



Review Article

AN AYURVEDIC PERSPECTIVE: IMPACT OF MODERN DIETS ALONG WITH LIFESTYLE ON SHUKRA DHATU AND MALE FERTILITY

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ABSTRACT

As per Ayurvedic principles, *Shukra Dhatu* is the vital reproductive tissue responsible for male fertility, often equated with semen. The nourishment and balance of *Shukra Dhatu* are essential for maintaining male reproductive health. **Objective:** To explore the impact of modern dietary habits and lifestyle practices on *Shukra Dhatu* and, consequently, on male infertility. **Methods:** The discussion integrates Ayurvedic concepts with modern dietary and lifestyle changes. The literature referencing from *Charak Samhita*, and through various modern text book, research journal and electronic database. **Results:** Modern processed diets deplete *Shukra Dhatu*, while nutrient-rich foods like dairy, nuts, and fruits enhance it. Improper food combinations disrupt digestion and accumulate toxins, harming *Shukra Dhatu*. Similarly, balanced exercise, sleep, and stress management support also *Shukra Dhatu*, whereas sedentary habits, irregular sleep, and toxins harm it. **Conclusion:** The shift towards modern dietary and lifestyle practices has contributed to increased oxidative stress, endocrine disruptions, and obesity, all of which are linked to male infertility. This article emphasizes the importance of balanced nutrition and a healthy lifestyle in promoting *Shukra Dhatu* health and preventing male infertility, thus helping to avoid such implications in future perspective.

INTRODUCTION

Infertility is a significant health concern affecting couples worldwide, with male infertility contributing to nearly half of all cases. In Ayurveda, the ancient Indian system of medicine, reproductive health is intricately linked to the balance and nourishment of *Shukra Dhatu*, the vital tissue responsible for reproduction. *Shukra* literally means semen virile, sperm, lucid, clear.^[1] In recent years, dietary patterns have significantly shifted, with an increased consumption of processed foods, preservatives, canned foods, and ready-to-eat meals. These changes have sparked concern regarding their impact on male fertility. This article explores the relationship between modern diets and male infertility, examining the underlying causes, pathophysiology, hormonal

influences, into the roles of *Ahara* (diet), *Vihara* (lifestyle), and *Viruddh Ahara* (incompatible foods) in influencing male infertility and the health of *Shukra Dhatu*.

AIMS

1. To study the concept of *Shukra dhatu*, *Ahara*, *Vihara*, *Viruddha Ahara*.
2. To study the concept of male fertility.
3. To evaluate the effects of modern diets and lifestyle on male fertility.

MATERIALS AND METHODS

Firstly, literary study was performed in classical Ayurvedic text such as *Charaka Samhita*. Then for further literature study has been gone through various modern text book, research journal and electronic database.

Ahara (Diet) - Importance of *Ahara*

Ahara or diet is considered a cornerstone of health in Ayurveda. Food is most essential for sustaining life (*Vrittikara*).^[2] The body is built and nourished by food.^[3] Food is the source of both life and

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disease. Wholesome foods lead to happiness, while unwholesome foods result in sorrow. The ability of the body to endure physical and mental ailments depends on the quality of the food consumed.^[4] After proper digestion and metabolism, ingested food nourishes the tissues, leading to plumpness, strength, complexion, health, and longevity. Tissues are sustained by various nourishing factors (*Poshaka Dhatu*)^[5]. It is believed that a balanced and nutritious diet directly impacts the quality of all body tissues, including *Shukra Dhatu*. The ancient texts suggest that specific foods can enhance or deplete *Shukra Dhatu*, thus affecting male fertility.

Shukra Dhatu

It is compared to male and female reproductive system and its secretions. Its main function is *Garbhotpadana*- reproduction. It is controlled by *Kapha Dosh*. It gets nourishment from *Majja Dhatu*.

Shukra Vruddhikara Dravya (Foods that Enhance Shukra Dhatu)

According to Ayurvedic principles, certain foods are known to nourish and strengthen *Shukra Dhatu*. Any article which is sweet, unctuous, life promoting, nourishing and heavy to digest and causing mental excitement, is to be regarded as virilific.^[6] These include:

- **Dairy Products:** Milk, ghee, and yogurt are considered highly beneficial. They are rich in essential nutrients and promote the formation of healthy *Shukra Dhatu*^[7].
- **Nuts and Seeds:** Almonds, walnuts, sesame seeds, and pumpkin seeds are excellent sources of healthy fats and proteins that support reproductive health^[8].
- **Sweet Fruits:** Fruits like dates, figs, and mangoes are believed to be nourishing and strengthening for *Shukra Dhatu*^[9].
- **Herbs:** *Ashwagandha*, *Shatavari*, and *Kapikacchu* are commonly recommended herbs that boost *Shukra Dhatu* and enhance fertility^[10].

Shukra Kshayakara Dravya (Foods that deplete Shukra Dhatu)

Conversely, the consumption of certain foods can deplete *Shukra Dhatu* and adversely affect male fertility, like:

- **Spicy, Sour, and Salty Foods:** Excessive intake of these tastes can lead to imbalances in the body's *Dosha*, weakening *Shukra Dhatu*^[11].
- **Processed Food:** Food's high in preservatives, artificial additives, and refined sugars can impair the body's natural balance and diminish *Shukra Dhatu*^[12].
- **Alcohol and Caffeine:** Regular consumption of alcohol and caffeine is associated with reduced

sperm quality and quantity, negatively impacting *Shukra Dhatu*^[13].

Ayurveda emphasizes a *Sattvic* diet, comprising fresh, wholesome, and naturally sourced foods, to maintain the balance of *Dosha* and promote the health of *Shukra Dhatu*^[14].

Viruddha Ahara (Incompatible Foods)

Diet which dislodges *Dosha* within the body but does not expel them out of the body are termed as '*Viruddha*'/*Ahita* (unwholesome)^[15]. *Viruddha Ahara* refers to the consumption of incompatible food combinations that can disrupt digestion and lead to the formation of toxins (*Ama*) in the body. *Ayurveda* asserts that these incompatible combinations can disturb the balance of *Doshas* and impair the health of *Shukra Dhatu*.

Examples of Viruddha Ahara

Certain food combinations are considered *Viruddha Ahara* and should be avoided:

- **Dairy with Fish:** This combination is believed to create toxins and disturb the digestive process^[16].
- **Fruits with Milk:** Mixing fruits, especially sour fruits, with milk can lead to digestive issues and the formation of *Ama* (toxins)^[17].
- **Heating Honey:** According to *Ayurveda*, heating honey makes it toxic and unsuitable for consumption, potentially harming *Agni* (digestive fire)^[18].
- Consuming curd at night
- Honey and ghee (dose incompatibility)
- Cold water after hot tea and vice versa (contraindication incompatibility)
- Cold water after ghee (indication incompatibility)
- Laugh, speak while eating (rules incompatibility)
- Overeating when there is *Agnimandya* (digestive fire incompatibility)
- Milk and yogurt
- Tea and garlic
- Tea and roti

DISCUSSION

Effect of Viruddhahara on Shukra Dhatu

Regular consumption of *Viruddha Ahara* can lead to digestive disturbances and the accumulation of *Ama*. This toxic build-up can obstruct the channels (*Srotas*) responsible for the nourishment and flow of *Shukra Dhatu*, ultimately affecting reproductive health and leading to male infertility^[19].

Changes in Modern Diets

Modern diets have become heavily reliant on processed and convenience foods. These foods often contain high levels of sugars, unhealthy fats, and

artificial additives, while being low in essential nutrients. Some common components of modern diets include:

- **Processed Foods:** These include snacks, fast foods and pre-packaged meals, often high in trans fats, sodium and sugars.
- **Preservatives:** Chemicals such as nitrates, sulphites, and benzoates are commonly used to extend shelf life.
- **Canned Foods:** Frequently contain Bisphenol A (BPA), a chemical linked to various health issues.
- **Ready-to-Eat Foods:** Often high in calories and low in nutritional value, contributing to obesity and metabolic disorders.

Vihara (Lifestyle) - Positive Lifestyle Practices

Vihara, encompassing daily routines and lifestyle practices, plays a crucial role in maintaining *Shukra Dhatu*. Ayurveda advocates for a balanced lifestyle to support overall health and reproductive vitality.

- **Regular Exercise:** Moderate physical activity, such as *Yoga* and walking, is recommended to improve circulation and enhance the nourishment of *Shukra Dhatu*^[20].
- **Adequate Sleep:** Quality sleep is vital for the rejuvenation and proper functioning of all body tissues, including *Shukra Dhatu*. Ayurveda suggests going to bed early and waking up early to align with the natural circadian rhythms^[21].
- **Stress Management:** Chronic stress is known to deplete *Shukra Dhatu*. Practices like meditation, *Pranayama* (breathing exercises), and mindfulness can help reduce stress and improve reproductive health^[22].
- **Balanced Work-Rest Routine:** Maintaining a harmonious balance between work and rest prevents exhaustion and supports the nourishment of *Shukra Dhatu*^[23].

Negative Lifestyle Practices

Certain lifestyle habits can negatively impact *Shukra Dhatu* and lead to male infertility:

- **Sedentary Lifestyle:** Lack of physical activity can lead to poor circulation and stagnation, affecting the nourishment of *Shukra Dhatu*^[24].

- **Excessive Physical Exertion:** Overexertion can deplete the body's reserves and weaken *Shukra Dhatu*. It is essential to engage in moderate and balanced physical activities^[25].
- **Irregular Sleep Patterns:** Disruptions in sleep cycles can lead to hormonal imbalances and negatively impact the formation of *Shukra Dhatu*^[26].
- **Exposure to Environmental Toxins:** Prolonged exposure to pollutants and toxins can impair reproductive health and deplete *Shukra Dhatu*^[27].

Ayurveda recommends living in harmony with natural rhythms, including seasonal and daily cycles, to optimize health and prevent disorders related to *Shukra Dhatu*.

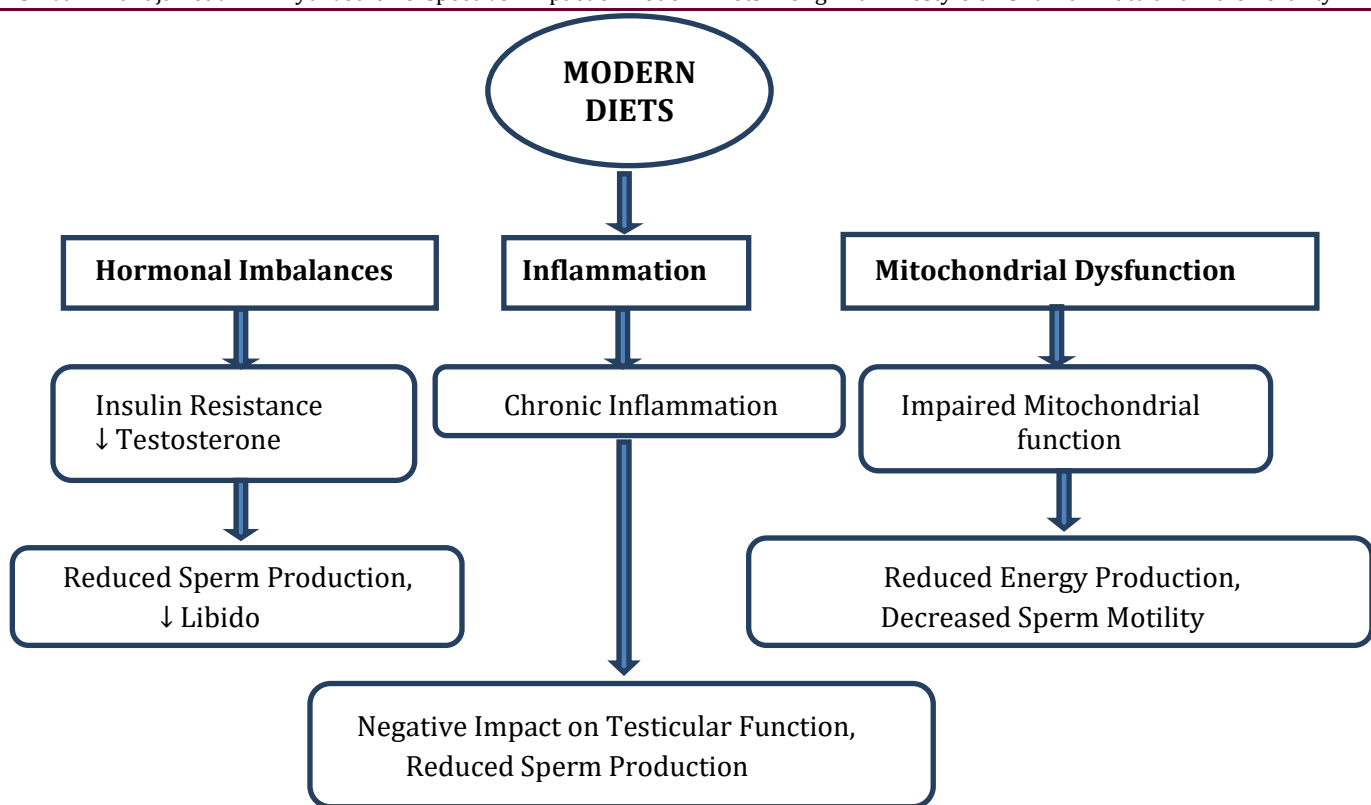
Impact on Male fertility

1. **Oxidative Stress and Sperm Damage:** Reactive Oxygen Species (ROS): Processed foods are often high in oxidants, which increase oxidative stress. ROS can damage sperm DNA, reduce sperm motility, and impair fertilization capability^[28].
2. **Endocrine Disruptors:** BPA and Phthalates: Chemicals found in canned foods and plastics can act as endocrine disruptors, altering hormone levels and affecting sperm production^[29].
3. **Obesity and Metabolic Syndrome:** Diet-Induced Obesity: High-calorie, low-nutrient diets contribute to obesity, which is linked to lower testosterone levels and reduced sperm quality^[30].

Pathophysiology of Male Infertility

The pathophysiology of male infertility due to modern diets involves multiple mechanisms:

- **Hormonal Imbalances:** Excessive intake of unhealthy fats and sugars can lead to insulin resistance and decreased testosterone levels. Low testosterone affects sperm production and libido^[31].
- **Inflammation:** Diets high in trans fats and sugars promote chronic inflammation, which negatively impacts testicular function and sperm production^[32].
- **Mitochondrial Dysfunction:** Nutrient-poor diets can impair mitochondrial function in sperm cells, leading to reduced energy production and decreased sperm motility^[33].



Hormonal Involvement and Male Fertility

Several hormones play crucial roles in male fertility, including:

- **Testosterone:** Essential for spermatogenesis and libido. Modern diets can lead to lower testosterone levels, affecting overall fertility^[34].
- **Luteinizing Hormone (LH):** Regulates testosterone production. Endocrine disruptors can interfere with LH secretion, reducing testosterone synthesis^[35].
- **Follicle-Stimulating Hormone (FSH):** Promotes sperm production. Nutritional deficiencies can affect FSH levels and impair spermatogenesis^[36].

CONCLUSION

The dietary shift towards processed and convenience foods has had a profound impact on male fertility. The consumption of high-sugar, high-fat, and chemically-laden foods increase oxidative stress, disrupts endocrine function, and contributes to obesity, all of which can impair sperm quality and reproductive health. Addressing these dietary issues is crucial for improving male fertility outcomes. The principles of *Ahara*, *Vihara*, and *Viruddhahara* in *Ayurveda* provide a comprehensive framework for understanding the factors that influence male infertility and the health of *Shukra Dhatu*. By adhering to a balanced diet, maintaining a healthy lifestyle, and avoiding incompatible food combinations, one can promote reproductive health and mitigate the risk of infertility. The holistic approach of Ayurveda, which emphasizes the balance of *Dosha*, proper nourishment,

and lifestyle harmony, offers valuable insights into the prevention and management of male infertility. By integrating these principles into daily life, individuals can enhance their reproductive health and overall well-being.

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