर्मणो हीनप्रवृत्तिर्हीनयोगः । वेगोदीरणादिकं सामिभुक्तभाषणादिकं रागद्वेषादिकं च यथास्वमुत्तरत्र
(सू.अ.१२/४०) वक्ष्यमाणं मिथ्यायोगः । अतिप्रवृत्तिरतियोगः । अ.ह.सू.१/१९ अरुणदत्त.
कायिकवाचिकमानसिकभेदात्कर्म त्रिधा । ... अल्पा चेष्टा कर्मणां हीनयोगः, अनुचितो
मिथ्यायोगः, अधिकोऽतियोगः । अ.ह.सू.१/१९ हेमाद्रि.

Karma or Kriya is the another word used for Vihāra. Kāyika Vihāra Vaiṣamya includes
Atimātrā karma (in excess amount), Hīnamātrā karma (less quantity) and Mithyākarma
(inappropriate manner)

In Āyurveda Vidhi (rules) of Āhāra (diet), Jalapāna (water intake), Vyāyāma (exercise)
etc. are explained. If these Vidhis are not followed, done in excess or less or in improper
way, it is Vidhiviparīta. So the meaning of the term Vaiṣamya is taken as Vidhiviparīta
for the present study.

Kāyika Vihārās which were taken for the present study were-

1. Divāsvāpa (day sleep)
2. Rātrijāgaraṇa (keeping awake at night)
3. Vyāyāma (exercise)
4. Vegadhāraṇa (suppression of the natural urges) - Kṣudhā (hunger) Truṣṇa (thirst)
Purīṣa (bowel movement) and Mūtra (urination).

In Dinacaryā, Vyāyāma is included as a daily activity. Vidhi of Vyāyāma is explained
elaborately in Āyurveda. In case of Vyāyāma the term Vaiṣamya can be studied as
Atimātrā karma (excess quantity), Hīnamātrā karma (less quantity) and Mithyākarma
(improper manner).

It is clearly mentioned in Āyurveda that for maintaining Svāsthya it is necessary to avoid Divāsvāpa, Rātrijāgaraṇa and Vegadhāraṇa. The term Vaiṣamya is applied to these Kāyika Vihārās as Atimātra karma (excess quantity) and Mithyākarma (improper manner).

The meaning of the term Vaiṣamya is Vidhiviparīta. Thus it is important to know the Granthokta meaning of the term Vidhi from Classical Āyurvedic Texts.

e) Concept of Vidhi (Rules) :

Āyurveda is a science of life and it has established the Vidhis of Āhāra and Vihāra to maintain and promote the health. These Vidhis are based on Sāmānya and Viśeṣa Siddhānta which are proved by Pramānās.

Ācārya Hemādri has given the meaning of the term Vidhi as-

१. विधिः-शास्त्रोक्तो नियमः,....। अ.ह.सू.८/५५ हेमाद्रि

२. तन्त्रोक्तं विधिमिति अपथ्यपरिहारपथ्योपादानरूपम् । च.सू.१/२९ चक्रपाणि

Vidhi is to follow the rules given in the Śāstra. The things which should be avoided i.e. Apathya and the things which should be accepted and adopted i.e. Pathya for healthy and long life of a well-being is given in the Āyurveda Samhitās.

In Āyurveda, rules for taking Āhāra are described elaborately. Similarly in Dinacaryā, Rūṭucaryā, and Rogonutpādaniya Adhyāya and in Sadvṛutta rules regarding Vihāra are explained. Madhyānacaryā (afternoon regimen) and Rātricaryā (night regimen) are mentioned in Aṣṭāṅga Saṃgraha.

In today's fast age, people are modifying themselves by changing their life style at the cost of their health. Āyurveda has solutions on life style disorders in a preventive manner. Following the Vidhis of Āhāra and Vihāra are one of them and are very essential to maintain the healthy state of a person.

Need of present era is to create awareness among people, related to these things, for gaining and maintaining own health.

The present study deals with the Kāyika Vihāra Divāsvāpa and Rātrijagarana.

रात्रौ जागरणं दिवसे च स्वप्नः स्वप्नविपर्ययः । सु.सू.४६/५००-५०१ डल्हण

रात्रिजागरणं दिवास्वप्नश्च विषमशयनं । सु.सू.१९/२० डल्हण

Divāsvāpa and Rātrijagarana are Viṣamaśayana. So it is important to know the Vidhi of Nidrā

f) Vidhi of Nidrā :

Vidhi of Nidrā is described in detail in Āyurveda. The important points which are related to present study are discussed here.

Defination of Nidrā

यदा तु मनसि क्लान्ते कर्मात्मानः क्लमान्विता ।

विषयेभ्यो निवर्तन्ते तदा स्वपिति मानवः ॥ च.सू.२१/३५

According to Caraka, the individual sleeps when the Mana gets exhausted and Indriya fail to perceive their respective subjects.

Nidrā is a state of mind in which mind is not connected with the sense organs. Like proper diet, proper sleeping time is also essential for the maintenance of health.

Considering this, sleeping during day time (Divāswāpa), awaking at night (Rātri Jāgraṇa) and excessive sleep during day and night (Atinidrā) become a cause for diseases. Hence, proper ‘Time’ is important factor for sleep.

a) What is the normal time to sleep?

१. न सन्ध्यास्वभ्यवहाराध्ययनस्त्रीस्वप्नसेवी स्यात् । च.सू.९/२५

२. निद्रां रात्रौ सेवेत, न दिवा । अ.ह.सू.७/६५ हेमाद्रि

३. एतानि पञ्च कर्माणि सन्ध्यायां वर्जयेद् बुधः । आहारं मैथुनं निद्रा संपाठं गतिमध्वनि ॥

भोजनाज्जायते व्याधिमैथुनाद्भवेकृतिः । निद्रया निःस्वता पाठादायुर्हानिर्गतेर्भयम् ॥

भा.प्र.प्रथमखण्ड ५/२७५

४. प्रभाते मैथुनं निद्रा सद्यःप्राणहराणि षट् ॥ निघण्टरत्नाकर रात्रिचर्या पान क्र.३२२

According to Āyurveda Rātra (night) is the normal time of sleep because in Sandhyakāla (evening hour) and Prabhāta Kāla (the time of day break) Nidrā is prohibited.

b) How much a person should sleep?

रात्रावपि यथाकालं-प्रवृत्तिकालानतिक्रमेण, यस्य यस्मिन् रात्रिविभागे निद्रा प्रवर्तते स तस्मिन्नेव सेवेतेत्यर्थः। सात्त्विकतः-यामद्वयामत्रयादिसात्त्व्यानुरोधेन । अ.ह.सू.७/६५ हेमाद्रि

According to Deśa, Kāla and Sātmya person should sleep for the period of two Yāma or three Yāma i.e. 6 to 9 hrs.

c) What are the ideal timings of waking up, Bhojana (lunch), Sāyam Bhojana (dinner) and Nidrā (sleep)?

Dinacaryā is the Āyurvedic term used for a daily regimen. Dinacaryā begins with time for waking up in early morning and ends with time for sleeping at night. Waking up timing in the morning is clearly indicated in Dinacaryā whereas timings of night sleep is undefined.

१. ब्राह्मे मुहूर्त उत्तिष्ठेत्स्वस्थो रक्षार्थमायुषः । अ.ह.सू.२
रात्रेश्चतुर्दशो मुहूर्तो ब्राह्मे मुहूर्तः....। अ.ह.सू.२/१ अरुणदत्त.
२. एतानि पञ्च कर्माणि सन्ध्यायां वर्जयेद्बुधः ।
आहारं मैथुनं निद्रां संपाठं गतिमध्वनि ॥ भा.प्र.दिनचर्या ५/२७५
३. रात्रौ च भोजनं कुर्यात्प्रथमप्रहरान्तरे । भा.प्र. रात्रिचर्या पान क्र. २७९
४. प्रभाते मैथुनं निद्रा सद्यःप्राणहराणि षट् ॥ निघण्टरत्नाकर रात्रिचर्या पान क्र.३२२

According to Āyurveda one should wake up at Brāhma Muhūrta i.e. 1.5 hours before sunrise. This time differs according to R̥utu (season).

From above references it can be said that-

- Waking up time -Brāhma Muhūrta approximately 4.30 am.
- Lunch time - Clockwise time not mentioned.
- Dinner time - Clockwise time not mentioned.
- Sleeping time - it should be taken at night but clockwise time is not mentioned.

Brāhma Muhūrta i.e. 1.30 hours before sunrise is an ideal time of waking up. As timing of sleeping at night is not directly mentioned in Āyurvedic literature it can be decided as 1.30 hours after sunset with the help of Viparyaya Tantrayukti.

In Kautīlya Arthaśāstra Dinacaryā of the king is mentioned. They have divided total day and night in 16 parts. ^[22]

Considering Brāhma Muhūrta as beginning of the day the parts of day and night are as follows-

Table-1 : Dinacaryā of the King mentioned in Kautīlya Arthaśāstra

Parts	Timing	Reference from Kautilya Arthaśāstra	Activity
1	4.30 am	तत्रपूर्वेदिवसस्याष्टभागे रक्षाविधानमायव्ययौ च शृणुयात् ।	During the first one-eighth part of the day, he shall post watchmen and attend to the accounts of receipts and expenditure
2	6 am	द्वितीये पौरजानपदानां कार्याणि पश्येत् ।	During the second part, he shall look to the affairs of both citizens and country people.
3	7.30 am	तृतीये स्नानभोजनं सेवेत; स्वाध्यायं च कुर्वीत ।	During the third, he shall not only bathe and dine, but also study.
4	9.00am	चतुर्थे हिरण्यप्रतिग्रहमध्यक्षांश्च कुर्वीत ।	During the fourth, he shall not only receive revenue in gold (hiranya), but also attend to the appointments of superintendents.
5	10.30 am	पञ्चमे मन्त्रिपरिषदा पत्रसम्प्रेषणेन मन्त्रयेत; चारगुह्यबोधनीयानि च बुद्धयेत ।	During the fifth, he shall correspond in writs (patrasampreshanena) with the assembly of his ministers, and receive the secret information gathered by his spies.
6	12.00 pm	षष्ठे स्वैरविहारं मन्त्रं वा सेवेत ।	During the sixth, he may engage himself in his favourite amusements or in self-deliberation.
7	1.30 pm	सप्तमे हस्त्यश्वरथायुधीयान् पश्येत् ।	During the seventh, he shall superintend elephants, horses, chariots, and infantry.
8	3.00 pm	अष्टमे सेनापतिसखो विक्रमं चिन्तयेत् । प्रतिष्ठितेऽहनि सन्ध्यामुपासीत ।	During the eighth part, he shall consider various plans of military operations with his commander-in-chief.
9	4.30 pm	प्रथमे रात्रिभागे गूढपुरुषान्पश्येत् ।	During the first one-eighth part of the night, he shall receive secret emissaries.

Parts	Timing	Reference from Kautilya Arthaśāstra	Activity
10	6.00 pm	द्वितीये स्नानभोजनं कुर्वीत स्वाध्यायं च ।	During the second, he shall attend to bathing and supper and study.
11	7.30 pm	तृतीये तूर्यघोषेण संविष्टश्चतुर्थपञ्चमौ शयीत ।	During the third, he shall enter the bed-chamber amid the sound of trumpets.
12	9.00 pm	संविष्टश्चतुर्थपञ्चमौ शयीत ।	Enjoy sleep during the fourth and fifth parts.
13	10.30pm	संविष्टश्चतुर्थपञ्चमौ शयीत ।	Enjoy sleep during the fourth and fifth parts
14	12.00 pm	षष्ठे तूर्यघोषेण प्रतिबुद्धः शास्त्रमितिकर्तव्यतां च चिन्तयेत् ।	Having been awakened by the sound of trumpets during the sixth part, he shall recall to his mind the injunctions of sciences as well as the day's duties;
15	1.30am	सप्तमे मन्त्रमध्यासीत;गूढपुरुषांश्च प्रेषयेत् ।	During the seventh, he shall sit considering administrative measures and send out spies.
16	3.00 am	अष्टमे ऋत्विगाचार्यपुरोहितसखः स्वस्त्ययनानि प्रतिगृहीयात् चिकित्सकमाहानसिकमौहूर्तिकांश्च पश्येत् ।	During the eighth division of the night, he shall receive benedictions from sacrificial priests, teachers, and the high priest, and having seen his physician, chief cook and astrologer, and having saluted both a cow with its calf and a bull by circumambulating round them, he shall get into his court.

Looking at all the above references, the approximate ideal timing of waking up, food and sleep may be taken as follows-

- 4.30 am to 6.00 am - waking up.
- 7.30 am to 9.00 am - Bhojana (lunch).
- 6.00 pm to 7.30 pm - Sāyam Bhojana (dinner).
- 9.00 pm to 10.30 pm - Nidrā (sleep).

The ideal timing of waking up is 4.30am. It is changed in today's altered lifestyle. One should not sleep after sunrise in healthy conditions. Sleeping after sunrise is also considered as Divāsvāpa. Sleeping immediately after lunch is mainly considered as Divāsvāpa for the present study.

Considering the timing of sleep at night, the person should sleep in between 9pm to 10.30 pm. Sleeping after 10.30 pm is taken as a baseline for considering Rātrijāgaraṇa in the present study.

2. Kāyika Vihāra Vaiṣamya

a) DIVĀSVĀPA

In Bruhatrayī references of Divāsvāpa are found which are as follows-

1. चरक संहिता - च.सू.२१ अष्टौनिन्दितीय
2. सुश्रुत संहिता - सु.शा.४ गर्भव्याकरणनामशारीरोपक्रमः
3. अष्टांगसंग्रह - अ.सं.सू.९ विरुद्धान्नविज्ञानीय
४. अष्टांगहृदय- अ.ह.सू.७ अन्नरक्षाध्यायः

Meaning of the word Divāsvāpa –

१. गीर्वाणलघुकोश-
 १. दिव्-स्त्री-दिवस भा.१०.१३.६
 २. दिवा अ.-दिवसा
 ३. स्वप्नः, स्वापः इ. दिवसा निजणे. [23]
२. आयुर्वेदीय शब्दकोश:-

दिवा-अव्य.दिने (सु.शा.४/४१)

-निद्रा-स्त्री., दिवास्वप्नः (सु.शा.४/४१)

-स्वपन-न.दिवानिद्रा (सु.शा.४/३८)

-स्वप्न-पु., दिवानिद्रा (सु.शा.४/४८)

-स्वाप- पु. दिवानिद्रा (सु.शा.४/३८) [24]

There are two words in the term Divāsvāpa i.e. Divā (day) and Svāpa (sleep). The meaning of the term Divāsvāpa is day sleep.

Defination

1. दिवा दिवसे स्वप्न। दिवानिद्रायाम् । [25]
२. स्वप्नं दिवेति दिवास्वापम् । [26]

Sleep which is taken during day time is called as Divāsvāpa.

Madhyānhacaryā (Afternoon regimen) –

Afternoon regimen i.e. Madhyānhacaryā is explained by Aṣṭāṅga Samgraha in which Divāsvāpa is not recommended.

धर्मोत्तराभिरर्थ्याभिः कथाभिस्त्रिगुणात्मभिः ।

मध्यं दिनस्य गमयेदिष्टशिष्टसहायवान् ॥ अ.स.सू.३/५९

1. One should spend the afternoons in the company of liked, good and helpful persons.
2. Person should engage himself in reading stories. The stories should be such as having more of Dharma (rightousness), moderate Artha (money) and least Kāma (desire).^[27]

Divāsvāpa Vidhi – (Rules for taking daysleep)

a) R̥tu (season) and Divāsvāpa - According to Āyurveda Divāsvāpa is not recommended in daily routine. It is advised in Gr̥ṣma R̥tu (summer) only.

ग्रीष्मे वायुचयादानरौक्ष्यरात्र्यल्पभावत ।

दिवास्वप्नो हितोऽन्यस्मिन् कफपित्तकरो हि सः । अ.ह.सू.७/५६-५७

Gr̥ṣma R̥tu is characterized by the dryness of Ādānakāla (period of extraction) and short duration of night. Daysleep is desirable in Gr̥ṣma R̥tu (summer) as there is Caya (accumulation) of Vāta in this season.

बहुमेदः कफाः स्वप्युः स्नेहनित्याश्च नाहनि । अ.सं.सू.९/२६

Though day sleep is allowed in this season people who are Bahumeda (excessively obese), who have excess Kapha and habituated to the use of Sneha Dravya (fats) are not permitted to sleep during daytime in Gr̥ṣma R̥tu.

Table - 2 : Indication and Contraindication of Divāsvāpa according to R̥tu.

क्रमांक	ऋतु	अर्ह	अनर्ह	संदर्भ
१	ग्रीष्मे	दिवास्वप्नो हितो	–	च.सू.६/३०, सु.शा.४/३८, अ.सं.सू.९/३५, अ.ह.सू.७/५६-५७,
२	वसन्त	–	दिवास्वप्न त्यजेत्	च.सू.६/२३, सू.उ.६४/४०, अ.सं.सू.४/१३, अ.ह.सू.३/२६
३	शरद	–	दिवास्वप्न	च.सू.६/४५, सू.उ.६४/१८,

			परित्यजेत्	अ.सं.सू.४/१९, अ.ह.सू.३/५५
४	वर्षा		दिवास्वप्न वर्जयेत्	च.सू.६/३५, सू.उ.६४/१३, अ.सं.सू.४/१७, अ.ह.सू.३/४८
४	प्रावृट्	–	दिवास्वप्न वर्जयेत्	सू.उ. ६४/४९

b) Mātra of Divāsvāpa (Amount of daysleep) in Exeptional conditions.

सर्वर्तुषु दिवास्वापः प्रतिषिद्धोऽन्यत्र ग्रीष्मात्,
प्रतिषिद्धेष्वपितुबालवृद्धस्त्रीकर्णितक्षतक्षीणमद्यनित्ययानवाहनाध्वकर्मपरिश्रान्तानामभुक्तवतां
मेदःस्वेदकफरसरक्तक्षीणानामजीर्णानां च मुहूर्तं दिवास्वपनमप्रतिषिद्धम् । रात्रावपि जागरितवतां
जागरितकालादर्धमिष्यते दिवास्वपनम् । सु.शा.४/३८
मुहूर्तं घटिकाद्वयम् । डल्हण

- Divāsvāpa should not be taken more than one muhurta. (One Ghatika i.e.48 minutes).
- It should be taken before Meals.
- The person who had Rātrijāgaraṇa should sleep in day time before taking meal.
The amount of Divāsvāpa should be half of the amount of Rātrijāgaraṇa.

c) Position of body during Divāsvāpa (day sleep)-

यदाह भेडः-स्वप्नकामो दिवा काममुपविष्टः शयीत वा । प्रस्तीर्णाडस्य जन्तोर्हि श्लेष्मा कोष्ठे प्रवर्तते ।
अ.ह.सू.७/६(१) हेमाद्रि

The person who desires to sleep in day time should sleep in a sitting posion (on chair).Systemic circulation of Kapha Doṣa occurs if a person sleeps on a bed in lying position.

d) Divāsvāpa Arha (Indication for day sleep)-There are some conditions and Vyādhī mentioned in Āyurvedic Samhitās in which Divāsvāpa is permitted till the recovery of that diseased condition.These conditions are as follows.

Table-3 : Divāsvāpa Arha (Indication for day sleep)

व्याधि/अवस्था	चरक संहिता (च.सू. २१/३९ - ४३)	सुश्रुतसंहिता (सु.शा. ४/३८)	अष्टांगसंग्रह (अ.सं.सू. ९/२४ - २५)	अष्टांगहृदय (अ.ह.सू. ७/५६- ५९)
गीतकर्षितः	√	-	-	-
अध्ययन कर्षितः	√	-	-	-
मद्यकर्षितः	√	√	√	√
स्त्रीकर्षितः	√	√	√	√
कर्मकर्षितः	√	√	√	√
भारकर्षितः	√		√	√
अध्वकर्षितः	√	√	√	√
अजीर्णिनः	√	√	√	√
क्षताः	√	√	√	√क्षतकासी-हेमाद्रि
क्षीणा	√	√	√	√
वृद्धा	√	√	√	√
बाला	√	√	√	√
अबलाः	√	-	√	√
तृष्णा	√	√	√	√
अतीसार	√	√	√	√
शूलार्ताः	√	√	√	√
श्र्वास	√	-	√	√
हिक्का	√	√	√	√
कृश	√	-	-	-
पतित	√	-	-	-
अभिहत	√	-	√	-
उन्मत्त	√	-	√	√
क्लान्त	√	-	-	-

व्याधि/अवस्था	चरक संहिता (च.सू.२१/३९ -४३)	सुश्रुतसंहिता (सु.शा.४/३८)	अष्टांगसंग्रह (अ.सं.सू.९/२४ -२५)	अष्टांगहृदय (अ.ह.सू.७/५६- ५९)
यान	√	√	√	√
प्रजारण	√	-	-	-
क्रोधक्लान्त	√	-	√	√
शोकक्लान्त	√	-	√	√
भयक्लान्त	√	-	√	√
मेदःस्वेदकफरसरक्तक्ष पिण	-	√	-	-
भाष्यक्लान्त	-	-	अतिभाष्य	√

e) Divāsvāpa Anarha (Specific Contraindication for day sleep) -

There are some conditions and Vyādhī mentioned in Āyurvedic Samhitā in which Divāsvāpa is not permitted at all.

Table-4 : Divāsvāpa Anarha (Specific Contraindication for day sleep)

व्याधि/अवस्था	चरक संहिता(च.सू.२१/४५)	अष्टांगसंग्रह(अ.सं.सू.९/२ ६)	अष्टांगहृदय(अ.ह.सू.७/६०)
मेदस्विनः	√	√	√
स्नेहनित्या	√	√	√
श्लेष्मलाः	√	√	√
श्लेष्मरोगिणः	√	-	-
दूषीविषार्त	√	-	-

Vaiṣamya of Divāsvāpa :

1. Ati Divāsvāpa (Atimātra karma - excess quantity) – References of Ati Divāsvāpa are quoted here as an example.

१. कफज अतीसार- दिवस्वप्नपर....श्लेष्मातिसार । च.चि.१९/७

दिवास्वप्नातिसेविनः । गंगाधर

२. विसर्प-अत्यादानदिवास्वप्नाद.... । च.चि.२१/२०

३. शिरोरोग-प्रजागरातिस्वपना.... । च.चि.२६/१०४

अतिस्वप्नः-दिवास्वप्नः । चक्रपाणि

2. Mithyākarma (improper manner) in Divāsvāpa :

Āhāra and Divāsvāpa (relation of type of diet and day sleep) - Divāsvāpa is not permitted after taking food. Relations of type of Āhāra and Divāsvāpa for manifestation of diseases are mentioned below as examples.

Table-5 : Āhāra and Divāsvāpa (relation of type of diet and daysleep)

क्र.	व्याधी	श्लोक	संदर्भ
१	कुष्ठ	अजीर्णेऽन्ने चापि निद्रां च भजतां दिवा।	च.चि.७/८
२	ग्रहणी(कफज)	भुक्तमात्रस्य च स्वप्नात्।	च.चि.१५/६७
३	पाण्डु	विदग्धेऽन्ने दिवास्वप्नात्।	च.चि.१६/८
४	स्तन्यरोग	भुक्त्वा दिवास्वप्नात्।	च.चि.३०/२३३
५	वातशोणित	...दिवास्वप्नजागरैः प्रायशः सुकुमाराणां मिष्टान्नसुखभोजिनाम् ।	च.चि.२९/७

Effect of Divāsvāpa on Doṣa, Dhātu and Agni :

1. Divāsvāpa has effect on Doṣa. It is given in the following table.

Table-6 : Effect of Divāsvāpa on Doṣa

दिवास्वाप	दोषप्रकोप	संदर्भ
ग्रीष्मवर्ज्येषु कालेषु दिवास्वप्नात्	श्लेष्मपित्त	च.सू.२१/४४
दिवास्वप्न	कफप्रकोप	सु.सू.२१/२३
दिवास्वप्नः	त्रिदोषप्रकोपकः	सु.शा.४/३८
भुक्तमात्रदिवास्वप्न	कफप्रकोप	अ.स.नि.१/२६
दिवास्वप्न	कफप्रकोप	अ.ह.नि.१/१७

2. Effect of Divāsvāpa on Dhātu and Srotasa- Divāsvāpa has both direct and indirect effect on Dhātu. Indirect effect is through Doṣās.

1. Rasa Dhātu -

रसोऽपि श्लेष्मवत् । अ.ह.११/८

Rasa Dhātu has similar properties as that of Kapha Doṣa.

Due to Divāsvāpa Kapha Doṣa gets vitiated which vitiates Rasa Dhātu.

2. Rakta Dhātu –

पित्तप्रकोपणेरेव चाभीक्ष्णं द्रवस्निग्धगुरुभिहारेदिवास्वप्न.....असृक् प्रकोपमापद्यते ।

सु.सू.२१/२५

Divāsvāpa also vitiates Pitta Doṣa which ultimately vitiates Rakta Dhātu.

Divāsvāpa taken immediately after taking food causes Raktaduṣṭi.

3. Māṃsa Dhātu –

मांसवाहीनि दुष्यन्ति भुक्त्वा च स्वपतां दिवा । च.वि.५/१५

Divāsvāpa taken immediately after taking food causes Māṃsavaha Srotasa Duṣṭi.

4. Meda Dhātu-

अव्यायामादिवास्वप्नान्मेद्यानां चातिभक्षणात् ।

मेदोवाहीनि दुष्यन्ति.....। च.वि.५/१६

Divāsvāpa causes Medovaha Srotoduṣṭi which further leads to various diseases of Medovaha Srotasa.

3. Effect of Divāsvāpa on Agni (effect of daysleep on digestive power) :

दिवास्वप्नश्च पित्तप्रकोपणोऽप्यग्निशमनः । सु.सू.२१/९ डल्हण

Divāsvāpa causes Agnimāndya. One should not sleep in day time immediately after taking food.

4. Guṇa of Divāsvāpa (properties of daysleep) :

स्निग्धं प्रस्वपनं दिवा । च.सू.२१/५०

Snigdha Guṇa (unctuous) increases in the body due to Divāsvāpa.

Divāsvāpajanya Vyādhī (diseases due to daysleep) : If the rules of Divāsvāpa are not followed it can lead to manifestation of Vyādhī (disease).

Table-7 : Divāsvāpajanya Vyādhī (diseases due to daysleep)

व्याधि/अवस्था	चरकसंहिता (च.सू. २१/४६- ४९)	सुश्रुतसंहिता (सु.शा. ४/३८)	अष्टांगसंग्रह (अ.सं.सू. ९/२७ -२९)	अष्टांगहृदय (अ.ह.सू. ७/६१)
हलीमकः	√	—	√	—
शिरःशूलं	√	शिरोगौरव	शिरोजाडय	√
स्तेमित्य	√	—	√	√
गुरुगात्रता	√	—	√	—
अङ्गमर्द	√	√	—	—
अग्निनाश	√	अग्निदौर्बल्य	अग्निमन्दता	अग्निमन्दता
हृदयस्य प्रलेप	√	—	—	—
शोफ	√	—	—	√
अरोचक	√	√	—	—
हल्लास	√	—	—	√
पीनस	√	—	—	√
अर्धावभेदक	√	—	—	—
कोठ	√	—	√	—
पिडकाः	√	—	√	—
कण्डू	√	—	√	—
तन्द्रा	√	—	√	—
कास	√	√	√	—
गलामय	√	—	√	—
स्मृतिबुद्धिप्रमोह	√	—	—	—
स्रोतस संरोध	√	—	√	√
ज्वरः	√	√	√	√
इन्द्रियाणामसामर्थ्य	√	—	—	—
विषवेगप्रवर्धनम्	√	—	√	—
श्र्वास	—	√	—	—
प्रतिश्याय	—	√	—	—
भ्रम	—	—	√	—
मोह	—	—	—	√

Divāsvāpa as a Hetu in GIT diseases (day sleep as a causative factor in diseases) :

In the present study Divāsvāpa is mentioned as a Hetu in GIT diseases- Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arśa and Pravāhikā.

Table-8 : Divāsvāpa as a Hetu in GIT diseases according to Bruhatrayī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	–	–	–	–
ग्रहणी	कफज ग्रहणी– भुक्तमात्रस्य च स्वप्नाद् (च.चि.१५/६७)	–	–	–
अतिसार	कफज अतिसार– दिवास्वप्न((च.चि.१९/७)	–	–	–
अर्श	सा.हेतु–दिवास्वप्न ((च.चि.१४/९) कफज–दिवास्वप्न: (च.चि.१४/१८)	–	–	–
प्रवाहिका	–	–	–	–
अजीर्ण	–	स्वप्नविपर्यय–रात्रौ जागरणं दिवसे च स्वप्न(सु.सू.४६/५०० उल्हण)	–	

b) RĀTRIJĀGARṆA

In Bruhatrayī references of Rātrijāgarṇa (keeping awake at night) are found which are as follows

1. चरक संहिता - च.सू.२१ अष्टौनिन्दितीय
2. सुश्रुत संहिता - सु.शा.४ गर्भव्याकरणनामशारीरोपक्रमः
3. अष्टांगसंग्रह - अ.सं.सू.९ विरुद्धान्नविज्ञानीय
४. अष्टांगहृदय- अ.ह.सू.७ अन्नरक्षाध्यायः

Meaning of the word Rātrijāgarṇa (keeping awake at night)

१. गीर्वाणलघुकोश-रात्रिः(त्री.)स्त्री.१.रात्र २.अहोरात्र म.भा.१३.९.४,जागरः (रा) रणं-
जागृतावस्था;जागरण श.३३ [28]

२. संहिता-.....प्रजागरः । प्रजागरः-अतिजागरणम् । अ.ह.सू.१३/११ अरुणदत्त

Lack of sleep (at night) is Jāgarṇa

Rātricaryā :

Rātricaryā or night regimen is an important concept which was first mentioned in Aṣṭanga Saṃgraha. Rātricaryā is equally important to Dinacharyā for Svāsthyarakṣaṇa (for a good health). People are not so much concern with the regimen to be followed at night. Rātricaryā deals with the regimen that has to be followed from dusk, through out the night up to the dawn.

1. Rātri (Night) :

तमो भयावहं मोहदिङ्मोहजननं भवेत् ।

पित्तहृत्कफकृत्कामवर्धनं क्लमकृच्च तत ॥

Night is considered to be full of Tamas (darkness). It is said that it creates fear in the minds of the people. It enhances Moha (delusion), increases Pitta and Kapha Doṣa. It also enhances Kāma (desire) and reduces Klama (fatigue). [29]

Rātri includes Sandhyācaryā and Rātricaryā (night regimen).

a) Sandhyācaryā - (regimen during dusk)

Sandhyācaryā is the conjunction of the last part of the day and the first part of the night. This period is considered to be inauspicious and many regimens are contraindicated in this Kāla (time).

Contraindications in Sandhyakāla –

एतानि पञ्च कर्माणि सन्ध्यायां वर्जयेद्बुधः ।

आहारं मैथुनं निद्रां संपाठं गतिमध्वनि ॥ भा.प्र.पूर्वखण्ड दिनचर्या ५/२७५-७७

Bhāvaprakāśa has mentioned certain actions that have to be contraindicated during Sandhyākāla (evening hours) which is said to be the joining period between the end of the day and beginning of the night time. ^[30]

b) Rātricaryā (night regimen) according to Aṣṭanga Saṃgraha

सायं भुक्त्वा लघुहितं समाहितमनाः शुचिः ।

शास्तरं अनुसंस्मृत्य स्वशय्यां चाथ संविशेत् ॥

देशे शुचावनाकीर्णे द्वित्राप्तपरिचारकः ।

युक्तोपधानं स्वास्तीर्णं विस्तीर्णाविषमं सुखम् ॥

जानुतुल्यं मृदुशुभं सेवेत शयनासनम् ।

प्राग्दक्षिण शिराः पादावकुर्वाणो गुरुन् प्रति ।

पूर्वापरनिशाभागे धर्ममेवानुचिंतयेत् ॥ अ.स.सू.३/११९-१२१

1. One should retire to bed after taking light and wholesome food, with peaceful, fair minded, and having accounted entire activities of the day.
2. The sleeping place should be open and dirt free, protected nearby with faithful attendants.
3. The head end should be neither elevated nor depressed but well leveled to position of shoulders.
4. The bed should be spacious in breadth and length, so as to provide unobstructed and comfortable sleep. While in lying down position bed should be strong possessing the height up to knee and well covered with soft mattresses.
5. At the time of sleep, head end should be facing to east or south but not towards teachers and elders. One should always be religious minded at both early and late phases of night.

The main aspects to be considered in Rātricaryā are -Āhāra (Food), Nidrā (Sleep) and Maithuna (copulation).

a) Āhāra (food)-

रात्रौ भोजनं कुर्यात्प्रथमप्रहरान्तरे ।

किञ्चिदूनं समश्नीयाद्दुर्जरं तत्र वर्जयेत् ॥

1. Dinner should be consumed in the first Prahara (first 3 hrs) of the night.
2. Food should be taken in lesser quantity in comparison to the food taken during noon (lunch).^[31]
3. One should avoid taking the food which is heavy to digest.

न नक्तं दधि भुञ्जीत न चाप्यघृतशर्करम् । च.सू.७/६१

One should not consume curd at night time as it is Abhiṣyandī (obstructive) and will cause Mandāgni (weakens the digestive power).

4. नोदकान्तरितान्नं द्विर्न निशायां न केवलम् । अ.स.सू.७/५३

One should not take Saktu (roasted grain floor) at night.

b) Nidrā (time of sleeping)

अहोरात्रे विभज्यते सूर्यो मानुषदैविके ।

रात्रिः स्वप्नाय भूतानां चेष्टायै कर्मणामहः ॥ मनु.वै.सू.सा.२१/३

According to Manusmṛiti the Sūrya divides the Ahorātra (whole day of human being and God) in two different parts. Out of which the Rātra (night) is reserved for the Nidrā (sleep) and the day period is for doing Karma (work).

Shayyā (sleeping bed) :

नानास्तीर्णमनुपहितमविशालमसमं वा शयनं प्रपद्येत....। च.सू.८/१९

One should not sleep on uncovered hard bed or having no pillow, not having sufficient dimensions or uneven.

c) Maithuna (sexual activities)

शरीरे जायते नित्यं देहिनां सुखतस्पृहा ।

अव्यवायान्मेहमेदोवृद्धिः शिथिलता तनोः ॥ यो.र.रात्रिचर्या ४

Sexual desires are present in all human beings. If one does not indulge in sexual activities appropriately it could lead to many diseases like Meha (Diabetes), Medovṛuddhi (obesity) and Śithilata Tano (general weakness).^[32]

Seasonal regimen for sexual practices :

सेवेत कामतः कामं बलाद्वाजीकृतो हिमे ।

प्रकामं तु निषेवेत मैथुनं शिशिरागमे ॥

त्र्यहाद्वसन्तशरदोः पक्षाद् वृष्टिनिदाघयोः । भा.प्र.पूर्वखंड,दिनचर्या५/ २८९-९०

In Hemanta (winter) one can indulge in sexual activities as per desire after taking Vṛuṣyadrugs (Aphrodisiac). In Śiṣira Rutu one can do so without aphrodisiac. In Vasanta and Śarada Rutu (spring and autumn) sexual intercourse is advised only once in three days. In Varṣā (rainy) and Grīṣma Rutu (summer) it is advised only once a fortnight. [33]

Post Sexual activities :

स्नानं सशर्करं क्षीरं भक्ष्यमैक्षवसंस्कृतम् ।

वातो मांसरसः स्वप्नः सुरतान्ते हिता अमी ॥ भा.प्र.पूर्वखंड,दिनचर्या५/३१२

The things which are beneficial after copulation are-bath, milk mixed with sugar, food mixed with sugar, meat and good sleep. [34]

आयुष्मन्तो मन्दजरावपुर्वर्णबलान्विताः ।

स्थिरोपचितमांसाश्च भवन्ति स्त्रीषु संयता ॥ भा.प्र.पूर्वखंड,दिनचर्या५/२८८

By following proper sexual activity as per the regimen mentioned in Āyurvedic classics one could attain long life, delayed ageing, increase in colour and complexion, strength, and good muscletone. [35]

Thus it is important to follow various rules of Rātrīcaryā appropriately as mentioned in Āyurveda classics for the maintenance of health and well-being. But now a days due to shift duties, playing games on mobile, use of internet etc. people are keeping awake late at night which is affecting their health.

Vaiṣamya of Rātrījāgarana (keeping awake at night)

1. Ati Rātrījāgarana (Atimātra karma -excess quantity) :

प्रजागरः । अ.ह.१३/११

प्रजागरः-अतिजागरणम् । अरुणदत्त

Prajāgara is found as a Hetu, Lakshana and Cikitsā in Bruhatrayī. But only Hetu aspect is considered in the present study.

१. शिरोरोग (वातज) – प्रजागरः (च.सू.१७/१६)

२. उरुस्तंभ– प्रजागरैः (च.चि.२७/९)

३. वातव्याधी– प्रजागरैः (च.चि.२८/१५)

४. वातशोणित– प्रजागरैः (च.चि.२९/७)

2. Mithyākarma (improper manner) in Rātrijāgaraṇa

1. Āhāra (food) and Rātrijāgaraṇa

वातशोणित– मिष्टान्नसुखभोजिनाम्प्रजागरात्। (च.चि.२९/७)

2. Doṣa Avasthā in body and Rātrijāgaraṇa

वातज प्रमेह – जागरण... तथाविध शरीर (बहुद्रवः श्लेष्मा) । च.नि.४/३६

3. Śarīrabala and Rātrijāgaraṇa

वातशोणित सुकुमाराणां दिवास्वप्नात् । प्रजागरात् । च.चि.२९/७

Rātrijāgaraṇa is contraindicated in Ayurved. In above conditions one should not keep awake at night.

Effect of Rātrijāgaraṇa on Doṣa, Dhātu and Agni :

1. Habitual keeping awake at night leads to Doṣaprakopa.

Table-9 : Effect of Rātrijāgaraṇa on Doṣa

रात्रिजागरण	दोषप्रकोप	संदर्भ
रात्रिजागरण	वातप्रकोप	अ.सं.नि.१/२४, अ.ह.नि.१/१४
निद्राविधारणैः	उदानवायुदुष्टी	अ.ह.नि.१६/२१
करोत्यकालशयनजागराद्यैश्च	समानवायुदुष्टी	अ.ह.नि.१६/२६

2. Effect of Rātrijāgaraṇa on Dhātu :

लवणादि प्रजागरैरित्यन्तं शोणितदुष्टीकारणं समुच्चिनोति । च.चि.२९/७ चक्रपाणि

Ati rātrijāgaraṇa causes Raktadushti.

3. Effect of Rātrijāgaraṇa on Agni (effect of keeping awake at night on digestive power) –

Rātrijāgaraṇa affect Samāna Vāyu which in turn becomes cause for improper digestion.^[36]

4. Guṇa of Rātrijāgaraṇa (properties of keeping awake at night)-

रात्रौ जागरणं रुक्षं..... । च.सू.२१/५०

Rukṣa Guṇa increases in the body due to Rātrijāgaraṇa.

Rātrijāgaraṇa as a Hetu in GIT diseases (Rātrijāgaraṇa as a causative factor in GIT diseases)-

In the present study Rātrijāgaraṇais mentioned as a Hetu in GIT diseases Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arsa and Pravāhikā.

Table-10 : Rātrijāgaraṇa as a Hetu in GIT diseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	–	–	–	–
ग्रहणी	–	–	–	–
अतिसार	त्रिदोषज– अस्वप्नाद्(च.चि.१९/८)	–	–	–
अर्श	–	–	–	–
प्रवाहिका	–	–	–	–
अजीर्ण	प्रजागरैः (च.वि.२/९)	–	–	–

c) VYĀYĀMA

In Bruhatrayī references of Vyāyāma are found which are as follows-

1. चरक संहिता - च.सू.७ नवेगान्धारणीय
2. सुश्रुत संहिता - सु.चि.२४ अनागताबाधप्रतिषेधनीय
3. अष्टांगसंग्रह - अ.सं.सू.३ दिनचर्या
४. अष्टांगहृदय - अ.ह.सू.२ दिनचर्या

Defination of Vyayama :

१. शरीरचेष्टा या चेष्टा स्थैर्यार्था बलवर्धिनी ।

देहव्यायामसंख्याता मात्रया तां समाचरेत् ॥ च.सू.७/३१

२. व्यायामः शरीरायासजननं कर्म । सु.नि.१/४० डल्हण

३. व्यायामः शरीरायासजनकं कर्म; । सू.उ.४१/१६

४. शरीरायासजननं कर्म व्यायाम उच्यते । अ.ह.सू.२/१० अरुणदत्त

Vyāyāma is referred to any karma (action or movement) which will bring Āyasa (exhaustion).

Ācārya Caraka defined Vyāyāma as any physical activity which is desirable and is capable of bringing about bodily stability and increases the strength of the body.

Types of Vyayama :

A. There are three types of Vyayama-

१. या च शरीरचेष्टा इष्टा मनोऽभीष्टा स्थैर्यार्था स्थायिताधर्मरूपा न तु न्यूनातिरिक्तरूपाततोऽनन्तरमेव बलवर्धनीत्युक्तं सा देहव्यायामसंख्याता देहव्यायामसंज्ञा । देहपदेन मनोवागव्यवच्छेदः । च.सू.७/१८ गंगाधर

२. व्यायामस्त्रिविधः-कायवाङ्मनोभेदात् । सु.सू.३५/४० डल्हण

Aacharya Gangadhara and Dalhana has described three types of Vyayama viz

Kāyika (related to body), Vācika (related to speech) and Mānasika (related to mind).

B. Other types of Vyayama are-

१. व्यायामोऽङ्गानां विविधप्रकार आयाम । तथा चोक्तम्-तुलभ्रमगुणाकर्षधनुराकर्षणादिभिः । आयामो विविधोऽङ्गानां व्यायाम इति कीर्तितः । सु. चि.११/११ डल्हण

२. व्यायामकर्म धनुराकर्षणादिव्यापारः । सू.उ.५०/३-५

Vidhi of Vyāyāma (rules for Vyavāma) :

a) Dinacaryā - According to Hemādri, Dinacaryā and Rutucaryā are Niyatakālīka Vihāra. The word 'Baddhakrama Vihāra' is used for Vihāra which indicates that the activities which are mentioned in daily routine should be followed serially one by one. In this sequence prior to Vyāyāma, Abhyanga (self oil massage) should be done as it prevents Vāta Prakopa.^[37] Vyāyāma is followed by Mardana, Udvardhana (massaging body with fine powders), Snāna (bathing) and then Bhojana (food).

Vyāyāma is included in Dinacaryā as a daily routine. Vyāyāma is an essential component of Āyurveda which has importance in prevention health care, rejuvenation and longevity. Āyurveda suggests that a daily routine of proper physical activity affects not only body but it also has positive influence on mind.

b) Mātrā of Vyāyāma (quantity of exercise) -

१. व्यायामः स्वस्थस्य मात्रया काले च पथ्यतमः । सु.सू.२०/६ डल्हण.

Vyāyāma (Physical exercise) has to be done in proper measure.

२. सर्वेष्वतृष्वहरहः पुम्भिरात्महितैषिभिः ।

बलस्यार्धेन कर्तव्यो व्यायामो हन्यतोऽन्यथा॥

हृदि स्थानस्थितो वायुर्यदा वक्रं प्रपद्यते।

व्यायामं कुर्वतो जन्तोस्तद्वलार्धस्य लक्षणम् ॥ सु.चि.२४/४६-४७

Vyāyāma should be performed by persons as per their Bala i.e. Balardha (half of total strength). Otherwise it has harmful effects on body.

३. स्वेदागमः श्वासवृद्धिर्गान्नाणां लाघवं तथा ।

हृदयाद्युपरोधश्च इति व्यायामलक्षणम् ॥ च.सू.७/३३

Lakṣaṇa of Vyāyāma are Svedāgama (appearance of sweat), Śvāsavṛuddhī (increase in respiration rate), Lāghava (feeling lightness of the body) and Hṛdayaparodha (feeling of blockage in the region of the heart and such other organs of the body).

४. प्राक् श्रमाद् व्यायामवर्जी स्यात् । च.सू.८/१८

Therefore it is said in Sadvrutta that before getting exhausted one should stop doing exercise.

c) Eligible Vaya for Vyāyāma (suitable age for exercise) -

Vyāyāma should be performed after considering Vaya (age), Bala (strength), Śarīra (physique), Deśa (place), Kāla (time) and Aśana (diet). If Vyāyāma is done without considering these factors, it causes severe disorders. .^[38] Bāla (children) and Vṛuddha (aged person) should avoid Vyāyāma. Ācārya Arūṇadatta specifically explained the age group of Bāla as below 16 years and of Vṛuddha who are above 70 years. So taking this into consideration suitable age for Vyāyāma is from 16 years upto 70 years.^[39]

d) Vyāyāma (exercise) and Ṛutu (season) - The Matrā (amount) of Vyāyāma should be changed according to Ṛutu.

Table-11 : Vyāyāma (exercise) and Ṛutu (season)

क्रमांक	ऋतु	ऋतुचर्या	संदर्भ
१	हेमंत	व्यायाम शीलयेत्	च.सू.६/११
२	शीतकाले वसन्ते च	मन्दमेव ततोऽन्यदा	अ.ह.सू.२/११
३	वर्षा	व्यायाम वर्जयेत्, नातिव्यायाममाचरेत्	च.सू.६/१४ सू.उ. ६४/१
४	ग्रीष्म	व्यायामं च विवर्जयेत् व्यायाममुष्णमायासं मैथुनं परिशोषि च	च.सू.६/२९ सू.उ. ६४/४०
५	वसन्त	व्यायाम व्यायामोऽत्र नियुद्धाध्वशिलानिर्घातजो हितः	सू.उ. ६४/३६ सू.उ. ६४/३८
६	प्रावृट्	व्यायामं वर्जयेत्	सू.उ. ६४/४९

e) Vyāyāma Arha (indications for Vyāyāma) - Vyāyāma is indicated for the management of Santarpanajanya Roga like Prameha, Sthaulya etc. Āyurveda believes that the root cause of all the diseases is Agnimāndya. Vyāyāma increases Agni. Dīptāgni prevents the formation of Āma. So performing Vyāyāma daily can keep a person away from many diseases.

f) Vyāyāma Varjya (contraindications for Vyāyāma) - Bāla (children), Vṛuddha (old), Pravāta (having aggravated Vāta), Ucca and Bahubhāṣa (those who speak too much and loudly), Kṣudhita (hungry) and Trūṣita (thirsty) should abstain from Vyāyāma.^[40]

Vyāyāma should be avoided by those who are suffering from Raktapitta (intrinsic hemorrhage), Kṛūṣa (emaciation), Śoṣa, Svāsa (dyspnea), Kāsa (cough), Kṣata (wound), Bhuktavāna (after taking food), Kṣhiṇa (wasted due to sex), Trūd and Bhramārta (afflicted with thirst and giddiness).^[41]

Vaiṣamya of Vyāyāma

1. Avyāyāma (Hinamatra - Absence of Exercise) - The list of diseases due to Avyāyāma is as follows -

Table-12 : Avyāyāma (Hinamatra - Absence of Exercise) and Vyādhi

व्याधी	संदर्भ	व्याधी	संदर्भ
हृद्रोग (कफज)	(च.सू.१७/३४)	मधुमेह	(च.सू.१७/७८)
स्थौल्य	(च.सू.२१/४)	ज्वर (कफज)	ज्वर (कफज)
प्रमेह	(च.नि. ४/५),	शोथ	(च.चि.१२/५)
उदर (कफज)	(च.चि.१३/२९)	अर्श	(च.चि.१४/९)
अर्श (कफज)	(च.चि.१४/१८)	विसर्प	(च.चि.२१/३९)
मदात्यय (कफज)	(च.चि. २४/८९)	कृमी	(सु.उ.५४/३)

2. Ativyāyāma (Excessive exercise) - The diseases due to Ativyāyāma are enlisted below-

Table -13 : Ativyāyāma (Excessive exercise) and Vyādhi

व्याधी	संदर्भ	व्याधी	संदर्भ
हृद्रोग (वातज)	(च.सू.१७/३०)	ज्वर (वातज)	(च.नि. १/१९)
अर्श (वातज)	(च.चि.१४/१३)	अर्श (पित्तज)	(च.चि.१४/१५)
हिक्का, श्वास	(च.चि.१७/११)	छर्दी	(च.चि. २०/७)
मूत्रकृच्छ्र	(च.चि. २६/३२)	वातव्याधी	(च.चि. २८/१६, सु.नि.१/४०)
अर्धावभेदक	(च.सि. ९/७४)	विद्रधि	(सु.नि.९/१६)

3. Mithyākarma (improper manner) in Vyāyāma

a) Viṣama Vyāyāma (Improper exercise)

Table-14 : Viṣama Vyāyāma (Improper exercise) and Vyādhi

ग्रंथोक्त वर्णन	अर्थ	व्याधि	संदर्भ
जिह्मव्यायामात्।	Doing contorted exercise.	अंतर्विद्रधि	च.सू.१७/१२
विषमाः शरीरचेष्टा समाचारताम्	Doing asymmetrical body movements.	उन्माद	च.नि.७/४
दारुण अनुचित व्यायामसेवनात्	Doing vigorous unsuitable exercise.	गर्भ उपघातकर	च.शा.८/२१
अतिविचेष्टितैः	Doing excessive asymmetrical movements.	वातव्याधि	च.चि.२८/५

b) Āhāra followed by Vyāyāma-

Table-15 : Āhāra followed by Vyāyāma and Vyādhi

व्याधी	ग्रंथोक्त वर्णन	संदर्भ
कुष्ठ	अतिभुक्त्वा व्यायामम् उपसेविनाम्।	च.चि. 7/8
पांडु	विदग्धेऽन्ने व्यायामात्।	च.चि.16/8
आमवात	स्निग्धं भुक्तवतो ह्यन्नं व्यायामं कुर्वताम्।	मा.नि.24/1

Effect of Vyāyāma on Doṣa, Dhātu, Agni and Srotasa :

1. Effect of Vyāyāma on Doṣa and Doṣagati-

Table-16 : Effect of Vyāyāma on Doṣa

व्यायाम	दोषप्रकोप	संदर्भ
व्यायाम	वातप्रकोप	अ.सं.नि.१/२४, अ.ह.नि.१/१५, च.नि.१/१९
व्यायाम	प्राणवायुदुष्टी	अ.ह.नि.१६/१९
तथाऽश्रमात् (अश्रमादिति अव्यायामात्)	श्लेष्मा प्रकोपं	शा.सं.प्रथमखण्डअ.२/३५दीपिका, सु.सू.२१/२३
व्यायाम	दोषक्षय(श्लेष्मक्षयोऽभिप्रेत)	च.सू.७/३२ चक्रपाणि
अतिव्यायाम	वातप्रकोप	सु.सू.२१/१९

Effect of Vyāyāma on Doṣagati-

व्यायामादूष्मणस्तैक्ष्ण्याद्धितस्यानवचारणात् ।

कोष्ठाच्छाखा मला यान्ति द्रुतत्वान्मारुतस्य च ॥ च.सू.२८/३१

Due to Vyāyāma Doṣa circulates from Koṣṭa to Śakhā.

Table-17 : Effect of Vyāyāma on Dhātu

व्यायाम	धातु धातुक्षयः	संदर्भ
अतिव्यायाम	धातुक्षयः	च.सू.७/३३ चक्रपाणि
व्यायाम	मेदसःक्षयः	अ.ह.सू.२/१०
व्यायाम	स्थिरीभवति मांसं	सु.चि.२४/४२
व्यायाम	मज्जशुक्रसमुत्थानामौषधं.. व्यायामौ	च.सू.२८/२८

Effect of Vyāyāma on Agni (effect of exercise on digestive power) :

दोषक्षयोऽग्निवृद्धिश्च व्यायामादुपजायते । च.सू.७/३२

Vyāyāma produces Agnidīpti.

Table-18 : Effect of Vyāyāma on Srotasa :

व्यायाम	स्रोतस	संदर्भ
व्यायामात् क्षुधितस्य च	प्राणवह स्रोतोदुष्टि	च.वि.५/१०
अव्यायाम	मेदवह स्रोतोदुष्टि	च.वि.५/१६
व्यायामात्	अस्थिवह स्रोतोदुष्टि	च.वि.५/१७
व्यायामात्	स्वेदवह स्रोतोदुष्टि	च.वि.५/२२

Vyāyāma as a Hetu in GIT diseases(Vyāyāma as a causative factor in diseases)-

In the present study Vyāyāma is mentioned as a Hetu in GIT diseases- Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arśa and Pravāhikā.

Table-19 : Vyāyāma as a Hetu in GIT diseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	—	—	—	—
ग्रहणी	—	—	—	—
अतिसार	वातज—अतिव्यायाम(च.चि.१९/५)	—	—	—
अर्श	सा.हेतु—अव्यायाम (च.चि.१४/९) वातज—व्यायामकर्म(च.चि.१४/१३) पित्तज—व्यायाम (च.चि.१४/१५) कफ—अव्यायाम (च.चि.१४/१८)	—	—	—
प्रवाहिका	—	—	—	—
अजीर्ण	—	—	—	—

d) VEGADHĀRAṆA

Vega (natural urge) is a very fundamental and important concept of Āyurveda. It plays important role in maintaining Svāsthya (health). Therefore it is described in Svāsthya Catuṣka Adhyāyās by Caraka.

Vegās (natural urges) are created naturally by the body. It is very important to respond to these Vegās and not to suppress them. But now- a-days, due to busy and stressful lifestyle and in the dream of achieving the big targets in short period, people are suppressing some or most of the natural urges of the body.

Mostly people always suppress the Kṣudhā Vega (urge of eating) and Truṣṇā Vega (urge of thirst) when they are busy with their work. Mūtra (urination) and Purīṣa (defecation) Vega are suppressed while travelling or watching a favorite movie or serial on television, or in meeting or in a classroom etc. If these Vegās are suppressed by chance once or twice immediately it doesn't affect health .But if there is a habit of suppressing these Vegās then it is harmful for health and later on these suppressed natural urges could be the main cause of many diseases.

In Bruhatrayī references of Vegadhāraṇa are found which are as follows-

1. चरक संहिता - च.सू.७ नवेगान्धारणीय
2. सुश्रुत संहिता - सु.उ.५५ उदवर्तप्रतिषेधोपक्रमः
3. अष्टांगसंग्रह- अ.सं.सू.५ रोगानुत्पादनीय
४. अष्टांगहृदय- अ.ह.सू ४ रोगानुत्पादनीय

Meaning of the word Vegadhāraṇa :

The word “Vegadhāraṇa” is composed of two words i.e. Vega and Dhāraṇa. Here Vega means “natural urge” and Dhāraṇa means “suppression”. Hence the word “Vegadhāraṇa” means suppression of natural urges.

व्याकरणदृष्ट्या-

वेग-पुल्लिङ्गी नाम

मूळ धातू-विज्

शब्दसिद्धि-विज्-घञ्

१. विज् पृथक्करणे । जुहोत्यादि-३गण-उभयपद-वेगळे करणे.

२. विज् भये कम्पेच-१.तुदादि गण-आत्मनेपद

२. रुदादि गण-परस्मैपद-भिणे,कंप पावणे.

Veg is a masculine word in Sanskrit derived from the root word vij to go. ^[42]

Therefore meaning of Vega can be described as a special and particular movement of a substance in a particular direction.

Definition of Vega (natural urge) :

१. वेगोऽत्र प्रवृत्तिः उन्मुखता । गंगाधर

२. अधः च उर्ध्वं च भावानां प्रवृत्तानां स्वभावतः ।

न वेगान् धारयत् प्राज्ञो वातादीनां जिजीविषुः ॥ सु.उ.५५/३

३. वेगविधारणशब्देन वातविण्मूत्रादीनां वेगधारणम् । सु.नि.२/४ डल्हण

४. प्रवृत्त्युन्मुखत्वम् वेगः । हेमाद्रि

Vega is a natural body urge to pass Mūtra (urination), Puriṣa (defecation) etc.

Types of Vega-

1. There are two types of natural urges namely-

- DhāraṇīyaVegās (suppressible urges).
- AdhāraṇīyaVegās (non suppressible urges).

According to Acārya Caraka, there are 13 types of natural urges in the body which should not be suppressed and that can cause many diseases when ignored. In addition to theses Vegās, 14th Vega is mentioned by Vagbhata.

न वेगान् धारयेद्धीमाञ्जातान् मूत्रपुरीषयोः ।

न रेतसो न वातस्य न छर्द्याः क्षवथोर्न च ॥

नोद्गारस्य न जृम्भाया न वेगान् क्षुत्पिपासयोः ।

न बाष्पस्य न निद्राया निश्वासस्य श्रमेण च ॥ च.चि.७/३-४

Mūtra (urination), Puriṣa (defecation), Reta (semen), Vāta (flatulence), Chardī (vomiting), Kṣavathu (sneezing), Udgāra (belching), Jrumbhā (yawning), Kṣudhā

(hunger), Truṣṇa (thirst), Bāṣpa (tears), Nidrā (sleep) and Niśvāsa (rapid breathing after exertion) are Adhāraṇīya Vegās.

2. According to Sushruta the Vegas can be divided into - ^[43]

- Urdhwa- Udgāra (belching), Jrumbhā (yawning) etc.
- Adhovega- Mūtra (urination), Puriṣa (defecation) etc.
- Kothagata Vega- Kṣudhā (hunger), Truṣṇa (thirst)

Present study deals with Mūtra (urination), Puriṣa (defecation), Kṣudhā (hunger) and Truṣṇa (thirst) Vegās only.

Reasons for Vegadhāraṇa-

These are explained in Śosa Nidāna Adhyāya by Carakācārya. A person suppresses the urge to pass Adhovāta (flatulence), Mūtra (urination) and Puriṣa (defecation) due to-

संधारण-यदा पुरुषो राजसमीपे भर्तुः समीपे वा गुरोर्वा पादमूले द्युतसभमन्यं वा सतां समाजं स्त्रीमध्यं वा समनुप्रविश्य यानैर्वाऽप्युच्चावचैरभियान् भयात् प्रसङ्गाद्ध्रीमत्वाद्धृणित्वाद्वा निरुणद्धयागतान् वातमूत्रपुरीषवेगान् तदा तस्य संधारणाद्वायुः प्रकोपमापद्यते, स प्रकुपितः पित्तश्लेष्माणौ समुदीर्योर्ध्वमधस्तिर्यक् च विहरति.....॥ च.नि.६/६

1. Attending a royalty (king).
2. Being in a formal sitting in the company of sages, teachers, nobles, etc.
3. Society of gambling.
4. Being in the midst of women.
5. While travelling on uneven vehicle.
6. Due to fear.
7. Shyness.
8. Disgust (hatred of place).

Natural urges in females are more prone to the suppression due to many factors. Ācārya Caraka has explained 3 reasons for this. ^[44]

1. Dependency on social culture and surroundings.
2. Lack of awareness.
3. Responsibilities of the family.

Vaiṣamya of Vegdhāraṇa :**1. Ati Vegdhāraṇa (Atimātrakarma-excess amount)**

गुल्म-सन्धारणं वातातपौ चातिसेवमानस्य पित्तं सह मारुतेन प्रकोपमापद्यते । च.नि.3/8

Ati Vegdhāraṇa is one of the cause of Gulma.

2. Mithyākarma (improper manner) in Vegdhāraṇa

१. Vegdhāraṇa - in combination with other Vihāra

शुष्कायोनि – व्यवायकाले रुन्धन्त्या वेगान्... । च.चि.३०/३२

Effect of Vegdhāraṇa on Doṣa, Agni and Srotasa :**1. Table-20 : Effect of Vegdhāraṇa on Doṣa**

क्रमांक	हेतु	दोषप्रकोप	संदर्भ
१	वेगाविधारणोदीरण	वातप्रकोप	अ.सं.नि.१/२४ अ.ह.नि.१/१४
२	वेगोदीरणधारणैः	प्राणवायुदुष्टी	अ.ह.नि.१६/१९
३	रुक्षगुर्वन्नवेगाघातातिवाहनैः	अपानवायुदुष्टी	अ.ह.नि.१६/२७

2. Effect of Vegdhāraṇa on Agni :

.....वेगानां च विधारणात् । दुष्यत्यग्निः.....॥ च.चि.१५/४३-४४

वेगविधारणं हि अग्निनाशनम् । सु.चि.24/102-106

Vegdhāraṇa causes Agniduṣṭī.

3. Effect of Vegdhāraṇa on Srotasa-Vegdhāraṇa is the cause for Prānavaha Srotoduṣṭī. (च.वि.५/१०)

Vegdhāraṇa as a Hetu in GIT diseases (Vegdhāraṇa as a causative factor in diseases)- In the present study Vegdhāraṇa is mentioned as a Hetu in GIT diseases- Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arśa and Pravāhikā.

Table-21 : Vegdhāraṇa and GITdiseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	–	–	–	–
ग्रहणी	वातज-वेगनिग्रह (च.चि.१५/५९)	–	–	–
अतिसार	त्रिदोषज- अतिवेगविधारण (च.चि.१९/८)	वेगविघातैः(सु.उ.४०/५)	वेगरोधात् (अ.स.नि.८/३)	वेगरोध (अ.ह.नि.८/३)
अर्श	सा.हेतु- वेगनिग्रह (च.चि.१४/९)	वेगविधारणात्(सु.नि.२/४)	मूत्रशकृत् वेगधारण (अ.स.नि.७/१२)	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)
प्रवाहिका	–	–	–	–
अजीर्ण	–	संधारणात्(सु.सू.४६/५००)	–	–

Kṣudhā (hunger), Truṣṇā (thirst), Puriṣa (defecation) and Mūtra (urination) are the Adhāraṇīya Vega which are taken for the present study.

1. KṢUDHĀVEGADHĀRAṆA

Meaning of Kṣudhā-

1. Monier Williams –

क्षुद् –I.kshud,cl,I.P.kshodati,to strike against shake,Kshuda,as,m,flour,meal,L. ^[45]

2. Apte Dictionary-

क्षुध् – f. -क्षुधा Hunger; सीदति -क्षुधा Ms.7.134, 4.187-Comp. ^[46]

३. गीर्वाणलघुकोश– क्षुध् (धा) भूक नी.श.२९. ^[47]

४. आयुर्वेदीय शब्दकोश– क्षुध्-स्त्री.,क्षुधा,आहारसेवनेच्छा (च.सू.१६.५)बुभुक्षा (सु.उ.५५.५)

क्षुत्पिपासादिः स्वाभाविको व्याधिः (सु.सू.१.२५(४) , क्षुधा-स्त्री,अन्नभिलाषा (रापरि.८.३०) . ^[48]

The meaning of the Kṣudhā is hunger, desire to eat. Kṣudhā and Truṣṇā are said to be Svābhāvika Vyādhi by Ācārya Suśruta.

Defination of Kṣudhā -

क्षुद् भोक्तुमिच्छा । सु.सू.१.२५ डल्हण

Desire to eat is known as Kṣudhā.

Kṣudhāvega-

1. When a person feels Hungry - (time of appearance of hunger)

क्षुत्सम्भवति पक्वेषु रसदोषमलेषु च । काले वा यदि वाऽकाले सोऽन्नकाल उदाहृतः ॥भा.प्र.पूर्वखण्ड ५/११८

When Rasa, Doṣa and Mala gets properly digested either at the stipulated time or at any other times, then that is the proper time for taking food. ^[49]

2. Bubhukṣhita Lakṣaṇa (Features of a hungry person)-

उत्साहवर्णस्वरदृष्टिहानि विषादकार्श्यश्रमवाग्विकाराः ।

भृशं च पीडा हृदयस्य जन्तोर्ग्लानिर्मुखस्यातिबुभुक्षितस्य ॥ का.स.क.१०/१०

Utsāhahāni (decrease in enthusiasm), Varṇa Swara Dṛuṣṭi Hāni (decrease in complexion, voice, eyesight), Viṣada (despondency), Kārṣya (emaciation), Śrama(tiredness), Vāgvikāra (abnormalities of voice), Hṛdayapīdā (severe pain of cardiac region)and Mukhaglāni (languor of face) are the features of Bubhukṣhita (hungry person). ^[50]

3. Bhuktavata Lakṣaṇa (Features of the person having taken food) :

दृष्टिप्रसादो वचनप्रसिद्धिः स्वरस्य गाम्भीर्यमदैन्यमूर्जाः ।

इष्टेन्द्रियार्थेषु मनः प्रहर्षः स्निग्धं मुखं भुक्तवतश्च विद्यात् ॥का.स.क.१०/२०

Dṛṣṭīprasāda (clarity of eyes / vision), Vacana Prasiddhi (celebrity of words), Svargāmbhīrya (deepness of voice), Adainya (absence of misery), Ūrja (energy), Indriya Mana Praharṣa (happiness/enthusiasm of psyche in all the objects of indriyas) and Snigdhamukha (glistening of face) are the features of Bhuktavata person (person having taken food).^[51]

4. Jīrṇa Āhāra Lakṣaṇa (features of the person having digestion of food) :

उद्गारशुद्धिरुत्साहो वेगोत्सर्गो यथोचितः । लघुता क्षुत्पिपासा च जीर्णाहारस्य लक्षणम् ॥भा.प्र.पूर्वखण्ड ५/११९

Udgārashuddhi (belching without bad smell), Utsāha (enthusiasm to work), Vegotsarga (urges of body appearing properly), Laghutā (feeling of lightness of the body), Kṣutpipāsā (appearance of hunger and thirst) are the signs of Jīrṇa Āhāra (proper digestion of food).^[52]

Āhāra gets properly digested when it is taken by following the rules of Āhāravidhi. The detail description about Āhāra is found in Āyurvedic Classics. It is a very broad concept. The points which are related to the present topic are discussed in this chapter.

Āharavidhī (rules of taking food) :

a) Bhojanakāla (ideal time for food) :

सायं प्रातर्मनुष्याणामशनं श्रुतिबोधितम् । नान्तरा भोजनं कुर्यादग्निहोत्रसमो विधिः ॥भा.प्र.पूर्वखण्ड ५/११६

प्रातः—प्रथमयामादुपरि द्वितीययामादर्वाक् (तदेवोत्तराह) तथा च—

याममध्ये न भोक्तव्यं यामयुग्मं न लङ्घयेत् । याममध्ये रसोत्पत्तिर्यामयुग्माद्वलक्ष्यः ॥ भा.प्र.पूर्वखण्ड ५/११७

1. Food should be taken twice- once in the evening and once in the morning.

2. Food should not be taken (for the second time) within one Yāma (3 hrs after the earlier meal), as process of formation of Āhāra Rasa is taking place during this period.
3. One should not starve for (more than) two Yāma (6 hrs), as it will decrease the strength of the body.^[53]

b) Aṣṭa Āhāra Vidhiviśeṣāyatana –Ācārya Caraka has explained Aṣṭa Āhāra Vidhiviśeṣāyatana in which Upayoktā (the person who consumes the food) is described. (च.वि.१/२४).

The rules of eating are described in Upayogasansthā.^[54]

1. Uṣnam Aśniyāt - The Āhāra should be Uṣna (warm).
2. Snigdham Aśniyāt –The food should be Snigdha (uncours).
3. Mātrāvat Aśniyāt - The food should be taken in suitable quantity according to the Prakṛuti (constitution) and Agni (digestive power) of a person.
4. Jīrṇe Aśniyāt - The food should be eaten only when the previous meal has been digested.
5. Avirudha Vīrya Aśniyāt - Food antagonistic in potency or contrary to each other in action should not be taken.
6. Iṣṭadeṣa Sarvopakaraṇam Aśniyāt - Food should be eaten in a desired place with desired articles.
7. Nātidṛutam Aśniyāt - One should not eat too quickly to ensure the food does not get into the wrong passage, and that the person is able to ascertain the qualities and taste of the food or even detect any defects in the food.
8. Nātilambitam Aśniyāt - One should not eat too slowly, because by eating too slow one does not get satisfaction, eats much, and the food becomes cold and is digested irregularly.
9. Ajalpam Ahasanam Tanmanā Bhuñjīta - One should eat with utmost concentration on the food, while not talking or laughing. By taking food while talking or laughing or with mind elsewhere, a person is inflicted with the same defects as by eating too fast.
10. Ātmānam Abhisamikṣya - One should eat with due consideration to self, i.e., knowing one's own constitution and tastes. He/she should take food that is suitable to him/her.

c) Bhojanottara Karma : (post prandial activities) ^[55]

1. Ācamana (आचमन) - After having food the person should do Ācamana (suck water for gargling).
2. The person should remove the remnants of food remaining in between the teeth slowly with the help of the tooth pick; if not removed these will produce bad smell in the mouth.
3. After removal of remnants Ācamana rite (sipping water) should be done with suitable water. With the moist hands one should touch the eyes.
4. Prarthana (प्रार्थना) - After taking meals the person should pray to Agastya etc.daily for granting happiness. After praying like this,one should move his hands softly over his abdomen and then engage himself in activities which are not tiresome.
5. Dhūma and Tāmbulasevana (धूमतांबुलसेवन) - To pacify the Kapha which gets increased immediately after meals, Dhūmapāna and Tāmbulasevana is indicated.
6. Cankramaṇa (चंक्रमण) - The person after taking food should walk for a hundred feet slowly,that will reduce the heaviness produced after consumption of the food. It gives lightness in the neck,ankles and waist. ^[56]
7. After meals the person may lie down (after lapse of one muhurta of short time) -8 breathings- with his face up; 16 breathings- on right side; 32 breathings on his left side; and afterwards as found convenient. ^[57]
8. Avoid - Vyāyāma (exercise), Vyāyāya (copulation), Dhāvana (running), Yāna (riding), Yudha (fighting), Gīta (singing) and Pāṭha (study) for one muhurta (48 minutes) immediately after meals. ^[58]

Vaishamya of Kṣudhāvega :

a) Aprāptakāla Bhojana (food taken earlier to proper time) -

अप्राप्तकाले भुञ्जानो ह्यसमर्थतनुर्नरः । तांस्तान् व्याधीनवाप्नोति मरणं चाधिगच्छति ॥भा.प्र.पूर्वखण्ड
५/१५३

One who takes food earlier to the proper time will have his body incapable of work and becomes victim of many diseases and even death. ^[59]

b) Atītakāla Bhojana (food taken after the lapse of time)

कालेतीतेनतो जन्तोर्वायुनोपहतेनले । कृच्छाद्विपच्यते भुक्तं न स्याद्भोक्तुं पुनः स्पृहा॥भा.प्र.पूर्वखण्ड
५/१५४

Taking food after the lapse of proper time causes indigestion and person does not desire to take meal again. ^[60]

Kṣudhā Vegadhāraṇa :

Suppression of the urge of Kṣudhā (hunger) is Kṣudhā Vegadhāraṇa

1.Kṣudhā Vegadhāraṇajanya Lakṣaṇa-**Table-22 : Kṣudhā Vegadhāraṇajanya Lakṣaṇa according to Bruhatraī**

वेगधारणजन्य लक्षणो	चरक (नवेगान्धारणीय च.सू.७/२०)	सुश्रुत (सु.सू.उ. उदावर्तप्रतिषेधोपक्रम : ५५/१६)	अष्टांगसंग्रह (अष्टांगसंग्रह सू. रोगानुत्पादनीय ५/११)	अष्टांगहृदय (अ.ह.सू.रोगानुत्पादनीय ४/११)
काश्य	√	—	√	√
दौर्बल्य	√	—		
वैवर्ण्य	√	—		
अङ्गमर्द	√	√	√	√
अरुचि	√	√	√	√
भ्रम	√	√	√	√
तन्द्रा	—	√	—	
कृशता च दृष्टे	—	√	—	
ग्लानि	—	—	√	√
शूल	—	—	√	√ पक्वाशयशूल— अरुणदत्त; कोष्ठशूल— हेमाद्रि

Vaishamya of Kṣudhā Vegadhāraṇa-

1. Ati Kṣudhā Vegadhāraṇa : The lakṣanās described in Ati Langhana can be considered same for Ati KṣudhāVegadhāraṇa.

पर्वभेदोऽङ्गमर्दश्च कासः शोषो मुखस्य च ।

क्षुत्प्रणाशोऽरुचिस्तृष्णा दौर्बल्यं श्रोत्रनेत्रयोः ॥

मनसः संभ्रमोऽभीक्ष्णमूर्ध्वातस्तमो हृदि ।

देहाग्निबलनाशश्च लङ्घनेऽतिकृते भवेत् ॥ च.सू.२२/३६-३७

Ati Langhana causes Parvabheda (pain in the joints), Angamarda (body aches), Kāsa (cough), Mukhaśoṣa (dryness of the mouth), Kṣudhā Pranāśa (complete loss of hunger), Aruchi (anorexia), Truṣṇā (thirst), Daurbalya of Shrotra and Netra (weakness of hearing and vision), Mana Sambrama (confusion of mind), Urdhva Vāta (frequent upward movement of vata), Hrudaya Tama (feeling of darkness in the heart), Deha, Agni and Balanāśa (loss of body weight, loss of digestive power and strength).

2. Mithyākarma (improper manner) in Kṣudhā Vegdhāraṇa- Jalapana instead of taking Āhāra-(drinking of water instead of eating)

तृषितस्तु न चाश्र्नीयात्क्षुधितो न पिबेज्जलम् । तृषितन्तु भवेद् गुल्मी क्षुधितस्तुजलोदरी ॥भा.प्र.पूर्वखण्ड
५/१६०

One who is hungry should not drink water instead of taking food, it will cause Jalodar (Ascitis).^[61]

Effect of Kṣudhāvegadhāraṇa on Agni -

बुभुक्षितो न योऽश्नाति तस्याहारेन्धनक्षयात् । मन्दीभवति कायाग्निर्यथा चाग्निनिरिन्धनः ॥
आहारं पचति शिखी दोषानाहारवर्जितः । पचेद् दोषक्षये धातून्प्राणान्धातुक्षयेऽपि च ॥भा.प्र.पूर्वखण्ड
५/११२-११३

One who does not take food even when he is hungry; his Kāyāgni (digestive power) becomes weak. Doṣa and Dhātukṣaya due to lack of food can cause death of a person.^[62]

Kṣudhā Vegdhāraṇa as a Hetu in GIT diseases (Kṣudhā Vegdhāraṇa as a causative factor in diseases)- In the present study Kṣudhā Vegdhāraṇa is mentioned as a Hetu in GIT diseases - Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arśa and Pravāhikā.

Table-23 : Kṣudhā Vegadhāraṇa and GIT diseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	—	—	—	—
ग्रहणी	—	—	—	—
अतिसार	—	मूत्रादिवेगावरोधैः— डल्हण (सु.उ.४०/५)	—	—
अर्श	—	—	—	—
प्रवाहिका	—	—	—	—
अजीर्ण	—	—	—	उपतप्तेन...क्षुदादिभिः क्षुत्— बुभुक्षा, तदुपतप्तत्वं— कालातिक्रमात् (अ.ह.सू.८/३३(१) हेमाद्रि)

2. TRUṢṆĀVEGADHĀRAṆA

Meaning of the word Truṣṇa :

आयुर्वेदीय शब्दकोश – तृष्णा-स्त्री., लक्षण.पानीयसेवनेच्छा (च.सू.१६/५),पिपासा (च.नि.४.४८)
इच्छाद्वेषस्वरूपा वासना (च.शा.१.३४).

The meaning of the word Truṣṇa is Thirst. It is also known as Pipāsā. ^[63]

Lakṣana of Pipāsita Vyakti (Features of thirsty person) -

ताल्वोष्ठजिह्वागलगण्डशोषः श्रोत्राक्षिदौर्बल्यविषादमोहः ।

स्मृत्यग्निमेधासुखवाक्यहानि र्जिह्वाविवृद्धिश्च पिपासितस्य ॥ का.स.क.१०/११

Tālu Oṣṭa Jivhā Gala Gaṇḍa Śoṣa (dryness of palate, lips, tongue, throat and cheeks), Śrotra Akṣi Daurbalya (weakness of ears and eyes), Viṣāda (despondency), Moha (unconsciousness), Smṛuti Medhā Sukha Vākyahāni (loss of memory, intellect, happiness, speech), Jivhā Vivrudhi (elongation of tongue) are the features of thirsty person. ^[64]

Vidhi of Jalapana-

Jala is one of the most important components for all living beings in the universe. Jala is one of the elements of Pancamahābhūtas. Various references related to Jala, Guṇa of Jala etc. are elaborately described in the Āyurvedic literature. Being a vast topic, only the rules of taking Jala i.e. Jalapānavidhi is explained in the present study.

a) R̥tu (Season) and Jalapana –

ऋते शरन्निदाघाभ्यां पिबेत्स्वस्थोऽपि चाल्पशः ॥ अ.ह.सू. ५/१४

In all the R̥tu (season) except Śarada (autumn) and Gr̥ṣma (summer) one should drink water in a small quantity.

Table-24 : R̥tu (Season) and Jalapāna

क्र.	ऋतु	पेय जल	अंश
१	वसंत ऋतु	सुखाम्बुना.....॥ क्वथितं मुस्तशुंठयंबुसारांभःक्षौद्रवारि वा ।	सु.उ.६४/३६ अ.सं.सू.४/१३
२	ग्रीष्म ऋतु	नारिकेलांबु....।	अ.सं.सू.४/३३
३	वर्षाऋतु	तप्तावरतमभ्मो वा पिबेन्मधुसमायुतम् ॥	सु.उ.६४/९

क्र.	ऋतु	पेय जल	अंदर्भ
		दिव्यं क्वथितकूपोत्थं चौण्डं सारसमेव वा ॥	अ.सं.सू. ४/४३
४	शरद ऋतु	सलिलं च प्रसन्नत्वात् सर्वमेव तदा हितम् ॥ हंसोदक।	सु.उ.६४/१५ अ.सं.सू.४/५५
५	प्रावृट ऋतु	ऽशीताम्बु.....विवर्जयेत् ॥	सु.उ.६४/५०

b) Jalapāna Mātrā (quantity of water)-

1. कुक्षेर्भागद्वयं भोज्यैस्तृतीये वारि पूरयेत् । भा.प्र.पूर्वखण्ड ५/१५५ (१)

Two parts (half) of the stomach should be filled by solid foods, third part (quarter) by water and the fourth part (quarter) should be kept empty for the movement of Vāyu. ^[65]

c) Bhojana and Jalasambandha (effects of drinking water before, during and after meal)-

Table-25 : Bhojana and Jalasambandha (effects of drinking water before, during and after meal)

क्र.	जलपान	अष्टांगसंग्रह (अ.स.सू.६/३९-४०)	अष्टांगहृदय (अ.ह.सू.५/१५)	भावप्रकाश(भा.प्र.दिनचर्या ५/१५८)
१	भोजन पूर्व	काश्य,अग्निमांघ	कृश	काश्य,अग्निमांघ
२	भोजन मध्य	धातुसाम्य,जरणम् सुखम्	सम(धातुसाम्यअरूणदत्त)	अग्निदीपन श्रेष्ठम्
३	भोजन अन्ते	स्थूल,उरस्थ कफवृद्धि	स्थूल	स्थौल्य,कफप्रद

d) Rules about drinking of Jala (water) :

पानीयं न तु पानीयं पानीयेऽन्यप्रदेशजे ।

अजीर्णे क्वथितं चामे पक्वे जीर्णेऽपि नेतरत् ।

शीते विधिरयं तप्ते त्वजीर्णे शिशिरं त्यजेत् ॥ अ.सं.सू.६/१०

तृष्णाक्षुधौ चेद्युगपद्भवेतां तयोर्भिषक् तां प्रथमं चिकित्सेत् ॥ (का.स.क८/२३)

1. If a person travels from place to place he should not consume water from a new place before previously drunk water is digested.
2. Avoid drinking boiled water before digestion of unboiled water and vive-versa.
3. Cold water should never be consumed before complete digestion of hot water. ^[66]

4. When a person is hungry he should eat first also when he/ she is thirsty he should drink water first. ^[67]

e) Alpa Jalapāna Avasthā :

Table-26- Alpa Jalapāna Avasthā (indication to drink small quantity of water)

क्र.	व्याधि	च.चि. २२/५९	सु.सू.४५/४५ -४६	अ.ह. ५/१३-१४	योग- रत्नाकर	भा.प्र.पूर्वखण्डवारिव र्ग७३
१	अरोचक	—	√	—	√	√
२	प्रतिश्याय	√	√	—	√	√
३	प्रसेक	—	√	—	√	√
४	श्वयथु	—	√	√	√	√
५	क्षय	—	√	—	√	√
६	मंदाग्नि	√	√	√	√	√
७	उदर	√	√	√	√	√
८	कुष्ठ	—	√	—	√	√
९	ज्वर	—	√	—	√	√
१०	नेत्रामय	—	√	—	√	√
११	व्रण	—	√	—	√	√
१२	मधुमेह	√	√	—	√	√
१३	गुल्म	√	√	—	—	—
१४	पांडु	√	—	√	—	—
१५	अतिसार	√	—	√	—	—
१६	अर्श	—	—	√	—	—
१७	ग्रहणी	—	—	√	—	—
१८	प्लीहा	√	—	—	—	—
१९	विद्रधि	—	—	—	—	—
२०	अभिष्यंदि	—	—	—	—	—
२१	शोष	—	—	√	—	—

Jalapacana Kāla (Digestion time for warer)-^[68]

पीतं जलं जीर्यति यामयुग्माद्यामैकमात्राच्छतशीतलश्च ।

तदर्धमात्रेण शृतं कदुष्णं पयःप्रपाके त्रय एव कालाः । भा.प्र.वारिवर्गः ८६

1. Jala (water consumed in a usual way) -2 Prahara (6hrs)
2. Śrutasīta Jala (boiled and cooked)-1 Prahara (3hrs)
3. Uṣṇa jala (boiled and used warm)-½ Prahara (1.30 hrs)

Vaishamya of Truṣṇa Vega-

1. Ati Jalapāna (excess intake of water)

अतियोगेन सलिलं तृष्यतोऽपि प्रयोजितम् ।

प्रयाति श्लेष्मपित्तत्व ज्वरितस्य विशेषतः॥

वर्धयत्यामतृट्निद्रा तंद्राध्मानागगौरवम् ।

कासाग्निसादहल्लासप्रसेक श्वास पीनसम् ॥ अ.सं.सू ६/१३

Atyambupāna (Excessive intake of water)-When a person is thirsty and if he drinks excess amount of water it causes-Pitta and Kapha Prakopa, Āma, Truṣṇā, Nīdrā, Tandrā, Ādhmāna, Angagaurava, Kāsa, Agnimāndya, Hrulāsa, Śvāsa and Pīnasa. ^[69]

2. Mithyakarma (improper manner)

1. तृषितस्तु न चाश्रीयात्क्षुधितो न पिबेज्जलम् । तृषितन्तु भवेद् गुल्मी क्षुधितस्तुजलोदरी

॥भा.प्र.पूर्वखण्ड ५/१६०

One who is thirsty should not eat instead of consuming water,as it will cause Gulma. ^[70]

2. Vyāpanna and Paryushita Jala should not be taken. ^[71]

Udakavaha Srotasa :

Tālu and Kloma are the Mulasthāna of Udakavaha Srotasa. (च.वि.५/८).

a) Udakavaha Srotasa Duṣṭī Hetu - Uṣṇa (over exposure to heat), Āma (indigestion), Bhaya (fear), Atiśuṣkānnasevana (excess eating of dry food), Truṣṇā (over drinking of water) are the reasons for Udakavaka Srotoduṣṭī. (च.वि.५/११)

b) Udakavaha Srotasa Duṣṭī Lakṣaṇa - Jivhā, Tālu, Oṣṭa, Kanṭha, Kloma Śoṣa (dryness of tongue, palate, lip, throat), Pipasā Vṛudhī (excessive thirst) are the symptoms seen due to Udakavaha Srotoduṣṭī. (च.वि.५/८).

Truṣṇā Vegadhāraṇa Lakṣaṇa (symptoms occurred due to suppression of thirst)**Table-27 : Truṣṇā Vegadhāraṇa Lakṣaṇa according to Bruhatraī**

तृष्णावेगधारणजन्य लक्षण	चरक (च.सू.७/२१)	सुश्रुत (सु.सू.उ.५५/१६)	अष्टांगसंग्रह (अ. सू. ५/१०)	अष्टांगहृदय (अ.ह.सू. ४/१०)
कण्ठास्यशोष	√	√	√	√
बाधिर्य	√		√	√
श्रमः	√	—	—	—
साद	√	—	अंगसाद	√
हृदि व्यथा	√	√	√	√
सम्मोह	—	—	√	√
भ्रम	—	—	√	√

Truṣṇa Vegdhāraṇa as a Hetu in GIT diseases (Truṣṇa Vegdhāraṇa as a causative factor in diseases) : In the present study Truṣṇa Vegdhāraṇais mentioned as a Hetu in GIT diseases - Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arṣa and Pravāhikā.

Table-28 : Truṣṇa Vegadhāraṇa and GIT diseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	—	—	—	—
ग्रहणी	—	—	—	—
अतिसार	—	मूत्रादिवेगावरोधैः— उल्हण (सु.उ.४०/५)	—	—
अर्श	—	—	—	—
प्रवाहिका	—	—	—	—
अजीर्ण	—	—	—	—

3. PURIṢAVEGADHĀRAṆA

Meaning of the word Purīṣa :

आयुर्वेदीय शब्दकोश-पुरीष-न., अन्नमलः (च.सू.१४.४).^[72]

Purīṣa is the excretory bi-product of the process of digestion of food material and is therefore known as Annamala.

Purīṣadharā Kalā : The Purīṣadharākālā is located in the Antakoṣṭha, starting from the central part of Laghvāntra, the Purīṣadharākālā continues till the end of Laghvāntra, into the Bṛuhadāntra, in its initial part known as Unduka (ceacum). This Unduka is also known as Purīṣadharā Kalā.^[73]

Function of Purīṣa :

१. अवष्टम्भः पुरीषस्य (कार्यम्) । अ.ह.सू.११/५

२. पुरीषमुपस्तम्भं वाय्वाग्निधारणं च । सु.सू.१५/४-२

The important function of Purīṣa is Avaṣṭambha i.e. to help in the sustenance of cycle of life by holding on to the material in the intestines until all the essential elements are absorbed. The function of Purīṣa is also to prevent Agnimāndya and thereby protect or sustain all the bodily elements. Vāgbhata has clarified that for the same reason a Vṛuddhī or increase in the quantity of Purīṣa may be tolerable, but a decrease or Kṣaya in the Purīṣa Pramāṇa causes lot of harm to the body.

Vidhi of Malamūtravisarjana :

The Vidhi of Malamūtravisarjana is described in Āyurveda. Detail description of Malotsarga is given by Aṣṭāṅgasamgraha.^[74] It is as follows-

1. After getting the urge of urination and faeces naturally the person should eliminate them, facing north and if still dark, facing south.
2. It should be done silently, in sitting position, covering the head with cloth.
3. One should attend to the urge without initiating it by force.
4. The places which should be avoided for Malamūtravisarjana are - dirty, centre of the road, heaps of mud or ash, a cowshed, place of assembly, cowdung heap (or pit), ramparts of the city, place set for fire altar, ant-hill, garden, ploughed land, burial ground or funeral place; in front of or on the trees; facing or in front of women,

sacred thing, cow, sun, moon, wind, food, fire and water; and the naked ground (not covered with grass etc.).

5. At times of fear (of being seen by others and also of thieves, wild animals etc.) and persons who are debilitated, may void the excrements as they wish.
6. Urge of elimination being priority, one should not attend to another work.
7. After elimination, the excretory orifices should be touched with a lump of good mud devoid of thorns, it should be washed well with water taken out in a vessel or by hand to remove the adherents and smell, taking care that droplets of water do not fly up during washing.
8. Ācamana (sipping small quantity of water) - should be done after contact with things like excreta etc.
9. After this Dantadhāvana and other activities which are described in daily routine in sequence should be followed.

Purīṣavaha Srotasa :

Pakvāśaya and Sthūla Guda are the Mulasthāna of Purīṣavaha Srotasa (च.वि.५/८).

a) Purīṣavaha Srotasa Duṣṭi Hetu - Sandhāraṇa (suppression of natural urges), Atyāśana (over eating), Ajīrṇādhyāśana (eating before the previous food is not digested), Durbalāgni (impairment of Agni), Kārśya (emaciation) are the Hetus of Purīṣavaha Srotoduṣṭi. (च.वि.५/२१)

b) Purīṣavaha Srotasa Duṣṭi Lakṣaṇa - Specific symptoms of Purīṣavaha Srotoduṣṭi are - Kruchra, Alpa, Sasūla Malapravṛtti (painful, difficult, scanty defecation with sound), Atidrava (excessive watery stool), Atigrathita (hard stool), Atibahu (increased quantity of stool) Malapravṛtti. (च.वि.५/८).

Purīṣavegdhāraṇajanya Lakṣaṇa :

Table - 29 : Purīṣavegdhāraṇajanya Lakṣaṇa according to Bruhatraī

वेगधारणजन्य लक्षणे	चरक (च.सू. ७/८)	सुश्रुत (सु.सू.उ.५५/८)	अष्टांगसंग्रह (अ. सू. ५/४)	अष्टांगहृदय (अ.ह.सू.४/३)
पक्वाशयशूल	√	—		—
शिरःशूल	√	—	√	√
वात अप्रवर्तनम्	√	—	—	—
वर्चो अप्रवर्तनम्	√	√ पुरीषसंग	—	—
पिण्डिकोद्वेष्ट	√	—	√	√

आध्मान	√	—	—	—
आटोप	—	√	—	—
शूल	—	√	—	—
परिकर्तनं	—	√	√	√
उर्ध्ववात	—	√ (बहुद्वारता)	√	√
पुरीषम् आस्याद् निरेति	—	पुरीषम् आस्याद् निरेति	√ (मुखेनविट्प्रवृत्ति)	√ (मुखेनविट्प्रवृत्ति)
प्रतिश्याय	—	—	√	√
हृययस्योपरोधनम्	—	—	√	√

Vyādhi and Purīṣavegdhārana : Vegas which are not clearly described in Vyādhi are referred from Caraka Samhitā Sūtrasthan - 7 (Navegānadhārāṇīya Adhyāya).

Table-30 : Purīṣavegdhārana and Vyādhi

व्याधी	वेगधारण	अंदर्भ	व्याधी	वेगधारण	संदर्भ
शोणित गुल्म	पुरीष	च.नि. 3/13	उरुस्तंभ	पुरीष	च.चि.27/8
कुष्ठ	पुरीष	च.चि.7/8	वातव्याधी	पुरीष	च.चि.28/17
शोष	पुरीष	च.नि. 6/3	उदावर्तीनी योनिव्यापद	पुरीष	च.चि.30/25
राजयक्ष्मा	पुरीष	च.चि.8/20	स्तन्यरोग	पुरीष	च.चि.30/233
उदर (वातज)	पुरीष	च.चि.13/23	मूत्रजठर	पुरीष	च.सि. 9/29
अर्श	पुरीष	च.चि.14/9	अतिसार (सन्निपातज)	पुरीष	च.चि.19/8
ग्रहणी	पुरीष	च.चि.15/43	उदावर्त	पुरीष	च.चि.26/5
ग्रहणी (वातज)	पुरीष	च.चि.15/59	हृद्रोग	पुरीष	च.चि.26/77
कास (क्षयज)	पुरीष	च.चि.18/24	प्रतिश्याय	पुरीष	च.चि.26/104
शिरोरोग	पुरीष	च.सू. 17/8	अलसक	पुरीष	च.वि.2/12
गर्भोपघातकर	पुरीष	च.शा.8/21			

Purīṣa Vegdhārana as a Hetu in GIT diseases (Purīṣa Vegdhārana as a causative factor in diseases) : In the present study Purīṣa Vegdhārana is mentioned as a Hetu in GIT diseases- Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arśa and Pravāhikā.

Table-31 : Purīṣa Vegadhāraṇa and GIT diseases according to Bruhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	–	–		–
ग्रहणी	–	–		–
अतिसार	–	–	वेगरोधात् (अ.स.नि.८/३)	–
अर्श		विट् वेगधारणात्– डल्हण (सु.नि.२/४)	मूत्रशकृत् वेगधारण (अ.स.नि.७/१२)	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)
प्रवाहिका	–	–		
अजीर्ण	–	–		

4. MŪTRAVEGADHĀRAṆA

There are eight Parikṣya Bhāva described by Yogaratnākara. Nādi, Mūtra, Mala, Jivhā, Śabda, Sprśa, Dṛuk and Ākṛuti. A Vaidya who does't examines the Parikṣya Bhāva properly, lays the patient in life threatening condition.

Habit of Mūtravegadhāraṇa can lead to many diseases. People are not aware of the concept of Vegadhāraṇa. Therefore they avoid this natural urge when they are busy in their work affecting their health.

Meaning of the word Mūtra :

१. आयुर्वेदीय शब्दकोश-मूत्र- न.मल (च.सू.१.६९) अन्नमल (च.सू.१४.४; चशा.७.१५) मूत्रशकृती, अन्नमलौ (अ.ह.सू.१.१३), मूत्रशकृत्स्वेदाः इति त्रयो मला (अ.सू.१.३१) अन्नक्लेदनिर्वाहणेन मूत्रम् (अ.सू.१९.५). [75]

संहिता-

१. तत्राहारप्रसादाख्यो रसः किट्ट च मलाख्यमभिनिवर्तते । किट्टात् स्वेद मूत्रपुरीषः पुष्यन्ति ॥

च.सू.२८/१४

२. किट्टमन्नस्य विण्मूत्रम् ॥ च.चि.१५/१८

३. विण्मूत्रम् आहारमलः । सु.सू.४६/३५

Mūtra is an Annamala (waste product).

Guna of Mutra (Characteristics of Urine) :

मूत्रेऽम्बुशिखिनोर्गुणः । सु.सू.१५/१४ डल्हण

Out of the five basic elements, Jala (water) and Teja (energy) elements are predominant in urine.

Function of Mūtra :

मूत्रस्य क्लेदवाहनम् । अ.ह.सू.११/५

Function of Mūtra is to expel the Kleda (waste material) out of the body.

Mūtravaha Srotasa :

Basti, Medhṛa and Vankṣana are the the Mulasthāna of Mūtravaha Srotasa. (च.वि.५/८, सु.शा.९/१२)

a) Mūtravaha Srotasa Duṣṭi Hetu : The Mūtravaha Srotasa is affected due to Mūtrita Udaka Bhakṣya, Strī sevana (consumption of water, food and coitus during the urge for micturition), Mūtranigraha (suppression of the urge of micturition) especially in persons who are Kṣīṇa and Abhikṣakta (suffering from wasting and trauma).

b) Mūtravaha Srotasa Duṣṭi Lakṣaṇa : The symptoms of Mūtravaha Srotoduṣṭi include Atisṛuṣṭa (excessive excretion), Atibaddha (excessive obstruction or suppression of urine), Prakupitam (vitiated), Alpālpa (diminished), Abhikṣṇam (frequent), Bahalam (thick urine), Saśūlam (with pain).

Mūtravegdhāraṇajanya Lakṣaṇa :

Table-32 : Mūtravegdhāraṇajanya Lakṣaṇa according to Bruhatraī

वेगधारणजन्य लक्षण	चरक (च.सू.७/६)	सुश्रुत (सु.सू.उ.५५/९-१०)	अष्टांगसंग्रह (अ.सं. सू. ५/५)	अष्टांगहृदय (अ.ह.सू.४/४)
बस्तिशूल	√	—	√	√
मेहनशूल	√	—	√	√
मूत्रकृच्छ्र	√	√	—	—
शिरोरुजा	√	—	—	—
विनाम	√	—	—	—
वक्षणानाह/वेदना	√	—	√	√
अङ्गभङ्ग	—	—	√	√
अश्मरी	—	—	√	√

Vyādhi and Mūtravegdhāraṇa : Vegas which are not clearly described in Vyādhi are referred from Caraka Samhitā Sūtrasthan- 7 (Navegānadhāraṇīya Adhyāya).

Table - 33 : Mūtravegdhāraṇa and Vyādhi

व्याधी	वेगधारण	संदर्भ	व्याधी	वेगधारण	संदर्भ
शोणित गुल्म	मूत्र	च.नि. 3/13	उरुस्तंभ	मूत्र	च.चि.27/8
कुष्ठ	मूत्र	च.चि.7/8	वातव्याधी	मूत्र	च.चि.28/17
शोष	मूत्र	च.नि. 6/3	उदावर्तीनी योनिव्यापद	मूत्र	च.चि.30/25
राजयक्ष्मा	मूत्र	च.चि.8/20	स्तन्यरोग	मूत्र	च.चि.30/233
उदर (वातज)	मूत्र	च.चि.13/23	मूत्रजठर	मूत्र	च.सि. 9/29
अर्श	मूत्र	च.चि.14/9	मूत्रातीत	मूत्र	च.सि. 9/36

ग्रहणी	मूत्र	च.चि.15/43	वाताष्ठीला	मूत्र	च.सि. 9/36
ग्रहणी (वातज)	मूत्र	च.चि.15/59	वातबस्ति	मूत्र	च.सि. 9/36
कास (क्षयज)	मूत्र	च.चि.18/24	वातकुण्डलिका	मूत्र	च.सि. 9/39
अतिसार (सन्निपातज)	मूत्र	च.चि.19/8	उदावर्त	मूत्र	च.चि.26/5
अलसक	मूत्र	च.वि.2/12	हृद्रोग	मूत्र	च.चि.26/77
गर्भोपघातकर	मूत्र	च.शा.8/21			

Vaiṣamya of Mūtra Vegdhāraṇa-

1. Mūtra Vegdhāraṇa in combination of other Vihāra

मूत्रकृच्छ्र- मूत्रितस्य व्यवायात्। च.सि.9/32

Sexual intercourse with suppression of Mūtra Vega is one of the cause for Mutrakruṣṭra.

2. Āhara and Mūtra Vegdhāraṇa

मूत्रवह स्रोतस दुष्टी- मूत्रितोदकभक्ष्यस्त्रीसेवनान्मूत्रनिग्रहात् । च.वि.5/20

The Mūtravaha Srotas is affected due to the consumption of water, food and coitus during the urge for micturition, suppression of the urge of micturition specially in persons who are suffering from wasting and trauma.

Mūtra Vegdhāraṇa as a Hetu in GIT diseases (Mūtra Vegdhāraṇa as a causative factor in diseases) -

In the present study MūtraVegdhāraṇa is mentioned as a Hetu in GIT diseases - Ajīrṇa, Amlapitta, Grahaṇī, Atisāra, Arsa and Pravāhikā

Table-34 : Mūtra Vegdhāraṇa and GIT diseases according to Burhatraī

व्याधी	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
अम्लपित्त	—	—	—	—
ग्रहणी	—	—	—	—
अतिसार	—	मूत्रादिवेगावरोधैः- डल्हण(सु.उ.४०/५)	वेगरोधात् (अ.स.नि.८/३)	—
अर्श	सा.हेतु-मूत्रपुरीष वेगनिग्रह (च.चि.१४/९)	मूत्रवेगविधारणात्- डल्हण(सु.नि.२/४)	मूत्रशकृत् वेगधारण (अ.स.नि.७/१२)	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)
प्रवाहिका	—	—	—	—
अजीर्ण	—	—	—	—

3. GIT DISEASES - ĀYURVEDĪC PERSPECTIVE

a) Āyurvedic Concept of GIT

The concept of Srotasa is discussed elaborately in Āyurveda. Body is composed of numerous Srotasa which have significant role in the maintenance of the equilibrium of the body elements. They are responsible for the maintenance of health as well as for the diseased condition. The Srotasa are derivatives of Pancamahābhūtās, especially Ākāṣa Mahābhūta. Physiologically Srotasa is the channel through which different elements undergo transformation, circulation and transportation.

स्रोतांसि खलु परिणाममापद्यमानानां धातूनामभिवाहीनि भवन्त्ययनार्थेन ॥ च.वि.५/३

खलुशब्दो हेतौ । परिणाममापद्यमानानामिति पूर्वपूर्वरसादिरुपतापरित्यागेनोत्तरोत्तररक्तादिरुपतामापद्यमानानाम् । अयनार्थेनेतिवचनान्न स्थिराणां धातूनामभिवाहीनि भवन्ति स्रोतांसि, किंतु देशान्तरप्रापणेनाभिवाहीनि भवन्ति । चक्रपाणि.

Carakācārya has laid more stress to understand and explain the concept of Srotasa. He has mentioned Srotoduṣṭi Hetu (causative factor), Srotoduṣṭi Lakṣaṇa (symptoms) and line of treatment of Srotoduṣṭijanya Vikara in detail. In Bṛuhatraī Srotasās are described with their Mulasthāna (origin). There are innumerable Srotasa in human body. Among them 13 Srotasas are grossly described. From these 13 the three which transfer life support substances from outside to inside are called Prānavaha (carrying vital energy), Uda-kavaha (carrying body water) and Anna-vaha Srotasa (carrying food nutrients). Another three, perform gross excretory functions and remove faeces, urine and sweat and are called as Purīṣavaha Srotasa, Mūtravaha Srotasa and Sveda-vaha Srotasa respectively. The remaining seven Srotasās are of Dhātus (tissues).

Among them Anna-vaha Srotasa and Purīṣavaha Srotasa together can be correlated to Gastro Intestinal Tract (GIT). The first half of the alimentary canal represents the Anna-vaha Srotasa while the latter half is the representative of the Purīṣavaha Srotasa.

1. Anna-vaha Srotasa : This Srotasa of the body is the channel that carries the food undergoing metabolism. The food remains in this Srotasa till it is ready for Sārakīṭṭa Vibhajana.

a) Mulasthāna of Annavaha Srotasa :

१. अन्नवहानां स्रोतसामामाशयो मूलं वामं च पार्श्वं.....। च.वि.५/८
२. अन्नवहे द्वे, तयोर्मूलमामाशयोऽन्नवाहिन्यश्च धमन्यः....। सु.शा.९/१२

According to Caraka, Āmāśaya (Stomach) and Vāmapārśva (left side of trunk) are the Mulasthāna (origin) of Annavaha Srotasa. Whereas Ācārya Suśruta accepts Āmāśaya and Annavāhini Dhamanī as a Mulasthāna of Annavaha Srotasa.

b) Relation of Annavaha Srotasa and Doṣa :**Table-35 : Annavaha Srotasa and Doṣa**

क्र.	दोष	कर्म	संदर्भ
१	प्राणवायु	अन्नप्रवेशकृत्	अ.ह.सू.१२/५
२	समानवायु	अन्नं गृह्णाति पचति विवेचयति मुञ्चति	अ.ह.सू.१२/८
३	पाचकपित्त	पचत्यन्नं विभजते सारकिटटौ पृथक् तथा	अ.ह.सू.१२/११
४	रंजकपित्त	आमाशयाश्रयं पित्तं रज्जकं रसरज्जनात्	अ.ह.सू.१२/१३
५	बोधक कफ	बोधको रसनास्थायी	अ.ह.सू.१२/१७
६	क्लेदक कफ	यस्त्वामाशयसंस्थितः। क्लेदकः सोऽन्नसङ्घक्लेदनात्....।	अ.ह.सू.१२/१७
७	अवलंबक कफ	हृदयस्यान्नवीर्याच्च तत्स्थ एवाम्बुकर्मणा	अ.ह.सू.१२/१५

c) Annavaha Srotasa and Agni : Every Srotasa has Agni in itself, may it be Dhātvaṅni or Bhūtāgni. All these are derivatives of Jāṭharāgni. Hence physiology of Annavaha Srotasa is dependent on the condition of Agni. Jāṭharāgnimāndya affects whole body but the pathology starts from Annavaha Srotasa.

d) Annavaha Srotasa and Avasthāpāka : Food ingested undergoes many changes through the action of Jāṭharāgni. It occurs at three different levels, Madhura Avasthāpāka, Amla Avasthāpāka and Katu Avasthāpāka. Among these three the first two Avasthāpākās are attributed to the Annavaha Srotasa. Madhura Avasthāpāka takes place in Āmāśaya with the help of Kledaka Kapha, while Amla Avasthāpāka occurs in Grahāṇī.

e) Duṣṭi Hetu of Annavaha Srotasa :

अतिमात्रस्य चाकाले चाहितस्य च भोजनात् ।

अन्नवाहीनि दुष्यन्ति वैगुण्यात् पावकस्य च ॥ च.वि.५/१२

The causative factors that vitiate Annavaha Srotasa are Atimātrā Bhojana (overeating), Akāla Bhojana (untimely eating), Ahita Bhojana (unwholesome food) and Pāvaka Vaigunya (impairment of Agni).

f) Duṣṭī Lakṣaṇa of Annavaha Srotasa :

१.....प्रदुष्टानां तु खल्वेषामिदंविशेषविज्ञानं भवति; तद्यथा-अनन्नाभिलषणमरोचकविपाकौ छर्दिं चक्ष्वाऽन्नवहान्यस्य स्रोतांसि प्रदुष्टानीतिविद्यात् । च.वि.५/८

२....तत्रविध्दस्याध्मानं शूलोऽन्नद्वेषश्छर्दिः पिपासाऽऽन्ध्यं मरणं च ...। सु.शा.९/१२

Anannābhilāṣā (lack of appetite), Arocaka (anorexia), Avipāka (indigestion), Chardi (vomiting), Śūla (pain), Pipāsā (thirst), Āndhya (loss of vision), Maraṇa (death) are the symptoms produced due to Annavaha Srotoduṣṭī.

g) Diseases of Annavaha Srotasa :

Agnimāndya is the root cause for all diseases. The first effect of Agnimāndya can be observed on Annavaha Srotasa. Therefore it can be said that each and every disease has the Duṣṭī of Annavaha Srotasa primarily. There are some diseases in which the placement of pathogenesis is mainly in Annavaha Srotasa. Ajīrṇa, Alasaka, Visucika, Chardi, Amlapitta, Śūla, Parināmsūla, Grahaṇī, Ādhamāna, Udāvarta, Arocaka, Bhasmaka, Krumi etc. Diseases of Pitta and Kapha are mostly related to Annavaha Srotasa. Āmāśaya is the main organ in this system which is the important site for Kapha and Pitta. These two Doṣas along with Vata are responsible for digestion in Āmāśaya. Therefore they are capable to vitiate Annavaha Srotasa. Among these diseases Ajīrṇa, Amlapitta and Grahaṇī are undertaken for the present study.

2. Purīṣavaha Srotasa : Maladharākālāforms a major part of this Srotasa. Purīṣavaha Srotasa, not only functions for the transportation of Purīṣa but also for its formation, assimilationand excretion (Sāra Kitta Vibhajana). Thus this system participates in the formation of digestive system along with Annavaha Srotasa.

a) Mulasthāna of Purīṣavaha Srotasa :

१. पुरीषवहानां स्रोतसां पक्वाशयो मूलं स्थूलगुदं च.....। च.वि.५/८

२. पुरीषवहे द्वे, तयोर्मूलं पक्वाशयो गुदं च.....। सु.शा.१०/१२

Regarding the Mulasthāna, Pakvāśaya is the organ accepted as a Mulasthāna by all Ācāryās.

Stūla Guda – this organ forms the end part of Purīṣavaha Srotasa which is responsible for the excretion of Purīṣa.

b) Relation of Purīṣavaha Srotasa and Doṣa-

Table-36 : Purīṣavaha Srotasa and Doṣa

क्र.	दोष	कर्म	संदर्भ
१	समानवायु	अन्नं गृह्णाति पचति विवेचयति मुञ्चति	अ.ह.सू.१२/८
२.	अपानवायु	शुक्रार्तवशक्न्मूत्रगर्भनिष्क्रमणक्रियः	अ.ह.सू.१२/९
३	पाचकपित्त	पचत्यन्नं विभजते सारकिटटौ पृथक् तथा	अ.ह.सू.१२/११

c) Purīṣavaha Srotasa and Agni : Sāra Kitta Vibhajana is the basic process required for proper formation of faeces. This is directly dependent upon the condition of Agni. In the physiological and pathological aspect of Purīṣavaha Srotasa, Agni is the most important factor.

d) Purīṣavaha Srotasa and Avasthāpāka : Katu Avasthāpāka takes place in Pakvāśaya. When food gets properly digested then the stage of Sara Kitta Vibhajana starts in Purīṣavaha Srotasa. After the entry of Kitta part in the channel, it gets processed by Apāna Vāyu. Absorption of extra water and solidification also takes place in this stage.

e) Duṣṭi Hetu of Purīṣavaha Srotasa :

संधारणादत्यशनादजीर्णाध्यशनात्तथा ।

वर्चोवाहीनि दुष्यन्ति दुर्बलाग्नेः कृशस्य च ॥ च.वि.५/२१

Sandhāraṇa (suppression of natural urges), Atyāśana (over eating), Ajīrṇa Adhyaśana (eating before the previous food is not digested), Daurbalāgni (impairment of Agni), Kārśya (emaciation) are the Hetus of Purīṣavaha Srotoduṣṭi.

f) Duṣṭi Lakṣaṇa of Purīṣavaha Srotasa :

१....प्रदुष्टानां तु खल्वेषामिदंविशेषविज्ञानं भवति; तद्यथा-कृच्छेणाल्पाल्पं

सशब्दशूलमतिद्रवमतिग्रथितमतिबहु चोपविशन्तं दृष्ट्वा पुरीषवहान्यस्य स्रोतांसि प्रदुष्टानीति विद्यात् ।

च.वि.५/८

२.....तत्रविद्धस्यानाहो दुर्गन्धता ग्रथितान्त्रता च...। सु.शा.१०/१२

Specific symptoms of Purīṣavaha Srotoduṣṭī are - Kṛuchra, Alpa, Saśūla Malapravṛutti (scanty stools, painful defecation with sound), Atidrava (excessive watery stool), Atigrathita (excessive hard stool), Atibahu (stools in excess quantity) Malapravṛutti.

g) Diseases of Purīṣavaha Srotasa :

Many diseases have symptoms related to faecal matter or act of defecation. Mala Parikṣaṇa is one of the Rogī Parikṣā described in Āyurveda. It should be done in every patient suffering from any disease. The diseases in which the pathogenesis takes place in Purīṣavaha Srotasa are Atisāra, Pravāhikā, Ajīrṇa, Grahaṇī, Alasaka, Visucika, Adhoga Amlapitta, Arśa, Kṛumi, Bhagandara, Udāvarta, Vidradhi, Gudabhrāṇa, Baddhagudodara etc.

From the above references it is clear that the diseases of Vāta are more related to Purīṣavaha Srotasa. Pakvāśaya is the Mulasthāna of Purīṣavaha Srotasa which is also the main site of Vāta Doṣa. Among these Vyādhis Arśa, Atisāra and Pravāhikā are taken for the present study.

3. Digestion according to Āyurveda :

The root cause of all diseases lies within the process of digestion. The points which are important in the process of digestion are mentioned here. The process of digestion is described in Grahaṇī Adhyāya. (च.चि.१५/५६-५७). Grahaṇī is the main site of Agni.

Jāṭharāgni is most important because it is the initiator of digestive process and it strengthens the digestive ability of other Agnis. Five Bhūtāgnis transform the Pāncabhautika components of Āhārarasa created by Jāṭharāgni into different structures of the body. Seven Dhātvāgnis are responsible for nourishment of seven Dhātu (tissues elements).

This Āhārarasa undergoes into three Avasthāpāka Madhura, Amla and Katu respectively. Doṣanirmīti take place in these stages.

Madhura Avasthāpāka – Kaphanirmīti, which nourishes Kapha.

Amla Avasthāpāka-Pitta Udīraṇa, it nourishes Pitta.

Katu Avasthāpāka – produces Vāta which nourishes the Vāta Dosha in the Śarīra by Rukṣadi Guṇa.

Nutrients get absorbed with the help of Vyanavāyu. Waste products are excreted out by Apānavāyu through Mūtra (urine), Puriṣa (feces) and Sveda (sweat).

All these processes happen in a proper manner when the Agnibala is Uttama and the proper time is given for the digestion. After observing the Lakṣaṇa of Jīrṇa Āhāra, next meal should be consumed. Lakṣaṇa of Jīrṇa Āhāra are-

प्रसृष्टे विण्मूत्रे हृदि सुविमले दोषे स्वपथगे ।

विशुद्धे चोद्वारे क्षुद्रुपगमने वातेऽनुसरति ॥

तथाऽग्नावुद्रिते विशदकरणे देहे च सुलघौ ।

प्रयुञ्जीताहारं विधिनियमितं, कालः स हि मतः ॥ अ.ह.सू.८/५५

1. Prasruṣṭa Vinmūtra - After the elimination of faeces and urine.
2. Hṛdayasuvimala - when the mind is clean (devoid of emotions).
3. Doṣa Svapathage - when the Doṣās are moving in their natural paths (functioning normally).
4. Viśudha Udgāra - when belching is pure (without any foul smell or taste).
5. Kṣud Upagama - when hunger is well manifested.
6. Vātānusaraṇa - when the flatus is moving downwards easily.
7. Agni Udrikta - when the digestive activity is keen.
8. Viśada Deha - when the sense organs are clear (functioning).
9. Laghutā - when the body is light.

Food should be consumed by following the rules and procedures of taking food. Some conditions which affect the process of digestion are Samaśana, Viśamāśana and Adhyaśana.

पथ्यापथ्यमिहैकत्र भुक्तं समशनं मतम् ।

विषमं बहु वाऽल्पं वाऽप्यप्राप्तातीतकालयोः ॥

भुक्तं पूर्वान्नशेषे तु पुनरध्यशनं मतम् ॥

त्रीण्यप्येतानि मृत्युं वा घोरान् व्याधीन्सृजन्ति वा । च.चि.१५/२३५-३७

Consuming Pathya (wholesome) and Apathya (unwholesome) foods together in diet is known as Samaśana. Viśamāśana is defined as taking food either in excess quantity or very little quantity and also if taken before or after appropriate time. Adhyaśana is having food even though previously eaten food is not yet digested. All the above three are causes for death or give rise to serious disorders.

Digestive system works at its optimum by correct lifestyle and correct quantity and quality of food as per the individual. When the Agni is affected by incorrect lifestyle and eating habits it ultimately affects the digestive process.

Āhāra, Vihāra and Ācaraṇa are the important aspects for maintaining the Agnibala. In Vihāra, following Dinacaryā, Rutucaryā, not suppressing the Vega (natural urges), and yearly Śodhana are important to conserve Agnibala.

When a person follows all the rules of Āhāra and Vihāra, he gets the benefits like good complexion, strength, health, enthusiasm etc. which is suggestive of good Agnibala and proper functioning of Grahaṇī.

b] Ayurvedic Concept of Hetu :

Meaning of the word Hetu :

1. तत्र व्याधिजनकं निदानं हेतुः, व्याधिबोधकं च कारणं निदानपूर्वरूपरूपोपशयसंप्राप्तिरूपम् । च.नि.1/2 चक्रपाणि
2. निदानशब्दो जनककारणवचन... । च.नि.1/2 चक्रपाणि
3. सेतिकर्तव्यताको रोगोत्पादकहेतुर्निदानम् । मा.नि.

The reason for the origination of a disease is called as Nidana.

Synonyms :

इह खलु हेतुर्निमित्तमायतनं कर्ता कारणं प्रत्ययः समुत्थानं निदानमित्यनर्थान्तरम् । च.नि.1/3

Nimitta, Āyatana, Karta, Kārana, Pratyaya, samuthana are the synonyms used for Nidāna.

Types :

निदानं द्विधा-रोगाणामासन्नं विप्रकृष्टं च । तत्रासन्नं यथा-वातादयः प्रकुपिताः । विप्रकृष्टं कारणं यथा-
वातादिचयप्रकोपकरमाहारविहारदि । अ.ह.नि.1/2 अरुणदत्त

There are two types of Hetu-

Āsanna- Vātādi Dosa

Viprakraushta- Āhāra and Vihāra.

तन्निविधम्-असात्म्येन्द्रियार्थसंयोगः, प्रज्ञापराधः, परिणामश्चेति ॥ च.नि.1/3

There are three types of Hetu - Asātmendriyārtha Samyog, Pradnyāparādha and Parinām.

Lifestyle disorders are currently one of the most important issues in the health sector. These diseases affect a bulk of the global population. To avoid them, their causative factors must be analyzed. Improper lifestyle is one such causative factor which is affecting the individual's health.

According to Āyurveda, vitiation of Doṣa is the only causative factor of any disease.

दोषा एव हि सर्वेषां रोगाणामेककारणम् । अ.ह.सू. १२/३२

To elaborate this more appropriately, Carakācārya says that,

सर्व एव निजा विकारा नान्यत्र वातपित्तकफेभ्यो निर्वर्तन्ते । च.सू. १९/५

Vāta, Pitta and Kapha Doṣa are the only cause of all the Nija Vikāra. The vitiation of Doṣa occurs due to Hetu Sevana. While analyzing the Hetus, one must actually analyze their properties i.e. Guṇa (Anśāṇśakalpanā). Anśāṇśakalpanā of Vāta is given in the following Sūtra -

तत्र दोषाणामंशांशविकल्पो यथा – वाते प्रकुपितेऽपि कदाचिद्वातस्य शीतांशो बलवान् भवति,
कदाचिल्लघ्वंशः, कदाचिदूक्षांशः, कदाचिल्लघुरुक्षांश इत्यादि; एवंपित्तकफयोरप्युदाहार्योऽंशांशविकल्पः;
अयं चांशांशबलविकल्पो दोषाणां शीतादिगुणोद्भूतहेतुभेदाद्भवति ॥ च.नि.१/११(५)

The above statement is applicable to all the Doṣās, Dhātus and Malās by Atideṣa Tantrayukti.

The knowledge of Hetu (Āhāriya, Vihāriya and Mānasa) is very important for a Vaidya to determine the exact Samprāpti of that disease which is occurred due to vitiation of Doṣa. It helps in Nidāna Parīvarjana as well as Cikītsā (Hetu Guṇa Viparita and thus Doṣa Guṇa Viparita) of that disease. Understanding any disease on the basis of Anśaṅśakalpanā, helps to gain in depth view of the disease and exact pin pointed solution for it.

There are many types of Hetu given in the Āyurvedic texts. The Vihāraja factors which are taken for the present study can be categorized as-

1. Santarpanjanya and Apatarpanjanya Hetu :

जातजाः स्वापचारात्सन्तर्पणजा अपतर्पणजाश्च । अ.स.सू. २२/२

Jātaja Roga are those which are produced due to Santarpanaja and Apatarpanaja Hetu. The reason is Sva Apacāra i.e. occurred due to one self's mistake.

The factors which are taken for the present study are Divāsvāpa, Rātrijāgaraṇa, Vyāyāma (Ativyāyāma, Avyāyāma, and improper Vyāyāma) and Vegadhāraṇa. These factors turn into Hetus when they are done regularly for a longer duration. These Hetus are the reasons for Doṣaprakopa which is the main cause for the diseases. Among these factors- Divāsvāpa and Avyāyām are - Santarpanaja Hetu.

Rātrijāgaraṇa, Ativyāyāma and Vegadhāraṇa are -Aptarpanja Hetu.

Santarpanaja Hetus mainly lead to Kaphajaa Vikāra. Apatarpanjanya Hetus lead to Vātaja Vikāra. The GIT diseases which are taken for the present study are Ajīrṇa, Amlapitta, Grahāṇī, Arśa, Atisāra and Pravāhikā. The Samprāpti of these diseases could be due to Santarpanaja or Apatarpanaja Hetu.

2. Svatantra and Paratantra Hetu -

व्याधिदोषानपि स्वतन्त्रपरतन्त्रान्विद्यात् । अ.ह.सू. १२/६०(१) हेमाद्रि

According to Hemādrī Hetus are also of two types Svatantra and Paratantra. Thus the physician is required to examine the same with absolute awareness in each and every disease.

तांल्लक्षयेदवहितो विकुर्वाणान् प्रतिज्वरम् । अ.ह.सू. १२/६२

Considering the factors which are taken for the present study following things can be said with the help of Ūhana Tantrayukti.

a) Divāsvāpa - It is a Svatantra Hetu for Kapha and Pitta Prakopa due to its Samāna Guṇa.

अतिस्नेहात्तु मन्देऽग्नौ.....। च.चि.१५

Increased Snighda Guṇa in the body due to Divāsvāpa results in Agnimāndya.

मन्देऽग्नौ मलिनैर्भुक्तैरपाकादोषसंचयः । च.चि.१३/१०

Agnimāndya causes Tridoṣa Prakopa. It is a Paratantra Hetu for Doṣaprakopa. Due to Agnimāndya there is Āmanirmitī and it gets turned into Āmviṣa. When this Āmviṣa gets Sansṛuṣṭa (mixed) with Kapha it causes Prameha, Sthaulya etc. If Pitta is Sansṛuṣṭa with Āmaviṣa it causes Mukhapāka, Amlapitta etc. When this Āmaviṣa is Sansṛuṣṭa with Vāta it causes Vātavikāra. This is Paratantra Vātaprakopa. In this manner the three Doṣas get vitiated. Here Agniduṣṭī is the Paratantra Hetu for Tridoṣa Prakopa.

Similar Phenomenon occurs in case of Avyāyāma.

b) Rātrijāgaraṇa - Rātrijāgaraṇa causes Vātaprakopa (Svatantra) due to Samāna Guṇa.

रौक्ष्यान्मन्दे.....। च.चि.१५/

Rātrijāgaraṇa causes Rukṣatā in the body which results in the Vātaprakopa. The result of Vātaprakopa is Viṣamāgni. Viṣamāgnī affects digestion. The food sometimes gets digested properly and sometimes doesn't resulting in Āmanirmitī. Agni is Āmāvṛtta. This Agniduṣṭī is Paratantra Hetu for Doṣaprakopa.

Similar Phenomenon occurs in case of Ativyāyāma.

c) Vegadhāraṇa : It causes Vātaprakopa. Mala and Mūtravegadhāraṇa cause Agniduṣṭī.

उदावर्तत् तु मंदाऽग्नौ.....। च.चि.१५/ २०७

The knowledge of Hetus on basis of Svatantra or Paratantra is important for deciding the treatment of disease.

c] GIT Diseases- According to Ayurveda

Nidānapancaka of the diseases is elaborately described in the Āyurveda. In this chapter Hetu in the form of Vihāraja factors which are taken for the present study and GIT diseases are described.

Out of many GIT diseases Ajīrṇa, Amlapitta, Grahaṇī, Arśa, Atisāra and Pravāhikā are selected for this observational study. Reference of Ajīrṇa and Amlapitta are found in Grahaṇī chapter of Caraka Samhitā. Description of Pravāhikā is given under Kaphaja Atisāra. Agnimāndya is responsible for manifestation of Arśa, Atisāra and Grahaṇī.

The causes of Agnimāndya are thoroughly listed in Grahaṇī Cikītsā ^[76]

They are - Abhojana (excessive starvation), Ajīrṇabhojana (indulging in food intake although there is indigestion), Atibhojana (overeating), Viṣamāśana (irregular habit of eating), Asātmya (eating unwholesome food), Atiguru (indulging in food which is heavy to digest), Śīta (food which is having cold qualities or eating chilled or frozen items), Rukṣa (food which is dry in nature), Sanduṣṭa Bhojana (contaminated food), Vireka, Vamana Sneha Vibhrama (perversion of procedures like Vamana, Virecana and Sneha), Vyādhik Arśana (emaciation of body due to disease), Deśa, Kāla, Rūtu Vaiṣamya (sudden migration to unsuitable place and of time and of season), Vegavidhāraṇa (suppression of natural urges) are the causes for vitiation of Agni. This vitiated Agni is unable to digest even the light food. The other reasons of Agnimāndya are also given in the Grahaṇī Chikitsa Adhyāya. They are as follows-

1. Agnimāndya due to Rukṣa Guṇa :

रौक्ष्यान्मन्दे....। च.चि.१५/२०५

Regular consumption of RukṣaĀhāra and Vihāra leads to increase in Rukṣa Guṇa of Śarīrabhāva which vitiates Vāta Doṣa. Due to Vātaprakopa Agni is Viṣama which does not digest food properly.

2. Agnimāndya due Atisneha (excessive intake of unctuous food) :

अतिस्नेहात्तु मन्देऽग्नी....। च.चि.१५/२०६

Excessive intake of Sneha increases Guru, Snigdha, and Manda Guṇa of Kapha which leads to Mandāgni.

3. Agnimāndya due to Udavarta :

उदावर्तात्तु मन्देऽग्नौ.....। च.चि.१५/२०७

The habit of suppression of natural urges affects Agni by vitiating Vāta Doṣa.

4. Agnimāndya due to Doṣa Vṛuddhī :

दोषवृद्ध्या तु मन्देऽग्नौ.....। च.चि.१५/२०७

According to Gangadhara KaphaVṛuddhī is mainly considered in the word Doṣa Vṛuddhī. Increase in Kapha Doṣa leads to Agnimāndya.

5. Agnimāndya due Vyādhī (diseases) :

व्याधियुक्तस्य मन्दे.....। च.चि.१५/२०८

If diseased state is for longer duration it affects Agni.

6. Agnimāndya due to Upavāsa (fasting) :

उपवासाच्च मन्देऽग्नौ.....। च.चि.१५/२०८

Fasting for long duration affects the normal function of Agni.

7. Agnimāndya due to Kruśa, Kṣāma and Kṣīnatā (emaciation)

दीर्घकालप्रसङ्गात्तु क्षामक्षीणकृशान्नरान्.....। च.चि.१५/२०९

If the person is Kruśa, Kṣāma and Kṣīna (emaciated) due to long term disease, it leads to Agnimāndya.

1. Ajīrṇa

In Caraka Samhitā reference of Ajīrṇa is found in Grahaṇī Adhyāya (च.चि.15/42–49). In Suśruta Samhitā (सु.सू.46/500–507) Aṣṭāṅga Samgraha (अ.स.11/46–52) Aṣṭāṅga Hṛudaya (अ.ह.सू.8/25–28) Mādhavanidā Bhāvaprakāśa and Yogaratnākara types, symptoms and treatment of Ajīrṇa are mentioned in detail.

Defination

न जीर्यती सुखेनान्नं विकारान् कुरुतेऽपि ।

तदजीर्णमिति प्राहुस्तन्मूला विविधा रुजः ॥ कविराज गणनाथ सेन.

Ajīrṇa is the state of incomplete process of digestion of ingested food.

Types of Ajīrṇa -

According to predominance of vitiated Doṣās Ajīrṇa is broadly classified into three categories. [77]

- Āmājīrṇa - Due to vitiation of Kapha Doṣa.
- Vidagdha Ajīrṇa - Due to vitiation of Pitta Doṣa.
- Viṣṭabdha Ajīrṇa - Due to vitiation of Vāta Doṣa.

Vihāraja Hetu of Ajīrṇa

Table-37 : Vihāraja Hetu of Ajīrṇa according to Bruhatraī

विहार	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
दिवास्वाप	—	स्वप्नविपर्यय-रात्रौ जागरणं दिवसे च स्वप्न(सु.सू.४६/५००डल्ह ण)	—	—
रात्रिजागरण	प्रजागरैः(च.वि.२/९)	—	—	—
व्यायाम	—	—	—	—
वेगधारण	—	संधारणात्(सु.सू.४६/५००)	—	—
मूत्रवेगधारण	—	—	—	—
पुरीषवेगधारण	—	—	—	—
क्षुधावेगधारण	—	—	—	उपतप्तेन...क्षुदादिभिः क्षुत्-बुभुक्षा,तदुपतप्तत्वं- कालातिक्रमात् (अ.ह.सू.८/३३(१) हेमाद्रि)
तृष्णावेगधारण	—	—	—	—

Table-38 : Vihāraja Hetu of Ajīrṇa according to Laghutrai

विहार	माधव निदान	योगरत्नाकर	भावप्रकाश	काश्यप संहिता
दिवास्वाप	स्वप्नविपर्ययात्- दिवास्वप्नादेः(मधुकोष) मा.नि.६/७	स्वप्नविपर्ययात्(यो.र.७/१)	स्वप्नविपर्ययात्- दिवाशयनाद्रात्रौ जागरणात्। भा.प्र.चि.६/११	—

रात्रिजागरण	प्रजागर (मा.नि.६/९)	प्रजागर (यो.र.७/३०)	स्वप्नविपर्ययात्- रात्रौजागरणात् (भा.प्र.६/११)	-
व्यायाम	-	-	-	-
वेगधारण	संधारणात् (मा.नि.६/७)	वेगधारण (यो.र.७/१)	सधारणात्(भा.प्र.६/११)	-
मूत्रवेगधारण	-	-	मूत्रवेगधारण (भा.प्र.६/११)	-
पुरीषवेगधारण	-	-	पुरीषवेगधारण (भा.प्र.६/११)	-
क्षुधावेगधारण	-	-	क्षुधावेगधारण (भा.प्र.६/११)	-
तृष्णावेगधारण	-	-	तृष्णा परिप्लुतेन (भा.प्र.६/१२)	-

2. Amlapitta

Scattered references of Amlapitta are found in Bṛuhatrāi. The term Amlapitta is used by Carakācārya. Amlapitta as a disease and its management is not described separately in Caraka Samhitā. The disease Amlapitta is described in the chapter of Grahaṇī under the symptom of Pittaja Ajīrṇa. From this reference it can be said that the Nidāna of Amlapitta may be similar with that of Grahaṇī and Ajīrṇa i.e. vitiation of Agni. Suśrutācārya has described Amlikā (Amlodgara-Dalhana) as one of the symptoms caused by excessive use of Lavana Rasa (सु.सू.४२/७-३). Amlapitta as a separate disease is described in Kāśyapa Samhitā and Mādhavanidāna.

Defination :

विदाहाद्यम्लगुणोद्भूतं पित्तमम्लपित्तम् । मा.नि.अम्लपित्तनिदान १ मधुकोश

The word Amlapitta is composed of two words Amla and Pitta. According to Caraka Amla is a natural property of Pitta along with Katu - Rasa (च.सू.१/६०). Suśruta has enlisted Katu as its original Rasa and mentioned that when Pitta becomes Vidagdha then it changes into Amla. (सु.सू.२१/११)

Vihāraja Hetu of Amlapitta : Hetu of Amlapitta are mentioned in Kāśyapa Samhitā.

गुर्वभिष्यन्दिभोज्यानां वेगानां धारणस्य च ।

.... भुक्त्वा भुक्त्वादिवास्वप्नादतिस्नानावगाहनात् ॥ का.स.खि.१६/४-६

Vegadhāraṇa (suppression of natural urges), Bhuktvā Bhuktvā Divāsvāpa (day sleep immediate after lunch), Atisnāna and Atiavagāha (taking bath and tub bath frequently) are the Vihāraja Hetu of Amlapitta.

Detail Samprāpti of Amlapitta is described in Kāśyapa Samhitā. The Lakṣaṇa mentioned in Amlapitta are due to Pittaprakopa. In this Samprāpti two points are important.

Svatantra Pittaprakopa-if the Pittaprakopa is due to Uṣṇa, Tīkṣṇa Guṇa it is Svatantra Pittaprakopa.

Paratantra Pittaprakopa - With the help of Uhana Tantrayukti the word Agnimārdava used by Kāśyapa can be understood by following way -

Vāta Vṛuddhī - Viṣama Agni.

Pitta Vṛuddhī - Mandāgni (due to Drava Guṇa).

Kapha Vṛuddhī - Mandāgni.

Doṣa Vṛuddhī causes Agnimāndya. In this stage whatever a person eats it becomes Vidagdha, though it is not Pittaprakopaka. It becomes Śukta (Amla) and hence the condition is known as Amlapitta. Here the treatment of Agniduṣṭī is important. Hetuviparīta Cikitsā and avoiding Hetus that vitiate Agni are equally important. The line of treatment changes as per the Svatantra and Paratantara Hetu.

3. Grahaṇī :

In Bruhatrayī references of Grahaṇī are found which are as follows-

1. चरक संहिता - च.चि. १५ ग्रहणीदोषचिकित्सितं
2. सुश्रुत संहिता – सु.उ. ४० अतिसारप्रतिषेध अध्याय
3. अष्टांगसंग्रह – अ.सं.नि. ८ अतिसार-ग्रहणीनिदान
४. अष्टांगहृदय- अ.ह.नि. ८ अतिसारग्रहणीरोगनिदान

The disease Grahaṇī is the leading disorder of the digestive system.

अग्न्यधिष्ठानमन्नस्य ग्रहणाद्ग्रहणी मता ।

नाभेरुपर्यह्यग्निबलेनोपष्टब्धोपबृंहिता ॥

अपक्वं धारत्यन्नं पक्वं सृजति पार्श्वतः ।

दुर्बलाग्निबला दुष्टा त्वाममेव विमुञ्चति ॥ च.चि. १५/५६-५७

Grahaṇī is the vital organ situated in between Āmāśaya and Pakvāśaya. It is the main seat of Agni.

1. Concept of Grahaṇī Doṣa and Grahaṇī Roga :

Grahaṇī Doṣa-

अभोजनादजीर्णातिभोजनाद्विषमाशनात् ।

असात्म्यगुरुशीतातिरुक्षसंदुष्टभोजनात् ॥

विरेकवमनस्नेहविभ्रमाव्याधिकर्षणात् ।

देशकालतुवैषम्याद्वेगानां च विधारणात् ॥

दुष्यत्यग्निः, स दुष्टो अन्नं न तत् पचति लघ्वपि ।

अपच्यमानं शुक्तत्वं यात्यन्नं विषरुपताम् ॥ च.चि.१५/४२-४४

Chakrapani says that Abhojana, Atibhojana, Ajir nabhojana etc. are the Sāmānya Hetus for Grahaṇīdoṣavikāra mentioned in above sutra. Ajīṇa, Amlapitta and Agnidoṣa are described under Grahaṇīdoṣavikāra.

Grahaṇī Roga – Pathogenesis of Grahaṇī rogās revolves around Agnidoṣa, the site of which is the structure described as Grahaṇī.

दुर्बलो विदहत्यन्नं तद्यात्यूर्ध्वमधोऽपि वा ।

अधस्तु पक्वमामं वा प्रवृत्तं ग्रहणीगदः ॥ च.चि.१५/५१

Among Agnidoṣa Durbala Agni (Mandāgni - Chakrapani) is responsible for Grahaṇī Roga. When Grahaṇī becomes Durbala and Doṣaduṣṭa the normal function of the Grahaṇī gets hampered. The result of which is Āma and Apakva Mala.

2. Vihāraja Hetu of Grahaṇī

Table-39 : Vihāraja Hetu of Grahaṇī according to Bruhatraī

विहार	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
दिवास्वाप	कफज-भुक्तमात्रस्य च स्वप्नाद् (च.चि.१५/६७)	—	—	—
रात्रिजागरण	—	—	—	—
व्यायाम	—	—	—	—
वेगधारण	सामान्य हेतु-वेगानां च विधारणात्(च.चि.१५/४३) वातज — वेगनिग्रह(च.चि.१५/५९)	—	—	—
मूत्रवेगधारण	—	—	—	—
पुरीषवेगधारण	—	—	—	—
क्षुधावेगधारण	—	—	—	—
तृष्णावेगधारण	—	—	—	—

Table-40 : Vihāraja Hetu of Grahaṇī according to Laghutraī

विहार	माधव निदान	योगरत्नाकर	भावप्रकाश	काश्यप संहिता
दिवास्वाप	कफज-भुक्तमात्रस्य च स्वप्नाद् (मा.नि.४/१३)	कफज-भुक्तमात्रस्य च स्वप्नाद् (यो.र.३/१६)	कफज-भुक्तमात्रस्य च स्वप्नाद् (सद्यः शयनात्) (भा.प्र.चि.४/१५)	—
रात्रिजागरण	—	—	—	—
व्यायाम	—	—	—	—
वेगधारण	वातज ग्रहणी-वेगनिग्रह (मा.नि.४/५)	अत्यर्थवेगनिग्रह-वातज ग्रहणी यो.र.३/८)	वातज ग्रहणी-वेगनिग्रह (भा.प्र.४/७)	—
मूत्रवेगधारण	—	—	—	—
पुरीषवेगधारण	—	—	—	—
क्षुधावेगधारण	—	—	—	—
तृष्णावेगधारण	—	—	—	—

4. Arśa

In Bruhatrayī references of Grahaṇī are found which are as follows -

1. चरक संहिता - च.चि.१४ अर्शचिकित्सितम्
2. सुश्रुत संहिता- सु.नि.२ अर्शोनिदानोपक्रमः

3. अष्टांगसंग्रह - अ.सं.नि.७ अर्शोनिदानम्

४. अष्टांगहृदय- अ.ह.नि.७ अर्शोनिदान

1. Defination :

अरिवत्प्राणिनो मांसकीलका विशसन्ति यत् ।

अर्शासि तस्मादुच्यन्ते गुदमार्गनिरोधतः ॥ अ.ह.नि.७/१

Arśa is a muscular projection (Mansa kila) which troubles the patient like an enemy with pricking pain around the anus. Mādhavanidāna has described it as enemy troublesome and fatal in nature.

2. Vihāraja Hetu of Arśa :

Table-41 : Vihāraja Hetu of Arśa according to Bruhatraī

विहार	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
दिवास्वाप	सा.हेतु-दिवास्वप्न (च.चि.१४/९) कफज- दिवास्वप्न: (च.चि.१४/१८)	—	—	—
रात्रिजागरण	—	—	—	—
व्यायाम	सा.हेतु-अव्यायाम (च.चि.१४/९) वातज- व्यायामकर्म(च.चि.१४/१३) पित्तज-व्यायाम (च.चि.१४/१५) कफ-अव्यायाम (च.चि.१४/१८)	—	—	—
वेगधारण	सा.हेतु- वेगनिग्रह (च.चि.१४/९)	वेगविधारणात्(सु. नि.२/४)	—	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)
मूत्रवेगधारण	सा.हेतु-मूत्रपुरीष वेगनिग्रह (च.चि.१४/९)	मूत्रवेगविधारणात् — डल्हण(सु.नि.२/ ४)	वातमूत्रशकृत् वेगधारण (अ.स.नि.७/१ २)	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)
पुरीषवेगधारण		विट् वेगधारणात्- डल्हण (सु.नि.२/४)	वातमूत्रशकृत् वेगधारण (अ.स.नि.७/१ २)	वातमूत्रशकृत् वेगधारण (अ.ह.नि.७/१२)

क्षुधावेगधारण	–	–	–	–
तृष्णावेगधारण	–	–	–	–

Table-42 : Vihāraja Hetu of Arśa according to Laghutrai

विहार	माधव निदान	योगरत्नाकर	भावप्रकाश	काश्यप संहिता
दिवास्वाप	कफज- दिवास्वाप (मा.नि.५/७)	कफज- दिवास्वाप(यो.र.४/५)	कफज दिवास्वप्न- (भा.प्र.चि.५/६)	–
रात्रिजागरण	–	–	–	–
व्यायाम	वातज अर्श – व्यायामकर्म (मा.नि.५/४) पित्तज अर्श- व्यायाम(मा.नि.५/५) कफज अर्श- अव्यायाम(मा.नि.५/७)	वातज अर्श – व्यायामकर्म (यो.र.४/२) पित्तज अर्श- व्यायाम(यो.र.४/३) कफज अर्श- अव्यायाम(यो.र.४/५)	वातज अर्श – व्यायामकर्म (भा.प्र.५/३) पित्तज अर्श- व्यायाम (भा.प्र.५/४) कफज अर्श- अव्यायाम (भा.प्र.५/६)	–
वेगधारण	–	–	–	–
मूत्रवेगधारण	–	–	–	–
पुरीषवेगधारण	–	–	–	–
क्षुधावेगधारण	–	–	–	–
तृष्णावेगधारण	–	–	–	–

Arśa Samprāpti

1. पंचात्मा मारुतः पित्तं कफो गुदवलित्रयम् ।

सर्व एव प्रकुप्यन्ति गुदजानां समुद्भवे ॥

तस्मादर्शांसि दुःखानि बहुव्याधिकराणि च ।

सर्वदेहोपतापीनि प्रायः कृच्छ्रतमानि च ॥ च.चि.14/24–25

2. प्रकुपिता दोषा एकशो द्विशः समस्ताः शोणितसहिता वा यथोक्तं प्रसृताः प्रधानधमनीरनुप्रपद्याधो गत्वा गुदमागम्य प्रदूष्य गुदवलीर्मांसप्ररोहाजनयन्ति विशेषतो मन्दाग्नेः, तथा तृणकाष्ठोपललोष्ठवस्त्रादिभिः शीतोदकसंस्पर्शनाद्वा कन्दाः परिवृद्धिमासादयन्ति, तान्यर्शांसीत्याचक्षते ॥ सु.नि.2/4

3. दोषास्त्वडमांसमेदांसि सन्दूष्य विविधाकृतीन् ।

मांसाडकुरानपानादौ कुर्वन्त्यर्शांसि तान् जगुः ॥ अ.ह.नि.7/2

4. तैः खल्वधोमार्गोपरोधाद्वायुरपानो निवर्त्तमानः समानव्यानोदानप्राणान् पित्तश्लेष्माणौ च प्रकोपयन्ननलमुपमृदनाति । अ.स.7/15

The Apāna Vāyu aggravated by the above mentioned factors , brings down the accumulated waste products and so afflicts the anal sphincters and leads to acquired type of Arśa. Arśa never manifest without the aggravation of all the three Doṣās. It is evident that the predominance of one or all the Doṣās determines the type of Arśa. The nomenclature of Doṣaja Arśa is given according to the predominance of Doṣa e.g. if Vāta Doṣa is predominant then that Arśa is said to be Vātajā Arśa.

Five types of Vāta (Prāna, Apāna, Vyana, Udāna and Samāna), Pitta and Kapha - all these morbid factors in their aggravated state afflict the three anal sphincters at ano-rectum and lead to Arśa. These Arśas are painful and are usually associated with several complications. These Arśa affect the whole body and so they are difficult to cure with conservative measures.

5. Atisāra

References of Atisāra are found in detail in Bṛhatraī. It is also caused due to Agnimāndya.

1. चरक संहिता - च.चि. १९ अतिसारचिकित्सितम्
2. सुश्रुत संहिता – सु.उ.४० अतिसारप्रतिषेध अध्याय
3. अष्टांगसंग्रह – अ.सं.नि.८ अतिसार-ग्रहणीनिदान
४. अष्टांगहृदय- अ.ह.नि.८ अतिसारग्रहणीरोगनिदान

1. Defination :

१. अतिसरणम् अतिसारः, ... तथा चोक्तं अतिरत्यर्थवचने, सरतिर्गतिकर्मणि । तस्मात्तदत्यन्तसरणादतीसार इति स्मृतः । सु.उ.४०/१-२ डल्हण

२. सरति गच्छत्यतीवेत्यनेन निरुक्तिमुक्तवान्, गुदेन बहुद्रवसरणमतिसार इत्यर्थः । मा.नि.३/४ मधुकोश

Atisāra is characterized with increased frequency of stools.

2. Vihāraja Hetu of Atisāra

Table-43 : Vihāraja Hetu of Atisāra according to Bruhatraī

विहार	चरक संहिता	सुश्रुत संहिता	अष्टांग संग्रह	अष्टांग हृदय
दिवास्वाप	कफज-दिवास्वप्न (च.चि.१९/७)	—	—	—
रात्रिजागरण	त्रिदोषज- अस्वप्नाद्(च.चि.१९/८)	—	—	—
व्यायाम	वातज- अतिव्यायम (च.चि.१९/५)	—	—	—
वेगधारण	त्रिदोषज- अतिवेगविधारणात्(च.चि.१९/८)	सामान्य हेतु- वेगविघातैः (सु.उ.४०/५)	वेगरोधात् (अ.स.नि.८/३)	वेगरोधात्(अ.हु.नि.८/३)
मूत्रवेगधारण	—	मूत्रादिवेगावरोधैः- डल्हण (सु.उ.४०/५)	—	—
पुरीषवेगधारण	—	मूत्रादिवेगावरोधैः- डल्हण (सु.उ.४०/५)✓	—	—
क्षुधावेगधारण	—	मूत्रादिवेगावरोधैः- डल्हण (सु.उ.४०/५)	—	—
तृष्णावेगधारण	—	मूत्रादिवेगावरोधैः- डल्हण (सु.उ.४०/५)	—	—

Table-44 : Vihāraja Hetu of Atisāra according to Laghutrai

विहार	माधव निदान	योगरत्नाकर	भावप्रकाश	काश्यप संहिता
दिवास्वाप	—	—	—	—
रात्रिजागरण	—	—	—	—
व्यायाम	—	—	—	—
वेगधारण	वेगविघातैः (मा.नि.३/३)	वेगविघातः (यो.र.२/४)	वेगविघातैः (भा.प्र.२/३)	—
मूत्रवेगधारण	मूत्रवेगधारण-मधुकोश (मा.नि.३/३)	—	मूत्रपुरीषादि- (विद्योतिनी भा.प्र.२/३)	—
पुरीषवेगधारण	पुरीषवेगधारण मधुकोश (मा.नि.३/३)	—	मूत्रपुरीषादि- (विद्योतिनी भा.प्र.२/३)	—
क्षुधावेगधारण	—	—	—	—
तृष्णावेगधारण	—	—	—	—

Atisāra Samprāpti :

संशम्यापांधातुरन्तः कृशानुं वर्चोमिश्रो मारुतेन प्रणुनः ॥

वृद्धोऽतीवाधः सरत्येष यस्माद्व्याधिं घोरं तं त्वतीसारमाहुः ॥ सु.उ.40/6

...तद्विधैः कुपितोऽनिलः ।

विस्त्रंसयत्यधोऽब्धातुं हत्वा तेनैव चानलम् ।

व्यापद्यानुशकृत्कोष्ठं पुरीषं द्रवतां नयन् ।

प्रकल्पतेऽतिसाराय.... । अ.ह.8/2-3/ अ.स.8/3

1. वातज अतीसार-

स वायुः कुपितोऽनावुपहते मूत्रस्वेदौ पुरीषाशयमुपहृत्य, ताभ्यां पुरीषं द्रवीकृत्य, अतीसाराय प्रकल्पते ।
च.चि.19/5

The above factors aggravate Vāta, afflicting the power of digestion (or, reducing the Agni). With the depletion of Agni, the aggravated Vāta forces urine and sweat to the colon (Purishāshaya), liquefying the stool and manifesting Vātaja Atisāra.

2. पित्तज अतीसार-

तत् प्रकुपितं द्रवत्वादूष्माणमुपहृत्य पुरीषाशयविसृतमौष्ण्याद् द्रवत्वात् सरत्वाच्च भित्वा पुरीषमतिसाराय प्रकल्पते । च.चि.19/6

Due to the above mentioned factors, Pitta gets aggravated, in turn suppressing the power of Agni (digestion) on account of its liquidity and reaches the colon, disintegrates the stool because of its heat, liquidity and mobility leading to the manifestation of Pittaja Atisāra.

3. कफज अतीसार-

स स्वभावाद् गुरुमधुरशीतस्निग्धःस्त्रस्तोऽग्निमुपहृत्य सौम्यस्वभावात् पुरीषाशयमुपहत्योपक्लेद्य पुरीषमतिसाराय कल्पते । च.चि.19/7

Because of the above mentioned factors, Kapha gets aggravated. It moves downwards due to its nature (i.e heavy, sweet, cold and unctuous) and afflicts the Agni (power of digestion) on account of its natural cooling property (which is contradictory to the heating effect of Agni). Thereafter, having arrived at the colon, it liquefies the stool to cause Kaphaja Atisāra.

4. त्रिदोषज अतीसार-

स्त्रयो दोषाः प्रकुपिता भूय एवाग्निमुपहत्य पक्वाशयमनुप्रविश्यातीसारं सर्वदोषलिङ्गं जनयन्ति ।
च.चि.19/8

Because of the above mentioned causative factors, Agni (power of digestion) gets vitiated as a result of which all the three Doṣas get aggravated. These aggravated Doṣa in turn further afflict the Agni, and having entered into Pakvāshaya (colon) cause Sannipātaja Atisāra.

6. Pravāhikā :

Pravāhikā is also one of the important and oftenly occurring disease of Annavaha and Purīṣavaha Srotasa in the current era. Its main cause is Agnimāndya.

In Caraka Samhitā Pravāhikā is described under Kaphaja Atisāra. Detailed information about the Saṃprāpti of Pravāhikā is given in Sushrut Samhitā.

1. चरक संहिता - च.चि. १९ अतिसारचिकित्सितम्
2. सुश्रुत संहिता – सु.उ.४० अतिसारप्रतिषेध अध्याय

1. Defination :

निःसारकः=प्रवाहिका निठाहीति लोके । भावप्रकाश अतिसाराधिकारः २/१०९

वायुः प्रवृद्धो निचितं बलासं नुदत्यधस्तादहिताशनस्य ।

प्रवाहमाणस्य मुहुर्मलाक्तं प्रवाहिकां तां प्रवदन्ति तज्ज्ञाः ॥ सु.उ.४०/१३८

अतीसारे नानाविधद्रवधातुसरणं, प्रवाहिकायां तु कफमात्रसरणमिति भेदः । मधुकोश

Prakupita Vāta drags the Sancita (accumulated) Kapha from its Sthāna (Āmāśaya) to Pakvāśaya. Due to Rukṣa and Khara Guṇa of Vāta and Snigdha Guṇa of Kapha Styānatā of Kapha is developed which gets stuck to Pakvāśaya internally. The disease is characterized by frequent urge to deficate with small quantity of stool mixed with mucus, hence named as Pravahika.

2. Vihāraja Hetu of Pravāhikā :

Hetu of Kaphajaa Atisāra, Vāta and Kapha Prakopaka and Hetu of Agnimāndya can be considered as the Hetu of Pravāhikā.

4. GIT CANCER

A) CANCER-ĀYURVEDĪC VIEW :

The word Cancer is not directly mentioned in Āyurveda. Duṣṭa Vraṇa, Arbuda, Granthī, Vraṇaśoṭha, Visarpa, Gulma, Śoṭha can be correlated with Cancer. Hetu (causative factors) responsible in these diseases can be considered as Hetu for Cancer. Visarpa, Gulma, Vidradhi are Raktapradośaja Vyādhi while Arbuda is Mānsapradośaja Vyādhi. Therefore Hetu of Raktaduṣṭi and Mansadushti should also be considered as Hetu in Cancer. The Vihāraja Hetu which are mentioned in these diseases are Divāsvāpa, Rātrijāgaraṇa, Ativyāyāma, Avyāyāma, Vegadhāraṇa etc.

The study was focused to observe these Vihāraja factors in GIT Cancers and with the intention if there is any strong association of these factors with GIT Cancers. Vihāraja Hetu mentioned in the above diseases are listed in the table below.

Table-45: Vihāraja Hetu in Śoṭha, Gulma, Visarpa, Vidradhi, Granthī and Arbuda

हेतु	शोथ	गुल्म	विसर्प	विद्रधि	ग्रंथि	अर्बुद
दिवास्वाप		√ कफज (च.चि.५/१४),(मा. .नि.२८/११)	√ (च.चि.२१/१०)	—	—	—
रात्रिजागरण	√ (अ.स.१३/१९) (अ.ह.नि.१३/२५ —२६)		√ (अ.स.१३/१९) (अ.ह.नि.१३/२ ५—२६)	—	—	—
व्यायाम	—	—	—	—	√(सु.नि. ११/८)	
अतिव्यायाम	—	√वातज (च.नि.३/६)	—	√(सु.नि.९/ १६)	—	
अव्यायाम	√कफज (च.सू.१८/६)	—	√ (च.चि.२१/३९)	—	—	—
वेगधारण	—	√ कफज (च.नि.४/१०), (मा.नि.२८/६)	—	√(सु.नि.९/ १६)	—	—
मूत्रवेगधारण	√(च.सू.१८/६)	√(च.नि.३/६)	—	—	—	—
पुरीषवेगधारण	√(च.सू.१८/६)	√(च.नि.३/६)	—	—	—	—
क्षुधावेगधारण	√उपवास (च.सू.१८/६) (अ.ह.नि.१३/२५)	निरन्तरता (मा.नि.२८/६)	√उपवास (अ.ह.नि.१३/२ ५—२६)	—	—	—
तृष्णावेगधारण			√(अ.ह.नि.१३/ ४६)	—	—	—

According to Aṣṭāṅga Saṁgraha Hetu of Śoṭha are directed same as the Hetu of Vata, Pitta and Kapha Prakopa.

Table-46 : Vihāraja Hetu of Doṣaparakopa according to Aṣṭāṅgasangraha
(अ.स.नि.१/२४-२६)

दोषप्रकोप	विहार हेतु
वात	तृषिताशन, क्षुधिताम्बुपान, वेगविधारण, रात्रिजागरण, व्यायामबलवत्
पित्त	—
कफ	निशाम्बुपान, भुक्तमात्रदिवास्वप्न, कालातिस्वप्न

The diseases which are arising newly can be understood by the principles given in Āyurveda. Unstated diseases can be studied by using the principle of ‘Anukta’ with the help of Atideśa Tantrayukti.

विकारानामाकुशलो न जिह्वियात् कदाचन ।
न हि सर्वविकाराणां नामतोऽस्ति ध्रुवा स्थितिः ॥
स एव कुपितो दोषः समुत्थानविशेषतः ।
स्थानान्तरगतश्चैव जनयत्यामयान् बहुन् ॥
तस्माद्विकारप्रकृतीरधिष्ठानान्तराणि च ।
समुत्थानविशेषांश्च बुध्वा कर्म समाचरेत् ॥
यो ह्येतन्निर्णयं ज्ञात्वा कर्माण्यारभते भिषक् ।
ज्ञानपूर्वं यथान्यायं स कर्मसु न मुह्यति ॥ च.सू.१९/४४-४७

Physician should not feel ashamed if he is not able to name a particular disease because it is not always possible to name all types of diseases in a definite term. For understanding these diseases one must consider Hetu, vitiated Doṣa, and Sthāna involved in the Samprāpti of that disease.

दोषा एव हि सर्वेषां रोगाणामेककारणम् । अ.ह.१२/३२

The main cause of the Vyādhī is Doṣaduṣṭī (vitiation of Doṣās). The knowledge of Anśāṅśakalpanā of Doṣa is important. This can be achieved by the knowledge of Hetus.

Knowledge of Hetu is important in Anukta Vyadhi. This knowledge of Hetu can acquire by asking the daily routine of the individual. With the knowledge of Hetus one can infer-

1. Doṣa (Vitiation)
2. Anśāṅśakalpanā of Doṣa (properties of Doṣa)
3. Sansarga and Sannipāta (vitiation of two or three Doṣa)
4. Svatantra and Partantra Hetu

Knowledge of above factors will help to decide the line of treatment. New diseases arises as per the era and as per changed life style. But the principles of mode of development do not change. Thus one can find the causative factors, process of pathology and decide its treatment of any disease which is not mentioned in Āyurvedīc texts with the help of principles mentioned in Āyurveda. So the study was focused to find out the risk factors for GIT Cancers which is also a Anukta Vyadhi.

B) CANCER- MODERN VIEW :**A] Gastro Intestinal Tract :**

The breaking down of larger food molecules into molecules small enough for use by body cells is called digestion, and the organs that collectively perform this function compose the digestive system.

Gastrointestinal tract, or alimentary canal, is a continuous tube running through the ventral body cavity and extending from the mouth to the anus. Organs composing the gastrointestinal tract include the mouth, pharynx, esophagus, stomach, small intestine and large intestine. The GIT tract contains the food from the time it is eaten until it is digested and prepared for elimination. The second Group of organs composing the digestive system consists of the accessory structures – the teeth, tongue, salivary glands, liver, gallbladder and pancreas. Their secretions are released into the tract through ducts.^[78]

Gastrointestinal diseases refer to diseases involving the gastrointestinal tract, namely the oesophagus, stomach, small intestine, large intestine and rectum, and the accessory organs of digestion, the liver, gallbladder, and pancreas. Among GIT diseases GIT Cancers were taken for the study.

B] Cancer

Cancer is a generic term for a large Group of diseases characterized by the growth of abnormal cells beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs. Other common terms used are malignant tumours and neoplasms. Cancer can affect almost any part of the body and has many anatomic and molecular subtypes that each require specific management strategies.

Cancer is the second leading cause of death globally and is estimated to account for 9.6 million death in 2018. Lung, Prostate, Colorectal, Stomach and Liver Cancer are the most common types of Cancer in men, while breast, colorectal, lung, cervix and thyroid Cancer are the most common among women.^[79]

Gastrointestinal Cancer refers to malignant conditions of the gastrointestinal tract and accessory organs of digestion, including the esophagus, stomach, biliary system,

pancreas, small intestine, large intestine, rectum and anus. Overall, the GIT tract and the accessory organs of digestion (pancreas, liver, gall bladder) are responsible for more Cancers and more deaths from Cancer than any other system in the body.^[80]

1. Types of Cancer -^[81]

There are over 100 different known Cancers that affect humans. Cancers are often described by the body part that they originated in. However, some body parts contain multiple types of tissue, so for greater precision, Cancers are additionally classified by the type of cell that the tumor cells originated from. These types include-

1. Carcinoma : Cancers derived from epithelial cells. This Group includes many of the most common Cancers, particularly in older adults. Nearly all Cancers developing in the breast, prostate, lung, pancreas, and colon are carcinomas.

2. Sarcoma : Cancers arising from connective tissue (i.e. bone, cartilage, fat, nerve), each of which develop from cells originating in mesenchymal cells outside the bone marrow.

3. Lymphoma and leukemia : These two classes of Cancer arise from cells that make blood. Leukemia is the most common type of Cancer in children accounting for about 30%. However, far more adults develop lymphoma and leukemia.

4. Germ cell tumor: Cancers derived from pluripotent cells, most often presenting in the testicle or the ovary (seminoma and dysgerminoma respectively).

5. Blastoma : Cancers derived from immature "precursor" cells or embryonic tissue. Blastomas are more common in children than in older adults.

According to body parts types of Cancer are - Bone and muscle sarcoma, Brain and nervous system, Breast, Endocrine system, Eye, Gastrointestinal, Genitourinary and Gynecologic, Head and neck, Hematopoietic, Skin, Thoracic and respiratory, HIV/AIDS related, Unsorted (so far). Among these organs mainly GIT Cancers were taken for the study.

Gastro - Intestinal (GIT) Cancer is a term for the Group of Cancers that affect the digestive system. This includes Cancers of the oesophagus, gallbladder and biliary tract, liver, pancreas, stomach, small intestine, bowel (large intestine or colon and rectum), and anus. It also includes rare Cancers like neuroendocrine tumours and gastro - intestinal stromal tumours, which can occur throughout the gastro-intestinal system. (What is gastrointestinal Cancer, <https://GITCancer.org.au-GIT-Cancer-explained>)

Mainly the GIT Cancers which are included in the study are - Esophageal Cancer, Stomach Cancer, Liver Cancer, Gallbladder Cancer, Pancreatic Cancer, Colon Cancer and Rectal Cancer.

2. Causes of Cancer : ^[82]

1. Early Theories about Cancer Causes - Ancient Egyptians blamed Cancers on the gods.
2. Humoral theory - Hippocrates believed that the body had 4 humors (body fluids) - blood, phlegm, yellow bile, and black bile. When the humors were balanced, a person was healthy. An excess of black bile in various body sites was thought to cause Cancer.
3. Lymph theory - Among theories that replaced the humoral theory of Cancer was the formation of Cancer by another body fluid, lymph. Stahl and Hoffman theorized that Cancer was composed of fermenting and degenerating lymph, varying in density, acidity, and alkalinity.
4. Blastema theory - In 1838, German pathologist Johannes Muller demonstrated that Cancer is made up of cells and not lymph, but he believed that Cancer cells did not come from normal cells. Muller proposed that Cancer cells developed from budding elements (blastema) between normal tissues. His student, Rudolph Virchow (1821-1902), the famous German Pathologist, determined that all cells, including Cancer cells, are derived from other cells.
5. Chronic irritation theory - Virchow proposed that chronic irritation was the cause of Cancer, but he believed incorrectly that Cancers “spread like a liquid.” In the 1860s, German surgeon, Karl Thiersch, showed that Cancers metastasize through the spread of malignant cells and not through some unidentified fluid.
6. Trauma theory - Despite advances in the understanding of Cancer, from the late 1800s until the 1920s, trauma was thought by some to cause Cancer.
7. Infectious disease theory - Zacutus Lusitani (1575-1642) and Nicholas Tulp (1593-1674), two doctors in Holland, concluded at almost the same time that Cancer was contagious.

Causes of Cancer according to WHO : ^[83]

Cancer arises from the transformation of normal cells into tumour cells in a multistage process that generally progresses from a pre-Cancerous lesion to a malignant tumour. These changes are the result of the interaction between a person's genetic factors and 3 categories of external agents, including-

1. Physical carcinogens - such as ultraviolet and ionizing radiation.
2. Chemical carcinogens - such as asbestos, components of tobacco smoke, aflatoxin (a food contaminant), and arsenic (a drinking water contaminant).
3. Biological carcinogens - such as infections from certain viruses, bacteria, or parasites.

Ageing is another fundamental factor for the development of Cancer. The incidence of Cancer rises dramatically with age, most likely due to a build-up of risks for specific Cancers that increase with age. The overall risk accumulation is combined with the tendency for cellular repair mechanisms to be less effective as a person grows older.

Common Causes of Cancer - according to American Cancer Society ^[84]

1. Smoking and Tobacco - Cigarette smokers die younger than non-smokers. Smoking shortens male smokers' lives by about 12 years and female smokers' lives by about 11 years. Not only does smoking increase the risk for lung Cancer, it's also a risk factor for Cancers of the - Mouth, Larynx, Pharynx, Esophagus, Kidney, Cervix, Liver, Bladder, Pancreas, Stomach, Colon/Rectum, Myeloid leukemia. Cigarettes, cigars, pipes, and spit and other types of smokeless tobacco all cause Cancer. There is no safe way to use tobacco.
2. Diet and Physical Activity - Research has shown that poor diet and not being active are 2 key factors that can increase a person's Cancer risk.
3. Sun and other types of Radiation.
4. Viruses and other infections.

More recently, infections with certain viruses, bacteria, and parasites have been recognized as risk factors for several types of Cancer in humans. Infections can raise a person's risk of Cancer in different ways.

C) GIT CANCERS :

1. Esophageal Cancer :

a) Epidemiology of Esophageal Cancer :

Esophageal Cancer is the fourth common cause of Cancerrelated deaths in India. It is prevalent among both men and women. Squamous cell carcinoma (SCC) accounts for up to 80% of these Cancers, although adenocarcinoma is on the increase due to changing lifestyles. The etiological factors for SCCs show a regional variation in different parts of India, but tobacco consumption in various forms, alcohol, hot beverages, and poor nutrition remain the predominant predisposing factors. ^[85]

b) Anatomy of Esophagus : ^[86]

The esophagus is a hollow, muscular tube that connects the throat to the stomach. It lies behind the trachea (windpipe) and in front of the spine. Food and liquids that are swallowed travel through the inside of the esophagus (called the lumen) to reach the stomach. In adults, the esophagus is usually between 10 and 13 inches (25 to 33 centimeters [cm]) long and is about $\frac{3}{4}$ of an inch (2cm) across at its smallest point. The upper part of the esophagus has a special ring of muscle at its beginning that relaxes to open the esophagus when it senses food or liquid coming toward it. This muscle is called the upper esophageal sphincter. The lower part of the esophagus that connects to the stomach is called the gastroesophageal (GE) junction. A special ring of muscle near the GE junction, called the lower esophageal sphincter, controls the movement of food from the esophagus into the stomach. Between meals, it closes to keep the stomach's acid and digestive juices out of the esophagus.

The wall of the esophagus has several layers. These layers are important for understanding where Cancers in the esophagus usually start and how they can grow.

Mucosa: This layer lines the inside of the esophagus. The mucosa has 3 parts:

1. The epithelium is the innermost lining of the esophagus and is normally made up of flat, thin cells called squamous cells. This is where most Cancers of the esophagus start.
2. The lamina propria is a thin layer of connective tissue right under the epithelium.
3. The muscularis mucosais a very thin layer of muscle under the lamina propria.

Submucosa: This is a layer of connective tissue just below the mucosa that contains blood vessels and nerves. In some parts of the esophagus, this layer also includes glands that secrete mucus.

Muscularis propria: This is a thick layer of muscle under the submucosa. It contracts in a coordinated way to push food down the esophagus from the throat to the stomach.

Adventitia: This is the outermost layer of the esophagus, and is formed by connective tissue.

c) Esophageal Cancer :

Cancer of the esophagus (also called esophageal Cancer) starts in the inner layer (the mucosa) and grows outward (through the sub mucosa and the muscle layer). Since 2 types of cells can line the esophagus, there are 2 main types of esophageal Cancer-

i. Squamous cell carcinoma : The esophagus is normally lined with squamous cells. Cancer starting in these cells is called squamous cell carcinoma. This type of Cancer can occur anywhere along the esophagus, but is most common in the portion of the esophagus located in the neck region and in the upper two-thirds of the chest cavity.

ii. Adenocarcinoma : Cancers that start in gland cells (cells that make mucus) are called adenocarcinomas. This type of Cancer usually occurs in the distal (lower third) part of the esophagus. Before an adenocarcinoma can develop, gland cells must replace an area of squamous cells, which is what happens in Barrett's esophagus. This occurs mainly in the lower esophagus, which is where most adenocarcinomas start.

Adenocarcinomas that start at the area where the esophagus joins the stomach (the GE junction, which includes about the first 2 inches (5 cm) of the stomach called the cardia), tend to behave like Cancers in the esophagus (and are treated like them, as well), so they are Grouped with esophagus Cancers.

iii. Rare Cancers of Esophagus - Other types of Cancer can also start in the esophagus, including lymphomas, melanomas, and sarcomas. But these Cancers are rare.

Table of risk factors of GIT Cancers is given at the end of this chapter.

2. Stomach Cancer :

a) Epidemiology of Stomach Cancer : It is the second most common cause of Cancer related deaths among Indian men and women in the age between 15 and 44. Helicobacter

pylori carcinogenesis is low in India. Advanced stage at presentation is a cause of concern.^[87]

b) Anatomy of Stomach -^[88]

After food is chewed and swallowed, it enters the esophagus, a tube that carries food through the throat and chest to the stomach. The esophagus joins the stomach at the gastroesophageal (GE) junction, which is just beneath the diaphragm (the thin sheet of breathing muscle under the lungs). The stomach is a sac-like organ that holds food and starts to digest it by secreting gastric juice. The food and gastric juice are mixed and then emptied into the first part of the small intestine called the duodenum.

Parts of the stomach-The stomach has 5 parts:

- Cardia: The first part is closest to the esophagus
- Fundus: The upper part of the stomach next to the cardia
- Body (corpus): The main part of the stomach, between the upper and lower parts
- Antrum: The lower portion (near the intestine), where the food mixes with gastric juice
- Pylorus: The last part of the stomach, which acts as a valve to control emptying of the stomach contents into the small intestine

The first 3 parts of the stomach (cardia, fundus, and body) are sometimes called the proximal stomach. Some cells in these parts of the stomach make acid and pepsin (a digestive enzyme), the parts of the gastric juice that help digest food. They also make a protein called intrinsic factor, which the body needs to absorb vitamin B12.

The lower 2 parts (antrum and pylorus) are called the distal stomach. The stomach has 2 curves, which form its inner and outer borders. They are called the lesser curvature and greater curvature; respectively. Other organs next to the stomach include the colon, liver, spleen, small intestine, and pancreas.

The stomach wall has 5 layers - The innermost layer is the mucosa. This is where stomach acid and digestive enzymes are made. Most stomach Cancers start in this layer. Next is a supporting layer called the submucosa. Outside of this is the muscularis propria, a thick layer of muscle that moves and mixes the stomach contents. The outer 2 layers,

the subserosa and the outermost serosa, wrap the stomach. The layers are important in determining the stage (extent) of the Cancer and in helping determine a person's prognosis (outlook). As a Cancer grows from the mucosa into deeper layers, the stage becomes more advanced and the prognosis is not as good.

c) Types of stomach Cancers :

i. Adenocarcinoma : Most (about 90% to 95%) Cancers of the stomach are adenocarcinomas. A stomach Cancer or gastric Cancer almost always is an adenocarcinoma. These Cancers develop from the cells that form the innermost lining of the stomach (the mucosa).

ii. Lymphoma : These are Cancers of the immune system tissue that are sometimes found in the wall of the stomach. The treatment and outlook depend on the type of lymphoma.

iii. Gastrointestinal stromal tumor (GIST) : These rare tumors start in very early forms of cells in the wall of the stomach called interstitial cells of Cajal. Some of these tumors are non-Cancerous (benign); others are Cancerous. Although GISTs can be found anywhere in the digestive tract, most are found in the stomach.

iv. Carcinoid tumor : These tumors start in hormone-making cells of the stomach. Most of these tumors do not spread to other organs.

v. Other Cancers : Other types of Cancer, such as squamous cell carcinoma, small cell carcinoma, and leiomyosarcoma, can also start in the stomach, but these Cancers are very rare.

3. Liver Cancer :

a) Epidemiology of Liver Cancer : Hepatocellular carcinoma (HCC) is a major health burden and the seventh most common cause of Cancer-related death in India.^[89]

b) Anatomy of Liver^[90]

The liver is the largest internal organ. It lies under right ribs just beneath right lung. It has two lobes (sections). The liver is made up mainly of cells called hepatocytes. It also has other types of cells, including cells that line its blood vessels and cells that line small tubes in the liver called bile ducts. The bile ducts carry bile from the liver to the gallbladder or directly to the intestines.

The different types of cells in the liver can form several types of malignant (Cancerous) and benign (non-Cancerous) tumors. These tumors have different causes, are treated differently, and have a different prognosis.

c) Types of Liver Cancer :

- i. Primary liver Cancer :** A Cancer that starts in the liver is called primary liver Cancer. There is more than one kind of primary liver Cancer.
- ii. Hepatocellular carcinoma (HCC) :** This is the most common form of liver Cancer in adults. Hepatocellular Cancers can have different growth patterns-
 1. Some begin as a single tumor that grows larger. Only late in the disease does it spread to other parts of the liver.
 2. A second type seems to start as many small Cancer nodules throughout the liver, not just a single tumor. This is seen most often in people with cirrhosis (chronic liver damage).
- iii. Intrahepatic cholangiocarcinoma (bile duct Cancer) :** About 10% to 20% of Cancers that start in the liver are intrahepatic cholangiocarcinomas. These Cancers start in the cells that line the small bile ducts (tubes that carry bile to the gallbladder) within the liver. Most cholangiocarcinomas, however, actually start in the bile ducts outside the liver.
- iv. Angiosarcoma and hemangiosarcoma :** These are rare Cancers that begin in cells lining the blood vessels of the liver. People who have been exposed to vinyl chloride or to thorium dioxide (Thorotrast) are more likely to develop these Cancers. Some other cases are thought to be caused by exposure to arsenic or radium, or to an inherited condition known as hereditary hemochromatosis. In about half of all cases, no likely cause can be identified.

These tumors grow quickly and are usually too widespread to be removed surgically by the time they are found. Chemotherapy and radiation therapy may help slow the disease, but these Cancers are usually very hard to treat. These Cancers are treated like other sarcomas.
- v. Hepatoblastoma –** This is a very rare kind of Cancer that develops in children, usually in those younger than 4 years old. The cells of hepatoblastoma are similar to fetal liver cells. About 2 out of 3 children with these tumors are treated successfully with surgery and chemotherapy, although the tumors are harder to treat if they have spread outside the liver.

- vi. Secondary liver Cancer (metastatic liver Cancer) :** Most of the time when Cancer is found in the liver it did not start there but has spread (metastasized) from somewhere else in the body, such as the pancreas, colon, stomach, breast, or lung. Because this Cancer has spread from its original (primary) site, it is called a secondary liver Cancer. These tumors are named and treated based on their primary site (where they started). For example, Cancer that started in the lung and spread to the liver is called lung Cancer with spread to the liver, not liver Cancer. It is also treated as lung Cancer.
- vii. Benign liver tumors :** Benign tumors sometimes grow large enough to cause problems, but they do not grow into nearby tissues or spread to distant parts of the body. If they need to be treated, the patient can usually be cured with surgery.
- viii. Hemangioma :** The most common type of benign liver tumor, hemangiomas, start in blood vessels. Most hemangiomas of the liver cause no symptoms and do not need treatment. But some may bleed and need to be removed surgically.
- ix. Hepatic adenoma :** Hepatic adenoma is a benign tumor that starts from hepatocytes (the main type of liver cell). Most cause no symptoms and do not need treatment. But some eventually cause symptoms, such as pain or a lump in the abdomen (stomach area) or blood loss. Because there is a risk that the tumor could rupture (leading to severe blood loss) and a small risk that it could eventually develop into liver Cancer, most experts will usually advise surgery to remove the tumor if possible.
- Using certain drugs may increase the risk of getting these tumors. Women have a higher chance of having one of these tumors if they take birth control pills, although this is rare. Men who use anabolic steroids may also develop these tumors. Adenomas may shrink when these drugs are stopped.
- x. Focal nodular hyperplasia :** Focal nodular hyperplasia (FNH) is a tumor-like growth made up of several cell types (hepatocytes, bile duct cells, and connective tissue cells). Although FNH tumors are benign, they might cause symptoms. It can be hard to tell them apart from true liver Cancers and doctors sometimes remove them when the diagnosis is unclear. Both hepatic adenomas and FNH tumors are more common in women than in men.

4. Gall bladder Cancer :

a) Epidemiology of Gall bladder Cancer : India is a high incidence area for gallbladder Cancer (GBC) and contributes to about 10% of the global GBC burden. Within India, the incidence is high in North, North-East, Central and Eastern India, and less common in South and West India. Additional co-factors such as older age, lower socio-economic status, chronic Salmonella typhi (*S. typhi*) infection, Helicobacter pylori (*H. pylori*) infection, exposure to pollutants, heavy metals, chemicals, adulterated mustard oil and smoking in participants with gallstones have been identified which promote carcinogenesis. Environmental risk factors such as soil and water contamination by industrial wastes, agricultural effluents and human sewage have been identified as putative risk factors. ^[91]

b) Anatomy of Gallbladder : ^[92]

The gallbladder is a small, pear-shaped organ under the liver. Both the liver and the gallbladder are behind the right lower ribs. In adults, the gallbladder is usually about 3 to 4 inches long and normally no wider than an inch.

The gallbladder concentrates and stores bile, a fluid made in the liver. Bile helps digest the fats in foods as they pass through the small intestine. Bile is made by the liver and is either sent into ducts that carry it to the small intestine, or stored in the gallbladder and released later.

When food (especially fatty food) is being digested, the gallbladder squeezes and sends bile through a small tube called the cystic duct. The cystic duct joins up with the common hepatic duct (which comes from the liver) to form the common bile duct. The common bile duct joins with the main duct from the pancreas (the pancreatic duct) to empty into the first part of the small intestine (the duodenum) at the ampulla of Vater.

c) Types of Gallbladder Cancers :

Gallbladder Cancers rare and nearly all of them are adenocarcinomas. An adenocarcinoma is a Cancer that starts in gland-like cells that line many surfaces of the body, including the inside the digestive system.

Papillary adenocarcinoma or just papillary Cancer is a rare type of gallbladder adenocarcinoma that deserves special mention. The cells in these gallbladder Cancers are arranged in finger-like projections. In general, papillary Cancers are less likely to spread into the liver or nearby lymph nodes. They tend to have a better prognosis (outlook) than most other kinds of gallbladder adenocarcinomas.

Other types of Cancer can start in the gallbladder, such as adenosquamous carcinomas, squamous cell carcinomas, and carcinosarcomas, but these are very rare.

5. Pancreatic Cancer :

a) Epidemiology of Pancreatic Cancer : In comparison to the West, India has a relatively lower incidence of pancreatic Cancer. The rates in India vary from 0.5 to 2.4/100,000 persons per year among women to 0.2 to 1.8/100,000 persons per year among men. The National Cancer Registry Programme (ICMR, Bengaluru) has estimated that by 2020, there will be 8440 and 6090 new cases of pancreatic Cancer afflicting Indian men and women, respectively. ^[93]

b) Anatomy of Pancreas : ^[94]

The pancreas is an organ that sits behind the stomach. It's shaped a bit like a fish with a wide head, a tapering body, and a narrow, pointed tail. In adults it's about 6 inches (15 centimeters) long but less than 2 inches (5 centimeters) wide.

1. The head of the pancreas is on the right side of the abdomen (belly), behind where the stomach meets the duodenum (the first part of the small intestine).
2. The body of the pancreas is behind the stomach.
3. The tail of the pancreas is on the left side of the abdomen next to the spleen.

Endocrine cells make up a smaller percentage of the cells in the pancreas. These cells make important hormones like insulin and glucagon (which help control blood sugar levels), and release them directly into the blood. Pancreatic neuroendocrine tumors start in the endocrine cells.

It is very important to know if pancreatic Cancer is endocrine Cancer or exocrine Cancer. They have distinct risk factors and causes, have different signs and symptoms, are diagnosed with different tests, are treated in different ways, and have different outlooks.

- c) **Types of Pancreatic Cancer** : Exocrine Cancers are by far the most common type of pancreas Cancer.
- i. **Pancreatic adenocarcinoma** : About 95% of Cancers of the exocrine pancreas are adenocarcinomas. These Cancers usually start in the ducts of the pancreas. Less often, they develop from the cells that make the pancreatic enzymes, in which case they are called acinar cell carcinomas.
- ii. **Less common types of exocrine Cancer**: Other, less common exocrine Cancers include adenosquamous carcinomas, squamous cell carcinomas, signet ring cell carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with Gitan cells.
- iii. **Ampullary Cancer (carcinoma of the ampulla of Vater)** : This Cancer starts in the ampulla of Vater, which is where the bile duct and pancreatic duct come together and empty into the small intestine. Ampullary Cancers aren't technically pancreatic Cancers, but they are included here because they are treated much the same. Ampullary Cancers often block the bile duct while they're still small and have not spread far. This blockage causes bile to build up in the body, which leads to yellowing of the skin and eyes (jaundice). Because of this, these Cancers are usually found earlier than most pancreatic Cancers, and they usually have a better prognosis.
- iv. **Benign and preCancerous growths in the pancreas** : Some growths in the pancreas are simply benign (not Cancer), while others might become Cancer over time if left untreated (known as preCancers). Because people are getting imaging tests such as CT scans more often than in the past (for a number of reasons), these types of pancreatic growths are now being found more often.
- v. **Serous cystic neoplasms (SCNs)** : also known as serous cystadenomas are tumors that have sacs (cysts) filled with fluid. SCNs are almost always benign, and most don't need to be treated unless they grow large or cause symptoms.
- vi. **Mucinous cystic neoplasms (MCNs)** : also known as mucinous cystadenomas are slow-growing tumors that have cysts filled with a jelly-like substance called mucin. These tumors almost always occur in women. While they are not Cancer, some of them can progress to Cancer over time if not treated, so these tumors are typically removed with surgery.
- vii. **Intraductal papillary mucinous neoplasms (IPMNs)** : are benign tumors that grow in the pancreatic ducts. Like MCNs, these tumors make mucin, and over time they sometimes become Cancer if not treated. Some IPMNs can just be followed
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closely over time, but some might need to be removed with surgery if they have certain features, such as if they are in the main pancreatic duct.

- viii. Solid pseudo papillary neoplasms (SPNs) :** are rare, slow-growing tumors that almost always develop in young women. Even though these tumors tend to grow slowly, they can sometimes spread to other parts of the body, so they are best treated with surgery. The outlook for people with these tumors is usually very good.

6. Small Intestine Cancer :

- a) Anatomy of Small intestine :** Small intestine Cancer starts when cells in the small intestine start to grow out of control. The small intestine is part of the gastrointestinal (GIT) tract, also known as the digestive tract. The GIT tract processes food for energy and rids your body of solid waste.

Although the small intestine makes up the largest part of the GIT tract, small intestine Cancers are much less common than most other types of GIT Cancers (such as colon, rectal, stomach, and esophagus Cancers).

After swallowing the food, it goes through the esophagus, a tube that carries food through the neck and chest and into the stomach. The stomach is a sac-like organ that helps the digestive process by mixing the food with gastric juices.

The food and gastric juices are mixed into a thick fluid, which is then emptied into the small intestine (also known as the small bowel). The small intestine continues breaking down the food and absorbs most of the nutrients. Even though it's called the small intestine, it's actually the longest section of the GIT tract (about 20 feet long).The small intestine has 3 sections.

1. The duodenum : This is the first section and is only about a foot long. A short distance from where the duodenum attaches to the stomach, the pancreatic duct and bile duct enter the duodenum at the ampulla of Vater. Fluids from the pancreas and liver enter the small intestine here, helping to further digest the food.

2. The jejunum and ileum : These parts make up most of the small intestine, and are where most of the nutrients in food are absorbed into the bloodstream.

The ileum empties into the colon (the first part of the large intestine). This muscular tube is about 4 to 5 feet long. It absorbs water and some remaining mineral nutrients from the food matter. The waste left after this process goes into the rectum, where it is stored until it passes out of the body through the anus. ^[95]

b) Types of Small intestine Cancers : The small intestine is made up of many different types of cells, so different types of Cancer start here. The 4 major types of small intestine cancers are-

- i. Adenocarcinomas :** These cancers start in the gland cells that line the inside of the intestine. They account for about 1 in 3 small intestine Cancers.
- ii. Carcinoid tumors :** These tumors are a type of neuroendocrine tumor (NET), and they tend to be slow growing. They are the most common type of small intestine tumor.
- iii. Lymphomas :** These Cancers start in immune cells called lymphocytes. Lymphomas can start almost anywhere in the body including the small intestine.
- iv. Sarcomas :** These are Cancers that start in connective tissues, such as muscle. The most common sarcomas are known as gastrointestinal stromal tumors (GISTs).

7. Colorectal Cancer :

a) Epidemiology of Colorectal Cancer : The incidence of colorectal Cancer in India is lower than that in the western countries, and it is the seventh leading Cancer in India. Mean age of rectal Cancer (RC): around 40-45 yr. (Globocan, 2018 data). ^[81] Colorectal Cancer is the Cancer of the colon and/or rectum which begins with the development of pre-Cancerous polyps from the lining of the colon and rectum. These Cancers can also be named colon Cancer or rectal Cancer, depending on where they start. Colon Cancer and rectal Cancer are often grouped together because they have many features in common.

b) Anatomy of Colon and Rectum :

Colon and rectum are the parts of large intestine, which is the lowest part of the digestive system. Colon is about 5 feet long and absorbs water from stool. Rectum is the last 12 centimeters (nearly 5 inches) of the colon, where the body stores stools until you have a bowel movement.

c) Types of Cancer in the Colon and Rectum :

- i. Adenocarcinomas :** make up about 96% of colorectal Cancers. These Cancers start in cells that make mucus to lubricate the inside of the colon and rectum. Some sub-types of adenocarcinoma, such as signet ring and mucinous, may have a worse prognosis. Other, much less common types of tumors can start in the colon and rectum, too. These include-
- ii. Carcinoid tumors :** These start from special hormone-making cells in the intestine.
- iii. Gastrointestinal stromal tumors (GSTs) :** start from special cells in the wall of the colon called the interstitial cells of Cajal. Some are not Cancer (benign). These tumors can be found anywhere in the digestive tract, but are not common in the colon.
- iv. Lymphomas :** are Cancers of immune system cells. They mostly start in lymph nodes, but they can also start in the colon, rectum, or other organs.
- v. Sarcomas :** can start in blood vessels, muscle layers, or other connective tissues in the wall of the colon and rectum. Sarcomas of the colon or rectum are rare.

Table-47 : Risk factors of GIT Cancers according to American Cancer Society

	Esophageal Cancer	Stomach Cancer	Liver Cancer	Gall bladder Cancer	Pancreatic Cancer	Small Intestine Cancer	Colorectal Cancer
Age	increases with age (55years)	over age 50	65 or older	-	more than 45	60 to 70	after age of 50
Gender	Common in men	common in men	common in men	common in female	common in men	More offen in men	-
Family History	-	√ first degree relatives (parents,siblingsor childrens) likely to develope this disease.	-	risk is low as this is rare disease	√ inherited genetic syndromes		√ colorectal Cancer or adenomatous polyps
Tobacco	√	√ smoking	√ smoking	smoking (possibility of risk)	-	smoking	√ smoking
Alcohol	√	-	√	-	√ heavy alcohol use	√	√ heavy alcohol use
Diet	processed meat,very hot liquids (temperatures of 149° F or 65° C - much hotter than a typical cup of coffee	smoked food,salted fish and meat,pickled vegetables	Aflatoxins-fungus that contaminates peanuts,wheat,soyabe ans,ground nuts,corn and rice.	-	high in red and processed meats,low in fruits and vegetables.Drinking coffee (not confirmed)	high in red meat and salted or smoked foods	red meats,processed meats,cooking meats at very high temperature
Obesity	√	√	√	-	-		both men and women,stronger in mens
Work place/Exposure	exposure to chemical fumes,e.g.solvents used for dry cleaning	workers in the coal,metal and rubber industries	exposure to chemicals Vinyl chloride and thorium dioxide.	exposure tochemicals used iin rubber and textile industries (possibility of risk), exposure to nitrosamines	-		-
Injury	injury to esoplagus	-	-	-	-		-
Pre existing medical condition	GORD (gastro esophageal reflux disease);Barretts esophagus√	Stomach lymphoma (MALT),previous stomach surgery	Cirrhosis, Non-alcoholic fatty liver diseases,Primary billiary cirrhosis,Inherited metabolic diseases,	Gallstones,Porcelain gallbladder	Type 2 diabetes,Chronic pancreatitis		history of colorectal polyps or colorectal Cancer,inflammatoy bowel diseases-ulcerative colitis,crohns disease

	Esophageal Cancer	Stomach Cancer	Liver Cancer	Gall bladder Cancer	Pancreatic Cancer	Small Intestine Cancer	Colorectal Cancer
			Type 2 diabetes				Type 2 diabetes
History of certain Cancers	lung Cancer,mouth Cancer,throat Cancer	-	-	-	-		testicular Cancer
Infections	HPV (Human papilloma virus infection)	Helicobacter pylori infection, Epstein-Barr virus (EBV) infection	Chronicviral hepatitis (HBV or HCV)	-	infection of the stomach with ulcer-causing bacteria-H.pylori,or infection with Hepatitis B may increase risk		
Other possible conditions	Achalasia, Tylosis, Plummer-Vinson syndrome	Pernicious Anemia,Menetrier disease,Type A blood, stomach polyps	Long term use of Anabolic steroids	Choledochal cysts,Abnormalities of the bile duct,Gall bladder polyp,Primary sclerosing cholanGITtis,Typhoid		Celiac disease,colon Cancer,Crohn's disease,inherited syndromes,Familial adenomatous polyposis,Lynch syndrome	
Ethnicity and geography	-	-	-	more common in India,Pakistan,Central European and South American countries			
Physical inactivity	-	-	-	-	might increase risk		√
Night Shift work	-	-	-	-	-		may increase risk (more research needed)

Chapter - 3

RESEARCH METHODOLOGY

Concept of Kāyika Vihāra Vaiṣamya was studied by analysis of data obtained in observational study. The Kāyika Vihāra which were taken for the study were – Divāsvāpa, Rātrijāgaraṇa, Vyāyāma, Vegadhāraṇa of Mūtra, Purīṣa, Kṣudhā and Trūṣṇa. For this purpose a survey study was done.

Material :

1. Literature review regarding Kāyika Vihāra- Divāsvāpa, Rātrijāgaraṇa, Vyāyāma, Vegadhāraṇa - Mūtra, Purīṣa, Kṣudhā and Trūṣṇa was collected from-

- Āyurvedic and Modern texts
- Available Medical Journals
- Research Articles
- Internet

2. Sample size - Total 300 participants were observed.

They were categorized in three Groups.

1. Group A - 100 diagnosed patients of GIT Cancer.
2. Group B - 100 diagnosed patients of GIT diseases from Āyurvedic perspective.
3. Group C - 100 individuals - Not suffering from any major illness.

Sampling Method - Sample selection method used was purposive sampling method.

Methodology :

Method-Survey

Type of study-Fundamental and Observational

Study design - Case-control

Survey Study :

1. Preparation of Questionnaire :

- i. A Questionnaire was prepared based on Āyurvedic texts and observations mainly focusing on Kāyika Vihāra - Divāsvāpa, Rātrijāgaraṇa, Vyāyāma, and Vegadhāraṇa - Mūtra, Purīṣa, Kṣudhā and Trūṣṇa.
- ii. Questionnaire was finalized after 10 pilot cases and changes were made.

- iii. Questionnaire type- combination of open ended and close ended.
- iv. Informed written consent form was duly filled by the participants.

2. Data collection :

Data of participants regarding past history of Kāyika Vihāra Vaiṣamya was collected.

Work Place - O.P.D. and I.P.D. of B.S.D.T's Integrated Cancer Treatment & Research Centre and Ayurved Hospital and Research Centre, Wagholi, Pune.

Table 48 : Inclusion Criteria

	Group A –Patients of Malignant GIT Diseases	Group B –Patients of Non Malignant GIT diseases	Group C-Healthy Individuals
Inclusion criteria	Diagnosed participants of GIT Maligancy by modern parameters like biopsy, scopy, sonography, CT scan, MRI, PET Scan, Tumour marker.	Diagnosed participants of Non Malignant GIT diseases (Annavaha and Puriṣavaha Srotasa) by Āyurvedic Prameters	Healthy Individuals
	Participants of Cancer of primary origin - Esophageal Cancer, Stomach Cancer, Liver Cancer, Gall bladder Cancer, Pancreatic Cancer, Cancer of Colon, Cancer of Rectum.	Patients of Amlapitta, Grahanī, Atisāra, Arśa, Pravāhikā, Ajīrna	
	Age -30-70 years	Age - 30-70 years	Age - 30-70 years
	Gender –Both	Gender -Both	Gender -Both

Table 49 : Exclusion criteria

Exclusion criteria	Group A –Patients of Malignant GIT Diseases	Group B –Patients of Non Malignant GIT diseases	Group C-Healthy Individuals
	Participants with carcinomas of organs other than GIT will be excluded.	Participants other than GIT diseases will be excluded.	Individuals suffering from any major illness.
	Metastatic Liver Cancer, Metastatic Cancer of GIT		
	Oro-pharyngeal malignancies	Mukhavikāra	
	Age- >30 and<70 years of age	Age- >30 and<70 years of age	Age- >30 and<70 years of age

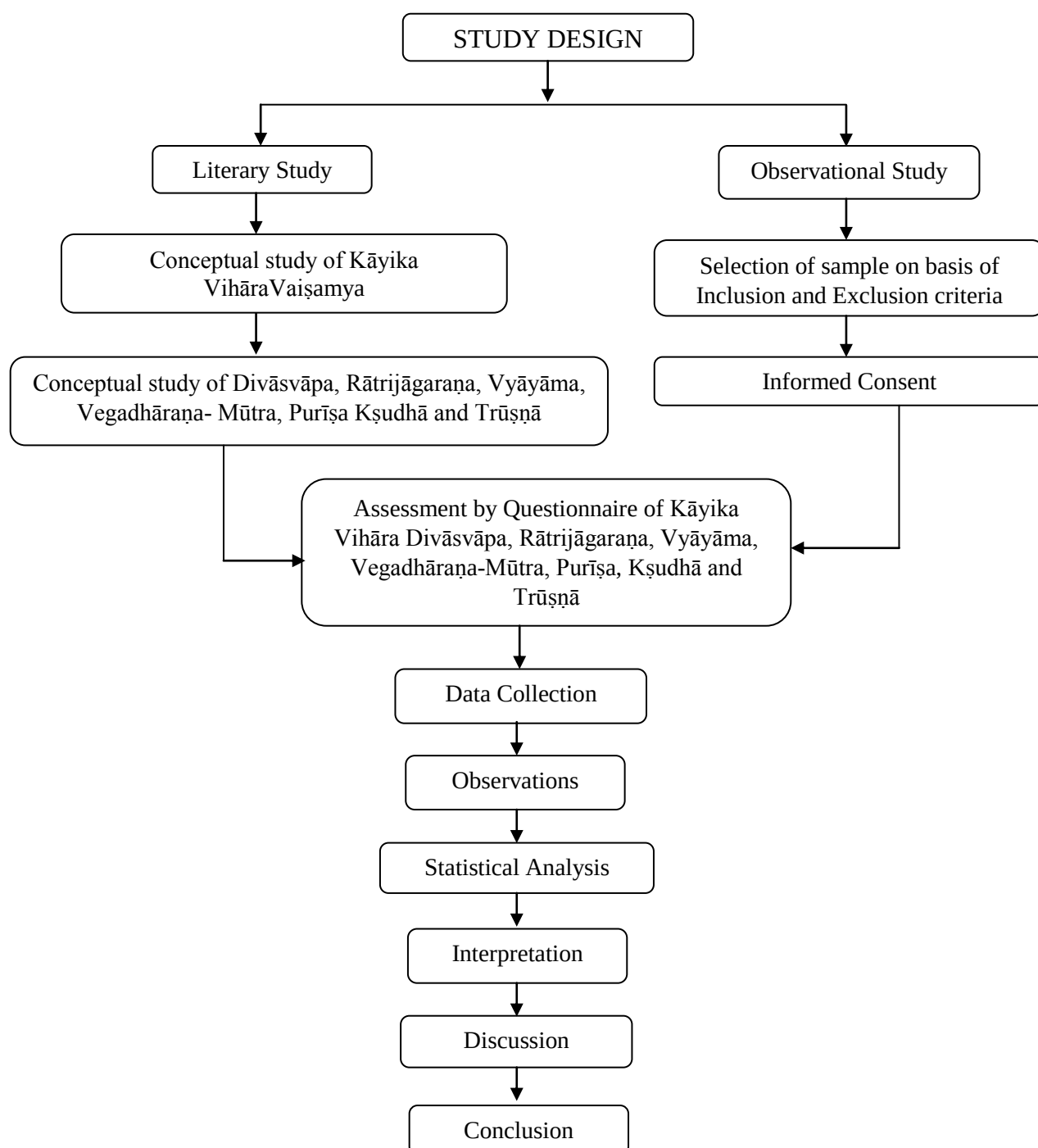
Observed data was studied in the following way-

- Kāyika Vihāra Vaiṣamya was studied as – Hīnamātra (less amount), Atimātra (excess) and Vaiṣamya (improper manner).
- Divāsvāpa, Rātrijāgaraṇa, Vidhiviparita Vyāyāma, Vegadhāraṇa of Mūtra, Purīṣa, Kṣudhā and Trūṣṇa was studied with the help of following points-
 - Kāla (Time Duration in year)
 - Vāranvārata (Frequency in a week)
 - Mātra (Amount- in hours)
- Divāsvāpa- mainly daysleep immediately after food was considered as Divāsvāpa. Other observations related to Divāsvāpa were recorded.
- Rātrijāgaraṇa- As mentioned in review of literature 10.30 p.m. was considered as baseline to decide Rātrijāgaraṇa.
- Observed data was analyzed and studied for effect of Kāyika Vihāra Vaiṣamya on –
 - Dosha, Dhatu and Mala
 - Agni etc.

Statistical Analysis –

- i. Statistical Test- Pearson Chi-Square test was applied for the observed data.
- ii. Data interpretation- with the help of statistical test observations and results are interpreted
- iii. Data presentation- in tabular form and graphs data is presented.

After statistical analysis conclusion is drawn.

Flow Chart showing plan of work

Chapter-4

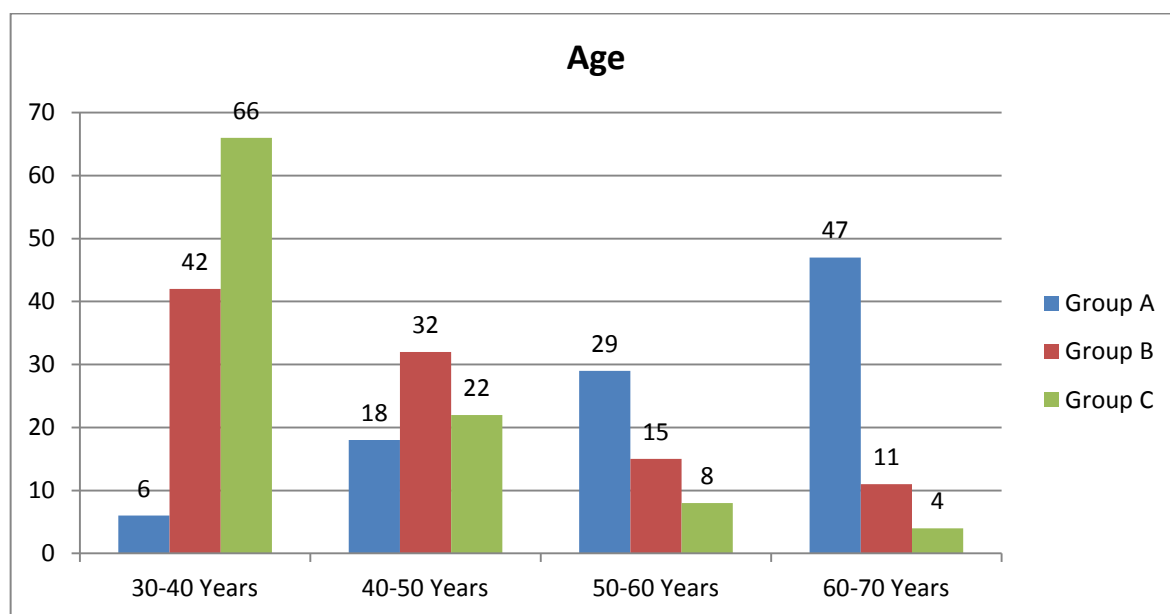
ANALYSIS AND INTERPRETATION

The data obtained during the study was analyzed. Statistical significance was considered. Observed data is recorded in the form of tables and graphs.

Table No. 50 : Age wise distribution of participants in three Groups

Age Group	Group A		Group B		Group C	
	No of participants	%	No of participants	%	No of participants	%
30-40 Years	06	06	42	42	66	66
40-50 Years	18	18	32	32	22	22
50-60 Years	29	29	15	15	08	08
60-70 Years	47	47	11	11	04	04
TOTAL	100	100	100	100	100	100

Graph No. 1 : Age wise distribution of participants in three Groups



Age wise distribution of participants in three Groups :

Out of 100 participants in Group A, 47 participants were from age group 60-70 years; 29 from age group 50-60 years; 18 from age group 40-50 years and 06 from age group 30-40 years.

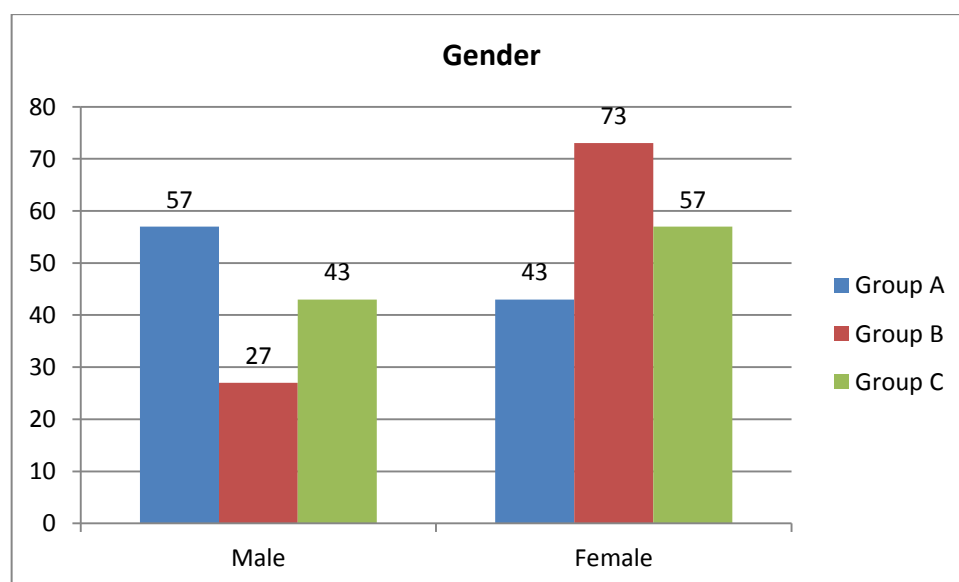
In Group B, 42 participants were from 30-40 years; 32 from 40-50 years; 15 from 50-60 years and 11 from 60-70 years.

In Group C, 66 participants were from 30 -40 years; 22 from 40-50 years; 08 from 50-60 years and 04 from 60-70 years.

Table No. 51 : Gender wise distribution of participants in three Groups

Gender	Group A		Group B		Group C	
	N	%	N	%	N	%
Male	57	57	27	27	43	43
Female	43	43	73	73	57	57
TOTAL	100	100	100	100	100	100

Graph No. 2 : Gender wise distribution of participants in three Groups

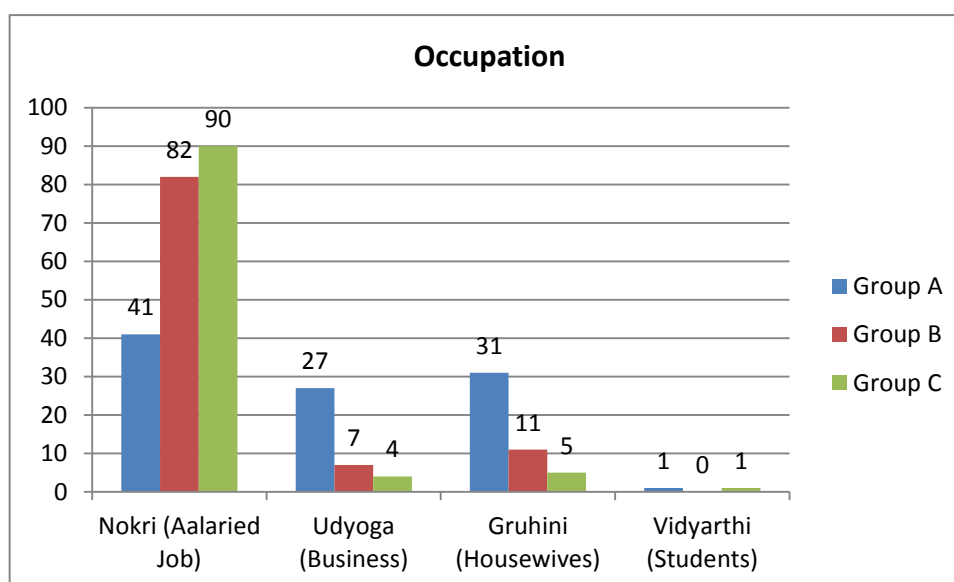


Gender wise distribution of participants in three Groups :

Out of 100 participants in Group A, 57 participants were male and 43 were female. In Group B, 73 participants were female and 27 were male. In Group C, 57 participants were female and 43 were male.

Table No. 52 : Occupation wise distribution of three Groups

Occupation	Group A		Group B		Group C	
	N	%	N	%	N	%
Nokri (salaried job)	41	41	82	82	90	90
Udyoga (business)	27	27	07	07	04	04
Gruhini (housewives)	31	31	11	11	05	05
Vidyarthi (students)	01	01	0	0	01	01

Graph No. 3 : Occupation wise distribution of participants in three Groups**Occupation wise distribution of participants in three Groups :**

Out of 100 participants in Group A, 41 participants were involved Nokri (Salaried Jobs); 31 were Gruhini (housewives); 27 were doing Udyoga (business) and 01 was Vidyarthi (student).

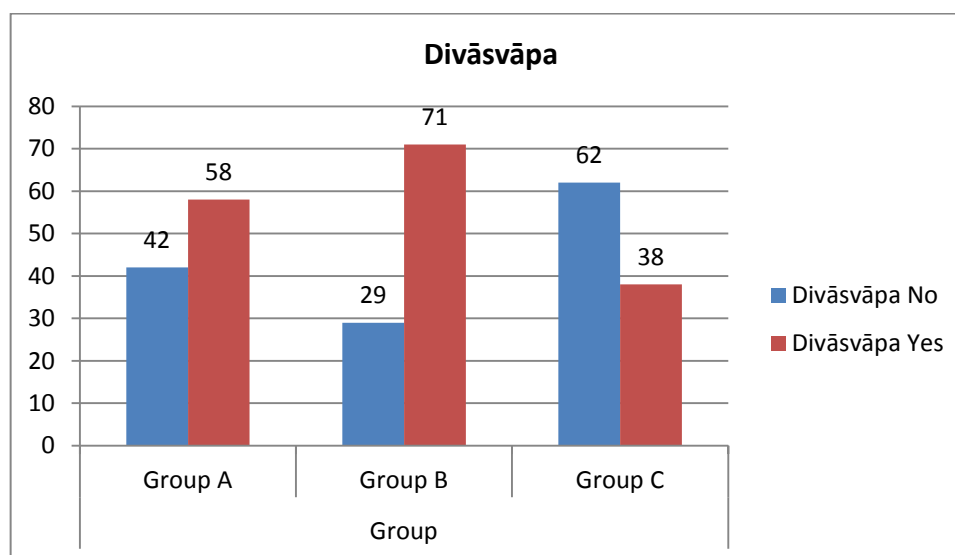
Out of 100 participants in Group B, 82 participants were involved Nokri (Salaried Jobs); 11 were Gruhini (housewives); 04 were doing Udyoga (business).

Out of 100 participants in Group C, 90 participants were involved in Nokri (Salaried Jobs); 05 were Gruhini (housewives); 04 were doing Udyoga (business) and 01 was Vidyarthi(student).

Table No. 53 : Group wise distribution of Divāsvāpa.

		Group			Total
		Group A	Group B	Group C	
Divāsvāpa	No	42	29	62	131
	Yes	58	71	38	169
Total		100	100	100	300

Graph No. 4 : Group wise distribution of Divāsvāpa



Group wise distribution of Divāsvāpa :

Out of 100 participants in Group B, 71 participants; in Group A, 58 participants and in Group C, 38 participants were taking Divāsvāpa.

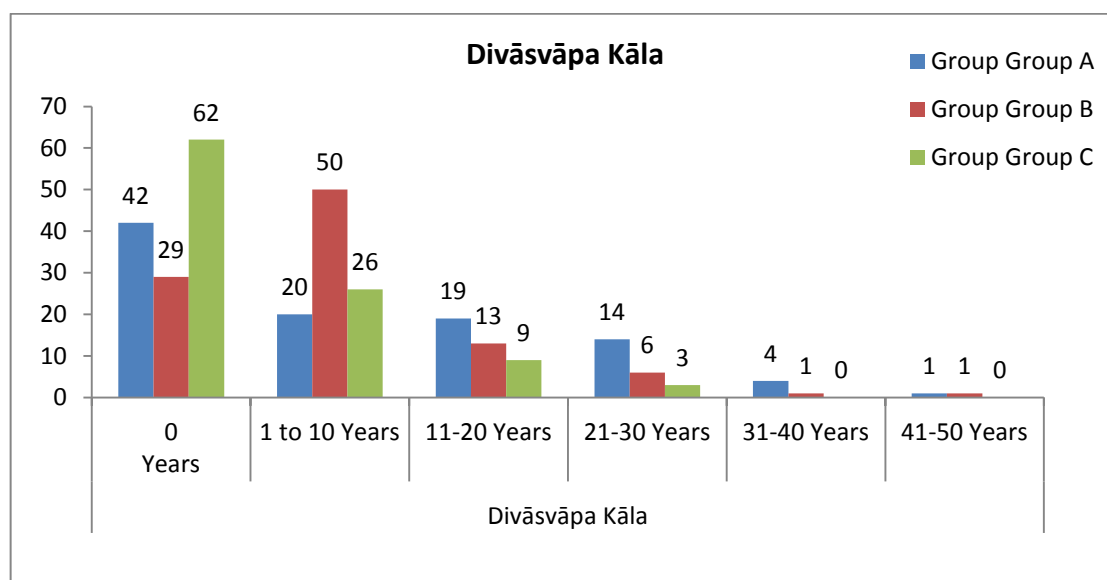
	Value	df	P-Value
Pearson Chi-Square	23.931 ^a	2	0.000
Likelihood Ratio	24.287	2	0.000
Linear-by-Linear Association	8.934	1	0.003
N of Valid Cases	300		

Since data is observational, Chi - Square test is applied to test the association between selected Kāyika Vihāra Vaiṣamya and manifestation of GIT diseases. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 54 : Group wise distribution of Divāsvāpa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Divāsvāpa Kāla	0	42	29	62	133
	1 to 10 years	20	50	26	96
	11-20 Years	19	13	09	41
	21-30 Years	14	06	03	23
	31-40 Years	04	01	00	5
	41-50 Years	01	01	00	2
Total		100	100	100	300

Graph No. 5 : Group wise distribution of Divāsvāpa according to Kāla



Group wise distribution of Divāsvāpa according to Kāla-

Out of 100 participants in Group B, 50 were taking Divāsvāpa in the period of 1-10 years; 13 were from 11 to 20 years; 06 were from 21 to 30 years and 01 each from 31-40 and 41-50 years each.

Out of 100 participants in Group C, 26 were taking Divāsvāpa in the period of 1-10 years; 09 were from 11 to 20 years; 03 were from 21 to 30 years.

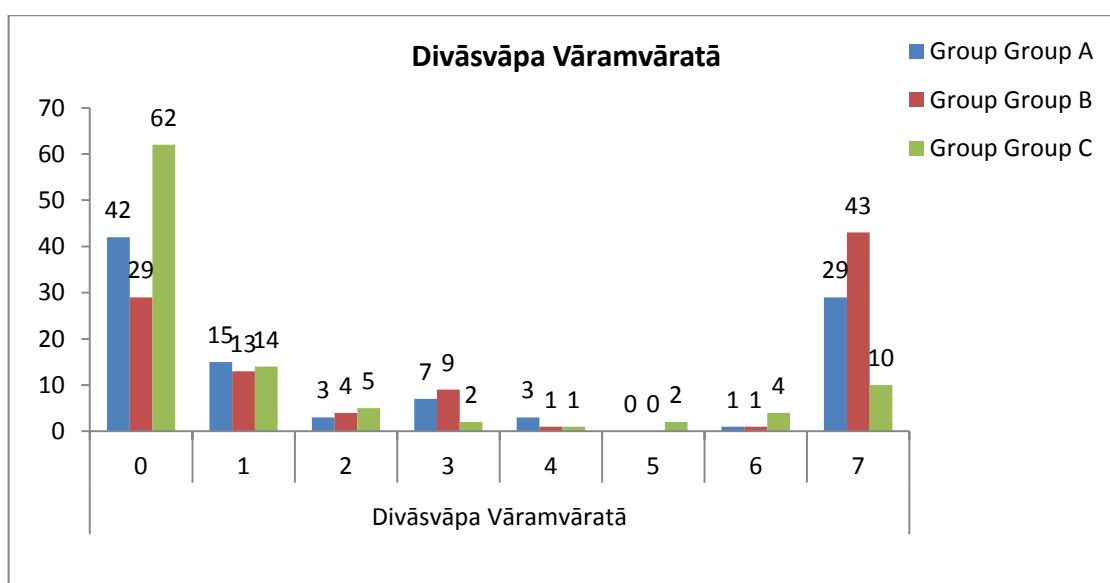
Out of 100 participants in Group A, 20 were taking Divāsvāpa in the period of 1-10 years; 19 were from 11 to 20 years; 14 were from 21 to 30 years and 04 from 31-40 and 01 from 41-50 years.

	Value	df	P-Value
Pearson Chi-Square	94.466 ^a	50	0.000
Likelihood Ratio	107.724	50	0.000
Linear-by-Linear Association	24.219	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 55 : Group wise distribution of Divāsvāpa according to Vāramvārātā

		Group			Total
		Group A	Group B	Group C	
Divāsvāpa Vāramvārātā (in days)	0	42	29	62	133
	1	15	13	14	42
	2	03	04	05	12
	3	07	09	02	18
	4	03	01	01	05
	5	00	00	02	02
	6	01	01	04	06
	7	29	43	10	82
Total		100	100	100	300

Graph No. 6 : Group wise distribution of Divāsvāpa according to Vāramvārātā**Group wise distribution of Divāsvāpa according to Vāramvārātā**

Out of 100 participants in Group B, 43 participants were taking Divāsvāpa for 07 days; 01 for 5-6 days; 10 for 3-4 days and 17 for 1-2 days.

Out of 100 participants in Group A, 29 participants were taking Divāsvāpa for 07 days; 01 for 5-6 days; 10 for 3-4 days and 18 for 1-2 days.

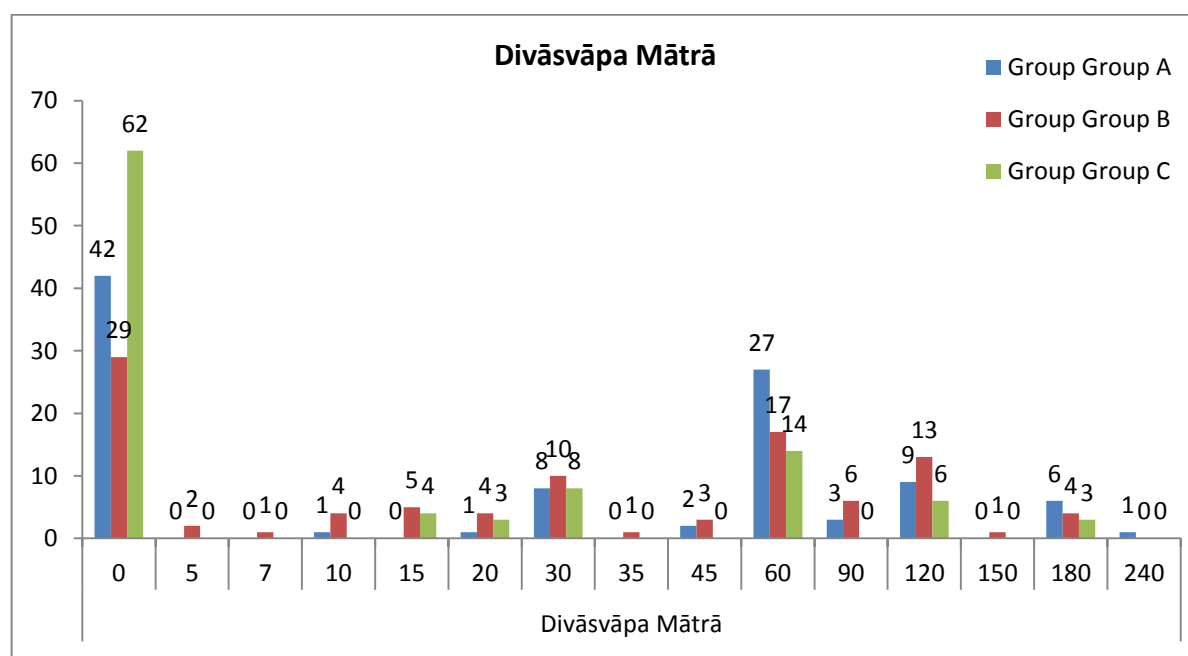
Out of 100 participants in Group C, 10 participants were taking Divāsvāpa for 07 days; 06 for 5-6 days; 03 from 3-4 days and 19 for 1-2 days.

	Value	df	P-Value
Pearson Chi-Square	46.116 ^a	14	0.000
Likelihood Ratio	49.079	14	0.000
Linear-by-Linear Association	8.682	1	0.003
N of Valid Cases	300		

Since data is observational, Chi-Square test is carried out to test the association. From above table it can be observed that P-Value is less than 0.05. Hence it is concluded that, there is significant association observed.

Table No. 56 : Group wise distribution of Divāsvāpa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Divāsvāpa Mātrā (in minutes)	0	42	29	62	134
	5	00	02	00	01
	7	00	01	00	01
	10	01	04	00	05
	15	00	05	04	09
	20	01	04	03	08
	30	08	10	08	26
	35	00	01	00	01
	45	02	03	00	05
	60	27	17	14	58
	90	03	06	00	09
	120	09	13	06	28
	150	00	01	00	01
	180	06	04	03	13
	240	01	00	00	01
Total		100	100	100	300

Graph No. 7 : Group wise distribution of Divāsvāpa according to Mātrā

Group wise distribution of Divāsvāpa according to Mātrā :

Out of 100 participants in Group B, 24 participants were taking Divāsvāpa for more than 60 minutes and 47 for less than 60 minutes.

Out of 100 participants in Group A, 19 participants were taking Divāsvāpa for more than 60 minutes and 39 for less than 60 minutes.

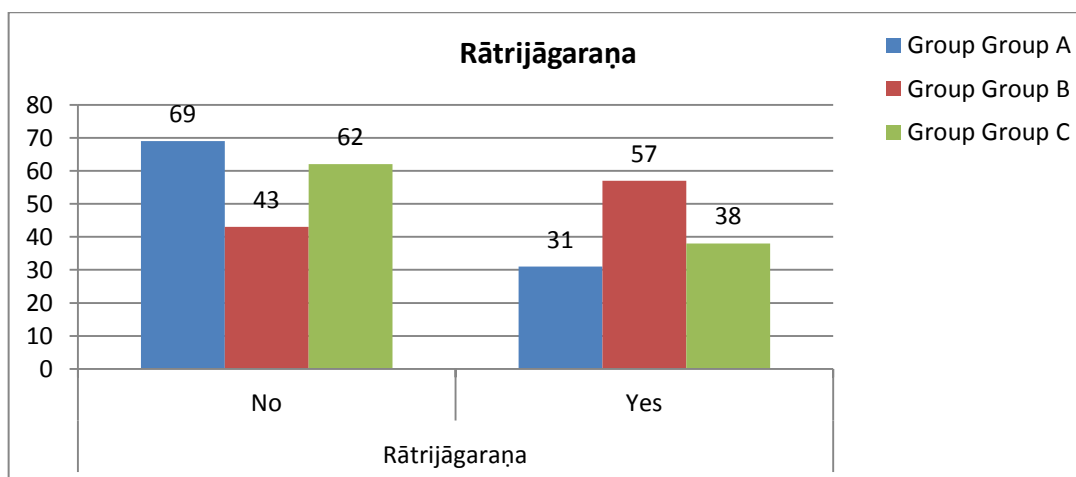
Out of 100 participants in Group C, 09 participants were taking Divāsvāpa for more than 60 minutes and 29 for less than 60 minutes.

	Value	df	P-Value
Pearson Chi-Square	50.939 ^a	28	0.005
Likelihood Ratio	59.192	28	0.001
Linear-by-Linear Association	9.380	1	0.002
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 57 : Group wise distribution of Rātrijāgaraṇa

		Group			Total
		Group A	Group B	Group C	
Rātrijāgaraṇa	No	69	43	62	173
	Yes	31	57	38	127
Total		100	100	100	300

Graph No. 8 : Group wise distribution of Rātrijāgaraṇa**Group wise distribution of Rātrijāgaraṇa-**

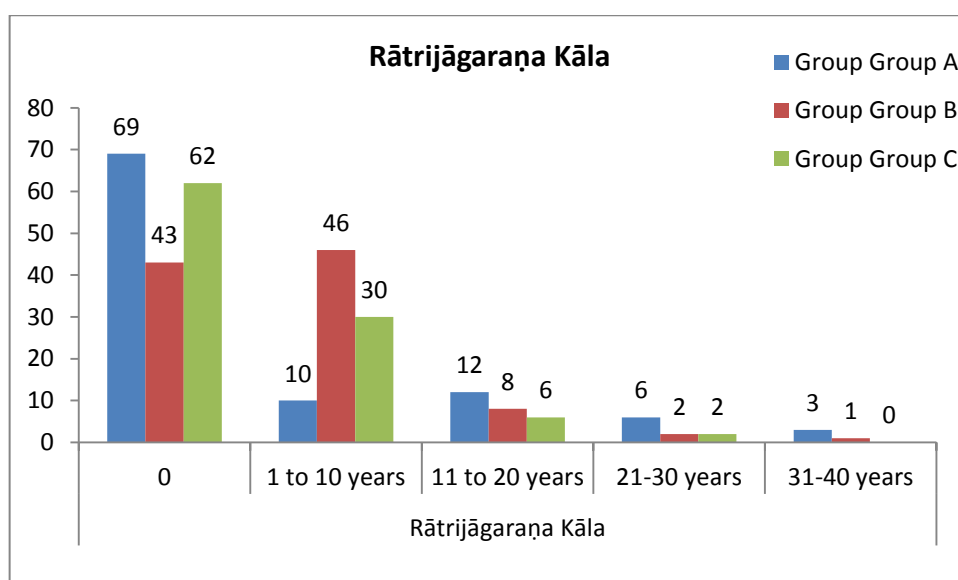
Out of 100 participants in Group B, 57 participants; in Group C, 38 participants and in Group A, 31 participants were indulged in Rātrijāgaraṇa

	Value	df	P-Value
Pearson Chi-Square	14.528 ^a	2	0.001
Likelihood Ratio	14.574	2	0.001
Linear-by-Linear Association	1.306	1	0.253
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 58 : Group wise distribution of Rātrijāgaraṇa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Rātrijāgaraṇa Kāla	0	69	43	62	174
	1 to 10 years	10	46	30	86
	11 to 20 years	12	08	06	26
	21-30 years	06	02	02	10
	31-40 years	03	01	00	04
Total		100	100	100	300

Graph No. 9 : Group wise distribution of Rātrijāgaraṇa according to Kāla**Group wise distribution of Rātrijāgaraṇa according to Kāla-**

Out of 100 participants in Group B, 46 were indulged in Rātrijagaraṇa for the period of 1-10 years; 08 were from 11-20 years; 02 were from 21-30 years and 01 each from 31-40 years.

Out of 100 participants in Group C, 30 were indulged in Rātrijagaraṇa for the period of 1-10 years; 06 were from 11-20 years; 02 were from 21-30 years.

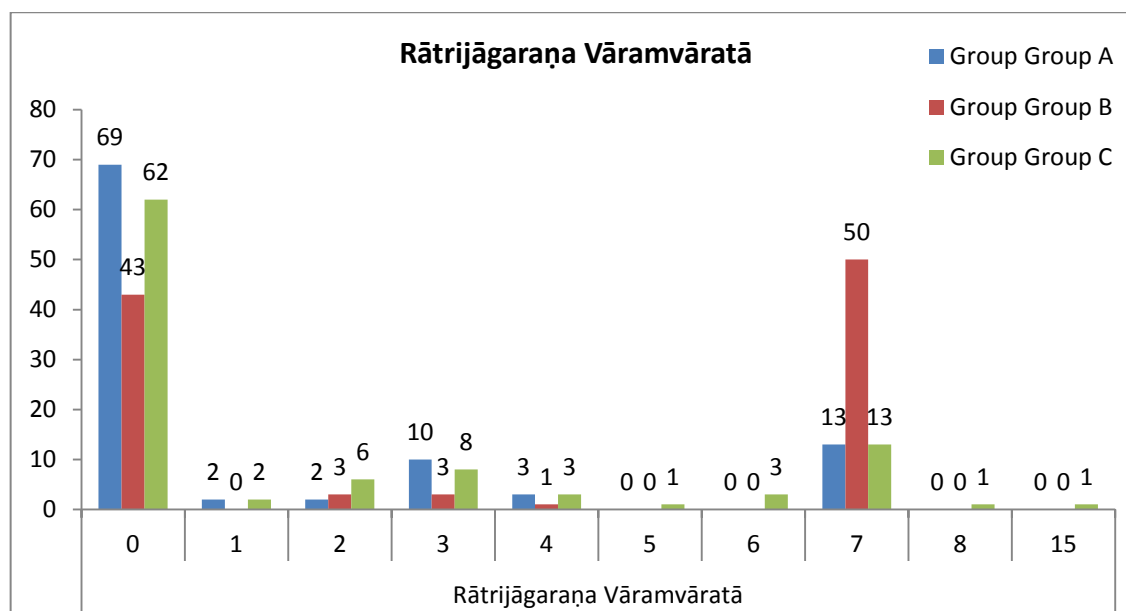
Out of 100 participants in Group A, 10 were indulged in Rātrijagaraṇa for the period of 1-10 years; 12 were from 11-20 years; 06 were from 21-30 years and 03 were from 31-40 years.

	Value	df	P-Value
Pearson Chi-Square	78.715 ^a	44	0.001
Likelihood Ratio	97.255	44	0.000
Linear-by-Linear Association	7.495	1	0.006
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 59 : Group wise distribution of Rātrijāgaraṇa according to Vāramvāratā

		Group			Total
		Group A	Group B	Group C	
Rātrijāgaraṇa Vāramvāratā (in days)	0	69	43	62	174
	1	02	00	02	04
	2	02	03	06	11
	3	10	03	08	21
	4	03	01	03	07
	5	00	00	01	01
	6	00	00	03	03
	7	13	50	13	76
	8	00	00	01	01
	15	00	00	01	01
Total		100	100	100	300

Graph No. 10 : Group wise distribution of Rātrijāgaraṇa according to Vāramvāratā**Group wise distribution of Rātrijāgaraṇa according to Vāramvāratā-**

Out of 100 participants in Group B, 50 participants were indulged in Rātrijāgaraṇa for 07 days; 0 for 5-6 days; 04 for 3-4 days and 03 for 1-2 days.

Out of 100 participants in Group C, 15 participants were indulged in Rātrijāgaraṇa for 07 days; 04 for 5-6 days; 11 for 3-4 days and 08 for 1-2 days.

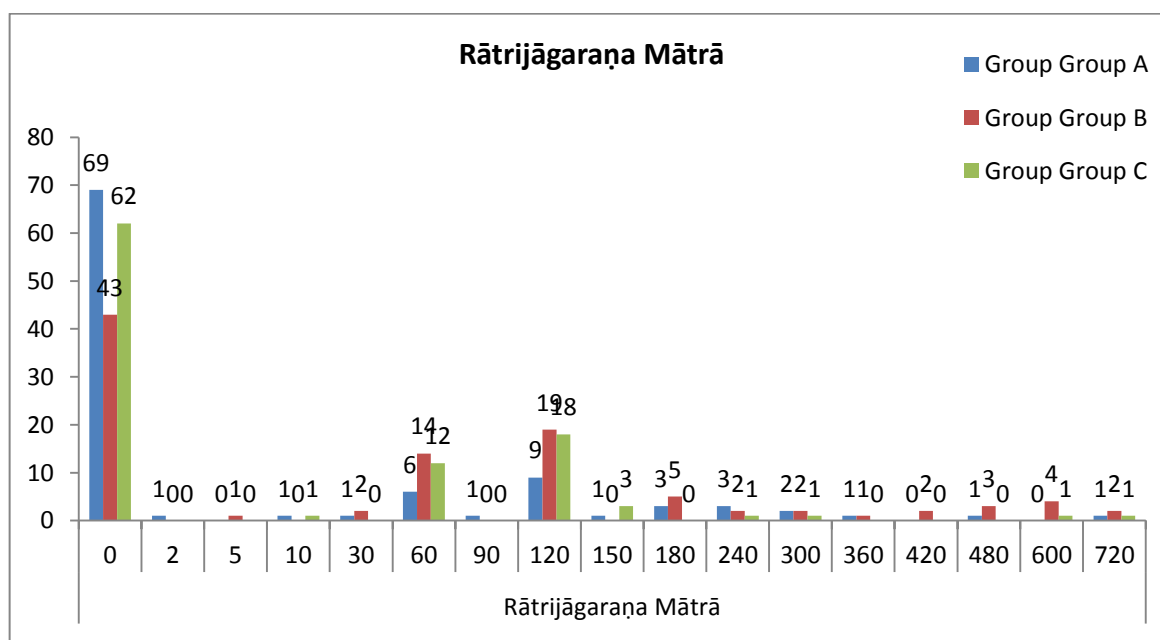
Out of 100 participants in Group B, 13 participants were indulged in Rātrijāgaraṇa for 07 days; 0 for 5-6 days; 13 for 3-4 days and 04 for 1-2 days.

	Value	df	P-Value
Pearson Chi-Square	64.103 ^a	18	0.000
Likelihood Ratio	64.896	18	0.000
Linear-by-Linear Association	1.134	1	0.287
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 60 : Group wise distribution of Rātrijāgaraṇa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Rātrijāgaraṇa Mātrā (in minutes)	0	69	43	62	174
	2	01	00	00	01
	5	00	01	00	01
	10	01	00	01	02
	30	01	02	00	03
	60	06	14	12	32
	90	01	00	00	01
	120	09	19	18	46
	150	01	00	03	04
	180	03	05	00	08
	240	03	02	01	06
	300	02	02	01	05
	360	01	01	00	02
	420	00	02	00	02
	480	01	03	00	04
	600	00	04	01	05
	720	01	02	01	04
Total		100	100	100	300

Graph No. 11: Group wise distribution of Rātrijāgaraṇa according to Mātrā**Group wise distribution of Rātrijāgaraṇa according to Mātrā-**

Out of 100 participants in Group B, 40 participants were indulged in Rātrijāgaraṇa for more than 60 minutes and 17 for less than 60 minutes.

Out of 100 participants in Group C, 38 participants were indulged in Rātrijāgaraṇa for more than 60 minutes and 13 for less than 60 minutes.

Out of 100 participants in Group A, 22 participants were indulged in Rātrijāgaraṇa for more than 60 minutes and 09 for less than 60 minutes.

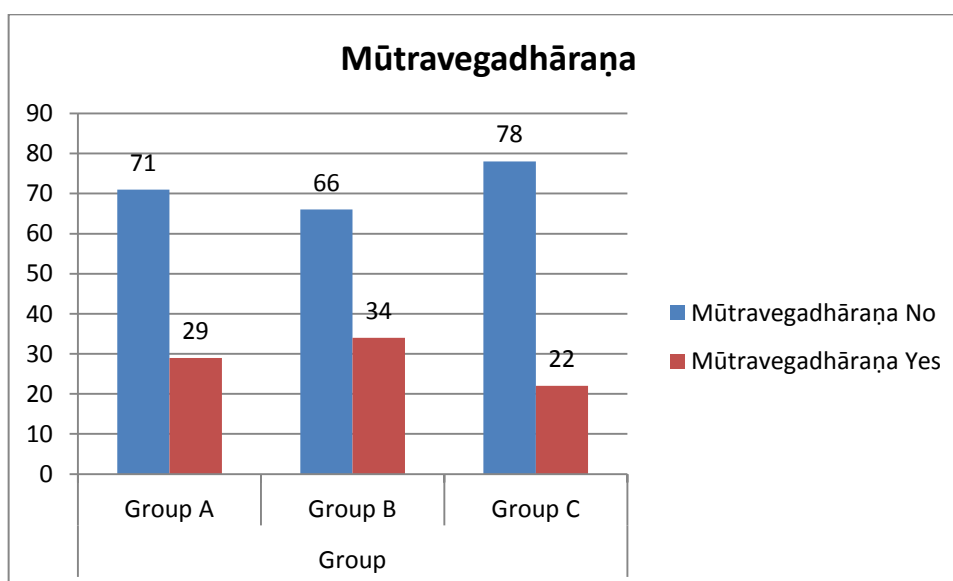
	Value	df	P-Value
Pearson Chi-Square	47.460 ^a	32	0.039
Likelihood Ratio	55.610	32	0.006
Linear-by-Linear Association	.004	1	0.952
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 61 : Group wise distribution of Mūtravegadhāraṇa

		Group			Total
		Group A	Group B	Group C	
Mūtravegadhāraṇa	No	71	66	78	216
	Yes	29	34	22	84
Total		100	100	100	300

Graph No. 12 : Group wise distribution of Mūtravegadhāraṇa



Group wise distribution of Mūtravegadhāraṇa-

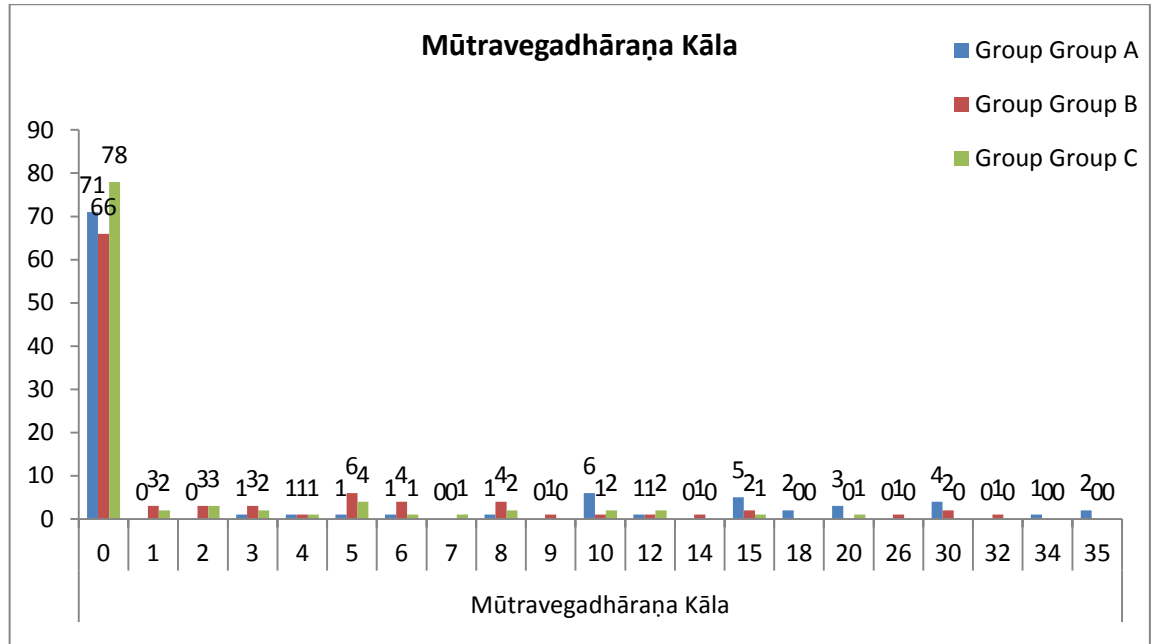
Out of 100 participants in Group B, 34 participants; in Group A, 29 participants and in Group C, 22 participants were suppressing the urge of Mūtra.

	Value	df	P-Value
Pearson Chi-Square	3.075 ^a	2	0.215
Likelihood Ratio	3.124	2	0.210
Linear-by-Linear Association	1.211	1	0.271
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is greater than 0.05, it is observed that, there is no significant association in all the groups.

Table No. 62 : Group wise distribution of Mūtravegadhāraṇa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Mūtravegadhāraṇa Kāla (in years)	0	71	66	78	215
	1	00	03	02	05
	2	00	03	03	06
	3	01	03	02	06
	4	01	01	01	03
	5	01	06	04	11
	6	01	04	01	06
	7	00	00	01	01
	8	01	04	02	07
	9	00	01	00	01
	10	06	01	02	09
	12	01	01	02	04
	14	00	01	00	01
	15	05	02	01	08
	18	02	00	00	02
	20	03	00	01	04
	26	00	01	00	01
	30	04	02	00	06
	32	00	01	00	01
	34	01	00	00	01
	35	02	00	00	02
Total		100	100	100	300

Graph No 13 : Group wise distribution of Mūtravegadhāraṇa according to Kāla

Group wise distribution of Mūtravegadhāraṇa according to Kāla-

Out of 100 participants in Group B, 26 participants were suppressing Mūtravega for the period of 1-10 years; 04 were from 11-20 years; 03 were from 21-30 years and 01 from 31-40 years.

Out of 100 participants in Group A, 11 participants were suppressing Mūtravega for the period of 1-10 years; 11 were from 11-20 years; 04 were from 21-30 years and 03 from 31-40 years.

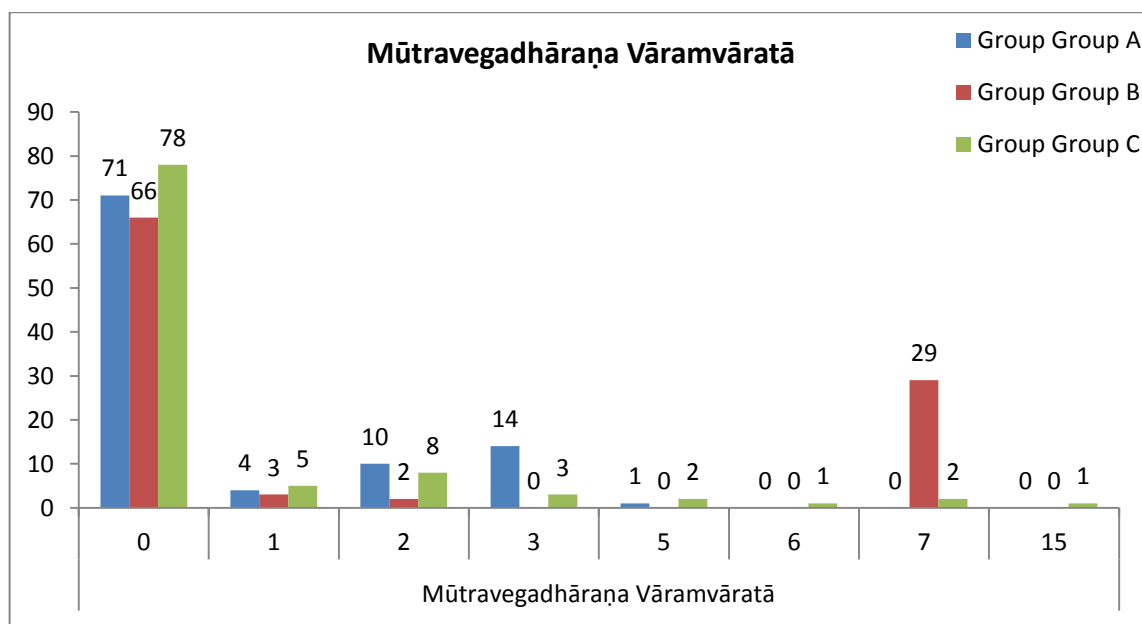
Out of 100 participants in Group C, 18 participants were suppressing Mūtravega for the period of 1-10 years; 04 were from 11-20 years.

	Value	df	P-Value
Pearson Chi-Square	52.185 ^a	40	0.094
Likelihood Ratio	59.910	40	0.022
Linear-by-Linear Association	12.262	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is greater than 0.05, it is observed that, there is no significant association in all the groups.

Table No. 63 : Group wise distribution of Mūtravegadhāraṇa according to Vāramvārātā

		Group			Total
		Group A	Group B	Group C	
Mūtravegadhāraṇa Vāramvārātā (in days)	0	71	66	78	215
	1	04	03	05	12
	2	10	02	08	20
	3	14	00	03	17
	5	01	00	02	03
	6	00	00	01	01
	7	00	29	02	31
	15	00	00	01	01
Total		100	100	100	300

Graph No. 14 : Mūtravegdhāraṇa Varanvāratā**Mūtravegdhāraṇa Varanvāratā-**

Out of 100 participants in Group B, 29 participants were suppressing Mūtravega for 07 days and 05 for 1-2 days.

Out of 100 participants in Group A, 01 participant was suppressing Mūtravega for 5-6 days; 14 for 3-4 days and 14 for 1-2 days.

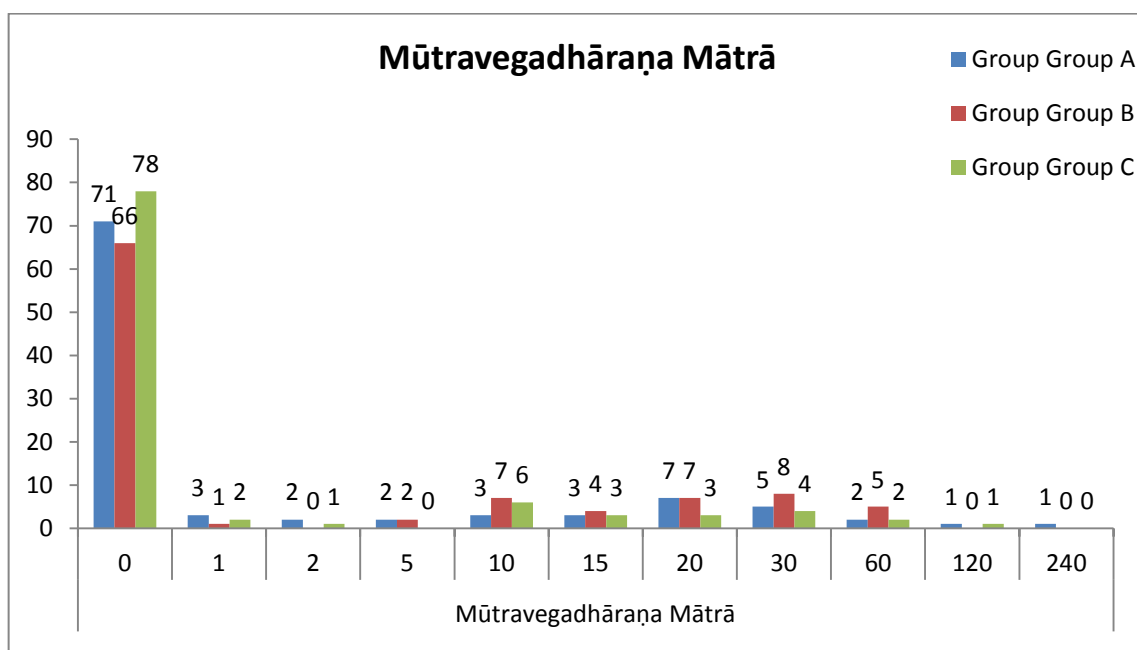
Out of 100 participants in Group C, 03 participants were suppressing Mūtravega for 07 days; 03 for 5-6 days; 03 for 3-4 days and 13 for 1-2 days

	Value	df	P-Value
Pearson Chi-Square	82.878 ^a	14	0.000
Likelihood Ratio	89.864	14	0.000
Linear-by-Linear Association	.022	1	0.881
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 64 : Group wise distribution of Mūtravegadhāraṇa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Mūtravegadhāraṇa Mātrā (in minutes)	0	71	66	78	215
	1	03	01	02	06
	2	02	00	01	03
	5	02	02	00	04
	10	03	07	06	16
	15	03	04	03	10
	20	07	07	03	17
	30	05	08	04	17
	60	02	05	02	09
	120	01	00	01	02
	240	01	00	00	01
Total		100	100	100	300

Graph No 15 : Group wise distribution of Mūtravegadhāraṇa according to Mātrā

Group wise distribution of Mūtravegadhāraṇa according to Mātrā -

Out of 100 participants in Group B 05 participants were suppressing Mūtravega for more than 60 minutes and 29 for less than 60 minutes.

Out of 100 participants in Group A 04 participants were suppressing Mūtravega for more than 60 minutes and 25 for less than 60 minutes.

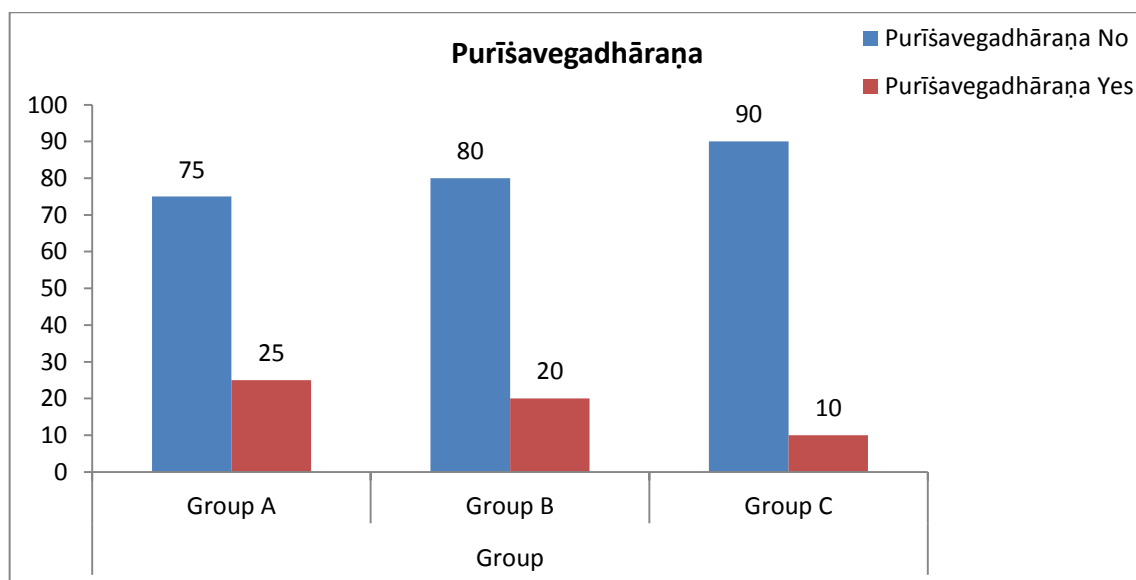
Out of 100 participants in Group C 03 participants were suppressing Mūtravega for more than 60 minutes and 19 for less than 60 minutes.

	Value	df	P-Value
Pearson Chi-Square	23.229 ^a	24	0.506
Likelihood Ratio	25.983	24	0.354
Linear-by-Linear Association	1.042	1	0.307
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is greater than 0.05, it is observed that, there is no significant association in all the groups.

Table No 65 : Group wise distribution of Purīsavegadhāraṇa

		Group			Total
		Group A	Group B	Group C	
Purīsavegadhāraṇa	No	75	80	90	245
	Yes	25	20	10	55
Total		100	100	100	300

Graph No. 16 : Group wise distribution of Puriṣavegadhāraṇa

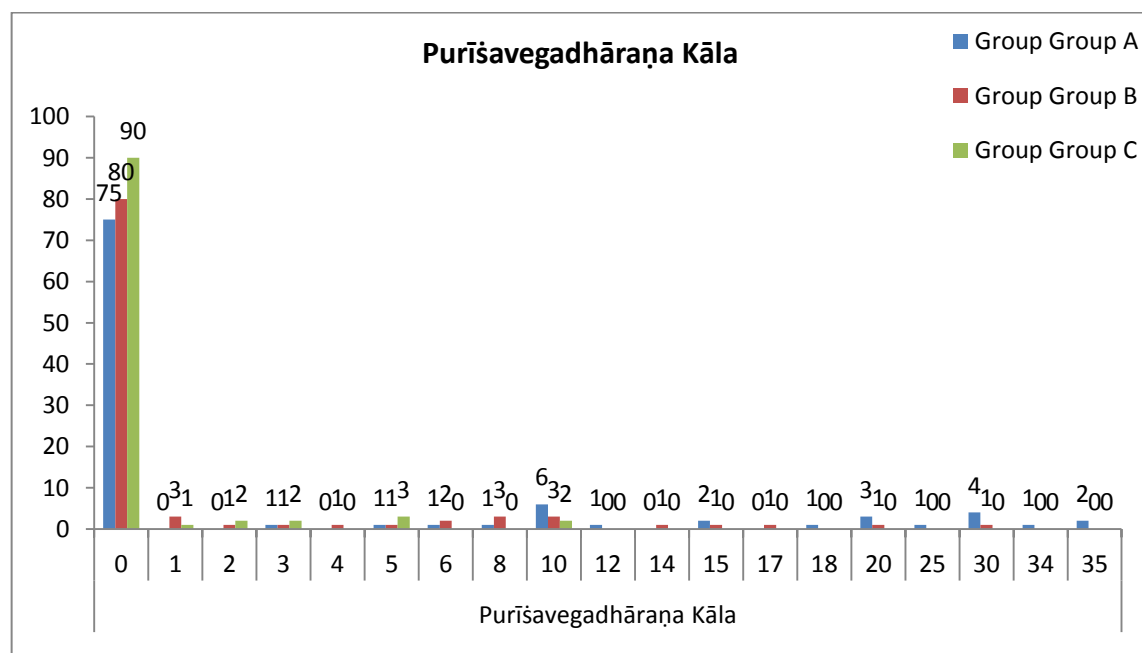
Group wise distribution of Puriṣavegadhāraṇa-Out of 100 participants in Group A 25 participants; in Group B 20 participants and in Group C 10 participants were suppressing the urge of Puriṣa.

	Value	df	P-Value
Pearson Chi-Square	7.792 ^a	2	0.020
Likelihood Ratio	8.282	2	0.016
Linear-by-Linear Association	7.489	1	0.006
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No 66 : Group wise distribution of Purīsavegadhāraṇa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Purīsavegadhāraṇa Kāla (in years)	0	75	80	90	245
	1	00	03	01	04
	2	00	01	02	03
	3	01	01	02	04
	4	00	01	00	01
	5	01	01	03	05
	6	01	02	00	03
	8	01	03	00	04
	10	06	03	02	11
	12	01	00	00	01
	14	00	01	00	01
	15	02	01	00	03
	17	00	01	00	01
	18	01	00	00	01
	20	03	01	00	04
	25	01	00	00	01
	30	04	01	00	05
	34	01	00	00	01
	35	02	00	00	02
Total		100	100	100	300

Graph No 17 : Group wise distribution of Purīsavegadhāraṇa according to Kāla

Group wise distribution of Purīśavegadhāraṇa according to Kāla-

Out of 100 participants in Group A ,10 participants were suppressing Purīśavega for the period of 1-10 years; 07 were from 11-20 years; 05 were from 21- were suppressing 30 years and 03 from 31-40 years.

Out of 100 participants in Group B, 15 participants in were suppressing Purīśavega for the period of 1-10 years; 04 were from 11-20 years; 01 were from 21-30 years.

Out of 100 participants in Group C,10 participants were suppressing Purīśavega for the period of 1-10 years.

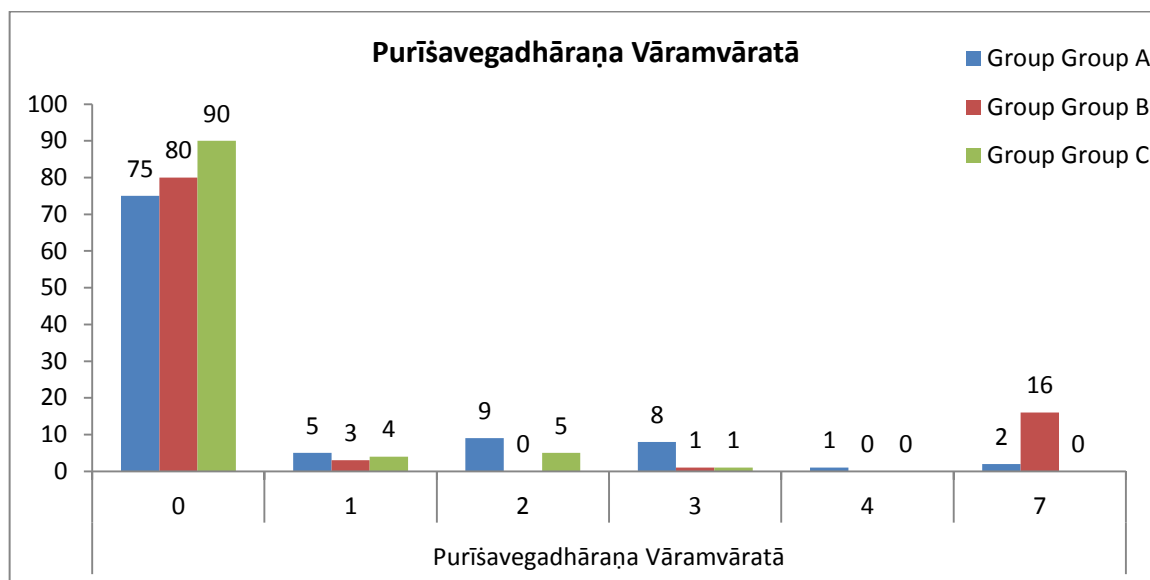
	Value	df	P-Value
Pearson Chi-Square	45.592 ^a	36	0.131
Likelihood Ratio	52.598	36	0.036
Linear-by-Linear Association	20.278	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is greater than 0.05, it is observed that, there is no significant association in all the groups.

Table No. 67 : Group wise distribution of Purīśavegadhāraṇa according to Vāramvāratā

		Group			Total
		Group A	Group B	Group C	
Purīśavegadhāraṇa Vāramvāratā (in days)	0	75	80	90	245
	1	05	03	04	12
	2	09	00	05	14
	3	08	01	01	10
	4	01	00	00	01
	7	02	16	00	18
Total		100	100	100	300

Graph No. 18 : Group wise distribution of Purīsavegadhāraṇa according to Vāramvāratā



Group wise distribution of Purīsavegadhāraṇa according to Vāramvāratā-

Out of 100 participants in Group A, 02 participants were suppressing Purīsavega for 07 days and 09 for 3-4 days and 14 for 1-2 days.

Out of 100 participants in Group B, 16 participants were suppressing Purīsavega for 07 days; 01 for 3-4 days and 03 for 1-2 days.

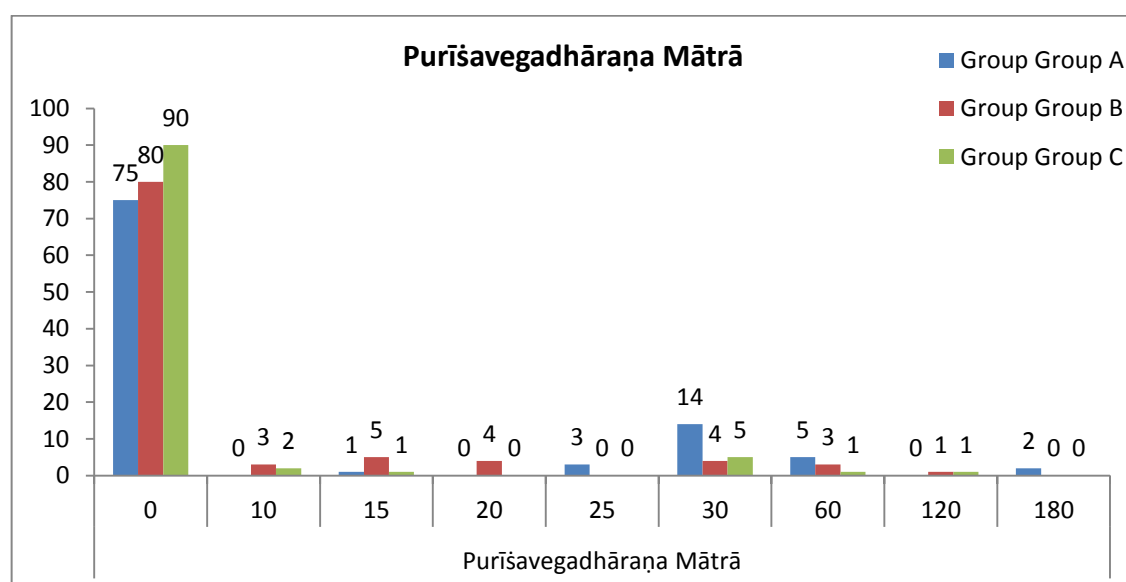
Out of 100 participants in Group C, 01 participants were suppressing Purīsavega for 3-4 days and 09 for 1-2 days.

	Value	df	P-Value
Pearson Chi-Square	47.776 ^a	10	0.000
Likelihood Ratio	52.815	10	0.000
Linear-by-Linear Association	3.733	1	0.053
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 68 : Group wise distribution of Purīsavegadhāraṇa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Purīsavegadhāraṇa Mātrā(in minutes)	0	75	80	90	245
	10	00	03	02	05
	15	01	05	01	07
	20	00	04	00	04
	25	03	00	00	03
	30	14	04	05	23
	60	05	03	01	09
	120	00	01	01	02
	180	02	00	00	02
Total		100	100	100	300

Graph No. 19 : Group wise distribution of Purīsavegadhāraṇa according to Mātrā**Group wise distribution of Purīsavegadhāraṇa according to Mātrā-**

Out of 100 participants in Group A, 02 participants were suppressing Purīsavega for more than 60 minutes and 23 for less than 60 minutes.

Out of 100 participants in Group B, 01 participant was suppressing Puriṣavega for more than 60 minutes and 19 for less than 60 minutes.

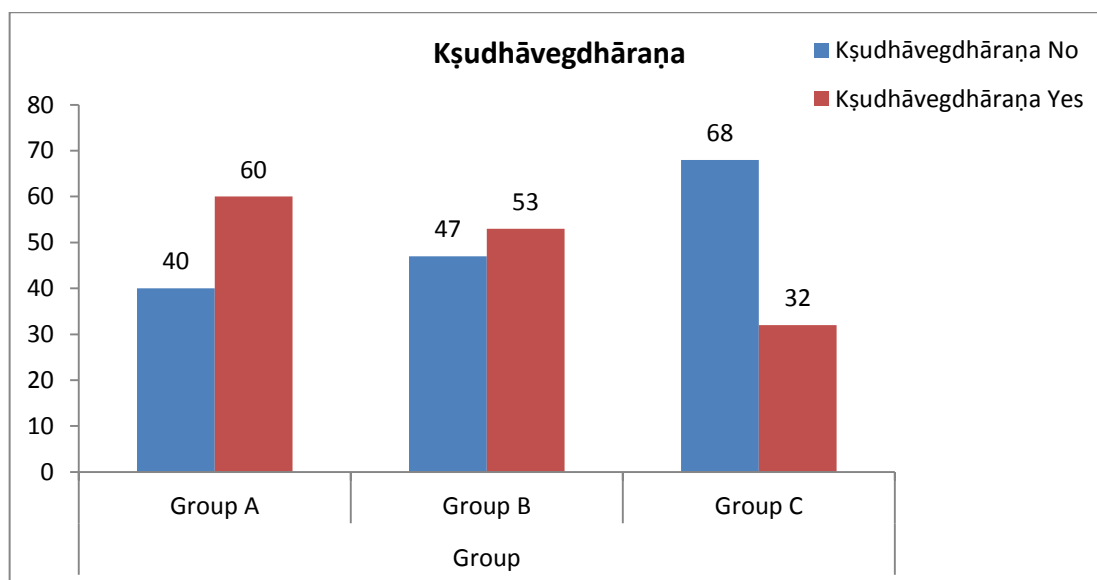
Out of 100 participants in Group C, 01 participant was suppressing Puriṣavega for more than 60 minutes and 09 for less than 60 minutes.

	Value	df	P-Value
Pearson Chi-Square	34.077 ^a	16	0.005
Likelihood Ratio	36.896	16	0.002
Linear-by-Linear Association	6.246	1	0.012
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 69 : Group wise distribution of Kṣudhāvegdhāraṇa

		Group			Total
		Group A	Group B	Group C	
Kṣudhāvegdhāraṇa	No	40	47	68	156
	Yes	60	53	32	144
Total		100	100	100	300

Graph No. 20 : Group wise distribution of Kṣudhāvegdhāraṇa**Group wise distribution of Kṣudhāvegdhāraṇa-**

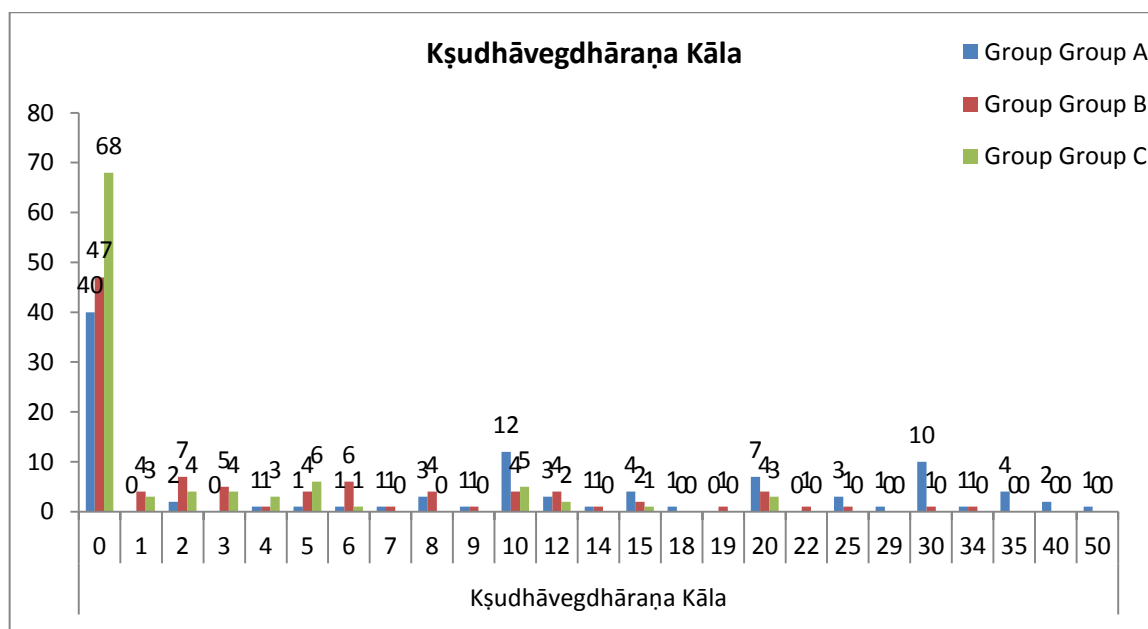
Out of 100 participants in Group A, 60 participants ; in Group B, 53 participants and in Group C ,32 participants were suppressing the urge of Kṣudhā (hunger).

	Value	df	P-Value
Pearson Chi-Square	16.667 ^a	2	0.000
Likelihood Ratio	16.963	2	0.000
Linear-by-Linear Association	15.653	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 70 : Group wise distribution of Kṣudhāvegdhāraṇa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Kṣudhāvegdhāraṇa Kāla (in years)	0	40	47	68	155
	1	00	04	03	07
	2	02	07	04	13
	3	00	05	04	09
	4	01	01	03	05
	5	01	04	06	11
	6	01	06	01	08
	7	01	01	00	02
	8	03	04	00	07
	9	01	01	00	02
	10	12	04	05	21
	12	03	04	02	9
	14	01	01	00	02
	15	04	02	01	07
	18	01	00	00	01
	19	00	01	00	01
	20	07	04	03	14
	22	00	01	00	01
	25	03	01	00	04
	29	01	00	00	01
	30	10	01	00	11
	34	01	01	00	02
	35	04	00	00	04
	40	02	00	00	02
	50	01	00	00	01
Total		100	100	100	300

Graph No. 21 : Group wise distribution of Kṣudhāvegdhāraṇa according to Kāla**Group wise distribution of Kṣudhāvegdhāraṇa according to Kāla-**

Out of 100 participants in Group A, 22 participants were suppressing Kṣudhāvega for the period of 1-10 years; 15 were from 11-20 years; 14 were from 21-30 years and 7 from 31-40 years and 01 from 41-50 years.

Out of 100 participants in Group B, 37 participants were suppressing Kṣudhāvega for the period of 1-10 years; 12 were from 11-20 years; 03 were from 21-30 years and 01 from 31-40 years.

Out of 100 participants in Group C, 26 participants were suppressing Kṣudhāvega for the period of 1-10 years; 06 were from 11-20 years

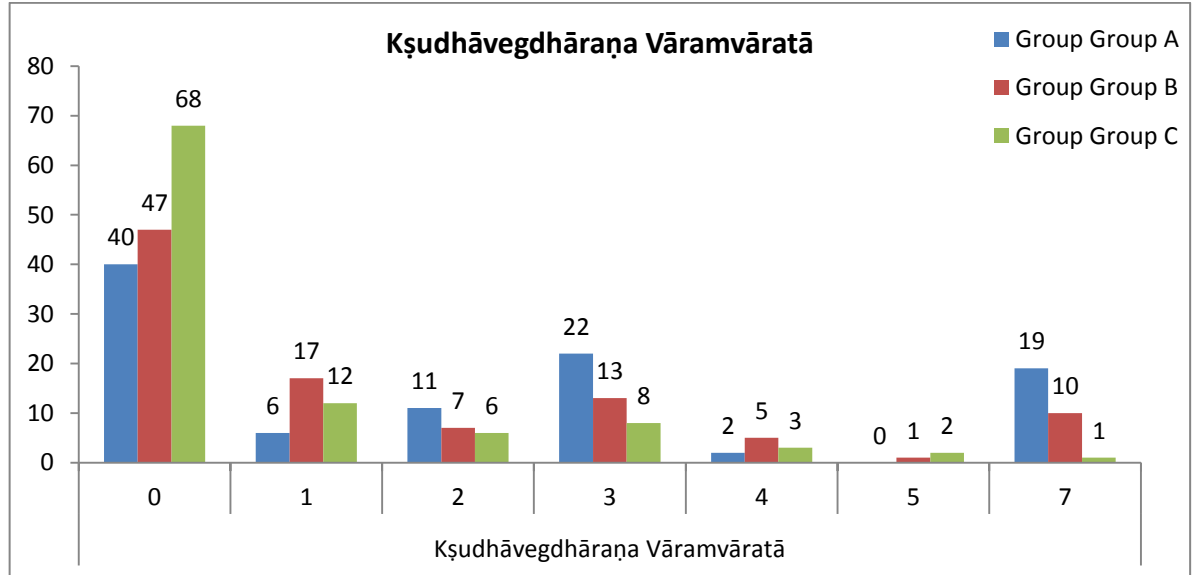
	Value	df	P-Value
Pearson Chi-Square	91.435 ^a	48	0.000
Likelihood Ratio	103.864	48	0.000
Linear-by-Linear Association	47.379	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 71 : Group wise distribution of Kṣudhāvegdhāraṇa according to Vāramvāratā

		Group			Total
		Group A	Group B	Group C	
Kṣudhāvegdhāraṇa Vāramvāratā (in days)	0	40	47	68	155
	1	06	17	12	35
	2	11	07	06	24
	3	22	13	08	43
	4	02	05	03	10
	5	00	01	02	03
	7	19	10	01	30
Total		100	100	100	300

Graph No. 22 : Group wise distribution of Kṣudhāvegdhāraṇa according to Vāramvāratā



Group wise distribution of Kṣudhāvegdhāraṇa according to Vāramvāratā-

Out of 100 participants in Group A, 19 participants were suppressing Kṣudhāvega for 07 days and 24 for 3-4 days and 17 for 1-2 days.

Out of 100 participants in Group B, 10 participants were suppressing Kṣudhāvega for 07 days; 01 for 5-6 days; 19 for 3-4 days and 24 for 1-2 days.

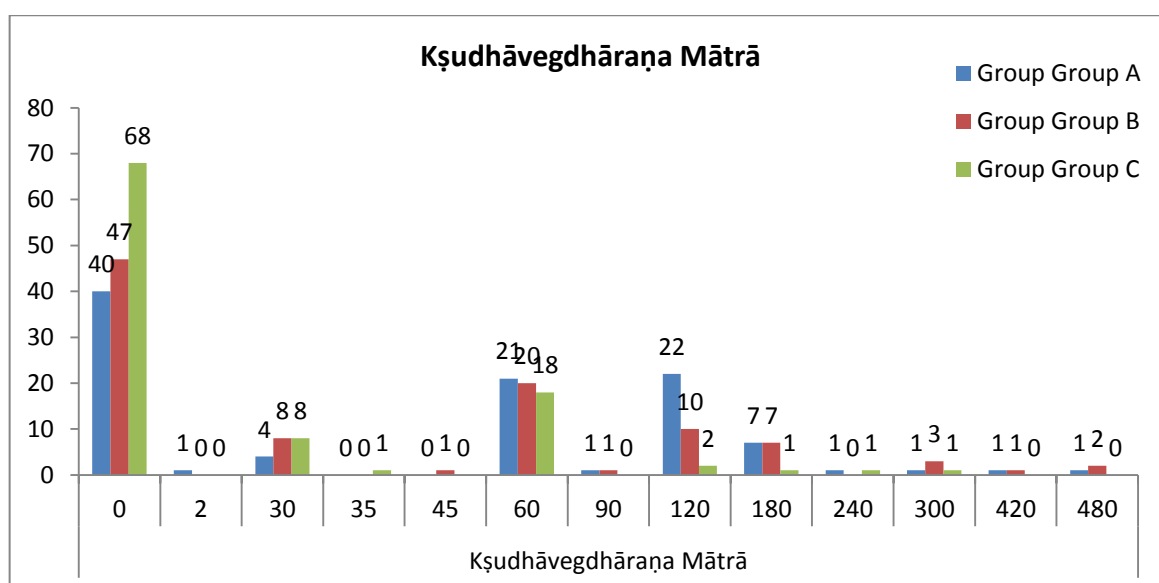
Out of 100 participants in Group C, 03 participants were suppressing Kṣudhāvega for 5-6 days; 11 for 3-4 days and 18 for 1-2 days.

	Value	df	P-Value
Pearson Chi-Square	41.793 ^a	12	0.000
Likelihood Ratio	46.086	12	0.000
Linear-by-Linear Association	25.483	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 72 : Group wise distribution of Kṣudhāvegdhāraṇa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Kṣudhāvegdhāraṇa Mātrā(in minutes)	0	40	47	68	155
	2	01	00	00	01
	30	04	08	08	20
	35	00	00	01	01
	45	00	01	00	01
	60	21	20	18	59
	90	01	01	00	02
	120	22	10	02	34
	180	07	07	01	15
	240	01	00	01	02
	300	01	03	01	05
	420	01	01	00	02
	480	01	02	00	03
Total		100	100	100	300

Graph No. 23 : Group wise distribution of Kṣudhāvegdhāraṇa according to Mātrā**Group wise distribution of Kṣudhāvegdhāraṇa according to Mātrā-**

Out of 100 participants in Group A, 34 participants were suppressing Kṣudhāvega for more than 60 minutes and 26 for less than 60 minutes.

Out of 100 participants in Group B, 24 participants were suppressing Kṣudhāvega for more than 60 minutes and 29 for less than 60 minutes.

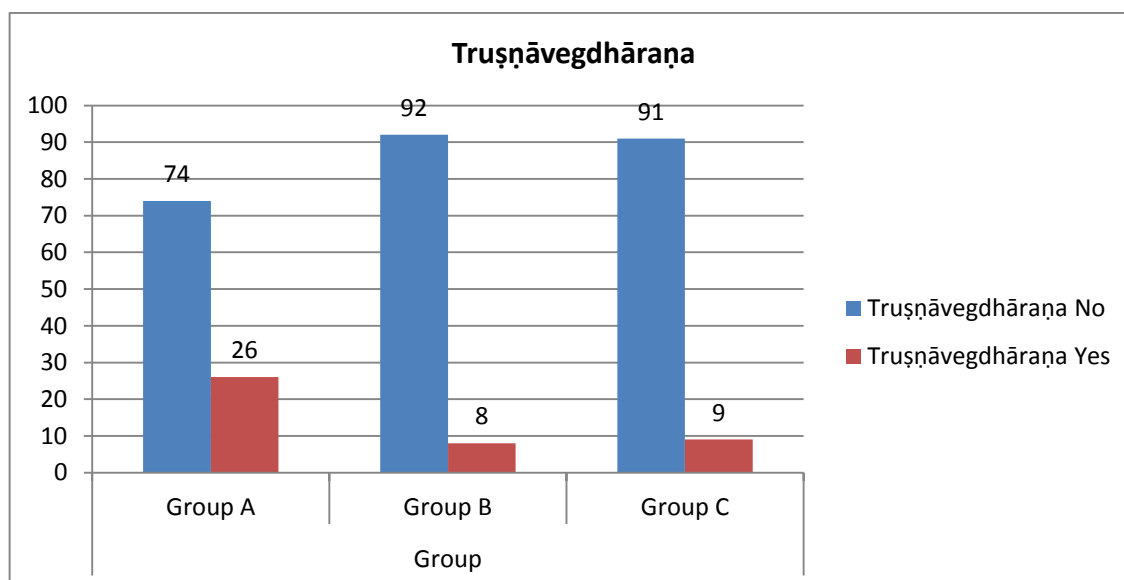
Out of 100 participants in Group C, 05 participants were suppressing Kṣudhāvega for more than 60 minutes and 27 for less than 60 minutes.

	Value	df	P-Value
Pearson Chi-Square	45.132 ^a	24	0.006
Likelihood Ratio	51.029	24	0.001
Linear-by-Linear Association	17.478	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 73 : Group wise distribution of Truṣṇāvegdhāraṇa

		Group			Total
		Group A	Group B	Group C	
Truṣṇāvegdhāraṇa	No	74	92	91	257
	Yes	26	8	9	43
Total		100	100	100	300

Graph No. 24 : Group wise distribution of Truṣṇāvegdhāraṇa**Group wise distribution of Truṣṇāvegdhāraṇa -**

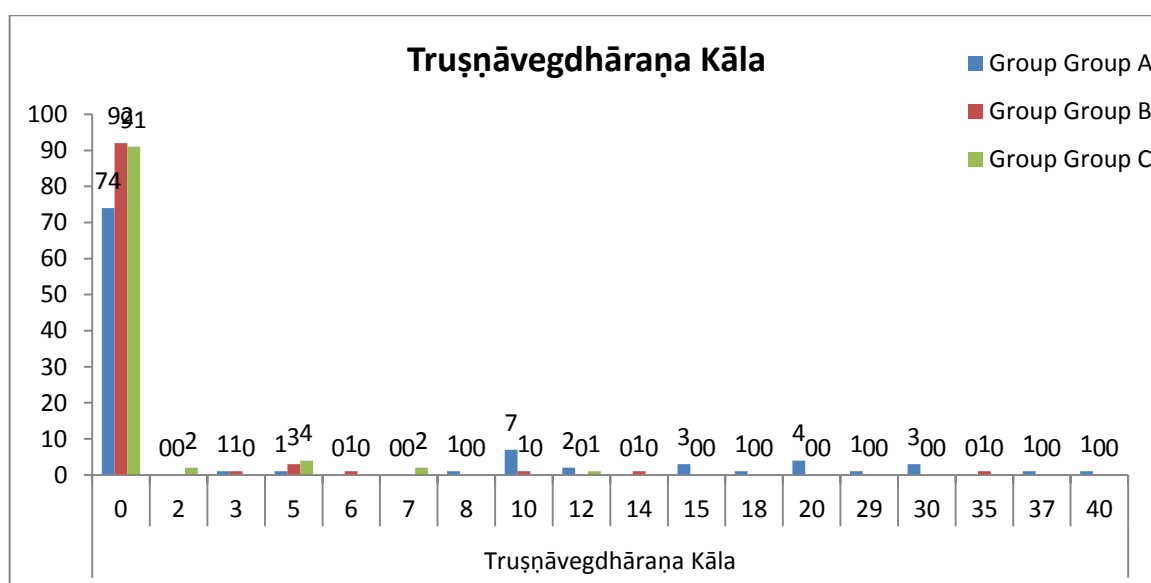
Out of 100 participants in Group A, 26 participants; in Group C, 09 participants and in Group B, 08 participants were suppressing the urge of Truṣṇā (thirst)

	Value	df	P-Value
Pearson Chi-Square	19.818 ^a	4	0.001
Likelihood Ratio	18.928	4	0.001
Linear-by-Linear Association	4.237	1	0.040
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 74 : Group wise distribution of Truṣṇāvegdhāraṇa according to Kāla

		Group			Total
		Group A	Group B	Group C	
Truṣṇāvegdhāraṇa Kāla (in years)	0	74	92	91	257
	2	00	00	02	02
	3	01	01	00	02
	5	01	03	04	08
	6	00	01	00	01
	7	00	00	02	02
	8	01	00	00	01
	10	07	01	00	08
	12	02	00	01	03
	14	00	01	00	01
	15	03	00	00	03
	18	01	00	00	01
	20	04	00	00	04
	29	01	00	00	01
	30	03	00	00	03
	35	00	01	00	01
	37	001	00	00	01
	40	01	00	00	01
Total		100	100	100	300

Graph No. 25 : Group wise distribution of Truṣṇāvegdhāraṇa according to Kāla**Group wise distribution of Truṣṇāvegdhāraṇa according to Kāla-**

Out of 100 participants in Group A, 10 participants were suppressing Truṣṇāvega for the period of 1-10 years; 10 were from 11-20 years; 04 were from 21-30 years and 02 from 31-40 years.

Out of 100 participants in Group C, 08 participants were suppressing Truṣṇāvega for the period of 1-10 years; 01 was from 11-20 years.

Out of 100 participants in Group B, 06 participants were suppressing Truṣṇāvega for the period of 1-10 years; 01 was from 11-20 years and 01 was from 31-40 years.

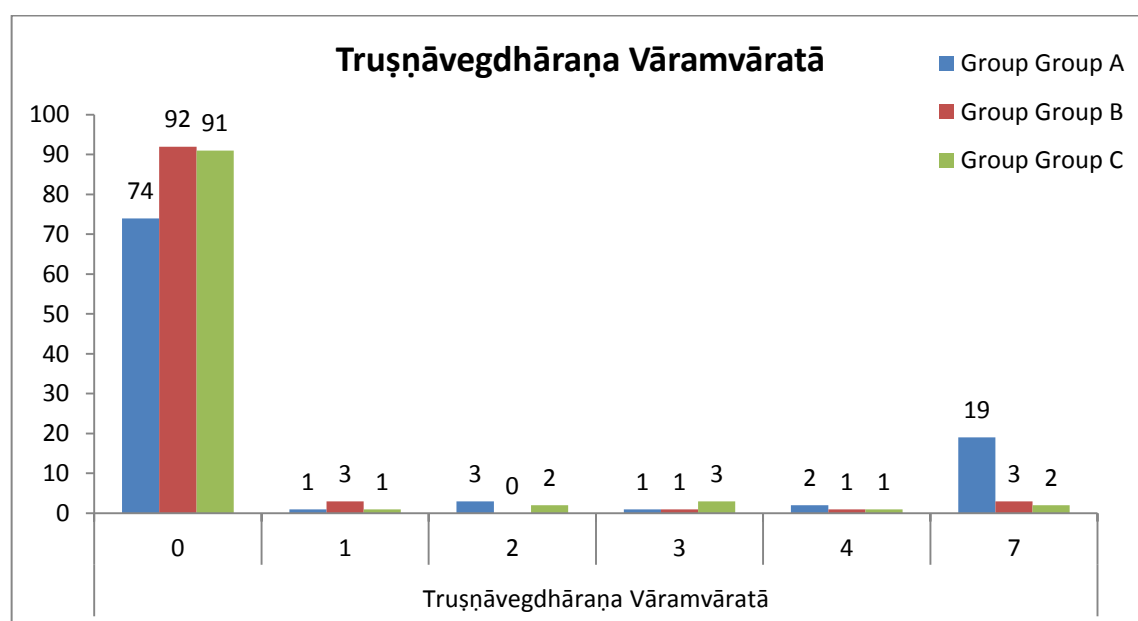
	Value	df	P-Value
Pearson Chi-Square	61.889 ^a	34	0.002
Likelihood Ratio	68.720	34	0.000
Linear-by-Linear Association	21.525	1	0.000
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 75 : Group wise distribution of Truṣṇāvegdhāraṇa according to Vāramvāratā

		Group			Total
		Group A	Group B	Group C	
Truṣṇāvegdhāraṇa Vāramvāratā(in days)	0	74	92	91	257
	1	01	03	01	05
	2	03	00	02	05
	3	01	01	03	05
	4	02	01	01	04
	7	19	03	02	24
Total		100	100	100	300

Graph No. 26- Group wise distribution of Truṣṇāvegdhāraṇa according to Vāramvāratā



Group wise distribution of Truṣṇāvegdhāraṇa according to Vāramvāratā

Out of 100 participants in Group A, 19 participants were suppressing Truṣṇāvega for 7 days and 03 for 3-4 days and 04 for 1-2 days.

Out of 100 participants in Group C, 02 participants were suppressing Truṣṇāvega for 7 days; 04 for 3-4 days and 03 for 1-2 days.

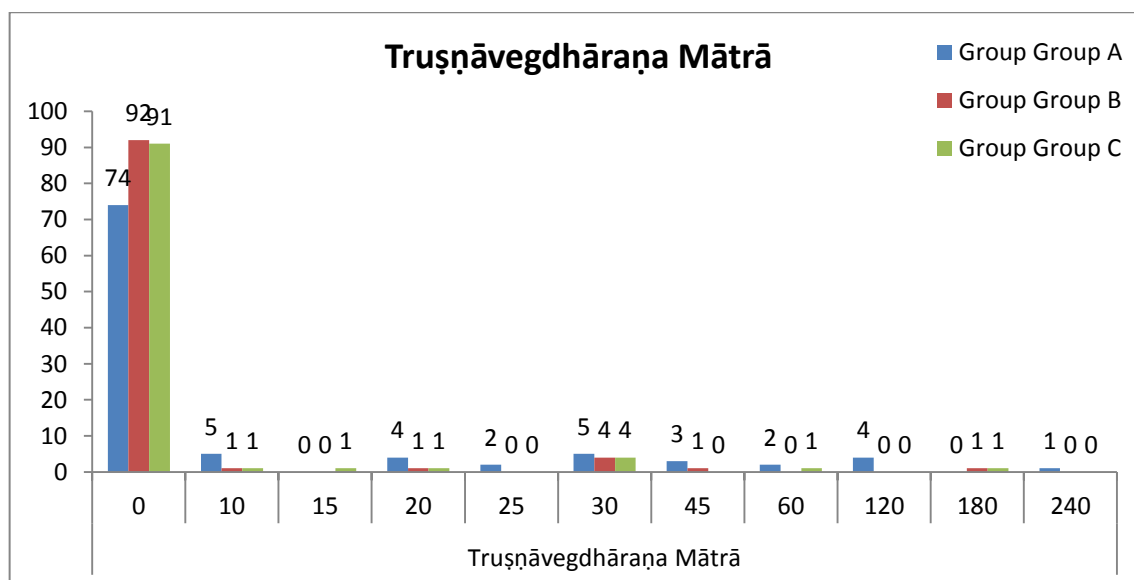
Out of 100 participants in Group B, 03 participants were suppressing Truṣṇāvega for 7 days; 02 for 3-4 days and 03 for 1-2 days.

	Value	df	P-Value
Pearson Chi-Square	36.280 ^a	12	0.000
Likelihood Ratio	37.124	12	0.000
Linear-by-Linear Association	6.981	1	0.008
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 76 : Group wise distribution of Truṣṇāvegdhāraṇa according to Mātrā

		Group			Total
		Group A	Group B	Group C	
Truṣṇāvegdhāraṇa Mātrā(in minutes)	0	74	92	91	257
	10	05	01	01	07
	15	00	00	01	01
	20	04	01	01	06
	25	02	00	00	02
	30	05	04	04	13
	45	03	01	00	04
	60	02	00	01	03
	120	04	00	00	04
	180	00	01	01	02
	240	01	00	00	01
Total		100	100	100	300

Graph No. 27 : Group wise distribution of Truṣṇāvegdhāraṇa according to Mātrā**Group wise distribution of Truṣṇāvegdhāraṇa according to Mātrā-**

Out of 100 participants in Group A, 05 participants were suppressing Truṣṇāvega for more than 60 minutes and 21 for less than 60 minutes.

Out of 100 participants in Group C, 01 participant was suppressing Truṣṇāvega for more than 60 minutes and 08 for less than 60 minutes.

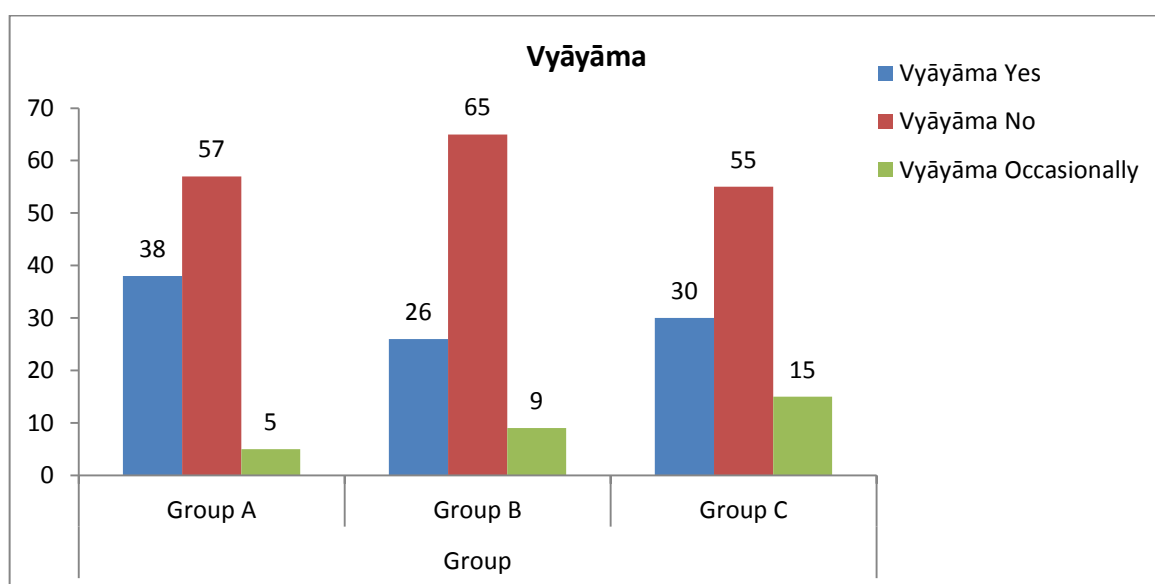
Out of 100 participants in Group B, 01 participant was suppressing Truṣṇāvega for more than 60 minutes and 07 for less than 60 minutes.

	Value	df	P-Value
Pearson Chi-Square	35.165 ^a	20	0.019
Likelihood Ratio	39.539	20	0.006
Linear-by-Linear Association	6.168	1	0.013
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is less than 0.05, it is observed that, there is significant association in all the groups.

Table No. 77 : Group wise distribution of Vyāyāma

		Group			Total
		Group A	Group B	Group C	
Vyāyāma	Yes	38	26	30	95
	No	57	65	55	175
	Occasionally	05	09	15	29
Total		100	100	100	300

Graph No. 28 : Group wise distribution of Vyāyāma**Group wise distribution of Vyāyāma-**

Out of 100 participants in Group A, 38 participants; in Group C, 30 participants and in Group B, 26 participants were doing Vyāyāma regularly.

Out of 100 participants in Group A, 65 participants; in Group B, 57 participants and in Group C, 55 participants were not doing Vyāyāma. (Avyāyāma-lack of physical exercise).

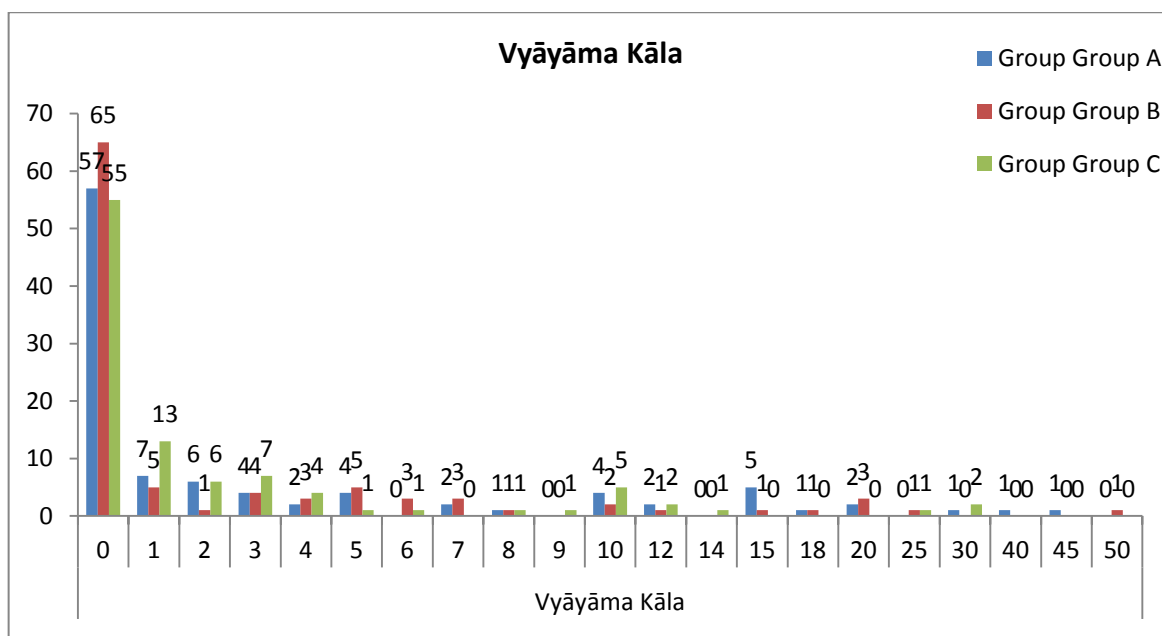
Out of 100 participants in Group C, 15 participants; in Group B, 09 participants and in Group A, 05 participants were doing Vyāyāma occasionally.

	Value	df	P-Value
Pearson Chi-Square	11.184 ^a	6	0.083
Likelihood Ratio	11.373	6	0.078
Linear-by-Linear Association	5.856	1	0.016
N of Valid Cases	300		

Since data is observational, Chi-Square test is applied to test the association. As the P-Value is greater than 0.05, it is observed that, there is no significant association in all the groups.

Table No. 78 : Group wise distribution of Vyāyāma according to Kāla

		Group			Total
		Group A	Group B	Group C	
Vyāyāma Kāla(in years)	0	57	65	55	177
	1	07	05	13	25
	2	06	01	06	13
	3	04	04	07	15
	4	02	03	04	09
	5	04	05	01	10
	6	00	03	01	04
	7	02	03	00	05
	8	01	01	01	03
	9	00	00	01	01
	10	04	02	05	11
	12	02	01	02	05
	14	00	00	01	01
	15	05	01	00	06
	18	01	01	00	02
	20	02	03	00	05
	25	00	01	01	02
	30	01	00	02	03
	40	01	00	00	01
	45	01	00	00	01
	50	00	01	00	01
Total		100	100	100	300

Graph No. 29 : Group wise distribution of Vyāyāma according to Kāla**Group wise distribution of Vyāyāma according to Kāla-**

The participants who were doing Vyāyāma regularly and occasionally are categorized according to Kāla.

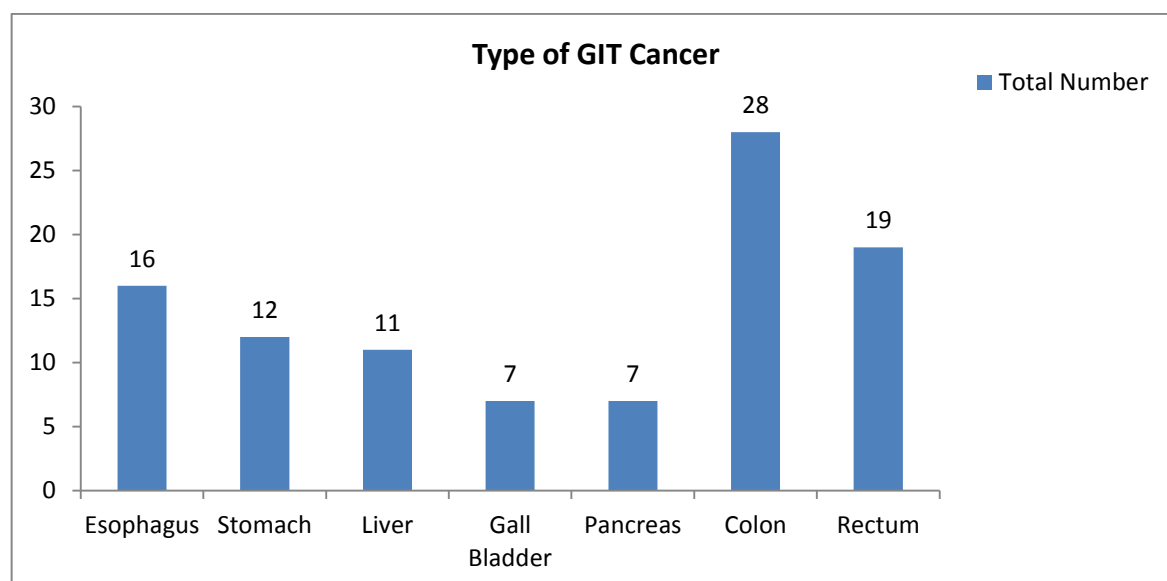
Out of 100 participants in Group C, 39 participants were doing Vyāyāma for the period of 1-10 years; 19 were from 11-20 years; 05 were from 21-30 years.

Out of 100 participants in Group A, 30 participants were doing Vyāyāma for the period of 1-10 years; 06 were from 11-20 years and 01 each was from 21-30 year, 31-40 years and 41-50 years.

Out of 100 participants in Group B, 27 participants were doing Vyāyāma for the period of 1-10 years; 03 were from 11-20 years; 03 were from 21-30 years.

Table No. -79 : Total Number GIT Cancers

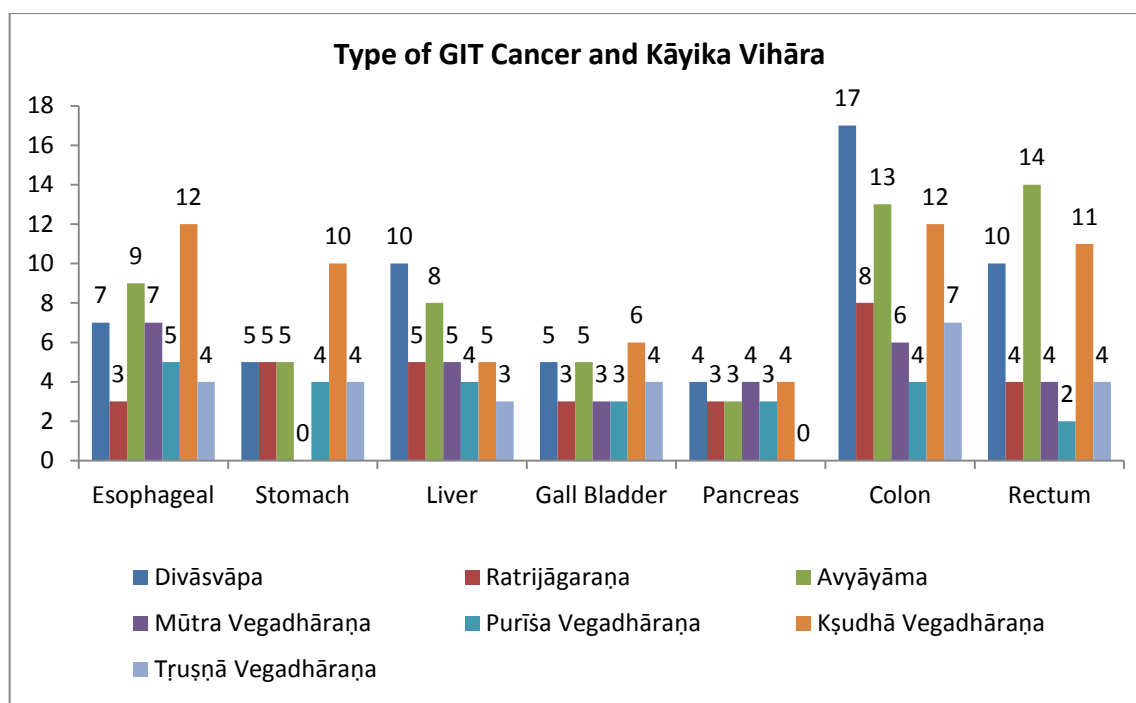
Type of GIT Cancer	Total Number
Esophagus	16
Stomach	12
Liver	11
Gall Bladder	07
Pancreas	07
Colon	28
Rectum	19
Total	100

Graph No. 30 : Total Number GIT Cancers**Total Number GIT Cancers :**

Out of total 100 GITCancer participants 28 participants of Colon Cancer; 19 Rectum; 16 Esophagus; 12 Stomach; 11 Liver; 07 Pancreas and 07 Gall Bladder Cancer were observed.

Table No. 80 : Type of GIT Cancer and Kāyika Vihāra

Cancer	Divāsvāpa	Ratrijāgarāṇa	Avyāyāma	Mūtra Vegadhāraṇa	Purīṣa Vegadhāraṇa	Kṣudhā Vegadhāraṇa	Truṣṇā Vegadhāraṇa
Esophageal	07	03	09	07	05	12	04
Stomach	05	05	05	00	04	10	04
Liver	10	05	08	05	04	05	03
Gall Bladder	05	03	05	03	03	06	04
Pancreas	04	03	03	04	03	04	00
Colon	17	08	13	06	04	12	07
Rectum	10	04	14	04	02	11	04
Total	58	31	57	29	25	60	26

Graph No. 31 : Kāyika Vihāra and type of GIT Cancer**Kāyika Vihāra and type of GIT Cancer -**

Divāsvāpa- out of 100 participantstotal 58 were taking Divāsvāpa.Out of them 17 Colon, 10 Liver, 10 Rectum, 07 Esophagus, 05 Gall bladder, 05 Stomach and 04 Pancreas Cancer participants were taking Divāsvāpa.

Rātrijagaraṇa : out of 100 participants total 31 participants were indulged in Rātrijagaraṇa. Out of them, 08 colon, 05 Liver, 05 Stomach, 04 rectum, 03 Esophagus, 03 Gall bladder and 03 Pancreas Cancer participants were indulged in Rātrijagaraṇa.

Avyāyāma : out of 100 participants total 57 participants were not doing Vyāyāma. Out of them, 14 Rectum, 13 Colon, 09 Esophagus, 08 Liver, 05 Gall bladder, 05 Stomach and 03 Pancreas were observed not doing Vyāyāma.

Mūtravegdhāraṇa : out of 100 participants total 29 participants were suppressing Mūtravega. Out of them, 07 Esophagus, 06 Colon, 05 Liver, 04 Pancreas, 04 Rectum and 03 Gall bladder were observed to suppress Mūtravega.

PurīṣaVegadhāraṇa : out of 100 participants total 25 participants were suppressing in Purīṣavega. Out of them, 05 Esophagus, 04 Colon, 04 Liver, 04 Stomach, 03 Gall bladder, 03 Pancreas and 02 Rectum were suppressing Purīṣavega.

Kṣudhāvegadhāraṇa: out of 100 participants total 60 participants were suppressing in Kṣudhāvega. Out of them, 12 each Colon, 12 Esophagus, 11 Rectum, 10 Stomach, 06 Gall bladder, 05 Liver and 04 Pancreas were suppressing Kṣudhāvega.

Truṣṇāvegadhāraṇa : out of 100 participants total 26 participants were suppressing in Truṣṇāvega. Out of them, 07 Colon, 04 Esophagus, 04 Gall bladder, 04 Rectum, 04 Stomach and 03 Liver were suppressing Truṣṇāvega.

Type of Cancer and Kāyika Vihāra :-

Colon Cancer - out of 28 participants -17 participants were taking Divāsvāpa; 13 were not doing Vyāyāma; 12 were suppressing Kṣudhāvega ; 08 were indulged in Rātrijagaraṇa; 07 were suppressing Truṣṇāvega; 06 were suppressing Mūtravega and 04 were suppressing Purīṣavega.

Rectum Cancer - out of 19 participants -14 were not doing Vyāyāma; 11 were suppressing Kṣudhāvega; 10 were taking Divāsvāpa; 04 each were suppressing

Mūtravega, Truṣṇāvega and were indulged in Rātrijagaraṇa and 02 were suppressing Purīṣavega.

Esophagus Cancer - out of 16 participants -12 were suppressing Kṣudhāvega; 09 were not doing Vyāyāma; 07 each were taking Divāsvāpa and were suppressing Mūtravega; 05 were suppressing Purīṣavega, 04 were suppressing Truṣṇāvega and 03 were indulged in Rātrijagaraṇa.

Stomach Cancer - out of 12 participants -10 were suppressing Kṣudhāvega ;05 each were taking Divāsvāpa, Rātrijagaraṇa and were not doing Vyāyāma, and 04 each were suppressing Purīṣavega and Truṣṇāvega.

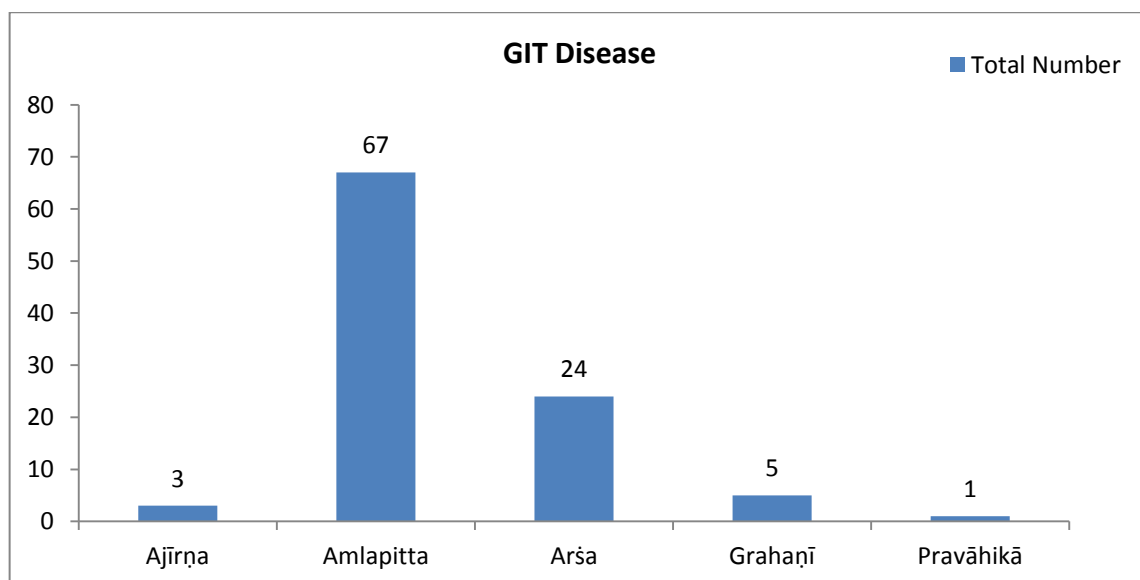
Liver Cancer - out of 11 participants -10 were taking Divāsvāpa, 08 were not doing Vyāyāma, 05 each were suppressing Mūtravega and Kṣudhāvega indulged in Rātrijagaraṇa; 04 were suppressing Purīṣavega, 03 were suppressing Truṣṇāvega.

Pancreas Cancer - out of 07 participants - 04 each were taking Divāsvāpa, were suppressing Mūtravega, and Kṣudhāvega, 03 each were indulged in Rātrijagaraṇa, suppressing Purīṣavega, and were not doing Vyāyāma.

Gall Bladder Cancer - out of 07 participants -06 were suppressing in Kṣudhāvega, 05 each were not doing Vyāyāma and taking Divāsvāpa, 04 were suppressing Truṣṇāvega; 03 each were suppressing Purīṣavega, Mūtravega and indulged in Rātrijagaraṇa.

Table No. 81 : Total number of Ayurvedic GIT Diseases

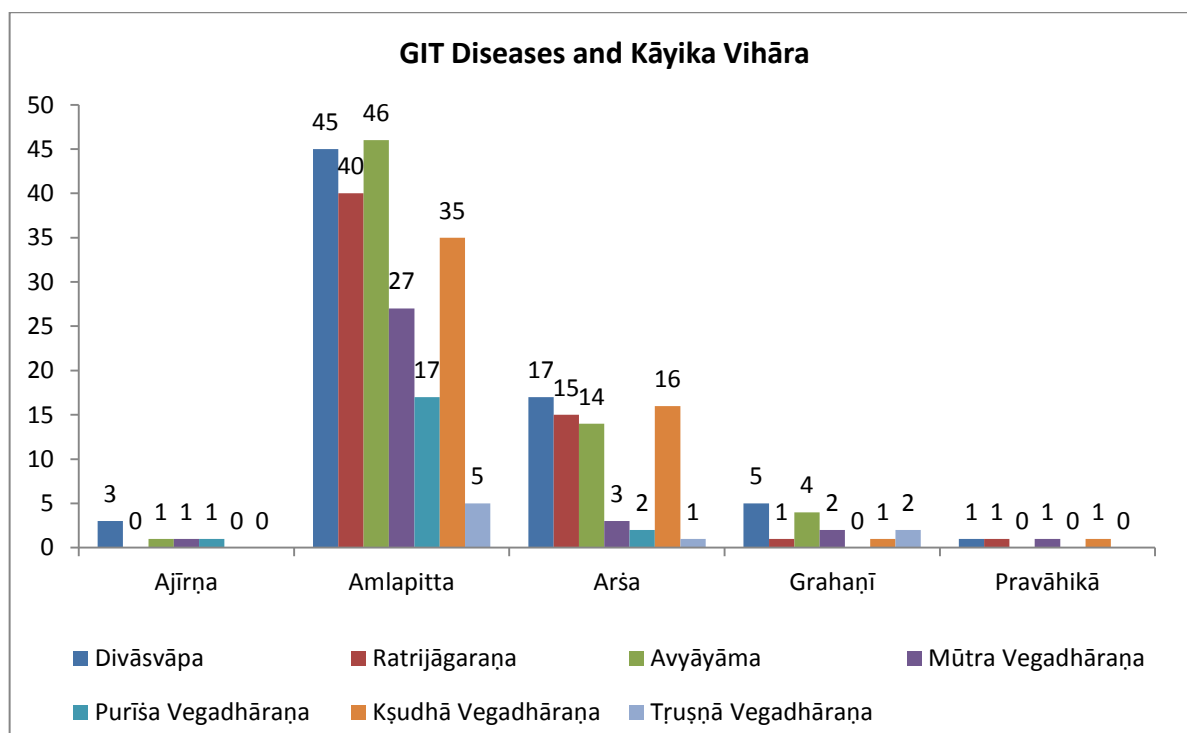
GIT Disease	Total Number
Ajīrṇa	03
Amlapitta	67
Arśa	24
Grahaṇī	05
Pravāhikā	01
Total	100

Graph No. 32 : Total number of Ayurvedic GIT diseases**Total number of Ayurvedic GIT diseases :**

Out of total 100 GIT diseases, 67 participants of Amlapitta; 24 participants of Arśa, 05 participants of Grahaṇī, 03 participants of Ajirṇa and 01 participants of Pravāhikā were observed.

Table No-82 : GIT Diseases and Kāyika Vihāra

Diseases	Divāsvāpa	Ratrijāgaraṇa	Avyāyāma	Mūtra Vegadhāraṇa	Purīṣa Vegadhāraṇa	Kṣudhā Vegadhāraṇa	Tṛṣṇā Vegadhāraṇa
Ajirṇa	03	00	01	01	01	00	00
Amlapitta	45	40	46	27	17	35	05
Arśa	17	15	14	03	02	16	01
Grahaṇī	05	01	04	02	00	01	02
Pravāhikā	01	01	00	01	00	01	00
Total	71	57	65	34	20	53	08

Graph No. 33 : GIT Diseases and Kāyika Vihāra**GIT Diseases and Kāyika Vihāra**

Divāsvāpa - out of 100 participants total 71 participants were taking Divāsvāpa. Out of 71, 45 participants of Amlapitta, 17 participants of Arśa, 05 participants of Grahaṇī, 03 participants of Ajīrṇa and 01 patient of Pravāhikā were observed taking Divāsvāpa.

Rātrijāgaraṇa - out of 100 patients, total 57 were indulged in Rātrijāgaraṇa. Out of 57, 40 participants of Amlapitta, 15 participants of Arśa, 01 each Grahaṇī and Pravāhikā were observed indulging in Rātrijāgaraṇa.

Avyāyāma - out of 100 participants total 65 participants were not doing Vyāyāma. Out of 65, 46 participants of Amlapitta, 14 participants of Arśa, 04 participants of Grahaṇī and 01 participants of Ajīrṇa were observed not doing Vyāyāma.

Mūtravegdhāraṇa - out of 100 participants total 34 participants were doing Mūtravegdhāraṇa. Out of 34, participants 27 participants of Amlapitta, 03 participants of Arśa, 02 participants of Grahaṇī and 01 each Ajīrṇa and Pravāhikā were suppressing Mūtravega.

Puriṣavegdhāraṇa - out of 100 participants total 21 were suppressing Puriṣavega. Out of 21 patients, 17 participants of Amlapitta, 02 participants of Arśa and 01 patient of Ajīrṇa were suppressing Puriṣavega.

Truṣṇāvegadhāraṇa - out of 100 participants total 08 participants were suppressing Truṣṇāvega. Out of them 05 participants of Amlapitta, 02 participants of Grahaṇī and 01 participant of Arśa were suppressing Truṣṇāvega.

Kṣudhāvegadhāraṇa - out of 100 participants total 53 were suppressing Kṣudhāvega. Out of 53, 35 participants of Amlapitta, 16 participants of Arśa, 01 each Grahaṇī and Pravāhikā were found.

GIT Diseases and Kāyika Vihāra

Ajīrṇa - Out of 100 participants total 03 participants were of Ajīrṇa. Out of 03, 03 were taking Divāsvāpa, 02 were not doing Vyāyāma, 01 each was suppressing Mūtra and Puriṣavega.

Amlapitta - out of total 100 participants, 60 participants were of Amlapitta. Out of 67, 46 were not doing Vyāyāma, 45 were taking Divāsvāpa, 40 were indulged in Rātrijāgaraṇa, 35, 27, 17 and 05 were suppressing Kṣudhāvega, Mūtravega, Puriṣavega and Truṣṇāvega.

Arśa - Out of 100 participants total 24 participants of Arśa were found. Out of 24, 17 were taking Divāsvāpa, 16 were suppressing Kṣudhāvega, 15 were indulged in Rātrijāgaraṇa, 14 were not doing Vyāyāma, 03, 02 and 01 were suppressing Mūtra, Puriṣa and Truṣṇāvega.

Grahaṇī – out of total 100 participants 05 participants of Grahaṇī were found. Out of 05, all were taking Divāsvāpa, 04 were not doing Vyāyāma, 02 each were suppressing Mūtra and Truṣṇāvega and 01 each was suppressing Kṣudhāvega and indulged in Rātrijāgaraṇa.

Pravāhikā - only one participant out of 100 was of Pravāhikā. Divāsvāpa, Rātrijāgaraṇa, Mūtravegdhāraṇa and Kṣudhāvegadhāraṇa was found in that patient.

Chapter - 5

DISCUSSION

Discussion is based on literature review as well as observation and results.

A) Discussion on Literature Review

a. Discussion on concept of Kāyika Vihāra Vaiśamya :

1. Concept of Vihāra :

The concept of Vihāra is extensively described in Bṛuhatraī. Ācāryās has equally emphasised importance of Āhāra and Vihāra for maintaining health. Vihāra plays key role in Svāsthya, Nidāna and Cikitsā. Present study was mainly focused on Nidāna (Hetu) aspect of Vihāra in GIT diseases.

The literary meaning of the term Vihāra is activities done by an individual. Krīyā, Ceṣṭa, Ācāra are the different terms used for Vihāra.

According to Hemādri, there are two types of Vihāra, namely Niyatakālīka (Dinacārya and Rutucaryā) and Aniyatakālīka (Vegadhāraṇa, Vegaodīraṇa, Śodhana, Bṛuhaṇa and Bhutādyasparśana).

Kāyika, Vācika and Mānasika are the three types of Vihāra mentioned in Bṛuhatraī.

- i. Kāyika Vihāra includes - Dhāvana (running), Plavana (swimming), Vyāyāma (exercise), Nṛutya (dance), Sthāna (standing position) etc.
- ii. Vācika Vihāra includes - Gīta (singing), Adhyayana (learning, speaking) etc.
- iii. Mānasika Vihāra includes - Rāga (anger), Bhaya (fear) etc.

Vihāra being a very broad concept the present study deals with only Kāyika Vihāra.

2. Concept of Kāyika Vihāra

The classical meaning of the word Kāya is Deha/Śarīra.

The different activities done by Śarīra comes under the term Kāyika Vihāra namely Utkṣepaṇa (upward movement), Apakṣepaṇa (downward movement), Sthāna (standing position), Āsana (sitting position), Cankramaṇa (walking), Divāsvāpa (day sleep), Vyāyāma (exercise), Maithuna (copulation), Gamana (movement, walk), Dhāvana (running), Plavana (swimming), Nṛutya (dance), Vegadhāraṇa (natural urges) etc.

Among these Kāyika Vihāra study was mainly based on Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa - Kṣudhā, Trūṣaṇā, Puriṣa and Mūtra.

3. Concept of Vaiṣamya :

There are different meanings of the term Vaiṣamya like Vruḍhi, Kṣhaya, Viṣamatā etc. But for the present study the meaning of the term Vaiṣamya is considered as deviated from normal way i.e. in excess or less than normal or improper manner.

The activities performed by an individual can be divided into-

- i. **Sāma (सम)** : Vidhiyukta i.e. in accordance with standard guidelines mentioned in the classical texts. E.g. Vidhivata Vyāyāma.
- ii. **Viṣama (विषम)** : Vidhiviparīta i.e. deviated from the standard guidelines. The activities are either done in excess or less or in an improper manner. e.g. Ativayāyāma, Avyāyāma.

For the present study the meaning of the term Vaiṣamya was considered as deviated from normal way (Viṣama) i.e. Vidhiviparita.

4. Concept of Kāyika Vihāra Vaiṣamya :

The term Kāyika Vihāra Vaiṣamya is found in Bruhatrayī. In some Sūtrās the term Karma is used in place of Vihāra. Krīyā, Ceṣṭa, Ācāra are the different terms used for Vihāra.

Kāyika Vihāra Vaiṣamya includes Atimātrā karma (in excess quantity), Hīnamātrā karma (less quantity) and Mithyākarma (improper manner).

Among the Kāyika Vihāra study was mainly focused on Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa Kṣudhā, Trūṣaṇā, Puriṣa and Mūtra.

In Ayurvedic texts Divāsvāpa and Rātrijāgaraṇa are included in विषमशयन.

In Bruhatrayī all types of Vegadhāraṇa are mentioned as कायिक मिथ्यायोग.

The term Vaiṣamya was applied to these Kāyika Vihāra is as follows ;

Vyāyāma is indicated as a daily routine in Dinacārya. If Vyāyāma is done in Atimātrā karma (excess quantity), Hīnamātrā karma (less quantity) and Mithyākarma (improper manner) it is Vaiṣamya of Vyāyāma i.e. Vidhiviparita.

The term Vaiṣamya is applied to Divāsvāpa, Rātrijāgarāṇa and Vegadhāraṇa is – Atimātrā karma (excess quantity) and Mithyākarma (improper manner).

In Āyurveda Divāsvāpa, Rātrijāgarāṇa and Vegadhāraṇa are contraindicated in order to maintain Svāsthya. Exceptionally in certain diseases and conditions Divāsvāpa, Rātrijāgarāṇa, Vegadhāraṇa - Kṣudhā and Trūṣaṇā are advised as treatment till that disease subsides.

अपि च देशकालात्मगुणविपरीतानां कर्मणामाहारविकाराणां च क्रमोपयोगः सम्यक् त्यागः सर्वस्य चातियोगायोगमिथ्यायोगानां, सर्वातियोगसंधारणम्, असंधारणमुदीर्णानां च गतिमतां, साहसानां च वर्जनम्, आरोग्यानुवृत्तौ हेतुमुपलभामहे सम्यगुपदिशामः सम्यक् पश्यामश्चेति ॥ च.वि.३/३६

Importance of following the rules of Vihāra is mentioned in the above Sutra. Along with Āhāra, one should avoid the over utilization, non utilization and wrong utilization of all the regimens. To achieve healthy life, attention should be given towards Vihāraja Hetus along with Āhāra. It indicates that Vihāraja Hetus have equal importance in generation of diseases.

5. Concept of Vidhi (rules) :

Āyurveda has established the Vidhis of Āhāra and Vihāra to maintain and promote the health. These Vidhis are based on Sāmānya and Viśeṣa Siddhānta which are proved by Pramāṇās.

According to Hemādēī Vidhi is to follow the rules given in the Śāstra.

Due to some reasons people fail to obey the rules. This disobedience is affecting the health. In Caraka Samhitā the rules regarding Āhāra are mentioned (च.सू.२८/३५-४१).

With the help of Atidesa Tantrayukti these reasons can be applied to Vihāra also. The reasons of not following the rules are -

1. **Ajñāna (अज्ञान)** : Many times people are not aware of the proper Vidhi. Vyāyāma is the best example of it. Now a days there are different methods of Vyāyāma. So it is important to make people aware of the proper Vidhi of Vyāyāma according to Āyurveda.
2. **Āsakti (आसक्ति)** : If a person gets habitual to some things, knowingly or unknowingly it is difficult for him to withdraw these habits. At present people keep awake at night for watching T.V., internet, mobile games etc. resulting in Rātrijāgaraṇa and Divāsvāpa. These are the examples of Āsakti.
3. **Priti (प्रिती)** : Due to fondness, individual does the improper things again and again. e.g. Divasvāpa, Rātrijagaraṇa etc.
4. **Prajñāparādha(प्रज्ञापराध)** : The things which are not recommended or beneficial for health are followed due to Prajñāparādha (intellectual errors leading to improper actions).e.g.Vegadhāraṇa
5. **Ignorance (दुर्लक्ष/उपेक्षा)** : Some individuals inspite of knowledge of proper Vidhi, may ignore it due to certain reasons. ^[96]

Divāsvāpa and Rātrijāgaraṇa are Nidrā Vaiṣamya. It was important to find out the timing of Nidrā (night sleep) with the help of Āyurvedic and other Literatures.

6. Vidhi (rules)of Nidrā :

1. What is the normal time to sleep?

According to Āyurveda Rātra (night) is the normal time of sleep. Rātra (night) is Tamaguna Pradhāna. Tamoguna is Guru and Āvaraka, so a person feels sleepy naturally at night.

2. How much a person should sleep?

According to Ācārya Hemādri a person should sleep for at least two Yāma or three Yāma i.e. 6 to 9 hours at night.

The Conditions which affect the waking up in the morning are -

1. Svastha Puruṣa (healthy person) should wake up early in the morning i.e. Brāhma Muhūrta (1.5 hrs. before sunrise i.e.app. 4 to 4.30 am). But a person suffering from disease should sleep accordingly to achieve Dhātusāmya (balance of Dhātus).^[97]
2. According to Deśa (habitat), Kāla (season), Prakṛti (constitution), the time of awakening differs from person to person. One should not sleep after Sūryodaya i.e. approximately after 6 O'clock.
3. Increased Kapha causes obstruction in the Srotasa which causes heaviness of the body. This heaviness follows laziness which in turn causes excess sleep. Thus individual can not wake up early in the morning.^[98]

In current era use of internet has become embedded in every aspect of our day-to-day lives. People spend hours together on computer screen after completing working hours and use their mobile devices for entertainment spending their nights. This results in Rātrijāgaraṇa and Divāsvāpa.

Nidrā Vegadhāraṇa (forced sleep restriction) is considered as a cause of many diseases. Two important aberrant sleep behaviours, namely Divāsvāpa (day sleep) and Rātrijāgaraṇa (keeping awake at night) are recognized as the cause of many diseases.

3. What are the idel timings of waking up, Bhojana (lunch), Sāyam Bhojana (dinner) and Nidrā (sleep)?

The timing of waking up is directly mentiond in the Samhitās. Duration of sleep and duration in between two meals are also mentioned in Ayurvedic literature in the form of Yāma (hours) whereas the clockwise time is not directly mentioned.

According to Āyurveda one should wake up at Brāhma Muhūrta i.e. 1.5 hours before sunrise. This time differs according to Rūtu (season).

- Waking up time - Brāhma Muhūrta approximately 4.30 am.
- Lunch time - Clockwise time not mentioned.
- Dinner time - Clockwise time not mentioned.
- Sleeping time - it should be taken at night but clockwise time is not mentioned.

Brāhma Muhurta i.e. 1.30 hours before sunrise is an ideal time of waking up. As timing of sleeping at night is not directly mentioned in Āyurvedic literature it can be decided as 1.30 hours after sunset with the help of Viparyaya Tantrayukti.

In Kautīlya Arthaśāstra Dinacaryā of the king is mentioned. They have divided total day and night in 16 parts. (कौ.अ.प्रकरण १४, अध्याय १८ /१-२). Considering Brāhma Muhūrta as beginning of the day, with the help of Āyurvedic Literature and references found in Kautīlya Arthaśāstra, the timing of waking up, lunch, dinner and sleep were estimated. These timings can slightly differ according to Deṣa (habitat), Kāla (season) and Vyakti (individual).

- i. Waking up timing - 4.30 am to 6 am.
- ii. Bhojana (lunch) time - 7.30 am to 9 am.
- iii. Sayambhojana (dinner) - 6 pm to 7.30 pm.
- iv. Nidrā (sleep) - 9 pm to 10.30 pm.

Brāhma Muhurta i.e. approximately 4.30am is the ideal timing of waking up. One should not sleep after sunrise as it is also considered as Divāsvāpa. In today's life style due to habit of keeping awake late night, shift duties etc. ideal time for waking up is not as accordance with time mentioned in Ayurvedic literature.

For the present study sleeping immediately after lunch is considered as Divāsvāpa. Considering the estimated timing for sleep, in current situation one should sleep in between 9 pm. to 10.30 pm. Sleeping after 10.30 pm was taken as a baseline to decide Rātrijāgaraṇa for the present study.

b. Discussion on Kāvika Vihāra Vaisamya in :

- a) Divāsvāpa
- b) Rātrijāgaraṇa
- c) Vyāyāma
- d) Vegadhāraṇa

a) Divāsvāpa :

References of Divāsvāpa are found in Bruhatrayī.

According to Dalhanācārya sleep which is taken during day time is called as Divāsvāpa. Divāsvāpa is not recommended in Dinacaryā. Madhyānhacārya (afternoon regimen) is explained in Aṣṭāṅsangraha in which Divāsvāpa is not indicated.

1. Vidhi of Divāsvāpa (rules for taking day sleep)

a. Ṛutu (season) and Divāsvāpa - Divāsvāpa is indicated in Grīṣma Ṛutu only. The reason is due to Ādānakāla the atmosphere is Rukṣa (dry) leading to Caya of Vāta Doṣa. Divāsvāpa produces Snigdha Guṇa in the body which pacifies Vāta Doṣa.

According to Caraka Divāsvāpa taken in other Ṛutu causes Kapha and Vātaprakopa. However Divāsvāpa in Grīṣma Ṛutu is not indicated in individuals who are suffering from Kapha and Medavikāra.

b. Mātra of Divāsvāpa (Amount of daysleep) in Exeptional conditions-

1. Recommended duration for Divāsvāpa is not more than one muhurta i.e. one Ghatika i.e. 48 minutes.

The possible reason behind this may be - due to physical and mental activities there is Kaphakṣaya and Vātavṛddhi. Divāsvāpa increases Snigdha Guṇa and produces Kapha. Whenever Divāsvāpa is advised the duration should be minimum just enough to pacify Vāta Doṣa and Śrama. Divāsvāpa taken for more than 48 minutes vitates Kapha Doṣa.

2. Divāsvāpa should be taken before meals.

भुक्तमात्रस्य तु स्वप्नाद्धन्त्यग्निं कुपितः कफः । भा. प्र. ५/१७६

Divāsvāpa taken immediately after consuming food increases Kapha Doṣa which causes Agnimāndya thus whenever Divāsvāpa is indicated it should be taken before meals.

3. The person who had Rātrijāgaraṇa should take Divāsvāpa before lunch. The amount of Divāsvāpa should be half the amount of Rātrijāgaraṇa.

The reason behind is - Rātrijāgaraṇa produces Rukṣata in the body. Divāsvāpa pacifies Vāta Doṣa and increase Kapha Doṣa. Divāsvāpa only half period of Rātrijāgaraṇa, taken before meal and for limited duration is recommended to avoid further Kaphavṛddhi.

c. Position of the body during Divāsvāpa (day sleep)

Divāsvāpa in sitting position (on chair) is advised. Lying posture should be avoided as it will facilitate circulation of increased Kapha Doṣa in all systems of the body.

d. Divāsvāpa Arha (Indication for day sleep) :

Divāsvāpa is not permitted daily but it is allowed conditionally. Commentator Cakrapāṇi have quoted the reasons for exceptional indications for Divāsvāpa. They are as follows :

- a. गीतकर्षितः, अध्ययन कर्षितः, मद्यकर्षितः, स्त्रीकर्षितः, कर्मकर्षितः, भारकर्षितः, अध्वकर्षितः-
All these conditions lead to Dhatukshaya, Divāsvāpa is beneficial in these condition as it lead to Dhātu Puṣṭi.
- b. अतीसार - it is helpful in Atisāra due to its Prabhāva.
- c. अजीर्णिनः - Divāsvāpa befor meal is recommended as it increases Agnibala which is essential for Āhara Pacana in Ajīrna.
- d. रात्रौजागरीतः - Ratrijāgaraṇa causes Vāta Prakopa. This Prakupita Vāta gets normalised by Divāsvāpa.
- e. भाष्यादीक्लांत - Over exersion due to Vācika activities like excess speech Vāta gets prakupita. Vāta gets normalised by Divāsvāpa.
- f. श्वास हिक्का – it helps to divert mind from the Vega of that disease.
- g. वृद्धा - Old age is associated with Apararpana (emaciation) caused due to Vātaprakopa thus Divāsvāpa is useful for Santarpana (proper nourishment).

e. Divāsvāpa Anarha (Specific Contraindication for day sleep) :

Person having Kapha Prakruti, dominance of Meda and suffering from Sleshmavikara and habituated for Sneha should not take daysleep as it increase Kapha.

2. Vaiṣamya of Divāsvāpa- (Vidhiviparita)

After the literature review Vaiṣamya of Divāsvāpa is mentioned in points. They are as follows -

1. Divāsvāpa itself is Vidhiviparīta.
2. Bhuktottara Divāsvāpa (sleeping immediately after taking meal) is Vidhiviparīta.

It causes Kapha Prakop and Māmsa and Meda Dhātu Duṣṭī leading to diseases.

3. Duration more than 48 minutes.
4. Sleeping after Suryodaya (sunrise) is also considered as Divāsvāpa which is Vidhiviparīta.
5. Sleeping in the evening (contraindicated in Sandhyācarya) is also considered as Divāsvāpa which is Vidhiviparīta.
6. Divāsvāpa in lying posture is also Vidhiviparīta.
7. Ati Divāsvāpa (Atimātra karma - excess quantity) – Excess Divāsvāpa is a Hetu in Kaphaja Atisāra, Visarpa and Śīroroga.

Divāsvāpa increases Snigdha Guṇa causing Vitiating of both Kapha and Pitta Doṣa.
(Cha.su.21/50)

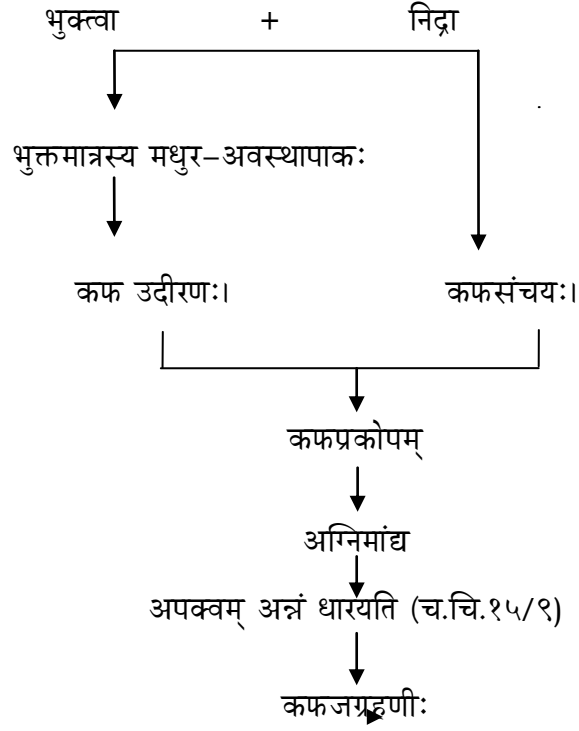
Divāsvāpa - दोषतः सर्वदोषप्रकोपकः। (सु.शा.४/३८)
गुणतः- स्निग्ध गुरु स्थिर मन्द गुणवृद्धिकरः। स्रोतोरोधकरः।
कर्मतः- अग्निदौर्बल्यकरः। (सु.शा.४/३८)
धातुतः- रक्त मांस मेद दुष्टिकरः।

Hence, in combination with other Hetus Divāsvāpa can cause Vyādhis at different levels such as-

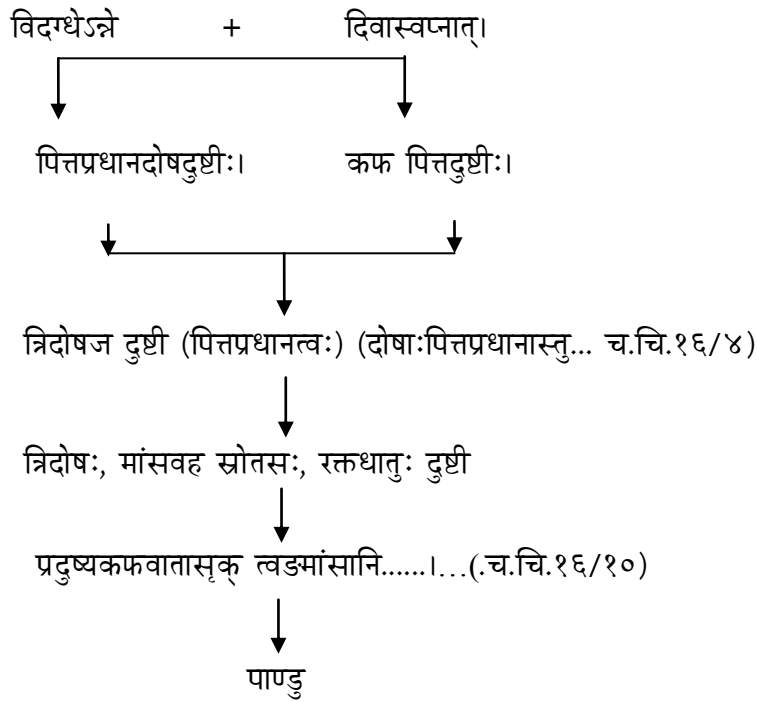
सर्वदोषप्रकोपक - e.g. Atisāra (Sannipātaja) etc.
अग्निदौर्बल्य - e.g. Jwar, Ajīrṇa etc.
रक्त दुष्टि - e.g. Visarpa etc.
मांस दुष्टि - e.g. Arśa etc.
मेद दुष्टि - e.g. Sthaulya, Medorog etc.

8. Mithyākarma (improper manner) in Divāsvāpa : Divāsvāpa is contraindicated.
Here relation of type of diet and Divāsvāpa is given as an example.

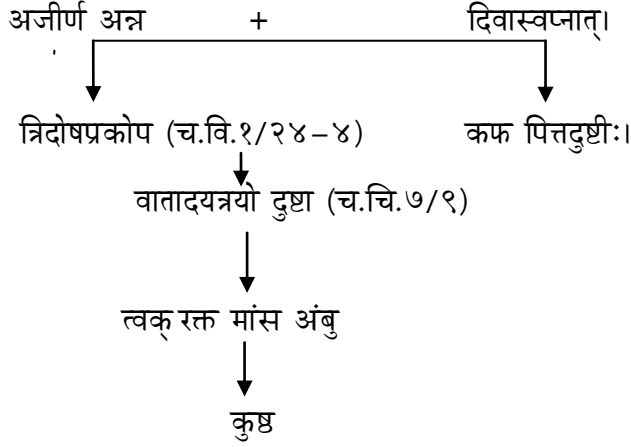
१. ग्रहणी(कफज)- भुक्तमात्रस्य च स्वप्नात्। च.चि.१५/६७



२. पाण्डु- विदग्धेऽन्ने दिवास्वप्नात्। (च.चि.१६/८)



३. कुष्ठ – अजीर्णोऽन्ने चापि निद्रां च भजतां दिवा। च.चि.७/८



3. **Divāsvāpajanya Vyādhi** : Divāsvāpa causes Tridoṣaprakopa mainly Kapha, Pitta and Rakta, Māṃsa and Meda Dhātu Duṣṭī leading to many diseases.

Effect of Divāsvāpa, Rātrijāgarāṇa, Vyāyāma (Ativyāyāma and Avyāyāma) and Vegadhāraṇa on Doṣa, Dhātu and Agni is given in one table. Samprapti of these Kāyika Vihāra and GIT diseases (Ayurvedic perspective) is discussed further.

b) **Rātrijāgarāṇa** :

In Bruhatrayī references of Rātrijāgarāṇa are found at many places. Rātrijāgarāṇa is contraindicated in Āyurveda. Sandhyācārya (evening regimen) and Rātricaryā (night regimen) are described in Āyurveda. Rātricaryā deals with the regimen that are to be followed from dusk, through out the night up to the dawn.

1. **Rātri (regimen to be followed at night)**

Rātri includes Sandhyācaryā and Rātricaryā (night regimen).

Sandhyācaryā (Evening Regimen) : Sandhyācaryā is the conjunction of the last part of the day and the first part of the night and also vice versa. This period is considered to be inauspicious and many regimens are contraindicated in this Kāla (time) like Āhāra, Nidrā etc.

Some rules to be followed during Sandyakāla :

भोजनाज्जायते व्याधिर्मैथुनाद्भवेकृतिः ।

निद्रायां निःस्वता पाठादायुर्हानिर्गतेर्भयम् ॥ भा.प्र.पूर्वखण्ड दिनचर्या ५/२७५-७७

1. Āhāra (intake of food) - Food consumed at this time leads to manifestation of many diseases.
2. Maithuna (sexual intercourse) - Sexual intercourse at this time of the day is said to cause Garbha Vikṛuti (fetal abnormalities).
3. Nidrā (sleep)-Sleep at evening (not night) can result in poverty.
4. Pāṭha (reading) - This can result in Āyuhāni (loss of lifespan).
5. Adhvagamana (walking long distances) -It cause Bhaya (fear of darkness).

The concepts mentioned here would be more relevant in the ancient times since there was no source of power or light at night and the only source of light was moonlight.

Rātricarya :

Rātricaryā mainly deals with three things, Āhāra (food), Nidrā (Sleep) and Maithuna (copulation).Some important points regarding Rātricaryā are discussed below.

a. Rules regarding Āhara :

1. Dinner should be consumed in the first Prahara (first 3 hrs) of the night.
2. Serving portion must be less in comparison to lunch.
3. Guru (heavy) meals should be avoided.

During day time all the Srotasa are dilated. Hṛdaya is active due to exercise and other physical and mental activities. This prevents the formation of Kleda (excess moisture) in various Dhātus. So food gets easily digested in day time as compared to night.

रात्रौ तु हृदये म्लाने संवृतेष्वयनेषु च ।

यान्ति कोष्ठे परिक्लेदं संवृते देहधातवः ॥ च.चि.१५/२४१

On the contrary the functions of Srotasa and Hṛdaya slow down during night. Hence heavy food should be avoided.

Modern research has proved that heavy food intake during bed time can lead to obesity and other metabolic syndrome. Limiting or avoiding food during night time has been proposed as both a weight loss strategy and approach to improve health and body

composition. Negative outcomes have been demonstrated in response to large meals in population that consume a majority of daily food intake during the night. Data is being to show that it is better to consume small or low energy foods at night rather than large meals.^[99]

As per a study done by Suri and Pradhan(2010) night snacking syndrome is associated with number of harmful behaviours - Physical and Psychological, including poor dietary quality and also skipping main meal and nibbling at night may have led to significant change seen in eating pattern and lifestyle of late adolescents. As shown in this study, these fluctuations and changed patterns together could force the youngsters at risk of various chronic illnesses further disrupting their health status and eating attitude causing clinical eating disorders thus awareness about healthy eating is important. Night eating syndrome is found to be a syndrome more common in the obese and it can result in further obesity.^[100]

4. One should not consume curd at night time as it is Abhiṣyandī (obstructive) and will cause Māṇḍāgni (weakens the digestive power)

5. One should not take Saktu (roasted grain flour) at night as it is Guru (heavy to digest).

b. Rules regarding Nidrā :

1. Person should sleep at Night.

The functions of Srotasa and Hṛdaya slow down in this period. Due to physical and mental work in the day time, body and mind gets exhausted. During this period natural increase of Kapha Doṣa and Tama Guṇa induces sleep. Instead of keeping awake, one should sleep at night.

2. Minimum 6 to 9 hours sleep is recommended. As per research done by Chaput JP et al, 7-8 hours of sleep is associated with lower prevalence of metabolic syndrome and reduced overall cardio-metabolic risk in adults. Sleeping less than 6 hours per night is associated with an elevated cardio-metabolic risk.^[101]

3. In order to avoid disturbed sleep comfortable bed should be preferred. Head should be kept facing towards the east or south. If the head is kept facing towards east or south, there will be mild and soothing effects of magnetic force of earth on brain cells and thus the subsequent sleep will be dream free and undisturbed.

c. **Maithuna** : The detail description of Maithuna is given in the Āyurvedic texts. If followed according to rules it gives the health benefits.

Ratijagaraṇa : Remaining awake late night is known as Ratrijagaraṇa. It should be avoided always as it increases Rukṣa Guṇa (dryness) in the body. Rātrijāgaraṇa is indicated in people who take Divāsvāpa as a treatment for increased Kapha Doṣa. In Prameha, Sthaulya it is mentioned as a part of treatment.

2. Vaiṣamya of Ratrijagaraṇa- (Vidhiviparita) :

1. Ratrijagaraṇa itself is Vidhiviparita.

2. Ati Ratrijagaraṇa - means chronic inadequate sleep (less than 6 hours).

Prajagaraṇa word is used in Samhita for Ati Ratrijagaraṇa. It is one of the causes for शिरोरोग (वातज), उरुस्तंभ, वातव्याधी, वातशोणित. In these diseases there is a dominance of Vāta Doṣa.

शिरोरोग (वातज) : Excess Ratrijagaraṇa vitiates Vāta Doṣa. Aggrevated Vāta Doṣa affectes the vessels of the head producing pain in head.

वातव्याधी : Ratrijagaraṇa increases Rukṣa Guṇa in the body. Excess Ratrijagaraṇa vitiates Vāta Doṣa. Increased Rukṣa Guṇa causes dryness in the Srotasās leading to Vātavyādhī.

देहे स्रोतांसि रिक्तानि पूरयित्वाऽनिलो बली ।

करोति विविधान् व्याधीन् सर्वाङ्गैकाङ्गसंश्रितान् ॥ च.चि.28/18

वातशोणित– Excess Ratrijagaraṇa vitiates Vāta Doṣa and also causes Raktadhātudushti.

वायुर्विवृद्धो वृद्धेन रक्तेनावारितः पथि ।

कृत्स्नं संदूषयेद्रक्तं तज्ज्ञेयं वातशोणितम् ॥ च.चि.29/10–11

उरुस्तंभ : Excess Ratrijagaraṇa vitiates Vāta Doṣa. Ratrijagaraṇa also affect Samāna Vāyu (अ.ह.नि.16/26) which in turn becomes cause for improper digestion. Also

Ratrijagaraṇa causes Raktadushti. Increased Rukṣa Guṇa causes dryness in the Srotas resulting in constriction of Srotas. Due to this, normal passage of Vāta is affected.

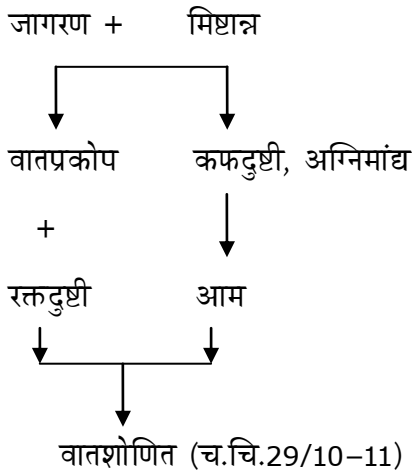
All these factors together can lead to Urusthambha (च.चि.27/10–12)

Modern science also states that inadequate sleep during night affects metabolism. Improper quantity and quality of sleep can also represent a risk factor of overweight and obesity. Thus sufficient sleep is a factor that influence a normal weight. Adults and children that sleep less, have an increase in obesity and overweight risk with dysfunctional eating behaviours, decreased physical activity and metabolic changes.^[102]

3. Mithyākarma (improper manner) in Rātrijāgaraṇa

1. Āhāra (food) and Rātrijāgaraṇa

वातशोणित- मिष्टान्नसुखभोजनाम्प्रजागरात्। (च.चि.२९/७)

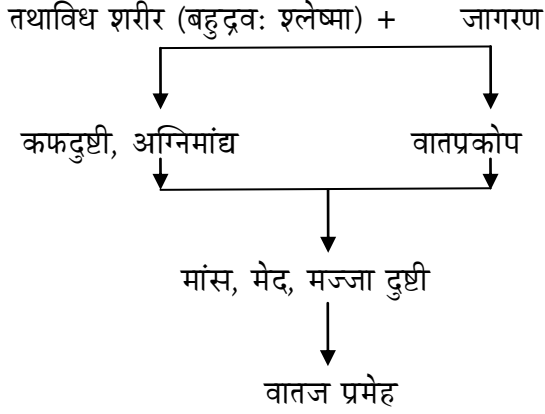


Eating during Ratrijagaraṇa – now a days during shift duties or working late till night etc. tend to have beverages or food. Researchers have proved the ill effect of eating habits during late night.

Night time eating is a risk factor for metabolic syndrome and obesity. In women, there was an association between eating habits at night and metabolic syndrome, but in men it was unrelated. Both night eating habits were associated with dyslipidaemia in men and women. These findings suggest the need for intervention and awareness among individuals with night eating habits to mitigate further complications.^[103]

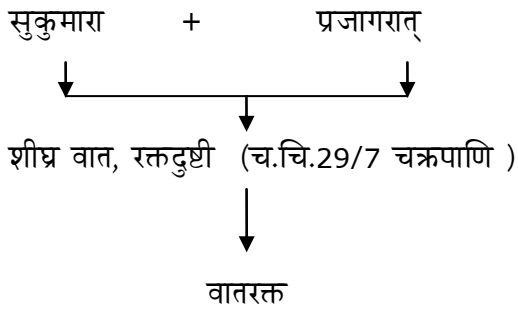
2. Doṣa Avasthā in body and Rātrijāgarāṇa

वातज प्रमेह – जागरण... तथाविध शरीर (बहुद्रवः श्लेष्मा) । च.नि.४/३६



3. Śarīrabala and Rātrijāgarāṇa

वातशोणित सुकुमाराणां...प्रजागरात् । च.चि.२९/७



- c) **Vyāyāma** : Vyāyāma is referred to any karma (action or movement) which brings Āyasa (exhaustion). Ācārya Dalhaṇa has described three types of Vyāyāma viz Kāyika, Vācika and Mānasika.

1. Vidhi of Vyāyāma :

- Vyāyāma is a part of Dinacārya (daily routine). The word ‘Baddhakrama Vihāra’ is used for Vihāra which indicates that the activities which are mentioned in daily routine should be followed serially one by one. In this sequence prior to Vyāyāma, Abhyanga (self oil massage) should be done as it prevents Vāta Prakopa. Sequentially Mardana, Udvardana, Snāna (bath) and Bhojana (food) are the activities which should be performed after Vyāyāma.
- Mātra (amount) of Vyāyāma - Vyāyāma should be performed Balārdha i.e. half of total strength because excess Vyāyāma can lead to harmful effects on body.

According to Suśruta, when Prāna Vāyu situated in heart comes out to mouth while performing exercise, it is the sign of Balārdha.^[104]

Therefore it is said in Sadvrutta that before getting exhausted one should stop doing exercise.

- c) Vaya(age for Vyāyāma) - According to references of Suśruta Saṃhitā (सु.चि.२४/४८-४९) and Aṣatāṅg Hṛudaya (अ.ह.सू.२/११(१) अरुणदत्त) the suitable age for doing Vyāyāma is from 16 years up to 70 years.

In Vṛuddha (old) Avasthā already there is Vātaprakopa and Dhātukṣaya so Vyāyāma is contraindicated.

- d) Vyāyāma (exercise) and Ṛutu (season) - Vyāyāma should be changed according to season. If Vyāyāma is indicated in any Ṛutu it should be performed Balārdha.

- i. Varshā and Prāvruta Ṛutu – In these Ṛutus there is a dominance of Vāta Doṣa. Vyāyāma can lead to further Vātaprakopa so it should be avoided.
- ii. Grīṣma Ṛutu – In this season Bala of a person is Hina so one should avoid Vyāyāma.
- iii. Vasant Ṛutu - There is a dominance of Kapha Doṣa in this season. Vyāyāma leads to Kaphakṣaya, so it should be performed as per the bala of the person.

- e) Vyāyāma Arha (indications for Vyāyāma) - Vyāyāma is indicated for the management of Santarpanajanya Roga like Prameha, Sthaulya etc. Āyurveda believes that the root cause of all the diseases is Agnimāndya. Vyāyāma increases Agni. Dīptāgni prevents the formation of Āma. So performing Vyāyāma daily can keep a person away from many diseases.

- f) Vyāyāma Varjya (contraindications of Vyāyāma) - Bāla (children), Vṛuddha (old), Kṣudhita (hungry) and Trūṣita (thirsty) and person suffering from Vātaprakopa should abstain from Vyāyāma. (च. सू. ७/३५ (१-२)). Excess Vyāyāma lead to Vātaprakopa and Dhātukṣaya.

2. Vaisamya of Vyāyāma (Vidhiviparita) :

1. Avyāyāma (Hinamatra - Absence of Exercise) : Avyāyāma causes Kaphaprakopa which leads to Santarpanjanya Vikāra. Avyāyāma is one of the Hetu in Sthaulya, Prameha, Arśa, Śoṭha, Visarpa etc.

Avyāyāma increases Kapha Doṣa by Sthira, Manda, Guru, Snigdha and Śīta Guṇas. Hence, the diseases develop due to Kapha Doṣa dominance. For e.g. Prameha, Kaphaja-Hṛdroga etc.

Increased Kapha affects Meda and Māmsa Dhātu due to similar properties resulting in Sthaulya, Medorog etc.

Increased Kapha causes Agnimandya which is the root cause of the diseases. The example is Arśa etc.

Lack of physical activity tends to many diseases. According to World Health Organisation-

1. Insufficient physical activity is one of the leading risk factors for death worldwide.
2. Insufficient physical activity is a key risk factor for noncommunicable diseases (NCDs) such as cardiovascular diseases, Cancer and diabetes.
3. Physical activity has significant health benefits and contributes to prevent NCDs.

Ativyāyāma and Avyāyāma both are Vidhiviparīta. They are the Hetu in many diseases. Therefore it is important to follow the rules regarding Vyāyāma to maintain health and that must be a reason of describing Vyāyāma as a daily routine.

2. Ativyāyāma (Excessive exercise) : Vyāyama performed in excess manifest various diseases (अ.ह.२/१३). Ācārya Caraka has elaborately described the effects of Nitya Divāsvāpa and Ativyāyāma on Dhātu.

सर्वे शरीरदोषा भवन्ति..... दिवास्वप्नस्त्रीमद्यनित्यानां....अतिमात्रव्यायामसंक्षोभितशरीराणां.....;
अतोनिमित्तं हि शिथिलीभवन्ति मांसानि, विमुच्यन्ते सन्धयः, विदह्यते रक्तं, विष्यन्दते चानल्पं मेदः, न
सन्धीयतेऽस्थिषु मज्जा, शुक्रं न प्रवर्तते, क्षयमुपैत्योजः, स एव भूतो ग्लायति, सीदति, निद्रातन्द्रालस्यसमन्वितो
निरुत्साहः श्वसिति, असमर्थश्चेष्टानां शरीरमानसीनां, नष्टस्मृतिबुद्धिच्छायो रोगाणामधिष्ठानभूतो न
सर्वमायुरवाप्नोति....॥ च.चि.२/२(३)

Indulging in day sleep, excessive physical exercise etc. affects Dhātu. This leads to Mansa Shithilatā (muscles get lax), Sandhivimocana (joints get loosened), Raktavidāha (blood gets burnt), Meda Viṣyanda (fat becomes abundant and liquefied), Na Sandhiyate Asthiṣu Majjā (marrow does not mature in bones), Na Pravartata Śukra (semen does not manifest) and Ojākṣaya (ojas deteriorates). (च.चि.२/२(३)).

Ativyāyāma increases Cala and Rukṣa Guṇa in the body. Vāta Doṣa gets vitiated by both the Guṇas. This increased Cala Guṇa is one of the factor in producing Chardi, Hikkā, Śula, Kāsa etc.

Cala Guṇa along with Rukṣa Guṇa, leads to Aptarpaṇa of Dhātus. In some Vyādhi Ativyāyāma along with other Hetus does Apararpaṇa and Dhātu Kṣaya. eg. VātaVyādhi, Prameha (Vātaja), Ardhāvbhedaka, Vātaja Hṛdroga etc.

Ativyāyāma leads to changes in Doṣagati. Vyāyāma brings the Vilayita Doṣas from Koṣṭha to Śakhā. (Ca.su. 29/31 Cakrapāṇī). In case of Kaphaja Śoṭha Vilayita Kapha passes from Koṣṭha to Śakhā and accumulates beneath the skin due to Ativyāyāma.

If one performs excessive exercise in Utaklīsta Avasthā of Kapha, Pitta then due to Cala Guṇa the Doṣas move in upward direction resulting in Chardi.

In Kṣudra Hikkā ‘परिघट्टनकारि व्यायाम’ is mentioned as a Hetu. It means- the exercise which creates abnormal pressure on internal organ of abdomen (especially on diaphragm) which irritates Koṣṭha-gata Vāta. This results in upward movement of Vāyu causing minor hiccups, which does not continue for longer time and or suppresses after meal.

3. Mithyākarma (improper manner) in Vyāyāma :

a) Viṣama Vyāyāma (Improper exercise) - Vyāyāma should be performed in proper posture of the body. Otherwise it can lead to structural and functional defects in the body.

b) Sharirbala and Vyayama -

Granthi (Sirāja) - अबलस्य व्यायामजातैः (Ma.ni.38/16)

Sirās lie beneath the Māmsa Peśīs. Māmsa Peśīs are involved in the process of Vyāyāma. Physical strength of a person depends on the Māmsa Dhātu. In Abalavana (weak) Vyakti (person) Sirās are not well protected. When such person performs different types of strenuous physical exercises, it directly affects Sirā. Also due to Vāta Dushti i.e. Rukṣa

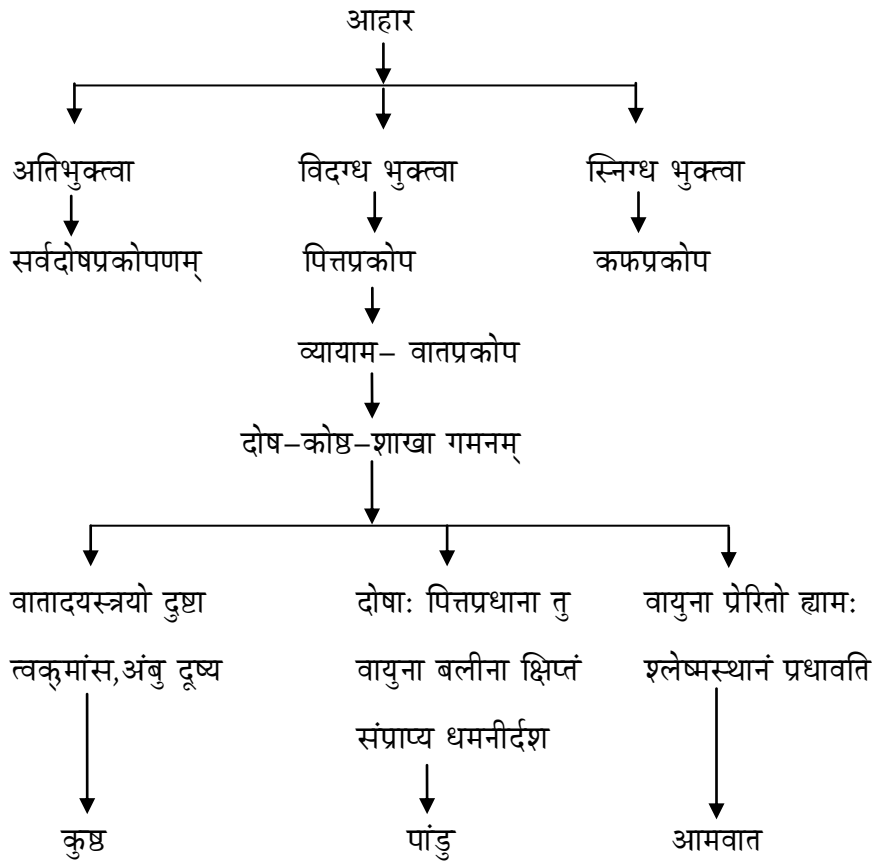
Guṇa causes structural and functional disturbance in Sirā and develops roughness and dryness in Sirā. This further leads to formation of Granthi.

c) Āhāra followed by Vyāyāma - Vyāyama should be performed in empty stomach. Consuming the food to one's over satisfaction followed by Vyāyāma is Tridoṣaprapakopaka (च.नि. ५/६).

कुष्ठ- अतिभुक्त्वा व्यायामम् उपसेविनाम्। च.चि. 7/8

पांडु- विदग्धेऽन्ने व्यायामात्। च.चि. 16/8

आमवात- स्निग्धं भुक्तवतो ह्यन्नं व्यायामं कुर्वताम्। मा.नि. 25/1



d) **Vegadhārana** : Vega (natural urge) is a very fundamental and important concept of Āyurveda. It plays important role in maintaining Svāsthya (health). Therefore it is described in Svāsthya Catuṣka Adhyāyās by Caraka.

Vegās (natural urges) are created naturally by the body. It is very important to respond to these Vegās and not to suppress them.

Synonym : धारण, संधारण, विधारण, रोध, विरोध, उपरोधन, वेगाघात प्रतिघात, निरोधन, निग्रह, संगड are the words used for Vegadhāraṇa in Samhita.

Types : There are two types of natural urges namely-

- a) Dhāraṇīya Vegās (suppressible urges).
- b) Adhāraṇīya Vegās (non suppressible urges).

According to Acārya Caraka, there are 13 types of natural urges in the body which should not be suppressed and that can cause many diseases when ignored. In addition to theses Vegās, 14th Vega is mentioned by Vagbhata. Present study mainly focuses on Kṣudhā, Trūṣaṇā, Puriṣa and Mūtra Vegadhāraṇa.

According to Sushruta the Vegas can be divided into - (सु.उ.55/3-4)

- Urdhwa- Udgāra (belching), Jrumbhā (yawning) etc.
- Adhovega- Mūtra (urination), Puriṣa (defecation) etc.
- Kosthagata Vega- Kṣudhā (hunger), Truṣṇa (thirst)

The word “Vegadhāraṇa” means suppression of natural urges. In Bruhatrayī references of Vegadhāraṇa are found. According to Hemadrī, Vegadhāraṇa is a Aniyatkālīka Vihāra.

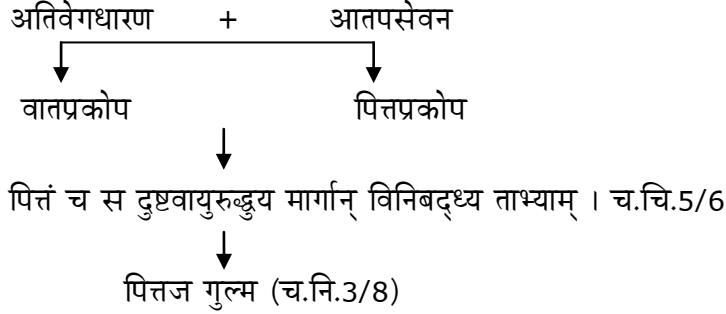
Reasons of Vegadhāraṇa : These are explained in Śosa Nidāna Adhyāya by Carakācārya. Some of them are- fear, shyness, dependency on social culture and surroundings, lack of awareness, responsibilities of the family (especially in women) etc. But now- a-days, due to busy and stressful lifestyle and in the dream of achieving the big targets in short period, people are suppressing some or most of the natural urges of the body.

Apart from these now a day’s unhygienic toilets and busy work schedule force females to avoid her bodily needs. This habit in turn becomes harmful to her health in future (Toilets for health, 2016).

Vaiṣamya of Vegdhāraṇa :**1. Atimātrakarma (excess amount) :**

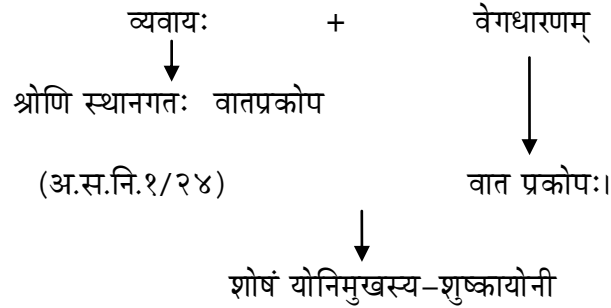
Vegdhāraṇa in combination with other Vihāra -

गुल्म-सन्धारणं वातातपौ चातिसेवमानस्य पित्तं सह मारुतेन प्रकोपमापद्यते । च.नि.3/8

**2. Mithyākarma (improper manner) in Vegdhāraṇa :**

Vegdhāraṇa - in combination with other Vihāra

शुष्कायोनि - व्यवायकाले रुन्धन्त्या वेगान्... । च.चि.३०/३२



The Vegavidhāraṇa or Udīraṇa (suppression or exaggeration of natural urges) is nothing but a kind of Pradjñāparādha, which ultimately leads to disease formation.

तदा वेगप्रतीघातात् कफपित्ते समीरयन् ।

ऊर्ध्वं तिर्यग्धश्चैव विकारान् कुरुतेऽनिलः ॥ च.चि.८/२०-२१

Present study mainly focuses on

1. Kṣudhā Vegadhāraṇa
2. Trūṣaṇā Vegadhāraṇa
3. Puriṣa Vegadhāraṇa and
4. Mūtra Vegadhāraṇa

1. Kṣudhā Vegadhāraṇa : Desire to eat is known as Kṣudhā. According to Suśrutācārya Kṣudhā and Trūṣaṇā are the Svābhāvika Vyādhi. (सु.सू.१/२५(४)).

Kṣudhā Vega :

When a person feels Hungry? (time of appearance of hunger)

1. According to Bhāvaprakāśa when Rasa, Doṣa and Mala gets properly digested either at the stipulated time or at any other times, then that is the proper time for taking food.
2. After observing the Lakṣaṇa of Jīrṇa Āhara one should consume the food.

Table-83 : Lakṣaṇa of Bubhukṣita, Bhuktavat, Jīrṇa Āhāra

बुभुक्षित लक्षण का.स.क.१०/१०	भुक्तवत लक्षण का.स.क.१०/२०	जीर्णाहार लक्षण भा.प्र.पूर्वखण्ड ५/११९
१. उत्साहवर्णस्वरदृष्टिहानि २. विषाद ३. कार्श्य ४. श्रम ५. वाग्विकाराः ६. भृशं च पीडा हृदयस्य ७. गर्लानिर्मुखस्य	१. दृष्टिप्रसादो २. वचनप्रसिद्धिः ३. स्वरस्य गाम्भीर्यं ४. अदैन्यम् ५. ऊर्जाः ६. इष्टेन्द्रियार्थेषु मनः प्रहर्षः ७. स्निग्धं मुखं	१. उद्गारशुद्धि २. उत्साहो ३. वेगोत्सर्गो यथोचितः ४. लघुता ५. क्षुत्पिपासा

Table-84 : Kṣudhā - Kāla, Mātra and Pacankāla

क्षुधा	
काल	दोषकालादी विचार्य-प्रातः सायं (भा.प्र.पूर्वखण्ड ५/११७)
मात्रा	अग्निबलापेक्षी (च.सू.५/३)
पचन काल	याममध्ये न भोक्तव्यं यामयुग्मं न लङ्घयेत् (भा.प्र.पूर्वखण्ड ५/११६)

A healthy person is advised to consume food only twice a day, that is morning and evening; taking food between this time is contraindicated in order to allow proper digestion. Food should not be taken within 3 hours after the previous meal because the production of Rasadhātu (Primary product of digested food) takes place during this time and if food is consumed, it hinders this process and causes many diseases.

ĀharaVidhi :

Aṣṭā ĀhāraVidhi Viśeṣāyatana - should be followed during consumption of food to get the utmost benefits of Āhāra.

1. उष्णं अश्नीयात् – One should consume food that is warm. Consuming warm food helps in retaining the taste of food, stimulates the digestive fire, and undergoes digestion very easily. It will also help in Anulomana (normalize proper movement) of Vata. Warm food also helps in reducing increased Kapha.
2. स्निग्धम् अश्नीयात् – Unctuous food is advised, because it will be delicious, it increases the power of digestion. The food will get digested quickly and Anulomana of Vata occurs due to the softness imparted by Snigdha Guna. It will strengthen the sense organs and will enhance growth, strength, and complexion of the body.
3. मात्रावत् अश्नीयात् - Food consumed in proper quantity keeps Tridosha in normalcy, thereby increasing the lifespan of a person. Proper quantity does not impair the power of digestion and ensures proper peristalsis and comfortable passage of food toward the rectum after being properly digested before being expelled out.
4. जीर्णेऽश्नीयात् - The next diet should be taken only after the proper digestion of previous food. If taken otherwise, the improperly digested Ahararasa (primary product of digestion) of the previous meal gets mixed up with Ahararasa of the newly taken food and instantaneously aggravates Tridosa.
5. वीर्याविरुद्धमश्नीयात् - One should consume food that is noncontradictory in Virya (potency). On consuming noncontradictory food, a person is not affected by diseases such as Kushta, Andhya (Blindness), Visarpa (Erysipelas disease) etc., which were considered complications of Virudha (incompatible foods).
6. इष्टे देशे इष्टसर्वोपकरणं चाश्नीयात् – One should dine at one's favorite places, which are equipped with desired accessories. While eating at one's favorite place with the desired accessories, one is not afflicted with psychological trauma.
Having food in uncomfortable places without proper accessories may lead to disturbance of mind.
7. नातिद्रुतमश्नीयात् - One should not consume food hurriedly. If one consumes food in a hurry, it will enter the wrong passage, will not move properly, and will get located at improper places; that is, the asphyxiation of food may be possible. Besides this, the person consuming food will not be able to appreciate the good

- quality of it or identify any defects of food, including hair or any other foreign materials mixed with the food.
8. नातिविलम्बितमश्नीयात् - One should not consume food very slowly. By consuming food very slowly, one does not get satisfaction or may eat more, and food becomes cold and is irregularly digested due to irregular contact of digestive fire.
 9. अजल्पन्नहसन् - One should not consume food while talking or laughing, or without concentration. The food consumed while talking, laughing, or with a distracted mind produces complications just like food taken hurriedly, that is, the movement of food in an abnormal passage etc.
 10. तन्मना भुंजीत् - Food should be always consumed with due consideration to oneself, knowing well about the suitability or the unsuitability of the food components to the self. Thus, one should consume food only after proper self-consideration.
 11. आत्मानमभिसमीक्षद् - The word Atmanam means self and Abhisameekshya means properly assessed. That is individuals can make modifications according to their conditions than blindly following all the rules as told in the text.

Bhojanottara Karma - which are described in detail by Bhavprakash should be followed. They are as follows-

१. Ācamana (आचमन) - to remove remnants of the food.
2. Prārthanā (प्रार्थना-prayer to God) - for proper digestion.
3. Dhūma and Tāmbula sevana (धूमतांबुलसेवन) - to pacify Kapha which increases after taking food.
4. Cankramaṇa (चंक्रमण) - walking 100 feet slowly to reduce heaviness caused due to consumption of food.

After meals the person may lie down (after lapse of one muhurta of short time) - 8 breathings - with his face up; 16 breathings- on right side; 32 breathings on his left side; and afterwards as found convenient. (भा.प्र.पूर्वखण्ड ५/१९९)

Anala (digestive power) is present on the left side, above the umbilicus; hence the person who has taken meals should lie down on his left side for better digestion. (भा.प्र. पूर्वखण्ड ५/२००)

Avoid - Vyāyāma (exercise), Vyāyāya (copulation), Dhāvana (running), Yāna (riding), Yudha (fighting), Gīta (singing) and Pāṭha (study) for one muhurta (48 minutes) immediately after meals. (भा.प्र.प्रथमखण्ड ५/२२)

Kṣudhā Vegadhāraṇa :

Suppression of the urge of Kṣudhā (hunger) is Kṣudhā Vegadhāraṇa
Kṣudhā Vegadhāraṇajanya Lakṣaṇa are elaborately described in Bruhatrayī.

Vaishamya of Kṣudhāvega :

Kṣudhā Vegadhāraṇa itself is Vidhiviparita unless and until it is recommended as a treatment.

1. Aprāptakālabhojana (Eating before time) -

अप्राप्तकालं भुञ्जानः शरीरे ह्यलघौ नरः।

तांस्तान् व्याधीनवाप्नोति मरणं वा नियच्छति ॥ सु.सू.४६/४७२

One who takes food earlier to the proper time will have his body incapable of work and becomes victim of many diseases and even death.

2. Atitakālabhojana (Eating after the lapse of proper time) -

अतीतकालं भुञ्जानो वायुनोपहतेऽनले।

कृच्छाद्विपच्यते भुक्तं द्वितीयं च न काङ्क्षति ॥ सु.सू.४६/४७३

Taking food after the lapse of proper time causes indigestion and person does not desire to take meal again.

Both Aprāptakālabhojana and Atitakālabhojana are Vidhiviparita.

3. Performing Vyāyāma, Vyavāya, Dhāvana, Yāna etc. immediately after eating food.
This can lead to move Doṣa from Koshta to Shakhā. It will hamper the process of digestion.
6. Eating too fast, too slow, with talking and laughing, without digestion of previous food, etc.is Vidhiviparita.

Practically people who consume food while watching television, under tension or any worries or who are involved in various thoughts are not aware of their speed of eating. So, they tend to eat more and also there will be less appreciation of good or bad qualities of food, which is similar to consuming food in a hurried manner.

7. Adhyaśana, Viśamāśana are also Vidhiviparita.

Vaishamya of Kṣudhā Vegadhāraṇa :

1. Ati Kṣudhā Vegadhāraṇa : The lakṣanās described in Ati Langhana can be considered same for Ati Kṣudhā Vegadhāraṇa.

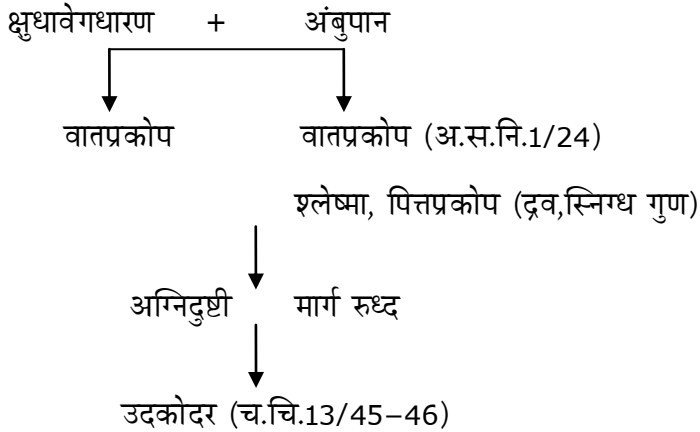
Ati Langhana causes Parvabheda (pain in the joints), Angamarda (body aches), Kāsa (cough), Mukhaśoṣa (dryness of the mouth), Kṣudt Pranāśa (complete loss of hunger), Aruchi (anorexia), Truṣṇā (thirst), Daurbalya of Shrotra and Netra (weakness of hearing and vision), Mana Sambrama (confusion of mind), Urdhva Vāta (frequent upward movement of vata), Hrudaya Tama (feeling of darkness in the heart), Deha, Agni and Balanāśa (loss of body weight, loss of digestive power and strength).

Kṣudhā Vegadhāraṇa can be considered as Kālātita Bhojana. It causes Tridosa Prakopa, Dhatukṣhya leading to above symptoms.

2. Mithyākarma (improper manner) in Kṣudhā Vegdhāraṇa-

Jalapana instead of taking Āhāra - (drinking of water instead of eating)

One who is hungry should not drink water instead of taking food, it will cause Jalodar (Ascitis).



2. Truṣṇā Vegadhāraṇa :

The meaning of the word Truṣṇā is Thirst.

Lakṣaṇa of Pipāsita Vyakti is described by Kashyapa.

Table-85 : Lakṣṇa of Pipāsita Vyakti

पिपासित लक्षण (का.स.क.१०/११)
१. ताल्वोष्ठजिह्वागलगण्डशोषः २. श्रोत्राक्षिदौर्बल्य ३. विषाद ४. मोहः ५. स्मृत्यग्निमेधासुखवाक्यहानि ६. र्जिह्वाविवृद्धिश्च

Table-86 : Ṭṛṣṇā -Kāla, Mātra and Pacankāla

तृष्णा	
काल	वह्निविवर्धनाय मुहुर्मुहुर्वारि पिबेदभूरि
मात्रा	ऋतेशरन्निदाघाभ्यां पिबेत्स्वस्थोऽपि चाल्पशः (अ.ह.सू.५/१४)
पचन काल	१. जल- यामयुग्म (६तास) २. श्रुतशीत जल-एकयुग्म (३तास) ३. तदर्धमात्रेण श्रुतं कदुष्णं-अर्ध युग्म (१.३०तास)

Jalapāna Vidhi :**1. R̥tu (Season) and Jalapāna :**

In all the R̥tu (season) except Śarada (autumn) and Gr̥ṣma (summer) one should drink water in a small quantity. One should follow the rules of drinking water according to R̥tu e.g.

१. वसंत ऋतु – क्वथितं मुस्तशुंठयंबुसारांभःक्षौद्रवारि वा । अ.सं.सू.४/१३

In Vasant R̥tu the drugs which are having Pāchana effect should be used for preparing Siddha Jala. This will help to pacify Kapha Doṣa and increase Agni.

२. वर्षाऋतु तप्तावरतमभ्मो वा पिबेन्मधुसमायुतम् ॥ सु.उ.६४/९

The reason is given by Arundatta :

ननु, वातलं मधु इति (ह.सू.५/५२) वक्ष्यति । पवनश्चात्र कुप्यतीत्युक्तम् । अतो माक्षिकस्यात्रोपयोगो न युक्तः । अत्रोच्यते । देहधातवोऽस्मिन् काले क्लेदमुपयान्ति । ततश्च क्लेदसंरक्षणे एवोपक्षीणप्रभावत्वात् मधु मरुत्कोपं विधातुमसमर्थम् । तस्मान्मधूपयोगो न्याय्य एव । अ.ह. ३/४५-४६ अरुणदत्त.

2. Jalapāna Mātrā (quantity of water) :

अत्यम्बुपानान्न विपच्यतेऽन्नमनम्बुपानाच्च स एव दोषः ।

तस्मान्नरो वह्निविवर्धनाय मुहुर्मुहुर्वारि पिबेदभूरि ॥ भा.प्र.पूर्वखण्ड ५/१५७

Excessive drinking of water causes indigestion. Therefore it is recommended that a person should drink small quantity of water frequently to increase Agni.

3. Bhojana and Jalasambandha (effects of drinking water before, during and after meal) - अष्टांगहृदय (अ.ह.सू.५/१५)

भोजन पूर्व – कृश

भोजन मध्य– सम(धातुसाम्यारुणदत्त)

भोजन अन्ते– स्थूल

The reason is given by Arundatta-

भक्तमध्येऽम्बु पीतं धातुसाम्यं समानता करोति । भक्तान्ते तु पीतमामाशये कफवृद्धिं विदधत्स्थौल्यमाधत्ते । भक्तादौ च पीतं निरिन्धनमग्निं तेजःप्रतिपक्षतयाऽवश्यमवसादयति, मन्दोऽग्निश्च सम्यगाहारं पक्त्वुमशक्तो भवति, आहारस्य चासम्यग्पाकान्न तथा पुष्टिः, इति कृशत्वे युक्तिः । अ.ह.सू.5/15 अरुणदत्त

4. Alpa Jalapāna Avasthā :

Jala is Drava, Snigha, Shita so naturally it vitiates Vāta, Pitta and Kapha Doṣa . Also excess take of water can lead to Mandagni and Indigestion leading to Āmanirmiti. So one should drink very less quantity of water in the diseases having Kapha, Piita dominance and caused due to Agnimandhya.

Vaishamya of Truṣṇa Vega-

1. Trūṣaṇā Vegadhāraṇa is itself Vidhiviparita.
2. Drinking water without considering ones need is Vidhiviparita.
3. Drinking water without doing proper Sanskāra (Hot, Cold, Medicated etc) as per the season.
4. Ati Jalapāna (excess intake of water)

Atyambupāna (Excessive intake of water) - When a person is thirsty and if he drinks excess amount of water it causes- Pitta and Kapha Prakopa, Āma, Truṣṇā, Nidrā, Tandrā, Ādhmāna, Angagaurava, Kāsa, Agnimāndya, Hrulāsa, Śvāsa and Pīnasa.

5. Mithyakarma (improper manner)

तृषितस्तु न चाश्रीयात्क्षुधितो न पिबेज्जलम् । तृषितन्तु भवेद् गुल्मी क्षुधितस्तुजलोदरी

॥भा.प्र.पूर्वखण्ड ५/१६०

One who is thirsty should not eat instead of consuming water, as it will cause Gulma.

When a person is thirsty and instead of drinking water he eats, this causes Vātaprakopa^[81]

(अ.स.नि.1/24). Gulma is caused mainly due to Vāta Doṣa dominance.

6. Vyāpanna Jala should not be taken.

व्यापन्नं वर्जयेन्नित्यं तोयं यच्चाप्यनार्तवम् ।

दोषसंजननं ह्येतन्नाददीताहितं तु तत् ॥

व्यापन्नमुदकं यस्तु पिबतीहाप्रसादितम् ॥

श्वयथुं पाण्डुरोगं च त्वग्दोषमविपाकताम् ॥

श्वासकासप्रतिश्यायशूलगुल्मोदराणि च ।

अन्यान्वा विषमात्रोगान्प्राप्नुयादचिरेण सः ॥ सु.सू.45/14-16

7. Paryushita Jala should not be taken.

न च पर्युषितं देयं कदाचिद्वारि जानता ।

अम्लीभूतं कफोत्क्लेदि न हितं तत् पिपासवे ॥ सु.सू.45/41

3 & 4) Purīṣa and Mūtra Vegadhāraṇa :

One should not engage himself in other activities during the sensation of natural urge. Micturation and defecation urges are the signs of Jīrṇa Āhāra.

Voiding Mala and Mūtra early in the morning prolongs life, relieves Āntrakūjana (noise in the intestines), Ādhamāna (flatulence) and Udargaurava (heaviness of the abdomen).

(भा.प्र.५/१७)

The function of Mūtra is Kledavahana. The function of Puriṣa is Avaṣṭambh i.e. holding on to the material in the intestines untill all the essential elements are absorbed. Timely evacuation of these Mala is necessary to avoid diseases.

Vidhi of Malamutra Visharjana is described in Ashtansangraha.

Vaiṣamya of Vegdhāraṇa- (Vidhiviparīta) :

1. Mūtra and Puriṣavegadhāraṇa itself is Vidhiviparīta.

2. Consumption of food during Mūtra and Puriṣavegadhāraṇa -

The Mūtravaha Srotasa is affected due to consumption of water, food and coitus during the urge for micturition and suppression of the urge of micturition.

3. Atevegdhāraṇa-

वातप्रकोप- अतिवेगसंधारणात्..... ।च.नि.१/१९

Atevegadhāraṇa causes Vātāprakopa and other Vātaja Vikāra.

4. Mutruvegadharana in combination with other Vihara – e.g.

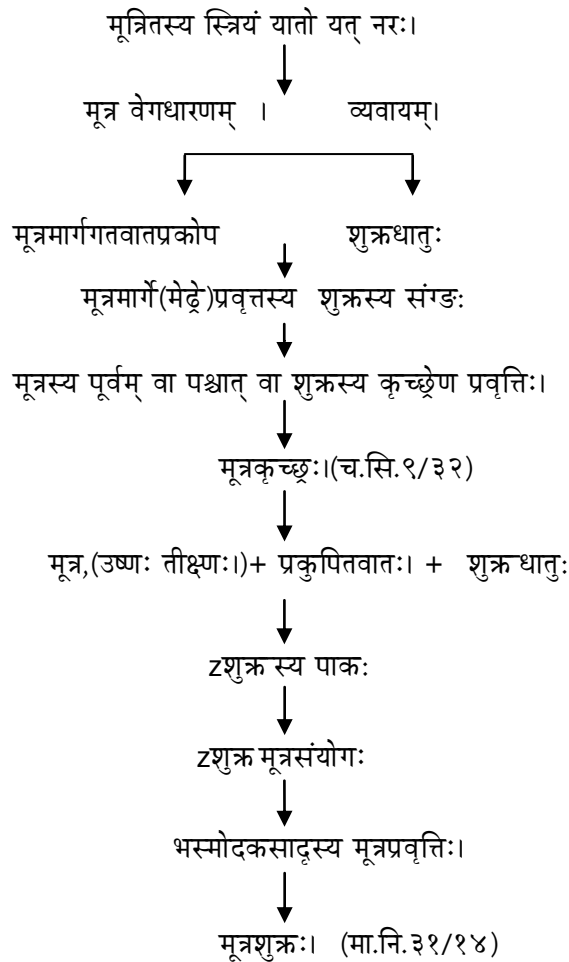


Table-87 : Effect of Divāsvāpa, Rātrijāgaraṇa, Vyāyāma (Ativyāyāma and Avyāyāma) and Vegadhāraṇa on Doṣa, Dhātu and Agni

हेतु	वातप्रकोप	पित्तप्रकोप	कफप्रकोप	धातु दुष्टि	अग्नि
दिवास्वाप	त्रिदोषप्रकोपकः	√	√	रस, रक्त, मांस, मेद	अग्निमंद
रात्रिजागरण	√ उदानवायुदुष्टी समानवायुदुष्टी	-	-	रसादीस्निग्धधातु	अग्निदुष्टी
व्यायाम	वातप्रकोप, प्राणवायुदुष्टी	-	कफक्षय (विधियुक्त)	मेदक्षय (विधियुक्त)	अग्निदीप्ती (विधियुक्त)
अतिव्यायाम	√	-	-	धातुक्षय	-
अव्यायाम	-	-	√	-	-
वेगधारण	√ प्राणवायुदुष्टी, अपान वायुदुष्टी				अग्निदुष्टी

c) Discussion on Āyurvedic Concept of Hetu :

Vāta, Pitta and Kapha Doṣās are the only causes of all the Vikāra. (अ.ह.नि.१/१२-१३(१) अरुणदत्त)

तत्रासन्नं यथा-वातादयः प्रकुपिताः । विप्रकृष्ट कारणं यथा-वातादिचयप्रकोपकरमाहारविहारादि ।
अ.ह.नि.१/२ अरुणदत्त

तत्रादौ बहुवक्तव्यत्वाद्बहिरङ्गो हेतुः । स द्वेधा-विहारः आहारश्च । अ.ह.२गद्यसूत्र हेमाद्रि

Doṣās are the Antaranga Hetu (internal cause) of all diseases. Āhāra and Vihāra are the Bahiranga (external) Hetu for the diseases.

Hetu Sevana causes vitiation of the Doṣās. One must examine Anaśānsakalpanā (Guṇās - properties) of the Doṣās from the Hetus for deciding the line of treatment.

The knowledge of Hetu (Āhāriya, Vihāriya and Mānasa) is very important for a Vaidya to determine the exact Samprāpti of a particular disease, as it helps in Nidāna Parivarjana as well as Cikitsā (treatment).

There are many types of Hetus (causes) described in Āyurvedic literature.

The Kāyika Vihāraja factors which are taken for the present study were Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa (Kṣudhā Trūṣaṇā Mala and Mūtra). These can be categorized in the following way -

A) Santarpanaja and Aptarpanaja Hetu -

- i. **Santarpanaja Hetu** - Divāsvāpa and Avyāyāma.
- ii. **Aptarpanaja Hetu** - Rātrijāgaraṇa, Ativyāyāma and Vegadhāraṇa.

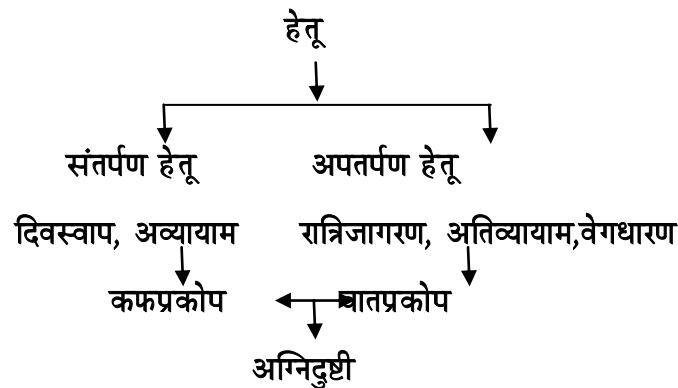
B) Svatantra and Paratantra Hetu - According to Hemādri Hetus are of two types Svatantra and Paratantra. Svatantra Hetus are those which vitiate Doṣa by their own Samāna Guṇa (similar properties). Paratantra Hetu means Doṣas are not vitiated by their own Hetus.

Divāsvāpa, Avyāyāma, Ativyāyāma, Rātrijāgaraṇa, and Vegadhāraṇa are the Svatantra Hetus as they vitiate the Doṣas by their Samāna Guṇa. But when these Hetus cause Agniduṣṭī, that Agniduṣṭī leads to Tridoṣa Prakopa. As this Tridoṣa Prakopa is due to Agniduṣṭī it is a Paratantra Hetu for Tridoṣa Prakopa. In this situation correction of Agniduṣṭī is the first line of treatment along with Nidāna Parivarjana.

शमप्रकोपौ दोषाणां सर्वेषामग्निसंश्रितौ ।

तस्मादग्निं सदा रक्षेत्रिदानानि च वर्जयेत् ॥ च.चि.५/१३६

While considering the Hetus of a Vyādhī, one must differentiate the Svatantra and Paratantra Hetu, as the line of treatment changes accordingly as per the type of Hetu.



d) Discussion on GIT Diseases :

1. Concept of Gastro Intestinal Tract in Āyurveda : The unique concept of Srotasa is discussed elaborately in Āyurveda. Srotasa are responsible for different elements to undergo transformation, circulation and transportation. Annavaha Srotasaa and Purīṣavaha Srotasaa together can be correlated to Gastro Intestinal Tract (GIT). Carakācārya has given separate chapter on Srotasa and has explained Srotoduṣṭi Hetu (causative factor), Srotoduṣṭi Lakṣaṇa (symptoms) and Cikitsā (line of treatment) of these Srotasās in detail.

Table-88 : Mulasthaṇa, Doṣasambandha, Avasthāpāka, Duṣṭihetu and Duṣṭilakṣṇa of Annavaha and Purīṣavaha Srotasa.

	अन्नवह स्रोतस	पुरीषवह स्रोतस
मूलस्थान	आमाशय, वामपार्श्व, अन्नवाहिनी धमनी	पक्वाशय, स्थूलगुद, गुद
दोषसंबंध	प्राणवायु, समानवायु, पाचकपित्त, रंजकपित्त, बोधक कफ, क्लेदक कफ, अवलंबक कफ.	समानवायु, अपानवायु, पाचकपित्त.
अवस्थापाक	मधुर, अम्ल	कटु
दुष्टिहेतु	अतिमात्र अकाले भोजन, पावक वैगुण्यात्	संधारण, अत्यशन, अजीर्णाध्यशन, दुर्बलाग्नेः कृशस्य
दुष्टिलक्षण	अनन्नाभिलषणमरोचकविपाकौ छर्दि शूलोऽन्नद्वेषश्छर्दिः पिपासाऽऽन्ध्यं मरणं	कृच्छेणाल्पाल्पं सशब्दशूलमतिद्रवमतिग्रथितमतिबहु पुरीष

From the above table it is observed that the Āhāriya Hetu are more dominant in causing Duṣṭi of both the Srotasa. The common point in the Srotoduṣṭi of Annavaha (पावक वैगुण्यात्) and Purīṣavaha Srotasa (दुर्बलाग्नेः) is Agniduṣṭi. The reasons of Agniduṣṭi are described in detail in the chapter of GIT Diseases.

Vegadhāraṇa is a only Vihāraj Hetu mentioned in Srotoduṣṭi of Purīṣavaha Srotasa along with the Āhāriya Hetu. Vegadhāraṇa causes Agniduṣṭi. The direct references regarding correlation between Vegadhāraṇa and Agnimāndya is found in Caraka Samhitā (च.चि.१५

/४४-45). Annavaḥa and Purīṣavaḥa Srotoduṣṭī leads to Agnimāndya which is the prime cause for GIT diseases.

GIT Diseases - Āyurvedic perspective :

Among the diseases of GIT, Ajīṛṇa, Amlapitta, Grahaṇī, Arśa, Atisāra and Pravāhikā were taken for the observational study. Nidāna Pancaka of these diseases are elaborately described in the Āyurveda. Vihāraja factors which were taken for the study and which are found in these diseases are discussed here.

Table-89 : Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa as Hetu in GIT Diseases according to Bruhatraī.

हेतु	अजीर्ण	अम्लपित्त	ग्रहणी	अर्श	अतिसार	प्रवाहिका
दिवास्वाप	√(सु.सू.४६/५ ००डल्हण)	-	√कफज- (च.चि.१५/६७)	√(च.चि.१४/९) कफज- (च.चि.१४/१८)	√ कफज- (च.चि.१९/७)	
रात्रिजागरण	√(च.वि.२/९)	-		-	√त्रिदोषज- (च.चि.१९/८)	
व्यायाम	-	-		वातज- √(च.चि.१४/१३) पित्तज- √(च.चि.१४/१५)		
अतिव्यायाम	-	-			(च.चि.१९/५)	
अव्यायाम	-	-		कफज- √(च.चि.१४/९)		
वेगधारण	√(सु.सू.४६/५ ००)	-	वातज (च.चि.१५/५९)	√(च.चि.१४/९) (सु.नि. २/४) (अ.ह.नि.७/१२)	√त्रिदोषज- (अतिवेगविधार ण) (च.चि.१९/८) सा.हेतु√(सु.उ. ४०/५) (अ.ह.नि.८/३) (अ.स.नि.८/३)	
मूत्रवेगधारण	-	-		√(च.चि.१४/९) (सु.नि. २/४) (अ.ह.नि.७/१२) (अ.स.नि.७/१२)	√ (सु.उ.४०/५ड ल्हण)	
पुरीषवेगधारण	-	-		√ (सु.नि. २/४)	√(सु.उ.४०/५)	

हेतु	अजीर्ण	अम्लपित्त	ग्रहणी	अर्श	अतिसार	प्रवाहिका
				(अ.ह.नि.७/१२) (अ.स.नि.७/१२)	डल्हण	
क्षुधावेगधारण	√ (अ.ह.सू.८/३ ३(१) हेमाद्रि)	-			√(सु.उ.४०/५ डल्हण)	
तृष्णावेगधारण	√ (अ.ह.सू.८/३ ३(१) हेमाद्रि)	-		-	√(सु.उ.४०/५ डल्हण)	

Table-90 : Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa as Hetu in GIT
Diseases according to Laghutrai.

हेतु	अजीर्ण	अम्लपित्त	ग्रहणी	अर्श	अतिसार	प्रवाहिका
दिवास्वाप	√ (मा.नि.६/७) (यो.र.७/१) (भा.प्र.चि.६/ ११)	(का.स.खि.१६/६)	√ कफज (मा.नि.४/१ ३) (यो.र.३/१ ६) (भा.प्र.चि. ४/१५)	√ कफज (मा.नि.५/७) (यो.र.४/५) (भा.प्र.चि.५/६)	-	
रात्रिजागरण	√ (मा.नि.६/९) (यो.र.७/३०) (भा.प्र.६/११)	-			-	
व्यायाम	-	-		√ वातज (मा.नि.५/४) (यो.र.४/२) (भा.प्र.चि.५/३) पित्तज (मा.नि.५/५) (यो.र.४/३) (भा.प्र.चि.५/४)	-	
अतिव्यायाम	-	-		-		
अव्यायाम	-	-		√ कफज (मा.नि.५/७) (यो.र.४/५) (भा.प्र.चि.५/६)		
वेगधारण	√ (मा.नि.६/७) (यो.र.७/१) (भा.प्र.६/११)	(का.स.खि.१६/ ४)	√ वातज (मा.नि.४/ ५) (यो.र.३/८) (भा.प्र.४/	-	√ (मा.नि.३/३) (यो.र.२/४) (भा.प्र.चि.२/३)	

हेतु	अजीर्ण	अम्लपित्त	ग्रहणी	अर्श	अतिसार	प्रवाहिका
			७)			
मूत्रवेगधारण	√ (भा.प्र. ६/११)	-		-	√ (मा.नि. ३/३ मधुकोश) (भा.प्र.चि. २/३ विद्योतिनी)	
पुरीषवेगधारण	√ (भा.प्र. ६/११)	-		-	√ (मा.नि. ३/३ मधुकोश) (भा.प्र.चि. २/३ विद्योतिनी)	
क्षुधावेगधारण	√ (भा.प्र. ६/११)	-		-	-	
तृष्णावेगधारण	√ (भा.प्र. ६/११)	-			-	

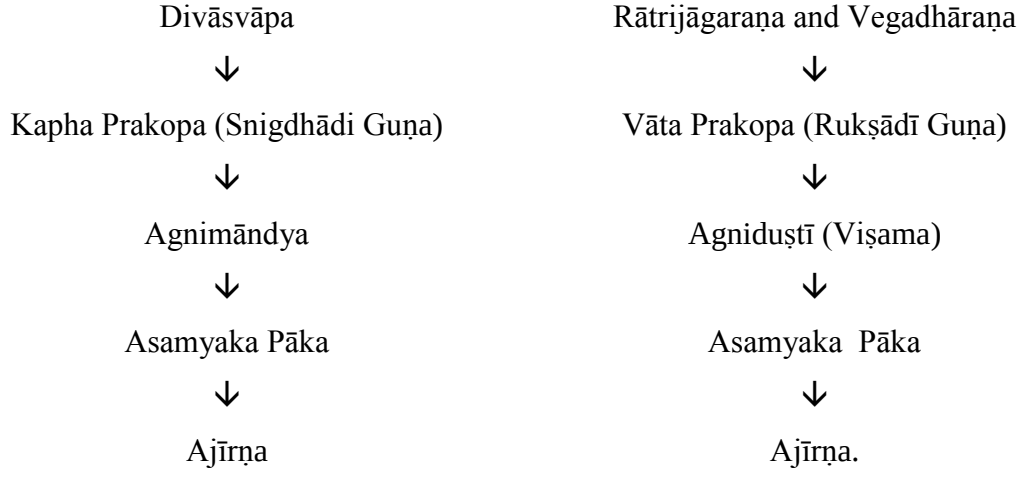
Summary - The list of Vihāraja Hetu and GIT diseases is given below.

1. Divāsvāpa- Ajīrṇa, Amlapitta, Kaphaja Grahaṇī, Kaphaja Arśa, Kaphaja Atisāra
2. Rātrijāgaraṇa-Ajīrṇa, Tridoṣaja Atisāra
3. Vyāyāma-Vātaja and Pittaja Arśa
 - a. Ativyāyāma-Atisāra
 - b. Avyāyāma-Kaphaja Arśa
4. Vegadhāraṇa-Ajīrṇa (Mūtra, Purīṣaa), Amlapitta, Vātaja Grahaṇī, Arśa (Mūtra, Purīṣa), Atisāra.
 - a. Atevegadhāraṇa -Tridoṣaja Atisāra
 - b. Kṣudhā, Trūṣaṇā Vegadhāraṇa- Ajīrṇa, Atisāra.

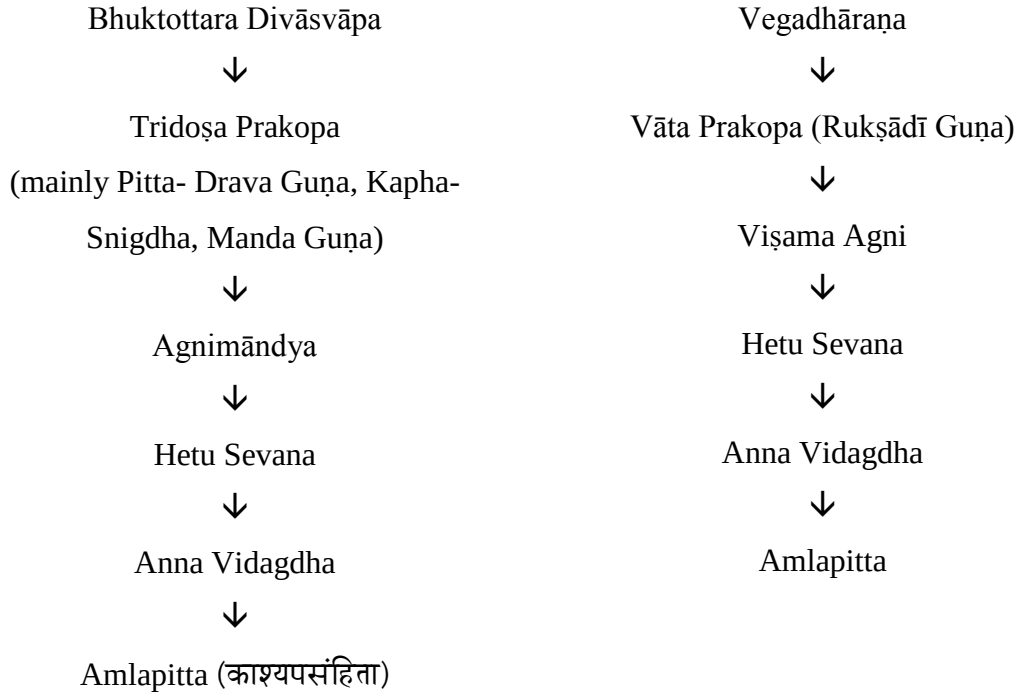
Though these are the Vihāraja Hetus mentioned in these diseases, other Hetus also play an important role in the Saṃprāpti of these diseases.

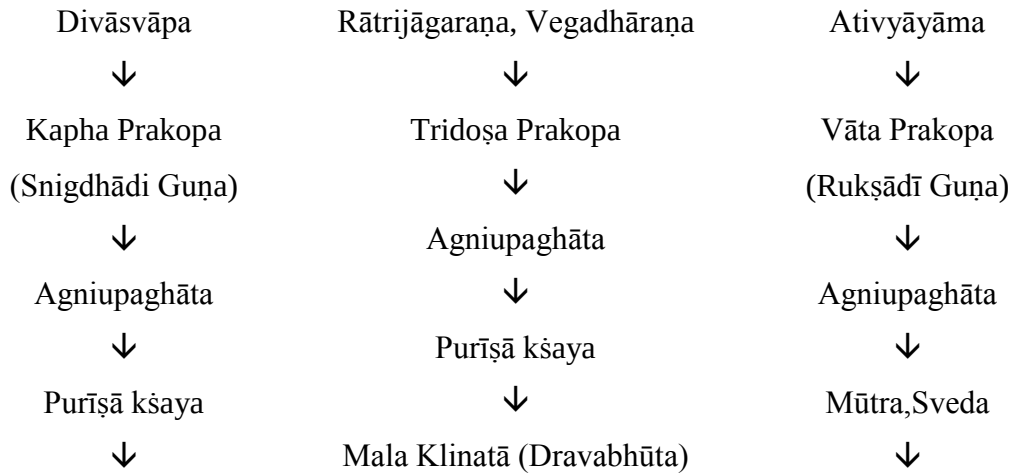
Samprapti of GIT diseases caused due to Vihāraj Hetu- Flow chart

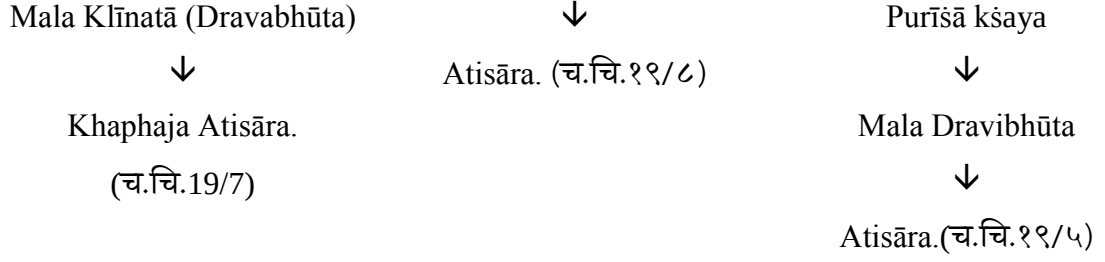
a) Ajīrṇa-



b) Amlapitta-

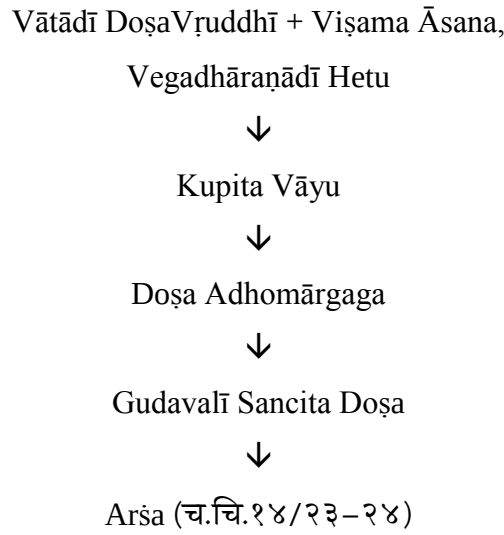


c) Grahaṇī-**d) Atisāra-**



e) **Pravāhikā** – As per Caraka Samhitā Hetu and Saṃprāptī of Kaphaja Atisāra can be considered as Hetu and Saṃprāpti of Pravāhikā.

f) **Arśa** - Vyāyāma, Vegadhāraṇa, Divāsvāpa, Avyāyāma are the Vihāraja Sāmānya Hetu of Arśa. Arśa is a Tridoṣaja Vyādhi.



Saṃprāpti of Analduṣṭī (Agni) in Arśa is described in Aṣṭāṅga Samgraha.

तैः खल्वधोमार्गोपरोधाद्वायुरपानो निवर्तमानः समानव्यानोदानप्राणान् पित्तश्लेष्माणौ च प्रकोपयन्ननलमुपमृद्नाति । अ.स.नि.७/१५

Arśa, Atisāra and Grahaṇī are the three diseases which are interdependent. Hīna Agnibala aggravates the diseases and Vrudha Agnibala gives relief from the diseases. So the Agnibala should be maintained in these three diseases to overcome them. (च.चि.१४/२४४-४५)

e) Discussion on GIT Cancer :**1. Cancer - Āyurvedic perspective :**

The word Cancer is not directly mentioned in Āyurveda. It is correlated with Duṣṭa Vraṇa, Vraṇaśoṭha, Arbuda, Gulma, Śoṭha, Visarpa, Vidradhi, etc. The Vihāraja factors which were taken for the study are found as a Hetu in these diseases.

The diseases which are arising newly can be understood by the principles given in the Āyurveda. Undescribed diseases can be studied with the help of 'Anukta' concept.

All the Nija Vikāra (endogenous diseases) occurs invariably due to the vitiation of Vāta, Pitta and Kapha, i.e. the Doṣās. By examining the location, sign and symptoms, causes of vitiation of Vāta, Pitta and Kapha in any condition, the intelligent physician can diagnose and treat all Anukta diseases.

The main cause of the Vyādhī is Doṣaduṣṭī (vitiation of Doṣās). Therefore to treat any disease the knowledge of Anśānśakalpanā of Doṣa is important. This can be achieved by the knowledge of Hetus.

2. Risk factors for Cancer (Āyurvedic View) :

Modern researchers have found dietary factors, physical inactivity and infections etc. as a risk factor for the Cancer. According to Āyurveda the factors (Āhāra, Vihāra, Mānasa) which vitiates the Doṣas are considered as Hetu.

In the present study among the Āhāra, Vihāra and Mānasa Bhāva the main focus was given on Vihāra.

Daily activities (Vihāra) if done in excess, less or in improper manner play an important role in vitiating Doṣās as equal to diet. Dietary items have direct effect on GIT tract.

Divāsvāpa (daysleep), Ratrijāgaraṇa (keeping awake at night), Ativyāyāma (exercise), Avyāyāma (lack of exercise), Vegadhāraṇa (suppression of natural urges) are the Vihāraja Hetu for the diseases. These Vihāraja factors (Divāsvāpa etc.) are commonly seen which affect the digestive system.

In GIT Cancers, the study was focused on the Hetu aspect only.

एको हेतुरनेकस्य तथैकस्यैक एव हि ।

व्याधेरेकस्य चानेको बहूनां बहवोऽपि च ।।च.चि.८/२४

One causative factor may cause one or many diseases. Many causative factors may result in a single disease or may cause several diseases. Like Anukta Vyādhi there may be Anukta Hetu also in the manifestation of Cancers. So other factors may be the risk factors in Cancer.

Samavāyi Kāraṇa of Vyādhi is vitiated Doṣa. Doṣa gets vitiated due to Hetus. The term Hetu is applied to the factors which are done continuously, for longer duration and which are Vidhiviparīta.

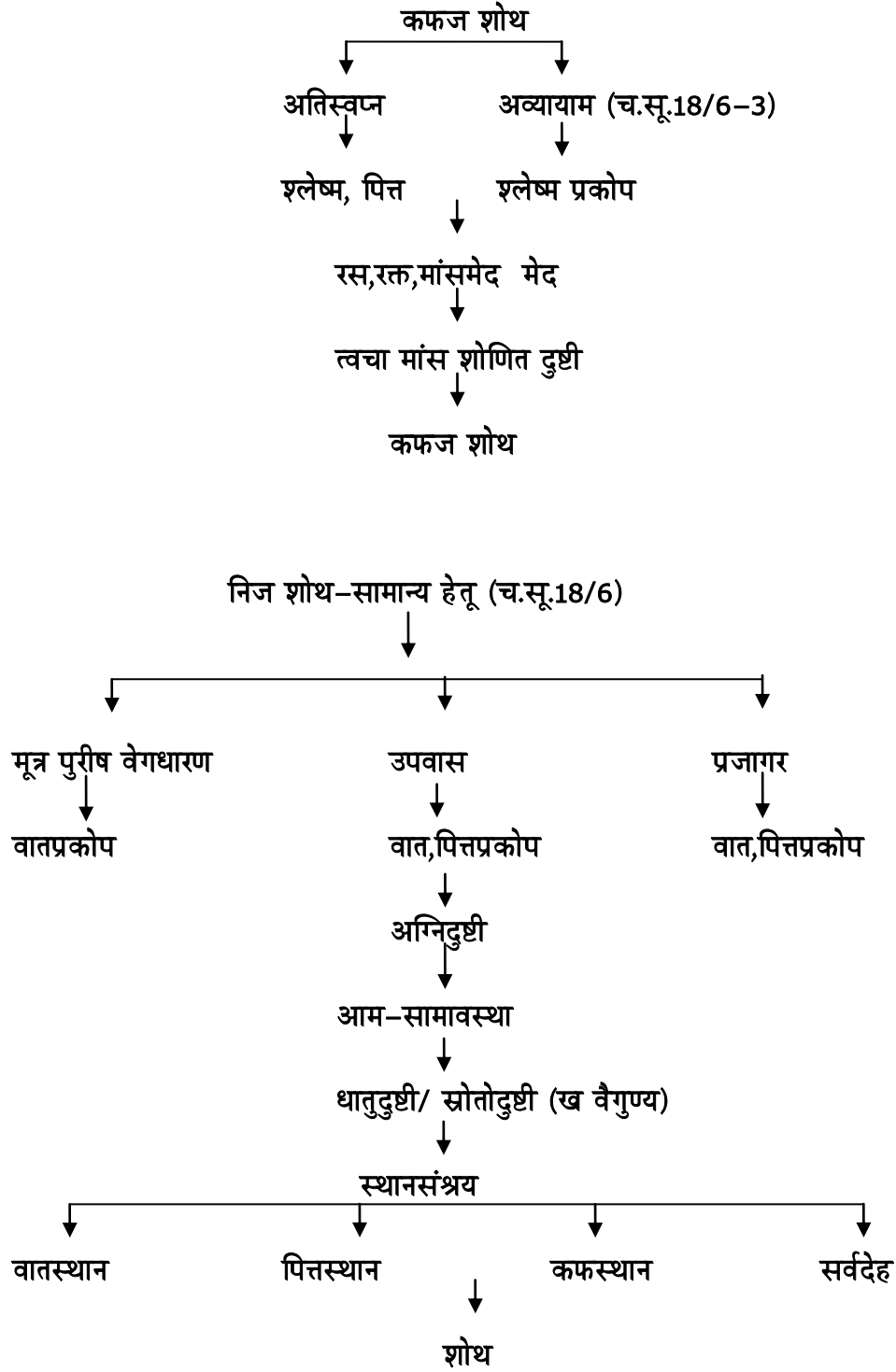
Vyādhis like Arbuda, Gulma, Śoṭha etc. described in Āyurveda can be correlated to Cancer.

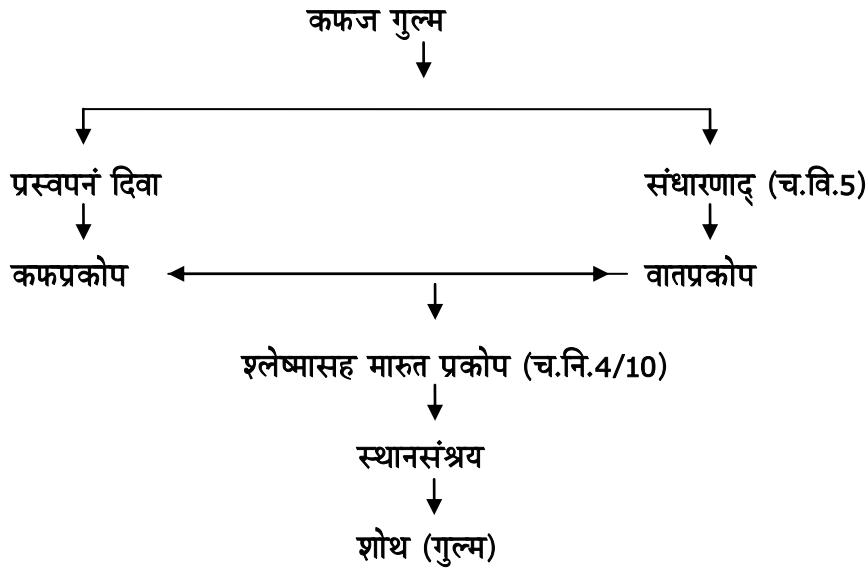
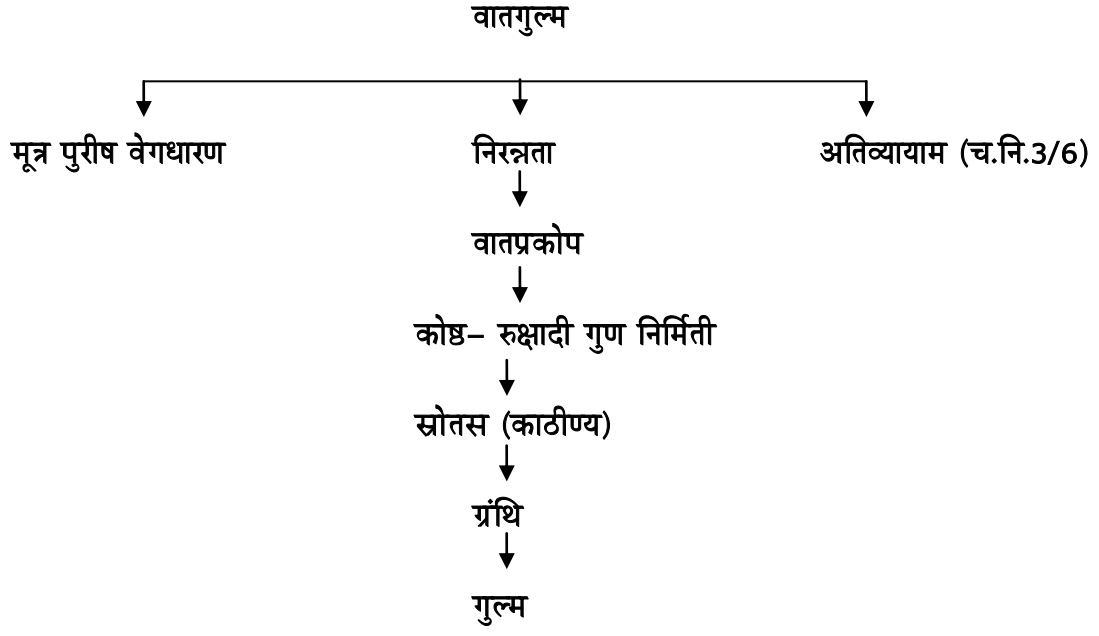
Divāsvāpa, Rātrijagaraṇa, Ativyāyāma, Avyāyāma, Vegadhāraṇa etc. are the Hetus quoted for the above diseases. With the help of Atideśa Tantrayukti it can be said that, these Hetus may be responsible for manifestation of Cancer.

As Atideśa Tantrayukti is applied to Hetus so it is applied for Vyādhī Utpatti. As stated in commentary of Gulma Vyādhi in Caraka Cikitsā, the Vāta Doṣa carries Kapha or Pitta which are vitiated by Svatantra Hetu and cause Kaphaja and Pittaja Gulma. In Vātaja Gulma Prakupita Vāta due to its Svatantra Hetu carries Prākṛuta Pitta or Kapha to Sthānavaigunya to form Vātaja Gulma. Same may happen while Cancer disease is formed where Divāsvāpa, Rātrijagaraṇa, Ativyāyāma, Avyāyāma, Vegadhāraṇa etc.vitiate Doṣa directly or indirectly.

Divāsvāpa, Rātrijagaraṇa, Ativyāyāma, Avyāyāma, Vegadhāraṇa etc. are definitely vitiating the Doṣās which further may result in Cancer. The Samprāpti for Cancer formation is described below-

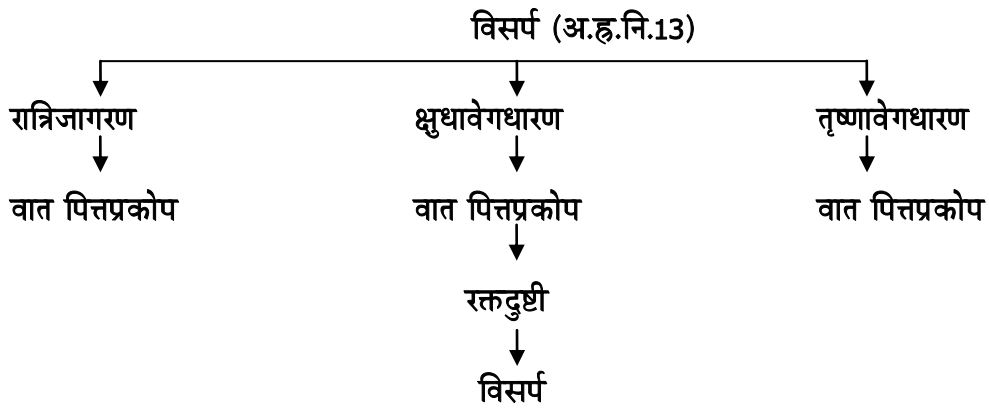
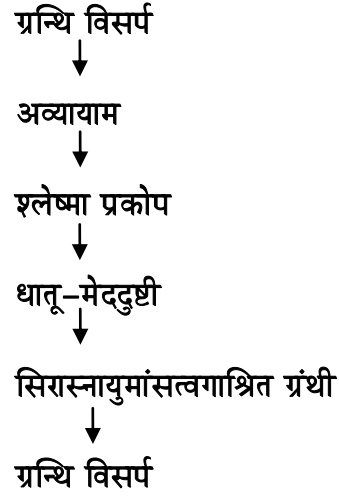
3. Samprapti of the diseases resembling with Cancer-





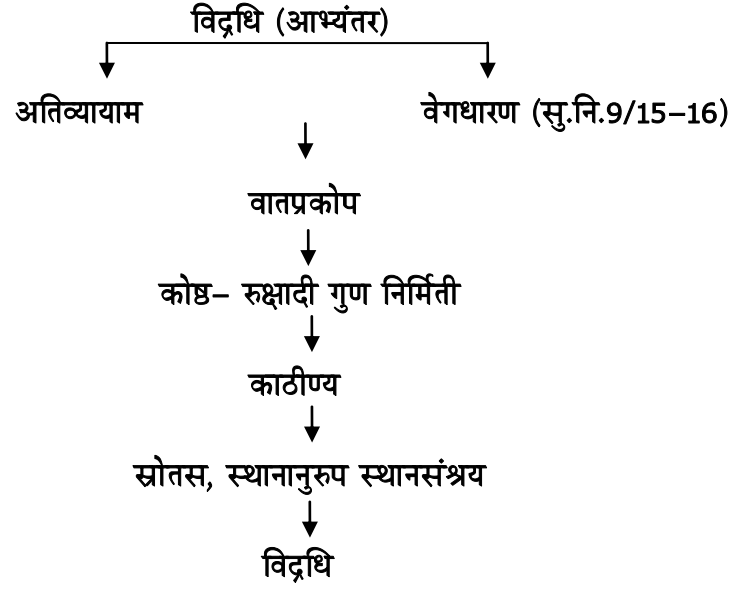
यस्य वायुः प्रकुपितो गुल्मस्थानेऽवतिष्ठते ।

शोफं सशूलं जनयन् गुल्मस्तस्योपजायते ॥ च.सू.18/29

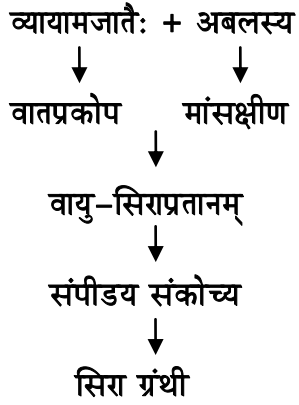


यस्य पित्तं प्रकुपितं त्वचि रक्तेऽतिष्ठते ।

शोथं सरागं जनयेद्विसर्पस्तस्य जायते ॥ च.सू.18/23



ग्रंथि- सिराजग्रंथी



B. Discussion on observational study :

Gastro Intestinal Tract (GIT) diseases are commonly associated with Āhāra Vaiṣamya. Efforts should be taken to explore association of Vihāraja Vaiṣamya with GIT diseases. Present study is taken to probe into these factors. The research work comprises of literary and observational study.

Cancer is one of the leading life style diseases of the present era. The digestive tract is a major site of Cancer in humans. While considering Cancer, study is limited only to Cancers of the Gastro Intestinal Tract only.

In the present study diseases of the Gastro Intestinal Tract were focused. Amongst various GIT diseases the diagnosed cases of Ajīrṇa, Amlapitta, Grahaṇī, Arśa, Atisāra and Pravāhika from Ayurvedic perspective were selected.

Concept of Kāyika Vihāra Vaiṣamya was studied by analysis of data obtained in observational study. The Kāyika Vihāra which were taken for the study were Divāsvāpa, Rātrijāgaraṇa, Vyāyāma and Vegadhāraṇa- Mūtra, Purīṣa, Kśudhā and Truṣṇa.

The method used for this study was survey. Total 300 participants were selected and categorized in three Groups. 100 participants in each Group. This data was collected through Questionnaire.

The three Groups were as follows-

- i. Group A - Diagnosed patients of GIT Cancers namely- Esophagus, Stomach, Liver, Gallbladder, Colon and Rectum.
- ii. Group B - Diagnosed patients of Non Malignant GIT diseases according to Ayurveda namely - Ajīrṇa, Amlapitta, Grahaṇī, Arśa, Atisāra and Pravāhikā.
- iii. Group C - Healthy individuals who were not suffering from any major illness.
Selection of participants according to Age - participants in the age Group of 30 years to 70 years were included.

In Caraka Samhitā and Aṣṭāṅga Hṛdaya (Arundatta), the Madhya Vaya is described between 30 to 70 years. As chronocity of Kāyika Vihāra Vaiṣamya is a contributing factor in manifestation of diseases the age group 30 to 70 years (Madhya Vaya) was selected for the study.

a) Discussion on observations :**1. Age :**

- i. In Group A, 06 participants were from age Group 30 to 40 years, 18 participants from 40 to 50 years, 29 participants from 50 to 60 years, and 47 participants from 60 to 70 years.
- ii. In Group B, there were 42 participants from age Group 30 to 40 years, 32 participants from 40 to 50 years, 15 participants from 50 to 60 years, and 11 participants from 60 to 70 years.
- iii. In Group C, there were 66 participants from age Group 30 to 40 years, 22 participants from 40 to 50 years, 08 participants from 50 to 60 years, and 04 participants from 60 to 70 years.

GIT Malignancies are common in elderly patients i.e. above the age of 60 years whereas other GIT diseases other than malignancies commonly occur in comparatively younger age group i.e. between 30 to 50 yrs. This is because of the fact that younger people commonly indulged in unhealthy life style resulting in occurrence of various GIT diseases

2. Gender :

In Group A , 57 Male and 43 Female, in Group B 27 Male and 73 Female, in Group C 43 Male and 57 Female participants were observed.

Group B includes maximum number of female patients i.e. 73%. This is due to the fact that Kāyika Vihāra Vaiṣamya is in the form of Divāsvāpa, and Vegadhāraṇa is commonly observed in females which are responsible for GIT diseases.

3. Occupation : Four categories of occupation were taken into consideration. These are Nokri (salaried jobs), Udyoga (business), Gruhīṇi (housewives) and Vidyārthī (students).

- i. In Group A, participants occupation wise distribution was –Nokri 41, Udyoga 27, Gruhīṇi 31 and Vidyārthī 01.
- ii. In Group B, participants occupation wise distribution was - Nokri 82, Udyoga 07, Gruhīṇi 11.
- iii. In Group C, participants occupation wise distribution was - Nokri 90, Udyoga 04, Gruhīṇi 05 and Vidyārthī 01.

4. Discussion on Kāyika Vihāra Vaiṣamya :

The Kāyika Vihāra which were taken for the study were Divāsvāpa, Ratrijāgarāṇa, Vegadhāraṇa, and Vyāyāma. The recorded observations regarding these Vihāra are discussed according to Kāla (in years), Vāranvārata (frequency per week) and Mātrā (duration in minutes). The observed data is further categorized as follows

- i. Kāla (period in years) - 1yr to 10 yrs; 11yrs to 20yrs; 21yrs to 30yrs; 31yrs to 40yrs; 40yrs to 50yrs.
- ii. Vāranvārata (frequency per week) - 1-2 days, 3-4 days and more than 4 days.
- iii. Mātrā (duration in minutes) - less than 60 minutes and greater than 60 minutes.

a) Divāsvāpa (daysleep) : The data related to Divāsvāpa was statistically analyzed. For discussion purpose, a brief summary of observation is highlighted.

58 participants from Group A, 71 from Group B and 38 from Group C were found taking Divāsvāpa after having meals and in a lying position.

1. **Kāla (period in years) :** for 01-10 years period, 20 participants from Group A, 50 participants from Group B, and 26 participants from Group C; for 11 to 20 years period 19 from Group A, 13 from Group B, 09 from Group C; for 21-30 years period, 14 from Group A, 06 from Group B and 03 from Group C were seen.
2. **Vāranvārata (frequency per week) :** 29 participants from Group A, 43 participants from Group B and 10 participants from Group C took Divāsvāpa for complete week.
3. **Mātrā (duration in minutes) :** 39 participants from Group A, 47 participants from Group B and 29 from participants Group C took Divāsvāpa approximately for a time period of 60 minutes (1 hour); while 19 participants from Group A, 24 participants from Group B and 09 participants from Group C took Divāsvāpa for more than 60 minutes.

After applying Pearson's Chi - square Test, it is observed that P value is less than 0.05 suggesting significant association in all the groups.

Number of participants from Group C taking Divāsvāpa was less than number of participants from Group A and Group B.

Āyurvedā's guideline to avoid Divāsvāpa for maintenance of health is seen in Group C participants.

Divāsvāpa after taking meals and in lying position (Bhojanottara Divāsvāpa) is Vidhiviparita. After comparing Group A, Group B and Group C, it is observed that, participants taking Divāsvāpa from Group B are more than in Group A. This

demonstrates that, this Vihāra Vaiśamya is one of the leading factors to GIT disorders mentioned in Āyurvedic literature.

Bhuktottara Divāsvāpa causes Kapha and Pitta Prakopa, Rakta Dhatuḍṣṭi and Agnimāndya. GIT diseases mentioned in Ayurvedic Texts and which are taken for the study are manifested by Agnimāndya.

Nidānapancaka of Cancer is not clearly mentioned in classical texts. The basic principle of Vyādhi Utpatti is Doṣaduṣṭi. This can also be applied to Cancer. Bhuktottara Divāsvāpa will vitiate the Doṣa which may manifest in any type of the Cancer.

4. Additional Findings related to Divāsvāpa (daysleep) : In the Questionnaire of Divāsvāpa detailed history of Divāsvāpa was noted. Some points related to Divāsvāpa were as follows-

1. Total 09 participants from all Groups prefer to take Divāsvāpa in sitting position (chair). This is the correct position when Divāsvāpa is recommended.
2. Total 12 Participants from all group took Divāsvāpa after Ratrijagaraṇa, and prefer to sleep after taking lunch.

Divāsvāpa after Ratrijagaraṇa is recommended for the duration of half the period of Ratrijagaraṇa and should be taken before lunch. In any circumstance, where Divāsvāpa is taken after meals is Vidhiviparīta.

3. Extra sleep in morning after awakening - Total 06 participants have habit of sleeping in morning, after 1 or 2 hours of awakening time. Such sleep is also labelled as Divāsvāpa. Sleeping after Suryodaya (sunrise) is restricted. Hence it is also Nidrā Vidhiviparīta.
4. Habit of sleeping in the evening after work- Total 13 participants were observed who took evening sleep. According to Sandyācaryā it is Vidhiviparīta.
5. Sleep during travelling – Total 16 participants were observed who slept while travelling.
6. Divāsvāpa after eating sweets-very few participants reported that on weekend they preferred to have heavy lunch including desserts and slept thereafter. Snigdha Guṇa increased due to Divāsvāpa and Guru Guṇa of Madhura Rasa caused Kaphavruddhī.
7. Divāsvāpa after Ajīrṇa - it was observed rarely in these study groups.

8. Divāsvāpa in Grīṣma R̥tu - 34 participants from Group A, 47 from Group B and 22 from Group C were found taking Divāsvāpa in summer. According to Āyurveda Vidhivata Divāsvāpa is permitted only in Grīṣma R̥tu.
9. Some participants reported that they felt enthusiastic after taking Divāsvāpa. The reason behind it is that these participants may have become habitual to this habit (Oka Sātmya) or they may be Arha (eligible) for Divāsvāpa.

Out of above mentioned factors, only Divāsvāpa in Grīṣma R̥tu, Divāsvāpa after Rātrijāgarāṇa are permitted. All other conditions are Vidhiviparīta.

P value of all these factors is more than 0.05 hence no significant association is observed in this study statistically. But one should not neglect these conditions.

5. Reasons of Divāsvāpa :

The main reason of Divāsvāpa found in this study is due to the free time that the participants got in their daily schedule. Here, free time refers to weekly off in case of salaried jobs, rest period given at work place or in case of house wife time remaining after house hold work is completed. The other reason is Rātrijāgarāṇa, shift duty, etc.

The need of time is to make people aware of these causes which adversely affect their health.

Rātrijāgarāṇa (keeping awake at night) : The second Vihāraja Hetu is Rātrijāgarāṇa. As stated earlier sleeping after 10.30 pm. is considered as Rātrijāgarāṇa for the present study.

Out of 100 participants in each Group, 31 from Group A, 57 from Group B and 38 from Group C were keeping awake till late night.

1. **Kāla (period in years) :** 46 participants from Group B, 30 from Group C and 10 from Group A had history for Rātrijāgarāṇa between 1 to 10 years period, while 12 from Group A, 08 from Group B, 06 from Group C for 11 to 20 years period.
2. **Vāraṇvāratā (frequency per week) :** 13 participants from Group A, 50 participants from Group B and 15 participants from Group C had a frequency of Rātrijāgarāṇa for 7 days.

- 3. Mātrā (duration in minutes) :** 22 participants from Group A, 40 participants from Group B and 38 participants from Group C, remained awake late night for more than one hour.

According to statistical analysis, the significance of association was tested. The p value for this is less than 0.05 suggesting significant association between all the groups.

On comparing the three Groups, it is noticed that more number of participants from Group B, were indulged in Ratrijāgaraṇa. It was also noticed that the Kāla, Vāraṁvāratā and Mātrā in them is on higher side. This observation suggests that Ratrijāgaraṇa is a predisposing factor for GIT diseases diagnosed from Āyurveda.

Ratrijāgaraṇa causes Rukṣata, Vāta Prakopa, Samāna Vāyu Duṣṭi. Samāna Vāyu is located in Koṣṭa which is the site of Agni. Duṣṭi of Samāna Vāyu results in Agniduṣṭi.

In Group A maximum number of participants i.e. 22 out of 31 remain awake more than 1 hour is indicative of association of Mātrā of Ratrijāgaraṇa and manifestation of GIT diseases. The chronicity in terms of Kāla is 22 participants for the period of 1 to 20 years, but the frequency of Ratrijāgaraṇa is less. Hence Ratrijāgaraṇa may be supporting cause, along with the other Cancer causing factors.

4. Reasons of Ratrijagaraṇa :

Travelling, change of place, addictions, improper bed, snoring, urges like toilet, hunger, thirst, pain are not interfering with the sleep of participants included in this study. Indulging in media and entertainment are the outstanding reasons in these participants. Psychological conditions such as fear, over thoughts, planning of the next day, worry, dreams also result in Ratrijagaraṇa to some extent.

- c) Mūtravegdhāraṇa (suppression of the urge of urination)-** Suppression of natural urges is Vidhiviparīta. While studying Mūtravegdhāraṇa it is observed that 34 participants from Group B, 29 participants from Group A and 22 participants from Group C suppress Mūtravega.

- 1. Kāla (period in years) :** 11 participants from Group A, 26 participants from Group B and 18 participants from Group C, had history of Mūtravegdhāraṇa for 1 to 10

years. 11 participants from Group A, 04 participants from Group B and 04 participants from Group C had a history for a period of 11 to 20 years.

2. **Vāranvāratā (frequency per week)** : No participants from Group A, 29 participants from Group B and 03 participants from Group C had Mūtravegadhāraṇa frequency for 7 days.

14 participants from Group A, none from Group B and 3 from Group C had Mūtravegadhāraṇa frequency for 3 to 4 days.

14 from Group A, 05 from Group B and 13 from Group C had frequency once or twice per week.

3. **Mātrā (duration in minutes)** : 25 participants from Group A, 29 participants from Group B and 19 participants from Group C, had history of Mūtravegadhāraṇa and duration was less than 1 hour.

Group B participants were more habituated for suppression of Mūtravega as compared to other two groups. The Kāla, Vāranvāratā and Mātrā of Mūtravegadhāraṇa was also on higher side in Group B.

According to statistical analysis the significance of association was tested. The p value for Vāranvāratā is less than 0.05 suggesting significant association. While P value is more than 0.05 in Kāla and Mātrā hence no significant association seen statistically. But as the actual number differ, they are clinically significant.

Micturition is a natural urge. One can physiologically hold the urge of micturition. According to modern physiology there is voluntarily control of micturition due to cerebral control of the external urethral sphincter and certain muscles of pelvic diaphragm. Voluntary control is limited till the bladder capacity is full. But the chronicity in this habit leads to pathology.

Mūtravegadhāraṇa leads to Vātaprakopa. This Vātaprakopa causes Viṣama Agni resulting in production of Āma. Agni is further vitiated by this Āma. This is the prime factor for GIT diseases mentioned in Āyurveda.

- d) **Puriṣavegadhāraṇa (suppression of the urge of defecation)** : Malavega is the function of Apāna Vāyu. Apāna Vāyu is also responsible for holding the Puriṣa mala for appropriate time.

In this study, it was observed that 25 participants in Group A, 20 participants in Group B and 10 participants of Group C had a habit of suppression of the urge of defecation.

1. **Kāla (period in years) :** The mala suppression habit is mostly seen in the period of 1 to 10 years for each Group. Number of participants being 10, 15, and 10 from Group A, B and C respectively.
2. **Vāranvāratā (frequency per week) :** Out of 20 participants from Group B, 16 participants have history of suppressing Purīṣavega for 7 days which was far more than the number of participants from Group A (02) and Group C (0). While 14 participants from Group A had an habit of suppressing Purīṣavega once or twice in a week.
3. **Mātrā (duration in minutes) :** Purīṣavegasuppression is less than 1 hour duration in each Group. The number being 23, 19 and 9 participants in Group A, Group B and Group C respectively. Mātrā of Purīṣavegadhāraṇa was more than 1 hours viz 2, 1 and 1 participants from Group A, Group B and Group C respectively.

Statistically the p value for Vāranvāratā and Mātrā is less than 0.05, hence significant association is seen in all the groups.

It is observed that Purīṣavegadhāraṇa, its Kāla, Vāranvāratā and Mātrā in Group A and B have marginal difference. But the number of participants are more in Group A. Hence it can be stated that Purīṣavegadhāraṇa is significant risk factor in GITCancers (Group A).

Purīṣavegadhāraṇa causes vitiation of Vātadoṣa. This vitiated Vātadoṣa becomes the factor that causes vitiation of Agni. The Agni becomes Viṣama. Due to this even the diligent diet is sometimes not properly digested leading to Āmautpatti. This Āma is responsible for Annavaha and Puriṣavaha Srotasaduṣṭī.

4. **Reasons of Mūtra and Purīṣavegadhāraṇa :**

In this study, the leading reason for Mūtra and Purīṣa Vegadhāraṇa found was being busy in either office work or House work. The second leading cause being travelling. The other reasons included in the study namely hatrete for the place of toilets, not accustom to use of Comode system, boredom, difficulty in urination and

defecation, weakness due to diseases showed very less or negligible association with Vegdhāraṇa.

Depending on this observation it is clear that individuals give less importance to the natural urges. Moreover they overstress themselves with work.

5. Additional findings found in Mūtra and Puriṣa Vegadhāraṇa :

1. As per Ayurvedic literature eating and drinking habits during Mūtra and Puriṣa Vegadhāraṇa are add on risk factors of GIT diseases .However they are not seen evident in this observational study.
2. Forceful urination and defecation was noted negligibly.

e) Kṣudhāvegdhāraṇa (suppression of the urge of hunger) :

Kṣudhāvegdhāraṇa i.e.suppression of hunger was assessed in all the three Groups. Most of the participants from Group A i.e.60, Group B i.e.53 and 32 participants from Group C had habit of Kṣudhāvegdhāraṇa.

1. **Kāla (period in years) :** Among 60 participants having history of Kṣudhāvegdhāraṇa from Group A 22 had this habit since 1to 10 years, 15 participants since 11 to 20 years and 14 participants since 21 to 30 years.

In Group B, 37, 12 and 03 participants having history of Kṣudhāvegdhāraṇa, fall in the Kāla of 1 to 10 years, 11 to 20 years and 21 to 30 years respectively.

In Group C the history of Kṣudhāvegdhāraṇa is found in 26 participants for the period of 1 to 10 years and 06 in the period 11 to 20 years.

2. **Vāranvāratā (frequency per week) :** 19 participants of Group A and 10 participants of Group B were suppressing Kṣudhāvega everyday. The Varamvāratā of 24 participants from Group A, 19 participants from Group B and 11 from Group C was between 3 to 4 days per week.

17, 24 and 18 participants from Group A, Group B and Group C respectively were suppressing hunger once a week.

3. **Mātrā (duration in minutes) :** The duration of hunger suppression was less than 1 hour in 26 participants in Group A, 29 participants from Group B, 27 participants

from Group C while remaining participants were suppressing their hunger for more than 1 hour.

Habit of Kṣudhāvegadhāraṇa was remarkable in each Group. But it is not found influencing with the health of participants from Group C as their chronicity is not more than 10 years. Chronicity of habit of Kṣudhā Vegadhāraṇa was evident in Group A patients i.e. up to 30 years, which proves association of chronicity of Kṣudhā Vegadhāraṇa with GIT malignancies.

According to statistical analysis the significance of association was tested. The p value for this was less than 0.05 suggesting significant association in all groups.

Kṣudhā Vegdhāraṇa vitiates Vāta. Kṣudhā Vegdhāraṇa can be considered as Upavāsa. Upavāsa leads to Agnimāndya. In Annavaḥa and Puriṣavaḥa Srotas Vyādhī Agni plays an important role. Agnimāndya leads to Āmanirmitī. The Samprāptī takes place in same fashion as described for other Vegadhāraṇa. Kṣudhā Vegadhāraṇa was seen dominantly in Group A followed by Group B while chronicity was more in Group A.

4. Additional findings found in Kṣudhā Vegdhāraṇa (suppression of the urge of hunger) :

1. 49 participants from Group A, 34 participants from Group B and 19 participants from Group C drank water, tea during suppression of hunger.
2. Habit of eating snacks instead of food was seen in 40, 28 and 17 participants in Group A, Group B and Group C respectively.
3. 26 participants from Group A, 21 participants from Group B and 13 participants from Group C consumed food even if there was no urge for hunger. This is Aprāptakāla Bhojana. Eating after the time of hunger is Atitakāla Bhojana. Both Aprāptakāla Bhojana and Atitakāla Bhojana are Vidhiviparita. They cause Annavaḥasrotasa Duṣṭi.

f) Truṣṇāvegdhāraṇa (suppression of the urge of thirst) :

Truṣṇā is a physiological aspect. Truṣṇā is mentioned as one of the signs of Jīṛṇa Āhāra. The frequency of Truṣṇā is dependent on Rūtu. Clear instructions regarding

quantity, quality and time of drinking water are mentioned in Āyurvedic literature. It is mentioned that one should not suppress his thirst.

In this study it was noted that about 26 participants from Group A, 08 participants from Group B and 09 participants from Group C had habit of Trūṣṇāvegadhāraṇa.

1. **Kāla (period in years) :** In Group A-10 participants, Group B-06 participants and Group C-08 participants had the habit of Trūṣṇā vegadhāraṇa for a period of 1-10 years and Group A-10 participants, Group B-01 participant and Group C-01 participants were observed to suppress thirst for a period between 11-20 years.
2. **Vāranvāratā (frequency per week) :** Highest reported frequency was 07 days by 19 participants of Group A whereas - 03 participants from Group B and 02 participants from Group C were found.
3. **Mātrā (duration in minutes) :** The duration of suppression of thirst was less than 1 hour in 21 participants of Group A, 07 and 08 participants of Group B and Group C respectively.

As the p value of Pearson's Chi square test is below 0.05, significant association is noted in all the groups.

It is observed that the chronicity of Trūṣṇāvegadhāraṇa is more in Group A (20 participants in the period of 1 to 20 years) as compared to Group B and Group C (7 and 9 respectively). In conclusion Trūṣṇāvegadhāraṇa is observed a risk factor for GIT Malignancies (in Group A).

The Samprāpti for GIT diseases with respect to Vegadhāraṇa is mentioned previously.

4. **Reasons of Kṣudhā and Trūṣṇāvegadhāraṇa-**

Prime reason for Kṣudhā and Trūṣṇāvegadhāraṇa found in this study was that the people being busy in their work. Another reasons for Kṣudhā and Trūṣṇāvegadhāraṇa viz religious deeds like fast, parannavarjya (not eating outside), Pūjā or psychological factors like quarrel, anger, worry and boredom were not observed commonly.

Thus it is necessary to make people aware about the ill effects of Kṣudhā and Truṣṇāvegdhāraṇa.

g) Vyāyāma (exercise)-

In this study, it is observed that 57 participants from Group A, 65 participants from Group B and 55 participants from Group C were not doing Vyāyāma.

As Avyāyāma is seen in all the three groups however no significant association was found statistically. Hence Ayāyāma in this context is Vidhiviparīta. Physical inactivity or lack of exercise, less or too much exercise come under one umbrella i.e. Vidhiviparīta. This lack of exercise or sedentary lifestyle (Avyāyāma) leads to Kaphavrudhi. The Kaphavrudhi is due to increase in the Guru (heaviness), Snigdha (unctuous), Sthira (immobility) Guṇa. They affect Agni and lead to GIT diseases.

As most of the participants from each Group never performing exercise, data regarding to Kāla, Vāramvārata and Mātrā was not applicable.

Avyāyāma is found in all the three groups. According to modern medical research also physical inactivity is one of the risk factors for Cancer. Finding in the present study is similar as per the modern medical science.

Reasons of Avyāyāma :

The most observed reason for Avyāyāma was lack of time for exercise. Similar to Mūtra and Puriṣa Vegdhāraṇait is found that individual restrict themselves from following proper daily regimen in the form of Ayāyāma. They give utmost importance to the work instead of their health.

Additional Observations found in Vyāyāma :

Other finding related to Vyāyāma was that 38, 26 and 30 participants from Group A, B and C were doing Vyāyāma regularly whereas 05, 09 and 15 participants were exercising occasionally.

The type of Vyāyāma done by these people included walking, Prāṇāyāma, Yogāsana, etc. But Abhyanga (self oil massage) before Vyāyāma was not practiced. Quantity of

Vyāyāma was Ardhaśakti (half of the strength) in all individuals, but was following same type of Vyāyāma irrespective of R̥utu (season).

5. Additional Observations found in this study which are Vidhiviparita :

In this observational study thorough case taking was done. Some findings were noted which are as follows-

1. Related to sleep - Drinking tea before sleep was noted in some participants.
2. Related to diet -
 - a. Some individuals had the habit of eating too fast or too slow. Watching television, chitchatting during consuming meal was also observed in some individuals.
 - b. Though there was no hunger sensation, people took lunch as a habit of eating at their lunch time.
3. Related to drinking water-many of the participants had the habit of drinking water just after waking up in the morning without the urge of thirst. It is desirable to drink warm or cold water according to the season but it was not followed by any of the participants.
4. Some reasons of Divāsvāpa and Rātrijagaraṇa are interdependent. These are as follows-
 - a. Some participants have infants (babies), or have to nurse the elderly or ill family member so they sleep at late night.
 - b. In some houses dinning together is practiced, so there was waiting for all members to gather and thus there was waiting in late hours for going to sleep.
 - c. Occupational reasons like shift duty also played an important role.

These habits are Vidhiviparita. Participants in these category are found to be less in number. Hence their significance cannot be stated as a risk factor for GIT diseases and GIT Cancers.

b) Discussion of Group A (GIT Cancer)-

1. GIT Cancer (Group A) - Out of 100 Cancer participants, 16 suffered from Esophageal Cancer, 12 from Stomach Cancer, 11 from Liver Cancer, 07 from Gall bladder Cancer, 07 from Pancreatic Cancer, 28 from Colon Cancer.

2. Age - 76 out of 100 were found in between the age Group 50 to 70 years. According to modern science also prevalence of GIT Cancer is more in elderly persons (after 50).
3. Gender-Male are found in more number than female. According to modern research also prevalence of GIT Cancer in Male is more than female.

Observations regarding age and gender in this study is found to be similar with the modern medical research.

4. Type of Cancer and Kāyika Vihāra Vaiṣamya -

a) Esophageal Cancer - In this group, 16 participants had Esophageal Cancer. Kāyika Vihāra Vaiṣamya was analyzed in these participants. Kṣudhāvegdhāraṇa was observed as leading Kāyika Vihāra Vaiṣamya followed by Avyāyāma, Divāsvāpa, Purīṣa Vegadhāraṇā and Mūtravegdhāraṇa in Esophageal Cancer.

It is known that Vegadhāraṇa causes Prānavāyu and Apānavāyu Duṣṭi. Sancara Sthāna of Prānavāyu (site of migration) is Kanṭha (neck/throat) and its function is Annapraveśa (deglutition). In Esophageal Cancer the most common symptom is dysphagia which can be related to Prānaduṣṭi.

Kṣudhāvegdhāraṇa is the Hetu for Śoṭha, Gulma and Visarpa. Duṣṭa Avasthā of these diseases is correlated to Cancer. Altogether Kṣudhāvegdhāraṇa causes vitiation of Vāta and imbalance of Agni.

From above references it can be said that Kṣudhāvegdhāraṇa is the risk factor for Esophageal Cancer.

Avyāyāma and Divāsvāpa increases Kapha Doṣa and causes Mandāgni. Mandāgni causes Āmanirmiti leading to Ajīrna (indigestion) which is one of the symptoms of Esophageal Cancer.

According to Āyurveda Vyādhī is manifested due to Doṣaduṣṭi. Therefore Lakṣṇās (signs and symptoms) of Vyādhī will resemble with specific Doṣaduṣṭi. According to Āyurveda it can be stated that the Lakṣṇās of Esophageal Cancer quoted above are expressed due to Doṣaduṣṭi.

- b) Stomach Cancer** : out of 100 participants of Group A, 12 were of stomach Cancer. Kṣudhāvegdhāraṇa, Divāsvāpa, Rātrijāgaraṇa, Avyāyāma, are the Kāyika Vihāra seen chronologically in Stomach Cancer patients.

Āmāśaya (stomach) is the Mulasthāna of Annavaha Srotasa. Kledaka Kapha located in Āmāśaya helps in digestion. Akāla Bhojana and Agniduṣṭī are unanimously described as the Hetu of Annavaha Srotasaduṣṭī. Here Akāla Bhojana means before or after the right time of meal. Kṣudhāvegdhāraṇa is Akāla Bhojana as food is not taken at proper time.

Vegadhāraṇa, Rātrijāgaraṇa causes Vātaprakopa and Pittaparakopa. Divāsvāpa and Avyāyāma causes Kaphaparakopa. All these Hetu vitiate Agni leading to improper digestion.

Indigestion, heartburn, loss of appetite, weakness are symptoms found in stomach Cancer which is a consequence of above Doṣaduṣṭī.

Gulma Vyādhī is correlated to Cancer. One of the Sthāna of Gulma is Nābhī. According to Āyurveda Āmāśaya is that organ which is located between Nābhī and Stana. Kṣudhāvegadhāraṇa (nirannata), Vegadhāraṇa (Mūtra, Purīṣa), Divāsvāpa are the Vihāraja Hetu mentioned in Gulma which are also observed dominantly in stomach Cancer.

Hence it can be said that Kṣudhāvegdhāraṇa is an evident risk factor for stomach Cancer.

- c) Liver Cancer** : 11 diagnosed participants of Group A were having Liver Cancer. Divāsvāpa, Avyāyāma, Rātrijāgaraṇa, Mūtravegadhāraṇa, Kṣudhāvegadhāraṇa, Purīṣavegadhāraṇa, Truṣṇāvegadhāraṇa are observed to be the Kāyika Vihāra Vaiṣamya in these participants.

Yakṛuta is the Mulasthāna of Raktavaha Srotasa. Its utpatti (embriologically) is from Śoṇita (Su.Sha.4/25). It is the Stāna of Pitta. In Caraka Samhītā it is clearly stated that Raktaduṣṭī is caused due to Bhuktottara Divāsvāpa (day sleep immediately after taking meal). Divāsvāpa is the dominant factor contributing to Liver Cancer. This

Bhuktottara Divāsvāpa increases Kapha and Pitta Doṣa. Loss of appetite, nausea, vomiting are the symptoms of Liver Cancer. These are the symptoms attributed by Kapha and Pitta Doṣaduṣṭī.

Visarpa, Gulma, Vidradhi are Raktapradoṣaja Vyādhī which are correlated to Cancer. Divāsvāpa, Avyāyāma, Rātrijāgaraṇa, Mūtravegadhāraṇa, Kṣudhāvegadhāraṇa, Purīṣavegadhāraṇa, Truṣṇāvegadhāraṇa are the Hetu mentioned in these diseases. All these Hetus are found in Liver Cancer in more or less amount. These observations invariably matches to the Āyurvedic concept.

d) Gall Bladder and Pancreatic Cancer :

In the study, 07 participants each had Gallbladder and Pancreatic Cancer. Kāyika Vihāra Vaiṣmya in them is as follows-

Kṣudhāvegadhāraṇa – in 06 and 04 patients; Divāsvāpa in 05 and 04; Avyāyāma in 05 and 03; Truṣṇāvegadhāraṇa in 04 and 0; patients of Gall bladder and Pancreas Cancers respectively.

Also Mūtravegadhāraṇawas observed in 03 and 04, Rātrijāgaraṇa in 03and 03 and Purīṣavegadhāraṇa in 03 and 03 patients respectively.

It is clear that though there are only 07 participants each who were suffering from Gall bladder and Pancreatic Cancers but numerical data of their Kāyika Vihāra Vaiṣmya is significant. To prove this significance statistically, separate study with greater sample size is required. For this study all these factors can be considered as risk factors.

e) Colon Cancer : Highest number of participants from this Group were suffering from Colon Cancer (Total 28 participants).

Colon (Pakvāśaya) is the mulastāna of Purīṣavaha Srotasa. It is also the prime location of Vāta. Kāyika Vihāra Vaiṣmya like Divāsvāpa, Avyāyāma, Kṣudhāvegadhāraṇa are seen commonly in these patients followed by Rātrijāgaraṇa, Truṣṇāvegadhāraṇa, Mūtravegadhāraṇa and Purīṣavegadhāraṇa.

Vegasandhāraṇa and Durbalāgnī are the two Hetus responsible for Purīṣavaha Srotasaduṣṭī. Divāsvāpa is responsible for Mansavaha Srotoduṣṭī and Kapha and Pittaprapaka. Avyāyāma is the Hetu for Kaphaprapaka.

Śoṭha is also considered as root cause of Cancer. All these Hetus are also mentioned in Śoṭha in Āyurvedic texts.

- f) **Rectum Cancer** : Out of 100 participants of Group A, 19 were of Rectal Cancer. In these participants Avyāyāma, Kṣudhāvegadhāraṇa, Divāsvāpa were noticed as notable Kāyika Vihāra Viṣamya followed by Rātrijāgarāṇa, Mūtravegadhāraṇa and Truṣṇāvegadhāraṇa.

Doṣaduṣṭī in rectal Cancer will be similar to Colon Cancer as both of them are the organs incorporated in Purīṣavaha Srotasa.

According to modern medical science physical inactivity (Avyāyāma) is the risk factor for Colorectal Cancer. Above observations support this finding.

The essence of this discussion is at least one of the Kāyika Vihāra Viṣamya was observed in all types of GIT Cancers. Also the combination of two or three Kāyika Vihāra Viṣamya were seen in individual types of Cancer.

As these Vihāra Viṣamya vitiate Doṣas and Agni they are considered as risk factors for GIT Cancers.

In Āyurveda it is stated that single Hetu can cause many diseases and multiple Hetus can lead to a single disease. Thus Āhāraja Hetu, Addictions, Mānasa Hetu and other Anukta Hetu may also be responsible for manifestation of GITCancers.

Vidhiviparīta Āhāra and Vihāra lead to Doṣaprakopa. In this observational study, association between Kāyika Vihāra Viṣamya and GIT Cancer was found. According to Sambhava Tantrayukti it can be stated that these Kāyika Vihāra are responsible for Doṣa Prakopa. As Cancer being manifested due to Doṣaprakopa it is considered to be a Nija Vyādhi.

Positive association of above mentioned Kāyika Vihāra Viṣamya with GITCancers and knowledge of association of Kāyika Vihāra Viṣamya and Doṣaprakopa will be helpful for Hetuviparīta Cikitsā and Nidānparīvarjana.

5. History of past illness in Group A (GIT Cancer) :

The knowledge of previous diseases is very important for understanding the diagnosis and deciding treatment. Agnimāndya, Ajīrṇa, Amlapitta, Arśa, Kāmala and Grahaṇī were reported in remarkable number of patients as Purvavyādhi in any one of the GIT Cancer.

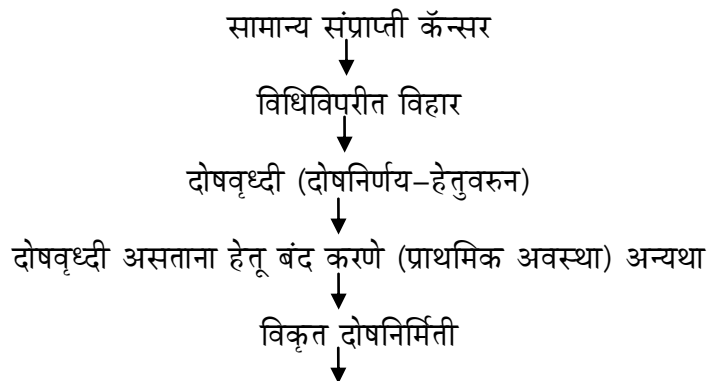
Among these Vyādhis, Amlapitta and Arśa are reported mainly in Colorectal Cancer. History of Kāmala is seen in majority of patients of Colon, Gall bladder and Liver Cancer as previous diseases.

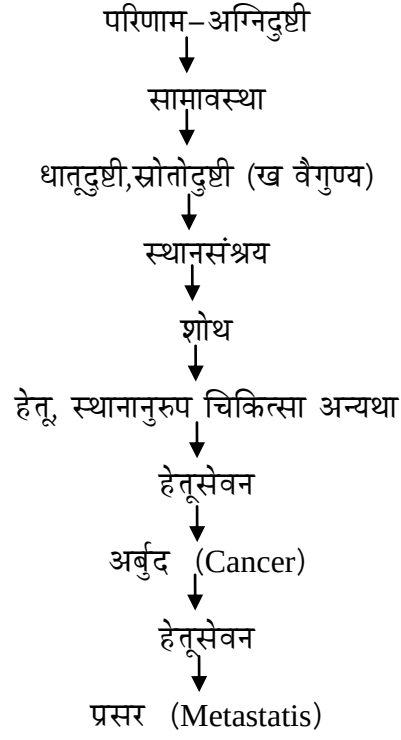
In Āyurveda there is a concept of Nidānārthakara Vyādhi which means disease itself becomes the cause for other disease. In modern medical science also the proneness of certain Cancer is dependent on previous diseases e.g. it is also stated history of haemorrhoids is very common in patients of Rectal Cancer. Present study supports the similarity of the concepts in both medical science

In nutshell Apunarbhava Cikitsā, strengthening of the affected organ or Srotas and Nidānaparivarjana are important to prevent recurrence of GIT Cancers. Hence it is very essential for everyone to follow the proper Vidhi of all Vihārās in order to avoid GIT Cancers.

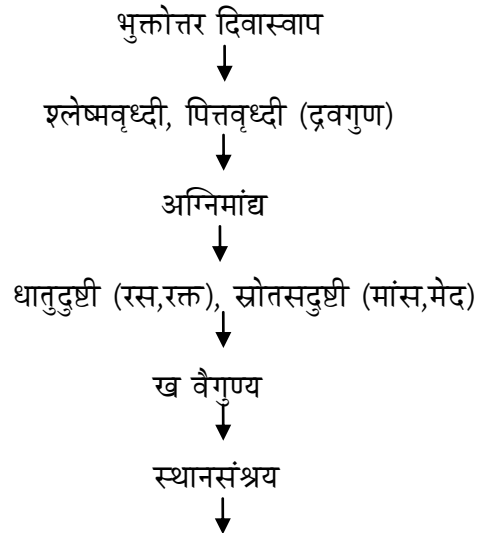
According to Ayurveda there are various disease entities which resembles with Cancer. But for the purpose of the malignant nature of the disease the description of Granthi and Arbuda come nearest to Cancer than any other disease. Also Granthi and Arbuda are described under the topic Shotha in Trishithiya Adhyaya by Caraka.

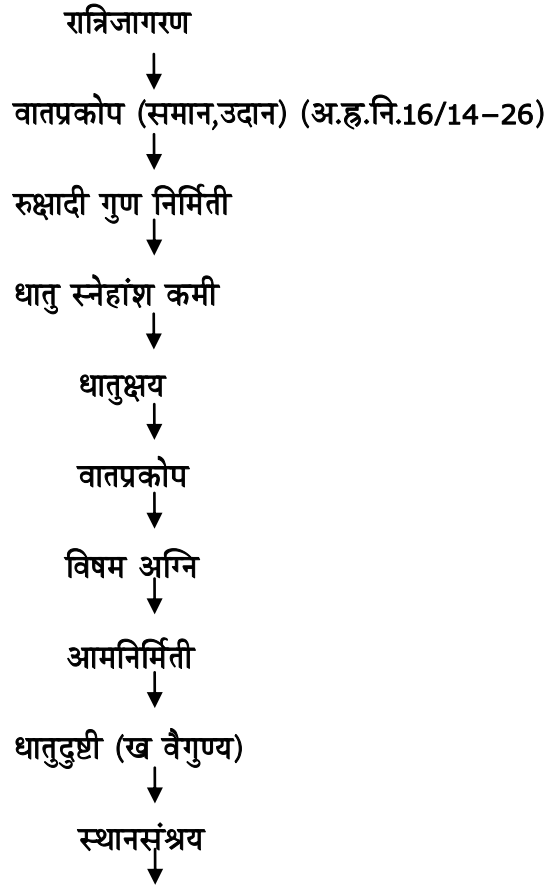
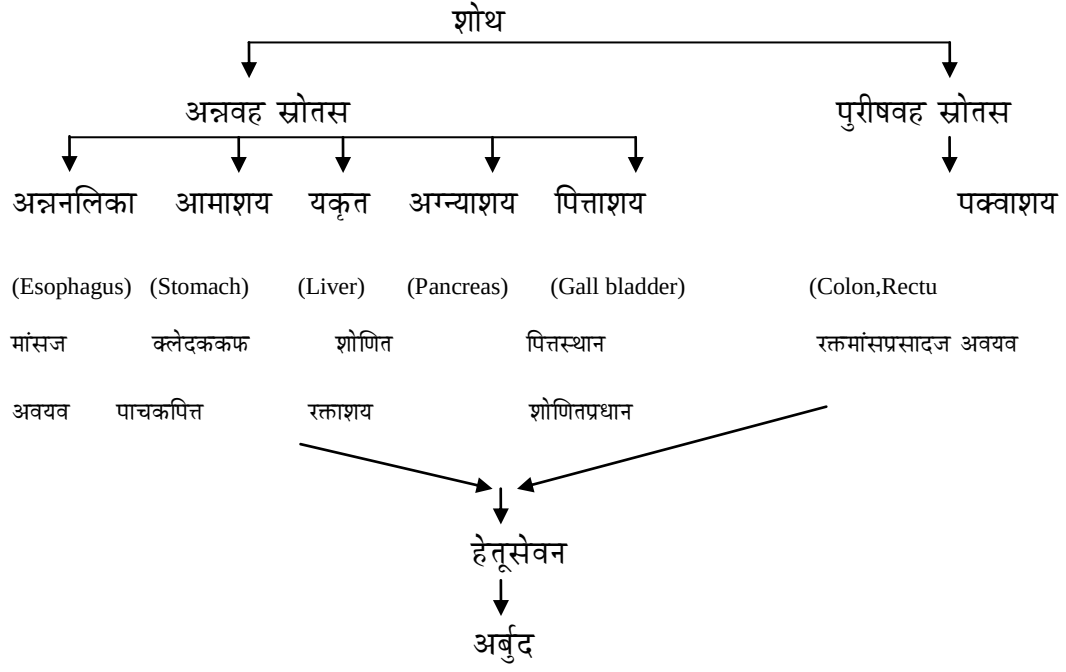
Samprāpti of GIT Cancer

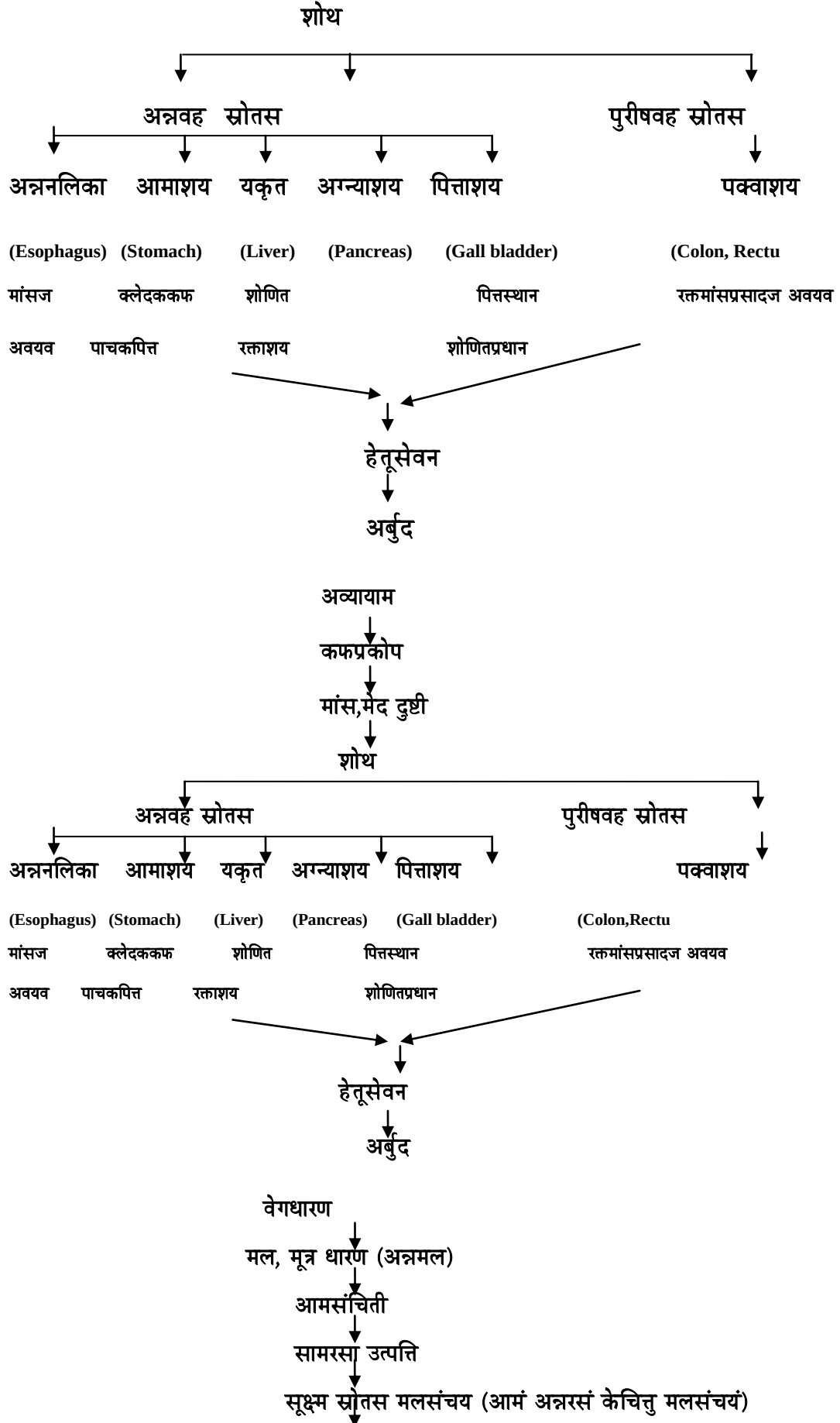


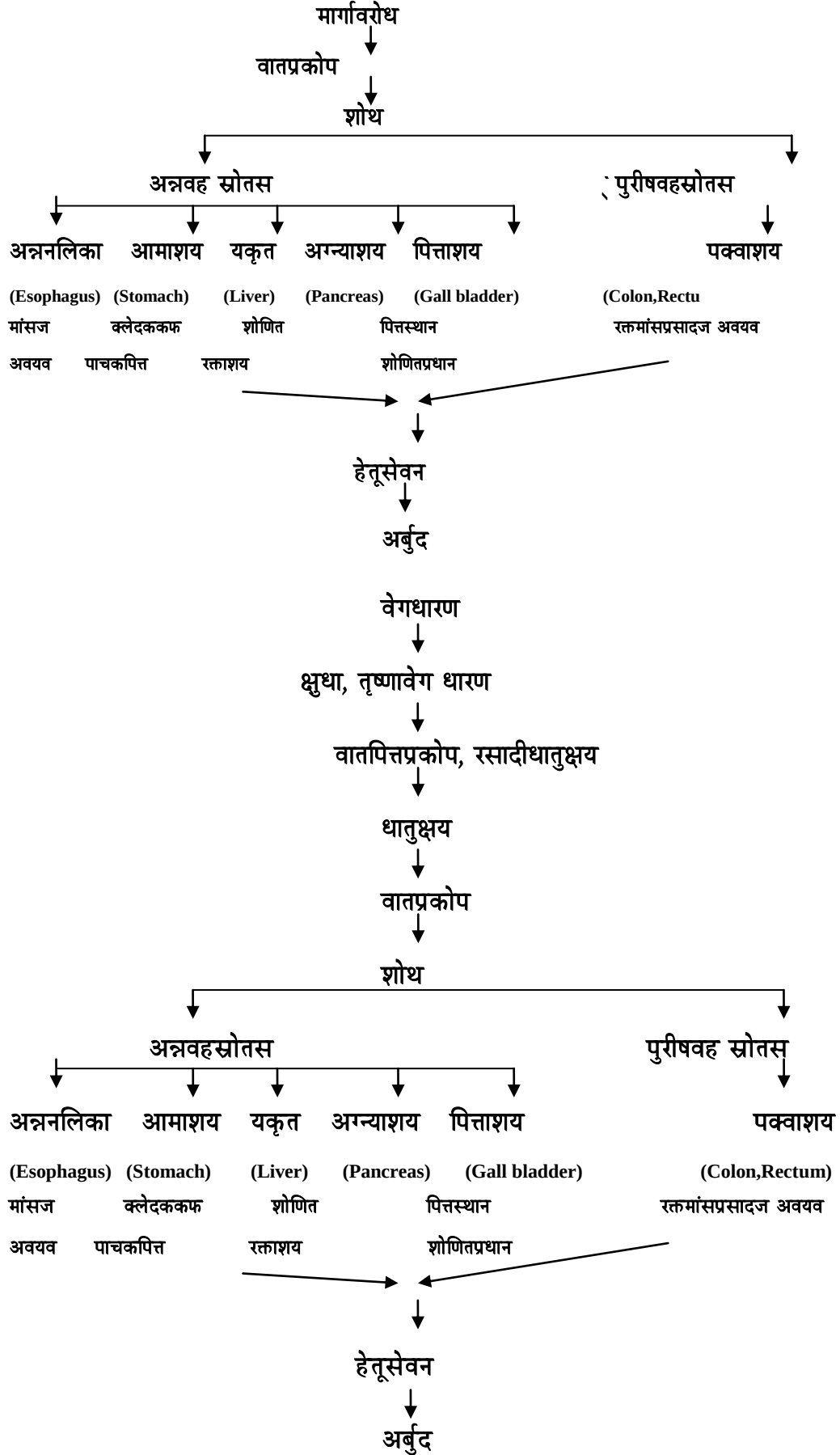


This will change according to दोषबल, दोषतरतमत्व, अंशांशकल्पना in each patient.





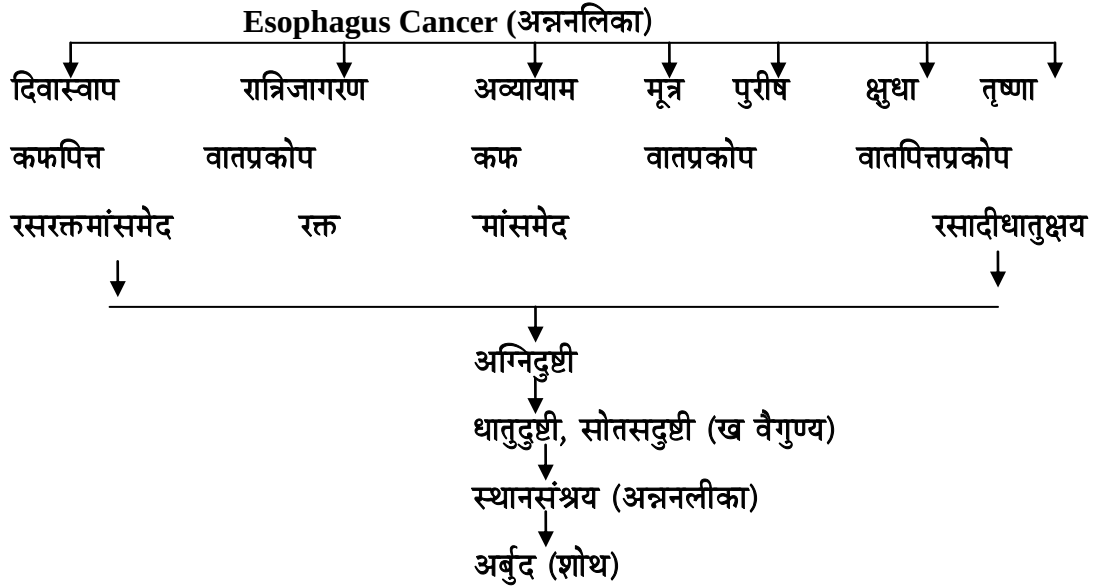




Vihāra which are found in one, two or more in combination :

Esophagus Cancer :

1. Divāsvāpa + Ratrijāgaraṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Ratrijāgaraṇa + Kṣudhā Vegdhāraṇa
3. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Trūṣṇāvegadhāraṇa, Avyāyāma.



अन्ननलीका-मांसज अवयव, प्राणवायु कार्यक्षेत्र

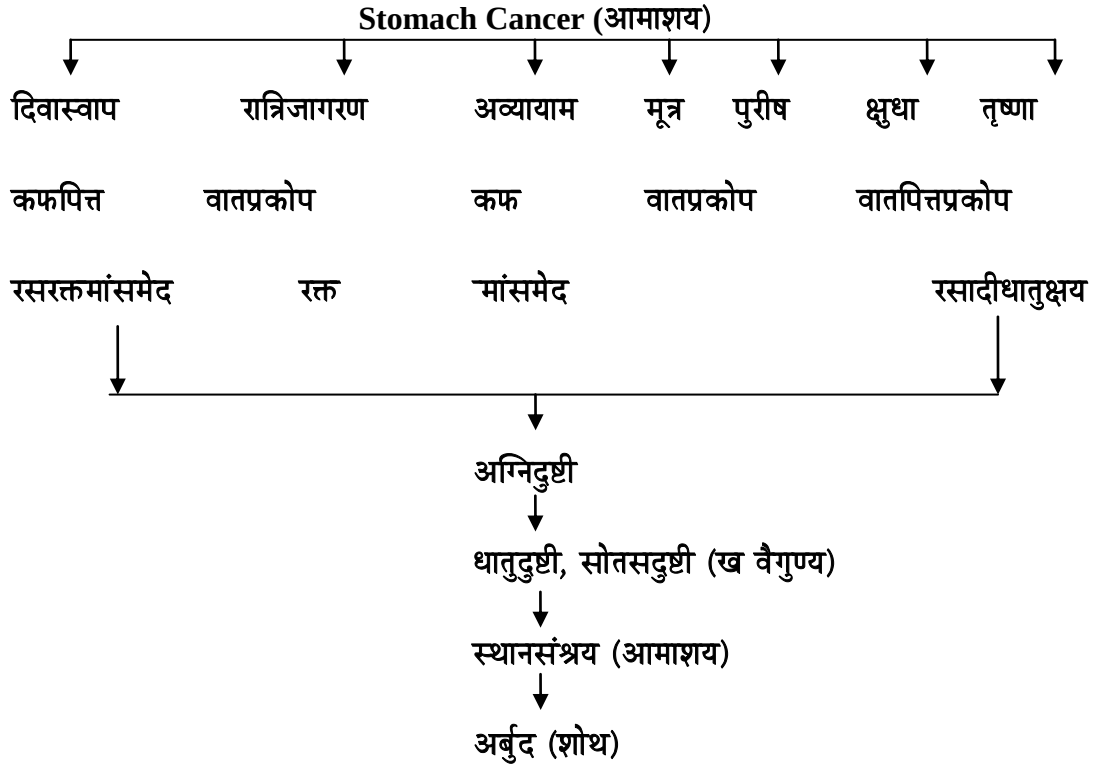
Signs and Symptoms of Esophagus Cancer- (According to American Cancer Society)

- Dysphagia- Prānavayu Dushti
- Weight loss- Dhatukshaya
- Cough- Kaphaprakopa
- Vomitting- Vāta Pittaprakopa
- Bone Pain- Asthi and Vāta Āshrayāshryī Sambandha
- Bleeding into esophagus-Pitta and Rakta Dushti

Vihāra which are found in one, two or more in combination :

Stomach Cancer :

1. Divāsvāpa + Ratrijāgaraṇa, Kṣudhā Vegdhāraṇa
2. Ratrijāgaraṇa + Purīṣavegadhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
3. Purīṣavegadhāraṇa + Kṣudhā Vegdhāraṇa, Trūṣṇāvegadhāraṇa
4. Kṣudhā Vegdhāraṇa, + Trūṣṇāvegadhāraṇa, Avyāyāma.



आमाशय– क्लेदक कफ. पाचक पित्त

मधुर अवस्थापाक

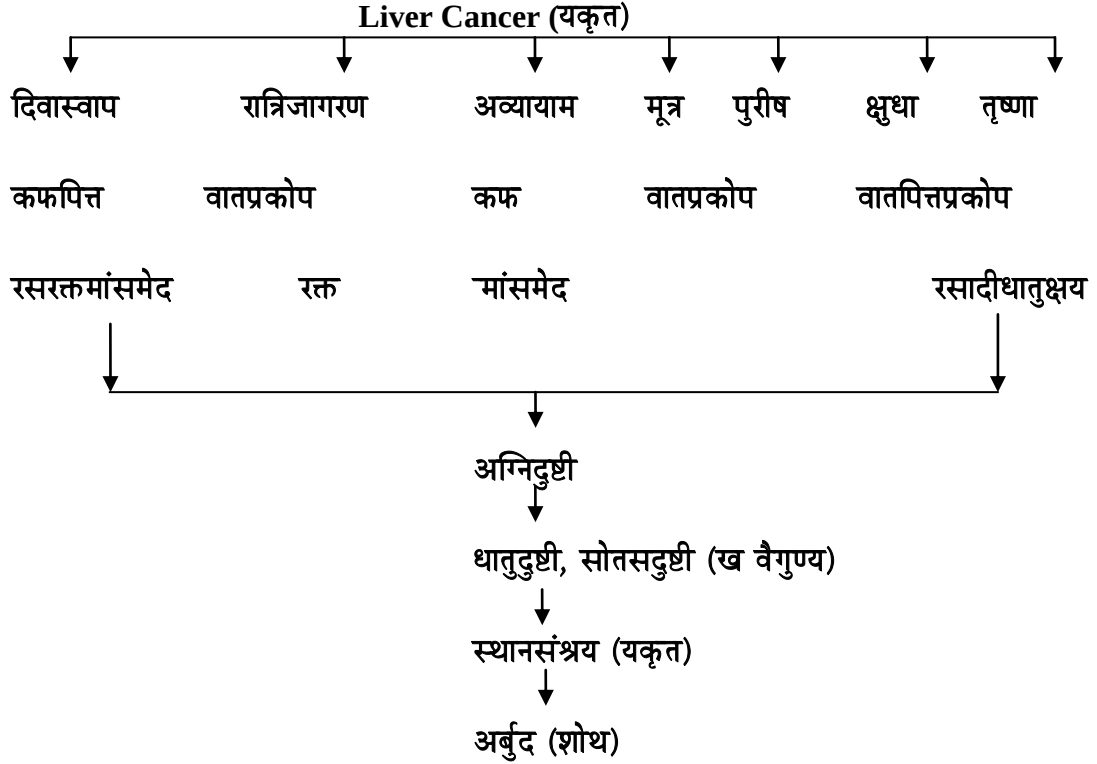
Signs and Symptoms Stomach Cancer (According to American Cancer Society)

- Poor Appetite-Agnidushti
- Weight loss- Dhatukshaya
- Abdominal pain-Vātaprakopa
- Indigestion- Due to Agnidushti-Ama Nirmiti
- Vomitting- Kapha,Pitta Prakopa
- Feeling tired- Amajanya, Lakshana

Vihāra which are found in one, two or more in combination :

Liver Cancer :

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Purīṣavegadhāraṇa + Mūtravegdhāraṇa.



यकृत-शोणित प्रधान अवयव, रक्ताशय

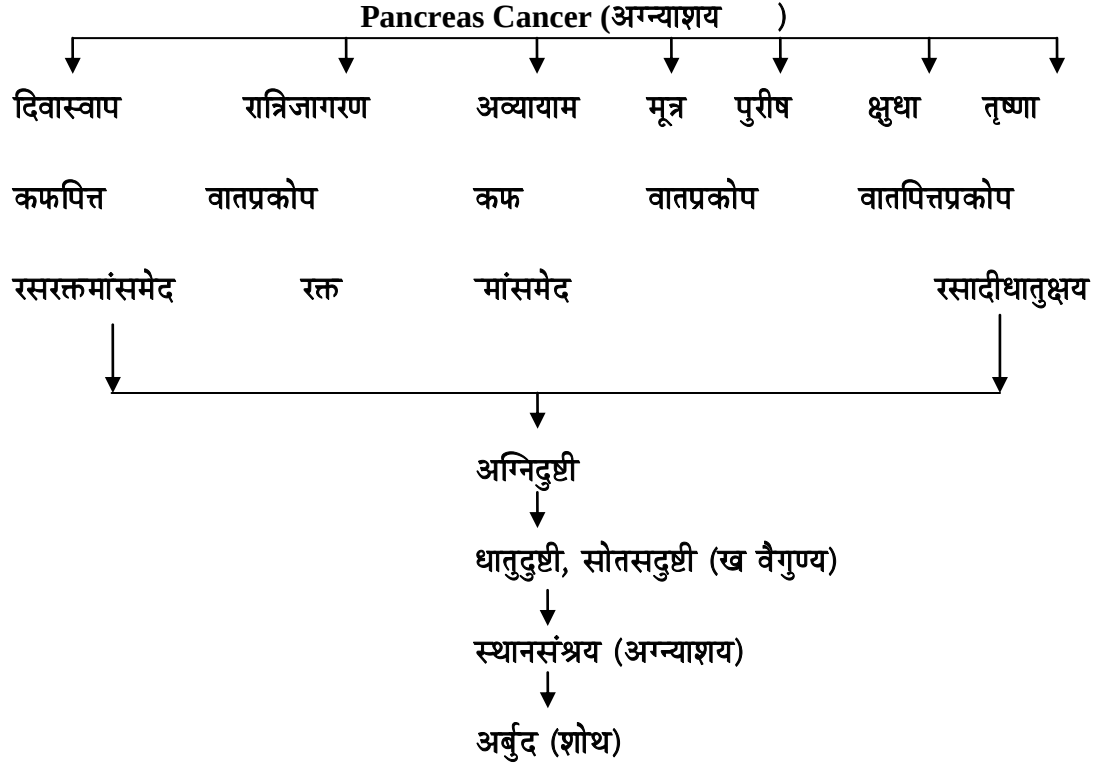
Signs and Symptoms Liver Cancer (According to American Cancer Society)

- Weight loss- Dhatukshaya
- Loss of appetite- Pitta and Rakta dushti
- Vomitting- Pittadushti
- Enlarged Liver, Spleen- Raktapradhan Avayava, Vataprakopa
- Itching- Pitta and Kaphadushti

Vihāra which are found in one, two or more in combination :

Pancreas Cancer :

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Avyāyāma.



अग्न्याशय-पित्तस्थान

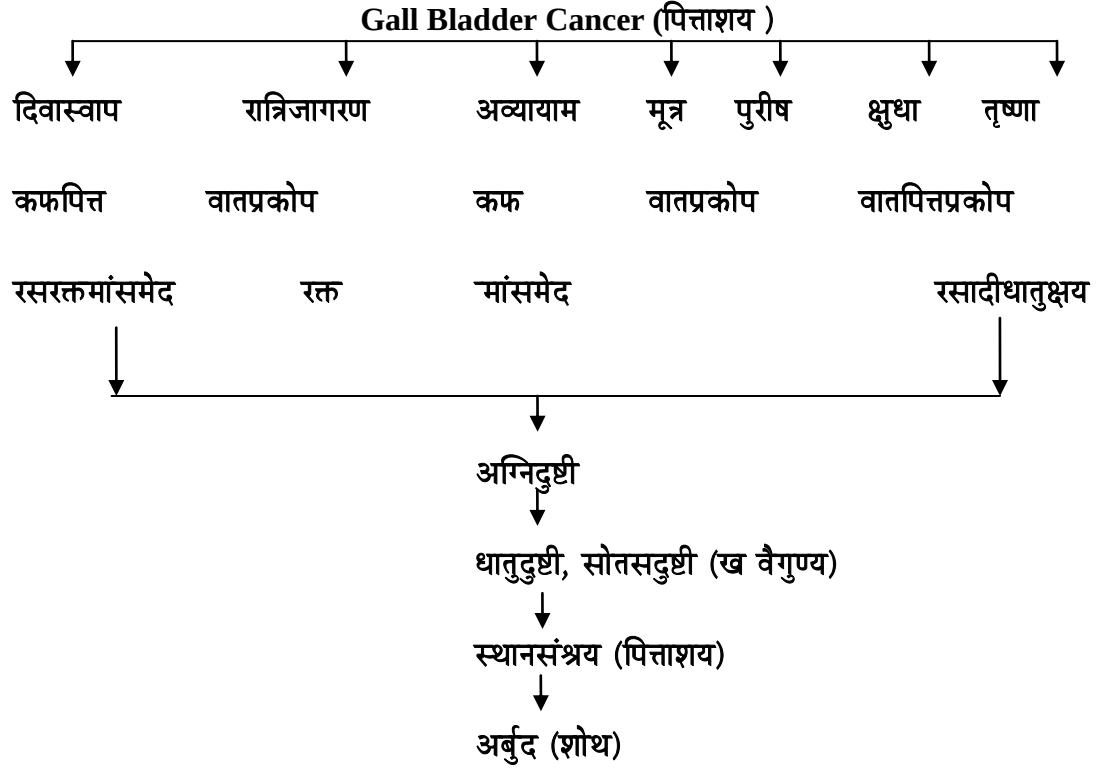
Signs and Symptoms Pancreas Cancer (According to American Cancer Society)

- Weight loss- Dhatukshaya
- Backpain- Vātaprakopa
- Loss of appetite- Pitta and Rakta dushti
- Vomitting- Pittadushti
- Enlarged Liver, Spleen- Raktapradhan Avayava, Vataprakopa

Vihāra which are found in one, two or more in combination :

Gall Bladder Cancer :

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Trūṣṇāvegadhāraṇa.



पित्ताशय-पित्तस्थान

Signs and Symptoms Gall Bladder Cancer (According to American Cancer Society)

- Abdominal Pain- Vātaprakopa
- Fever- Pitta and Agnidushti
- Weight loss- Dhatukshaya
- Loss of appetite- Pitta and Rakta dushti
- Vomitting- Pittadushti

Vihāra which are found in one, two or more in combination :

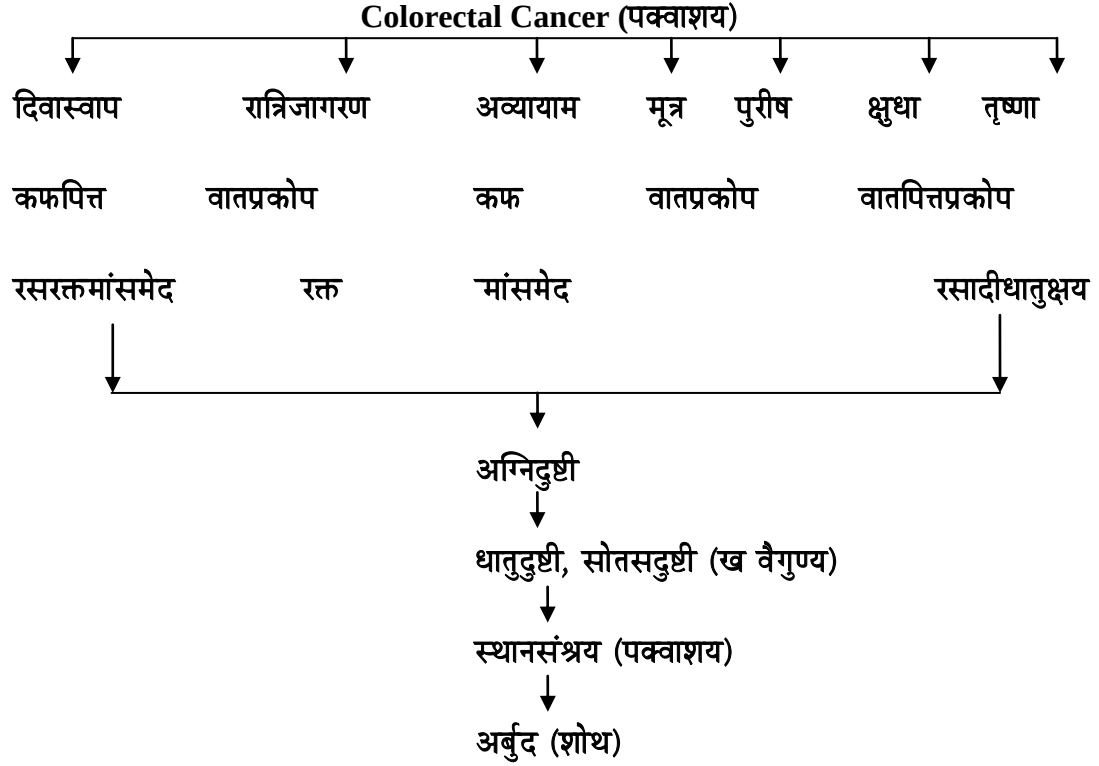
Colon Cancer :

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Truṣṇāvegadhāraṇa.
2. Ratrijāgarāṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Truṣṇāvegadhāraṇa, Avyāyāma.
3. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Avyāyāma.
4. Kṣudhā Vegdhāraṇa + Truṣṇāvegadhāraṇa, Avyāyāma.

Rectum Cancer :

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Truṣṇāvegadhāraṇa, Avyāyāma.

2. Ratrijāgaraṇa + Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Avyāyāma.
3. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa, Avyāyāma.
4. Kṣudhā Vegdhāraṇa + Trūṣṇāvegadhāraṇa, Avyāyāma.



पक्वाशय– वातस्थान

कटु अवस्थापाक

रक्तमांसप्रसादज अवयव

Signs and Symptoms of Colorectal Cancer (According to American Cancer Society)

- Abdominal Pain- Vātaprakopa
- Diarrhoea- Agnidushti
- Constipation- Vātaprakopa
- Weight loss- Dhatukshaya
- Weakness- Dhatukshaya
- Loss of appetite- Pitta and Rakta dushti

c) Discussion of Group B (GIT diseases according to Āyurveda)

1. Out of 100 patients of GIT diseases diagnosed from Āyurvedīc perspective, 3 were suffering from Ajīrṇa, 67 from Amlapitta, 24 from Arśa, 5 from Grahanī and 1 from Pravahikā .
2. Age - In Group B 74% of the participants were observed in between the age Group 30 to 50 years.

These age group participants were involved in stressful occupation. Due to the occupational stress or time restrictions Kāyika Vihāra Vaiṣamya in the form of Kṣudhāvegadhāraṇa, Truṣṇāvegadhāraṇa, Rātrijāgaraṇa were seen prominently. According to Āyurveda these Vihārās are responsible for Annavaha Srotoduṣṭī.

3. Gender- In Group B number of Females was more than Male.
4. Kāyika Vihāra Vaiṣamya and GIT Diseases from Ayurvedic perspective-
 - a) **Ajīrṇa**-In this observational study only 3 participants of Group B were suffering from Ajīrṇa. In all the cases Divāsvāpa was commonly observed Kāyika Vihāra Vaiṣamya. Kāyika Vihāra Vaiṣamyanamely Avyāyāma, Mūtra Vegadhāraṇa, and Purīṣa Vegadhāraṇa are seen occasionally. Rātrijāgaraṇa, Kṣudhā Vegadhāraṇa and Truṣṇā Vegadhāraṇa were not reported by any one of them. Divāsvāpa took in excess amount (including Kāla, Vāranvāratā and Mātra)causes Kapha Prakopa leading to Āmājīrṇa.

As recommended in Āyurveda, Divāsvāpa taken before meal is beneficial to patients of Ajīrṇa. All the three patients of Ajīrṇa were taking Vidhiviparīta Divāsvāpa. Hence here Divāsvāpa is not the treatment of Ajīrṇa but it acts as Hetu in these cases.

- b) **Amlapitta**-Amlapitta was the prominent GIT disease from Āyurvedīc perspective observed in this study. Out of 100 participants 67 participants were suffering from Amlapitta Vyādhī. Number of patients of Amlapitta habitual for Kāyika Vihāra Vaiṣamya viz Avyāyāma, Divāsvāpa and Rātrijāgaraṇa were at higher percentage i.e ranging from 46, 45 and 40 respectively. Next to these three Kāyika Vihāra Vaiṣamya Kṣudhā Vegadhāraṇa, Mūtra Vegadhāraṇa and Purīṣa Vegadhāraṇa were also noted. Truṣṇā Vegadhāraṇa was also reported in few participants.

Bhuktottara Divāsvāpa and Vegadhāraṇa are the causes of Amlapitta mentioned in Kāśyapa Samhītā. In the present study similar observation was noted. As per Kāśyapa Samhītā, among these two Kāyika Vihāra Vaiṣamya Vegadhāraṇa was prominent for Amlapitta.

Avyāyāma and Divāsvāpa are the factors which vitiate Kapha Doṣa further leading to Agnimāndya while Rātrijāgaraṇa and Vegadhāraṇa cause the Prakopa of Vāta. Additionally Rātrijāgaraṇa cause Tridoṣa Prakopa. All these Hetus lead to Agnimāndya, which is the key factor in the pathogenesis of Amlapitta.

- c) **Arśa** : Arśais the second most common disease observed in this study. Total 24 participants were suffering from Arśa Vyādhī. All most equal number of patients of Arśa in this study had Kāyika Vihāra Vaiṣamya namely Divāsvāpa, Kṣudhā Vegadhāraṇa, Rātrijāgaraṇa and Avyāyāma. However Mūtra Vegadhāraṇa, Purīṣa Vegadhāraṇa and Tṛuṣṇā Vegadhāraṇa were observed in negligible number of patients in Arśa.

Divāsvāpa is the Duṣṭī Hetu of Mansavaha Srotasa. Arśa is the Vyādhī of Mansavaha and Purīṣavaha Srotasa. Arśa is located in the anal canal which is a Mansaja Avayava.

All these Kāyika Vihāra Vaiṣamya affect Agni. Agnimāndya plays an important role in manifestation of Arśa.

- d) **Grahanī and Pravahikā** : Divāsvāpa was noted as the prominent Kāyika Vihāra Vaiṣamya in these diseases.

In Ajīrṇa, Grahanī and Pravāhikā number of cases are less hence this can be considered for further scope of study.

To sum up Divāsvāpa, Avyāyāma, Kṣudhā Vegadhāraṇa, Mūtra Puriṣa Vegadhāraṇa and Rātrijāgaraṇa are the leading causes in GIT diseases from Ayurvedic perspective.

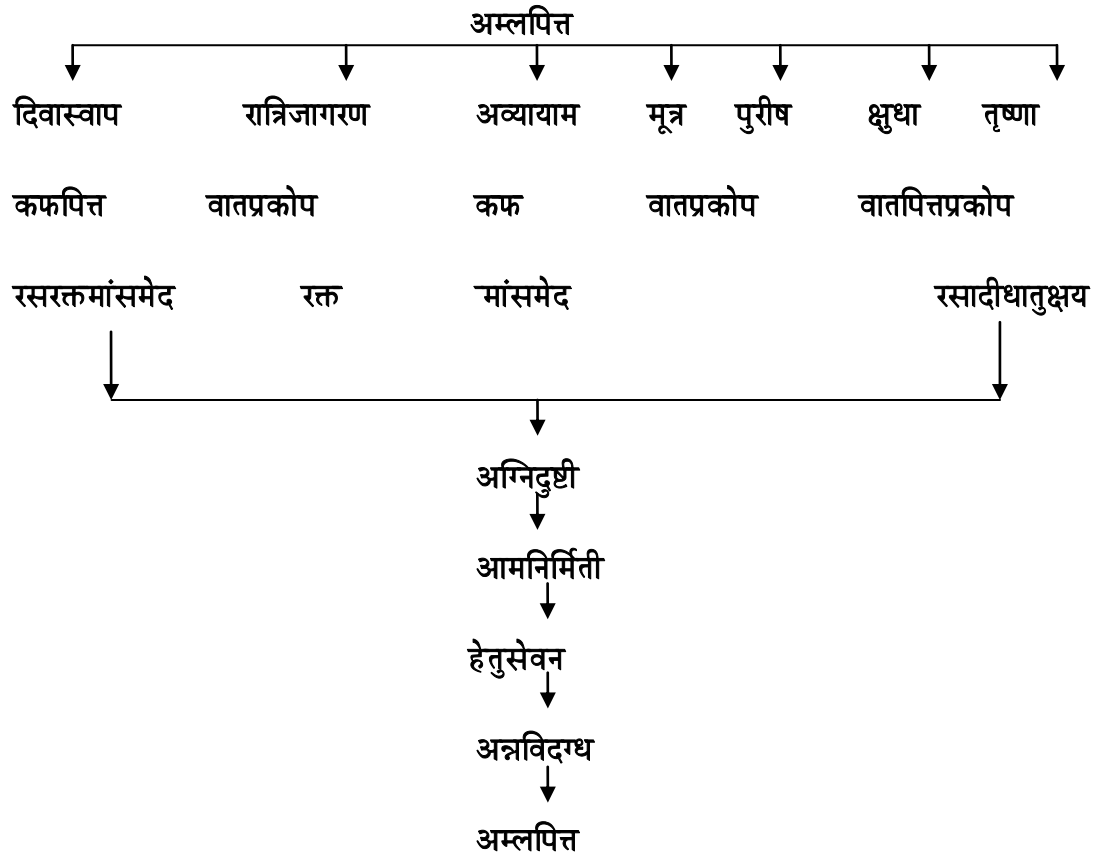
All these Kāyika Vihāra affects the Doṣa and Agni. Doṣaduṣṭī and Agniduṣṭī play important role in manifestation of these diseases.

Samprapti :

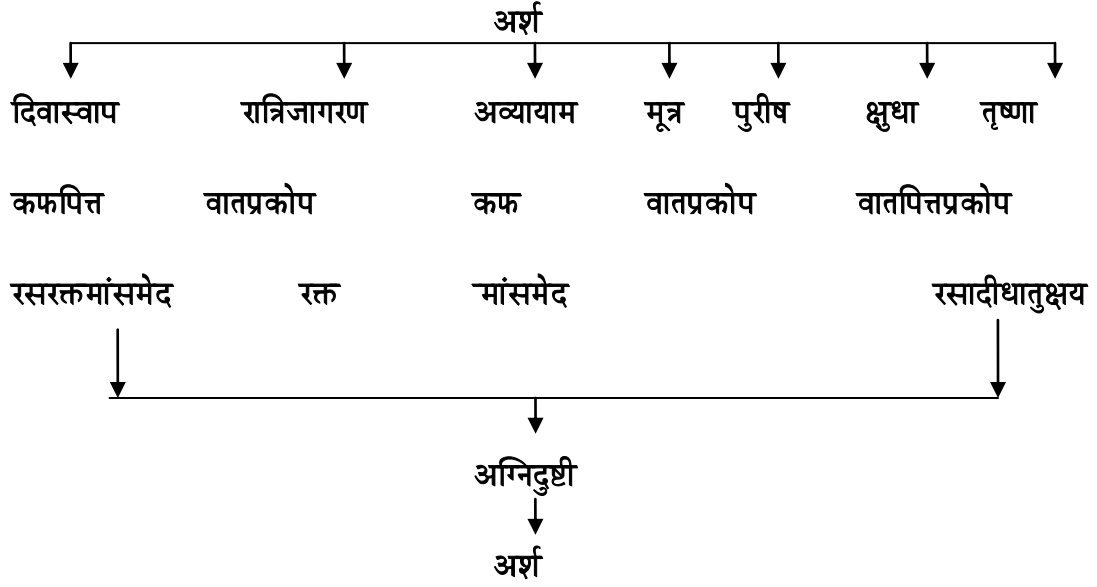
Vihāra which are found in one, two or more in combination :

Amlapitta :

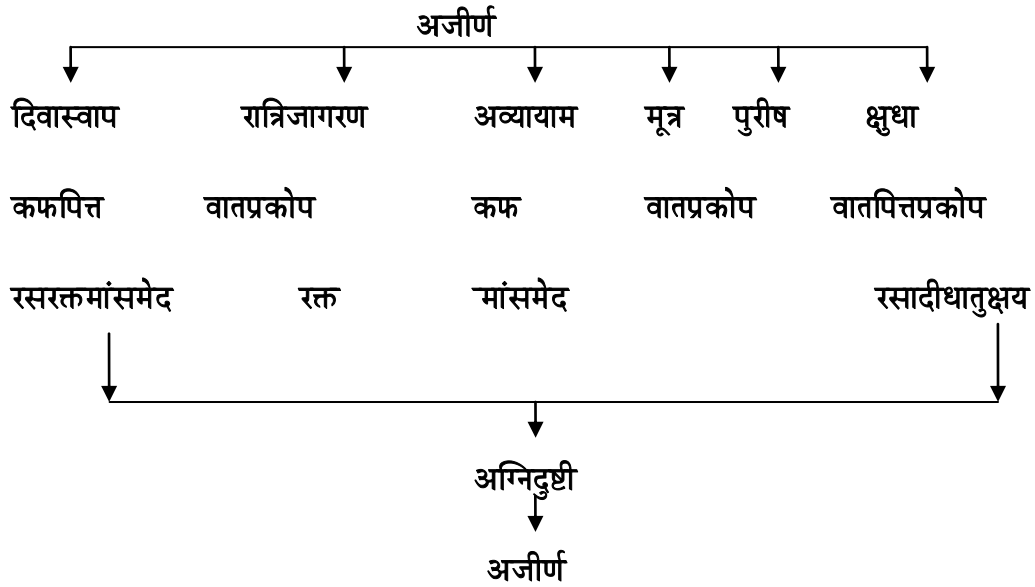
1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Ratrijāgarāṇa + Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Avyāyāma.
3. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Avyāyāma.
4. Kṣudhā Vegdhāraṇa + Avyāyāma.

**Arśa-**

1. Divāsvāpa + Ratrijāgarāṇa, Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Trūṣṇāvegadhāraṇa, Avyāyāma.
2. Ratrijāgarāṇa + Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa Avyāyāma.
3. Kṣudhā Vegdhāraṇa + Avyāyāma.

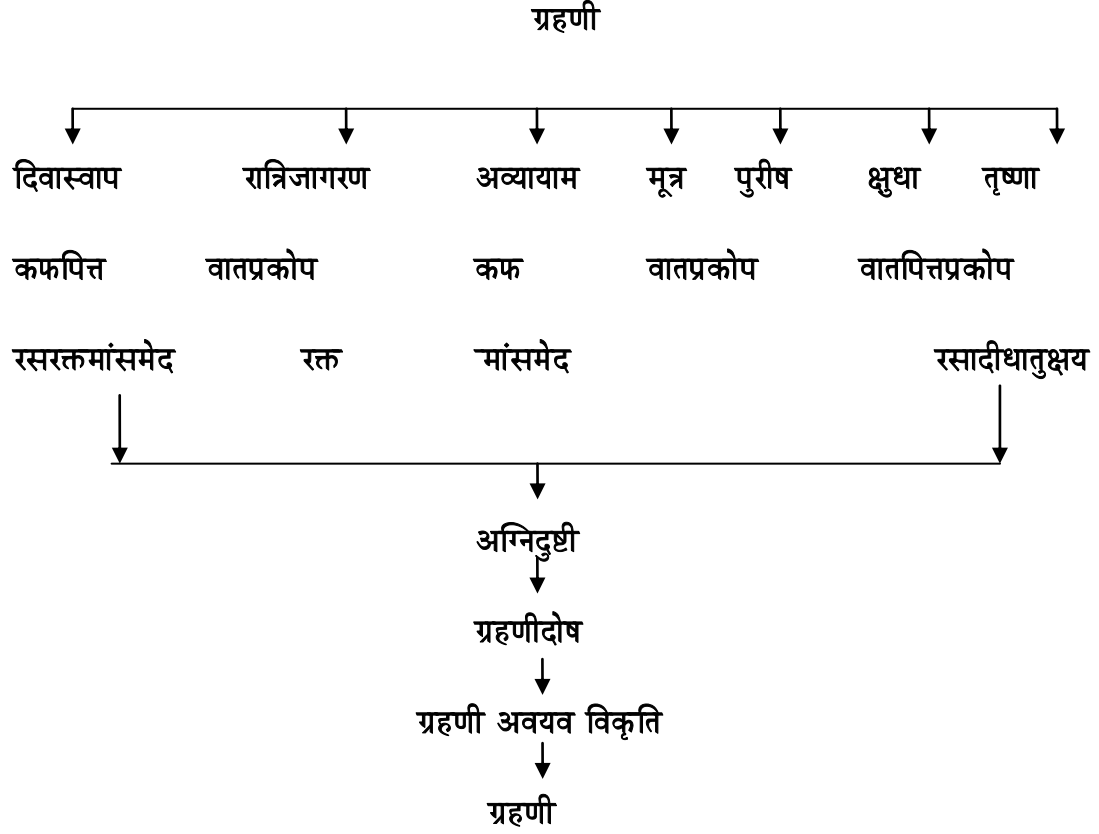
**Ajīrṇa :**

1. Divāsvāpa + Purīṣavegadhāraṇa, Mūtravegdhāraṇa, Avyāyāma.
2. Purīṣavegadhāraṇa + Mūtravegdhāraṇa, Kṣudhā Vegdhāraṇa ,Avyāyāma.



Grahanī :

1. Divāsvāpa + Ratrijāgaraṇa, Purīṣavegadhāraṇa, Mūtravegadhāraṇa, Kṣudhā Vegdhāraṇa Truṣṇāvegadhāraṇa, Avyāyāma.

**d) Discussion of Group C (Healthy individuals) :**

1. Age - In Group C 88% of the participants were observed in between the age Group 30 to 50 years.
2. Gender - InGroup C number of Female was more than Male.
3. Kāyika Vihāra Vaiṣamya in Group C - Out of 100 healthy individuals Kāyika Vihāra Vaiṣamya were remarkabaly observed as follows - Avyāyāma - 55, Divasvāpa - 38, Ratrijagaraṇa - 38, Kṣudhā Vegadhāraṇa - 32, MūtraVegadhāraṇa-22, Purīṣa Vegadhāraṇa - 10 and Truṣṇa Vegadhāraṇa - 09.

Observations about Kāyika Vihāra Vaiṣamya in 100 participants of group C were recorded to compare it with group A and group B patients and there after to ascertain them as risk factors. Thoughremarkable number of patients having habit of Avyāyāma, Divāsvāpa, Rātrijāgaraṇa and Kṣudhāvegadhāraṇa were observed in all

three groups a significant difference in number of patients was not observed in case of Avyāyāma in all groups A, B and C.

In case of Divāsvāpa and Kṣudhāvegadhāraṇa number of patients in group A and B were remarkably more than group C indicating Divāsvāpa and Kṣudhāvegadhāraṇa as dominant risk factor of GIT diseases and GIT Cancers.

Rātrijāgarāṇa and Mūtravegdharana observed in maximum number of patients in group B as compared to group A and C suggesting Rātrijāgarāṇa as remarkable risk factor of GIT diseases from Ayurvedic perspective.

Though Puriṣavegdhāraṇa and Tṛuṣṇāvegadhāraṇa were observed in less number of patients in all three groups difference in number of patients of group A and B with group C is notable i.e. very few individuals in group C. Thus Puriṣavegdhāraṇa can be considered as a risk factor of GIT diseases and GIT Cancers to some extent. Similarly number of patients habitual to Tṛuṣṇāvegadhāraṇa can also be considered as important risk factor of GIT Cancer.

In nutshell :

1. Divāsvāpa, Kṣudhāvegadhāraṇa and Rātrijāgarāṇa were evident risk factors of GIT diseases diagnosed from Āyurvedic perspective and GIT Cancers.
2. Kāyika Vihāra Vaiśamya as a risk factor was found to be significant with respect to Kāla (in years), Vāramvāratā (frequency per week) and Mātra (duration in minutes) in all the three groups.
3. Avyāyāma (physical inactivity) as a Vihāra risk factor is prominent in all the three groups.
4. GIT Cancers are considered as Nija Vyadhī due to the fact that there is a significant association between Doṣaduṣṭī caused by Kāyika Vihāra Vaiśamya and GIT Cancers.
5. Age (after 50 years), gender (male) and comorbidities of GIT system are risk factors for GIT Cancers.
6. The study shows significant association between GIT Cancers and Kāyika Vihāra Vaiśamya especially Kṣudhāvegadhāraṇa, Divāsvāpa and Avyāyāma. Cancer being an Anukta Vyādhi from Āyurvedic perspective, the present study is beneficial to ascertain Kāyika Vihāra as a risk factor for GIT Cancers. Avoiding these risk factors is beneficial to control occurrence of GIT Cancers.

So zeal of the study is proper vidhi of all these Vihāras need to be followed to maintain healthy state.

Chapter-6
CONCLUSION

1. Kāyika Vihāra Vaiṣamya refers to physical activities which are executed in excess, less or in improper manner i.e. Vidhiviparīta
2. Kāyika Vihāra - Divāsvāpa, Avyāyāma, Rātrijāgaraṇa, Kṣudhāvegadhāraṇa, Mūtravegadhāraṇa, Purīṣavegadhāraṇa, and Truṣṇāvegadhāraṇa were found dominant risk factors chronologically in GIT diseases from Āyurvedic perspective.
3. Kāyika Vihāra- Kṣudhāvegadhāraṇa, Divāsvāpa, Avyāyāma, Rātrijāgaraṇa, Mūtravegadhāraṇa, Truṣṇāvegadhāraṇa, and Purīṣavegadhāraṇa, were found chronologically dominant risk factors in GIT Cancers.
4. Alternative Hypothesis is accepted.

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PATIENT CONSENT FORM

Title of the Study: “Fundamental Study of Kayika Vihara Vaishamya and its Observational Study in GIT Diseases”

Name of the Participant:

Documentation of the informed consent:

I, ... have read the information in this form (or it has been read to me). I was free to ask any questions and they have been answered.

1. I have read and understood this consent form and the information provided to me.
2. I have had the consent document explained to me.
3. I have been explained about the nature of the study.
4. My rights and responsibilities have been explained to me by the researcher.
5. I have been explained the researcher of all the treatments I am taking or have taken in the past months including any desi (alternative) treatments.
6. I hereby give permission to the investigators to release the information obtained from me as result of participation in this study ethics committee. I understand that they may inspect my original records.
7. My identity will be kept confidential if my data are publicly presented.
8. I have had my questions answered to my satisfaction.
9. I have decided to be in the research study.

I am aware, that if I have any questions during this study, I should contact at one of the addresses listed above. By signing this consent form, I attest that the information given in this document.

Name and signature / thumb impression of the participant (or legal representative if participant incompetent) :

Name :

Address :

Contact No. :

Email Id :

रुग्ण संमतीपत्रक

अभ्यासक्रमाचे शीर्षक : “ Fundamental Study of Kayika Vihara Vaishamya and its Observational Study in GIT Diseases”

रुग्णाचे नाव :

रुग्ण संमतीपत्रक नियम :

मी रुग्ण पत्रकातील सर्व माहिती वाचून किंवा मला वाचून दाखविले आहे.
मी विचारल्या जाणाऱ्या प्रश्नांची उत्तरे देण्यास संमती दर्शवित आहे.

१. मी रुग्ण पत्रकात नमूद केलेली सर्व माहिती वाचली आहे.
२. मला रुग्ण संमती पत्रक समजवून सांगण्यात आले आहे.
३. मला माझे हक्क अभ्यासकाने माहिती करून दिले आहे.
४. मला अभ्यासाबद्दल माहिती देण्यात आली आहे.
५. मी सध्या घेत असलेल्या सर्व औषधोपचाराची माहिती अभ्यासकाला देत आहे.
६. मी ओळख (Identity) माहिती (Publish) करताना गोपनीय ठेवण्यात यावी.
७. मी माझी उत्तरे समाधानकारकरीत्या देत आहे.
८. मी स्वतः अभ्यासाचा एक भाग होण्यास तयारी दर्शवित आहे.

प्रौढ व्यक्तीसाठी :

रुग्णाचे नाव सही / अंगठा :

नाव :

सही :

दिनांक :

भारतीय संस्कृति दर्शन ट्रस्ट संचालित
आयुर्वेद हॉस्पिटल अण्ड रिसर्च सेंटर, वाघोली, पुणे.

रुग्णपत्रक

दिनांक

सर्वेक्षण क्र.

नाव

लिंग

वय व्यवसाय- नोकरी / उद्योग / गृहिणी / विद्यार्थी

स्वरूप- श्रमजीवी / अल्पबुद्धिजीवी / बुद्धिजीवी / व्यापारी / फिरतीचा व्यवसाय / बैठा व्यवसाय / निवृत्ती
पत्ता

मोबाईल

ई-मेल

निदान-

तपासण्या-

पूर्व व्याधिवृत्त-

सद्य व्याधी	काल	सद्य लक्षणे	चिकित्सा
अर्श अतिसार ग्रहणी अजीर्ण प्रवाहिका अम्लपित्त Esophageal cancer Stomach cancer Liver cancer Gall bladder cancer Pancreatic cancer Cancer of Colon Cancer of Rectum इतर			

व्यसने-

व्यसन	प्रमाण	प्रतिदिन वारंवारता	कालावधी
चहा काँफी			

सुपारी पान तंबाखु मशेरी तपकीर धूम्रपान (बिडी/सिगारेट/चिरुट्) अप्रत्यक्ष धूम्रपान पानपराग मावा भांग मद्यपान –प्रकार मादक द्रव्य (मुखावाटे/धूम/ इंजेक्शन)			
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रुग्ण सामान्य परीक्षण–

१. नाडी– गती / द.मि.

२. मूत्र– दिवसा– वेळा रात्री– वेळा

वर्ण – श्वेत / पीताभ / पीत / आविल / आरक्त

मूत्रदाह / मूत्रकृच्छता / कृतेऽपि अकृतसंज्ञता / बहूमूत्रता

३. मल– प्रतिदिन वेळा लागणारा वेळ– मि.

संवेदना वेळेवर येते– होय/ नाही / चहा कॉफी सेवनाने / सिगारेट / इ.व्यसनाने / विरेचन औषधाने

स्वरूप– ग्रथित / सोललेल्या केळ्याप्रमाणे / बांधून / भसरट / द्रवमल

वर्ण– पीताभ / पीत / हरित / श्वेत / कृष्ण /

गंध– प्रभूत दुर्गंध / विशिष्ट गंध रक्त पडते– होय / नाही

सपिच्छ– होय / नाही

अधोवाताधिक्य– होय / नाही

कृमिपतन– होय / नाही

४.जिव्हा – वर्ण– आरक्त / रक्त / श्वेताभ / पीताभ / कृष्ण

साम / निराम

५. शब्द– प्राकृत / क्षीण / स्वरभेद

६. स्पर्श– प्राकृत / शीत / उष्ण

७. दृक्– प्राकृत / दृष्टिमांद्य / दृष्टिनाश / द्विप्रतिमा

८. आकृति–कृश / मध्यम / स्थूल

व्यंगविशेष

९. सत्व– प्रवर / मध्यम / अवर

१०. अग्नि– विषम/ मंद / तीक्ष्ण / सम

११. कोष्ठ– मृदु/मध्यम/क्रूर

१२. प्रकृति- वात / पित्त / कफ / वातपित्त / वातकफ / कफपित्त / समन्निदोष

१३. वजन

१४. रक्तदाब

१५. उरः परीक्षण-

१६. उदरपरीक्षण-

विहार प्रश्नावली

निद्रा-

१. सकाळी उठण्याची वेळ- नियमित / अनियमित वेळ
 २. रात्री झोपण्याची वेळ- नियमित / अनियमित वेळ
 ३. एकूण किती तास झोप होते-
 ४. सकाळी झोपेतून उठल्यावर उत्साह वाटतो का- होय / नाही
 ५. रात्री झोपण्यापूर्वी आंघोळ करणे/दूध/ चहा/काफी/शीतपेय/ पाणी/मद्य/इतर सवय आहे का- होय / नाही
 ६. रात्री झोपेतून उठून दूध/ चहा/काफी/शीतपेय/ पाणी/मद्य/इतर काही पिण्याची सवय आहे का- होय / नाही
 ७. रात्री झोप येण्यासाठी औषधे घेण्याची सवय आहे का- होय / नाही
 ८. रात्रीची झोप खंडित/ अखंडित असते का- होय / नाही खंडीत असण्याचे कारण-
 ९. पालथे झोपण्याची सवय आहे का- होय / नाही
 १०. झोपताना जाड/कठीण उशी घेण्याची सवय आहे का- होय / नाही
 ११. झोपण्याचे आसन- जमिनीवर / सतरंजी / चटई / गादी
 १२. ए.सी.मधे / पंख्याखाली झोपण्याची सवय आहे का- होय / नाही
 १३. स्वप्न पडतात का - होय / नाही आठवतात / आठवत नाहीत
- स्वरूप-

दिवास्वाप

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	दिवसा झोपण्याची सवय आहे का					
२	दिवसाची झोप कधी घेतली जाते- -जेवण्यापूर्वी -जेवणानंतर					
३	दिवसा जेवल्यानंतरची झोप कशी घेतली जाते- -पलंगावर आडवे होऊन -खुर्चीत बसून					
४	रात्री जागरण झाल्यावर दिवसा कधी झोपता- -जेवण्यापूर्वी					

	-जेवणानंतर					
५	सकाळी- -नाश्ता झाल्यावर झोपण्याची सवय आहे का -नाश्ता झाल्यावर झोपून नंतर आंघोळ करण्याची सवय आहे का -सकाळी उठल्यावर लगेच १-२ तासांनी झोपण्याची सवय आहे का					
६	संध्याकाळी कामावरून आल्यावर झोपता का					
७	कामानिमित्त दिवसा प्रवास करताना झोपता का					
८	दिवसा झोपण्याचे कारण- -वाचन करता करता -औषधांचा परिणाम म्हणून -काहीही काम नसल्याने नुसते बसून राहिल्याने -रात्रिजागरण झाल्यामुळे -शिफ्ट ड्युटी असल्याने इतर					
९	दिवसा झोपताना- -मिष्टान्न (गोड व पचण्यास जड)खावून -अजीर्ण (अन्न पचले नसताना)असताना झोपले जाते का					
१०	उन्हाळ्यात दिवसा झोपता का					
११	दिवसा झोपून उठल्यावर उत्साह वाटतो का					
	इतर					

रात्रि जागरण

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१.	रात्रि जागरण होते का					
२.	रात्रि जागरणाची कारणे -झोप येत असूनही-अन्य व्यवधानांमुळे झोपमोड झाल्याने जसे डास / ढेकूण - वाचन -टि.व्ही. -कम्प्युटर /इंटरनेट /गेम्स / मोबाईल -चिंता -जागा बदल -प्रवासामुळे -आजुबाजुच्या वातावरण जसे-जोरात बोलणे, गाणी, भांडण इ. - झोप मोडल्यामुळे - शिफ्ट ड्युटी					

	-स्वप्न पडल्यामुळे - भीती - व्यसन-मद्य/ सिगारेट - पुढच्या दिवशीचे नियोजन/काळजी - झोपण्याचे बेड चांगले नसल्याने - इतरांच्या घोरण्यामुळे -मलप्रवृत्ति वेग - मूत्रप्रवृत्ति वेग -क्षुधावेग (भूक लागल्याने) -तृष्णावेग (तहान लागल्याने) -वेदना इतर					
३	शिफ्ट ड्युटी करता का					
४	शिफ्ट ड्युटी दरम्यान काही त्रास होतो का					
	इतर					

वेगधारण - मलवेगधारण

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	मलवेगधारण होते का					
२	मलवेगधारणाची कारणे- -ऑफीसच्या / व्यवसायाच्या कामात व्यग्र असल्यामुळे -घरच्या कामात व्यग्र असल्यामुळे - प्रवासादरम्यान - मलविसर्जनाच्या जागेबद्दल घृणा असल्यामुळे - कमोड वापरण्याची सवय नसल्यामुळे - कंटाळा आल्यामुळे - मलप्रवृत्तिस त्रास होत असल्याने भीतीमुळे - आजारपणामुळे दौर्बल्य आल्यामुळे इतर					
३	मलवेगधारण करून जेवण / पाणी पिणे / मैथुन इ . केले जाते का					
४	भूक कमी (मंदाग्नि) असताना मलवेगधारण केले जाते का					
५	मलप्रवृत्तिची संवेदना नसताना बलपूर्वक प्रयत्न केला जातो का					
	इतर					

वेगधारण- मूत्रवेगधारण

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	मूत्रवेगधारण होते का					
२	मूत्रवेगधारणाची कारणे- -ऑफीसच्या / व्यवसायाच्या कामात व्यग्र असल्यामुळे -घरच्या कामात व्यग्र असल्यामुळे - प्रवासादरम्यान - मलविसर्जनाच्या जागेबद्दल घृणा असल्यामुळे - कमोड वापरण्याची सवय नसल्यामुळे - कंटाळा आल्यामुळे - मूत्रप्रवृत्तिस त्रास होत असल्याने भीतीमुळे - आजारपणामुळे दौर्बल्य आल्यामुळे इतर					
३	मूत्रवेगधारण करून जेवण / पाणी /मैथुन केले जाते का					
४	मूत्रवेग काहीकाळ धारण करून मग मूत्रविसर्जन करता का					
५	भूक कमी (मंदाग्नि) असताना मूत्रवेगधारण केले जाते का					
६	कोरडे पदार्थ (फरसाण, वेफर्स इ.) सेवन करून मूत्रवेगधारण केले जाते का					
७	मूत्रप्रवृत्तिची संवेदना नसताना बलपूर्वक प्रयत्न केला जातो का					
	इतर					

क्षुधावेगधारण

क्षुधा-

१. भूक लागते / लागत नाही /कधी चांगली कधी नाही
२. जेवणाच्या वेळा- पूर्वी- नियमित / अनियमित संध्या- नियमित / अनियमित
३. जेवण-भूक लागली म्हणून / वेळ झाली म्हणून
४. जेवणाची मात्रा- अल्प / मध्यम /अधिक
५. भोजन सेवनाची गती-अतिद्रुत / मध्यम गती /अतिविलंबित
६. दोन अन्नसेवन कालात किती अंतर असते-
७. जेवताना एकटे/ सहकुटुंब/ टी.व्ही.पहात /हातात वर्तमानपत्र धरून /गप्पा मारत/मोठयाने हसत/वादविवाद करत जेवण्याची सवय आहे का- होय / नाही.
८. नाश्ता वेळ- दुपारचे जेवण वेळ-
संध्याकाळचे खाणे वेळ- रात्रीचे जेवण वेळ-

क्षुधावेगधारण-

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	भूक लागूनही जेवण न करण्याची सवय आहे का					
२	क्षुधावेगधारण- भूक लागूनही जेवण न करण्याची कारणे- - उपवास असल्यामुळे - भांडण झाल्यामुळे - राग आल्यामुळे - दुःख करण्याची सवय असल्यामुळे - खाल्यानंतर त्रास (आजार) होत असल्यामुळे - परात्र घेत नसल्यामुळे - पूजा झाल्याशिवाय जेवायचे नाही असा नियम पाळत असल्याने असल्यामुळे - आवडीचे पदार्थ नसल्यास - वजन कमी करायचे म्हणुन असल्यामुळे - कामात व्यग्र असल्यामुळे - खाण्याची सोय नसल्यामुळे - कंटाळा आला म्हणुन - अतिश्रमामुळे - परिस्थितीवश - झोप येत असल्यामुळे इतर					
३	भूक लागलेली असताना जेवण न करता पाणी प्यायले जाते का					
४	तात्पुरती थोडीशी भूक भागवली जाते का ? तेव्हा काय व किती प्रमाणात खाल्ले / प्यायले जाते					
५	भूक लागलेली नसताना जेवले जाते का					
	इतर					

तृष्णावेगधारण

जलप्राशन-

१. एकुण किती पाणी पिले जाते-

२. पाणी पिण्यासाठी कुठले पात्र वापरले जाते- तांब्याचे/ चांदीचे/ अल्युमिनिअमचे/स्टीलचे/काचेचे/ प्लस्टीकचे/इतर

३. पाणी कधी पिले जाते- सकाळी उठल्यावर /जेवणापूर्वी/ जेवणामधे/ जेवणानंतर/ रात्री झोपण्यापूर्वी /इतर

४. कुठले पाणी पिले जाते-माठातले / फ्रीजमधले/ पिंपातील/ इतर

तृष्णावेगधारण-

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	तहान लागूनही पाणी न पिण्याची सवय आहे का					
२	तहान लागूनही पाणी न पिण्याची कारणे- -उपवास असल्यामुळे -भांडण झाल्यामुळे -राग आल्यामुळे -दुःख करण्याची सवय असल्यामुळे - पाणी पिल्यावर त्रास (आजारी अवस्थेत) होत असल्यामुळे -परान्न घेत नसल्यामुळे -पूजा झाल्याशिवाय पाणी प्यायचे नाही असा नियम पाळत असल्याने - वजन कमी करायचे म्हणून - कामात व्यग्र असल्यामुळे - पाण्याची चांगली सोय नसल्यामुळे - कंटाळा आला म्हणून - वारंवार मूत्रप्रवृत्तिला जावे लागते म्हणून					
३	तहान लागलेली असताना पाणी न पिता जेवण केले जाते का					
४	तहान लागलेली असता पाणी न पिता गोळ्या / चॉकलेट इ. खाल्ले जाते का					
५	ऋतुनुसार पाणी पिण्याच्या मात्रेत फरक करता का					
६	ऋतुनुसार गरम/गार/सिध्द पाणी घेतले जाते का					
७	तहान लागलेली नसताना पाणी पिले जाते का					
	इतर					

व्यायाम

१.व्यायाम करता का - होय /अजिबात नाही / कधीतरी

२.किती वर्षांपासून व्यायाम करत आहे- महीने-

वर्ष-

३.व्यायामाची वेळ- सकाळी / दुपारी/ संध्याकाळी/ रात्री

प्रमाण-

मि.

तास

४.व्यायामाचा काल- जेवण्यापूर्वी / जेवणानंतर / जेवण पचल्यावर

५.व्यायामाची जागा- घर/ ग्राऊंड/जिम/ इतर

६.व्यायामाचा प्रकार- जोर / बैठका / चालणे / योगासने / सायकलींग /पोहणे / खेळणे / इतर

७.व्यायाम करण्याचे कारण- वजन कमी करणे/ वजन वाढवणे/ स्वास्थ्य टिकवणे / इतर

८.व्यायाम न करण्याची कारणे-सकाळी उठण्याचा कंटाळा/ कामातून वेळ न मिळणे/थकवा/आवडत नाही/गरज वाटत नाही/इतर

क्र.	प्रश्न	होय	नाही	काल (महिने/वर्ष)	वारंवारता (आठवडे) उदा. २/७	मात्रा (मिनिटे/तास)
१	व्यायाम करण्यापूर्वी- - प्रोटीन -पाणी -द्रवान्न - एनर्जी ड्रिंक घेतले जातात का					
२	व्यायाम करतांना- - प्रोटीन -पाणी -द्रवान्न - एनर्जी ड्रिंक घेतले जातात का					
३	व्यायाम केल्यानंतर- - प्रोटीन -पाणी -द्रवान्न - एनर्जी ड्रिंक घेतले जातात का					
४	व्यायाम करतांना- मल वेगधारण (मलप्रवृत्ति रोकुन धरणे) मूत्र वेगधारण (मूत्रप्रवृत्ति रोकुन धरणे) क्षुधा वेगधारण (भूकेचा अवरोध) तृष्णा वेगधारण (तहानेचा अवरोध) केले जाते का					
५	व्यायाम करतांना भरपूर घाम येवूनही व्यायाम सुरु ठेवता का-					
६	ऋतुनुसार व्यायाम प्रकार व मात्रेत फरक करता का					
७	स्निग्ध पदार्थ (तेलकट) खावून व्यायाम केला जातो का					
८	विदग्ध (जळजळ उत्पन्न करणारे) पदार्थ खावून व्यायाम केला जातो का					
९	उन्हातून जाऊन लगेचच गार पाण्यात पोहण्याचा व्यायाम केला जातो का					
१०	व्यायाम करण्यापूर्वी- -अभ्यंग (मालीश) - स्नान केले जाते का					
११	व्यायाम केल्यावर -मर्दन (अंग दाबुन घेणे) -स्नान केले जाते का					
१२	अजीर्ण (जेवण पचलेले नसताना)असताना व्यायाम करता का					
१३	शरीराला जास्त ताण देऊन व्यायाम केला जातो का					
१४	शारीरिक क्षमतेपेक्षा जास्त व्यायाम केला जातो का					
१५	व्यायाम किती करता- अर्धशक्ति / अर्धशक्तिपेक्षा अधिक / अर्धशक्तिपेक्षा कमी अर्धशक्ति लक्षणे- श्वासाची गती वाढणे, कपाळावर व काखेत घाम येणे					
	इतर					

ABBREVIATION USED IN MASTER CHART

नाव-A/B/C

लिंग -M /F

व्यवसाय- नोकरी-१ / उद्योग-२ / गृहिणी-३ / विद्यार्थी-४

निदान-अर्श-१/अतिसार-२/ग्रहणी-३/अजीर्ण-४/प्रवाहिका-५/अम्लपित्त-६

Esophageal Cancer-1/Stomach Cancer-2/Liver Cancer-3/Gall bladder Cancer-4/Pancreatic Cancer-5/Colon Cancer-6/Rectal Cancer-7/other-8

दिवास्वाप

दिवसा झोपण्याचे कारण-वाचन करता करता-१ /औषधांचा परिणाम म्हणून-२ /काहीही काम नसल्याने नुसते बसून राहिल्याने-३/रात्रिजागरण झाल्यामुळे-४ /शिफ्ट ड्युटी असल्याने-५ / इतर-६

रात्रि जागरण

रात्रि जागरणाची कारणे- झोप येत असूनही-अन्य व्यवधानांमुळे झोपमोड झाल्याने जसे डास, ढेकूण-१ / वाचन-२ /टि.व्ही.-३/ कम्प्युटर इंटरनेट गेम्स मोबाईल-४ /चिंता-५ /जागा बदल-६ / प्रवासांमुळे-७/आजुबाजुच्या वातावरण जसे-जोरात बोलणे, गाणी, भांडण इ.-८/ झोप मोडल्यामुळे-९/शिफ्ट ड्युटी-१०/स्वप्न पडल्यामुळे-११/भीती-१२/ व्यसन-मद्य/ सिगारेट-१३/पुढच्या दिवशीचे नियोजन-१४/झोपण्याचे बेड चांगले नसल्याने-१५/ इतरांच्या घोरण्यामुळे-१६/मलप्रवृत्ति वेग-१७/ मूत्रप्रवृत्ति वेग-१८/क्षुधावेग (भूक लागल्याने)-१९/तृष्णावेग (तहान लागल्याने)-२०/वेदना-२१/इतर-२२

वेगधारण-मलवेगधारण

मलवेगधारणाची कारणे-ऑफीसच्या / व्यवसायाच्या कामात व्यग्र असल्यामुळे-१/घरच्या कामात व्यग्र असल्यामुळे-२ / प्रवासादरम्यान-३ / मलविसर्जनाच्या जागेबद्दल घृणा असल्यामुळे-४/ कमोड वापरण्याची सवय नसल्यामुळे-५/ कंटाळा आल्यामुळे-६/मलप्रवृत्तिस त्रास होत असल्याने भीतीमुळे-७/आजारपणामुळे दौर्बल्य आल्यामुळे-८/इतर-९

वेगधारण-मूत्रवेगधारण

मूत्रवेगधारणाची कारणे-ऑफीसच्या / व्यवसायाच्या कामात व्यग्र असल्यामुळे-१/घरच्या कामात व्यग्र असल्यामुळे-२/ प्रवासादरम्यान-३ / मूत्रविसर्जनाच्या जागेबद्दल घृणा असल्यामुळे-४/कमोड वापरण्याची सवय नसल्यामुळे-५/कंटाळा आल्यामुळे-६/ मूत्रप्रवृत्तिस त्रास होत असल्याने भीतीमुळे-७/आजारपणामुळे दौर्बल्य आल्यामुळे-८/इतर-९

क्षुधावेगधारण-क्षुधावेगधारण- भूक लागूनही जेवण न करण्याची कारणे-उपवास असल्यामुळे -१/भांडण झाल्यामुळे-२ / राग आल्यामुळे-३ / दुःख करण्याची सवय असल्यामुळे-४/ खाल्यानंतर त्रास (आजार) होत असल्यामुळे-५/ परान्न घेत नसल्यामुळे-६/ पूजा झाल्याशिवाय जेवायचे नाही असा नियम पाळत असल्याने असल्यामुळे-७/ आवडीचे पदार्थ नसल्यास-८/ वजन कमी करायचे म्हणुन असल्यामुळे-९/कामात व्यग्र असल्यामुळे-१०/ खाण्याची सोय नसल्यामुळे-११/कंटाळा आला म्हणुन-१२/अतिश्रमामुळे-१३/परिस्थितीवश-१४/झोप येत असल्यामुळे-१५/इतर-१६

तृष्णावेगधारण-

तहान लागूनही पाणी न पिण्याची कारणे-उपवास असल्यामुळे -१ /भांडण झाल्यामुळे -२ /राग आल्यामुळे -३ /दुःख करण्याची सवय असल्यामुळे -४/ पाणी पिल्यावर त्रास (आजारी अवस्थेत) होत असल्यामुळे-५ /परान्न घेत नसल्यामुळे-६ /पूजा झाल्याशिवाय पाणी प्यायचे नाही असा नियम पाळत असल्याने -७/ वजन कमी करायचे म्हणुन -८/ कामात व्यग्र असल्यामुळे -९/ पाण्याची चांगली सोय नसल्यामुळे-१० /कंटाळा आला म्हणुन -११/ वारंवार मूत्रप्रवृत्तिला जावे लागते म्हणून-१२

व्यायाम

१. व्यायाम करता का - होय-१ /अजिबात नाही-२ / कधीतरी-३
३. व्यायामाची वेळ- सकाळी-१ / दुपारी -२/संध्याकाळी -३/ रात्री-४
४. व्यायामाचा काल- जेवण्यापूर्वी-१ / जेवणानंतर -२ / जेवण पचल्यावर-३
५. व्यायामाची जागा- घर -१/ ग्राऊंड -२ /जिम -३/ इतर-४
६. व्यायामाचा प्रकार- जोर -१/ बैठका -२/ चालणे -३/ योगासने -४/ सायकलींग-५ /पोहणे -६/ खेळणे-७ / इतर-८
७. व्यायाम करण्याचे कारण- वजन कमी करणे -१/ वजन वाढवणे -२/ स्वास्थ्य टिकवणे-३ / इतर-४
८. व्यायाम न करण्याची कारणे-सकाळी उठण्याचा कंटाळा -१/ कामातून वेळ न मिळणे -२/थकवा -३/आवडत नाही -४ /गरज वाटत नाही -५/इतर-६

व्यायाम करण्यापूर्वी-प्रोटीन-१/ पाणी/द्रवान्न -२ / एनर्जी ड्रिंक घेतले जातात का-३

व्यायाम करतांना- प्रोटीन-१/ पाणी/द्रवान्न -२ / एनर्जी ड्रिंक घेतले जातात का-३

व्यायाम केल्यानंतर- प्रोटीन-१/ पाणी/द्रवान्न -२ / एनर्जी ड्रिंक घेतले जातात का-३

व्यायाम करतांना-मल वेगधारण (मलप्रवृत्ति रोकुन धरणे) -१ /मूत्र वेगधारण (मूत्रप्रवृत्ति रोकुन धरणे) -२ /क्षुधा वेगधारण (भूकेचा अवरोध) -३ /तृष्णा वेगधारण (तहानेचा अवरोध) केले जाते का-४

व्यायाम करण्यापूर्वी-अभ्यंग (मालीश) -१ /स्नान केले जाते का-२

व्यायाम केल्यावर- मर्दन (अंग दाबुन घेणे) -१ /स्नानकेले जाते का-२

व्यायाम किती करता- अर्धशक्ति-१ / अर्धशक्तिपेक्षा अधिक -२/ अर्धशक्तिपेक्षा कमी -३