

REVIEW ARTICLE

A Story of *Swarnaprashan* and its Effect in Various Paediatric Age Groups: A Review Article

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ABSTRACT

Swarnaprashan is a classical gold preparation, especially advised for paediatric age groups. Many years back in *Ayurveda* literature, this unique combination of drug was defined by *Acharya Kashyap*, one of the best literatures of *Ayurveda* regarding paediatric care. *Swarnaprashan* is a mineral drugs formulation, processed with *Swarnabhasma*, honey and *ghrita*. *Swarnabhasma* (nano particle of gold) is main content of this formulation so its nomenclature by *Swarnaprashan*. In case of children health care and treatment, choice of medicine becomes very fragile topic, as medicine for children should be easy palatable and multi-tasking. *swarnaprashan* can also combine with herbal drugs like bramhi, vacha, guduchi, etc to address some desirable quality. *Acharya Kashyap* explained evidently that administration of *swanaprashan* in children shows the remarkable benefits like improving the intellect power, enhance the digestive power and metabolism, increase physical strength, rasayan, boost immunity, complexion, fertility, and lifespan.

Key Words *Swarnaprashan, Swarnabhasm, Lehan*

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INTRODUCTION

Kaumarabhritya is most valuable branch among the eight branches of *Ayurveda*. Its prime concern is to provide the ultimate care, nutrition, growth, and marvelous quality of children health and life¹. *Swarnaprashan* in children can be implicated in two context of *Ayurveda* known as *Lehana karma* and *Jatakarma samskara* (supplementary food) in newborn as a general care. *Lehana* comes under *Jatakarma sanskara* introduced by *Acharya Kashyapa*. *Lehana* supply the good nutritional requirement and promote

immunity, intellect, optimum growth, and better digestion capacity by boosting the *Agni* (digestive fire) of children. *Lehana* is a semisolid combination that contains *Ghrita*, *Madhu*, *Swarna Bhasma*, and various *herbal drugs*. *Lehana* also make the drug intake easy in children as it comes in palatable or lickable form². *Acharya Kashyapa* explained benefits of administration of *Swarnaprashan* as enhancing *Medha* (intellect), *Agnideepan* (boost-metabolism), *Balavardhan* (increase-strength), *Immunity*, *Varnayam*

REVIEW ARTICLE

(complexion), *Vrishuyam* (fertility) and *Ayushya* (longevity). *Swarnaprashan* acts on both physical as well as mental growth of children³. *Acharya Sushruta* and *Vagbhata* has been also prescribed intake of *Swarna* (gold) along with *Madhu* (honey) and *Ghrita* to the newborn immediately after birth known as *Jatakarma sanskara*.^{4,5}

Content description -; *Swarnaprashan* is made up with *Swarnabhasma*, *Madhu* and *Ghrita*.

Swarna (Gold) -: *Swarna* has been placed under metal category. Metal plays an important role in *Ayurvedic* treatment from years ago. *Swarna* (gold) has been established as a very precious and auspicious metal, as it is used for making highly desirable ornaments, coins, statues of God/Goddess and medicine through out the world. Gold is explained as one among the *Sapta Lauha*⁶ and classified under *Suddha Lauh*⁷. *Swarna Dhatu* have both preventive and curative property.

Therapeutic activity of Swarna (Gold) -; *Swarna* (gold) is advised for internal use even before conception, due to its *Rasayan* Quality (rejuvenator) and *Vajikarana* (aphrodisiac) properties⁸. Both of these qualities begat a healthy child. After conception it is used in *Pumsavana Karma* (process to get the desired sex of baby including a better intra uterine growth and development of the fetus)⁹. As the child grows gold is also used along with various *herbal drugs* for procuring better *Agni* (metabolism and

digestive power), *Bala* (physical strength and immunity), *Medha*, (intellect), *varnya* (complexion), *Ayu* (lifespan).

Swarnabhasma-; *Swarnabhasma* (nano particle of Gold) is obtained by *Swarna* and it possesses the properties of *Ayushya* (longevity), *Varnya* (enhances complexion), *Balya* (good strength), *Deepana* (digestive), *Vrishya* (aphrodisiac), *Brumhana* (nutritive), *Vajikara* (re-virilization), *Ojowardhana* (increase vitality), etc¹⁰.

Pharmacological study of Swarnabhasma- Immunomodulatory Activity¹¹

An experimental study by introducing gradual increasing dose of *Swarna Bhasma* to male mice for 10 days and it revealed that, significantly increased peritoneal macrophages stimulated phagocytic index of macrophages. Which will be helpful to fight against infection? So, it can be used as an immune booster.

Anti-asthma¹²:

auranofin treatment was given for Mild asymptomatic asthmatic patients with normal lung function for 12 weeks decreased non-specific bronchial hyper responsiveness.

Antiarthritis activity¹³:

Colloidal gold (average particle size 27nm) used in experimentally induced arthritis (in rats) is more potent in comparison to Sodium aurothiomalate (myocrisin) when administered subcutaneously. It shows that administration of colloidal gold and Sodium aurothiomalate subcutaneously in rats suppressed the development of arthritis.

REVIEW ARTICLE

Anxiolytic activity¹⁴:

This study suggested that *Swarna Bhasma* has the potential for the treatment of depression, stress, and nervous system disorder by reducing the level of norepinephrine, epinephrine, dopamine, serotonin (5-hydroxytryptamine), and corticosterone in rats which is induced by restraint stress.

[Above lines are discussed in **Fig. no.1** below.]

Action of *bhasma* in hepatic and gastrointestinal cell¹⁵:

Liver transaminase activity and bilirubin concentration increased significantly in male wistar rats exposed to Cadmium, Lead and Manganese and treated positively with their respective blood levels in a study on effect of chronic exposure to Lead, Cadmium and Manganese mixtures on oxidative stress in rat Liver¹⁵.

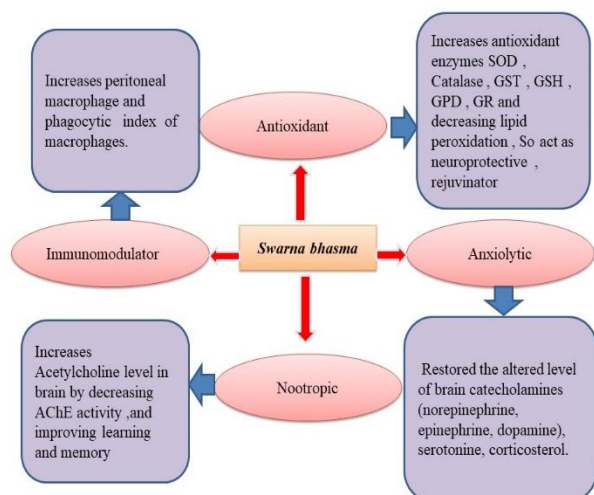


Figure 1 The pharmacological action of *Swarna Bhasma*

Ghrita-;

Ghrita is potent in *Sanskara-anuvartanam guna* which means it can include the properties of other drugs without losing its own properties and also shows the properties of *Rasayana*

(antioxidant), *Agnikara* (boost digestion capacity), *Chakshusya* (beneficial for vision), *Vrishya* (aphrodisiac), *Medhakara* (improves memory/intellect), *Ojovardhaka* (increase vitality), is used as both nutrition supplement and therapeutic purpose¹⁶. Pure *Go-ghrita* possess a natural pleasant odor, while the presence of carbonyls, lactones, FFA, and esters generated during processing provides brain. It also improves the a specific flavour¹⁷. Antioxidant property of *Ghrita* make sure to defend the body from oxidative injury. *Ghrita* contains Docosahexaenoic acid (DHA), an important component of the grey matter of the activity of biliary duct and gastric secretions *Ghrita* improves Gastric secretions¹⁸. Vitamin A modulates the growth of bones, epithelial tissue and prevents blindness¹⁹.

***Madhu*-;** Using *Madhu* (Honey) in this combination made the drug more powerful as *madhu* itself contains the *Tridosh-shamak* and *Yogvahi* capacity. *Madhu* balances all three constituent *Vata*, *Pitta*, and *Kapha* equally and made easy to serve the medicine at every micro channels of body. More of that *Madhu* is well known and the most used *Anupana* for ayurved medications,

its sweeter taste turns the medicine easily palatable specially in pediatric age group. Else It also has the properties of *Agnideepana*, *Varnya*, *Swarya*, *Vrishya*, and *medhakara*²⁰.

REVIEW ARTICLE

Antioxidant, anti-inflammatory, antiproliferative, antimicrobial, anticancer, and anti-metastatic effects of honey are reported²¹.

Almost all natural honey contains Flavonoids, Phenolic acid, Ascorbic acid, Tocopherols, Catalase (CAT), Superoxide dismutase (SOD), reduced Glutathione, and Peptides with some Millard reaction product.

Table 1 Nutritional value of honey as per dose of 100gm (3.5 oz) roughly in 5 ml²³

Energy	1,272 kJ (304 kcal)	Protein	0.3 g
Carbohydrates	82.4 g	Water	17.10 g
Fat	0 g	Dietary fiber	0.2 g
Sugars	82.12 g	Minerals - Potassium	52 g(1%)
		Iron	0.42 mg (3%)
		Magnesium	2 mg (1%)
		Phosphorus	4 mg (1%)
		Calcium	6 mg (1%)
		Sodium	4 mg (0%)
		Zinc	0.22 mg (2%)
Vitamins - Riboflavin (Vit. B2)	0.038 mg (3%)		
Niacin- (Vit. B3)	0.121 mg (1%)		
Pantothenic acid- (B5)	0.068 mg (1%)		
Vitamin B6-	0.024 mg (2%)		
Folate (Vit. B9)-	2 µg (1%)		
Vitamin C-	0.5 mg (1%)		

Some of *Herbal drugs* like *Brahmi*, *Shankhapushpi*, *kaidarya*, *Vacha* are also given in various combination of *Swarnaprashan* that helps to enhance memory, intelligence, complexion, immunity and metabolism²⁴.

MATERIALS AND METHODS

Swarnaprashan -; In *ayurveda* literature *Acharya Kashyapa* has briefly described about *Swarna Prashan* in *Leha Adhyaya* of *Kashyapa Samhita*. It is a combination of herbal and mineral drug, like *Swarna Bhasma*, *Madhu*, and *Ghrita*²⁵. They are used in pediatric age group for achieved the high nutrition value as well as better growth and child wellbeing. *Swarnaprashan* acts on the both mental as well as physical growth.

Most of those compound works together to provide a synergistic antioxidant effect. Nitrogenous compound, Vitamin C, B6 and B2 complex, Riboflavin, Nicotinic acid, are also present in Honey²².

[The above line are mentioned in **Table no. 1** below.]

Formulation-; *Swarnaprashan* has been explained by *Acharya Kashyapa*, where in *Swarnabhasma* (gold particle) should be triturated along with water, honey and cow *ghrita* on a clean stone facing eastern direction. After continue nine hours of rubbing the mixture collectively (*swarnabhasma*, *honey*, *ghrita*), we got the *swarnaprashan* in liquid form²⁶.

Dose-; *Acharya Kashyap* has not mentioned the dosages for *Swarnaprashan* in specific. A few other available references regarding per day dose of *swarnabhasma* can be given, as below -;

- 15.5 to 62.5 mg of *swarna bhasma*²⁷.
- 1/4 to 1/8 Ratti (15-30mg) *swarna bhasma*²⁸.
- 1/32 Ratti (3.9mg)²⁹.

REVIEW ARTICLE

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

The pediatric dose was calculated by the young's formula, which is mentioned below³⁰. A specific proportion of *Ghrita* and *Madhu*(honey)(1:2) was added to *Swarna Prashan Yoga*. *Swarna Prashan Yoga* was prepared in the form of drops and filled in a bottle of 15ml.

The specific benefits of *Swarna Prashan* are as follows³¹-;

- *Medha* (increases of intellectual capacity,)
- *AgniBala Vardhanam* (increase digestion power, metabolism, and physical strength)
- *Ayushyam* (promoting life span or longevity)

- *Mangalam* (auspicious)
 - *Punyam* (virtuous)
 - *Vrishyam* (aphrodisiac)
 - *Varnyam* (enhances complexion)
- Grahapaham* (protects from evil effects including microorganisms).
- According to the duration of administration specific benefits has also been mentioned as, the child becomes *Parama Medhavi* (extremely intelligent) and *Vyadhihara* (do not affected easily by disease)
 - By using *Swarna Prashan* for six months, child becomes *Shrutadhara* (Able to retain whatever hears)

Table 2 Types of *Swarnaprashan* and their therapeutic action according to various samhita³²⁻⁴²

Paraskar Grihyasutra ³²	<i>Swarna, Madhu, Ghrita</i>	At birth	Promotes <i>Medha</i> and longevity.
Khadir Grihyasutra ³³	<i>Swarna, Madhu, Ghrita</i>	At birth	Enhancement of <i>Medha</i> .
Ahswalayan Grihyasutra ³⁴	<i>Swarna, Madhu, Ghrita</i>	At birth
Manusmriti ³⁵	<i>Swarna, Madhu, Ghrita</i>	At birth
Kashyapa Samhita ³⁶	<i>Swarna, Madhu, Ghrita</i>	Up to 1 and 6 months	<i>Medha Agni Bala Vardhanam, Ayushyam Mangalam Punyam, Vrishyam, Varnyam, Grahapaham, Shrutadhara</i>
	4 lickable preparations were administered along with <i>Swarna, Madhu, Ghrita</i> ³⁸	<i>Kumara</i>	<i>Medha, Bala, Buddhi vardhanam</i>
	<ul style="list-style-type: none"> • <i>Kustha, Vacha</i> • <i>Matsyakshaka, Sankhapushpi</i> • <i>Arkapushpi, Vacha</i> • <i>Kaidarya, Shweta, Durva</i> 		
Ashtanga Samgraha ³⁸	On the first day <i>Ananta, Madhu, Ghrita</i> ³⁹	At birth
	<i>Hema raja and Vacha</i> ⁴⁰	Up to 1 year	<i>Medha, Agnivardham</i>
Ashtanga Hridaya ³⁹	<ul style="list-style-type: none"> • <i>Swarna, Madhu, Ghrita Vacha, Brahmi, Haritaki</i>⁴¹ • <i>Swarna, Madhu, Ghrita, Amalaki</i>⁴² 	At birth	Increases <i>Medha, ayu, Bala</i>

REVIEW ARTICLE

	4 lickable preparations were administered along with <i>Swarna, Madhu, Ghrita</i> ⁴³	Up to 1 year	<i>Medha, Bala, Varnakara</i>
	<ul style="list-style-type: none"> • <i>Shweta, Vacha, Kustha</i> • <i>Arkapushpi</i> • <i>Matsyakshaka</i> • <i>Kaidarya, Vacha</i> 		
Sharangdhara Samhita ⁴⁰	<i>Swarna Bhasma, Madhu, Ghrita</i>	At the time of birth
Rasratna samucchaya ⁴¹	<i>Swarna Bhasma, Pippali, Madhu</i>	<i>Swarna bhasma</i> (1/4ratti matra) At the time of birth
Yoga ratnakara ⁴²	Same as Bhavaprakash	<i>Kumar</i>	<i>Medha, Bala Vardhanam</i>
Bhaishajya Ratnavali ⁴³	<i>Swarna Bhasma, Madhu, Ghrita, Kustha, Vacha, Abhaya, Brahmi</i>	Up to the age of 1 year	<i>Varna, Ayu, Kanti Vardhan</i>

Above table discussed in **figure no.2** in probable Ayurveda mechanism of Swarna Prashan

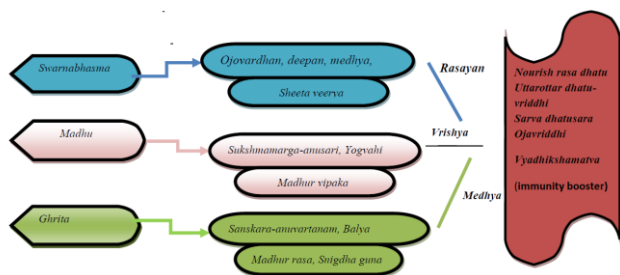


Figure 2 Probable Ayurveda mechanism for Swarnaprashan action

DISCUSSION

According to various *Samhita*, *Swarnaprashan* is referred as administration of purified gold bhasm (nano particle of gold) processed with honey and cow *ghrita*. This comes under process of *Lehana* karma. *Lehana* has been indicated for those children ,who are healthy but have compromised breast feeding, minor functional problem of metabolism. *Lehana* is prohibited in serious ill or children with any systemic or chronic disease. *Swarnaprashan* acts on tissue level, it provides nutrition, growth, development, metabolism, physical strength, digestion complexion, and

immunity. *Acharya* states that intake of *swarnaprashan* regularly for one month, the child will become extremely intelligent, remains unaffected by the disease. months child will As after birth, one year of age in children is considered to be the most vulnerable time for infection due to immature immune system. So for this crucial phase of life *swarnaprashan* is highly advised for better health and better further growth for children. Basically childhood is the period of growth spurts , which is considered to be until 16 years of age. There is no any specific day or time for administration of *Swarnaprashan*. *Acharya Kashyap* mentions east direction while preparing the formulation. Currently *Swarnaprashan* administration become exclusively focused on *Pushya Nakshatra* due to its special auspicious and nourishing effect.

CONCLUSION

Swarnaprashan is used as a complete general health booster drop in pediatric age group. *Swarnaprashan* does not signify administration

REVIEW ARTICLE

of any special kind of gold. It is also not associate with any specific time or day for administration by *Acharyas of Ayurveda*. In current scenario using *Pushya Nakshatra* for *Swarnaprashan* is used only because, Ayurveda consider it as a auspicious day and it has holistic approach for drugs and treatment. The selection of gold and other drugs should be based on better bioavailability, no side effect, good availability, easy formulation and administration, and these factors should be standardized by scientific study. Fixation of dose and duration should be same as told In various *samhita* and based on scientific studies or research regarding its toxicity and adverse effect. Before advising *swarnaprashan* patient health should be checked firstly, as they should not be suffering from any kind of systemic disease or chronic illness. The benefits of *Swarnaprashan* in children are multidimensional.

REVIEW ARTICLE

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REVIEW ARTICLE

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REVIEW ARTICLE

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