

## *Ayurvedic Concept of Srjana in Human Embryology*

*Dr. Harini P. R.<sup>1</sup>, Vishwanath K. S.<sup>2</sup>, Anitha Sree K.<sup>3</sup>, Gopal Krishna M.<sup>4</sup>*

*Department of Rachana Sharir*

*PNNM Ayurveda College*

*Email Id: gopal.krishna.dg@snayurveda.in<sup>4</sup>*

### **ABSTRACT**

*The Ayurvedic concept of Srjana refers to the creation, formation, and development of the human embryo through a harmonious interplay of biological, psychological, and spiritual components. Classical Ayurvedic literature—including Charaka Samhita, Sushruta Samhita, and Ashtanga Sangraha—describes embryogenesis based on the union of Śukra (sperm), Ārtava (ovum), Garbhāśaya (uterus), Kala, Doshas, Panchamahabhutas, and the influence of maternal factors such as Ahara, Vihara, and emotional status. This paper explores the principles of Srjana, correlates Ayurvedic theories with modern embryology, and highlights the unique dimensions of consciousness, Karma, and mind-body integration described in classical texts. The article also includes conceptual tables and illustrative figures.*

**KEYWORDS:** - *Srjana, Ayurveda, Garbha, Human Embryology, Panchamahabhutas, Garbhoptatti, Doshas*

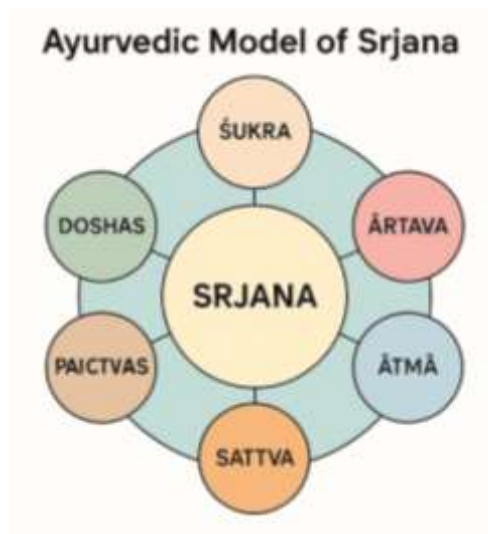
### **INTRODUCTION**

Ayurveda describes human life as a combination of *Sharira* (body), *Indriya* (senses), *Satva* (mind), and *Atma* (soul). The creation of a new life—*Srjana*—is viewed not merely as a biological process but as an outcome of a highly coordinated series of events involving physical, mental, and spiritual dimensions. Unlike modern embryology, which primarily focuses on cell division and physiological development, Ayurveda expands the scope by including the effects of *Gunas*, *Karma*, *Pancha Mahabhutas*, parental health, maternal diet, and environmental factors.

Classical Ayurvedic texts identify specific prerequisites for conception: the healthy state of sperm (*Śukra*), ovum (*Ārtava*), uterus (*Garbhaśaya*), nourishment (*Rasa*), and timing (*ṛtu*). These principles collectively form the basis of *Garbhotpatti* (embryogenesis). The etiological understanding of congenital anomalies, gender determination, organ development, and fetal nourishment is also elaborately discussed in Ayurvedic literature.

### AYURVEDIC DEFINITION OF SRJANA

The term **Srjana** originates from the Sanskrit root “*srj*”, meaning **to create, to bring forth, or to generate**. In Ayurveda, Srjana signifies the **entire process of the origin of a new human being**, beginning from the union of the parental reproductive elements and extending to the establishment of consciousness within the developing embryo. It encompasses not only the physical formation of the body but also the infusion of *Ātmā*, *Manas*, and the subtle influences of *Gunas* and *Karmas*.



*Figure: 1*

Classical texts explain Srjana as a multidimensional event involving:

#### 1. Biological Creation

This includes the **fusion of Śukra (sperm) and Ārtava (ovum)** leading to the formation of *Garbha* (embryo). Ayurveda describes this union as *Śukra-Ārtava Sammilana*, which is the foundational moment of conception. The success of this union depends on the purity and strength of both gametes.

## 2. Spiritual and Consciousness-Based Creation

Ayurveda states that the embryo becomes “alive” only when **Ātmā (the soul)** enters the fertilized ovum. Without the presence of Ātmā, the union of gametes remains inert. *Garbhāvākāśa* or the “space for the embryo” is thus sanctified by the presence of consciousness.

## 3. Mental Creation (Manas and Gunas)

*Manas* (mind) and the three *Gunas* (Sattva, Rajas, Tamas) influence:

- Personality
- Emotional tendencies
- Behavioral patterns
- Intellectual potential

These traits begin shaping at the very moment of Srijana, depending on the psychological state of the parents at conception.

## 4. Elemental Creation (Panchamahabhutas)

Ayurveda states that the embryo is created through the interplay of:

- **Prithvi** – solidity, tissues
- **Ap** – fluids, cohesiveness
- **Agni** – metabolism, transformation
- **Vayu** – movement, division
- **Akasha** – space, cavities

These five elements combine in unique proportions to create the structural and functional attributes of the fetus.

## 5. Influence of Past Karma

Ayurveda uniquely acknowledges that **previous life karmic impressions** influence:

- Life span
- Health tendencies
- Innate preferences

- Destiny

This karmic factor plays a subtle yet powerful role during the moment of creation.

Thus, the Ayurvedic concept of Srijana expands beyond the biological event of fertilization and includes **mind, consciousness, elemental composition, parental factors, and karmic influence**. It presents human embryology as a holistic and interconnected process, integrating body, mind, and spirit.

### **FACTORS RESPONSIBLE FOR EMBRYOGENESIS (GARBHOTPATTI)**

According to Ayurveda, **Garbhotpatti** or embryogenesis requires the harmonious convergence of multiple essential factors. These factors determine the successful formation, quality, and development of the embryo.

Below is a detailed description of each factor:

#### **1. ŚUKRA (Sperm)**

Śukra is considered the **essence of all Dhatus** and must be:

- Clear
- Viscous
- Mature
- Abundant
- Free from abnormalities

Healthy Śukra influences:

- Strength of the fetus
- Physical resemblance
- Vitality
- Gender characteristics

Any vitiation of Vata, Pitta, or Kapha in Śukra can result in infertility, congenital defects, or developmental anomalies.

#### **2. ĀRTAVA (Ovum)**

Ārtava refers to the mature ovum capable of fertilization. Its qualities include:

- Proper consistency
- Healthy red coloration
- Regular cyclic formation
- Hormonal balance

Disturbed Ārtava leads to:

- Anovulation
- Irregular cycles
- Poor embryonic development
- Risk of miscarriage

Çaraka emphasizes that both Śukra and Ārtava must be *Shuddha* (pure) for healthy conception.

### 3. ṚTU (Appropriate Timing / Fertile Period)

The fertile window is describe as *Ritu-kala*, the ideal period for conception. Ayurveda identifies the **12–16 days after menstruation** as optimal, when:

- The uterus is receptive
- The ovum is mature
- Hormonal balance is favorable

Improper timing reduces the chances of conception or may lead to weak fetal development.

### 4. KṢETRA (Healthy Uterus / Reproductive Tract)

*Kṣetra* refers to the uterus and entire female reproductive system. A healthy *Kṣetra* should be:

- Free from abnormalities
- Properly nourished
- Appropriately positioned
- Having balanced doshas

Diseases of the uterus (fibroids, infections, endometrial defects) hinder proper implantation and embryonic growth.

## 5. AMBIENCE AND NUTRITION (AHARA & VIHARA)

Immediately after conception, the embryo depends completely on the mother's:

- Food
- Lifestyle
- Emotional stability
- Daily routine

Ayurveda stresses that the mother's balanced diet supports proper tissue formation. Faulty maternal diet can cause congenital deformities or stunted development.

## 6. ĀTMĀ (Soul / Consciousness)

Ātmā's entry into the embryo marks the beginning of **life energy**. It decides:

- Longevity
- Innate tendencies
- Destiny
- Moral and intellectual tendencies

Ayurveda states that without Ātmā, the embryo remains nonviable even if fertilization has occurred.

## 7. SATTVA (Mind and Psychological Factors)

Sattva includes:

- Emotional state
- Thought patterns
- Mental stability
- Parental mental state during conception

These influence the developing fetuses:

- Emotional health
- Thought patterns
- Personality
- Behavioral inclinations

## **8. PANCHAMAHABHUTAS (Five Great Elements)**

The Panchamahabhutas play a crucial role in shaping the body:

**Prithvi (Earth)**

Provides solidity, organs, bones, muscles.

**Ap (Water)**

Responsible for blood, lymph, and cellular fluids.

**Agni (Fire)**

Manages digestion, metabolism, and enzyme activation.

**Vayu (Air)**

Controls motion such as cell division, organ formation.

**Akasha (Space)**

Creates internal spaces, channels, and cavities.

Every organ is form from a specific predominance of these elements.

## **9. DOSHAS (Vata, Pitta, Kapha)**

Each dosha contributes distinct functions:

### **Vata**

- Cell division
- Movement of nutrients
- Organ formation
- Differentiation

### **Pitta**

- Metabolic reactions
- Enzyme systems
- Tissue transformation
- Hormonal balance

### **Kapha**

- Structural development
- Stability
- Growth of tissues
- Fluid balance

A disturbance in any dosha leads to abnormal fetal development.

## **10. PARENTAL FACTORS (MATRUJA & PITRUJA BHAVA)**

### Mātruja Bhava (Maternal Traits)

Determines maternal-controlled features such as:

- Skin
- Blood
- Nutritional status
- Emotional nature
- Reproductive health

### Pitruja Bhava (Paternal Traits)

Determines paternal influences like:

- Bone structure
- Hair pattern
- Strength
- Some genetic traits

## **11. PAST KARMIC INFLUENCE**

Ayurveda asserts that a person's previous actions shape:

- Innate diseases
- Natural talents
- Life experiences
- Destiny

Karma influences the conditions leading to the type of birth and overall health.

## **12. ENVIRONMENTAL FACTORS**

These include:

- Climate
- Season
- Geographical influence
- Air and water quality

Environmental disturbances may disrupt doshas and therefore fetal health.

### CLASSICAL DESCRIPTION OF EMBRYONIC DEVELOPMENT

Ayurvedic literature provides a detailed week wise, month wise and organ wise description of fetal development.

#### WEEK-WISE DEVELOPMENT (As per Ayurvedic Texts)

Week	Ayurvedic Description
1st week	Formation of <i>Kalala</i> (semi-liquid mass)
2nd week	<i>Budbuda</i> stage—bubble-like form
3rd week	<i>Pinda</i> —solidification begins
4th week	Limb buds appear

#### MONTH-WISE DEVELOPMENT

Month	Developmental Features
1st Month	Embryo resembles a small mass ( <i>Kalala</i> )
2nd Month	Head and limb buds appear
3rd Month	Sense organs begin forming
4th Month	<i>Chetana</i> (consciousness) manifests
5th Month	Mind ( <i>Manas</i> ) stabilizes
6th Month	Hair, nails, and finer organs develop
7th Month	Fetus becomes viable
8th Month	Immature vitality; unstable energy
9th Month	Full maturation

#### AYURVEDIC PERSPECTIVE ON ORGANOGENESIS

Ayurveda explains each organ's development through *Panchamahabhutas*, *Dhatus*, and parental contributions:

Organ	Dominant Mahabhuta	Ayurvedic Explanation
Heart	Agni + Vayu	Seat of consciousness
Liver	Prithvi + Agni	Formation of <i>Rakta</i>

<b>Organ</b>	<b>Dominant Mahabhuta</b>	<b>Ayurvedic Explanation</b>
Brain	Akasha + Vayu	Seat of <i>Manas</i>
Bones	Prithvi	<i>Asthi Dhatu</i> predominance

## **MATERNAL AND PATERNAL INFLUENCES ON SRJANA**

### **MATERNAL FACTORS (MATRUJA BHAVA)**

- Blood formation
- Skin texture
- Nourishment
- Mental state of the mother
- Ahara-vihara
- Emotional balance

### **PATERNAL FACTORS (PITRUJA BHAVA)**

- Bone structure
- Hair patterns
- Body strength
- Certain genetic features

### **FETAL NOURISHMENT (GARBHAPOSHANA)**

Ayurveda explains fetal nourishment through the concept of *Upasneha* (osmosis) and *Upasveda* (diffusion). The mother's diet, lifestyle, and emotional stability directly influence fetal health. The placenta acts as the essential channel for delivering *Rasa Dhatu* to the fetus.

### **AYURVEDIC EXPLANATION OF CONGENITAL DISORDERS**

Classics attribute congenital anomalies to:

- Defective Śukra and Ārtava
- Improper timing (Ritu)
- Maternal malnutrition
- Stress and negative thoughts
- Vitiating doshas

### CORRELATION WITH MODERN EMBRYOLOGY

Ayurvedic Concept	Modern Correlation
<i>Śukra-Ārtava Sammilana</i>	Fertilization
<i>Kalala</i>	Zygote/early blastocyst
<i>Budbuda</i>	Blastocyst development
<i>Pinda</i>	Gastrulation
<i>Garbha Poshana via Rasa</i>	Placental nourishment
<i>Doshas</i>	Physiological regulatory systems

### CONCLUSION

The Ayurvedic concept of *Srijana* offers a holistic understanding of human embryology by integrating biological, psychological, environmental, and spiritual components. While modern embryology provides detailed insight into cellular and molecular mechanisms, Ayurveda broadens the perspective by considering the influence of *Doshas*, *Panchamahabhutas*, parental health, maternal consciousness, nutrition, and *Atma*. Together, these frameworks enrich our understanding of embryonic development, congenital anomalies, and prenatal health. The classical descriptions of *Kalala*, *Budbuda*, and *Pinda* stages show remarkable parallels with scientific embryogenesis. Thus, *Srijana* stands as a unique multidimensional concept that bridges ancient wisdom with modern developmental biology.

### REFERENCES

1. Acharya, Y. T. (2018). *Charaka Samhita of Agnivesha with Ayurveda Dipika Commentary*. Chaukhamba Surbharati Prakashan.
2. Shastri, A. (2017). *Sushruta Samhita with Nibandhasangraha Commentary*. Chaukhamba Sanskrit Sansthan.
3. Murthy, K. R. S. (2019). *Ashtanga Sangraha of Vagbhata*. Chaukhamba Orientalia.
4. Patwardhan, B., & Sharma, R. (2020). Ayurvedic perspectives on human development. *Journal of Integrative Health Sciences and Traditional Knowledge*, 12(3), 45–55.
5. Singh, G., & Rao, P. (2016). Embryological concepts in Ayurveda. *International Journal of Ayurveda Research and Development Studies*, 9(4), 22–30.
6. Deshpande, S. (2021). A review of Garbha Sharir. *Indian Journal of Ayurvedic and Holistic Medicine*, 13(2), 112–120.

7. World Health Organization. (2022). *Traditional Medicine and Integrative Health Systems*. Geneva.
8. Kumar, A., & Swamy, M. S. (2019). Comparative analysis of classical Ayurvedic embryology. *Asian Journal of Traditional and Natural Sciences*, 8(1), 60–72.