



Review Article

A REVIEW ARTICLE ON *GARBHA SHARIR* WITH SPECIAL REFERENCE TO MODERN EMBRYOLOGY

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ABSTRACT

Garbha Sharir, the branch of Ayurveda dealing with fetal development, is described in classical compendia such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* through the concepts of *Garbha Utpatti* (conception), *Shadbhava* (six determinants of fetal constitution), *Masanumasika Garbha Vridhhi* (month-wise fetal growth), and *Panchamahabhuta*-based organogenesis. This review compares these classical constructs with descriptions in modern human embryology and with evidence-based literature on prenatal programming, including the Developmental Origins of Health and Disease (DOHaD) hypothesis and epigenetic research. The scope extends beyond a simple two-source comparison to a wider search of previously completed post-graduate dissertations retrieved from the *Shodhganga* repository, peer-reviewed articles indexed in PubMed, Scopus and Google Scholar-linked databases, seminar and conference papers on related themes, and authoritative internet resources such as the AYUSH Research Portal and standard embryology textbooks, so as to situate *Garbha Sharir* within the wider body of published Ayurveda-embryology scholarship. Findings indicate that *Garbha Utpatti* corresponds to fertilization and implantation, *Shadbhava* parallels nuclear and cytoplasmic inheritance together with epigenetic and nutritional programming, and *Masanumasika Vridhhi* tracks the chronology of cleavage, gastrulation, organogenesis and fetal viability described in contemporary embryology; *Garbhini Paricharya*, the month-specific antenatal regimen, shows conceptual overlap with trimester-specific antenatal-care recommendations. The review concludes that Ayurvedic *Garbha Sharir* offers a functionally coherent, historically early framework for prenatal development that aligns with several established embryological and epigenetic milestones, and it recommends controlled molecular, epigenetic and clinical studies to validate specific *Shadbhava* and *Garbhini Paricharya* claims and to support their integration into contemporary perinatal care.

INTRODUCTION

Garbha Sharir, the Ayurvedic study of fetal development, offers a holistic view of growth by integrating physical, spiritual (*Atma*), and environmental factors, a perspective that finds remarkable correlation with modern embryology. Ayurvedic *Garbha Utpatti* (conception) combines the physical seeds (*Beeja*) with the optimal environment (*Ritu* and *Kshetra*)^[1], aligning precisely with the timing of fertilization and implantation of the sperm and ovum in the prepared uterus. Furthermore, the

Shadbhava (six determinants of growth) predate modern genetics by attributing fetal characteristics to parental factors (*Pitrija* and *Matrija*), while *Rasaja Bhava* underscores the critical role of placental nutrition, and *Satmyaja Bhava* is an early conceptual analogue of epigenetics. Finally, the monthly progression of *Masanumasika Vridhhi* maps closely onto the key milestones of organogenesis, such as cardiac development in the third month, and the attainment of fetal viability around the seventh month, suggesting that the ancient functional, holistic model tracks the descriptive, cellular events documented by contemporary science.

Interest in correlating classical Ayurvedic embryology with biomedical science has grown considerably over the last decade, driven partly by the expansion of the Developmental Origins of Health and

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Disease (DOHaD) paradigm, which formally recognizes that the intrauterine environment programmes long-term offspring health^[7,8]. Because the Ayurvedic *Shadbhava* framework had already proposed, many centuries earlier, that maternal nutrition, adaptation and psychic state shape the constitution of the offspring, a systematic comparison of the two knowledge systems is both timely and scientifically relevant. This review therefore widens the earlier two-source comparison of classical texts and a single embryology textbook to include previously completed post-graduate dissertations, peer-reviewed journal articles, conference/seminar papers on related themes, and authoritative internet databases, in order to place *Garbha Sharir* within the broader landscape of published research and to identify areas that merit further validation.

Review of Literature

To fulfil the stated scope, a structured literature search was carried out across four categories of evidence, summarised below.

Previous Dissertations

Post-graduate dissertations archived in the *Shodhganga* repository of the INFLIBNET Centre, University Grants Commission, India, were reviewed for prior academic work on this theme. Bhakre^[9] undertook a critical study of *Samhita* passages relating to embryology (Savitribai Phule Pune University, 1986), and Tulasidas^[10] conducted a comparative study of *Garbhavkranti* in Ayurveda vis-à-vis modern medical science (Savitribai Phule Pune University, 1991). More recent M.D.(Ayurveda) dissertations in the Rachana Sharir/Kriya Sharir departments of several Ayurveda universities have similarly examined *Garbha Poshana*, *Masanumasika Vriddhi*, and *Garbhini Paricharya*, indicating a sustained academic interest in validating this subject through structured post-graduate research, though most of these theses remain descriptive-comparative in design rather than experimental.

Research Journals and Conference/Seminar Papers

A number of recent peer-reviewed and conference-presented papers on closely related themes were identified. A 2026 conceptual and comparative study published in the World Journal of Advance Pharmaceutical Sciences analysed *Shadbhava Samanvaya* against modern embryological determinants^[11]. The Journal of Ayurveda and Integrated Medical Sciences has published a review applying *Garbha Sharir* concepts to embryogenesis using modern scientific literature^[12], while the International Journal for Research in Applied Science and Engineering Technology (IJRASET) has separately reviewed the *Garbha Sambhava Samagri* (four requisites for conception) in relation to modern reproductive physiology^[13] and examined ancient

embryological concepts through the lens of epigenetics^[14]. AYUSHDHARA (2026) has published an applied-anatomical review correlating *Marma Utpatti* during *Garbha Avastha* with third-month organogenesis^[15], and the International Journal of Ayurvedic and Herbal Medicine has carried a critical review comparing *Garbhavkranti* with modern embryology^[16]. These works, several of them very recent (2025-2026), confirm that comparative *Garbha Sharir*-embryology scholarship is an active and growing area of publication rather than an isolated undertaking.

Evidence from DOHaD and Epigenetic Research

To evaluate the scientific plausibility of the *Shadbhava* and *Rasaja/Satmyaja* concepts, evidence-based biomedical literature on prenatal programming was reviewed. Barker's original epidemiological studies proposed that fetal undernutrition programmes later cardiovascular and metabolic disease, founding what is now known as the fetal origins or "Barker" hypothesis^[7]. This has since matured into the Developmental Origins of Health and Disease (DOHaD) framework, which holds that adverse maternal nutritional, hormonal and environmental exposures alter fetal gene expression through DNA methylation, histone modification and non-coding RNA activity without changing the underlying genotype^[8,17]. Reviews on placental programming further show that maternal diet and metabolic status alter placental phenotype and, in turn, fetal nutrient supply, with documented sex-specific epigenetic effects^[18], while clinical reviews describe fetal programming as a determinant of adult hypertension, insulin resistance and cardiovascular disease^[19]. These findings provide a contemporary evidentiary basis for the Ayurvedic contention that maternal nutrition (*Rasaja Bhava*), adaptive factors (*Satmyaja Bhava*) and psychic state (*Sattvaja Bhava*) influence fetal constitution beyond direct parental inheritance.

Authentic Internet Sources and Databases

Searches were additionally conducted on the AYUSH Research Portal, PubMed Central, Google Scholar and the *Shodhganga* digital repository, following a methodology comparable to that used in recent AYUSH-related systematic review protocols, which recommend searching PubMed, Cochrane, *Shodhganga*, the AYUSH Research Portal and institutional repositories together for a complete evidence base^[20]. Standard embryology reference texts, principally Inderbir Singh's Human Embryology^[21], and current WHO antenatal-care guidance were used to verify the modern developmental chronology and antenatal-care correlates cited in the Results and Discussion sections.

MATERIALS AND METHODS

This review employs a qualitative and comparative-analytical methodology, drawing data from four categories of sources:

- **Classical Ayurvedic texts:** the *Charaka Samhita* (*Sharira Sthana*), *Sushruta Samhita* (*Sharira Sthana*), and *Ashtanga Hridaya* (*Sharira Sthana*) were consulted for the core definitions, stages, and determinants of *Garbha Sharir*.
- **Modern embryology textbooks and literature:** standard texts, principally Inderbir Singh's *Human Embryology*, were used to establish the contemporary understanding of the germinal, embryonic, and fetal periods, including fertilization, implantation, gastrulation, and organogenesis.
- **Previously published research:** post-graduate dissertations (*Shodhganga*), peer-reviewed journal articles, and seminar/conference papers on *Garbha Sharir*, *Garbhavkranti*, DOHaD and epigenetics, retrieved through PubMed, Google Scholar, Scopus-indexed journal websites and the AYUSH Research Portal.
- **Authentic internet sources:** institutional and government repositories (*Shodhganga*/INFLIBNET, AYUSH Research Portal) and publisher databases (PubMed Central, Zenodo, journal websites) were used in preference to non-peer-reviewed sources.

Key concepts from the classical and modern systems were isolated, grouped thematically (e.g., conception, month-wise growth, organogenesis, antenatal regimen), and analysed for conceptual equivalence, i.e., whether the ancient functional description aligns with the modern descriptive or evidence-based event. As this is a narrative/comparative review rather than a primary experimental or clinical study, no patient data, ethical clearance, or statistical analysis was required; the review is therefore limited to descriptive synthesis

rather than meta-analytic pooling of quantitative outcomes.

RESULTS

1. Conception (*Garbha Utpatti*)

Ayurveda defines conception as the union of *Shukra* (sperm), *Artava* (ovum), *Atma* (soul), and the proper environment of the *Garbhashaya* (uterus).^[2]

Modern correlation: the union of *Shukra* and *Artava* is the precise biological event of fertilization. The initial fusion of parental factors gives rise to the zygote.

2. Determinants of Fetal Body (*Shadbhava*)^[3]

The *Shadbhava* (Six Essential Factors) are defined as the inputs responsible for fetal structure and character. This classification explains the multi-factorial nature of fetal development, which aligns with modern embryology and genetics. *Pitruja Bhava* (paternal factors) dictates hard structures like bone and hair, corresponding to the paternal genes carried by the sperm, while *Matruja Bhava* (maternal factors) determines soft structures like muscle and blood, aligning with maternal genes and the cytoplasmic/mitochondrial reserves from the ovum. Beyond direct inheritance, *Rasaja Bhava* (nutritional factors) acknowledges the supply of materials needed for growth, functioning identically to maternal-foetal nutrition provided by the placenta. Crucially, *Sātmyaja Bhava* (adaptation factors) functions as an early model for epigenetics, recognizing that maternal habits and environment can alter the expression of inherited traits, a claim that is now supported by DOHaD and epigenetic evidence on placental and nutritional programming^[8,17,18]. Finally, the metaphysical factors, *Atmaja Bhava* (spiritual self) and *Sattvaja Bhava* (psychic/mental), govern the blueprint for cellular differentiation and the influence of maternal hormones and stress on the developing fetal brain and temperament, which parallels contemporary work on maternal stress hormones and offspring neurodevelopment^[19].

Ayurvedic Factor	Modern Correlation	Structure/Function
<i>Matrija</i> (maternal)	Cytoplasmic/mitochondrial DNA, non-genetic environment	Soft tissues (<i>Mamsa, Meda</i> , blood, etc.)
<i>Pitrija</i> (paternal)	Nuclear DNA/genetic inheritance	Hard tissues (<i>Kesha, Asthi, Nakha</i> , etc.)
<i>Atmaja</i> (soul/self)	Epigenetic blueprint/innate traits	Life span, knowledge, mind control, appearance, voice, happiness, sorrow, memory, ego.
<i>Rasaja</i> (nutritional)	Placental transfer/maternal diet	Growth (<i>Abhivridhi</i>), nourishment (<i>Pushti</i>), physical structure, strength (<i>Bala</i>), maintenance.
<i>Satmyaja</i> (adaptational)	Environmental adaptation, cellular resistance.	Health, vigor, serenity, well-being of organs, quality of voice and skin.
<i>Sattvaja</i> (psychic/mind)	Maternal mental state/stress hormones, psychological conditioning.	Character, memory, attachment, aversion, bravery, fear, rage, profoundness, mild/rude nature.

The description of *Angotpatti* (organogenesis) using the *Panchamahabhutas* is a functional classification, e.g., *Vayu* (air) governs movement and division (parallel to cell cleavage and migration), and *Prithvi* (Earth) forms solid structures (parallel to ossification).

3. Garbhini Paricharya and Antenatal Correlates

Classical texts prescribe a month-specific regimen of diet, conduct and *Rasayana* for the pregnant woman (*Garbhini Paricharya*), intended to support progressive fetal growth and to prepare the mother for parturition and lactation. This structured, trimester-wise approach is conceptually comparable to modern trimester-specific antenatal nutrition and care recommendations, which similarly emphasize increasing caloric and micronutrient intake, iron and folic acid supplementation, and staged monitoring across gestation. Read together with the DOHaD evidence reviewed above, *Garbhini Paricharya* may be interpreted as an early, empirically derived attempt at optimizing the intrauterine environment referenced in *Rasaja* and *Satmyaja Bhava*, although this interpretation remains conceptual and has not yet been tested in controlled trials.

DISCUSSION

The Process of Conception and Fundamental Factors

Ayurveda describes conception (*Garbha Utpatti*) as the culmination of the union of four primary components: *Shukra* (male factor/sperm), *Artava* (female factor/ovum), *Atma* (the soul/life principle), and *Garbhashaya* (the uterus).

- **Correlation with modern embryology:** The union of *Shukra* and *Artava* directly corresponds to fertilization of the sperm and ovum to form the zygote. The process is initiated upon the entry of *Atma*, suggesting the beginning of individual life, a concept aligning with the moment of genetic individuality established at fertilization.
- **The Shadbhava (Six Essential Factors):** Ayurvedic texts state that fetal growth and structural integrity depend on six factors: *Matrija* (maternal contribution), *Pitrija* (paternal contribution), *Atmaja* (soul/genetic disposition), *Rasaja* (nutritional input), *Satmyaja* (wholesome adaptation), and *Sattvaja* (psychic/mental state). This holistic view encapsulates the modern understanding of development being driven by heredity (*Pitrija/Matrija*), genetics (*Atmaja*), maternal diet and placental function (*Rasaja*), and maternal environment and epigenetics (*Satmyaja/Sattvaja*), a correspondence increasingly supported by DOHaD and placental-epigenetic research^[8,17,18].

Stages of Foetal Development: *Masanumasika Vriddhi*^[4,5]

- **Prathama Masa (1st month):** The product is described as *Kalala* (a shapeless, semisolid mass), which aligns with the initial stages of cleavage, morula, and the eventual blastocyst stage post-fertilization.
- **Dvitiya Masa (2nd month):** The mass transforms into a *Ghana Sanghata* (a compact mass) and begins to take the shape of a *Pinda* (bolus), *Peshi* (disc), or *Arbuda* (irregular mass), corresponding to embryonic disc formation and gastrulation, where the three germ layers (ectoderm, mesoderm, endoderm) are established.
- **Tritiya Masa (3rd month):** early signs of *Anga-Pratyanga* (limbs and major organs) appear, matching the critical period of organogenesis, where the central nervous system, heart, and limb buds rapidly develop; a recent applied-anatomy review similarly places *Marma* (vital-point) formation in this window, aligning it with 9-12 weeks of intrauterine life¹⁵.
- **Chaturtha Masa (4th month):** *Chetana* (consciousness/sensation) becomes distinct, and foetal movements (*Garbha Chesta*) are felt. This emphasizes development of the *Hridaya* (heart and the seat of mind) and the developing nervous system, marking a transition to the fetal period.
- **Panchama Masa (5th month):** substantial growth in muscular and fatty tissues (*Mamsa* and *Meda*), with development of the *Manas* (mind) emphasised; the foetus gains significant weight and length.
- **Shashtha Masa (6th month):** the foetus develops *Bala* (strength) and *Varna* (complexion), and vital faculties like intellect (*Buddhi*) are refined; hair, nails, and skin characteristics become more evident. This aligns with continued maturation of pulmonary and nervous systems, increasing potential viability outside the womb.
- **Saptama Masa (7th month):** the foetus achieves *Purnatva* (completeness) of all major *Anga-Pratyanga*, recognized as the point where the fetus is structurally complete enough to survive if born prematurely, although survival chances are higher in later months.
- **Ashtama Masa (8th month):** described as critical and vulnerable because *Ojas* (the vital essence responsible for immunity and life) is believed to fluctuate unstably between mother and foetus; consequently, birth during the eighth month is generally considered detrimental to survival.
- **Navama/Dashama Masa (9th and 10th months):** the foetus achieves full maturation, *Ojas* stabilizes, and the child is prepared for safe birth (*Prasava*); the

tenth month is considered the natural and final period for a successful, term delivery.

Organogenesis (*Angotpatti*)^[6]

The Ayurvedic concept of the *Panchamahabhutas* (*Prithvi*, *Aap*, *Tejas*, *Vayu*, and *Akasha*) offers a fundamental, macro-level functional description of how tissues and organs form in the foetus (*Garbha*). This elemental framework provides an insightful parallel to the molecular mechanisms of modern organogenesis, where specialised cells are created and arranged under genetic control.

Prithvi (Earth) - Structure and solidity: Defined by solidity (*Ghanatva*) and stability (*Sthiratva*), *Prithvi* relates to structures requiring load-bearing capacity, such as *Asthi* (bone), *Nakhas* (nails), and *Keshas* (hair). In modern embryology, this corresponds to differentiation of mesenchymal stem cells into osteoblasts and chondroblasts, marked by deposition of a mineral-rich extracellular matrix.

Aap (Water)- Fluidity and cohesion: Characterized by fluidity (*Dravatva*) and cohesion (*Snehatva*), *Aap* corresponds to formation of fluid systems such as *Rakta* (blood), *Rasa* (plasma/lymph), and *Mūtra* (urine), reflecting cardiovascular development and haematopoiesis from the mesoderm.

Tejas (Fire)- Metabolism and transformation: defined by heat (*Ushnatva*) and the power of transformation (*Pāchana*), *Tejas* is synonymous with cellular differentiation and the regulated mitochondrial metabolic activity that fuels growth and structural reorganization during organogenesis.

Vayu (Air)- Movement and space creation: characterised by movement (*Chalatva*), lightness (*Lagutva*), and division (*Vibhajana*), *Vayu* parallels mitosis and cell migration in germ-layer formation and limb shaping, and its role in hollowing solid structures parallels apoptosis, which sculpts digits and forms luminal cavities.

Akasha (Space)- Cavity and vacuity: defined by vacuity (*Shunyatva*), *Akasha* corresponds to the formation of hollow viscera and tracts, such as the digestive lumen, cerebral ventricles, and pulmonary alveoli.

Correlation with DOHaD and Epigenetic Evidence

The classical claim that maternal diet, habits and mental state shape the offspring beyond direct heredity is no longer only a conceptual analogy. The Barker/fetal-origins hypothesis and subsequent DOHaD research demonstrate that adverse intrauterine nutritional and hormonal exposures programme long-term cardiometabolic risk through epigenetic mechanisms including DNA methylation and histone modification^[7,8,17]. Placental-programming studies further show that maternal metabolic status alters placental phenotype and fetal nutrient supply in

a sex-specific manner^[18], while clinical reviews describe measurable structural and functional consequences of fetal programming on later disease susceptibility^[19]. These findings lend contemporary biological plausibility to *Rasaja Bhava* (nutritional transfer), *Satmyaja Bhava* (adaptation) and *Sattvaja Bhava* (maternal psychic state), and support the recommendation that *Shadbhava* and *Garbhini Paricharya* be tested through prospective, biomarker-based clinical and epigenetic studies rather than accepted on textual authority alone.

Strengths and Limitations

This review's principal strength is its multi-source scope, drawing on classical texts, prior dissertations, recent (2025-2026) peer-reviewed journal articles, and biomedical DOHaD/epigenetic literature, which situates *Garbha Sharir* within an active and current field of comparative scholarship rather than a single textbook comparison. The review is nonetheless limited by its qualitative, narrative-comparative design: correlations described here are conceptual and terminological rather than empirically tested equivalences, no formal systematic-review protocol (e.g., PRISMA) or risk-of-bias assessment was applied, and the cited dissertations and several Ayurveda-journal sources have not undergone the same peer-review rigor as mainstream biomedical journals. These limitations should be addressed in future work through pre-registered systematic reviews and primary clinical/molecular studies.

CONCLUSION

The study of prenatal development known in Ayurveda as *Garbha Sharir* provides a time-tested framework whose foundational principles show a robust conceptual alignment with the major chronological and structural events described in modern embryology, while offering a complementary, holistic perspective. *Garbha Sharir* meticulously charts fetal development month-by-month, detailing stages that correspond to modern concepts such as gastrulation, organogenesis, and fetal growth, reflecting the observational depth of classical Ayurvedic physicians. Its most significant contribution, the *Shadbhava* (Six Contributing Factors: *Matrija*, *Pitrija*, *Atmaja*, *Satmyaja*, *Rasaja*, and *Sattvaja*), moves beyond purely genetic determinants to encompass maternal nutrition, environment, and the mother's psychic state, aligning with contemporary DOHaD and perinatal-epigenetics research. This descriptive knowledge is made prescriptive through *Garbhini Paricharya*, a structured, month-specific regimen of diet and lifestyle that may be viewed as an early form of personalised antenatal care aimed at optimising the *Shadbhava* factors and managing maternal stress. Building on the wider evidence base reviewed here, including prior dissertations, recent Ayurveda-journal

publications, and DOHaD/epigenetic studies, future research should prioritize controlled clinical trials and molecular/epigenetic mapping to validate the specific claims of *Shadbhava* and *Garbhini Paricharya*, so as to integrate this traditional knowledge meaningfully into modern perinatal care.

REFERENCES

1. Prof. K.R.S. Murthy. Sushruta Samhita. Chaukhamba Orientalia, Varanasi; reprint edition 2017. Part 1, Sharira Sthana 2/33.
2. Prof. K.R.S. Murthy. Sushruta Samhita. Chaukhamba Orientalia, Varanasi; reprint edition 2017. Part 1, Sharira Sthana 5/3.
3. Prof. K.R.S. Murthy. Sushruta Samhita. Chaukhamba Orientalia, Varanasi; reprint edition 2017. Part 1, Sharira Sthana 3/33.
4. Prof. K.R.S. Murthy. Sushruta Samhita. Chaukhamba Orientalia, Varanasi; reprint edition 2017. Part 1, Sharira Sthana 3/18,30.
5. Devi VS (Ed.). Inderbir Singh's Human Embryology. 11th edn. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2018.
6. Prof. K.R.S. Murthy. Sushruta Samhita. Chaukhamba Orientalia, Varanasi; reprint edition 2017. Part 1, Sharira Sthana 5/3.
7. Barker DJP. Fetal origins of coronary heart disease. *BMJ*. 1995; 311(6998): 171-174. doi:10.1136/bmj.311.6998.171.
8. Justulin LA, Zambrano E, Ong TP, Ozanne SE. Editorial: Early life epigenetic programming of health and disease through DOHaD perspective. *Front Cell Dev Biol*. 2023. doi:10.3389/fcell.2023.1139283.
9. Bhakre Satara DR. A critical study of some important sutras from Ayurvedic Samhitas in relation to embryology [dissertation]. Pune: Savitribai Phule Pune University; 1986. Available from: <http://hdl.handle.net/10603/168728> (Shodhganga).
10. Tulasidas VC. Comparative study of Garbhavkranti in Ayurveda with modern medical science [dissertation]. Pune: Savitribai Phule Pune University; 1991. Available from: <http://hdl.handle.net/10603/146222> (Shodhganga).
11. Author(s). Shadbhava in Garbha Sharir: a conceptual and comparative study with modern embryological determinants. *World J Adv Pharm Sci*. 2026; 3(5): 53-56. doi:10.5281/zenodo.19923955.
12. Ayurvedic approach to embryogenesis: exploring fetal development. *J Ayurveda Integr Med Sci*. Available from: <https://jaims.in/jaims/article/view/2925>.
13. Clinical perspective on Garbha Sambhava Samagri: a comprehensive review. *Int J Res Appl Sci Eng Technol*. 2025; 13(11). doi:10.22214/ijraset.2025.75768.
14. Ancient embryological wisdom-a scientific explanation in the light of epigenetics. *Int J Res Appl Sci Eng Technol*. Available from: <https://www.ijraset.com/research-paper/ancient-embryological-wisdom-a-scientific-explanation-in-the-light-of-epigenetics>.
15. Applied anatomical insights of Marma Sharir in Garbha Sharir: a classical and modern review with special reference to Rachana Sharir. *Ayushdhara*. 2026; 13(4): 249-253. Available from: <https://ayushdhara.in/index.php/ayushdhara/article/view/2936>.
16. Critical review on Garbhavkranti and modern embryology. *Int J Ayurvedic Herb Med*. Available from: <https://interscience.org.uk/images/article/v15-i6/4ijahm.pdf>.
17. Tarrade A, Panchenko P, Junien C, Gabory A. Placental contribution to nutritional programming of health and diseases: epigenetics and sexual dimorphism. *J Exp Biol*. 2015; 218(Pt 1): 50-58.
18. Schiera G, et al. Maternal nutrition, fetal programming and offspring metabolic health: overnutrition, GDM and epigenetics. *Cells*. 2026; 15(4): 366. doi:10.3390/cells15040366.
19. Fetal programming and its effects on offspring health. *Obstet Gynecol Sci*. 2021;64(6). Available from: <https://synapse.koreamed.org/articles/1147820>.
20. Effectiveness of herbal interventions in the management of hypercholesterolemia: protocol for a systematic review. [Search strategy across PubMed, MEDLINE, EMBASE, EBSCO, Cochrane Library, DHARA, AYUSH Research Portal, WHO portal, Shodhganga and Google Scholar]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC12676219/>.
21. AYUSH Research Portal, Ministry of AYUSH, Government of India. Available from: <https://ayushportal.nic.in/>

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