

A CRITICAL REVIEW STUDY ON RELATIONSHIP BETWEEN *DEHA PRAKRITI* AND SEMEN PARAMETERS IN MALES

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ABSTRACT

Ayurveda emphasizes the concept of *Deha Prakriti*, the inherent constitution of an individual, as a foundational determinant of health, disease susceptibility, and physiological attributes. All the physiological process are directly controlled by *Vata-Pitta* and *Kapha* (three body humors) and *Mansika Doshas* (functional psychic factors). Semen quality is a critical factor in male fertility, and its parameters—such as volume, sperm count, motility, and morphology—are influenced by both genetic and environmental factors. This review explores existing literature on the correlation between different *Deha Prakriti* types (*Vata*, *Pitta*, *Kapha*, and their combinations) and semen parameters in males. Evidence suggests that *Kapha*-predominant *Prakriti* is often associated with superior semen quantity and quality, while *Vata* and *Pitta* dominance may correlate with suboptimal parameters.

KEYWORDS: *Deha Prakriti*, *Ayurveda*, semen parameters, male infertility, *Vata*, *Pitta*, *Kapha*, reproductive health.

INTRODUCTION

Ayurveda, the ancient system of Indian medicine, classifies individuals based on their unique psychosomatic constitution—*Deha Prakriti*. Every human being carries within them the three *Doshas* (*Vata*, *Pitta*, *Kapha*), the five basic elements (space, air, fire, water, earth), and the three *Gunas* (*Sattva*, *Rajas*, *Tamas*), which together shape their physical and mental nature.

At the moment of conception, the balance of these forces in the reproductive cells (sperm and ovum) determines a person's unique constitution, known as *Prakriti*. This constitution is set at fertilization and usually stays consistent throughout life. Seven no. of *Prakriti* are explained where every individual *Prakriti* have specific *laxanas* (characters).

Kapha Prakriti person is '*Prabhootashukravyavayapatya*', *Pitta Prakriti* person is having '*Alpashukravyavayapatya*' and *Vataja* person is '*Alpa-apatya*' and even *Alpa shukra*. Semen quantity and quality is a critical determinant of male fertility, assessed through parameters such as sperm concentration, motility, morphology, and volume.

This review aims to synthesize current knowledge from classical *Ayurvedic* texts and modern research to understand how *Deha Prakriti* may influence semen parameters in males.

AIM AND OBJECTIVES

1. To study *Prakriti* and *Shukra Dhatu* in detail through different *Samhitas*.
2. To study relation of *Prakriti* and Semen Parameters.
3. To establish a relation between *Prakriti* and Semen parameters in Males

MATERIALS AND METHODS

To study concept of *Prakriti* and *Shukra* (Semen Parameter) through different *Ayurvedic* classical texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*), online databases including PubMed, Scopus, AYUSH Research Portal, and Google Scholar.

Inclusion criteria

- 1) Studies assessing *Prakriti* types in human male participants.
- 2) Studies correlating *Prakriti* with semen parameters (volume, count, motility, morphology)
- 3) Reviews, observational, or interventional studies.

REVIEW OF LITERATURE

Classical *Ayurvedic* Literature

Concept of *Prakriti*

The term is derived from *Sanskrit*: '*Pra*' meaning "beginning" or "source," and '*Kriti*' meaning "to form." Together, *Prakriti* signifies the "natural form" or inherent nature of a person. This constitution is shaped by the predominance of the three *Doshas*—*Vata*, *Pitta*, and *Kapha*—which are the functional energies governing the body. Each individual exhibits a unique balance of these *Doshas*, and the dominant one determine their *Prakriti*. Although

the Doshas play a central role in shaping *Prakriti*, several other elements also influence its development

According to *Charaka Samhita*, these include

- The season during conception
- The intrauterine environment
- The mother's diet and lifestyle during pregnancy
- The genetic material (*Sukra* and *Shonita*) from both parents
- The influence of the five elements (*Mahabhuta Vikara*)

These factors may be influenced by one or more *Doshas*, which then dominate the constitution. As a result, individuals may have

- A single-dosha dominant *Prakriti* (*Vata*, *Pitta*, or *Kapha*)
- A dual-dosha combination (e.g., *Vata-Pitta*, *Pitta-Kapha*)
- Or in rare cases, a balanced *Tridoshik* or *Samdoshaj* constitution.

Features of different *Prakriti*

- *Vata Dosha*: Dry, cold, light, subtle, mobile, non-slimy and rough in properties.
- *Pitta Dosha*: Slightly unctuous, hot, sharp, liquid, sour, mobile, light and pungent smell.
- *Kapha Dosha*: Heavy, cold, soft, unctuous, sweet, stable and slimy.

Features of *Vata Prakriti*: Due to the qualities of *Vata*, the *Vata Prakriti* individuals have the following features

1	Roughness	Underdeveloped and short body, rough voice, weak, low, pathetic in appearance, hoarse and obstructed and less sleep.
2	Lightness	Light and unsteadiness in movement, activities, diet and speech.
3	Swiftiness	Quick in initiating actions, irritation and disorder, quick in fear, early attachment and disenchantment, understanding is quick but with poor memory (retention).
4	Mobility	Unstable joints, eye brows, jaw, lips, tongue, head, shoulder, hand and feet talkativeness and abundance of tendons and veins.
5	Coldness	Intolerance to cold, gets afflicted with shivering and stiffness on exposure to cold.
6	Non- sliminess	cracked body parts and constant sound in joint during movement.

Due to the inherent traits of *Vata* dominance, such individuals generally exhibit lower physical strength, shorter lifespan, reduced reproductive capacity, and limited accumulation of wealth.

Features of *Pitta Prakriti*: Based to the qualities of *Pitta*, *Pitta Prakriti* individuals have the following features

1	Hotness	Intolerance to heat, having hot face, delicate and fair organ plenty of moles, freckles, black moles and pimples, excessive hunger and thirst, early appearance of wrinkles, greying and falling of hairs.
2	Sharpness	Sharp prowess, intense fire (digestive power), taking plenty of food and drink, lack of endurance, frequently eating.
3	Liquidity	Lax and soft joints and muscles, excess excretion of sweat, urine and feces.
4	Fleshy	Smell fleshy smell in axilla, mouth, head and body.
5	Pungency and sourness	Low semen, sexual act and progeny.

Due to the inherent characteristics of *Pitta* dominance, individuals with this constitution typically exhibit moderate levels of physical strength, longevity, intellect, comprehension, wealth, and resources. Therefore, this *Prakriti* is considered to be of a balanced nature.

Features of *Kapha Prakriti*: Due to the qualities of *Kapha*, *Kaphaja Prakriti* individuals have the following features

1	Unctuousness	Unctuous organs.
2	Softness	Attractive; tender skin, organ and musculature.
3	Sweetness	Abundant semen, potency and high progeny.
4	Nature of essence	Strong sturdy body and organs.
5	Solidity	Well form and fully developed.
6	Dullness	Slow in their eating, in behaviour and working.
7	Rigidity	Do not take hasty steps in their works and will not get disheartened.
8	Heaviness	Firm and strong in their movements.
9	Coldness	Less hunger, thirst, heat and perspiration.
10	Sliminess	Compact and strong joint, ligaments.

Blessed with superior qualities, individuals of *Kaphaj Prakriti* possess exceptional strength, prosperity, intellect, vitality, robust immunity, and long life. Their calm and composed nature further elevate their constitution, making this *Prakriti* the most revered among all.

Applied aspect of *Prakriti*

Prakriti plays a vital role in both health and disease. Its significance lies in guiding personalized dietary regimens and lifestyle management tailored to each constitution. The implications of *Prakriti* assessment can be explored under the following key dimensions

- **Preventive and Promotive Healthcare:** *Prakriti* helps assess physical and mental strength, digestive capacity, adaptability, and overall vitality, enabling proactive health strategies.

- **Dietary and Lifestyle Recommendations:** Based on *Prakriti*, specific food choices, daily routines (*Dincharya*), and seasonal regimens (*Ritucharya*) can be prescribed to maintain *doshik* balance.
- **Disease Susceptibility and Risk Prediction:** Each *Prakriti* type has unique vulnerabilities. For example, *Vata* types may be prone to neurological disorders, while *Pitta* types may face inflammatory conditions.
- **Diagnosis and Prognosis:** *Prakriti* aids in understanding the nature and progression of diseases, helping predict outcomes and tailor treatment accordingly.
- **Therapeutic Planning:** Treatment modalities—including diet, medicine, and behavior—are customized based on *Prakriti*, ensuring more effective and individualized care.

- **Concept of *Shukra Dhatu***

Shukra is the vital essence responsible for regulating systemic bodily functions, including metabolism. A portion of this refined tissue is released during sexual activity, where it performs its primary role in reproduction. It not only governs reproductive capacity but also contributes to vitality, immunity, and overall well-being.

Shukra pervades all over body in *Shukradhara Kala* in such a way ghrita is present in milk and iksu rasa present in iksu. When sexual relation of any kind between a male and a female take place, the *shukra* exudes out like mud vessel containing water exudes water. After that its effect is seen all over the body such as *Sarva-daihika Shukra Sara Lakshan* and *Maithungat Lakshan*.

Production of *Shukra*

Beginning from *Rasa Dhatu* upto *Shukra* all the *Dhatu* are produced in a fashion of progressive evolutive metamorphosis. This means that *Rasa Dhatu* is basically produced from *Ahara rasa* which is ingested by the action of *Jatharagni*. Previous *Dhatu* is precursor to next and higher by the action of respective *dhatvagni* in it. *Shukra* is seventh in order of *Sapta Dhatu* and is quoted to be produced from evaluative metamorphosis of *Majja Dhatu* by the action of *Shukradhatvagni* on *Majja Dhatu*. *Shukra* is produced from *Prasada Bhaga* of *Majja Dhatu*. *Vayu* and *Akasha Mahabhuta* produce porosity in *Asthi Dhatu*. From these pores, *Shukra* oozes out like water from a new earthen pot and spreads all over body.

Time required for production of Shukra

Acc to *Acharya Sushrut* - 1 month.

Acc to *Acharya Charak* - 7 days.

Acc to *Acharya Vagbhatt* - 24 hr or 6 days or 1 month.

Acc to *Acharya Chakrapani* - concept acc. to status of *Dhatvagni* –

1- *Dhatvagni* - (optimum level) - production – (speed of ‘*Archi*’) - 8 days.

2- *Dhatvagni* - (moderate level) - production – (speed of ‘*Shabd*’) - 2-3 weeks.

3- *Dhatvagni* - (mild level) - production – (speed of ‘*Jal*’) - 1 month.

Function of Shukra Dhatu

The function of *Shukra Dhatu* is *Dhairya*(courage), *Chayvanam*(ejaculation), *Priti*(affection), *Dehabala*(body strength), *Harsh*(exhilaration), *Bijarth*(procreation). (*Shu. Su. 15/4*)

Properties of Shudh Shukra

Shukra is cool (*Saumya, Avidahi*), fluid (*Drava*), unctuous (*Snigdha*), white (*Shukla*), crystalline (*Sphatik-sannibham*), honey like smell (*Madhugandhi*), slimy (*Picchil*), abundant (*Bahal*), and its colour is like oil or honey (*Tailkshaudranibham*). Such semen is supposed to be fertile.

Characters of Shukra Sara Purush

Saumya (gentleman), *Saumyaprekshina* (gentlelook), *Kshirapurnalochana* (eyes appeaing filled with milk), *Praharsha bahula* (cheerfulness), *Snigdha-vritta-sara-samhata-Dasanaha* (teeths which are unctous, round, strong, dense, even), *Prasanna-snigdha-varnasara* (pleasant -unctous voice and complexion), *Bhrajisnu* (dazzling appearence), *Mahasphik* (large buttocks), *Stri-priya* (loved by women), *Upabhoga balavan*(virile), *Sukha* (endowed with happiness), *Aiswarya* (prosperity), *Arogya* (health), *Vitta* (money), *Sammana* (honour), *Apatyabahula* (many offspring) (*Su.Sa.35-16*).

Modern Review of Literature

Semen: Semen also called Seminal fluid, that is emitted from the male reproductive tract and that contains sperm cells, which are capable of fertilizing the female’s eggs. Semen also contains liquids that combined to form seminal plasma, which helps keep the sperm cells viable.

Properties of Semen

- Appearance - Cloudy white or grey liquid with a consistency similar to raw egg.
- Volume - 2 - 3 ml or more per ejaculation.
- Smell - A chlorine smell or fishy odour.
- Taste - Slightly sweet due to high content of fructose.
- pH of Semen- Range should be 7.2 to 7.8.
- Specific Gravity - 1.028
- No. of Sperms - 35-200 million/ml

Effect of Sperm Count on Fertility

The usual quantity of semen ejaculated during each coitus averages about 3.5 ml, and in each ml of semen is an average of about 120 million sperm, although even in “normal” males this can vary from 35 million to 200 million. This means an average total of 400 million sperm are usually present in the several ml of each ejaculate. When the number of sperm in each ml falls below about 20 million, the person is likely to be infertile. Thus, even though only a single sperm is necessary to fertilize the ovum.

Effect of Sperm Morphology and Motility on Fertility

Occasionally a man has a normal number of sperm but is still infertile. When this occurs, sometimes as many as one-half the sperm are found to be abnormal physically, having two heads, abnormally shaped heads, or abnormal tails. Whenever the majority of the sperm are morphologically abnormal or are nonmotile, the person is likely to be infertile, even though the remainder of the sperm appear to be normal.

Semen Analysis

Semen analysis is a laboratory test that is performed to assess male fertility. Infertility is defined as the inability to conceive after 1 year of unprotected sexual intercourse. About 15% of all couples in reproductive-aged experience infertility. Semen can be assessed by various attributes: the total number of spermatozoa, the fluid volume, sperm concentration, and the nature of the spermatozoa; their viability, motility, and shape as well as the composition of the secretions.

DISCUSSION

The consistent trend across both *Ayurvedic* theory and empirical evidence is that *Kapha*-dominant *Prakriti* individuals tend to have more favorable semen parameters, likely due to the *Dosha*'s anabolic and nourishing nature. This aligns with the classical concept that *Kapha* supports *Shukra Vriddhi* (augmentation of semen). *Vata*, being catabolic and mobile, may impair semen quality through reduced nourishment and stability. *Pitta*, with its metabolic and heat-producing qualities, may induce oxidative stress, affecting sperm DNA and morphology.

From a clinical standpoint, recognizing a patient's *Prakriti* can allow practitioners to tailor fertility treatments more effectively.

- *Vata* types may benefit from *Brimhana* (nourishing), *Snigdha* (unctuous), and *Vatahara* therapies.
- *Pitta* types may require *Sheetala* (cooling) and *Pittahara* interventions.
- *Kapha* types, despite favorable semen profiles, may need to manage excess *Snigdha* or metabolic stagnation.

CONCLUSION

The relationship between *Deha Prakriti* and semen parameters offers a valuable integrative perspective on male reproductive health.

- *Kapha*-dominant *Prakriti* individuals generally exhibit: Higher sperm count and semen volume; Better sperm motility and morphology, possibly supporting reproductive health.
- *Pitta*-dominant *Prakriti* may show: Moderate semen parameters Increased oxidative stress due to inherent "*Tejas*" quality Slightly higher abnormal morphology in some studies.
- *Vata*-dominant *Prakriti* individuals are more prone to: Oligospermia (low sperm count), Asthenozoospermia (low motility) Increased anxiety/stress which may affect semen quality.

Further large-scale studies combining *Ayurvedic* assessment with modern andrological diagnostics are recommended to strengthen the evidence base and guide integrative clinical practice.

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