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A novice perspective on exercise as a cause of diseases in contra-indication with Vyayama mentioned in Ayurveda

Maurya AS ^{1,*}, Patil SB ² and Salwade PB ³

¹ PG Scholar, Kayachikitsa department, LKRS Ayurveda college, Kolhapur, Maharashtra, India.

² Asst. Professor, Kayachikitsa department, LKRS Ayurveda college, Kolhapur, Maharashtra, India.

³ PG Scholar, Samhita department, Sion Ayurveda college, Mumbai, India.

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Abstract

Fitness is the most crucial parts of everyones life, in current era each human being is very well known to the fact of being fit and healthy with various means namely adopting moderation food habits, maintaining 24 hrs cycle and amongst all the attempts most trendy is physical exercise. In Ayurveda every detail of life is mentioned according to its need in one's life, its indication, contra-indication and importance, but often we humans tend to violate the ground rules in quest of achieving great.

Ayurveda emphasizes maintaining health through structured daily routines, including dinacharya (daily regimen), ratricharya (night regimen), and ritucharya (seasonal routine), which are essential for disease prevention and overall well-being. A key component of dinacharya is vyayama (physical exercise), considered fundamental for health maintenance and disease prevention. Ayurvedic texts highlight that appropriate physical activity positively impacts not only the body but also the mind (Mana), emotions, senses (Indriyas), and spirit (Aatma). When practiced correctly, vyayama enhances overall well-being and maximizes health benefits. However, improper execution can lead to health issues. This review article aims to provide an overview of vyayama according to Ayurvedic principles, detailing its effects on the body and necessary precautions for safe practice.

Keywords: Exercise; Vyayama; Contra indication; Rutukaal

1. Introduction

Exercise is essential for a healthy lifestyle, encompassing a variety of physical activities that enhance overall well-being. This includes designed workouts, recreational sports, and daily movements. Regular exercise offers numerous benefits, such as improved cardiovascular health, increased muscle strength, enhanced flexibility, and boosted mental wellness. As awareness of physical activity's importance grows, so does recognition of its role in preventing chronic diseases, managing stress, and improving quality of life. This introduction will explore different forms of exercise, their benefits, and the importance of integrating physical activity into daily routines for optimal health.

1.1. Diet and Exercise

Nutrition is crucial for optimizing performance and recovery, with tailored diets (like high-protein or carb-cycling) becoming popular. Individual needs vary based on goals and metabolism.

High intensity interval training (HIIT) and use of steroids is favored for its efficiency, it may cause short time of strength gain, but has many serious health risk.

* Corresponding author: Maurya AS

A balanced approach, prioritizing safety and sustainability, is essential in modern exercise practices. By focusing on dietary choices, effective training methods, and awareness of the risks associated with enhancers, individuals can achieve their fitness goals healthily and sustainably.

Ayurveda is one of the oldest systems of medicine in the world, encompassing every aspect of life. It is aptly described as "The Science of Living." Ayurveda primarily aims to achieve two objectives: the protection and promotion of health, and the treatment of disease¹. To achieve these objectives, Ayurveda recommends specific dietary and lifestyle routines tailored to each *ritu* (season), which are essential for maintaining optimal health. Among these practices, *dinacharya* (the ideal daily routine) is fundamental, serving as a cornerstone for sustaining overall well-being.² Thus, every *samhita grantha* of Ayurveda provides a detailed description of *dinacharya*. This ideal daily routine outlines various activities and duties to be performed throughout the day, guiding individuals from sunrise to sunset to ensure balanced and healthy living. Word *dinacharya* systematically and scientifically highlights all the regimen of the day, starting from *Brahmamuhurta jagarana* (Wake-up just before sun-rise), *Mala* and *Mutra Pravarthanam* (defecation and micturation), *dantadhavan* (cleaning the teeth), *Abhyanga* (smooth oil massage), *Snanakarma* (bath) and *vyayama* (physical exercise) etc. According to *Acharya Sushruta*, it is particularly beneficial for those who are robust or consume excessive fatty foods. By considering the amount of references available in all *samhita granthas*, we can say that *vyayama* is the most important and unique concept explained among the regimens of *dinacharya* and which is very essential to maintain the health and to avoid various type of diseases. In Ayurvedic literature all *samhita granthas* explained the definition, importance, procedure, and benefits of *Vyayama* along with adverse effects if it is practiced wrongly and excessively. *Vyayama* if practiced in proper way it acts as *Balavardhaka*, *Kantivardhaka* and *Agnivardhaka* but if the same is followed in improper way results for *nidan* (causative factor) of many disease.³

2. Material and methods

This is conceptual type of research. All sorts of references has been collected and compiled from various available Ayurvedic classics texts like *Charak samhita*, *Sushruta Samhita*, *Ashtanga Sangraha*, *Ashtanga Hridaya* and available commentaries on it. All matter is analysed for the discussion and attempt has been made to draw some conclusions.

Aim

To understand the need and importance of *vyayam* according to the classic of Ayurveda

Objective

- To review literature regarding *vyayam* and its role in management of various diseases.
- To understand of course modern exercise affects the health in contraindicator the Ayurveda *Vyayama* which promotes Health.

2.1. Definition of exercise

The ancient Ayurvedic authority *Acharya Charak* defined *vyayama* as any physical activity that is both beneficial and effective in enhancing bodily stability and increasing physical strength.⁴ Always *vyayama* (Physical exercise) has to be done in proper measure.⁵ *Vyayama* is referred to any *karma* (action or movement) which will bring *ayasa* (exhaustion).⁶

2.2. Physiological change occurs during *Vyayama*

- During the first few minutes of exercise: Glycogen in the muscles is broken down anaerobically and used to fuel the muscles. As the physical activity continues, oxygen becomes available for the aerobic break down of carbohydrates, fats and proteins. In addition to the glycogenolysis, muscle takes up the glucose in the circulation.
- After 5–10 minutes of activity: Muscle glycogen break down decreases. The decrease in the blood glucose suppresses insulin and stimulates glucagon which in turn causes hepatic glycogenolysis. Glycogen is broken down in the liver to glucose and is released into the blood stream and is taken up by the muscles as fuel. This glucose becomes the major source of fuel (hepatic glycogenolysis). Exercise 57 • At 20 minutes or more: The muscle glycogen stores are now depleted. The counter regulatory hormones other than glucagon (cortisol, epinephrine, norepinephrine and growth hormone) play an increasing role. Epinephrine and norepinephrine stimulate lipolysis and the resulting triglycerides break down into free fatty acids (FFA) and glycerol. FFA is used as a source of fuel for the muscles and glycerol can be converted into glucose through the process of hepatic gluconeogenesis.

- Longer duration of exercise: Should low-to-moderately intensive exercise continue for a long period of time, the muscles will continue to use the glucose derived from hepatic gluconeogenesis and FFA, as the fuel. FFA cannot completely replace the use of glucose and if carbohydrates are limited, then ketone bodies may form. This is not a risk in a person who has enough insulin, but may increase the risk of diabetic ketoacidosis in a person who is insulin deficient such as type 1 diabetic with poor glycemic control. 7

2.3. Importance of Vyayama

According to *Acharaya sushruta*, opponent will not only able to vanquish or defeat the person who performs *vyayama* regularly. *Vardhakya* does not attract him quickly and the muscle of his body becomes strong. It makes the body beautiful even of those people who are deficient in age, physique and qualities. The person, who performs daily exercise, can digest unhealthy and improperly cooked food without any kind of difficulty.⁸ Acharya Charak mentioned that avoidance of physical exercise lead to *Prameha vyadhi* (diabetes mellitus).⁹ Acharya Sushruta also mention that *vyayama* is best for reducing *sthulta* (obesity).¹⁰

2.4. MATRA OF VYAYAMA

In all the seasons, *vyayama* should be performed by persons as per their *bala* i.e. (half of total strength otherwise it harms).¹¹ Some Acharyas define *balardha* as the condition when profuse sweating occurs in areas such as the axilla, forehead, nose, arms, and shoulders. These symptoms typically arise during exertion. To prevent overexertion, it is advised to cease *vyayama* when such symptoms are observed.¹² Acharya *Vagbhata* also opines the same as Sushruta by advising *balardha* as a *matra* of *vyayama*.¹³ The appropriate amount of exercise will vary from person to person, depending on factors such as body type, age, and overall health. During the cold and spring seasons, it is advised to exercise until about half of one's energy is depleted. *Acharya Charak* notes that individuals who excessively engage in such activities may face sudden and severe consequences, much like a lion that attempts to overpower an elephant by sheer force and meets a swift demise.¹⁴ Rigorous exercises should not be commenced abruptly; instead, they should be introduced gradually, with the duration and intensity increasing slowly over time.

Table 1 Samyaga vyayama lakshana (sign of proper exercise)¹⁵

Sushruta	Charaka	Vagbhata	Yogaratanakra
Gatranamlaghvam	Swedaagamah	Balavaan	Svedopagamana in lalaata
Hridayoparodha	Shvaasavridhhi	Snighdha bhojana	Sevedopagamana in Naasa
Swedaagamah	Hridayoparodhachha	In Hemantha, Sisira and Vasanta rutu ¹⁹	Svedopagamana in Gaatra sandhishu
Shvaasavridhhi	Gatranam laghavam		Svedopagamana in Kaksha ²⁰
Vaya, Bala	Mukhasosha		
Sharira prakriti	Ayaasa ¹⁸		
Desha, Kala, Ashan ¹⁶⁻¹⁷			

2.5. VYAYAMA KALA

Suitable time for *Vyayama*

- Pratyusa– Hemanta-4-6 am
- Purvanna – Vasanta–6-9 am
- Aparanna – Pravith-5-7 pm

2.6. VYAYAMA ACCORDING TO RUTU

In *Ayurveda*, recommendations for physical exercise vary based on seasonal changes and an individual's health status. For a strong and healthy person:

- During Vasanta (Spring), Hemanta (Early Winter), and Shishira (Late Winter), Ayurveda recommends engaging in exercise up to Ardha Shakti (half of one's capacity).²¹

During *Grishma* Ritu, *Vyayama* (physical exercise) is contraindicated due to the excessive heat and potential for dehydration and overheating.

According to *Acharya Charaka*, *Vyayama* is also contraindicated during the following seasons:

- Grishma Ritu (Summer)
- Varsha Ritu (Rainy Season)

2.7. VYAYAMA PHALA

Vyayama promotes a sense of bodily lightness, enhances work capacity, and improves stability. It increases the ability to endure various forms of discomfort, such as pain and strain, and helps alleviate the three *doshas*, particularly *kapha dosha*. Additionally, it boosts the power of *Agni*, or digestive fire, improving overall digestive function.²² According to *Acharya Sushruta*, regular *vyayama* slows the aging process, helps shape the body, increases muscle strength, enhances digestion, and promotes overall health. It improves body nourishment, enhances skin luster, and refines body contours. Additionally, regular exercise enhances bodily stability, fosters a sense of lightness, reduces *alasiya* (laziness), and builds tolerance to fatigue, *Trishna* (thirst), *Aatap* (heat), and *sheet* (cold).²³

2.8. Cause of ATI VYAYAMA

People may engage in excessive exercise for various reasons, often driven by personal goals, societal pressures, or psychological factors. Here are some common motivations behind over-exercising:

Table 2 Common motivations behind over-exercising

	Reason	Description
1.	Fitness and Aesthetic Goals	Individuals may over-exercise to achieve muscle gain, fat loss, or a specific body image.
2.	Performance Enhancement	Athletes may push beyond limits to improve performance, risking overtraining syndrome.
3.	Mental Health	Some use exercise to cope with stress, anxiety, or depression, leading to excessive activity.
4.	Societal Pressure	Media and social influences glorify extreme fitness, prompting rigorous exercise regimens.
5.	Addiction to Exercise	A compulsive need to exercise may arise from the desire for endorphin "highs" or a sense of achievement.
6.	Lack of Knowledge	Individuals may be unaware of over-exercising risks, neglecting the importance of rest and recovery.
7.	Perfectionism	Perfectionistic tendencies can drive individuals to set unrealistic exercise standards.
8.	Disordered Eating	Excessive exercise can be a method to control weight in those with eating disorders like anorexia

2.9. ATIVYAYAMA SEVAN JANAYA VYADHI

Excessive practice of *Vyayama* (physical exercise) can lead to several adverse effects on the body, including:

- Ksharma, Klama, Kshaya, Trtishna, Raktapitta, Pratamaka, Kasa, Jwar, Chardi.

Over practice of *Vyayama* may lead to *Urakshata* (chest wounds), resulting in the expulsion of blood, pus, and mucus through coughing.²⁴ According to *Acharya Vagbhata*, excessive physical exercise is so detrimental that it can even lead to severe consequences, including death, if not managed properly.²⁵

- **Sushruta Samhita:** It has mentioned the importance of moderation in exercise to avoid aggravating the *Vata dosha* and causing imbalances that can lead to physical and mental distress.
- **Charaka Samhita:** It stated that the balance of the *doshas* and the role of physical activity in maintaining health. If over exercise, which can disturb the *Agni* and lead to various health issues.

Over-exercising can lead to a range of health issues and diseases due to the strain it places on the body. Here's why excessive physical activity can invite various health problems:

- Musculoskeletal Injuries
- Hormonal Imbalances
- Immune System Suppression
- Digestive Issues
- Mental Health Problems
- Cardiovascular Issues
- Chronic Fatigue
- Dehydration and Electrolyte Imbalance
- Nutritional Deficiencies
- Compromised Recovery

3. Vyayama varjya (contra- indication of exercise)

Vyayama (physical exercise) should be avoided in the following conditions:

Ajeerna (Indigestion), Navajwara, Udakodara (Ascites), Raktapitta (Bleeding Disorders), Mutrakruhra (Dysuria), Vatarakta Vyadhi (Gout), Karna Roga (Ear Disorders), Asthibhagna (Fractures), Bhagandhara.

Additionally, *Vyayama* should be avoided in individuals who are experiencing:

- Anger
- Emotional Distress
- *Dukha* (Grief)
- *Bahya* (Fear)
- Extremely Lean

Engaged in Physically Demanding Work²⁶

4. Discussion

Ayurveda advise a code of conduct for both day and night based on different season in order to safeguard ones good health. It is called as swathavritta. Once should follow the described dincaharya. Exercise or vyayama is very important part of dincharya. Vyayama has both the values preventive and curvative.

5. Conclusion

Many people follow crash diets and fad diets, like keto, and exercises without considering the risks, which can weaken immunity and overall health. Personalized nutrition and exercise plans, tailored to individual needs, are more effective and safer. Blindly following celebrities or influencers is risky because everyone's body is different. It's important to consult healthcare professionals and avoid extreme exercises for long-term well-being.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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