

Part-1

**A Comparative study of *Ṣat karmās* of *Yogic* texts
and
Pañca karmās of *Āyurvedic* texts**

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Abstract:

The present study was done to have a comprehensive view of the concepts of two basic purificatory processes practiced in *Yoga* and *Āyurveda*. Purificatory processes are mentioned in *Vedas*. The purification through *Śat karmās* which is also commonly known as *Śat kriyās*, is mentioned first in *Haṭha yoga pradīpika*. They are to be practiced before any of the yogic procedures. The *Śat karmās*, the six cleansing techniques are named as *Dhauti*, *Basti*, *Neti*, *Trāṭaka*, *Nauli*, and *Kapālabhati*. These *Śat karmās* not only have the bodily effect but also have the effect over the mind. *Caraka*, the *Āyurveda* master, mentions the practice of different limbs of yoga for the prevention and cure of the diseases and maintenance of health along with other procedures of the *Āyurveda*. The *Āyurveda* texts describe the five purificatory processes called *Pañca karmās*. They are *Vamana*, *Virecana*, *Vasti*, *Nasya* and *Rakta mokṣana*. Both the *Śat karmās* and *Pañca karmās* are based on same concepts of improving the health by removing the toxins from the body and balancing the *tridoṣas*. The three *doṣas*, *vāta*, *pitta*, and *kapha* are removed if they are excess and balance is brought about. Descriptions of the psychological benefits of these practices are mentioned in both *Yoga* and *Āyurveda* texts. These techniques bring a new perspective to the life by purifying and concentrating the mind, purifying and channelizing the emotions and also

purifying the intellect and developing the wisdom. *Ṣat karmas* and *Pañca karmas* are *śodhana* type of treatments which is aimed at the purification. The purification is the basis of all the therapeutic procedures and considered as primary one. Each of the *Ṣat karmas* can be compared with the *Pañca karmās* either by the similarities with their procedure or by the similar effect over the body. For example *Basti* with *Vasti*, *Neti* with *Nasya*, *Vamana dhauti* with *Vamana karma*, *Vārisāra* (*Śaṅkha prakṣālana*) with *Virecana* is compared with one another as there is similiarity in procedure and the same Target organ of the body. The target organ will be purified and various ailments particularly affecting that organ can be removed. This process is enhanced by the use of warm water, salt, herbs either by extracting its juice (*svarasa*) or by preparing the decoction (*kaśāya*). Variations in application in order to make the practice easier are also having similarities. For example *Karṇa dhauti* of *ṣaṭ karmās* and oiling of ears, *Jihva mūla dhauti* with Oral gargling, *Danta mūla dhauti* with *Danta prakṣālana*, *Daṇḍa dhauti* of *ṣaṭ karmās* and Oral hygiene through Gargling. Thus, in this study, an effort is made to explore the similarities between the *Ṣat karmās* and *Pañca karmās* with respect to their basic concepts and therapeutic effects. A combined approach of using herbs in various *Ṣat karmās* is also listed with few commonly used herbs. Further research can be done on beneficial effects of use of herbs in *Ṣat karmās*.

CHAPTER-1

INTRODUCTION

1.1 Modern life style and ailments:

Modern era bestowed deeper knowledge upon man of science and technology. This made life more comfortable in terms of material affluence. This material achievement dominated man more or less completely. The increasingly fast pace of modern life, the growing environmental degradation and the loss of connection to the natural rhythms of life are taking their toll on health and happiness everywhere. The most serious side effect of this is increasing health crises in the world, which is the result of a state of inner unhappiness. The inner unhappiness results in strong dissatisfaction with the job or relationships and leading to loss of the motivation or enthusiasm in life. Consequently, anxiety or depression has become a common phenomenon. As more and more people are falling prey to the adverse effects of stress, it has resulted in one or more of these complaints such as disturbed sleep, chronic indigestion, heart disease, hypertension, arthritis, lower back pain...etc,. Lack of physical and sexual vitality, chronic fatigue, allergies and inability to loose or gain weight are also common problems.

1.2 A Holistic approach as solution:

The objective logic, on which everything is based, brings an artificial distinction between observer and the observed as it is matter based approach. This approach to health brings a sense of limitation. The matter based approach of modern science resulted in material affluence giving more and more physical comforts and the mental stress. The cultivated insensitiveness towards alteration from healthier state, failed to get early recognition there by entering into chronic state.

So the complimentary systems have taken an important role in correcting the changes and bringing harmony internally and externally. These complimentary systems are based on traditional knowledge of existence of body beyond mere physical existence. The complete knowledge of different spheres of human existence will make a person to understand the science of health based on universal principles. This profound insight into the connection between the mind, body and laws of nature, structure the progress in life. There is nothing tangible about the things like mind, the soul and the spirit. These things exert a very noticeable influence on the course of physical existence as psychosomatic origin. All physical therapeutic practices will be temporarily successful and there is every chance of reappearance. Therefore, healthier and harmonious lifestyle is looked for tackling this problem. These stress related problems due to time based targets and money based affluence, can be tackled with yoga, the mind–body medicine. The holistic concept of disease according in *Yoga* and *Āyurveda*, which is based on the total perspective of human system consisting of not merely the material body but also the unseen vital sheath, sheath of wisdom and bliss is necessary to tackle these at the root cause with better understanding. The present study is focused on the concept and technique of elimination of toxins to bring about a basic correction to move towards health as described in *Yoga* and *Āyurveda* texts.

1.3 Elimination of toxins, the mediators of illness.

The fundamental principles of health are based on balanced state in body and mind. The balance is dependant on purity in body and mind which is brought by elimination of toxins at all the levels. Oriental sciences like *Āyurveda*, Nature

cure, *Yoga*, Chinese medicine proposed the toxin theory to describe how disturbed life style and stress bring about bodily illnesses.

1. *Āyurveda*:

There are two aspects in *Āyurveda*.

1. Imbalance of *doṣas*.
2. Accumulation of Toxins or *Malas*.

1. *Imbalance of doṣas*:

A balanced functioning of the three *doṣas Vāta, Pitta, Kapha*, the functional capacities of the body, are of vital importance for health as they are responsible for coordinating and directing all the structures and substances of the body. The knowledge of three *doṣās* and their functioning denotes the condition of *dhātus*. The three *doṣās* which are expressed as signs and symptoms indicate the deviation from balanced condition of health. The *Vāta* is the principle governing all movements, *Pitta* controls all transforming processes and *Kapha* is responsible for cohesion, growth and liquefaction.

2. *Accumulation of Toxins or Malas*:

Āyurveda talks about accumulation of toxins due to non-elimination of *Malas*. This in turn leads to disturbed balance in the *tridoṣas* leading to diseases. The *Malas* include everything that is expelled which is neither necessary for the body's support nor beneficial to it. If *Malas* such as urine, stools, sweat etc., do not get separated from the body at the appropriate time and in proper quantity, their accumulation cause imbalance in the functioning of *dhātus*. Sometimes the accumulated *malas* can even threaten the life. *Āyurveda* recommends that bodily urges to eliminate the *Malas* should never be restrained.

Imbalance of doṣas and Accumulation of *Malas* are inter related. They are the two main causes of vicious circle of illness. Both of them are either cause or effect to each other.

2. Nature cure:

Nature cure states that accumulation of morbid matter results in changes in the blood and lymph are the root cause of diseases. Elimination of these toxins is by fasting therapy, hydrotherapy, massage therapy, mud therapy and so on.

3. Chinese medicine:

Chinese medicine talks about accumulation of morbid matter in the meridians obstructing the flow of *energy* or *qui*. It recognizes the blockage of *qui* in specific points of different meridians resulting in particular disease symptoms. By applying pressure over the points of blockage (Acupressure), by piercing the point of blockage (Acupuncture) and by applying heat directly or indirectly on the point of blockage (Moxibusion).

4. Yoga:

Yoga talks about blockage of *nadis* resulting in disturbance in pranic flow which in turn manifests as disease at the body level when *nadis* are filled with impurities *vāyu* does not enter it. This, in turn interferes with achievement of balance and higher states of consciousness.

मलाकुलासु नाडीषु मारुतो नैव मध्यगः ।

कथं स्यादुन्मनी भावः कार्यसिद्धिः कथं भवेत् ॥

Malākulāsu nādīṣu māruto naiva madhyagaḥ,

Katham syādunmanī bhāvaḥ kāryasiddhiḥ katham bhavet.

Haṭha yoga pradīpika {2.4}

The vital air does not pass in the middle channel because of impurities in the nadies. Person cannot arise to the state of unmani and get the siddhis (2).

All the therapeutic practices will be temporarily successful and may eventually reappear when the root cause of the illness is not treated. The impurities, which are responsible for the ill health, should be removed from the *mūlaśaya*, the very root itself. These *doṣas* or impurities compared with root of trees.

दोषणां च द्रुमाणां च मुले अनुपहते सति ।

रोगाणां प्रसवानं च गतानामगति ध्रुवा ॥

*Doṣāṇāṃ ca drumāṇāṃ ca mule anupahate ṣaṭi,
Rogāṇāṃ prasavānaṃ ca gatānāmagati dhruvā.*

Caraka samhita {16.21}

The doṣas are all causing diseases unless they are eliminated from their very root like the tree which grows in spite of its branches being chopped of without uprooting (6).

Ṣaṭ karmās of *Yoga* and *Pañca karmās* of *Āyurveda* are the two elementary processes, which remove the impurities at their root cause. The purification techniques used in *Yoga* and *Āyurveda* are based on common principles the basic principles. The body's inner ability to heal by itself is taken advantage by adopting health promoting measures like *Ṣaṭ karmās* and *Pañca karmās*. The final component to move towards perfect health according to *Yoga* and *Āyurveda* for tuning the immune system is reducing the stress in life through achieving the highest level of spiritual harmony. All these techniques activate the body's natural mechanisms of elimination of toxins.

5. Modern Science:

Chemicals, which are not excreted through the various eliminatory channels like skin, lungs, kidney and bowels, lead to increase in the level of metabolic waste products in the blood. For E.g., accumulation of cholesterol causes

arteriosclerosis, which is a cardiac risk factor. Uric acid, Urea and Creatinine level in the blood should be maintained by proper functioning of the kidney. Increase in the uric acid level leads to gout. Non elimination of the Uric acid leads to Gout. The urea and creatinine also accumulates in the body in renal diseases. Water retention in the body results in oedematic condition as in cases of CCF (congestive cardiac failure), PEM (protein energy malnutrition) or diseases of nephrons etc.

The relationship between life style, stress and disease is recognized through the research over last three to four decades. Several mechanisms of how stresses that can lead to illnesses are understood. The path ways that connect the mind and body include disturbances in both electrical and chemical transmission mechanism.

Electrical Transmission: This normally takes place by creating a potential difference between adjacent points along the cell wall. The potential difference is created by movement of potassium ions out of the cell and sodium into the cell. After the impulse is passed the balance is restored to normalcy. During stress this balance is disturbed temporarily. But due to excessive stresses, an imbalance shows up in the autonomic nervous system resulting in disturbances in the target organ function at the physical level.

Chemical Transmission: Mainly through neurotransmitters released from vesicles from pre synaptic cleft. Neurotransmitters can be acetylcholine, GABA (gamma amino butyric acid), adrenalin, noradrenalin, dopamine, histamine, five hydroxy tryptamine, glycine, prostaglandins and cyclic AMP etc. During health there is a healthy balance between the quantities of these chemicals that are released. Ill-health results through imbalances in these transmitters. Thus imbalances are

seen at various levels if stressful state is continued. Diseases show up through the different symptoms in the body if stressful state is continued. The free radicals like Hydroxyl, Super oxide, Nitric oxide and Peroxyl which bring the change in Gene level or in cellular level, will be tackled more efficiently by the defense mechanism in stress free condition.

Thus we find that the modern science is also moving towards an understanding of imbalance created by accumulation of toxins. There is a need to understand these mind–body connections at subtler levels. Hence a look at the knowledge from *Yoga* and *Āyurveda* is becoming relevant with respect to elimination of toxins.

Elimination can be designed to serve three purposes.

1. To impose preventive measures
2. To treat the diseases at its early stage.
3. To remove the toxins accumulated in diseased condition at the advanced stage.

Each of them is unique and complete on their own way. They incorporate a more subjective or intuitive approach to gaining knowledge, treating the disease in addition to objective means. They not only treat the body but also affect the mind and soul. Both believe that human life is a part and parcel of nature in par with the natural laws of elimination. Like this, both bring about cleanliness both inside and outside. They also eliminate inauspiciousness resulting in purity and longevity.

CHAPTER-2
ṢAṬ KARMĀS IN YOGA TEXTS

Ṣaṭ karmās are the six purificatory processes which are meant for cleansing of body and mind, mentioned in different ancient texts.

Purification and health:

Purificatory process started with usage of water. Water - whose disinfecting virtues have so often being hymnised in the Vedas can be used internally for drinking and externally for bathing to serve the purpose of cleaning.

पवित्रे वृष्यमायुष्यं श्रमस्वेद मलापहम् ।

शरिर बलसन्धानं स्नानमोजस्करं परम् ॥

Pavitre vṛṣyamāyusyaṁ śramasveda malāpaham,
Śarira balasandhānaṁ snānamojaskaraṁ param.

Caraka samhita, Sūtrastana, {5.94}

Bathing is purifying, libidinal stimulant and life giving .It removes fatigue, sweating and dirt. It brings about the strength in the body and is an aid par excellence for enhancement of energy (6).

Types of Ṣaṭ karmās:

1. According to *Gheraṇḍa samhita*

धौतिर्बास्तिस्तथा नेतिलौलिकी त्राटकं तथा ।

कपालभातिशचैतानि षट्कर्माणी समाचरेत् ॥११२॥

dhautirbastitathā netirlaulikī trāṭakaṁ tathā,
kapālabhātīśacaitāni ṣaṭkarmāṇī samācaret.

[1. 12]

(1) *Dhauti.*; (2) *Vasti*; (3) *Neti*; (4) *Laulikī*; (5) *Trāṭaka*; (6) *Kapālabhāti* are the six practices known as *ṣaṭkarmās*(1).

2. *Haṭha yoga pradīpika* introduces the six purificatory processes as follows:

धौतिर्बस्तिस्तथा नेतिस्त्राटकं नौलिकं तथा ।

कपालभातिश्चैतानि षट्कर्माणि प्रचक्षते ॥

*Dhautirbastistathā netistrāṭakam naulikam tathā,
Kapālabhātiscaitāni ṣaṭkarmāṇi pracakṣate. {2-22}*

Dhauti, Basti, Neti, Trāṭaka, Nauli and Kapālabhāti – these are said to be the six purificatory processes(2).

3. According to *Haṭha ratnāvali*

चक्रिनौलिर्धौतिर्नीतिर्बस्तिर्गजकरिणी ।

त्रोटनं मस्तकभातिः कर्माण्यष्टौ प्रचक्षते ॥

*Cakrinalirdhautirnetirrbastirgajakarīṇī,
Troṭanam mastakabhātiḥ karmāṇyaṣṭau pracakṣate. {1. 25}*

(1)Cakri, (2) Nauli, (3) Dhauti(4) Neti(5) Basti(6) Gajakarīṇī(7) Troṭanam and(8) Mastakabhāti, these are said to be eight karmās or eight purificatory processes (3).

Classification of of *Ṣaṭ karmās* :

<i>DHAUTI.</i>	<i>Antardhauti</i> (internal)	<i>vātasara</i> (plavini) <i>vārisāra</i> (<i>śaṅkha</i> prakshalana) <i>vahnisara</i> (agnisara kriyā) <i>bahiṣkṛta</i> (rectal cleaning)
	<i>Danta dhauti</i> (teeth)	<i>jihva</i> (tongue) <i>Karṇa</i> (ear) <i>Kapālarandhra</i> (frontal sinuses) <i>chakshu</i> (eyes)
	<i>Hrid dhauti</i> (cardiac)	<i>vastra</i> (cloth) <i>daṇḍa</i> (stick) <i>vāman</i> (<i>kuñjal & vyāghra Kriyā</i>)
	<i>Mūla śodhana</i> (Anal)	
<i>BASTI</i>	<i>Jala</i> (water) <i>Sthala</i> (dry)	
<i>NETI</i>	<i>Sūtra</i> (thread) <i>Jala</i> (water) <i>Dughdha</i> (milk) <i>Ghrṛta</i> (ghee)	
<i>TRĀṬAKA</i>	<i>Antaraṅga</i> (internal) <i>Bahiraṅga</i> (external)	
<i>NAULI</i>	<i>Dakṣiṇa</i> (right) <i>Vāma</i> (left) <i>Madhyama</i> (middle)	
<i>KAPĀLABHATI</i>	<i>Vātakrama</i> (breathing) <i>Vyuthkrama</i> (reversed) <i>Sīthkrama</i> (cooling)	

2.2 TRĀṬAKA:

Trāṭaka is cleaning of eyes.

1. According to *Gheraṇḍa Samhita*

निमेषोन्मेषकं त्यक्त्वा सूक्ष्मलक्ष्यं निरीक्षयेत् ।

यावदश्रुन पतति त्राटकं प्रोच्यते बुधैः ॥

Nimeṣonmeṣakaṁ tyaktoā sūkṣmalakṣyaṁ nirikṣayet,

Yāvadaśruna patati trāṭakaṁ procyate budhaiḥ . {1.53}

Gazing steadily without winking at any small object, until tear begin to flow is called Trāṭaka by the wise (1).

2. According to *Haṭharatnāvali* and *Haṭha yoga pradīpika*

निरीक्षेत् निश्चलदृशा सूक्ष्मलक्ष्यं समाहितः ।

अश्रुसम्पातपर्यन्तमाचार्यैस्त्राटकं स्मृतम् ॥

Nirikṣet niścaladṛśā sūkṣmalakṣyaṁ samāhitaḥ,

Aśrusampātaparyantamācāryaiṣṭrāṭakaṁ smṛtam.

- Haṭha yoga pradīpika {2.31},- Haṭharatnāvali {1. 52}

Looking intently with an unwavering gaze at a small point until the tears are shed is known as Trāṭaka (2&3).

Procedure: There are *Bahiraṅga* or

external, *Antaraṅga* or internal types in

the practice.

Bahiraṅga involves an object or a symbol

to gaze at. *Antaraṅga trāṭaka* involves

clear and stable inner visualization of an

object. The practice of *trāṭaka* is continued

until the subtle form of the image

manifests in front of the closed eyes. The

point of concentration which is a symbol or object activates the inner potential



and can absorb the mind. Symbols can be objects such as crystal ball, full moon, a star, symbol of OM etc...The figure shows *Jyoti trāṭaka*, practice with the flame. *Antaraṅga trāṭaka* uses the impression left by these symbols in the mind. *Trāṭaka* can be done at any time but is more effective when performed on empty stomach. Through out the practice one has to remain as a silent witness with awareness. If there is an uncontrollable flow of thoughts during *trāṭaka*, *mantra japa* should also be done at the same time. The gazing with closed eyes should be by meditating on *Ājñachakra* (fore head *cakra*).

Benefits:

नेत्र रोगा विनश्यन्ति दिव्यदृष्टिः प्रजायते ।

Netra rogā vinaśyanti divyadr̥ṣṭiḥ prajāyate

Gheraṇḍa samhita {1.54}

All eye disorders are destroyed and clairvoyance is induced (1).

मोचनं नेत्ररोगाणां तन्द्रादीनां कपाटकम् ।

यत्नतस्त्राटकं गोप्यं यथा हाटकपेटकम् ॥

Mocanaṁ netrarogaṇāṁ tandrādīnāṁ kapāṭakam,

Yatnatastrāṭakaṁ gopyaṁ yathā hāṭakapeṭakam.

Haṭha yoga pradīpika {2.32}

Trāṭaka eradicates all eye diseases, fatigue and sloth and closes the door way creating that these problems (2).

It benefits not only the eyes but a whole range of physiological and mental functions. The purpose is to make the mind completely one pointed and to arouse inner vision. *Haṭha yoga pradīpika* also mentions the arousal of clairvoyance but other capacities such as telepathy, psychic healing etc, can develop. Onepointedness of mind strengthens will power, improves memory

and ability to concentrate. Physiologically *Trāṭaka* relieves eye ailments such as eye strength, headache, and astigmatism.

2.3 KAPĀLABHATI:

Kapāla or *bhala* means forehead, *bhati* means shine. It is commonly called as frontal brain cleansing.

1. *Gheraṇḍa samhita* calls it as *bhālabhati*.

वाम क्रमेणाव्युत्क्रमेण शीत्क्रमेणा विशेषतः ।

भालभातिं त्रिधा कुर्यात् कफदोषं निवारयेत् ॥

Vāma krameṇāvvyutkrameṇa śītkrameṇā viśeṣataḥ,
Bhālabhātiṁ tridhā kuryāt kaphadoṣaṁ nivārayet.

Gheraṇḍa samhita {1.55}

There are three kinds of *Kapālabhati*, *vāma krama*, *vyut krama* and *śītkrama* and help to remove *kapha* disorders (1).

2. According to *Haṭhayoga pradīpika*

भस्त्रवल्लोहकारस्य रेचपूरौ ससंभ्रमौ ।

कपालभतिर्विख्याता कफदोषविशोषणी ॥

Bhastravallohakārasya recapūrau sasambhramau,
Kapālabhatirvikhyātā kaphadoṣaviśoṣaṇī.

Haṭha yoga pradīpika {1.36}

This is to perform rapid inhalation and exhalation like the bellows of the black smith. This *Kapālabhati* destroys all the disorders arising from excess of phlegm (2).

3. According to *Haṭha ratnāvali* it is explained as follows:

भस्त्रिवल्लौहकाराणां रेचपूरसुसंभ्रमौ ।

कपालभतिर्विख्याता सर्वरोगविशोषणी ॥

Bhastrivallauhakārāṇāṁ recapūrasusambhramau
Kapālabhatirvikhyātā sarvarogaviśoṣaṇī.

Haṭha ratnāvali {1.54}

*This is to perform rapid inhalation and exhalation like the bellows of the black smith.
Kapālabhati destroys all the disorders (3).*

Procedure:

There are three kinds of *Kapālabhati* according to *Gheraṇḍa samhita*. They are *vāmakrama*, *vyutkrama* and *śītkrama*.

Vāmakrama:

ईड्या पूरयेद्वायुं रेचयेत्पिङ्गलापुनः ।
पिङ्गलया पूरयित्वा पुनश्चन्द्रेण रेचयेत् ॥
Īḍyā pūrayeedvāyurṁ reecayetpiṅgalāpunah,
Piṅgalayā pūrayitoā punaścandreeṇa recayet.

Gheraṇḍa samhita {1.56}

Drawing the wind through the left nostril and expelling it through the right, and drawing it again through the right and expelling it through the left is Vāma karma (1).

In *Vāmakrama* short inhalations with emphasis on exhalation is performed. After the last exhalation deep inhalation is practiced. The inhaled air should be left through the mouth by slightly pursing the lips.

Vyutkrama:

नासाभ्यां जलमाकृष्य पुनर्वक्त्रेण रेचयेत् ।
पायं पायं व्युत्क्रमेण श्लेष्म दोषं निवारयेत् ॥
Nāsābhyāṁ jalamākṛṣya punarvaktreṇa recayet,
Pāyaṁ pāyaṁ vyutkrameṇa śleeṣma doṣaṁ nivārayet.

Gheraṇḍa samhita {1.58}

Drawing the water through nostrils and expelling through the mouth slowly and slowly is called vyut karma(1).

Śītkrama:

शीत्कृत्य पीत्वा वक्रेण नासानालैर्विरेचयेत् ॥

Śītkṛutya pītṵā vaktreṇa nāsānālavirecayet.

Gheraṇḁa samhita {1.59}

A mouth full of warm water is pushed up to nose to let it out is Śītkrama (1).

Benifits:

Prevents ageing, relaxes facial muscles, rejuvenates cells and nerves, can be used as *Jala neti*. Spiritually helps to awaken *Ājñā cakra*.

2.4 NETI:

Neti refers to cleansing of nasal passages.

There are four types of *neti*, *Jalaneti*- practice with water, *Sūtraneti*- practice with thread, *Dugdha neti* – practice with milk, *Ghrṛta neti*- practice with ghee.

Sūtra neti:

1. According to *Gheraṇḁa samhita*

वितस्तिमानं सूक्ष्मसूत्रं नासानाले प्रवेशयेत् ।

मुखान्निर्गमयेत्पश्चात् प्रोच्यते नेतिकर्मकम् ॥

Vitastimānaṁ sūkṣmasūtraṁ nāsānāle praveśayet,

Mukhānnirgamayetpaścāt procyate netikarmakam.

Gheraṇḁa samhita {1.50}

A thin thread, measuring half a cubit, inserted into the nostrils and pulled out by the mouth, is called Neti – kriyā (1).

2. According to *Haṭha yoga pradīpika*

सूत्रं वितस्ति सुस्निग्धं नासानाले प्रवेशयेत् ।

मुखान्निर्गमच्चैषा नेतिः सिद्धैर्निर्गद्यते ॥

*Sūtram vitasti susnigdham nāsānāle praveśayet,
Mukhānnirgamaccaiṣā netiḥ siddhairnigadyate.*

Haṭha yoga pradīpika {2.29}

A soft thread is inserted through the nose and taken out from the mouth is called Neti (2).

3. According to *Haṭha ratnāvali*

आखुपुञ्जाकारनिभं सूत्रं सुस्निग्धनिर्मितम् ।

षड्वितस्तिमितं सूत्रं नेतिसूत्रस्य लक्षणम् ॥

*Ākhupuñcākāranibhaṁ sūtram susnigdhanirmitam,
Ṣaḍvitastimitaṁ sūtram netisūtrasya lakṣaṇam.*

Haṭha ratnāvali {1.37}

A smooth thread made like the tail of the rat, of four and half feet in length, is Neti thread(3).

नासानाले प्रवेश्यैतं मुखान्निर्गमयेत्क्रमात् ।

सूत्रस्यान्तं प्रवद्ध्वा तु भ्राम्येन्नासानालयोः ॥

*Nāsānāle praveśyainam ayenam mukhānnirgamayetkramāt,
Sūtrasyānta pravaddhvā tu bhrāmyennāsānālayoḥ. {1.38}*

Introducing it in one nostril, it should be taken out from the mouth gradually.

By joining the end of the thread it should be rotated through nostrils (3).

Procedure:

1. *Sūtraneti*: Person should be asked to insert the thread or catheter straight into the nostrils by tilting the head little back. The thread should not be forced through the nose but gently



pushed so that it slowly passes down into the throat. When it reaches the back of the throat, two fingers are inserted in top the mouth and hanging thread should be pulled out. Then the thread is moved backwards and forwards. The same procedure is repeated from the other nostril.

2. *Jalaneti*: Neti pot which has a nozzle is fit into the nostril. Person while leaning forward should tilt the head to one side placing the nozzle of *Neti* pot other side. Water is introduced while breathing through the mouth. At the end, nose should be blowed thoroughly to drain out the remaining water. *Bhastrika* or *Kapālabhati* are advised after *Jala neti* to dry the nose.

Benefits:

साधनान्नेति कार्यस्य खेचरी सिद्धिमप्नुयात् ।

कफदोषा विनश्यन्ति दिव्यदृष्टिः प्रजायते ॥

Sādhānānneti kāryasya khecarī siddhimapnuyāt.

Kaphadoṣā vinaśyanti divyadr̥ṣṭiḥ prajāyate.

Gheraṇḍa samhita {1.51}

Practice of neti removes kapha disorders and it helps to master over Khecarī mudra (1).

कपालशोधनी चैव दिव्यदृष्टिप्रदायिनी ।

जत्रूर्ध्वजातरोगौघं नेतिराशु निहन्ति च ॥

kapālaśodhanī caiva divyadr̥ṣṭipradāyini,

jatrūrdhvajātarogaudham netirāśu nihanti ca.

Haṭha yoga pradīpika {2.30}

Sūtra and Jala Neti cleanse the frontal sinuses, bestow perfect vision, and soon destroy the diseases of the upper region above the shoulders (2).

On the physical level, irrigation of the nasal mucosa removes accumulated mucus from the nostrils, associated passages and sinuses, allowing air to flow

without obstruction. Regular practice of *Neti* maintains healthy secretory and drainage mechanisms of the entire ear, nose and throat area. The practice of *Neti* promotes a balance between the left and right nostrils. This induces a state of harmony and balance throughout the entire central nervous system and systems governing respiratory, circulatory, digestive and excretory function. The integration of higher mental faculties leads to genius, intuition, creativity. According to *Haṭha Yoga Pradīpika*, *Neti* leads to *Divya Dṛṣṭi* or Divine sight. *Divya Dṛṣṭi* is the faculty of clairvoyance which manifests with the awakening of *Ājñachakra* (9).

Indications:

Cold, cough, allergic rhinitis, Hay fever, tonsillitis, diseases of ears, eyes, and throat, Sinusitis, Headache, cold insensitivity to smell, asthma. Mouth breathing in children leads to poor memory, concentration and development is overcome by *Neti*.

Contra indications:

Haemorrhage , nasal polyps etc.

2.5 DHAUTI:

Dhauti is cleansing of Gastro intestinal tract.

According to *Gheraṇḍa samhita*-

अन्तर्धौतिर्दन्तधौतिर्हृद्दौतिर्मूलशोधनम् ।

धौतिं चतुर्विधां कृत्वा घटं कुर्वन्तु निर्मलम् ॥

Antardhautirdantadhautirhraddhautirmūlaśodhanam.

Dhautiam caturvidham kṛtvā ghaṭam kurvantu nirmalam.

Gheraṇḍa samhita- {1. 13}

The dhautis are of four kinds, they are - (1) *Antar dhauti* (internal washing);
(2) *Danta dhauti* (cleaning of the teeth); (3) *Hrid dhauti* (cleaning the heart);
(4) *Mulaśodhana* (cleaning the rectum) (1).

(1).*Antar dhauti* (internal washing):

वातसारं वारिसारं वह्निसारं बहिष्कृतम् ।
घटस्य निर्मलार्थाय अन्तर्घोतिश्चतुर्विधा ॥
vātasāraṃ vārisāraṃ vahnisāraṃ bahiṣkṛtam.
ghaṭasya nirmalārthāya antardhotiścaturvidhā.

Gheraṇḍa samhita- {1.14}

Antar dhauti is again subdivided into four parts: (a) *Vātasāra* (wind purification)
(b) *Vārisāra* (water purification), (c) *Vahnisāra* (fire purification) and (d) *Bahiṣkṛta*
(rectal cleansing) (1).

(a).*Vātasāra dhauti* (wind purification) - is performed by breathing in slowly through the mouth in *Kāki Mudra*, and then swallowing the air into the stomach while expanding the abdomen. It can be done ten times or until the stomach is fully expanded. Then the air should be passed through the large intestine to do these .It is helpful to assume an inverted posture. *Pāśinī mudra* is the best. The air should then pass of the anus easily out.

(b). *Vārisāra dhauti* (water purification) is more commonly known today as *Śaṅkha prakṣāḷana*. In this practice total of sixteen glasses of warm salty water has drunken and evacuated through the bowels. Two glasses of water are to be drunk with intervals and a series of five specific *āsanās* to be performed. *Āsanās* are *tadāsana*, *tiryaka tadāsana*, *kati cakrāsana*, *tiryaka Bhujangāsanas* and *udara*

karṣaṇāsana. After every two glasses of water, āsanas should be performed until the water starts flowing out of the anus. Once clear water comes out, then it is inferred that the stomach and intestines are perfectly cleaned.

There is a shorter technique called *laghu śāṅkha prakṣāḷana* where six glasses of warm saline water are taken. After every two glasses of water same series of āsanas are to be repeated. The *Haṭha ratnāvali* mentions the use of jaggery water or milk water instead of salt water. There is also various other herbs and juices which could be used like few drops of lemon, onion or garlic juice. Sometimes it can also be advised with carrot or celery juice.

Diet after *Dhauti*:

Forty five minutes after completing the practice of *śāṅkha prakṣāḷana*, a saltless liquid mixture of cooked rice, mung *dāl* and ghee has to be eaten to fill the stomach completely.

(c). *Vahnīsāra dhauti* (fire purification): also known as *Agnīsāra Kriyā* involves moving the fire in the body. Fire is related to the essence of fire located in the naval region. Fire is stimulated by the movement of abdominal muscles and organs. This can be felt by increase in the internal heat.

नाभिं ग्रन्थिं मेरुपृष्ठे शतवारञ्च कारयेत् ।

Nābhi granthim meruprṣṭhe śatavaraṅca kārayet .

Gheraṅḍa samhita { I.20}

The naval should be pushed against the spine hundred times (1).

The practice can be done in standing or sitting in *bhadrasana*. *Jalandhara bandha* is performed first and then the abdomen is pushed out and in rapidly while the

breath is held. It can be done while breathing through the mouth with the tongue extended and moving the abdomen in rhythm with the breath.

(d). *Bahiṣkṛta dhauti* (rectal cleansing): is very difficult to practice as it involves pushing the rectum out and washing it with the hands standing naval deep water.

(2). *Danta dhauti* (cleansing of teeth):

दन्तमूलं जिह्वामूलं रन्ध्रञ्च कर्णयुग्मयोः ।

कपालरन्ध्रं पञ्चैते दन्तधौतिं विधीयते ॥

*Dantamūlaṁ jihvāmūlaṁ randhrañca karṇayugmayoḥ,
Kapālarandhraṁ pañcaite dantadhautiṁ vidhīyate.*

Gheraṇḍa samhita {1.26}

Danta dhauti is cleaning of the teeth with the special stick, usually of neem or babul (1).

Dantadhauti includes *Jihva dhauti* – cleaning the tongue, by rubbing it with the joined first finger and thumb in a downward motion and then squeezing it, *Karṇa dhauti* –cleaning the ears, with the middle finger and nothing smaller, *Kapalrandhra dhauti* –cleaning the upper back portion of the palate, *Cakshu dhauti* –bathing the eyes, with tepid saline water or with urine.

(3). *Hrid dhauti* (purification of heart):

Hrid dhauti is purification of heart (or rather throat).

हृद्दौतिं त्रिविधां कुर्याद्दण्डवमनावससा ॥

hṛddhautiṁ trividhāṁ kuryāddaṇḍavamanavāsasā.

Gheraṇḍa samhita {1.36}

Hrid- Dhauti, is of three kinds, viz..(a) *Daṇḍa* (a stick),(b) *Vamana* (water) and by (c)*Vāstra* (cloth) (1).

(a) *Daṇḍa dhauti* (cleansing with stick):

The first practice is *daṇḍa dhauti* i.e. practicing with stick. Although a soft banana stem is traditionally used, *Gheraṇḍa* advises the use of the sugar cane or turmeric roots.



(b) *Vamana Dhauti* (cleansing with water) or *Vyāghra Kriyā* (cleansing like tiger) -is second practice of *Hrid dhauti*. *Vamana* is to vomit, *vyāghra* is tiger. In this practice food is vomited out from the stomach three hours after the meal. Vomiting can be practiced after drinking warm saline water and tickling back of the throat.

भोजनान्ते पिबेद्वारि चाकण्ठपूरितं सुधीः ।

उर्ध्वा दृष्टिं क्षणं कृत्वा तज्जलं वमयेत्पुनः ।

नित्यमभ्यासयोगेन कफ पित्तं निवारयेत् ॥

Bhojanānte pibedvāri cākaṇṭhapūritam sudhīḥ,
Urdhvām drṣṭim kṣaṇam kṛtvā tajjalam vamayetpunaḥ,
Nityamabhyāsayogena kapha pittam nivārayet.

Gheraṇḍa samhita {1.39}

After meal, let the practitioner drink water full upto the throat, then looking for a short while upwards, let him vomit out again. By daily practising this yoga, disorders of phlegm and bile are cured (1).

Kuñjal Kriya: is almost identical to *vyāghra Kriyā* except it is performed on empty stomach. After *vyāghra Kriyā* diet is restricted to sweet milk rice pudding. There is no restriction in diet in *kuñjal kriyā* (2).

(c) *Vastra Dhauti*:

चतुरङ्गुलविस्तारं हस्तपञ्चदशायतम् ।

गुरूपदिष्टमार्गेण सिक्तं वस्त्रं शनैर्ग्रसेत् ।

पुनः प्रत्याहारेच्यैतदुदितं धौतिकर्म तत् ॥

*Caturaṅgulavistaraṁ hastapañcadaśāyatam,
Gurūpadiṣṭamārgēṇa siktam vastram śanairgraset,
Punaḥ pratyāhārecyaitaduditarṁ dhautilkarmatat.*

Haṭha yoga pradīpika {2.24}

A strip of wet cloth, four angulas wide (i.e. seven to eight centimeters) and 15 hand spans (i.e. one and a half meters) in length is slowly swallowed and then taken out as instructed by the guru. This is known as vastra dhauti (2).



Figure no: Vastra dhauti

Haṭha ratnāvali and *Gheraṇḍa samhita* describe the similar procedures for *Vastra dhauti*..

विंशद्धस्तप्रमाणेन धौतिर्वस्त्रसुदिर्घितम् ।

चतुरङ्गुलविस्तारं सिक्तं चैव शनैर्ग्रसेत् ॥

*Visaddhastapramaṇena dhauteruvastrasudirdhitam,
Caturaṅgūvistaram siktam caiva śanairgraset.*

Haṭharatnāvali {1. 35}

चतुरंगुलर्विस्तारं सूक्ष्मवस्त्रं शनैर्ग्रसेत् ॥

पुनः प्रत्याहारेदेतत्प्रोच्यते धौतिकर्मकमे

*Caturaṅgulavistaram sūkṣmavastram śanairgraset,
Punaḥ pratyāhāredetatprocyate dhauti karmakam.*

Gheraṇḍa samhita {1. 40}

(4).*Mūlaśodhanam*:

अपानक्ररता तवद्याचन्मूलं न शोधयेत् ।

तस्मत्सर्वप्रयत्नेनमूलशोधनमाचरेत् ॥

*Apānakraratā tavadyācanmūlam na śodhayet,
Tasmatsarvaprayatnenamūlaśodhanamācaret.*

Gheraṇḍa samhita {1. 42}

Mūlaśodhanam: is done by inserting middle finger into the rectum and rotating it clockwise and anticlockwise (1).

Finger nails should be cut short and none irritating oil can be used to lubricate the anus. *Gheraṇḍa Samhita* also recommends the use of a turmeric root instead of finger and to start by sitting in *utkatāsana*.

Benefits of *dhauti*:

कासश्वासप्लीहकुष्ठं कफरोगाश्च विंशतिः ।

धौतिकर्मप्रभावेण प्रयान्त्येव न संशयः ॥

*Kāsaśvāsapliḥakuṣṭham kapharogāśca viṁśatiḥ,
Dhautikarmaprabhāveṇa prayāntyeva na saṁśayaḥ.*

Haṭha yoga pradīpika {2.25}

As a result of performing, asthma, disease of the spleen and the skin and twenty varieties of disease caused by excess of phlegm undoubtedly get cured (2).

गुल्मज्वरप्लीहाकुष्ठ कफ पित्तं विनश्यति ।

Gulmajvara plīhākuṣṭha kapha pittam vinaśyati.

Gheraṇḍa samhita { 1.41}

Gheraṇḍa Samhita states that dhauti can cure ailments pertaining to kapha, pitta and also diseases liver and spleen (1).

Contraindications:

Acute fever visceral infection, stomach or intestinal ulcers, hernia, heart diseases, high blood pressure.

2.6 NAULI:

The word *nāla* means tubular vessel. Here, it means the naval stream i.e. rectus abdominal muscle. *Gheraṇḍa Samhita* calls it is as *lauliki*. It comes from word *lola* which means to roll or agitate.

1. According to *Gheraṇḍa samhita*,

अमन्दवेगेन तुन्दं तु भ्रमयेदुभपार्श्वयोः ।

सर्वरोगान्निहन्तिह देहानलविवद्धर्नम् ॥१॥५२॥

Amandavegena tundam tu bhramayedubhapārśvayoḥ

Sarvarogānnihantiha dehānalavivaddharnam.

Gheraṇḍa samhita, {1.52}

Moving the recti muscles from one side to the other is called laukiki (1).

2. According to *Haṭha Yoga Pradīpika*

अमन्दावतवेगेन तुन्दं सव्यापसव्यतः ।

नतांसो भ्रामयेदेषा नौलिः सिद्धैः प्रशस्यते ॥

Amandāvartavegena tundam savyāpasavyataḥ,

Natānsō bhrāmayedeṣā nauliḥ siddhaiḥ praśasyate.

Haṭha Yoga Pradīpika {2.33}

Stirring the abdominal muscles from right to left is called nauli (2).

3. According to *Haṭharatnāvali*

सा च नौलिर्द्विध प्रोक्त भारीचैत्कान्तिकान्तरा

भारी स्यद्वाह्यरूपेण जयन्तेऽन्तस्तु सा तथा ॥

Sā ca naulirdvidha prokta bhārīcaitkāntikāntarā.

Bhārī syadbāhyarūpeṇa jayante'ntastu sā tathā.

Haṭharatnāvali {1.31}

Nauli is said to be of two types: Bāhya and Antarā. This Bāhya is external and Antara is internal (3).

According to *Gheraṇḍa saṃhita*, when rectus abdominal muscles are rotated from the left to right, it is called *dakṣiṇa nauli*. From right to left it is called *vāma nauli*.

When muscles are grouped together in the middle, it is called *madhyama nauli*.

Procedure:

Person should keep the feet little apart and rest the palms of the hands just above the knees by directing the thumb to the meadial side of the thigh. Jālandhara bandha (throat lock) can be performed while exhaling. Uḍḍyāṇa bandha (abdominal lock) is performed by sucking the abdomen in with the exhalation. The recti muscles can be isolated in the middle, right or left by lifting the hands a little and changing the pressure. Rotating the muscles in clockwise and anticlockwise is called as Nauli cālana (churning).

Benefits:

मन्दाग्नि सन्दीपन पाचनादि सन्दीपिकानन्दकरी सदैव ।

अशेष दोषमय शोषणी च हठक्रिया मौलिरियं च नौलिः ॥

Mandāgni sandīpana pācanādi sandīpikānandakarī sadaiva,

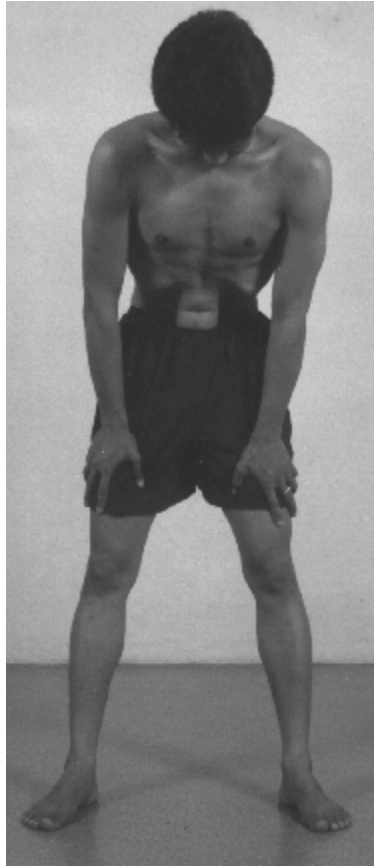
Aśeṣa doṣamaya śoṣaṇī ca haṭhakriyā mauliriyam ca nauliḥ.

Haṭha Yoga Pradīpika {2.33}

It kindles the digestive fire, removing indigestion, sluggish digestion and all the disorders of vitiated doṣas (2).



Dakṣiṇa Nauli.



Madhyama Nauli.



Vāma nauli.

Indications:

Nauli is especially useful in constipation, hyperacidity, diarrhoea, flatulence depression, hormonal imbalances, sexual and urinary disorders, laziness, dullness, lack of energy, and emotional imbalance. It controls one's appetite and strengthens will power.

Contra indication:

It is contra indicated in Heart disease, hypertension, hernia, gastric or duodenal ulcers, abdominal surgery, etc.

2.7 BASTI:

Basti is cleaning of large intestine by yogic enema.

1. According to *Gheraṇḍa samhita* there are two types of *Basti*.

There are two types of *Basti* karma, *Jala* and *sthala*.

जलबस्तिः शुष्कबस्तिर्बस्तिः स्याद्द्विविध स्मृता ।

जलबस्तिं जले कुर्याच्छुष्कबस्तिं सद क्षितौ ॥

Jalabastiah śuṣkabastirbastiah syāddvividha smṛtā,
Jalabastiam jale kuryācchuṣkabastiam sada kṣitau.

Gheraṇḍa samhita {1 . 45}

The *Bastis* are of two kinds, viz. *Jalabasti* (or water *Basti*) and *Śuṣkabasti* (or dry *Basti*).

Water *Basti* is done in the water and dry *Basti* on the land (1).

2. According to *Haṭharatnāvali*,

बस्तिस्तु द्विविधा प्रोक्ता जलवायु प्रभेदतः ।

चक्रिं कृत्वा यथाशक्या बस्तिञ्चैव तु कारयेत् ॥

Bastiastu dvividhā proktā jalavāyau prabhedataḥ,
Cakriṁkṛtvā yathāśakyā bastiñcaiva tu kārayet.

Haṭharatnāvali {1- 41}

Differentiating on water and air, *Basti* as said to be of two types. After doing *cakri* according to the best of one's effort one should practice *Basti* (3).

1. *Jala basti*:

Jala basti is yogic enema with water.

नाभिदघ्नजले पायौ न्यस्तनालोत्कटासनः ।

आधाराकुञ्चनं कुर्यात् क्षालनं बस्तिकर्म तत् ॥

Nābhidaghñajale pāyau nyastanālotkaṭāsanaḥ,
Ādhārākuñcanam kuryāt kṣālanam bastikarma tat.

Haṭha yoga pradīpika {2. 26}

Sitting in utkatāsana, naval deep in water, a tube is inserted to the anus by contracting and then cleaning with water is called Basti (2).

A tube of at least 13 to 15 centimeters long, perfectly smooth and hollow is used to insert to the anus. Tube can be wiped with bees wax or ghee for lubrication. When 4 centimeter of the tube is inserted into the anal passage in *utkatāsana*, person should be asked to perform *uddiyanbandha* and hold the *madhyama nauli*. Then water is sucked up by holding the breath. Catheter or tube should be removed without exhaling. Then person is asked to stand up and exhale slowly through the nose. Water should be expelled out in squatting position. Relaxation should be given in the form of *Śavāsana* and *Pāśinī mudra* should be practiced. This releases the air from the bowel and induces bowel action if there is any water remaining.

Basti can be done in warm or hot weather before *prāṇayāma* and *bandhas*. Before using the catheter for insertion it should be sterilized properly.

2. Sthala basti:

Sthala basti is yogic enema with air.

बस्तिं पश्चिमोन्तानेन चालयित्वा शनैरघः ।

अश्विनी मुद्रया वायुमाकुञ्चयेत् प्रसारयेत् ॥

Bastim paścimontānena cālayitvā śanairadhaḥ,

Aśvinī mudrayā vāyumākuñcayet prasārayet.

Gheraṇḍa samhita {1.48}

It is performed while lying on the back, assuming viparitakaraṇi position. Then the knees are brought down to the chest to push the sphincter muscles out so that air is sucked in.

Sthala basti can also be practiced in Pāśinī mudra or in Aśvini mudra or

Paścimattānāsana (1).

The *Haṭha Ratnāvali* says that after practicing *basti*, food should not be taken for three *ghatis* i.e. 72 minutes.

Benefits:

गुल्मप्लीहोदरं चापि वात पित्त कफोद्भवाः ।

बस्तिकर्मप्रभावेण क्षीयन्ते सकलामयाः ॥

Gulmaplīhodaram cāpi vāta pitta kaphoodbhavāḥ,
Bastikarmaprabhāveṇa kṣīyante sakalāmayāḥ.

Haṭha yoga pradīpika {2.27}

Enlargement of the glands and spleen and diseases arising from vāta (air), pitta (bile), kapha (mucus) are eliminated from the body through the practice of basti (2).

By practicing *jala basti* the appetite increases, the body glows, excess *doṣas* are destroyed and the *dhātus*, senses and mind are purified.

धात्विन्द्रियान्तः करणप्रसादं दद्याच्च कान्तिं दहनप्रदीप्तिम् ।

अशेषदोषोपचयं निहन्यादभ्यस्यमानं जलबस्तिकर्म ॥

Dhātviṅdriyantaḥkaraṇaprasādam Dadyācca kāntim dahanapradīptim,
Aśeṣadoṣopacayaṁ nihanyādabhyasyamānaṁ jalabastikarma.

Haṭha yoga pradīpika {2.28}

Practice of Jalabasti invigorates the dhātus, the senses and internal organs and gives a sense of well-being. It bestows luster, stimulates digestion and completely destroys all the accumulated diseases (2).

It is to be noted that Svātmārāma has described only *Jalabasti*

2.8 ṢAT KARMĀS IN CONTEMPORARY TEXT BOOKS:

There seems to be many differences in the names and mode of practice between the traditional texts and different contemporary texts. Only those that are different are mentioned in this chapter.

Ṣat karmās are mentioned as *Kriyās* in contemporary text books are discussed here.

Different texts are coated as follows:

I."Kriyās are cleansing techniques. Bathing, washing the face, brushing the teeth all are *kriyās*. But in yoga *kriyās* refer to special yoga techniques meant to cleanse the inner organs as developed by yogis.

The Objectives of *yoga kriyās* are to:

- 1) Cleanse the inner tracts namely the optical path, respiratory tract and gastro intestinal tract, and there by refresh the inner paths. Tardiness is removed.
- 2) Develop an inner awareness.
- 3) desensitize the possible hypersensitive reactions in the pathways (as in nasal allergy).
- 4) Build stamina and forbearance capacity.

The principles of *kriyā s* are to:

- 1) Stimulate the system by either an external medium or by volitional control.
- 2) Relax deeply after the *kriyā s* and often even during the *kriyā* practice itself."

- *A New light for Asthmatics (10).*

II."Trāṭaka (cleansing of eyes):

Classified mainly into:

1. Jaṭṭr trāṭaka (trāṭaka across the shoulders)
 - (a) Vāma jaṭṭr trāṭaka (left shoulder trāṭaka)
 - (b) Dakṣiṇa jaṭṭr trāṭaka (Right shoulder trāṭaka)

- (c) Ubhaya jāṭṭrāṭṭaka (defocussing)
2. (a) Urdhva mukha trāṭṭaka (upward gaze)
- (b) Adho mukha trāṭṭaka (down ward gaze trāṭṭaka)
3. Bru Madhya trāṭṭaka (centre of the eye brows trāṭṭaka)
4. Nāsāgra trāṭṭaka (tip of the nose trāṭṭaka)
5. Jyoti trāṭṭaka."

- *Yoga in Education (20).*

III a) "KAPĀLABHATI: (stimulating the brain cells):

- ❖ Sit comfortably in *Padmāsana* with an erect spine.
- ❖ Exhale forcibly as a burst using abdominal muscles.
- ❖ Inhale passively relaxing the abdominal muscles.
- ❖ Repeat as quickly as possible starting with 60 strokes per minute and increasing gradually up to 120 per minute.
- ❖ There is no holding of breath.
- ❖ The rapid active exhalations with passive effortless inhalation are accomplished by flapping movements of the abdomen. At the end of the minute there is automatic suspension of breath.
- ❖ Enjoy the deep silence of the mind associated with this.
- ❖ This *kriyā* washes out the carbon -di- oxide from the blood, activates the brain cells, cleans the air passages and stimulates the abdominal organs.
- ❖ In alternate nostrils *Kapālabhati*, the air is forced out during sudden bursts of exhalations through alternate nostrils. The speed is maintained at the same level at 120 strokes per minute."

-*Yoga in education (20).*

III b) KAPĀLABHATI:

The respiration obviously becomes shallow in nature. The tidal volume decreases .In normal breathing it is 450 to 500 ml per breath while in *Kapālabhati* the tidal volume has been found to be only 150 to 200 ml per breathing cycle. Minute ventilation (MV), however increases about three times more than that in the normal breathing due to increased breathing rate. In normal breathing MV is 7.5 liters /minute, while in *Kapālabhati* MV is about 20.5 liters /min. Oxygen consumption increase due to increased work of breathing. Consequently, Carbon- di-oxide is eliminated in large quantity from the blood. Oxygen consumption increases by 10 to 40 % over a normal breathing and then decreases by 3% after the practice is over, compared to normal values. As large quantity of Carbon- di-oxide is washed out from the body during *Kapālabhati* the respiratory center is not stimulated for breathing. On the contrary it is inhibited and one experiences a quiet or a tranquilized state of mind. Experimentally it has been observed that the duration of *antarkumbhaka* (internal holding) increases, if practiced immediately after *Kapālabhati* of 30 to 45 seconds. The heart rate increases slightly by 15 to 20 beats per minute and systolic blood pressure also increases by 7 to 10 mmhg. Diastolic blood pressure remains more or less the same.

-Anatomy and physiology of yogic practices (21).

IV. "NETI (Cleansing the Nasal passage):

There is no mention of *Jalaneti* in traditional texts. Dr. Bhole in his thesis has referred to *Kapālabhati* procedures of *Gheraṇḍa samhita* as *jalaneti*.

A) *JALANETI* (Cleansing the Nasal passage through water):

Sthiti: Tāḍāsana

Practice:

- Add about half a teaspoon salt to a *Neti* pot full of sterile Luke warm water.
- Stand with legs apart.
- Hold the *Neti* pot in your right hand.
- Insert the nozzle of the *Neti* pot into right nostril .keep the mouth open and breathe through the mouth.
- Tilt the head first slightly backwards, then forwards and sideways to the left so that the water from the pot enters into right nostril and comes out through the left by gravity. Allow flow till the pot is empty.
- Repeat the same on the left side.
- To clear the nasal passages of the remaining water, blow out the water by active exhalation through alternate nostrils as in *Kapālabhati*.

B) *SUTRA NETI*: (OR RUBBER CATHETER NETI)

Sthiti: Tāḍāsana

Practice:

- Insert a blunt end of a thin soft rubber catheter horizontally into the right nostril.
- Gently push it along the floor of the nose until the tip is felt in the back of the throat.
- Insert the right index and middle finger through the mouth and catch the tip of the catheter at the back of the throat.
- Pull it out through the mouth and gently massage the nasal passage by catching the two ends of the tube.
- Remove the catheter through the nose.
- Repeat on the left side.

Note:

Take care not to push the catheter vertically into the nostril.

Before you start this practice, cut and trim the nails of the fingers to be used for inserting in the mouth, as it may injure the throat when you are trying to grasp the tip of the catheter in the throat.

C) ŚITKRAMA KAPĀLA NETI:

This is similar to *Jalaneti*, with the difference that the water comes out of the mouth instead of through opposite nostril.

D) VYUTKRAMA KAPĀLA NETI:

Take a mouth full of saline water

Bend forwards and relax the soft palate so that the water comes out of the nose.

Neti kriyā is to be followed by a few rounds of *Kapālabhati*, so as to keep the nasal passage clear."

- Yoga - breathing practices, asanas, pranayama , mudras, bandhas, Kriyas and meditation (19).

V." Daṇḍa dhauti (cleansing with stick):

Sthithi: Tāḍāsana

Practice:

Drink Luke warm saline water as quickly as possible.

Take a rubber tube (daṇḍa) about 1 cm in diameter and about a meter long.

Slowly place one end of the tube and swallow it down the gullet into the stomach. Slowly bend forward. All the water will come out by syphon action .Suck in and bulge out the stomach if necessary. Remove the tube gently.

Note:

Drink three liters of Luke warm water .Rotate your body by raising hands & head and Shake the abdominal muscles before vomiting. Insert finger at the root of the tongue, press and vomit

The kriyā s should be performed early in the morning preferably before dawn and after clearing the bowels."

Integrated approach of yoga therapy for "POSITIVE HEALTH" (17).

VI. NAULI:

"The main characteristic of *Nauli* is the development of sub atmospheric pressure inside the various abdominal organs like stomach, urinary bladder, colon, and esophagus. *Swami Kuvalayānanda* investigated the creation of negative pressure in colon during *Nauli* for the first time in 1924. *Swami Kuvalayānanda* named this partial vacuum in colon 'Madhavas Vacuum' in the honor of this guru Madhavadas Maharaj. The negative or suction pressure is developed due to ascending action of diaphragm and the isolation of the abdominal recti muscles. The magnitude of negative pressure during *dakṣiṇa* and *vāma nauli* has been found to be in the range of -20 to -60 mmhg. The negative pressure was found in various degrees in different cavities and was maximum in colon. The creation of suction pressure can be demonstrated by connecting the stomach to the water column in a glass with a help of rubber tube. The water is immediately sucked inside the stomach when *nauli* is performed. The X-ray studies on *nauli* have revealed that the right and left domes of the diaphragm moved up independently of each other in *dakṣiṇa* and *vāma nauli* respectively.

-Anatomy and physiology of yogic practices (21).

CHAPTER 3

PAÑCAKARMĀS

Pañca karma: The *Pañca karmās* are five purificatory processes, are of *śodhana* type of treatments. They are named as *Vamana* – emesis therapy, *Virecana*-purgation therapy, *Vasti*-cleansing of colon, *Nasya*- nasal insufflation's therapy, and *Raktamokṣaṇa* - therapeutic blood letting.

The *Pañca karmās* are preceded by *pūrvakarmās*(preparatory procedures)and followed by *Paścāt karmās*(after procedures).

3.1Pūrvā karma: (preparatory procedures)

3.1 a) *Snehana* (Oleation therapy)

Snehana's actual meaning implies kindness, tenderness and love. True to its meaning it is a thoroughly soothing and enjoyable experience. A *Sneha* or an oleaginous substance forms the essential factor of physical organism and the self conscious animated element. *Snehas* or oleaginous substances are enjoined to be administered in food and drinks as well as in *Anuvāsana*, *Mastikya-ŚiroVasti* and *UttarVasti*. There are four kinds which however are divided into two classes according to their origin; vegetable and animal. Clarified butter prepared from cows milk is the best of the animal *Snehas*, sesame oil is the best of the vegetable ones. The oils are prepared from the seeds of *Lodhara*, *Airaṇḍa*, *Danti*, *Dravanti*, *Saptala*, ..etc.

सर्पितैलं वसा मज्जा सर्वस्नेहोत्तमा मताः ॥

Sarpitailaṃ vasā majjā sarvasnehottamā matāḥ||

Caraka samhita {13.9}

Four types oleaginous substances are vegetable oils (*taila*) clarified butter (*ghee*) animal fats (*vasa*) and fat from bone marrow (*majja*).

There are two types of *Snehana*, *Bāhya* and *Abhyantara*

i) *Bāhya Snehana* is massage process with sequence of strokes beginning from the umbilicus, going to head, moving back down to the umbilicus, from umbilicus down to the feet and from feet back up to the umbilicus on both the front and back sides of the body. The herbal oils are selected with reference to the patients Doṣic makeup. More commonly used one are *Vāta shamak* to pacify *vāta*, *Chandanabala* to pacify *pitta*, *mahanarayana* to pacify *kapha*.

ii) *Abhyantara (Internal Sneh)*:

A man with an empty stomach should be made to take a draught of medicinal or medicated oil or *ghṛṛta* at dawn. Mouth should be washed with warm water.

The use of *Ghrṛta* is recommended for dry condition of an individual which is the result of deranged *vāyu* and *pitta*. This will be characterized by weak memory and intellect. Medicated oils should be used in aggravations of the *kapha* or fat.

Use of lard is recommended to persons emaciated with over fatigue, physical labor or *mahāvadyadhi* (disease pertaining to vitiated conditions of the blood). The use of marrow or medicated *ghṛṛta* mixed with appropriate herbal drugs in a person with strong digestive capacity. Here the *vāyu* is deranged with slow bowel movement and less appetite.

Clarified butter without any other additives is for affections of deranged *pitta* whereas it should be mixed with salt before use in diseases due to deranged *vāyu*. Powdered *trikatu* is used in the affections of aggravated and deranged *Kapha*.

Clear oil, clarified butter, etc., should be taken by a man who is undergoing physical hardships during the months of the year which are neither too hot nor too cold.

A *Sneha* should be taken in the morning during the cold months of the year in case of joint aggravation of the bodily *Vāyu* and *Kapha*; whereas it should be taken in the evening, during summer and in cases of joint aggravations of bodily *Vāyu* and *Pitta*. If person feels thirsty after taking *Sneha*, warm water can be given and be made to vomit the *Sneha* drug once again. Cooling plasters should be applied to the head and cold water bath should be advised. Both the decoction and the paste should be prepared by respective drug in medicated *Sneha*. Medically cooked *Sneha* has several degrees, mild moderate and hard. Mild or *mṛdu* –oil has found entirely from its drug paste leaving it dry and sapless. It is given in food and drinks. *Madhyama* – paste is pellucid and non sticky like wax. *Khāra*- paste assumes a like clear, glossy, forth less and black colored. It can be used in *Vasti krama* as ear drops.

Benefits of *Snehana*:

When oil has saturated all seven *dhātus*, the body is well lubricated internally as well as externally. The skin is displaced a soft and shiny appearance and smells slightly unctuous. Elimination is healthy and fecal matter appear yellowish shiny or oily and is softer than normal. Both urine and fecal matter may smell like ghee and urine may look brighter than usual. Secretions from the eyes, nose and ears shine slightly and the skin and the hair become softer. Strength, enthusiasm, energy and clarity of mind increased. *Snehana* employs substances with the properties of fluidity and oiliness, which can penetrate even the finest tissues of the body and promote secretions. They induce the *dhātus* to give up their

accumulated toxins. They enhance the secretion through which doṣas transport all impurities to the gastro intestinal tract for elimination. They lubricate and protect the *dhātus* from damage while impurity being removed. They pacify and nourish *vāta* through its unctuous qualities. They remove the obstructions in the *Śrotās* or channels. The herbs used to prepare ghee for internal application also help to prevent cholesterol being deposited in the body. The digestive capacity is improved with regular and satisfactory motions of the bowels. There will be improved complexion and delayed old age. Strengthening of organs relates the firmness of the body.

3.1 b) SVEDANA OR (SUDATION THERAPY)

Svedana-literally means sweat. By this *Śrotās* or channels are diverted to remove the impurities. Sweat occurs naturally when the channels are widened up.

Svedana assists and enhances the process begun with *Snehana* (11).

Procedure:

When there is increased bodily *vāyu*, person should be anointed with oil and wrapped in thick cloth. There are two types of *svedana*. They are *Nadi svedana* and *Bhāṣpa svedana*.

Nadi svedana is penetrating heat by using a tube. Steam from an herbal water decoction is passed through the local area and is heated through the tube.

Previously clay pot or bamboo tube was used.

Nadi is a more penetrating type of wet heat than *bhāṣpa*.

Bhāṣpa: related to steam bath. This is by using a steam box where person either sits or lies on back. Head is excluded .i.e. head is outside to the chamber.

Applying a cold compress on the forehead during the treatment is must.

Once the *dhātus* give their accumulated toxins and wastes, *doṣas* successfully transport them back to gastro –intestinal tract for the elimination. From there *pañca karma* therapies will take the impurities out.

Ayurvedic texts describe four main types of *Agni Svedana*.

1. *Tapas Svedana (Rukṣa svedana)*: involves application of dry heat, such as sauna or hot sand fomentation.
2. *Upānaḥ Svedana*: Hot herbal poultices prepared with water or oil. These poultices consist of a combination of black gram flour cooked with herbs. Combination of heat, herbs and oil in the poultices reduces the pain and restores mobility of the joints especially in gout.
3. *Drava Svedana*: Herbal decoctions in hot water either in the form of shower or a hot bath are called is as *drava svedana*. Lukewarm decoction of any *vāyu* subduing drugs will help to overcome the disease.
4. *Ushma Svedana* : It is the combination of *nadi* and *bhāṣpa svedana*.

An alterative type of *svedana* is called *avagaha svedana*. In this procedure, a tub should be filled with decoction of herbs, milk, oil and ghee to immerse the body in it. This is called *Avagaha Sweadana*.

After a full and complete application of *svedana*, the *Sneha* should be rubbed well over the body and patient should be asked to go for hot bath. After the baht body should be kept well covered with warm cloths and diet should be taken care of. Entire body of the patient should be easily fomented without causing any inconvenience (11).

As an alternative *svedana* meat soup, milk, curd, decoctions of tender leaves of the *vāyu* subduing plants either jointly or separately should be heated over the fire. The entire body should be covered with blanket where the steam touches the

body surface. Body should be heated till the vapors get deposited in the forehead.

रोगातुव्याधितापेक्षो नात्युष्णोऽतिमृदुर्न च ।

द्रंघवान् कल्पितो देशे स्वेदः कार्यकरो मतः ॥

*Rogātuvyādhitāpekṣo nātyuṣṇo'atimṛdurna ca,
Draṅghavān kalpito deśe svedaḥ kāryakaro mataḥ .*

Caraka samhita {14.6}

Fomentation neither too hot nor too mild combined with proper drugs, applied with due regard to the diseases, the season, the individual constitution and the bodily organ effected by the disease is effective.

Contra indications:

वृषणौ हृदयं दृष्ट्वा स्वद्येन्मृदु नैनवा ॥

Vṛṣaṇau hrdayaṁ drṣṭva svadyenmṛdu nainavā

Caraka samhita {14.10}

No fomentation should be preferably administered over testicles, heart and eyes.

It is also contra indicated in Urinary disorders, toxic conditions, alcoholism, jaundice, abdominal diseases and weak person.

A tub should be filled with decoction of herbs, milk, oil and ghee to immerse the body in it. This is called *Avagaha Svedana*.

Benefits of *svedana*:

Improved digestive capacity, smoothness and clearness of the skin, Relish for food, clearness of bodily ducts and channels.

Contraindications:

It is contraindicated in Jaundice, urinary complaints, hemorrhage, pulmonary consumption (*Kshaya*), emaciation, indigestion, ascites, increased thirst, vomiting and dysentery.

Post fomentation Management:

After the *oleation* therapy, fomentation should be administered. When duly fomented, person should be kept under wholesome diet. After fomentation there should be complete abstention from exercise for that day.

Fomentation should be applied until there is complete recovery from clod, colic pain, stiffness and heaviness of the body until the sweating appears.

Order of administering *Snehana* and *svedana*:

स्नेहमग्रे प्रयुज्जीत ततः स्वेदमनन्तरम् ।

स्नेहस्वेदोपपन्नस्य संशोधनमथेतरत् ॥

*Snehamagre prayujjīta tataḥ svedamanantaram,
Snehasvedopapannasya saṁśodhanamathetarat.*

Caraka samhita {13.99}

Snehana should be administered first and then the svedana. These two are preparatory procedures for the śodhana kriyā s or pañca karmās.

3.2 NASYA:

Nasya is nasal insufflation therapy or errhine therapy. Inhalation of medicated snuff is called *nasya*. Medicated snuff is composed of powders of any drugs or *Sneha* cooked with such drugs. They are of two kinds. One is *Śirovirecana* and other is *Snehana*. In *Śirovirecana* medicated *Sneha* poured into nostrils to be discharged into the mouth. Powders of *Śirovirecana* drugs can be blown into the

nostrils with the help of the blow pipe. The accumulation of *kapha* in the region of the palate, throat or head can be taken out efficiently.

Types of *Nasya*:

Nasya can be administered by either using Medicated powders, medicated oils or by using both together.

1. To promote dislodgement and to carry the toxins out of the body .This is called as *śodhanam*.
2. To create a palliative or soothing effect is called *śamana*.
3. To provide nourishment to the tissues, called *Bruhan Nasya*.

According to the needs of the patients, each of these three effects can be increased by combination of medicated substances which are introduced to the nose.

Administration:

1. *Avapidana* or squeezing: Here dripping of juices extracted from fresh herbs into the nasal passage is practiced.
2. *Pradhamana* or forcefully pushing: powdered herbs are blown into the nose through a tube while inhaling.
3. *Marśyanasya* and *Pratimarśya* repeated applications using few weaker herbs which are not propelled as deeply in a sesame oil base. In *Marśya* 2 to 4 drops of medicated oil introduced into the nostrils every two hours. In *Pratimarśya* Medicated oil introduced frequently introduced in a day by the person himself through fingers. This treatment cleans, lubricates and strengthens the mucous membrane. Keeps the nasal passage open and increases the resistance to foreign substances.

Preparing for *nasya*:

Preparation is through *Snehana* . Warm herbal oil is vigorously massaged into the face focusing on to the sinus areas. Fomentation using a hot water bottle wrapped in a hot moist cloth is then applied to the face and neck to dilate the passage ways i.e. localized *Svedana*.

Indications:

ऊर्ध्वं जत्रु विकारेषु विशोषान्नस्यमिष्यते
ūrdhva jatru vikāreṣu viśoṣānnasyamiṣyate
Aṣṭāṅga hṛdaya, (18.1)

Nasya is considered to be the best remedy in the diseases pertaining to upper respiratory tract.

It is also indicated in Sinus congestion, chronic sinusitis, cold migraine, epilepsy, and eye and ear disorders.

Contraindications:

Contra indicated in infants, dehydration, immediately after bath and in pregnant women.

3.3 VAMANA.

Suśruta begins *pañca karmā* procedures by vamana karma. *Vamana*, the emesis therapy should be practiced after *Snehana* and *svedana* where person shows signs of internal and external signs of complete internal and external oleation. These

svedana and *snehana* help the movement of mucilaginous fluid into the stomach for their easy expulsion.

उपस्थिते श्लेष्म पित्ते व्याधवामाशयाश्रये ।

वमनार्ते प्रयुज्जित भिषमदेहमदूषयन् ॥

*Upasthite śleṣma pitte vyādhavāmāśayāśraye,
Vāmanārte prayujjita bhiṣamdehamadūṣayan.*

Caraka samhita(2.8-)

When vitiated pitta comes to the site of kapha i. e. upper part of stomach, the emesis is induced.

The night before *Vamana* is administered; *kapha* stimulating food should be given like sweet heavy, cool, sticky, slimy and oily foods.

Vamana should be given in the morning when it is neither too hot nor cold. Emetic drugs can be given in the form of powder, paste, decoction, medicated oil or ghee form.

Method of administering:

The procedure begins by giving the patient approximately one and half glass of a thin, sweet –tasting porridge made from wheat and milk. This promotes watery secretions and again increases the volume of the stomach contents. The porridge is pleasant and soothing in the taste and reduces the anxiety of the person under going treatment.

After eating the porridge emesis stimulating herb like *madan phal* (*Randia dumetorum*), is administered. There are 255 emetics named in *Caraka samhita*.

To ensure that the emesis is effortless and as comfortable as possible, a large quantity of warm licorice tea should be given. Licorice (*yasti madhu*) provides an excellent medium for moving sticky, heavy, oily, impurities out from the tissues.

In case of aversion to licorice, sugar cane juice or saline solution is used.

Fill the stomach completely to facilitate the emesis process. After the emetic has been administered, the body of the person should be gently fomented for a short period of time with warmed up palms of the hands. When there is tendency to vomit, the finger or the stem of a castor plant or of lotus should be inserted down his throat and made to vomit and continued vomiting until there is a bitter, sour or burning taste in the mouth. The amounts of porridge and licorice tea that are ingested and the vomitus that is expelled should be collected. Color, consistency, and odor give the information on the effectiveness of treatment.

Signs and symptoms:

1. First effect would be perspiration which indicates that the *doṣas* has started melting.
2. The second stage would show that the *doṣas* has moved from its own position.
3. In the third stage, distension of the abdomen is indicative of the *doṣas* having shifted to the intestine.
4. Fourth stage is characterized by nausea and salivation which occurs as an indication of the fact that the *doṣa* has started moving upwards.
5. This stage the patient should be asked to sit on a bed of knee height.

During emesis person sits by leaning forward and supporting the head; pressing the navel and massage in the back are done by the attendant.

Proper administration of Vamana karma is characterized by:

1. Manifestation of the vomiting urges in time.
2. Absence of too much pain.
3. Elimination of *doṣas* in proper order.
4. Automatic stoppage of the vomiting urge.

Post emesis management:

1. Hands and feet of the person should be well washed.
2. Avoid speaking aloud too much of eating standing for a long time
3. The diet which is heavy and deficient in nutritive value should be avoided.
4. Regimen of dietetics should be followed .i.e. Same evening or the next day after the patients has taken the bath in Luke warm water, diet should be given when the power of digestion has been revived. The Oleation therapy should be started immediately for a person who intends to go for purgation therapy.

Indications:

It is indicated in Poisoning, wasting diseases, sluggish appetite, hysteric convulsions, asthma, inflammations of lips throat and mouth.

कासोपलेपस्वरभेद निद्रा तन्दास्यदौर्गन्धविषोपसर्गाः ।

कफप्रसेक ग्रहणी प्रदोषा न सन्ति जन्तोर्वमतः कदाचित् ॥

kāsopalepasvarabheda nidrā tandāsyadaurgandhaviṣopasargāḥ

kaphapraseka grahaṇī pradoṣā na santi jantorvāmataḥ kadācit

Suśruta samhita, cikistāstāna (33.12).

Person performing Vamana will not suffer from cough, impurities in bodily channels, change in voice, excessivesleep, lasiness, foul smell in breath and worm infestation.

Contra indications:

Cataract, abdominal dropsy, enlargement of spleen, worms in the intestines, urinary complaints, haemoptysis and obstinate constipation, old and emaciated persons.

3.4 VIRECANA):

Virecana involves the use of strong purgatives which induce loose bowel movements so it is called as purgation therapy. *Virecana* is a controlled process, the effect of the purgative herbs subsides after a short time and the patient is left feeling stronger and more vital because toxins and waste material have been eliminated. The herbal substances which induce the purgation contain a predominance of *jala* and *prithvi bhutas*. They act with varying intensity on different individuals. *Vāta* dominant people are characterized by dry and hard stools, the oil from *Airaṇḍa* (*Ricinus communis*) can be used. In *kaphic* individuals with slow bowels and heavy, sticky stools need a stronger laxative like *Amaltas* (*Cassia fistula*). The *Caraka samhita* lists 315 herbal preparations that can be used in *Virecana*.

Preparation for *Virecana*:

Snehana and *Svedana* treatments prepare the patient for *Virecana*. Bitter ghee or tikta *ghṛrita* is the best substance for internal oleation. Full oleation is essential to dislodge the *āma* and toxins and draw them into the small intestine from the surrounding organs and tissues in the *pitta* zone.

The meal immediately preceding *Virecana* includes foods which promote the secretions from the *pitta* zone, such as hot, spicy and sour foods.

Administration of *Virecana*:

Coordination in the timings of the meals .i. e. Administration of meals in the hours around noon or midnight and the purgative used maximizes the *pitta*

secretions in the mid zone of the body. The frequency of bowel movements differ from individual to individual, ideally person should have at least six or eight movements. Other wise the procedure should be repeated with in few hours. The fecal matter is solid at first, but progressively softens until it is entirely liquid. The frequency of evacuation should be noted, as well as the quantity, color, odor, consistency and the presence of mucus, blood or parasites. The liquid bowels with little mucus indicate the complete emptying of small intestine.

Indications of *Virecana*:

पित्तं वा कफपित्तं वा पित्ताशयगतं हरेत् ॥

Pittam vā kaphapittam vā pittāśayagatam haret.

Caraka samhita, cikistāstāna. (3.171)

Purgation eliminates either pitta or kapha or both of them from pittāśaya I.e., stomach and small intesine.

It is indicated in Hyper acidity, colitis, urticaria, hemorrhoids, chronic headache, acid peptic disease, and skin diseases such as acne, Dermatitis, psoriasis, eczema.... ,etc.

प्राधान्येन वमन विरेचने वर्तते निर्हरशो दोषाणां चिकित्सा ॥

prādhānyena vamana virecane vartate nirharaśoo doṣāṇām cikitsā.

Suśruta samhita, Cikitsā stāna, (33.11)

Vamana and Virecana are the two primary cleansing techniques to eliminate the disturbance caused by vitiated doṣās.

So this verse states that vamana and virecana are to be applied to bring the balance in the doṣās.

Contra indications:

Contra indicated in Ulcerative colitis, dehydration, emaciation, acute fever and people with weak digestion.

3.5 VASTI:

Vasti is Therapeutic purification and rejuvenation of colon. *Vasti* is the instrument used for introducing water and is prepared with the bladder of an animal.

Vasti can be classified according to bowel movement into *mṛdu*, mild or easily movable, moderately constipated or *Madhyama, krūra* or hard or constipated. *Mṛdu* or mild has abundance of pitta. *Madhyama* is general type with equilibrium among *tridoṣas*. Hard or *Krūra* is the action of abundance of *vāyu* and *kapha*. Accordingly medicine is selected. An aggravation of *kapha* and *pitta*, a burning sensation in the body and aversion to food, impaired digestion are effects of improper application of a purgative.

The construction of *Vasti*:

The bladder, of which a *Vasti* should be made, should be cleaned, tanned and dyed with disinfecting decoctions. It should be softened and repeatedly lubricated with *Sneha*. The whole bladder should be heated with the piece of iron in order to polish the surface and remove the pores there in .If any bending in it should be corrected by fitting it into the butt end of the pipe. The mouth of the bladder should be folded again and tied. Once completed, it should be carefully preserved.

Types of vastis :

The *Vasti* are of two types.

1. *Niruhika* (dry or oil less), 2. *Snaihika* (oleaginous).

They are also classified according to effect of *vasti* and the site of administration

According to the function:

Utkleśana (disintegrating).

Doṣahara (corrective enema).

Samsódhanam (soothing).

Vasti should be applied with due regard to the nature of the season, nature and intensity of the disease under treatment, the strength of the patient and *Doṣa* involved in that condition.

According to the site of administration:

1. *Pakvāśaya gata Vasti*: medicated liquids sent through anus and rectum into colon.
2. *Uttara basti*: medicated liquid is sent through vagina and cervix to clean and nourish the uterus.
3. *Madhu tailika* ; is a type of *niruha basti*.
4. *Aṣṭa pāna*: rejuvenating organs there by organism.
5. *Anuvasana*: is alternative of *Sneha Vasti*. It can be adopted daily without any injury
6. *Netra Vasti*: for eyes.
7. *Kati vasti* : for lumbosacral area.
8. *Uro vasti*: on chest or heart region.
9. *Śiro vasti*: to the head region.

It helps the secretion and growth of fresh semen, contributes to the building up of an emaciated frame, invigorates eye sight, arrests immature old age and tends to rejuvenate.

A regular and proper use of a *Vasti* tends to improve complexion, bodily strength, imparts longevity, and contributes to the growth of the body.

Method:

Medicine duly injected through a rectum with the help of *Vasti* remains in the intestines (*pakvāśaya*) in the region of pelvis and below the umbilical region. The potency of *Vasti* spreads over whole body. The liquid part of the *Vasti* is emitted out through the rectum. A well applied *Vasti* contributes to the growth, health and strength. *Vasti* should be applied after emission of stool, flatus and urine from the system, since they resist the penetration of *Snehana* into the bowels. The potency of *Sneha* would be easily able to penetrate the system when previously cleaned.

1. NIRUHA-VASTI:

Snehana and *Svedana* are applied before the application of *Vasti*. The bowel and bladder should be relieved of all fecal accumulations. The *Vasti* should be administered in noon in a well cleaned chamber devoid of any gust of wind. Person has to lie on left side and right knee should be flexed. *Vasti* should be firmly pressed on its *Karnika*. One half of the mouth of the *Vasti* should be kept contracted by pressing a small and ring finger of left hand. Other half should be stretched with thumb, index and middle finger. Medicinal solution should be poured into the bladder. The pipe should be held with the middle and index finger of the right hand. Care should be taken in order not to let the solution overflow from *Vasti* or even a bubble of air should not be admitted. When the neck of the pipe is lubricated with clarified butter and cleaned, it should be gently introduced into the rectum of the patient up to its *karnika* (protuberance). The injection of medicinal solution in *Vasti* should be made at once, neither too

slowly nor too hurriedly. The pipe should be withdrawn and removed. Person should be asked to remain in the same position for a period of 30 *matras*.

2. *SNAIHIKA*:

Basti is administered in the same way as Niruha basti but with oleaginous substances.

Benefits of proper purification:

Clearness and expansion of the intellect, firmness of the organs, increase in the *bala* Improves digestive capacity by delaying the old age.

Indication:

त्रिन्मलान् बस्तिहरेत् पक्वाशयस्थितान् ॥
trinmalān bastirharet pakvāśayasthitān.
Caraka samhita, Cikitsā stāna {3.171}

Basti eliminates all the three doṣās lodged in pakvāśaya i.e. Colon.

शरिरोपचयं वर्णं बलमारोग्यमायुषः ।
कुरुते परिवृद्धिं च बस्ति सम्यगुपासितः ॥

śariropacayaṁ varṇaṁ balamārogyamāyusaḥ,
kurute parivṛddhiṁ ca basti samyagupāsitaḥ.

Suśruta samhita, Cikitsā stāna, {35.4}

By the proper administration of basti there will be strengthening of body, improvement in digestive capacity. This results in healthy state with better complexion and longevity.

So, it is indicated in Aversion to food, hemorrhoids, tumors, ascites, and abscess.

Hysteric convulsions and other mental disorders can also be improved by *Vasti*.

Contra indication:

In infants, diarrhoea, rectal bleeding, ulcerative colitis, diverticulitis, colon cancer, polyps, fever ...Etc.

3.6 RAKTA MOKṢANA:

Rakta mokṣana is therapeutic blood letting.

Rakta mokṣana means therapeutic blood letting with the help of *jalukas* or leeches. *Jalam* means water *oka* means dwelling place. So the leeches dwell in the water. They are divided into twelve distinct species of which six are venous and six are non-venomous

1. Venomous species of leeches:

The six venomous species are named *Krishna*, *Karvura*, *Alagarda*, *Indrāyudha*, *Sāmudrika* and *Gocandana*.

Krishna is marked by thick head and colour resembling powdered lamp black. *Karvura* has extended or elongated bodies and are indented and thick at the waist. *Alagarda* leeches are hairy, thick and round at the sides with black color at the mouth. *Indrāyudha* are marked on surface with up-pointed rainbow colored lines. *Sāmudrika* are blackish yellow, dotted over with white spots of variety of shapes. *Gocandan* provided with narrow mouths and are marked by bifurcating line at the bottom like the scrotal sac of a bull.

A person bitten by any of these venomous leeches has an irritable inclination to scratch the seat of bite which is marked by a considerable swelling.

2. The non-venomous species:

The non- venomous species include *Kapilas*, *pingalas*, *Śāṅkha mukhis*, *Musikas*, *Pundarimukhis*, *Sarāvikas*.

Kapila colored like *manah shila* at the sides and their backs are tinged with a glossy hue like that of *mudga* pulse. The *Pingalas* have reddish color and round in shape and are capable of locomotion. The *Saṅkha Mukhis* are marked by a blackish and are provided with sharp elongated mouths .They are capable of sucking blood with the greatest swiftness. *Musikas* colored like common blind mole sand, emit a fetid smell from their bodies.

Pundarimukhas are colored like *mudga* pulse and are called from the fact of resemblance of their to the full blown lotus lilies. *Saravikas* have cold bodies marked with impressions like lotus leaves. The non- venomous leeches swim about in sweet scented waters live on non- poisonous weeds, lay on the leaves of the flowering water plants. They suck the blood from the affected part of a human organism without causing any discomfort.

Mode of application:

Leeches should be caught hold of with a piece of wet leather or by some similar article and then put into a large sized new pitcher filled with the water and ooze or slime of a pool. Pulverized zoophytes and powder of dried meat and aquatic bulbs should be put into it for them to lie upon. The water and edibles should be changed each week. The leeches should be transferred to a new pitcher at the end of seven days.

The part which the blood is to sucked should be first scarified or slightly cut in two or three places. Then the mouth or the open end of the horn, covered with a thin piece of muslin tied around its edges should be placed over it and sucked with the mouth through the aperture at its tip or top end.

Therapeutic applications:

तत्र वात पित्त कफ दुष्टशोणितं यथा सख्यं शुङ्गजलौकालाबुभिरवसेचयेद्विशिषतस्तु विस्त्राण्यां सर्वाणि सर्वैर्वा ॥

tatra vāta pitta kapha duṣṭaśoṇitaṁ yathā sakhyam

śṛṅgajalaukālabubhiravasecayedviśiṣatastu vistrāṇyām sarvāṇi sarvairvā

Suśruta samhita, sūtra stāna, { 13.4}

In vata vitiated blood Śṛṅga are used, In kapha vitiated condition Ālabubhu are used and in pitta vitiated blood Jalukās are used.

CHAPTER – 5

COMPARISONS BETWEEN ṢAṬ KARMĀS AND PAÑCA KARMĀS

The Ṣaṭ karmās and Pañca karmās can be compared in many aspects. They can be listed under conceptual comparisons and therapeutic comparisons.

5.1 Conceptual comparisons:

1. Concept of health and disease:

Purified state of the body is considered as healthy state.

<p><i>Ṣaṭ karmās:</i></p> <p>योगनालेन समदह्य घटशुद्धिं समाचरेत् ॥ <i>Yoganālena samdahya ghaṭaśuddhim samācaret.</i> <i>Gheraṇḍa samhita {1.8}</i> <i>The body should be cleaned by the disciplinary practices.</i></p> <p>Body is embodied with lots of impurities, and purification is of</p>	<p><i>Pañca karmās:</i></p> <p>वायुः पित्तं कफ श्रोक्तः शरीरो दोष संग्रहः ॥ मानसः पुनरुद्धिष्टो रजश्च तम एव च ॥ <i>Vāyuh pittaṁ kapha śroctaḥ śarīro doṣa saṅgrahaḥ,</i> <i>Mānasaḥ punarūddhiṣṭo rajaśca tama eva ca.</i> <i>Caraka samhita { 1.57}</i> <i>The pathogenic factors in the body are vāyu and kapha . The pathogenic factors in the mind are rajas and tamas.</i></p> <p>So the balance of <i>doṣās</i> in the body and balance of <i>rajas</i> and <i>tamas</i> in</p>
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<p>primary importance. The accumulation of impurities is considered as disease state where there will be block in the <i>nādis</i>. So <i>ṣaṭ karmās</i> are administered for the purification of the body.</p> <p>घटस्य निर्मलार्थाय अन्तर्घोतिश्चतुर्विधा ॥ <i>Ghaṭasya nirmalārthāya antardhotiścaturvidhā.</i> <i>Gheraṇḍa samhita {1.14}</i> <i>For the purification of the body there are four types of internal dhautis.</i></p> <p>कर्म षट्कमिदं गोप्यं घटशोधनकारकम् ॥ <i>Karma ṣaṭkamidam gopyam ghaṭaśodhanakārakam.</i> <i>Haṭha yoga pradīpika {2.23}</i> <i>The six sacred processes purify the body.</i></p> <p><i>Haṭharatnāvali</i> states <i>aṣṭa karmās</i> or eight processes bring the healthy state in the body.</p> <p>देहारोग्यं च लभते ह्यास्त कर्म प्रभावतः । <i>Dehārogyam ca labhate hyāṣṭa karma prabhāvātaḥ.</i> <i>Haṭharatnāvali {1.60}</i> <i>Due to the purificatory power of these eight processes body gets good health.</i></p>	<p>mental level is health.</p> <p>In <i>Svastha vṛta</i>, it is stated that</p> <p>समदोष समाग्निश्च समघातु मलक्रिया । प्रसन्नमेन्द्रिय मनः स्वस्थ इत्यभिदियते ॥ <i>Samadoṣa samāgniśca samadhātu malakriyā,</i> <i>Prasannamendriya manaḥ svastha ityabhidiyate.</i> <i>Suśruta samhita, Sūtra stāna {1.23}</i></p> <p>The balance of <i>doṣas</i> with the balance of the <i>dhātus</i>, <i>agnis</i> (fires) and proper eliminatory processes, is considered as healthy state. This results in healthy state of body and mind.</p>
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2. Concept of symptoms:

All the purificatory processes leave the changes in the body level which can be termed as symptoms. These symptoms help to decide the completion of purificatory process. The *Ṣaṭ karmas* help to purify the *nādis* resulting in various external symptoms. The external symptoms of *Pañca karmās* resulted by internal purification.

Symptoms:

<p><u><i>Ṣaṭ karmās:</i></u></p> <p>यदा तु नाडीशुद्धिः स्यात्तथा चिह्नानि बाह्यतः । कायस्य कृशता कान्तिस्तदा जायेत निश्चितम् ॥ <i>Yadā tu nāḍīśuddhiḥ syāttathā cihmāni bāhyataḥ, Kāyasya kṛśatā kāntistadā jāyeta niścitam. Haṭha yoga pradīpika {2.19}</i> <i>When the nādis are purified, they are shown by external symptoms like thin and glowing body.</i></p> <p>वपुः कृशत्वं वदने प्रसन्नता नादस्फुटत्वं नयने च निर्मले । अरोगता बिन्दुजयोऽग्निदीपनं नाडीषु सिद्धिर्हठसिद्धि लक्षणम् ॥ <i>Vapuḥ kṛśatvaṁ vadane prasannatā nādasphuṭatvaṁ nayane ca nirmale, Arogatā bindujayo'gnidīpanaṁ nāḍīṣu siddhirhaṭhasiddhi lakṣaṇam. Haṭha ratnāvali {1.57}</i> <i>Slimness of the body, luster on the face,</i></p>	<p><u><i>Pañca karmās:</i></u></p> <p>बलं पुष्टिरपत्यं च वृषता चास्य जायते ॥ <i>Balaṁ puṣṭirapatyaṁ ca vṛṣatā cāsya jāyate. Caraka samhita, Sūtra stāna {1. 18}</i> <i>Pañca karmās Strengthen the body resulting in plumpiness and virility.</i></p>
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<p>clarity of the voice, brightness of the eyes, freedom from the disease, control over ejaculation of semen, stimulation of gastric fire and mastery over the nādis are the characteristics of success of Haṭha yoga(which has the basis of purification).</p>	
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3. Concept of śodhana (purification):

Both ṣaṭ karmās and pañca karmās are of śodhana type of treatment.

<p><u>Ṣaṭ karmās:</u></p> <p>षट् कर्माणां शोधनञ्च आसनेन भवेदृढम् ॥ Ṣaṭ karmāṇāṁ śodhanañca āsanena bhavedṛḍham. Gheraṇḍa samhita {1.10} The six purificatory processes bring out the śodhana effect.</p>	<p><u>Pañca karmās:</u></p> <p>बहुदोषस्य लिङ्गानि तस्मै संशोधनं हितम् ॥ Bahudoṣasya liṅgāni tasmai saṁśodhanam hitam. Caraka samhita, Sūtra stāna {16.16} The persons with more doṣās śodhana kriyā should be administred.</p> <p>The purificatory processes are mentioned as śodhana techniques. The purification is enhanced by the knowledge of herbs.</p> <p>शोधनार्थाश्च षड् वृक्षाः पुनर्वसुनिदर्शिताः ॥ Śoodhanārthāśca ṣaḍ vṛkṣāḥ punarvasunidarśitāḥ. Caraka samhita, Sūtra stāna {1.76} The sage Punarvasu mentioned six plants</p>
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4. Concept of balancing *tridoṣās*.

The *tridoṣās* are the basis of application in both *ṣaṭ karmās* and *pañca karmās*. Both *ṣaṭ karmās* and *pañca karmās* consider the *tri doṣās* as the causes of disease. The *pañca karmās* the part of *Āyurveda*, are spoken of in *Āyurveda* as having the basis in *tridoṣās*, viz.. *vāta*, *pitta*, and *kapha*(4).

Vāta:

The normal *vāta* is of five kinds. *Prāṇa*, *Udāna*, *Vyāna*, and *Apāna*.

Prāṇa vāyu is source of life which is responsible for swallowing food, breathing, spitting, sneezing, and belching. It also regulates the vital functions of the body.

Udāna vāyu is the main source of strength of the body and mind. In the body it is responsible for the production of sounds. It controls the mental functions like memory and intellect. *Vyāna vāyu* is situated in the heart and moves all over the body. It carries food juice and blood through out the entire body and helps in nourishment and secretions from the glands. *Samāna vāyu* is situated in the umbilicus region moves all over the alimentary tract. It controls the secretion of digestive juices there by helps in digestion and assimilation of food. *Apāna vāyu* is situated in the lower part of the digestive tract and it helps in expulsion of urine, faeces, flatus and also fetus, menses and semen.

Pitta:

Pitta is of five types. They are *Pācaka*, *Rañjaka*, *Sādhaka*, *Bhrājaka* and *Alocaka*. The *Pācaka pitta* is situated in between the stomach and the intestines. It is mainly responsible for digestion of the food. It can be correlated to digestive juices,

Hydrochloric acid and enzymes secreted in the stomach and intestines. It also regulates the functions of other *pittas* of the body.

Rañjaka pitta gives color to the food juice before it goes from the stomach to the liver.

Sādhaka pitta: is situated in the heart and helps in the normal functioning of the mind and its activities. It helps in acquiring knowledge and memory.

Bhrājaka pitta: is situated in the skin and regulates tint of the skin.

Alocaka pitta: It is situated in the eyes and mainly responsible for regulating the normal vision, size and colour of the objects.

Kapha:

There are five types of *kaphas*. *Kledaka*, *Avalambaka*, *Bhodaka*, *Tarpaka*, *Sleshaka*.

Kledaka kapha: is situated in the stomach and helps in moistening the food in the stomach. It nourishes other *kaphas*.

Avalambaka kapha: is situated in the thorax and protects the heart from excessive heat by its cooling effect.

Bhodaka kapha: is situated in the tongue and aids in detecting the taste of food which is swallowed. Thus its place is from the root of the tongue to the throat. It helps in increasing the appetite.

Tarpaka kapha: is situated in the head and cools the eyes and nose.

Sleshaka kapha: is situated in the joints of the body and it helps them to function properly (6).

Sat karmās:

The *Haṭha yoga pradīpika* states that:

मेदश्चेष्माधिकः पूर्वं षट्कर्माणि समाचरेत् ।

Pañca karmas:

Pañca karmās should be applied when vitiation in the *doṣās*.

<p>अन्यस्तु ना चरेतानि दोषाणां समभावतः ॥ <i>Medaśleṣmādhikaḥ pūroam śaṭkarmāṇi samācaret, Anyastu nā caretāni doṣāṇām samabhāvātaḥ.</i></p> <p style="text-align: right;"><i>Haṭha yoga pradīpika {2.29}</i></p> <p><i>When there is excess in phlegm and fat, śaṭ karmās should be performed earlier.</i></p> <p>In this verse three <i>doṣas</i> are talked off. It also indicates that the balance of these three <i>doṣas</i> will be the reason for exclusion from <i>śaṭ karmās</i> because balance of three <i>doṣas</i> indicates no impurity state, resulting in clean and healthy state.</p> <p>षट्कर्मनिर्गत स्थौल्य कफ दोष मलादिकः ॥ <i>Ṣaṭkarmanirgata sthauilya kapha doṣa malādikaḥ.</i></p> <p style="text-align: right;"><i>Haṭha yoga pradīpika {2.36}</i></p> <p><i>The Six karmās free a person from the excess of the doṣas.</i></p> <p>There are many individual practices in the <i>Śaṭ Karmās</i> which can remove the <i>doṣās</i> effectively. For example;</p>	<p>तान्युपस्थित दोषाणां स्नेहस्वेदोपपादनैः । पञ्चकर्माणि कुर्वीत मात्रकालौ वाचारयन् ॥ <i>Tānyupasthita doṣāṇām snehasvedopapādanaiḥ, Pañcakarmāṇi kurvīta mātrakālau vācārayan.</i></p> <p style="text-align: right;"><i>Caraka samhita, Sūtra stāna { 2.15}</i></p> <p><i>In the event of vitiated doṣās brought froth by oleation and fomentation therapies, the five purificatory procedures should be administered with due regard to the dose and time.</i></p> <p>Each of the <i>Pañca karmās</i> are applied according to the need for the balancing the vitiated <i>doṣās</i>.</p> <p>वात पित्त कफापहाः ॥ <i>Vāta pitta kaphapahāḥ.</i></p> <p style="text-align: right;"><i>Caraka samhita Sūtra stāna {1.87}</i></p> <p><i>The Pañca karmās meant for removing the vitiated vāta, pitta and kapha.</i></p>
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<p>कासश्वासप्लीहकुष्ठं कफरोगाश्च विंशतिः । घौतिकर्मप्रभावेण प्रयान्त्येव न संशयः ॥ <i>Kāsaśvāsaplihakuṣṭhaṁ kapharogāśca vimśatiḥ, Dhautikarmaṣraḃhāvena prayāntyeva na saṁśayah. Haṭha yoga pradīpika {2.25}</i></p> <p><i>As a result of performing, asthma, disease of the spleen and the skin and twenty varieties of disease caused by excess of phlegm undoubtedly get cured.</i></p> <p>गुल्मज्वर प्लीहाकुष्ठ कफ पित्तं विनश्यति ॥ <i>Gulmajvara plihākuṣṭha kapha pittam vinaśyati. Gheraṇḁa saṁhita { 1.40}</i></p> <p><i>Gheraṇḁa Saṁhita states that dhauti can cure ailments pertaining to kapha, pitta and also liver disorders and spleen disorders.</i></p>	
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5. Concept of *dhātus*:

Dhātus are those substances and structures which are retained by the body and always rejuvenated or replenished (6).

धातवोहि धात्वाहारः प्रकृतिमनुवर्तन्ते ॥

Dhātavohi dhātvāhāraḥ prakṛtimanuvartante.

Dhātū is formed by the essence of the food.

तत्रैतेषां धातूनामन्नपान रसः प्रीणायिता ॥

Tatraiteṣāṃ dhātūnāmannapāna rasaḥ prīṇāyitā.

Suśruta samhita, Sūtra stāna . {14.11}

Dhātū is derived from the subtle part of anna(food) and pāna (drink).

<p><u>Saṭ karmās:</u></p> <p>In the procedure like <i>jala basti</i>, invigoration of <i>dhātus</i> is mentioned.</p> <p>धत्विन्द्रियन्तःकरणप्रसादं दद्याच्च कन्तिंदहनप्रदीप्तिम् । <i>Dhātvoindriyantahkaraṇaprasādam dadyācca kantindahanapradīptim.</i> <i>Haṭha yoga pradīpika {2.29}</i></p> <p><i>Jalabasti invigorates the dhātūs, the senses and internal organs and gives a sense of well being.</i></p>	<p><u>Pañca karmās:</u></p> <p>प्रवृत्ति धातुसाम्यार्था चिकित्स्येत्यभिधीयते ॥ <i>Pravṛtti dhātusāmyārthā cikitsyetyabhidhīyate.</i> <i>Caraka samhita, Sūtra stāna {9.5}</i></p> <p><i>The revival of equilibrium is by different therapeutical procedures.</i></p> <p>Medicine, diet and regimen are prescribed by taking <i>dhātu</i> into consideration.</p>
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6. Concept of cleaning mind and senses:

<p><u>Saṭ karmās:</u></p> <p><i>Gheraṇḍa samhita</i> states शोधनं दृढता चैव स्थैर्यं धैर्यस्य लाघवं ।</p>	<p><u>Pañca karmās:</u></p> <p>इन्द्रियाणि मनोबुद्धिर्वर्णश्चास्य प्रसीदति ॥ <i>Indriyāṇi manobuddhivarnāścāsya prasīdati.</i></p>
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<p>प्रत्यक्षञ्च निर्लिप्तञ्च घटस्य सप्त साधनम् ॥ <i>Śodhanam dṛḍhatā caiva sthairyam dhairyasya lāghavam, Pratyakṣaṅca nirliptaṅca ghaṭasya sapta sādhanam. Gheraṇḍa samhita {1.9}</i></p> <p><i>Procedures leading to purification, strengthening, steadying, calming, lightness, perception, and isolation are the seven exercises to be followed by every one.</i></p> <p>The purification helps in attaining the other six qualities both in the body and mind level.</p>	<p><i>Caraka samhita Sūtra stāna {1.18}</i></p> <p><i>The same faculties mind intelligence and complexion become clear(by the practice of pañca karmās)</i></p>
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7. Concept of balancing the *prāṇa*:

<p><u><i>Ṣaṭ Karmās:</i></u></p> <p>The very purpose of administration of <i>Ṣaṭ karmās</i> is to make the flow of <i>prāṇa</i> smooth and continuous without any disturbance.</p> <p>प्राणायामं ततः कुर्यादनायासेन सिद्ध्यति ॥ <i>Prāṇāyāmaṁ tataḥ kuryādanāyāsena siddhyati. Haṭha yoga pradīpika {2.36}</i></p> <p><i>Then (after performing Ṣaṭ karmās) Prāṇāyāma should be performed to attain</i></p>	<p><u><i>Pañca karmās:</i></u></p> <p>The <i>Śirovirecana</i> occupies the first place as it influences the <i>Prāṇa</i> by treating the head region.</p> <p>प्राणाः प्राणभृता यत्राश्रिताः सर्वेन्द्रियाणि च ॥ <i>Prāṇāḥ prāṇabhṛtā yatrāśritāḥ sarvendriyāṇi ca. Caraka samhita Sūtra stāna {17.12}</i></p> <p><i>Head is the substratum of the vital force and the senses in a living being.</i></p>
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<p><i>the siddhis effortlessly.</i></p> <p>The <i>Ṣaṭ Karmās</i> are practiced before <i>Prāṇāyāma</i> as there is need for purification of the <i>nadis</i> .</p>	<p>According to <i>Caraka</i>, it is considered to be a good procedure if <i>Pañca karma</i> starts with <i>nasya</i>.</p>
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7. Concept of meaning of life:

<p><u><i>Sat karmās:</i></u></p> <p>The <i>jihva mūla dhauti</i> is considered as a practice leading to long life by <i>Gheraṇḍa</i>.</p> <p>जरा मरण रोगादिन्नाशयेत् दीर्घलम्बिका ॥ <i>Jarā maraṇa rogaḍinnāśayet dīrghalambikā. Gheraṇḍa samhita {1.29}</i></p> <p>Along with the removal of the impurities it will prevent aging and death</p>	<p><u><i>Pañca karmās:</i></u></p> <p>जरां कृच्छ्रेण लभते चिरं जीवत्यनामयः । तस्मात् संशोधनं काले युक्तियुक्तं पिबेन्नरः ॥ <i>Jarāṁ kṛcchreṇa labhate cirāṁ jīvatyanāmayah, Tasmāt saṁśodhanam kāle yuktivyuktam pibennarah. Caraka samhita, Sūtra stāna {16.19}</i></p> <p>One should undergo the <i>śodhana karmās</i> in time to be not affected by the old age, and to have long life without getting affected by any disease.</p>
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8. a) Concept of Spiritual of health:

The health is maintained with a higher goal rather than mere cleaning of the body.

<p><u><i>Sat karmās:</i></u></p> <p><i>Haṭha ratnāvali</i> emphasizes on the healthy condition of the body in</p>	<p><u><i>Pañca karmās:</i></u></p> <p>धर्मार्थ काम मोक्षाणां आरोग्यं मूलमुत्तमम् ॥ <i>Dharmārtha kāma mokṣāṇām ārogyam</i></p>
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<p>spiritual path.</p> <p>नाशनं सर्वरोगाणां मोक्ष मार्गस्य साधनं ॥</p> <p><i>Nāśanaṁ sarvarogāṇāṁ mokṣa mārgasya sādhanam.</i></p> <p><i>Haṭharatnāvali {1.59}</i></p> <p><i>Removal of all the diseases helps in the path of attainment of liberation</i></p>	<p><i>mūlamuttamam.</i></p> <p><i>One should be healthy enough for the achievement of four Puruṣārthās namely dharma(righteousness), artha(wealth), kāma(desire) and mokṣā(liberation).</i></p>
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b) *Concept of Mokṣa:*

Ṣaṭ karmās and *Pañca karmās* are the preliminary procedures which aim at the achievement of highest goal of *mokṣa*.

<p><u><i>Ṣaṭ karmās:</i></u></p> <p>प्राणायामाल्लाघवञ्च ध्यानत्प्रत्यक्षमात्मनि । समाधिनां निर्लिप्तञ्च मुक्तिरेव न संशयः ॥</p> <p><i>Prāṇāyāmāllāghavañca dhyānatpratyakṣamātmani, Samādhināṁ nirliptañca muktireva na saṁśayaḥ.</i></p> <p><i>Gheraṇḍa samhita {1.11}</i></p> <p><i>Prāṇayama gives lightness, Dhyāna gives perception of the self, Samadhi gives Nirliptatā or isolation, which is verily the freedom.</i></p> <p>For all these effects to occur purification is the base. Because in the</p>	<p><u><i>Pañca karmās:</i></u></p> <p>प्रशाम्यत्यौषधैः पुर्वे दैवयुक्तियवपाश्रयैः । मानसो ज्ञानविज्ञान धैर्यस्मृति समाधिभिः ॥</p> <p><i>Praśāmyatyauśdhaiḥ purve daivāyuktivyapāśrayaiḥ, Mānaso jñānavijñāna dhairyasmṛti samādhibhiḥ.</i></p> <p><i>Caraka samhita, Sūtra stāna { {1.19}</i></p> <p><i>The former ,the pathogenic factors of the body, are reconciled by various therapies. The later, while those in the mind are rajas and tamas are removed by scriptural knowledge, patience, memory and spiritual methods.</i></p>
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<p>verse 1.10</p> <p>Purification is mentioned first followed by the benefits of each practice. So <i>ṣaṭ karmās</i> are the foundation for all other achievements through yoga.</p>	<p>Here the <i>Pañca karmās</i> are meant for removing the mental pathogenic factors.</p>
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9. Rationale of administration:

<p><u><i>Ṣaṭ karmās:</i></u></p> <p>The purpose of administration can be the following. This is stated as</p> <p>शुद्धिमेति यदा सर्वं नाडीचक्रं मलाकुलम् । तदैव जायते योगी प्राण संग्रहणे क्षमः ॥</p> <p><i>Śuddhimeti yadā sarvaṁ nāḍīcakraṁ malākulam, tadaiva jāyate yogī prāṇa saṅgrahaṇe kṣamaḥ.</i></p> <p><i>Haṭha yoga pradīpika {2.5}</i></p> <p>Then yogi can retain the <i>prāṇa</i> only after purifying the impure nadis.</p> <p>This can be achieved by <i>Ṣaṭ karmās</i> which are the preparatory procedures for the <i>Prāṇayama</i>.</p>	<p><u><i>Pañca karmās:</i></u></p> <p>It is administered to get rid of the impurities at the root level.</p> <p>जिताः संशोधनैर्ये तु तेषां पुनरुद्भवः जिताः संशोधनैर्ये तु तेषां पुनरुद्भवः <i>Jitāḥ saṁśodhanairye tu teṣāṁ punarudbhavaḥ</i></p> <p><i>Caraka samhita, Sūtra stāna { 16.21}</i></p> <p>Reappearance of them (diseases) is conquered by purificatory techniques.</p>
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10. Mastery through cleaning:

Sat karmās:

The purification of body leads to cleansing of *cakras* and associated *siddhis* which are achieved through of development of greater degree of mastery over the involuntary functions of the body.

मणिपूरं नाभिगतं नौल्याख्येन तु कर्मणा ॥

Maṇipūraṁ nābhigataṁ naulyākhyena tu karmaṇā.

Haṭha ratnāvali {1.62}

Maṇipura situated in the navel region is purified through Nauli.

हृदयं कंठचक्रस्थं धौत्याख्येन तु कर्मणा ॥

Hṛdayaṁ kaṇṭhacakraṣṭhaṁ dhautyākhyena tu karmaṇā.

Haṭharatnāvali {1.63}

The cakra situated in the region of heart and throat is purified through dhauti.

शोधनं कार्यामाज्ञायां नेतित्रोटन कर्मणा ॥

Śodhanaṁ kāryāmaññāyāṁ netitrotana karmaṇā.

Haṭharatnāvali {1.64}

Purification of Ājñā cakra is done through neti and trotana karmās.

स्यादाधारं स्वाधिष्ठानं मणिपूरमनाहतम् ॥

Syādādhāraṁ svādhiṣṭhānaṁ

Pañca karmās:

Pañca karmās are also having their effect beyond the body.

बुद्धीन्द्रियमनः शुद्धिः मारुतस्यानुलोमता

Buddhīndriyamaṇaḥ śuddhiḥ mārutasyānulomatā

Caraka samhita { 16. 7}

The Virecana is indicated to bring the purification in mind and body.

maṇipūramanāhaṭham.

Haṭharatnāvali {1.65}

The cakras namely Ādhāra, Svadhīstāna, Maṇipura and Anāhata are purified by Basti.

साधनाच्चेति कार्यस्य खेचरीसिद्धिमप्नुयात् ॥

*Sāadhanānneti kāryasya
khecarīsiddhimapnuyāt.*

Gheraṇḍa samhita {1.51}

By practising neti kriyā one can obtain Khecari siddhis.

नेत्र रोगा विनश्यन्ति दिव्यदृष्टिः प्रजायते ॥

*Netra rogā vinaśyanti divyadr̥ṣṭiḥ prajāyate ॥
Gheraṇḍa samhita
All eye disorders are destroyed and clairvoyance
induced*

The *Haṭharatnāvali* also states that a person can clean each of his *cakras* one by one with specific *Ṣaṭ karma* practices.

विशुद्धं कंठचक्रस्थं आज्ञाचक्रं भ्रुवोर्मुखे ।

चक्र भेदमितिज्ञात्वा चक्रातीत निरंजनम् ॥

*Viśuddham kaṇṭhañcakrastham
ājñācakram bhruvormukhe,
Cakra bhedamiti jñātvā cakrātīta
nirañjanam.*

Gheraṇḍa samhita {1.66}

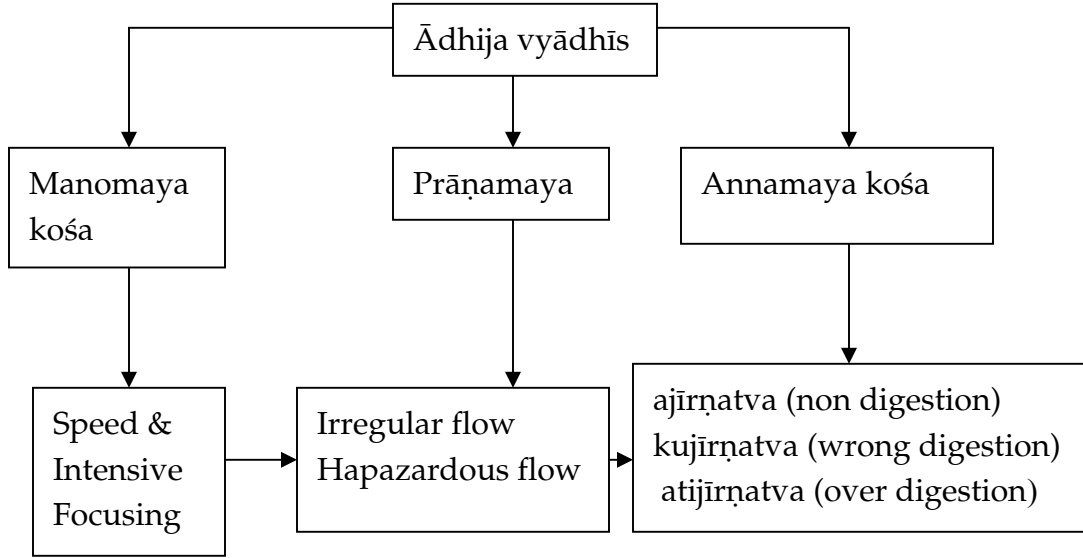
Viśuddha Cakra is situated in the middle of the eye brows. In this way after knowing the different cakrās, the Niranjana state

which is beyond cakrās can be attained.

This is to transcend the limitations of body through the body itself.

As *Ṣaṭ karmās* and *Pañca karmās* practices based on similar basic concepts, combining them for the betterment of the human being as a whole can be termed as integrated approach. Integrated approach is to eliminate the dirt from all the five layers of existence. The five layers of existence are *Ānandamaya*, *Vijñānamaya*, *Manomaya*, *Prāṇamaya*, and *Annamaya*. The dirt seated in *Manomaya* is removed first. *Ānandamaya* and *Vijñānamaya* being pure, person will be able to stay in this purified state only when the other layers are kept clean. The dirt originated in the form of likes and dislikes at *Manomaya* layer level are the root cause of the disturbance in *Prāṇamaya* and *Annamaya* layers. The disturbance in *Prāṇamaya* layer can occur in the form of agitations causing violent fluctuations in the flow of *prāṇa* in the *nadis* or channels. The *prāṇa* flows in wrong paths flying from one to the other without rhythm and harmony. The *nadis* can no longer, in this condition, maintain stability and steadiness, but quicker. Then the food does not get digested properly. There arises *kujīrṇatva* (wrong digestion), *ajīrṇatva* (non

digestion), and *atijrṇatva* (over digestion) at the body level .



These are called as *Ādhija vyādhīs*. In *Āyurveda* the disturbance in *Manomaya kośa* is called as *Prajñāparādha* (17).

4.2 Therapeutic Comparisons:

Pañcakarmās and *Ṣaṭ karmās* are the *śodhana* type of treatment. Therapeutically they can be correlated with each other according to the similarities in the procedures and effect over the target organs.

Comparisons in procedures:

1, The *Vārisāra* (*Śaṅkha prakṣālaṇa*) of *Ṣaṭ karmās* and *Virecana* of *Pañca karmās*:

<u>Procedure:</u>	<i>Ṣaṭkarmās:</i> <i>Vārisāra</i> (<i>śaṅkha prakṣālaṇa</i>):	<i>Pañca karmās:</i> <i>Virecana:</i>
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	<p>It is to drink sixteen glasses of the warm saline water and evacuating through the bowels. Warm saline water can be taken in small amounts of two glasses at a time with intervals in between where the <i>Āsanas</i> like <i>tadāsana</i>, <i>tiryaka tadāsana</i>, <i>katicakrāsana</i>, <i>tiryaka bhujangāsanas</i> and <i>udara karṣaṇāsana</i> are performed before evacuating the bowels.</p> <p><u>Herbs used:</u> The <i>Haṭha ratnāvali</i> mentions the use of jaggery water or milk water in case of salt water. There is also various other herbs and juices which could be used like few drops of lemon, onion or garlic juice. Sometimes it can also be</p>	<p>In <i>Virecana</i> purgatives are used to induce bowel movements.</p> <p><i>Caraka</i> mentions 315 herbal preparations for the <i>Virecana</i>. People with dominant <i>pitta</i> can use <i>nishottar</i> (Ipomoea Turpentum). <i>Kapha</i> dominated people have to stronger laxative <i>amaltas</i></p>
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	advised with carrot or celery juice.	(Cassia Fistula) and <i>Airaṇḍa</i> (Ricinus Communis) can be used in <i>vāta</i> dominant people.
<u>Target</u>	Small intestine.	
<u>Organ:</u>		Small intestine.
<u>Benefits:</u>	<p><i>Vārisāra</i> of <i>Ṣaṭ karmās</i>:</p> <p>मलदेहं शोधयित्वा देवदेहं प्रपद्यते ॥</p> <p><i>Maladehaṁ śodhayitvā devadehaṁ prapadyate</i> <i>Gheraṇḍa samhita {1.19}</i></p> <p><i>Purifies the filthy body and turns it into shining one.</i></p>	<p><i>Virecana</i> of <i>pañca karmās</i>:</p> <p>पक्वाशय गते दोषे विरेकार्थं प्रयोजयेत् ॥ ॥</p> <p><i>Pakvāśaya gate doṣe vireekārthaṁ prayoojayet</i> <i>Caraka samhita { 2.10}</i></p> <p><i>The doṣa located in the site of small intestine is the object of purgation.</i></p>

2. *Vamana dhauti* of *Ṣaṭ karmās* can be compared with *vamana karma* (emesis therapy) of *pañca karmās*.

<u>Procedure:</u>	<p><i>Ṣaṭ karmās</i>:</p> <p>भोजनान्ते पिबेद्वारि चाकण्ठपूरितं सुधीः</p> <p><i>bhojanānte pibedvāri cākanṭhapūritaṁ sudhīḥ</i> <i>Gheraṇḍa samhita {1.39}</i></p> <p><i>Drinking water full up to the stomach after the meal, then</i></p>	<p><i>Pañca karmās</i>:</p> <p><i>Vamana karma</i> is to drink 1 and 1/2 cups of a thin, sweet porridge from wheat and milk and vomiting it out by administering emesis</p>
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	<i>looking upwards for a short while, person has to vomit it out again.</i>	stimulating drug.
<u>Herbs used:</u>	Use of Jaggery water, coconut water or milk in <i>vamana dhauti</i> is mentioned <i>Haṭha ratnāvālī</i> .	In <i>Vamana karma</i> commonly used one is <i>madan phal</i> .
<u>Target organ:</u>	Stomach.	Stomach.
<u>Benefits:</u>	<p><i>Ṣaṭ karmās</i> recommend this practice to remove the excess phlegm and advised to practice early in the morning.</p> <p>नित्यमभ्यसयोगेन कफपित्तं निवारयेत् <i>nityamabhyasayogena kaphapittam nivārayet</i> <i>Gheraṇḍa samhita {1.39}</i></p> <p><i>By the regular practice, the vitiated kapha and pitta can be removed.</i></p>	It helps in removing the disorders of the stomach Hyper acidity, loss of appetite, etc.

3. Kapāla randra of ṣaṭ karmās with śiro basti of pañca karma:

<u>Procedure:</u>	<i>Ṣaṭ karmās:</i>	<i>Pañca karmās:</i>
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	<p><i>Kapāla randra</i> practice which is mentioned in <i>Gheraṇḍa samhita</i>, is rubbing of the depression in the fore head near the bridge of the nose with the thumb of the right hand.</p> <p><u>Herbs used:</u> -----</p> <p><u>Target organ:</u> Para nasal sinus zone and Brain.</p> <p><u>Benefits:</u> <i>Kapāla randra:</i> एवमभ्यास योगेन कफदोषं निवारयेत् <i>evāmahyāsa yogena kaphadoṣaṁ nivārayet</i> <i>Gheraṇḍa samhita {1.34}</i> It removes kapha doṣa by the regular practice. It has higher benefits rather than mere cleaning of the body.</p> <p>नाडी निर्मलतां याति दिव्यदृष्टिः प्रजायते । <i>nāḍī nirmalatām yāti divyadr̥ṣṭiḥ prajāyate ।</i></p>	<p>This can be compared with <i>Śiro basti</i>. It is to drip warm oil in a steady stream on the forehead, particularly on the brow in the region between the eyes</p> <p><i>Til</i> oil or the preparation of ten herbal roots (<i>daśamūla</i>) in <i>śiro basti</i>.</p> <p>Para nasal sinus zone and Brain.</p> <p><i>śiro basti</i> helps in migraine, tension headache, sinusitis, running nose..etc.</p>
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	<p><i>Gheraṇḍa samhita {1.34}</i></p> <p><i>Kapāla randra practice purifies the nadis and clairvoyance is induced.</i></p>	
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3. Karṇa dhauti ṣaṭ karmās and oiling of ears (as a part of nasya karma)

<u>Procedure:</u>	<p><i>Ṣaṭ karmās:</i></p> <p>This is cleaning of the ears, named as <i>Karṇa Dhauti</i>. In <i>Karṇa Dhauti</i> index and ring fingers are used to clean the ears.</p>	<p><i>Pañca karmās:</i></p> <p>Oiling of the ears is practiced as a part of <i>nasya karma</i>. Oiling the external canal of the ears by <i>til oil</i> is practiced.</p>
<u>Substances used:</u>	<p>Index and ring fingers are used to clean the ears in <i>Karṇa dhauti</i>.</p>	<p><i>Til</i> oil is poured on external auditory canal for oiling of the ears.</p>
<u>Target organ:</u>	Ears	Ears
<u>Benefits:</u>	<p><i>Karṇa dhauti:</i></p> <p>नित्यमभ्यासयोगेन नादान्तरं प्रकाशयेत् <i>nityamabhyāsayogena nādāntaram prakāśayet</i></p>	<p>Oiling the ears:</p> <p>Ear diseases due to vitiated <i>vāta</i>, torticollis, lockjaw, Hardness of</p>

	<p><i>Gheraṇḍa samhita {1.33}</i></p> <p>By this deafness can be prevented and mystical sound can be heard.</p>	<p>hearing and deafness can be prevented by oiling the ears.</p>
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4. jala basti of ṣaṭ karmās with Vasti of pañca karmās:

<u>Procedure:</u>	<p><i>ṣaṭ karmas:</i></p> <p>In jala basti water is sucked up through the hollow tube while performing <i>Uddyāna bandha</i>. Water induces the bowel action and gets evacuated.</p>	<p><i>Pañca karmas:</i></p> <p>Vasti karma: Water is administered through the bladder made of animal skins or organs. It induces colonic movements and cleans entire colon.</p>
<u>Herbs used:</u>	<p>Termeric or salt is used with water.</p>	<p>Different herbs in medicated liquid form are used according to the effect desired.</p>
<u>Target organ:</u>	<p>Colon.</p>	<p>Colon.</p>
<u>Benefits:</u>	<p>एवमभ्यासयोगेन कोष्ठदोषो न विद्यते । विवद्धयेज्जठराग्निमामवातं विनाशयेत् ॥ <i>evāmahyāsayogena koṣṭadoṣo na vidyate, vivarddhayejjaṭharāgnimāmaṅvāt aṅṅ vināśayet.</i></p>	<p>शरीरोपचयं वर्णं बलमारोग्यमायुषः</p>

	<p style="text-align: center;"><i>Gheraṇḍa samhita {1.49}</i></p> <p><i>By the practice of Basti, constipation never occurs, and it increases gastric fire and cures flatulence.</i></p>	
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5. Jihva mula dhauti of ṣaṭ karmās with oral gargling (a preparatory for vamaṇa, other than purva karmās)

<u>Procedure:</u>	<p>Ṣaṭ karmas:</p> <p><i>Jihva Mūla Dhauti</i> is used to keep the tongue clean there by entire oral cavity. Here index middle and ring finger are rubbed against the surface of the tongue to remove the impurities.</p> <p>Butter and milk are used in</p>	<p>Pañca karmas:</p> <p>Oral gargling is to fill the mouth with oil and moving it thoroughly within, until oil is diluted like water.</p>
<u>Substances used:</u>	<p><i>Jihva Mūla Dhauti.</i></p> <p>Tongue, Gums and Teeth</p>	<p><i>Til</i> oil is used in oral gargling</p>
<u>Target organ:</u>	<p>जरा मरण रोगादिनाशयेत् दीर्घलम्बिका <i>jarā maraṇa rogādināśayet dīrghalambikā</i></p> <p><i>Gheraṇḍa samhita {1.29}</i></p>	<p>Tongue, Gums and Teeth</p> <p>It is also beneficial for the strength of the jaws,relieves tooth ache,</p>
<u>Benefits</u>		

:	Along with the removal of the impurities it will prevent aging and death.	flabbiness of face, dryness of the face, dryness of the throat, and impurities of the tongue.
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6. Danta mūla dhauti. with Danta prakṣāḷana(a preparatory procedure)

<p><u>Procedure:</u></p>	<p><i>Danta mūla dhauti</i> of ṣaṭ karmas:</p> <p>मार्जयेत्दन्तमूलञ्च यावत्किल्बिषमाहरेत् <i>mārjayetdantamūlañca yāvatkilbiṣamāharet</i> <i>Gheraṇḍa samhita</i> {1.27} <i>Rubbing the teeth with catechu powder or with pure earth to remove impurities is Danta mūla dhauti.</i></p>	<p><i>Danta prakṣāḷana</i> (teeth brushing) of <i>pañca karmās:</i></p> <p><i>Caraka samhita</i> states that the top portion of the teeth brushing stick should be crushed. This has to be performed in such a way that gums are not affected.</p>
<p><u>Substances used:</u></p>	<p><i>Danta mūla dhauti:</i></p> <p>खादिरेण रसेनाथ मृत्तिकया च शुद्धया ॥ <i>khādireṇa rasenātha mṛttikayā ca śuddayā.</i> <i>Gheraṇḍa samhita</i> {1.27} <i>Danta mūla dhauti is</i></p>	<p>In <i>Danta prakṣāḷana</i> the teeth brushing</p>

<p><u>Target organ:</u></p> <p><u>Benefits:</u></p>	<p><i>practiced with the help of catechu- powder.</i></p> <p>Teeth and Gums</p> <p><i>Danta mūla dhauti</i></p> <p>नित्यं कुर्यात्प्रभाते च दन्तरक्षां च योगिवित्।</p> <p><i>nityam kuryātprabhāte ca dantarakṣāṁ ca yogivit</i></p> <p><i>Gheraṇḍa samhita</i></p> <p>{1.28}</p>	<p>stick can be prepared by the plants like <i>Karanja (Pongamia Pinnata), Karavira (Nirium Indica), Arjka (Catateropis Gigantica)</i> etc.</p> <p>Teeth and Gums</p> <p><i>Danta prakṣālana</i> has same effect.</p>
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7. Daṇḍa dhauti of ṣaṭ karmās and Oral hygiene through Gargling of pañca karmās (a preparatory for vamaṇa).

<p><u>Procedure:</u></p> <p><u>Herbs used:</u></p>	<p><i>Ṣaṭ karmas:</i></p> <p><i>Daṇḍa dhauti</i> is to thrust the throat with plantain stalk or a stalk of turmeric or a stalk of sugar cane into the esophagus.</p> <p>रम्भादण्डं हरिद्रं दण्डं वेत्रदण्डं तथैव</p>	<p><i>Pañca karmas:</i></p> <p>Oral hygiene through Gargling:</p> <p>This is to gargle with the saline water.</p> <p>Gargling:</p>
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	<p>च । हृन्मध्ये चालयित्वा तु पुनः प्रत्याहारेच्छनैः ॥ <i>rambhādaṇḍam harid daṇḍam vetradaṇḍam tathaiva ca । hṛṇmadhye cālayitoā tu punaḥ pratyāhārecchanaiḥ । । Gheraṇḍa samhita{1.37}</i> <i>Gheraṇḍa samhita mentions the use of plantain stalk or a stalk of turmeric or a stalk of sugar cane can be used to thrust the esophagus.</i></p>	<p>Gargling can also be done by using honey, turmeric solution.</p>
<u>Target organ:</u>	Throat	Throat
<u>Benefits:</u>	<p>कफपित्तं तथा क्लेदं रेचयेत् ऊर्ध्ववर्त्मना ॥ <i>kaphapittam tathā kledam recayet ūrdhvarvartmanā. Gheraṇḍa samhita{1.38}</i> <i>Daṇḍa dhauti is used to remove the phlegm, bile and impurities out of the throat.</i></p>	<p>Gargling is used to clear the throat before the practice of <i>vamana karma</i>. It can also be used in sore throat, cold and congestion, tonsillitis etc.</p>

Correlation of Śaṭ karmās and Pañca karmās according to the removal of the doṣās:

ŚAṬ KARMĀS	PAÑCA KARMĀS	DOṢA REMOVED
Dhauti	Vamana karma	Kapha
Basti	Vasti karma	Vāta
Neti	Nasya	Pitta
Trāṭaka	Vasti(Netra Vasti	Vāta
Nauli	Virecana	Pitta
Kapāla bhati	-----	Kapha
-----	Rakta mokṣana	-----

Chapter—5

SUMMARY AND CONCLUSIONS

Beneficial effects of some of the *Śaṭ karmās* and *Pañcakarmās* are studied by modern science. Here a detailed study of this traditional knowledge is attempted in this dissertation. These practices have been incorporated in the Integrated approach of yoga therapy used in several Nature cure, Yoga and Āyurvedic hospitals in India and abroad, with beneficial effects.

Śaṭ karmās of Yoga and *Pañca karmās* of *Āyurveda* are life supporting processes with more of similarities. Though they appear different they are complimentary to each other. They help to bring the balance in the bodily laws and cosmic laws.

Even in UK and USA several centers recommending Neti as a daily routine. By this the hypersensitivity disorders, migraine are very well prevented. It is said that the mouth breathing in children leads to poor memory, concentration and development. So, *Neti* clears off nasal passage. Like this yoga has become part and parcel of daily life. Even though it is not a system of medicine but its

therapeutical aspect is magnetizing the people. *Ṣaṭ karmās* provide a unique opportunity for the system to repair and rejuvenate.

Use of herbs:

The actual use of drugs is not mentioned but references to the medical concept are found.

Pañca karmās make use of many herbs to get the desired effect. The use of herbs in *Ṣaṭ kriyās* is mentioned in ancient text like *Gheraṇḍa samhita*, *Haṭha yoga pradīpika*, *Haṭha ratnāvali*,...etc.

Gheraṇḍa samhita states that different herbs can be used in different practices. In *mūla śodhanam* turmeric root can be used to clean the bowels in stead of small finger. *Gheraṇḍa samhita* also mentions the use of plantain stalk or a stalk of turmeric or a stalk of sugar cane can be used to thrust the esophagus in *Daṇḍa dhauti*. *Danta mūla dhauti* is practiced with the help of catechu- powder.

Haṭha ratnāvali states that jaggery water, coconut water or milk can be used in *vamana dhauti*. So, the purification was done by the use of herbs.

The herbs can be used for *kriyās* as follows:

<p><u>1.Neti:</u> (Here <i>neti</i> can also be performed by immersing sūtrās in these kaśāyas at least for twenty four hours.)</p>	a) <i>Jalaneti</i>	<p><i>Kūṣmāṇḍa rasa</i> <i>Apāvarga</i> <i>Dūrva kaśāya or svarasa</i></p>
	b) <i>Sūtra neti</i>	<p><i>Haridra kaśāya</i> <i>Snuhi rasa</i></p>
<p><u>2.Dhauti.</u></p>	a) <i>Vamana</i>	<p><i>Madana phal rasa</i> <i>jyeṣṭha madhu</i> <i>Īkṣu Rasa</i></p>

	<i>b)Vastra</i>	<i>Tāmbūla rasa</i> <i>Droṇa pushpi</i>
	<i>c)Daṇḍa</i>	<i>Haridra Nāla</i>
<u>3.Basti</u>	<i>Jala Basti</i>	<i>Til taila</i> <i>Airaṇḍa taila</i> <i>Indra vāruni</i> <i>Sonā mukhi withtil taila or honey</i>
<u>4.Trātaka</u> (The oil is used to lit the lamp)	<i>Bahir trātaka</i>	<i>Kadira taila</i> <i>Aśvatta taila</i>

Lifestyle modifications maximize the success of treatment. The life supporting activities include meditation, proper rest, moderate exercise, purificatory processes, *Prāṇayama*, seasonal routine and daily routine along with dietary considerations. Undue physical and mental stress can be avoided using these techniques.

Hence the suggestions to maintain good Health according to Integrated approach of yoga therapy (IAYT) and *Āyurveda* includes cleaning as an important initial component of life style modification.

1. Clean the teeth and gums as a regular practice.
2. Use *Jala Neti* or nasal cleaning with water daily.

3. Go for rubbing of the tongue with the fingers daily.
4. Eat only when there is appetite.
5. Always leave a little room in stomach at the end of each meal. *Haṭha yoga pradīpika* says, only half of the stomach should be filled with solid food. One fourth should be filled with water and one fourth should be left for air.

(Verse -1.58)

6. Eat in a calm atmosphere.
7. Avoid foods which are deep fried, spicy and too heavy.
8. Practice *Prāṇāyama* daily for balancing the *nadis*.
9. Go for one pointed gazing or *Trāṭaka* along with palming and near and far gazing especially in persons with computer work.
10. Drink water abundantly.
11. Avoid stress and strain as much as possible.
12. Over exercise should be avoided.
13. Practice relaxation in the form of meditation which brings stillness and silence to the mind and senses.

When a man lives in tune with the laws and cycles of nature, nature supports the state of health and wellbeing. This support can be facilitated by using simple procedures of *Kriya*. This enables a harmony between person and nature.

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ABSTRACT

The present study was conducted to have a comprehensive view of the concepts of two basic purificatory processes in *Yoga* and *Āyurveda*. Purificatory processes are mentioned in *Vedas*. The purification through *Ṣat karmās* which is also commonly known as *Ṣat kriyās*, is mentioned first in *Haṭha yoga pradīpika*. The *Ṣat karmās*, the six cleansing techniques are named as *Dhauti*, *Basti*, *Neti*, *Trāṭaka*, *Nauli*, and *Kapālabhati*. *Caraka*, the *Āyurveda Ācarya*, mentions the practice of different limbs of yoga for the prevention and cure of the diseases and maintenance of health along with other procedures of the *Āyurveda*. The *Āyurveda* texts describe the five purificatory processes called *Pañca karmās*. They are *Vamana*, *Virecana*, *Vasti*, *Nasya* and *Rakta mokṣana*. Both the *Ṣat karmās* and *Pañca karmās*, the *śodhana* type of treatments, are based on same concepts of improving the health. Each of the *Ṣat karmās* can be compared with the *Pañca karmās* either by the similarities with their procedure or by the similar effect over the body. For example *Basti* with *Vasti*, *Neti* with *Nasya*, *Vamana dhauti* with *Vamana karma*, *Vārisāra (Śaṅkha prakṣāḷana)* with *Virecana* is compared with one another for the same reason. Variations in practice also have similarities. For example *Karṇa dhauti* and Oiling of ears, *Jihva mūla dhauti* and Oral gargling, *Danta mūla dhauti* and *Danta prakṣāḷana*, *daṇḍa dhauti* and oral hygiene through gargling. Thus, in this study, an effort is made to explore the similarities between the *Ṣat karmās* and *Pañca karmās* relating to their basic concepts and therapeutic effects. A combined approach of using herbs in various *Ṣat karmās* is also listed with few commonly used herbs. Further research can be done on beneficial effects of use of herbs in *Ṣat karmās*.

CHAPTER -3

LITERATURE REVIEW

The earliest scientific study on yogic practices was done by *Swāmy Kuvalayānanda* in early 1920, in which he reported sub atmosphere pressure in various internal cavities during *Uddiyana bandha* and its extensions of the *Nauli kriyā*.

Studies on *Vamana dhauti*

Singh V., in the year 1987 published his study of *kuñjala kriyā* where seven asthmatic patients having nocturnal symptoms performed *kuñjala*. The results showed that there was subjective improvement noticed in six patients in the week of *Kuñjala* performance and the improvement in the symptoms persisted in the five patients in third week. A nonspecific protective factor helps in management of asthma patients practising *Kuñjala kriyā* (10).

Another study on asthmatics was conducted by Bhuyan, B., in 2002 . He studied *vamana dhauti* on 30 patients, where there were 22 males and 8 females with established diagnosis of bronchial asthma in the range of 14-55 years. All the subjects practiced an integrated approach of yoga therapy which included *Yogāsanas*, Breathing exercise, *Sithilīkaraṇa vyāyāma*, *Prāṇāyāma*, Meditation, Lectures, Bhajans, Satsang, Relaxation, *Vamana dhauti*, etc. Lung functions including forced vital capacity (FVC), forced expiratory volume in first second (FEVI), peak exhalation flow (PEF), ratio of FEVI/FVC by using a Standard Spirometer and PFR by Wright's peak flow meter, were recorded on first day (baseline) and just before and after the control session on 6th day and *Vamana dhauti* on session on 7th day. The control yoga session included a set of yogic breathing exercises, loosening practices & yoga āsana followed by relaxation

which was comparable to the *Vamana dhauti* in its muscular effort involved. Results showed that there was significant improvement in all the variables on 7th day. The addition of *Vamana dhauti* contributes to speedy recover in bronchial asthmatics. Daily practice of *Vamana dhauti* for one week showed increase in peak flow rate. There was a significant improvement seen in FEV1 when measured through Schiller's spirometry (11).

The study of Oak J. P., and Bhole, M, V., (1983) on learning processes of *Vamana dhauti* in 29 males and 11 females, showed that eight subjects vomited 60 percentage of water at a single attempt. The average water amount taken in was more than one liter in 3/4 of the subjects in first observation. The average volume ingested was 1160 ± 110 ml. There was wide variation observed in 20 percentages of the students in the volume of water vomited. The amount of vomitus in comparison with the volume of water drank which were measured in different attempts showed that the amount increases from 20 to 60 % in successive attempts (9 attempts) gradually (12) . They also studied the feelings and the reactions while learning *Vamana dhauti* by healthy subjects on 40 subjects, 29 males and 11 females of 15-45 years of age group in 1983. The onset of headaches, giddiness, and redness of the eyes, flushing of the face, a feeling of relief or gone away feeling were recorded using a questionnaire. The result showed that people looking to *Vamana* as an unnatural act could develop nausea, excessive lacrimation and running nose. Inability to bring the water out has resulted in feeling of discomfort with bloating of abdomen (13).

Studies of other *Kriyās*

Vastra Dhauti:

Oak, J, P., and Bhole, M, V., (1983) observed the differences in the length of the cloth swallowed, the time taken for swallowing while learning of *Vastra dhauti* in healthy individuals. 8cms x 650 cms of muslin cloth was used after sterilization in 40 subjects. The length of the cloth swallowed, time taken for swallowing and the amount of mucus taken out were noted. The study showed that the length swallowed was 385 ± 62 cms to 107 ± 6 cms in different attempts. The time taken for swallowing of the cloth was directly related to the length of the cloth swallowed. The amount of the mucus decreased as the practice period increased (14). In another study they also observed for the feelings and reactions while performing *Vastra dhauti* 40 subjects. Eight subjects who had the experience in *Vastra dhauti* expressed the feeling of lightness and freshness in the body. The other group of subjects reported burning sensation, irregular pain and distension of abdomen. Three people suffered from headaches, heaviness in the head along with other common reactions like tearing in eyes, running nose etc.

Desai, et al studied the influence of *Vastra dhauti* on gastric secretions on 40 subjects in 1983. The amounts of mucus, quantity of bile and blood traces were studied. There was 54 percent increase in mucus and 22 percent of increase in bile. There was very less amount of blood traces reported. The results showed that there was a temporary increase in the gastric secretions after the practice of *Vastra dhauti* (15).

Studies on *Danḍa dhauti* and *Vastra Dhauti*

Karambalkar, P, V., et al, (1969) studied uro-pepsin excretion in six male students. The urine sample was collected for 24 hours. Uro-pepsin was estimated in 3 hrs and 21 hrs sample by west's method. There was significant increase in

uro-pepsin level after the practice of *Vastra dhauti*. No such changes are observed in uro-pepsin level after *Danḍa dhauti* (16).

Studies on *Danḍa Dhauti*

Danḍa Dhauti was studied 40 subjects for the amount of water expelled out and presence of mucus was estimated by swallowing hollow rubber tube of 100 cms long and 8mm wide by Oak, J, P., and Bhole, M, V., in 1983. The 51 percentage of water was expelled out in first attempt and it has increased to 86 percentage of total amount taken in successive attempts. Expulsion of mucus was observed in all the attempts (17). They also studied 40 healthy subjects for the feelings and reactions during the practice of *Danḍa dhauti*. The result showed that the practice of *Danḍa dhauti* reduces unpleasant feeling and reactions such as irritation, pain suffocation, heaviness etc. It also showed inhibition of hunger in four people (18).

General studies on heart rate variability

Repeatability of heart rate variability as measured via spectral analysis was studied by Kamath M. V., Fallen EL, Mc kelvie, R., (1991). In across section design, seven healthy subjects were studied for repeated measurements in controlled breathing, three times a day during single session. Such sessions were repeated on a median of 4 days for each subject. As a conclusion a poor reproducibility is obtained in standing position, a medium reproducibility is obtained in the low frequency domain, but a good reproducibility in the high frequency domain. Measurements on different days did not contribute to the variance of spectral power measurements (20). In another study, Kamath, M, V., et dl (1991) studied effects of steady state exercise on the power spectrum of analysis. 19 subjects were studied in 15 minutes of rest in the supine state, 10 mins of standing, 10 minutes of steady state exercise on cycle ergometer, 15

minutes of post - recovery state in the supine pose. Orthostatic stress produced a significant 51 % increase in the ratio of low to high frequency peak spectral power. Steady state exercise caused a significant suppression of both low and high frequency components. The low peak power rose to significantly high levels throughout the 15 minutes of post - exercise recovery period. These results suggest that neuro regulatory control of heart rate plays a major role in adaptive response to orthostatic stress and post - exercise recovery while humoral factors probably more important in maintaining heart rate during steady exercise (21).

CHAPTER - 4

METHODS

Subjects

150 healthy volunteers were screened for inclusion criteria. Of these 76 were selected from experienced (n=38) and novice (n=38) groups after matching for age and sex. They were in the age range of 20-33 years (26.2 ± 4 years). There were 24 males and 14 females in each group. An informed signed consent was taken from all the subjects.

Inclusion criteria

- (1) The subjects who were found to be healthy on routine medical examination.
- (2) The subjects of first group were exposed to *kuñjala kriyā* at least four times.
- (3) The subjects of second group were not exposed to *kuñjala kriyā*.
- (4) The subjects who can voluntarily contribute and co-operative.

Exclusion criteria

- (1) Subjects with any other sickness.
- (2) Subjects below 20 years or more than 34 years of age.
- (3) Females during menstruation.

Design of the study

1. Design of recording:

Familiarization of the subjects to the laboratory environment and with the study:

The subjects were explained in detail about the project. Informed consent was also taken. Subjects were exposed to the procedure of recording of without any intervention with a gap of 10 mins.

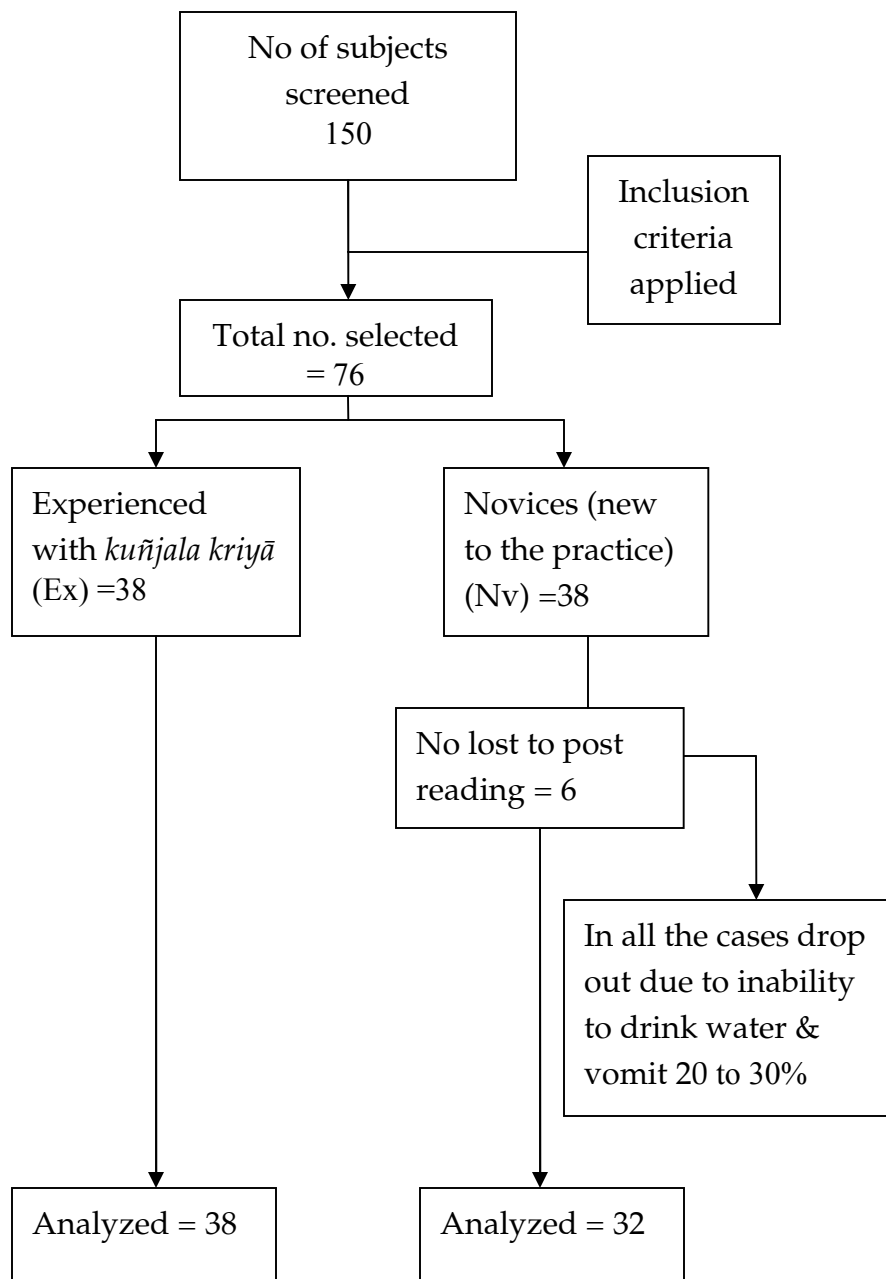


Figure no.1: Trial profile.

Conditoins of recording:

Subject was seated in the dimly lit sound attenuated chamber. All the electrodes were connected to HRV ambulatory system (Niviqure, Bangalore, India, 2003 model).

2. Design of the experiment:

All subjects were participants of different yoga courses conducted by Swamy Vivekananda Yoga Research Foundation (SVYASA) in South India, Bangalore.

The study was designed matched control study. All of them were undergoing same set of daily routine including same diet, exercise, lectures, practical sessions... etc. The subjects were matched for age and sex. They are divided into two groups according the selection criteria which based on the experience and correctness of the practice as novices (new to the practice) and as experienced (more than four previous exposures). There were 38 subjects in each group when selected through inclusion criteria.

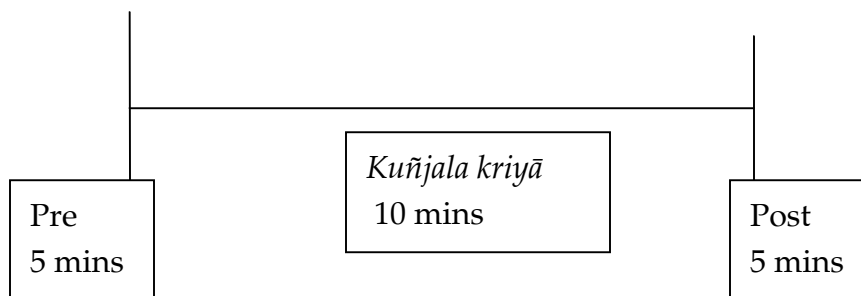


Figure 1: Illustration of design.

Time of recording

The timings of recording were maintained on both the days. The time of recording was early in the morning in an empty stomach.

Duration of recording:

HRV is recorded before and immediately after *Kuñjala kriyā* for five minutes. .

Assesments:

The HRV ambulatory system (Niviqure, Bangalore, India) was used to record the electrocardiogram (EKG), (Version 4.2). EKG was recorded using lead-II configuration. The EKG was recorded at the rate of 1024 Hz and a converted at a simple rate of 500 Hz by using a Niviqure converter. The Finland HRV analysis soft ware was used for the analysis. The R-waves were detected to obtain a point event series of successive R-R intervals, from which beat to beat heart rate series were computed. The heart beat, which was believed to be regular and rhythmic, is found to be irregular as it is influenced by sympathetic and parasympathetic activity of respiratory movement also.

HRV is influenced by respiratory gating of Parasympathetic efferent activity as well as by the impulses from the Baro-receptors in Aorta and carotid arteries to the Sino-atrial node. HRV provides a window to observe the heart's ability to respond to normal regulatory impulses that affect its rhythm. HRV is influenced by age sex, position, breathing, smoking, hour of the day and medications. Kuñjala kriyā is involving the entire system in vomiting process; HRV is studied as it effectively indicates the individual's capacity to adapt to stressful condition or demandful condition.

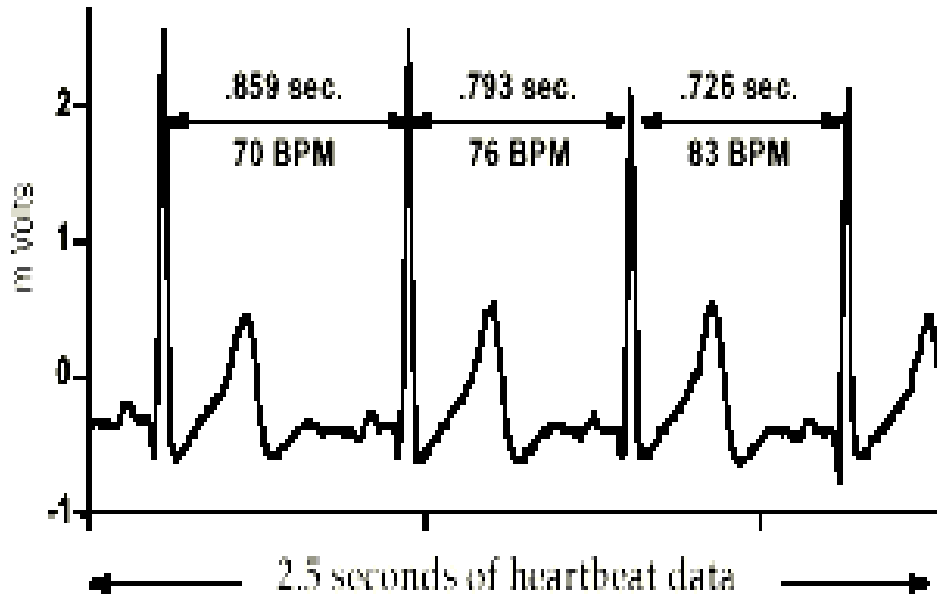


Figure 3: Heart rate variability is a measure of the beat to beat changes in heart rate.

CHAPTER - 6

RESULTS AND DISCUSSIONS

RESULTS

Table -I: Demographic Data:

Groups	No of subjects			Age (Mean±SD)		
	total	Males	Females	total	Males	Females
Ex	38	24	14	26.81±4.28	26.13±3.89	24.71±3.41
Nv	32	19	13	25.16±3.74	28.11±4.27	24.92±3.68

The group mean values and standard deviation (SD) for all the experienced and novices are given in the Table no- I.

Table -II: Table for normality:

Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
	statistic	df	sig.	statistic	df	sig.
PR LF Ex	104	38	.200	.947	38	.105
PR HF Ex	103	38	.200	.947	38	.100
PRLF/HF Ex	.083	38	.200	.984	38	.906
PRHR Ex	.080	38	.200	.986	38	.931
PRLF Nv	.171	32	.018	.918	32	.026
PRHF Nv	.169	32	.020	.917	32	.024
PRLF/HF Nv	.128	32	.199	.946	32	.171
PRHR Nv	.139	32	.116	.959	32	.370

Table II: Suggests that the baseline values of PRLF, PRHF, PRLF/HF, PRHR of the experienced group and PRLF/HF and PRHR of the novices group are normally distributed ($p > .05$).

Table no. III. Comparison of LF, HF, LF/HF ratio and HR in both groups.

HRV variables	Experienced (n=38)			Novices(n=32)		
	Before	After	% change	Before	After	% change
LF	77.93±4.11	73.96±6.18	↓5.09**	75.15±3.44	78.13±3.59	↑3.97**
HF	22.05±4.11	26.05±6.18	↑18.15**	24.83±3.45	21.86±3.59	↓11.96**
LF/HF	3.68± 0.82	3.03± 0.86	↓17.61**	3.10± 0.55	3.70±0.72	↑19.52**
HR	70.18±9.42	73.21±8.31	↑ 4.31*	71.53±9.14	76.48±8.55	↑ 6.91**

** $p < .001$, * $p < .01$, Paired t test.

↑ = increase, ↓ = decrease.

Table III: shows that there was a significant reduction in power of low frequency (LF) and significant decrease in LF/HF ratio ($p < .001$) in EX group. The power in high frequency (HF) ($p < .001$) is increased in experienced people. There was reverse effect in novices on all 3 variables. There was a significant increase in heart rate by 4.31% in experienced group and 6.91% of increase in novices group (paired samples t test – 2 tailed).

DISCUSSIONS

This matched case control study showed a significant decrease in LF value and LF/HF ratio in experienced subjects with reverse changes in the novices. The heart rate increased significantly in both the groups.

The LF band of the HRV spectrum corresponds to sympathetic activity when expressed in absolute values (1). The balance between the sympathetic and parasympathetic activity is indicated by LF /HF ratio. Hence the results of the present study suggest a decrease in sympathetic tone in experienced practitioners after *Kuñjala kriyā*. With this reduction in LF spectrum, one would expect a reduction in HR whereas we observed a significant rise in HR (4.3% in Ex and 7% in Nv). This can be explained by our understanding of the autonomic changes that occur with the change of posture from sitting to standing or changes during mild and moderate exercise wherein this type of change (decrease in LF band and increase in HR) is well documented (21). Here the exertion involved during the process of *Kuñjala kriyā* seems to be the factor that is responsible for these changes in HR and HRV. The mechanism of action of this exercise reflex which leads to increased HR during standing or after mild to moderate exercise has been attributed to early rapid withdrawal of Vagal tone. Flattening of baroreceptor sensitivity with sympathetic hypo activity during early exercise also has been documented which can explain the decrease of the LF spectrum in this study (25).

The increase in the low frequency power in novices points to increased sympathetic tone. This could be due to the psychological apprehension of the subjects about the practice as they were practising *Kuñjala kriyā* for the first time.

This may be similar to the sympathetic activation which occurs after involuntary vomiting due to sickness or emetics (6).

There are several studies on the changes in HRV after both activating as well as relaxing type of yoga practices. A comparative study on head stand (*śīrṣāsana*) with and without support showed increase in sympathetic tone (27). Another study on rapid breathing technique (*kapālabhati*) wherein forceful exhalation at the rate of 120 /min was performed also showed a significant increase in sympathetic activity with increased HR (28).

Although *Kuñjala kriyā* is an activating type of physical yoga practice, it does not have the sympathetic activating effect as seen in head stand (*śīrṣāsana*) or rapid breathing technique (*kapālabhati*). Hence it can be used safely to bring about better sympatho-vagal balance in both healthy and unhealthy subjects.

In conclusion this study on changes in HRV after *Kuñjala kriyā* has shown a decrease in the sympathetic tone in the experienced group and an increase in sympathetic tone in novices group.

CHAPTER - 7

SUMMARY AND CONCLUSIONS

The matched case control study was aimed to determine the effect of *kuñjala kriyā* on autonomic nervous system using heart rate variability. The two groups of healthy subjects (38 & 32) were studied. The experienced group (Ex) had practised *kuñjala kriyā* at least four times before, the novices (Nv) practised *kuñjala kriyā* for the first time. The HRV recorded for five minutes immediately before and after the *kriyā*. Design was matched case control. As data was normally found to be distributed (Shapiro- Wilk test), paired t-test was done for analysis. The result showed decrease in the HRV spectrum in experienced subjects rather than novices. There was more increase in heart rate in novices subjects rather than exposed subjects. The genderwise comparison (Independent t- test) between experienced and novices showed that there is significant change in the males of the novices group and there was no significant difference in between the females of two groups.

The result of this study can be summarized that the sympathetic stimulation as shown by heart rate variability spectrum is less in the subjects who are experienced to *kuñjala kriyā* earlier when compared to those who are novices.

CHAPTER - 8

LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE WORKS

A. LIMITATIONS OF THE STUDY

1. The subjects of exposed group had limited exposure to *kuñjala kriyā* (minimum is four times)..i.e. inadequate exposure.
2. Absence of repeat intervention sessions.
3. Absence of inter - individual analysis.

B. SUGGESTIONS FOR FUTURE WORKS

1. The study can be repeated with subjects having extensive exposure to *kriyās*.
2. It can also be extended to measure later effects of *kuñjala kriyā*.
3. Novices can be asked to repeat the practice and repeatability of the result can be tested.

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