



# SUARNAPRASHANA- AN ANCIENT APPROACH FOR INFANT HEALTH AND WELL BEING.

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**Abstract :** Suvarnaprashana, an age old practice rooted in Ayurveda, is a gaining renewed attention in the field of Pediatric healthcare. A Unique immunization technique that combines natural elements to promote the overall health and immunity of children. Suvarnaprashan involves the administration of Suvarna bhasma (gold ash) along with madhu and ghrita. The historical context, ingredients and preparation methods of Suvarnaprashan, shedding light on its holistic approach to child being. The scientific basis behind Suvarnaprashan discussing its potential immunomodulatory effects and contribution to cognitive development. It also address the safety and ethical concerns associated with the use of gold in Pediatric healthcare. In a world increasingly reliant modern vaccines. Suvarnaprashan stands as a time tested alternative that may complement existing immunization strategies. Suvarnaprashan offers a unique perspective on enhancing child health, emphasizing not only physical immunity but also mental and emotional well-being, aligning itself with holistic approach to healthcare increasingly sought after in today's society.

**Index Terms :-** Suvarnaprashan, Immune booster, Immune-modulatory,.

## I. INTRODUCTION

Among traditional practices, Suvarnaprashan, an Ancient Ayurvedic immunization technique. The term "Suvarnaprashan" is derived from two Sanskrit words "Suvarna" means Gold and "Prashan" means to feed. It involves the administration of SuvarnaBhasma , a specially prepared form of Gold ash mixed with Madhu and Ghrita. For the past several decades, experimental evidence proved that gold nanoparticles (AuNPs) have become better biocompatible metal nanoparticles in disease diagnosis and therapeutics . These gold nanoparticles also possess antibacterial, anti-cancer, and anti-inflammatory properties. Similarly, synthesis of Suvarna prashana was also done by using biological conjugates such as Ghrita, Madhu, and Herbs. This will increase the immunity of the infant to acts on pathogens, cancer cell, and inflammatory agent. In Suarna prashana, gold particles are encapsulated by Madhu, Ghrita, and herbs, and it helps the gold particles to form into various size, shape, charges, and composition. This irregular form of the gold particles in Swarna prashana may induce the non-specific immunity by activating both cellular and humoral immunity . In general, pathogens undergo several mutations naturally or induced by man. Therefore, human system which acquired non-specific immunity will be ready to defend against any pathogens and inflammatory substances that enter or develop in our

system. It is evident that gold nanoparticles are efficiently interacting with the target cells in terms of immunological responses and cytotoxicity.

### Properties and Benefits of Suvarnprashan

Lehana depicts administration various herbal drugs, Ghee preparations, and gold alone as supplementary feeds wherein precise indications are stated. Acharya Kashyapa coined the term Suvarnprashana for administration of gold. This unique formula has been explained wherein gold should be triturated along with water, Madhu, and Ghrita on a clean stone facing eastern direction and made the Shishu (infant) lick the same. The specific benefits ascribed to Suvarnprashana are as follows:

- Medha Agni Bala Vardhanam (improvement of intellect, digestion, metabolism, immunity, and physical strength)
- Ayushyam (promoting lifespan)
- Mangalam (auspicious)
- Punyam (righteous)
- Vrushyam (aphrodisiac)
- Varnyam (enhancement of color and complexion)
- Grahapaham (protection from evil spirits and microorganisms).

The specific benefits of Suvarnprashana according to the duration of administration have been mentioned such as:

- If administered for 1 month, the baby will become Parama Medhavi (highly intelligent) and Vyadhibhir Na Cha Drusyate (will not be affected by any disease)
- If administered for 6 months, the baby will become Srutadhara (will be able to remember the things, which are just heard).

All the above said benefits are indicating the enhancement of all favorable factors required for proper growth and development of a child, which is considered to be rapid during Shaishavavastha (infancy). Acharya Sushruta cite administration of Swarna along with honey and ghee in one among the procedures of Jatakarma Samskara that is, as a single dose at birth in the procedure of new born care. He provided the rationale behind this practice that there will be no adequate secretion of breast milk for the first 4 days after delivery and so as to support the baby with respect to preventive and nutritive aspects such practices are indispensable. Acharya Vagbhata advises to give a combination of herbal drugs in a specific shaped spoon as that of the leaf of holy banyan tree, made up of gold to the newborn for increasing Medha (intellect). Administration of Swarna along with other herbs is also mentioned by Acharya Vagbhata in Jatakarma Samskara.

### Dosage

Acharya Kashyapa has not mentioned the dosage for Suvarnprashana in specific. However, he has given general dosage of children according to age in the same context from birth. The same can be followed to fix the dosage of Suvarnprashana. A few other available references regarding per day dose of Suvarna Bhasma from various texts are as listed below: •

1/4th–1/8th Ratti (15–30 mg) Suvarna Bhasma

- 2 Gunja (250 mg)
- 1 Gunja (125 mg)/As per age
- 1 Harenu
- 1/32 Ratti (3.9 mg)
- 15.5–62.5 mg of Suvarna Bhasma.

By taking these adult dosages as reference standards, dosage in children can be calculated.

It is contraindicated among children suffering from fever, dysentery, and indigestion, etc.

### Mode of Action Suvarnaprashan

Swarna bhasma has moisturizing and unctuous effect on the body, as its madhura helps as Rasayana, and through detoxification can treat vishamjwara, antra jwara (Enteric fever), weakness, etc. Scientifically, it has been proved that swarna bhasma also possesses antioxidant, antidepressant, anti-cancerous, antibacterial, and anti-rheumatoid property and acts as a nerve stimulant.

### Toxicity

Clinical tests revealed that SP is free from toxicity as the ingredients used for its preparation are only after their non-toxic certification

### Side Effects

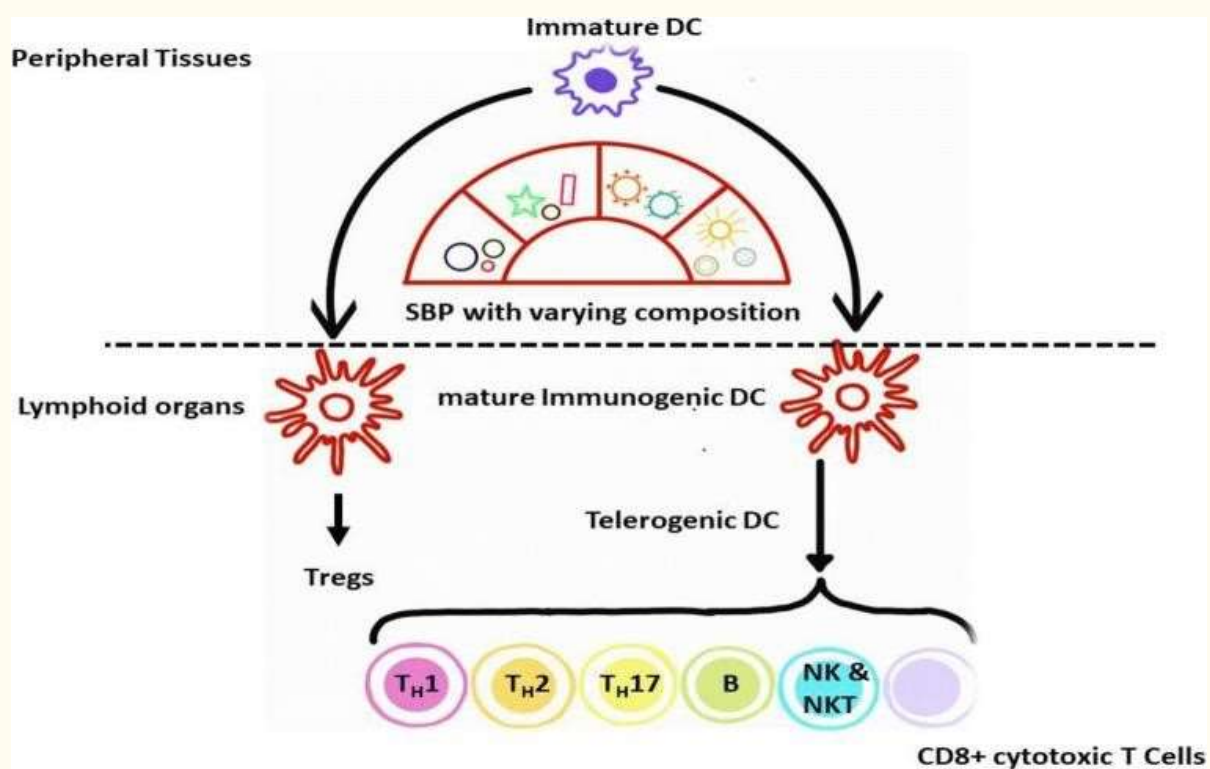
Sometimes due to smell of medicine and different taste, babies may vomit it. Except this, no other side effects have been reported. Till date, there are no published research data available regarding its safety and efficacy. But there are few studies presented in national and international seminars/conferences, which support its safety and efficacy. Besides, some animal studies support its safety and efficacy.

### Plausible Mechanisms of Suvarna Prashana

Swarna prashana is related to the smaller gold particles perhaps containing wide variation in shapes, sizes, charges, and biomolecular compositions. These particles retain high stability, low toxicity, and immunogenicity conjugation due to the molecular ingredients found in Ghrita and Madhu. The molecular ingredients contain sugars, amino acids, proteins, lipids, vitamins, and other components. Moreover, these components help in capping the gold particles in suvarna prashan which exhibits multivalent interactions between the particle and membrane receptor of antigen-presenting cells (APCs) such as dendritic cells. Targeting these dendritic cells is considered to be one of the efficient strategies in promoting immunotherapies and vaccine development. Therefore, the plausible mechanism of Suvararna prashana in interacting with dendritic cells is as follows: dendritic cells opt several mechanisms in the internalization of Suvarna prashana particles including receptor-mediated endocytosis, pinocytosis, and phagocytosis. Immature dendritic cells will uptake and internalize the Suvarna prashana particles in the cytosol. As a result, immature dendritic cells differentiate into mature dendritic that causes expression of CD83 and CD86 and also morphological changes in the maturation of the dendritic cells. The internalized particles, namely, antigens, are processed in the cytoplasm and initiate T cell response based on antigen presented through MHC complex. Interestingly, swarna prashana particles comprise of mosaic features in terms of size, shape, charge, and composition of the particles which results in intercellular trafficking in dendritic cells. Therefore, dendritic cells present multiple antigens effectively to the T cells. It is believed that the

activated dendritic cells and T cells require soluble cytokines including IL-7, IL-6, IL-10, IL-12, IL23, TNF, and IFN to exhibit immunogenic response . The potential application of Suvarna prashana in immunomodulation is the development of both prophylactic and therapeutic vaccine. Ancient scripts have suggested that the colloidal preparation of swarna (gold particles) with honey and ghee would significantly induce robust immunity like vaccines . Gold particles are the most promising ones which do not affect living cells and do not produce adverse effects . It is believed that gold is used in ayurvedic, herbal, and herbo-mineral preparations for the treatment of chronic and degenerative disease without any side effect . The advantages of biodegradable gold particles are utilization in the vaccinated organism, high loading efficiency for the target substance, enhanced ability to cross various physiological barriers, and low systemic side effects. In all likelihood, the immune actions of biodegradable nanoparticles and gold nanoparticles as corpuscular carriers are similar. The recent data indicating low toxicity of gold nanoparticles makes it being used in the development of next-generation vaccines . However, no extensive studies on animals or cell lines model are available, and further clinical trials are required on interaction of Suvarna prashana particles and human functions.

II.



III.

IV. [Fig. 1](#)

Schematic representation of plausible mechanism of activation of immunogenic dendritic cells by Suvarnaprasahan.

## V. Conclusion

Suvarnaprasahan is an immune booster used in pediatrics practice; its safety and efficacy are well supported by the classical texts of *Ayurveda*. In this review, we outlined the plausible mechanisms of Suvarna prashana in inducing immune system. It is also believed in older days that Suvarna prashana helps the child to grow up with a better immune system and intellectual performance. *Ayurveda* also explains about “vyadhikshamatwam” (immunomodulation), i.e., the individual’s resistance to any infectious disease which includes both the capacity of attenuation against manifested disease and resistance to the offspring of the next generation. It is the ancient immunization technique with no adverse effect and provides a good life with physical, mental, and social health. So Suvarna prashana samskara should be accepted as immunization program. However, its safety and efficacy need to be validated through systematic methodological research.

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