

## REVIEW ON PHYSIOLOGICAL EVALUATION OF ABHYANGA

Sabna P P<sup>1</sup>, Anjali Sivaram<sup>2</sup>, Hakkeem Panthappulan<sup>3</sup>

<sup>1</sup>MD scholar, <sup>2</sup>Associate Professor, <sup>3</sup>Assistant Processor  
Department of Kriyasareera, Govt. Ayurveda College Kannur, Kerala, India

Corresponding Author: [sabnapp32@gmail.com](mailto:sabnapp32@gmail.com)<https://doi.org/10.46607/iamj2409122021>

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## ABSTRACT

Lifestyle interventions are the major *Ayurvedic* preventive and therapeutic approach that helps in building a healthy metabolic system, attaining good digestion and proper excretion. To achieve the aim of Ayurveda, i.e., to preserve and promote the health of healthy, it prescribes many measures in the form of daily routine [*Dinacharya*], seasonal regime [*Rtu charya*] etc. *Abhyanga* has been included as a part of *Dinacharya* and as a treatment for certain diseases. It is also a part of the pre-therapeutic procedures of *Panchakarma* (five purificatory measures). It prevents *Jara* [ageing process], help to overcome *Srama* [fatigue], cures disease caused by *Vata*, promotes eyesight, improves texture and quality of skin, longevity etc. Since *Vata* dominates in the *Sparsanendriya* (skin) and *Taila* (oil) possess those qualities opposite to that of *Vata*, *Abhyanga* pacify *Vata* to a great extent. Since *Sparsha* is also the seat of *Pitta dosha*, and the eye itself is the seat of *Pitta*, *Drshtiprasada* effect of *Abhyanga* described in classics can be explained. By massaging, through oil application and generating heat by friction, *Abhyanga* stimulate blood circulation and lymphatic circulation. It also serves as the transporting medium of nutritional substances, metabolic end-products etc. So, it is an attempt to explore the physiological effects of *Abhyanga* as *Dinacharya* in the body.

**Keywords:** Abhyanga, Pancha karma, Physiology

## INTRODUCTION

According to Ayurveda, the term health does not stand only for the freedom from diseases, but it is called healthy only when a person's mind, sense organs and soul are in a perfect state of equilibrium to endow happiness and the body is free from diseases<sup>1</sup>. Ayurveda provides an integrated approach to prevent and treat illness through lifestyle interventions and natural therapies. Lifestyle interventions are the major Ayurvedic therapeutic and preventive approach that helps in building a healthy metabolic system, attaining good digestion and proper excretion. *Abhyanga* has been included as a part of *Dinacharya* and as the treatment for certain diseases. It is also a *Poorvakarma* of *Panchakarma*, an important part of *Bahiparimarjana chikitsa* (external purificatory measures). Just like a machine needs lubrication for its proper function and durability, the body also needs lubrication especially because of wear and tear. The lubrication should be provided both internally and externally by *Sneha* dravya (unctuous particles like oil).

It is one among the Ayurvedic procedures which become applicable from the first day after the birth itself. It is one of the most natural and powerful methods of relaxation and at the same time does body rejuvenation.

*Abhyanga* is the movement of *Sneha* over the body, applied using hand.

### ABHYANGA IN CLASSICS

*Abhyanga* is described in two contexts in Ayurvedic classics-

1) *Dinacharya* context, *Swasthya rakshnartha* in *Swastha* [preventive aspect in healthy individuals]

It can be done regularly to a person

- For the maintenance as well as promotion of positive health; rejuvenating the body to prevent and arrest the ageing process.
- In certain physiological conditions such as *Garbhinicharya* (prenatal care), *Soothikacharya* (post-natal care), *Navajatha shishuparicharya* (neonatal care) etc.

2) Part of the treatment procedure, *Roga pramanartha* in rogi [therapeutic aspect]

- It can also be done as a special therapy for a limited period for curing different diseases
- *Abhyanga* along with fomentation is also given before administering several categories of elimination therapies like *Vamana*, *Virechana*, *Vasti*, *Nasya* etc.

### METHOD OF PROCEDURE

- Generally, *Abhyanga* is done in *Anuloma* direction [in the direction of hairs], i.e., from head to foot in a downward motion, away from the heart
- It should be done in a round pattern on joints like the elbow, shoulder, knee, ankle, and lumbar joints.

### SITE OF APPLICATION

Though *Abhyanga* has to be done on the whole body (*Sarvanga*), special emphasis should be given to *Abhyanga* on the head, ears and feet<sup>2</sup>.

### TIME OF APPLICATION

As part of *Dinacharya*, *Abhyanga* is advocated in the morning after essential morning routines and before bath daily. As per *Rtu charya*, daily *Abhyanga* is said to be done specifically in *Hemanta* and *Sisira* rtus. It is told to be done after having developed a desire for food. It is said that there is no harm if *Abhyanga* is done with one, two, or even three days intervals. In *Ayurveda Rasayana* the importance of doing it every day is emphasized.

### DURATION

Regarding the duration therapeutically, the following view of Dalhana becomes significant.

According to him, *Abhyanga* done for -300 *Matras* reach till hair roots, 400 *Matras* reach up to skin, 500 *Matras* reach up to *Rakta dhatu*, 600 *Matras* reach up to *Mamsa*, 700 *Matras* reach up to *Meda*, 800 *Matras* reach up to *Asthi*, 900 *Matras* reach up to *Majja Dhatu*<sup>3</sup>.

Therapeutically *Abhyanga* is done in 7 positions to ensure that *Sneha* reaches all parts of the body equally. Then the total duration will be around 35 minutes, 5 minutes in each position. This is mainly done with substances like *Taila* and *Ghrta*.

## BENEFITS OF ABHYANGA

Daily application of oil on the body is recommended. Benefits of daily application of oil on the body include it retard ageing, overcoming fatigue and annihilating effects of aggravated *Vata*. It improves the clarity of vision, renders nourishment, longevity, good sleep, good skin and a sturdy physique<sup>4</sup>.

Acharya Susruta also adds that *Abhyanga* produces *Mrdutwa* (imparts softness to body), pacify *Kapha* and *Vata*, cause *Pushti* to *Dhatus* (nourishment to tissues), gives *Mrja* (cleanliness), *Varna* (good complexion) and *Bala* (strength/immunity). It also promotes longevity, induces sleep, imparts *Klesa sahatwa* (ability to withstand difficulties), *Abhighata sahatwa* (ability to withstand injuries) and *Indriya tarpana* (nourishment to sense organs)<sup>5</sup>.

## PADA ABHYANGA

As per *Vagbhata*, nerves in the soles are connected to the eyes. They vitiated by the accumulation of *Mala*, assault, squeezing etc. cause abnormalities to the eyes. They transmit the effects of the medicines applied over the feet in the form of *Abhyanga*, *Udwartana*, *lepa* etc. Thus, massage to the feet can help in the functioning of the eyes.

The benefits rendered by daily application of *Pada abhyanga* as it

Cures dryness, roughness and numbness of feet, relieves tiredness, renders strength and steadiness of feet, imparts beauty to feet, improves vision, pacifies and alleviates *Vata*, cures diseases like *Grdhrasi*, cracking of feet, nerve contractures<sup>6</sup> etc.

## SIRO ABHYANGA

The benefits of daily administration of *Siro abhyanga* (head massage) are enlisted as

Prevent headache, baldness, premature greying of hair and hair fall, strengthens the scalp, and makes hair thick, black and lustrous, strengthens the sense organs, improves the texture of facial skin, renders sound sleep and pleasure<sup>7</sup>.

## KARNA ABHYANGA

The benefits of daily application of *Abhyanga* in the ears (known as *Karnapoorana*) are enlisted as.

Prevents and cures ear diseases, prevent diseases like *Manyagraha* (spasm of the neck), *Hanugraha* (spasm

of the jaw) etc., prevents deafness, improves the auditory power, prevents headache<sup>8</sup> etc.

## CONTRA INDICATIONS OF ABHYANGA

It is, however, not to be practised by those suffering from vitiation of *Kapha Dosha*, those having undergone either one of the five purificatory methods [*Vamana*, *Virechana*, *Nasya*, *Vasti*, *Raktamoksha*] and those suffering from *Ajirna* (indigestion)<sup>9</sup>. Susruta also adds *Ama peedita* (suffering from complications of improper digestive fire) and *Tarunajwara* (recent onset fever)<sup>10</sup>.

## SKIN/TWAK

*Abhyanga* is an external process, so knowledge about the structure and function of the skin is essential. Skin and its accessory structures (hair, nails, glands, muscles and nails) make up the integumentary system, it is the largest organ covering an area of 2m<sup>2</sup>. The average square inch (6.5 cm<sup>2</sup>) of skin holds 650 sweat glands, 20 blood vessels, 60,000 melanocytes and more than 1000 nerve endings; structurally made up of 2 layers.

1. Outer epidermis
2. Inner dermis

## TWAK

From *Rakta*, during the formation of fetus by the union of *Shukra* and *Shonita*, processed by heat, seven skin layers are formed like the formation of surface layer cream over boiling milk<sup>11</sup>. *Twak* is one among the *Panchendriyadhishtana* for *Sparsanendriya*. *Vata* dosha dominates in the tactile sensory organ, and this sensory organ is lodged in the skin. In later stages when *Dhatu parinama* starts, it forms as an *Upadhatu* from *Prasada bhaga* of *Mamsa dhatu*. It is considered as a maternal element, formed in the 6<sup>th</sup> month of gestation<sup>12</sup>.

## COLOUR OF THE SKIN

*Twak* is considered as evolved from *Parthiva*. *Vayu* is the cause for its formation. Color of the skin is *Taijasa*. Among the *Dosha*, *Pitta* is said to be responsible for the normal as well as the abnormal coloration of the skin. The specific *Pitta* is termed as *Bhrajaka pitta* which is located in the *Twak*<sup>13</sup>.

## LAYERS OF THE SKIN

According to Susruta, Charaka and Vagbhata are 7,6 and 7 respectively. According to Susruta, among the 7

layers, *Avabhasini* is the outermost layer that serves to reflect all colors and is capable of being tinged with hues of all the five *Bhoutik* elements of the skin. According to *Susruta*, *Bhrajaka pitta* is situated in *Avabhasini*. The other layers toward the inner are *Lo-hita*, *Shweta*, *Tamra*, *Vedini*, *Rohini* and *Mamsadhara*<sup>14</sup>. *Charaka* has named the first two layers only viz. *Udakadhara* and *Asrikdhara*. *Susruta* has determined the thickness of each layer taking one *Vrihi* as standard.

### **BHRAJAKA PITTA**

*Bhrajaka pitta* or *Bhrajakagni* is responsible for the development of complexion, and skin is the seat of *Bhrajaka pitta*. Balance of *Bhrajaka pitta* contributes to the health of the skin and its appendages. Health and healthy metabolism make it radiant, ill health makes it dull.

Its functions are said to be.

- The production of normal and abnormal heat of the body
- The production of the normal and abnormal color of the skin as a whole, and its parts and structures of the body
- The *Deepana* and *Pachana* of substances used for *Abhyanga*, *Lepa*, *Parisheka*, *Avagaha* etc. Due to this function, *Susruta* called this *Pitta bhrajakagni*.
- It is so-called because it imparts lustre to the skin and makes its radiate. It irradiates the glow of one's natural complexion.

### **DISCUSSION**

- ❖ *RTU*-in the context of *Rtu charya*, *Abhyanga* is specifically told to be done in *Hemanta rtu* and *Sisira rtu*. They are *Shita rtu*. So *Abhyanga* done in these *Rtu*, stimulate the sweating mechanism and also blood flow by vasodilation.
- ❖ These *Rtu* are characterized by increased *Sareera bala*. *Hemanta rtu* belongs to *Visarga kala* also. *Abhyanga* like *Swasthya vardhaka* procedures then, may prolong this *Swasthyavastha* and also may help to compensate the unhealthy fluctuations in *Dosha*, *Dhatu* etc. those may take place in other *rtu*.

- ❖ In *Hemanta Rtu*, *Mrdu guna* of *Abhyanga* favour and maintain the *Pitta* in the *Prashamavastha*. *Sisira rtu* belongs to *Adana kala* and during this period cold is severe and dryness more; *Snigdha guna*(unctuousness) through *Abhyanga* will prevent the *Ruksha Guna Vrdhi* (aggravation of dryness). *Kapha dosha* will be pacified due to *Agni Deepti* (increases digestive fire) generated by *Abhyanga* and *Kapha dosha samchaya* will be prevented.

### **PROBABLE MODE OF ACTION**

The process of *Abhyanga* benefits in two modes

- Effect of *Abhyanga* process
- Effect of *Taila*

Effect of *Abhyanga* process

A spinal segment receiving afferent impulses from the surface receives the same from deeper organs as well, modulates them conducting the former to the higher centres. It produces arteriolar dilation in the adjoining areas of massage. Through the segmental association of afferents, vasodilation also occurs in the corresponding deeper organs. This occurs by axon reflex. Thus, the effect is not just to skin, the site of application but it is for the body as a whole, the effect being that increased blood supply. Cellular respiration, excretion, nutrition, maintenance of homeostasis, pH and temperature, defence mechanism etc. are benefited. i.e., it is *Vikaraprasamaka* (alleviates disease) as well as *Swastha hita* (suitable for a healthy person). Though there is oxidation, because of slow regulated *Sneha* application, oxidative byproducts may be removed. Since there is vasodilation, the scavenging of metabolic end products will also be quicker and more complete.

### **EFFECT OF TAILA**

The oil used in *Abhyanga* can reach up to different *Dhatu* if it is applied for sufficient time. *Abhyanga* performs the actions like *Snehana* (imparts unctuousness), *Kledana* (moistness), and *Vishyandana* (liquefaction) at the cellular level of the body by its *Snigdha guna*<sup>15</sup>.

### **MODE OF ACTION IN AYURVEDIC VIEW**

Oil enters through hair follicles and is digested by *Pitta* or *Bhrajakagni*. *Twak* is the natural abode of

*Vata*. So, in *Twak*, *Bhrajaka pitta* acts along with *Vata* seated in *Twak*. *Bhrajaka pitta* can be correlated to the metabolic tissue enzymes in the skin which cause *Deepana* and *Pachana* of applied *Sneha*. Out of the 20 *Sareera gunas*, 9 *Gunas* (*Ushna*, *Seetha*, *Snigdha*, *Ruksha*, *Slakshna*, *Khara*, *Mrdu*, *Katina* and *Pichila*) are *Sparsagrahya* (identifiable with touch). *Abhyanga dravya* dominated by the qualities of *Ushna* and *Snigdha* act on the opposite qualities of *Vata*, promoting positive effects. *Twak* being the area rich in vascular supply promotes the absorption of the *Abhyanga dravya* from *Twak* to successive *Dhatu*.

#### SIRO ABHYANGA

*Siras* is the *Uttamanga*, seat of all the senses, it will be *Sarvendriya prasadana*.

It is the root of *Sareera*, the seat of *Indriya* (sense organs), *Prana* (life) and *Pranavaha srotas*. It is the *Marma* to be protected with utmost care. The rate of absorption is high in the scalp, because of its very rich blood supply.

#### SRAVANA ABHYANGA

The ear is a *Vata sthana*. It is the seat of various *Marma*. Apart from the skin, it is the only possible site, where direct application of medicament is least irritating to the target. So, it strengthens the nerves as the facial nerve passes through the stylomastoid foramen, which is nearest to the surface. Even though a small structure, its structure is made up of a greater number of components like skin, muscle, cartilage, bone, blood vessels, nerves etc. also it contains receptors for posture and equilibrium.

#### PADABHYANGA

*Pada* (feet) is the most used *Karmendriya* (motor organs), the most vulnerable site for *Abhighata* and *Vata vrddhi*. The foot has over 70000 nerve endings with trigger points that correlate to the whole body. It is the most important reflex centre in reflexology and pressure point in acupuncture. Many crucial *Marmas* are located here. *Padabhyanga* assists the venous return. Absorption is relatively high at the arch of the sole with plantar arches, in the rest of the areas, skin is thick.

## GENERAL BENEFITS

### ▪ ON VATA

*Abhyanga* is *Vatahara*, possessing qualities opposite to *Vata*, it regulates the properties of *Vata*. The probable mode of action of *Abhyanga* in the alleviation of pain can be explained by the physiology of pain. The analgesic action of massage is attained by

1. neural gating mechanism, activating nerve receptor signals along myelinated nerve fibres to temporarily block pain signals from reaching the brain.
2. by depressing the sensitivity of the pain receptors through increased oxygen supply<sup>16</sup>.

### ▪ ON NIDRA

*Abhyanga* cause *Vata Pitta Samana* and provides *Kapha poshaka gunas* and these helps to get good sleep.

### ▪ ON SHRAMA

During continuous physical strain, due to anaerobic respiration, the concentration of lactic acid in muscles is increased which cause tiredness of muscle.

Due to *Abhyanga*, the channels get properly opened which ensures the proper supply of nutrients and oxygen to the body cells. At the same time, waste materials are excreted. The individual feels fresh, and his general energy level becomes higher.

### ▪ ON PUSHTI

The *Agni* is of paramount importance even in *Abhyanga*. *Bhrajaka pitta* situated in the skin is the *Agni* factor that performs the *Deepana* and *Pachana* of *Abhyanga Dravya*. *Rasa dhatu* is the *Dhatu* nutrient pool, hence it performs *Poshana* function in *Sareera*.

### ▪ ON TWAK

It is *Twachya* (good for skin). The activity of the skin is promoted by

The direct stimulus of *sweat* and sebaceous glands and the hair follicles. Glandular activity will be exciting. Reflex influence the vasomotor nerves whereby an increased supply of blood is brought to the skin by vasodilation of surface capillaries.

### ▪ ON DRISHTI

It is *Drishti prasadana*

Eyes are primarily seats of *Pitta*. *Pitta* is the functional factor in the eye. *Alochaka pitta* performs the *Alochana* [perception] of the *Indriyarthas*. But *Vata* is

responsible for *Pravartana* [stimulation, activation] conduction of visual impulses etc. It is cited in the classics that two *Siras* from *Pada* reach up to the eyes and *Padabhyanga* improves their function.

▪ **ON AYU, JARA etc.,**

Premature ageing, degenerative changes etc. are due to the aggravation of *Vata dosha*, which naturally increases with age. The functions of tissues and vital organs will be improved by *Abhyanga* which results in longevity<sup>16</sup>.

## CONCLUSION

The *Pancha mahabhuta* predominate in *sparsanendriya* is *vata*. Qualities of *Taila abhyanga* are opposite to the qualities of *Vata*, thereby normalizing the *Sareera vata* functions. It improves the circulation of blood and lymph, facilitating the transport of oxygen and other nutrients into the body tissues.

It is *Twachya* since it brings about improvement in the microcirculation and secretory activity of the skin glands which provide better texture, radiance and glow to the skin. Skin is the reflector of *Rasa dhatu*. So being *Twachya Abhyanga* improves the functional status of *Rasa Dhatu*. It improves the excretion of *Kleda* by increasing the activity of sweat glands. *Bhrajaka Pitta* can be considered as the metabolic epithelial enzymes which cause the *Deepana* and *Pachana* of substances applied in the form of processes like *Abhyanga*, *Alepa* and *Parisheka*.

*Siro Abhyanga* is *Keshya* due to the higher rate of absorption and increased vascularization which allow better absorption of nutrients through the hair follicle. *Padabhyanga* is considered important because of the presence of a large number of nerve endings. *Pada* is the *Karmendriya* that is to be used to the maximum. *Abhyanga* in this region helps in increasing venous return.

*Abhyanga* helps to promote the function of parasympathetic division of the autonomic nervous system. It alleviates pain by neural gating mechanism and by reducing the sensitivity of pain receptors. *Snigdha guna* imbibed from *Abhyanga* helps to get sound sleep. It helps to overcome *Srama* by increasing the circulation.

It is *Agni vardhaka*. It promotes parasympathetic activity so that the processes of secretion, movements, assimilation and elimination are improved, aiding in proper digestive functions. It relaxes the body, thereby reducing the effects of stress.

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