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THE GOLD: RELIGIOUS, MEDICINAL, TRADITIONAL ARTEFACTS

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ABSTRACT

Gold metal is said to be the ultimate beneficial. Gold enhances the longevity and strength, give prosperity, and cure diseases, increase luster, victory on enemies and diseases. By wearing gold as ornament, a person gets longevity among divine power and human being [Ayurveda]. By wearing daksharayan gold as a ornament or wearing swarnamani (Gold amulets), human being get relief from diseases, prevention from ill effects of rakshas, pisacha (disease causing organisms).

INTRODUCTION

The Ayurveda system of medicine has appreciable antiquity, dating back to about 5000 years B.C. Materia Medica of Ayurveda contain resources in the form of drugs derived from plant, animal, metal and mineral sources [1], the use of which have been described in various different pathological conditions. During the medieval period, there was greater use of certain heavy metals and minerals in Ayurveda therapeutics. The references of gold are available in Vedas by the name of Hiranya. Gold preparation from mercury (Rasa Vedhaja) is also mentioned in Kautilya Arthashastra. In noted history, it becomes clear that in many countries including India throughout the globe, gold was used for commerce, ornaments and metallurgy with often its apparent benefit to health.

In Yajurveda, Gold metal is said to be the ultimate beneficial. Gold enhances the longevity and strength, give prosperity, and cure diseases, increase luster, victory on enemies and diseases. By wearing gold as ornament, a person gets longevity among divine power and human being [Ayurveda]. By wearing daksharayan gold as a ornament or wearing swarnamani (Gold amulets), human being get relief from diseases, prevention from ill effects of rakshas, pisacha (disease causing organisms). Yajurveda. According to Atharvaveda, wearing gold as a ornament provide longevity, age of 100 years and offers auspicious resolution, provides strength. Human beings are not suffered with evil spirit, micro-organisms and diseases by wearing gold ornaments and stunning. Ornamented Daksharayan gold provides life and longevity, oja (immunity), bala (strength), virya (potency), increase endurance and work as medicine. Ornamenting gold is beneficial for providing strength of conceiving women, get beauty, cure diseases, and destroy micro-

organisms, provide prosperity and to gain better offspring's. (Atharvaveda 6/81/23) During ancient period, the gold is mentioned for increasing intellectual powers and longevity of life through the procedure of swarnaprashan. Gold in the form of fine gold dust, red colloidal solution, swarnapatra, swarnabhasma, swarnaparpati, kharaliya(trituated) formulations and sindoorkalpa, often combined with ghee, honey, medhya(intellect promoting) and rasayana herbs (rejuvenator) were popularly used.

HISTORY

From ancient times to the present day, gold has been valued by humans. Egypt was the principal gold-producing country in ancient times. Coptos, the present Quft on the eastern side of the River Nile, was the chief town of the Nomos of Harawi and was once politically important. In the eleventh dynasty (2133e1991 BC) it was overshadowed by Thebes, 50 km to the south, which became the capital of the Middle Kingdom (2133 BC) of ancient Egypt, the present-day.

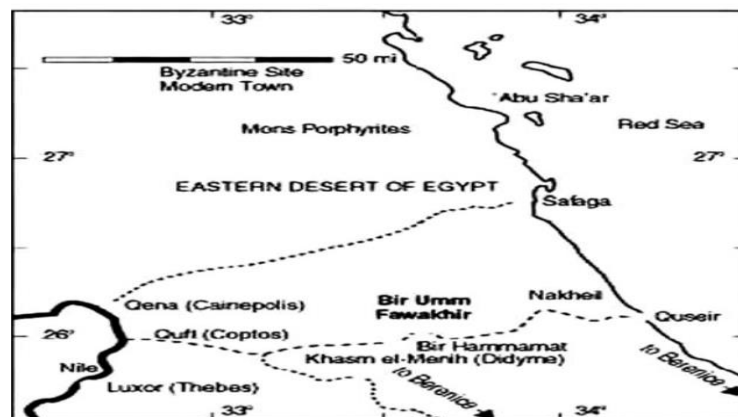


FIGURE 1.1 Location of Coptos in Upper Egypt, the most ancient gold-mining center.

Coptos was the world's first gold boom town. It was there in the Wadi Hammamat that alluvial gold had been washed down from the gold-bearing veins found later in the granite hills above. The world's oldest mine map which is made on papyrus and held at the Turin Museum (Museo Egizio di Torino) in Italy, shows the huts of the Egyptian miners, the road to the gold mines, and the hills within which the gold veins occurred

Gold Ore Processing



FIGURE 1.2 The world's oldest mine map.

In the old Egyptian language, the word nubia signifies "gold." By 1300 BC, underground mining of vein gold was well established in Nubia under Egyptian control. There were more than 100 mines in the area. A series of forts were built to protect the flow of Nubian gold along the rich trade routes. Egypt became the dominant power in the Middle East, having the greatest gold-filled treasury in the ancient world. The ancient

Egyptians did not have an important port on the Mediterranean and all their trade was through the Red Sea. Coptos was at the starting point of the two great routes leading to the coast of the Red Sea, one toward the port of Tââ ou (Myos Hormos) and the other more southerly, toward the port of Shashirit (Berenice). Under the pharaohs, the whole trade of southern Egypt with the Red Sea passed over these two roads. Under the Ptolemys, and in Roman and Byzantine times, merchants followed the same roads for purposes of barter with the coasts of Zanzibar, Southern Arabia, India, and the Far East. This place and the surrounding area were known for the richness of its gold mines and semiprecious stones.



FIGURE 1.3 Ancient Egyptian wall painting dating from about 1450 BC in the tomb of Rekmire, vizier to Thothmes III at Thebes, showing metal workers casting molten gold in the molds.

Gold Mask

From ancient times, funeral gold masks were used to cover faces of the dead.

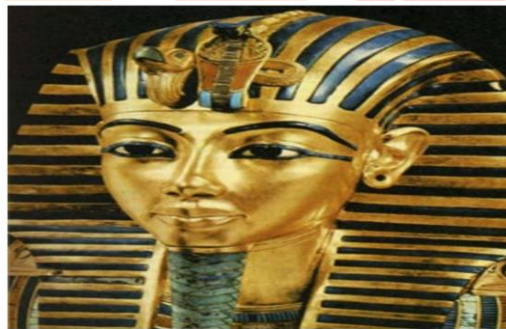


Figure 1.4. Ancient Greeks Gold mask

GOLD IN CURRENCY

Gold has been used as a medium of exchange and as a form of savings from the earliest times to the present day. For many civilizations, gold and money have been, and still are, regarded as one and the same thing. The first use of gold coins is attributed to the Chinese. In the West, the first gold coins were minted by the Lydians in Asia Minor from around the sixth century BC. It was only in the fifth century BC, however, that techniques were developed to produce pure gold coins by removing the naturally occurring silver content. Thereafter, coins became more important and were widely produced by the Romans in a variety of metals, besides gold. Metals other than gold were commonly used for coinage for much of history. The scarcity of gold precluded its widespread use as a means of payment. It was only with the major gold discoveries of the nineteenth century that gold became widely used as a form of currency.



Figure 1.5 Gold Coins of the eighteenth century in the east Slovak museum in Kosice

AYURVEDA THERAPIES

In Ayurveda classics, gold is indicated for internal use even before conception for its rasayana (rejuvenator) and vajikaran (aphrodisiac) properties. After conception, it is used in pumsavanakarma (procedure done to get the desired sex of the baby and for the proper intra-uterine growth and development of the fetus). After birth, gold is indicated in jatakarmasamskara (birth ceremony) and in the form of lehana (supplementary feeds) for the proper growth and development of the child.

The ancient Ayurveda text 'Rasa-Jala-Nidhi' documents that: "Gold is soothing, pure, nutritive, curer of poison, phthisis, insanity and other diseases. Gold improves vitality, fortune, beauty, intelligence and memory.

Ayurveda advocates that if swarnaprashan is administered for 1 month, the baby will become highly intelligent and will not be affected by any disease and if administered for 6 months, the baby will be able to remember the things, which are just heard [9]. It is the procedure where swarna (Gold) is mixed with medhya (intellect promoting), balya (strength promoting) and rasayana (rejuvenating) drugs. The selection of the drugs is aimed for both physical and mental well being of the child. This should be given for a stipulated time period with repeated administration.

GOLD FORMULATIONS

Table: 1 Formulation of gold present in different classics of Ayurveda.

Sr. No	Name of drugs	Disease
1.	Vasant Kusumakar Rasa	Prameha
2.	Shwasa Kasa Chintamani Rasa	Shwasa, Kasa
3.	Brhat Vata Chintamani Rasa	Vatavyadhi
4.	KumarKalyan Rasa	Balarogadhikar
5.	Brahmi Vati	Manoroga, Hrid Daurbalya
6.	Purnachandridaya Rasa	Rasayan Vajikaran

7.	Jayamangal Rasa	Jirna Jwara
8.	Sutasekhara Rasa	Amlapitta Chikitsa
9.	Brhat Garbha Chintamani Rasa	Sutika Roga Chikitsa
10.	Suvarna Malini Vasanta Rasa	Rajyakshma
11.	Vangeshwar Rasa	Prameha, Soma Roga
12.	Ugendra Rasa	Vatavyadhi
13.	Chaturmukh Rasa	Vatavyadhi
14.	Vata Gajankush Rasa	Vatavyadhi
15.	Panchamrita Rasa	Sarba Jwara

USES OF GOLD IN RECENT ERA

In the new pharmacopoeias of 17th century, use of gold could be found and was advocated by Nicholas Culpepper for treatment of ailments caused by a decrease in the vital spirits, such as melancholy, fainting, fever and falling sickness. Later in the 19th century, for treatment of syphilis, a mixture of gold chloride and sodium chloride i.e. muriate of gold was used. In 1890, the German bacteriologist Robert Koch proved that gold cyanide was bacteriostatic towards the tubercle bacillus. Gold therapy for tuberculosis was subsequently introduced in 1920s. After 30 year debate, a clinical study sponsored by Empire Rheumatism Council confirmed the effectiveness of gold compounds against rheumatoid arthritis. Since that time gold compound drugs have also been used to treat a variety of other rheumatic disease including psoriatic arthritis, a form of arthritis associated with psoriasis, juvenile arthritis, palindromic rheumatism and discoid lupus erythematosus.

Immuno-modulator & anti-inflammatory

Swarna prashan can be administered in children as an immune enhancing drug in early ages as this period until one year is considered to be the most vulnerable time for infections due to immature immune system. Clinical and pharmacological studies document immunomodulatory, nootropic as well as therapeutic effects of swarna prashan therapy. Pharmacological studies revealed specific and nonspecific immune response, which were modified in a positive manner in swarna bhasma-treated mice. It also had a stimulatory effect on peritoneal macrophages, which may be helpful to fight against infections.

Treatment of Cancer

Colloidal gold provide surface for easy conjugation of ligands, including antibodies which can be used for immune-targeting of the nano-particles to particular biomarkers of cancer cells. The intense surface Plasmon absorption of gold nano-particles, followed by rapid photo-thermal conversion, has been used for the selective photo-thermal treatment of cancer by using a suitable immune-targeting strategy .

Treatment of arthritis

In 1935 Forestier reported the results of a six year study supporting the beneficial effects of gold salts in slowing the evolution of RA. He continued to be a champion of chrysotherapy until his death in 1979. Later double blind clinical studies by the Empire Rheumatism Council (1961) confirmed Forestier's observations, documenting the benefit of sodium aurothiomalate in RA. Radiological evidence of the benefit of gold salts in RA was reported by John Sigler. He observed that gold salts slow down and often eliminate the progressive chronic joint changes associated with RA [60].

Treatment of asthma

In steroid dependent asthma, the efficacy of parenteral gold therapy was evaluated. Five of eight patients improved in terms of reduced steroid requirement while they were maintaining or improving lung function. Two patients developed significant proteinuria that resolved with cessation of gold. Chrysotherapy appears to have a corticosteroid-sparing effect in some patients.

Reproductive Health:

Gold has been used for treating male infertility in Ayurveda. Semen analysis by atomic absorption spectrophotometry. The value of gold in semen in a range of 0.36 to 1.98 µg/ml showed. A clinical study carried out on Chandrodaya rasa, swarna-containing formulation on its efficacy on shukrashaya (oligospermia) showed statistical significant result in spermatogenesis. There was no significant improvement in the volume which reveals that drug improves the semen qualitatively rather than quantitatively.

In Mental Health

Gold reduces the effects of depression, as well as enhances the ability to focus [65-69]. Studies also document the efficacy of gold in mental disorders. The biological and biomedical applications of gold nanoparticles as intracellular carriers of specific molecules (e.g., a drug, antibody, or oligonucleotide) to the brain, a thorough understanding of the interplay between intracellular gold nanoparticles and neuronal intrinsic properties is necessary.

ORGAN CENTERS ACTIVATED BY GOLD IN HUMAN BODY

In Traditional system such as Ayurveda and Yogic theories, gold ornaments are believed to influence body energy centres, circulation, and mental well-being [5,18,25].

1. Ayurvedic Perspective (Swarna Effect)

In Ayurveda, gold (Swarna) is considered a Rasayana (rejuvenator) that enhances overall vitality and subtle body functions rather than acting on a single organ.

◆ Key Actions of Gold:

Improves Ojas (immunity & vitality)

Enhances Medha (intellect, brain function)

Balances Tridosha (Vata, Pitta, Kapha)

2. Yogic / Energy Centre Perspective

Gold is believed to influence chakras (energy centers) depending on where it is worn:

● Crown Region (Head)

Associated with Sahasrara

Effect: Mental clarity, spiritual awareness

Example: Gold crown, head ornaments

● Forehead (Between Eyebrows)

Associated with Ajna Chakra

Effect: Memory, concentration

Example: Gold maang tikka

● Neck / Throat

Associated with Vishuddha Chakra

Effect: Communication, thyroid balance (traditional belief)

Example: Gold necklace

● Heart Region

Associated with Anahata Chakra

Effect: Emotional balance, circulation

Example: Chains, pendants

● Fingers / Hands

Linked to nerve endings and energy channels (Nadis)

Effect: Neural stimulation, reflex action

Example: Gold rings

● Ears

Related to acupressure points

Effect: Brain stimulation, reproductive health (traditional belief)

Example: Gold earrings

● Ankles / Feet

Connected to grounding energy

Effect: Stability, circulation

Example: Gold anklets (though silver is more common traditionally).

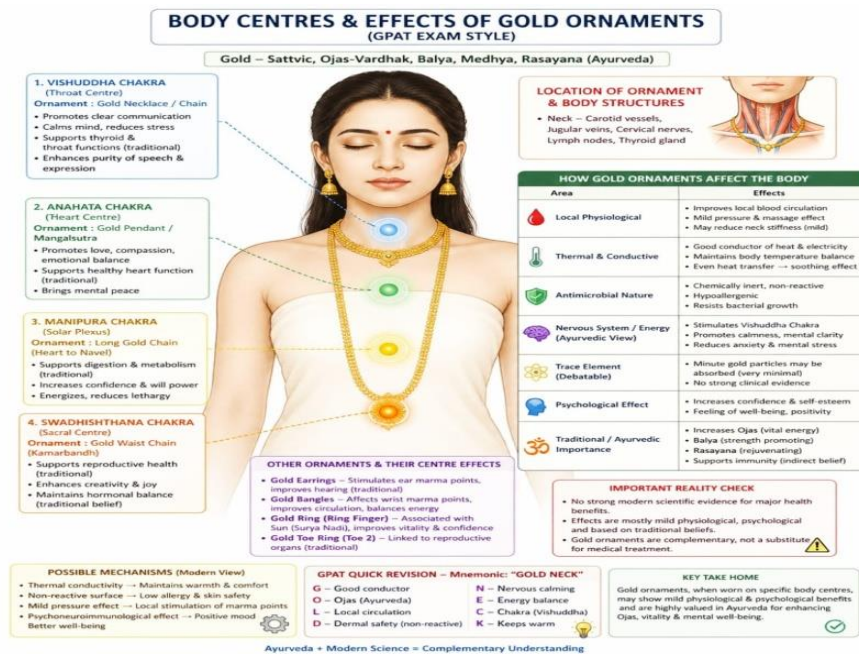


Figure 1.6: Body Centres & Effects Of Gold Ornament

EXPLORING DIFFERENT GOLD JEWELLRY STYLES

Gold jewellery has cultural, aesthetics, spiritual, and investment values across many civilizations. Different ornaments are worn on specific body parts and are traditionally associated with beauty, status, rituals, and symbolic meanings[10,18,25].

Ornaments	Body parts worn	Associated nerve / point	Traditional biological effect
Gold Ring	Finger	Nerve endings linked to brain & heart	Improves memory, enhances concentration, supports heart function
Gold Chain/ Necklace	Neck / Chest	Throat chakra (Vishuddha) vagus nerve	Enhances communication, reduces stress, supports thyroid function
Gold Earrings	Ear lobes	Acupressure points connected to brain & eyes	Improves eyesight, memory, and mental clarity
Gold Noserings (Nath)	Nose (left nostril common)	Linked to reproductive organs	Helps in menstrual regulation, reduces labor pain (traditional belief)
Gold Bangles/ Bracelets	Wrist	Pulse points, blood circulation pathways	Improves blood circulation, maintains energy balance
Gold Anklets (rare usually silver preferred)	Ankles	Nerve endings in feet	Gold to generally avoided; believed to disturb body heat balance
Gold Toe Rings(rare)	Toes	Reproductive nerve pathways	Similar to anklets, gold less preferred than silver in Ayurveda
Gold Armlet (bajuband)	Upper arm	Muscle & nerve control points	Improves strength and circulation in arms
Gold waist Chain	Waist	Digestive and reproductive region	Supports digestion and maintains posture
Gold crown	Forehead	Ajna chakra (third eye)	Enhances focus, mental calmness, and decision-making

GOLD ORNAMENTS



Figure 1.7 : Different Gold Ornaments

TRADITIONAL AYURVEDIC PREPARATIONS CONTAINING GOLD

Swarna bhasma :- Swarna Bhasma (gold calx) is a classical Ayurvedic formulation widely described in texts like Charaka Samhita and rasa Tarangini. Its uses are mainly based on Rasayana (rejuvenation) therapy.

Main uses of Swarna Bhasma

Improves memory, intelligence, and concentration

Enhances brain function

Immunity booster

Supports heart strength and circulation

Promotes longevity, tissue regeneration

Suvarna bindu (Gold drops) :- Suvarna bindu refers to a liquid ayurvedic preparation containing Swarna Bhasma (gold ash) Given in drop form (Bindu= drop, mainly for children.

Main uses of Suvarna bindu

Helps reduce frequent infections in child

Improves memory, concentration, learning ability

Supports overall physical and mental growth

Better sleep and behavior



Suvarna Vacha :-

Suvarna vacha is Ayurvedic formulation where gold is combined with Vacha (a medicinal herb known as sweet flag). It is mainly used for improving brain function and immunity, especially in children.

Main uses of Suvarna Vacha

Memory & intelligence booster.

Used in delayed speech in children

Helps improve resistance against infections

Supports brain function

Calms the mind

Useful in anxiety, hyperactivity



Kumarabharana Rasa

Is a classical Ayurvedic herbo-mineral formulation mainly used in pediatric care (kaumarbhritya) to improve immunity, digestion, and overall growth in children.

Kumarabharana rasa is mainly used in chronic tonsillitis, Also the anti-inflammatory, antioxidant, immunomodulatory, antibacterial, antipyretic, scraping, digestive stimulant, carminative, nourishing and rejuvenative effects aids in the better prognosis of this disease.

Main use Kumarabharana Rasa

Boosts immunity

Improves digestion

Supports brain development & memory

Helps in recurrent infections (cough, cold, fever)

Enhances strength and growth



Swarnamrita Prashana

Main use of Swarnamrita Prashana

Enhances memory & intelligence

Improves immunity

Supports growth & development

Helps in speech development promotes calmness & better behavior Use of swarna (gold) in paediatrics as Swarna Prashan The term Swarnaprashana was coined by Acharya Kashyapa. Suvarna prashan sanskar is one of the 16 essential rituals described in ayurveda for children.



TABLE OF GOLD CONTAINING PREPARATION ;-

Parameter	Swaran Bhasma	Swaran bindu	Suvarna vacha	Kumarbharana rasa	Swarnamrita prashana
Definition	Calcined gold preparation	Liquid gold-based pediatric formulation	Gold+vacha formulation	Herbo -mineral pediatric tonic	Gold based rasayana for children
Main ingredient	Gold nanoparticles	Swarna Bhasma+honey+ghee=herbs	Gold+vacha	Gold + multiple Bhasma + herbs	Swaran Bhasma + honey + ghee
Form	Fine powder	Liquid /semi-liquid drops	Powder/paste	Tablet/powder	Liquid / paste
Target group	All age groups	Childrens (0-16)	Mainly children	children	Children
Classical base	Rasashatra	Swarna prashan	Medhya rasayana	kaumarbhritya	Rasayana therapy
Purpose	General rasayana	Immunization & growth	Brain tonic	Pediatric immunity+ growth	Immunity + intellect
Main action	Rasayana, rejuvenator	Immunomodular	Medhya (brain stimulant)	Balya+rasayana	Medhya + Rasayana
Key benefits	Longevity, strength	Immunity, memory, digestion	Speech, cognition	Growth, resistance to infection	Intelligence, immunity
Administration	With honey/ ghee	Oral drops (pushya nakshara)	With honey/ghee	Small doses with adjuvant	Oral licking (lehana)
Complexity	Single metal drug	Moderate (herbal mix)	Simple combination	Complex polyherbal-mineral	Moderate
Special feature	Base for all gold drugs	Considered ayurvedic “vaccination”	Nervous system stimulant	Comprehensive pediatric tonic	Daily/monthly rasayana

Kinetics of gold nanoparticle

Gold nano particles (GNP) enhance drug delivery system Exhibits surface plasmin resonance and ability to bind amine and thiol group allowing surface modification. It is used as carrier in many drug delivery systems. Exemplified as a drug vehicle in centuximab and gemcitabine.

Traditional Therapeutic Potential of Gold

Traditional gold preparations are attributed with rejuvenating and antioxidant properties. Earlier studies revealed analgesic, immunostimulant (in calcined form), adaptogenic, glycogen sparing property, restoration of stress, and depression³⁴. Bhasma (calcined form used in various ailments like T.B, Anaemia, cough, debility, infertility, muscular dystrophy. It is considered best Rejuvenator, promotes longevity, and prevents aging.

Treatment for skin disorders

Gold is thought to have antibacterial properties and to help transport oxygen molecules into the skin for cell renewal to treat ulcers and inflammatory disorders of the skin. Some skin-healing benefits of gold were demonstrated by an in vitro chrysotherapy reported that gold is beneficial in treating autoimmune diseases and inflammation, and inhibits skin enzymes involved in blister formation⁴³⁻⁴⁴. Manifestations of utilization of gold and its preparations Allergic reactions to gold are rare but can result from direct skin contact. According to a publication in the “Daily News Analysis,” some people display allergic skin responses to gold jewelry or dental crowns, says Dr. Thomas Fuchs of Goettingen University Hospital in Germany. After a survey of various dermatological clinics and hospitals, he concluded pure, unalloyed gold can trigger allergic reactions.

GOLD IN INDIAN MYTHOLOGY

Divine Assosiations:-

Gold is widely regarded as a manifestation of divine energy (Tejas). It is associated with prosperity, vitality, and spiritual enlightenment. Goddess Lakshmi is often depicted adorned with gold ornaments, symbolizing abundance and auspiciousness.

Mythological Texts and Narratives

Ancient epics such as the Ramayana and Mahabharat contain multiple references to gold:

The golden city of Lanka ruled by Ravana

Use of gold in royal ornaments and divine weapons

Symbol of power, status, and divinity

The concept of Hiranyagarbha (Golden Womb) represents the cosmic origin of the universe.

Cross-Cultural Mythological Perspectives

1 Egyptian Mythology

Gold was considered the “flesh of the gods” and associated with Ra, representing eternal life and divine power.

2 Greek Mythology

The legend of Midas highlights both the allure and dangers of gold, symbolizing greed and moral lessons.

3 Chinese Traditions

Gold was linked to immortality and alchemical transformations in Taoist philosophy.

Myth VS Science

Aspect	Mythology	Science
Snake near gold	Guardian of treasure	Habitat coincidence
Reason	Divine protection	Shelter, food, temperature
Meaning	Wealth & power	Survival instinct

CONCLUSION

Present review reveals that gold has been used since the ancient time for ornamental as well as maintenance of health. Vedas, Ayurveda and many other ancient classics provide evidences regarding the use of gold for health benefits. Present clinical studies also document the efficacy of gold in various diseases. Nano particles of gold in various lehana forms can also be absorbed directly into the blood stream through sublingual route. Lehana (supplementary feeds) of swarna prashana (gold) can therefore be administered in all children as it acts at the level of nutrition, metabolism, growth and development, physical strength and immunity. A large number of research studies reveal that gold in various forms is beneficial as immuno-modulator anti-inflammatory, free radical scavenging activity, augmentation of non specific immunity, in reproductive health, in mental health, effect on cognitive functions, and treatment of cancer, arthritis, and asthma which indicates that gold can be successfully applied in maintenance of human health and treatment of diseases.

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