

PREVENTIVE AND CURATIVE ASPECTS OF VYAYAMA: A REVIEW ARTICLE***Dr. Manasa S. D.**

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ABSTRACT

Ayurveda is the science of life with the goal of Swasthya rakshanam and Vikaraprashmanam. Vyayama has its role both in swatha-rakshana and vikara prashamana. All ancient scholars have explained Vyayama as a part of Dinacharya for maintainance of health and as type of niragni sweda for the cure of disease. This article emphasizes on the effect of vyayama or physical exercise in physiology of human body and pathology of disease.

KEYWORDS: Vyayama, Physical exercise, Dinacharya, Niragni sweda.**INTRODUCTION**

Ayurveda the science of life has mentioned Vyayama in Dinacharya for maintainance and promotion of health. Acharya Sushruta has stated that one who is desirous of health should do vyayama daily in all season for their own well being.^[1] In today's life to keep one healthy and disease free Vyayama or physical exercise plays an important role. Insufficient physical activity is one of the leading risk factors for death worldwide and a key risk factor for noncommunicable diseases such as Cardiovascular disease, Cancer and Diabetes Mellitus. WHO estimates that physical inactivity is the fourth leading risk factor for global mortality.^[2] As data presented by W.H.O. physical inactivity is responsible for 6% of deaths globally -around 3.2 million deaths per year, including 2.6 million in low and middle-income countries, and 6,70,000 of these deaths are premature.^[3]

MATERIALS AND METHODS

All the references regarding Vyayama are collected from Bruhat trayi and Laghu trayi and relevant matters described in Journals and websites to explain the influence of Vyayama on prevention and cure of disease.

Definition of Vyayama

Acharya Sushruta defines Vyayama as the activity which produces tiredness or exhaustion in the body.^[4] Whereas Acharya Charaka describes Vyayama as any physical activity which enhances strength and stability of the body when performed in required amount.^[5] Here required or desirable amount excludes all heavy physical activity like carrying heavy load^[6] etc.

Matra and Kala of Vyayama

Acharya Sushruta and Vagbhatta have mentioned the duration to perform Vyayama as balardha^[7] i.e., when pranavayu situated in heart comes out to the mouth

(exhalation or increased ventilation) it is called balardha.^[7] Vyayamashakti is the parameter to measure bala of a person.^[8] By performing Vyayama regularly, body strength increases and so increases the measurement of bala in a person. The Matra, i.e., balardha for Vyayama depends upon various factors such as age (vaya), body strength (bala), place (desha), time (kala), prakruti and diet (nature of food).^[9] Acharya Charaka mentioned perspiration, increased respiration, lightness of the body, increased heart rate are indicative of exercise being performed correctly.^[10] He also mentions that if one performs exercise more than his bala then he suddenly perishes just as the lion which fights with the elephant dies after winning.^[10]

Vyayama is especially beneficial in winter and autumn seasons.^[11] In other seasons only mild vyayama should be done. Regarding the time to perform Vyayama it is said that Vyayama should be performed in morning hours. As the Kapha dosha dominates in morning hours and Vyayama is the best way to pacify it. Other reason could be after a whole night fasting, at morning hours in absence of carbohydrate, fat is available to be burnt and provide energy.

Acharya Charak also mentions that one who indulges in these and similar other activities in excess, suddenly perishes just as the lion which tries to vanquish an elephant by force suddenly.^[17]

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Importance of Vyayama in Maintenance and Promotion of Health

Vyayama plays a very important role in the maintenance and promotion of health. Acharya Charaka and Sushruta have stated various effects of Vyayama on human body. Vyayama brings about lightness in the body, strength, stability, endurance.^[12] The major impact of Vyayama is on Agni. It increases agni to the extent that even viruddhaahara (incompatible food), vidagdha and avidagdha ahara (improperly cooked food) can be easily digested without any discomfort.^[13] The increased agni will pacify kaphadi dosha, does digestion of ama and pacifies medo dosha resulting in Srotoshuddhi. This improves dhatvagni thereby causing proper nourishment of all dhatus leading to Shariropachaya.^[14] By Vyayama there will be increased perspiration and increased circulation there by improves lustre of the body. In muscles exercise increases the tensile strength resulting in compactness and firmness of the muscles thereby making the person strong enough that enemies will not be able to defeat him. By doing Vyayama regularly person develops the capacity to tolerate fatigue, exhaustion, thirst, heat and cold.^[14] It also provides optimum immunity.^[14]

Indications of Vyayama

Kapahaja Vyadhi: Vyayama is prescribed in case of all 20 types of Kaphaja vyadhi. In Vimana sthana Acharya Charaka has mentioned running(dhavana), jumping, leaping(plavana), walking(parisarana), waking up at night(jagarana), boxing(niyudha) etc. for Vitiated Kapha.^[15]

Prameha: Acharya Charaka mentioned that avoidance of Physical exercise leads to prameha.^[16] Prameha rogi who has no money should take a journey on bare foot for hundred yojana and those who are rich and Brahmana should adopt profession of sculpture and prepare Brahma ratha, or indulge constantly in agricultural activity or digging wells.

Sthoulya: Acharya Sushruta has mentioned that there is no anti obesity treatment better than Vyayama.^[17]

Urustambha: Swimming against the current of water frequently is prescribed in case of Urustambha chikitsa.^[18]

Importance of Vyayama for Curing Disease

The root cause of all disease is mandagni^[19] (Decreased digestive fire) according to Ayurveda. Mandagni results in formation of Ama dosha thereby causing Srotorodha leading to manifestation of disease. Vyayama increases Agni, pacifies kaphadi dosha and corrects srotorodha. There by aids in curing diseases.

Most of the disease indicated for Vyayama are due to Kapha and medha. Vyayama is one among niragni sweda. Which brings about increased body temperature, increase in jataragni and dhatvagni which burns the accumulated fat in the body. The mala of meda is sweda by vyayama sweat produced oozes out through minute channels resulting in srotoshuddhi.

Physical activity plays important role in many non-communicable diseases such as type 2 Diabetes and heart diseases. There is a direct link between obesity, diabetes and heart disease. Regular physical exercise is advised to overcome Obesity. During exercise mobilization of fatty acids occurs from the adipose tissue. These fatty acids are transported to muscle mitochondria for oxidation. Thus exercise helps in decreasing body fat and control obesity and other related disorders.

Acharya Charaka has mentioned Vyayama for the management of some cardiac diseases in persons who have optimum strength.^[21] An energy expenditure of about 1600 kcal (6720 kJ) per week has been found to be effective in halting the progression of coronary artery disease, and an energy expenditure of about 2200 kcal (9240 kJ) per week has been shown to be associated with plaque reduction in patients with heart disease. Low-intensity exercise training (e.g., exercise at less than 45% of maximum aerobic power) has also been associated with an improvement in health status among patients with cardiovascular disease. However, the minimum training intensity recommended for patients with heart disease is generally 45% of heart rate reserve.^[20]

During exercise contracting muscles releases multiple substance known as myokines which promote growth of new tissue, tissue repair, and multiple anti-inflammatory factors inturn reduce risk of development of inflammatory diseases.^[22]

DISCUSSION

In present era the burning problem is life style related disorders, which includes Diabetes mellitus, obesity, hypertension, atherosclerosis, joint disorder and other psycho-stomatic and metabolic disorders. The cause of this being sedentary life style and intake of high calorie diet. The same nidana has been mentioned in our classics for sthoulya and other santarpanjanya vyadhis. Vyayama is considered to be the best treatment for Sthoulya which by causing agni deepiti, removes srotorodha and aids in proper nourishment of dhatus causing Shareeropachaya, increases the strength and endurance.

CONCLUSION

Vyayama is an effective measure for maintenance of health and curing disease. In Ayurvedic classics the role of Vyayama in preventing and treating life style related disorders has been very clearly mentioned and the same has been supported by modern researches too. So to

maintain health and attain longevity one has to perform regular exercise.

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