

A Review on Tamra Jal or Copperized Water Being Useful in Today's Lifestyle

Dr. Manisha Nikam,

Professor, Swasthavrutta Dept.
Aditya Ayurved College, Beed.

Abstract:

Ayurved is the time tested, natural prevention oriented and holistic healthcare system of ancient India. It is free of negative side effects and offers economical solutions to the major current health problems worldwide. Healing with metals is an ancient ayurvedic therapy. Metals like Gold, Silver, Copper, Iron etc have been used to treat various health problems. In ancient India, as per one's economic condition, it was a practice to use gold, silver, copper, iron, bronze or earthen utensils to store, eat and serve food, also to store and drink water. In Ayurved, Drinking water that has been cleansed and ionized in copper vessel is very common practice. This transformed, therapeutic water taken from a copper vessel is called 'Tamra Jal' or 'Copperised Water'. This Tamra jal helps to balance all three doshas i.e., vat, pitta, kapha as it is a natural antioxidant. The electromagnetic energy of this copper metal makes the water ionic which helps to maintain body's pH (acid- alkaline) balance. The Tamra recharges the vitality of the drinking water, making the water 'alive' again. This energized water better absorbed by cells and therefore enhances hydration.

Very few quantities of copper get dissolved in the water when it is stored in a copper vessel for over eight hours, by the process called as 'oligodynamic' effect i.e., the sterilising effect of metals. This 'oligodynamic effect' was discovered by Swiss K.W Nageli in 1893. This water has ability to destroy a wide range of harmful microbes, moulds, fungi, algae, spores, prokaryotic and eukaryotic micro organisms etc due to toxic effect it has on living cells.

Copper is an essential trace mineral that is vital to human health. It has anti oxidant, antimicrobial, anti carcinogenic and anti inflammatory properties. It helps to neutralise toxins. Human body cannot synthesize copper, so it is a need to get it from dietary sources like meat, shellfish, seeds, legumes, nuts, whole grains, potatoes and chocolates.

Key words: Tamra jal, copperized water.

History:

Awareness of health and the need to return to the basics could be the reason of the ancient customs re-emerging. Ayurveda for centuries has advocated drinking water from pure copper vessels. Rhishis in ancient India always use to drink water from these copper vessels which is called as 'Kamandalu'. Copper is regarded very highly in Ayurved for balancing body and mind disorders. Ayurveda advised three metals for use i.e. Gold for vat, Silver for pitta and copper for kapha. These metals are used for centuries which help in balancing body and mind functions.

Many different civilisations throughout human history like the Sumerians (~4000-2300B.C.) used pulverized malachite (basic cupric carbonate) for generic medical purposes, the ancient Egyptian cultures (~3900-1550 B.C.) also used pulverized malachite for the prevention and cure of eye infections and later on (~1550 B.C. to 30A.D.) for healing postoperative wounds. The ancient Indian cultures (~2800-1000 B.C.) used copper sulphate for

non specific medicinal purposes. The ancient Greek culture (1300-323 B.C.) used copper preparations for purifying drinking water and for treatment of various coetaneous and eye diseases, pulmonary, vaginal and gastrointestinal disorders and copper bracelets for arthritis. Ancient Egyptians used copper vessels to keep water fresh. Even today the management of Shiva temple of Rameshwaram uses large sized copper vessel to store water brought from river Ganges to offer to Lord Shiva. Ancient Indians used to throw copper coins in rivers, lakes, ponds and wells (as copper coins were used in ancient past). The idea behind this was to kill the bacteria in water with copper and thus purified water would be useful for fishes and other living beings within the water and the humans and animals drinking it would remain healthy. The Hindus store for centuries "holy water of the Ganges" in copper utensils to keep the water clean.

Introduction:

Copper is one of the those nine minerals that are recognized as essential nutrients for humans, as it plays a crucial role in different physiological normal processes in basically all human tissues as well as in

the skin. The body of a 70 kg healthy individual has about 110 mg of copper 50% of which is found in the bones and muscles, 15% in the skin, 15% in the bone marrow, 10% in the liver and 8% in the brain. Copper is naturally found in many food sources and is recommended daily intake of copper for adult is ~1mg.

Copper has potent biocidal properties and has been used for centuries by many different civilizations. When the micro organism like viruses and bacteria comes in contact with copper, it can kill them i.e., contact killing. Copper kills the microorganisms by 1. Disrupting the protective layers or cell membranes or envelopes and can destroy the DNA and RNA of the microbes. 2. It generates oxidative stress on bacterial cells and creates hydrogen peroxide that can kill the cells. 3. It interferes with protein that operates important functions that keep the bacterial cell alive. Some common germs, copper has been proven to kill are 1. **MRSA**, 2. **E.Coli**, 3. **Influenza A**, 4. **Norovirus**. It can be effective against **SARS-CoV-2, the virus responsible for the corona virus pandemic. After four hours, the virus is no longer infectious on Copper's surface.** The rooms made with traditional material; there was 83% reduction in bacterial load on the surfaces in the room with the surfaces with copper components. Additionally infection rates of patients were reduced by 58%. It is involved in numerous physiological and metabolic processes critical for the appropriate functioning of almost all tissues in the human body. In the skin, copper is involved in the synthesis a destabilisation of extracellular matrix skin proteins and angiogenesis.

Copper being brain stimulant, it aids in weight loss, it slows down ageing, it is anti inflammatory and it claims of cancer fighting properties. Copper promotes the breakdown and elimination of fat cells. It fights against anemia. It regulates the functioning of the thyroid gland. It is effective in bacterial infections. It also helps in the digestion. Copper water being slightly ionic, it does not cause gastric acidity, on the other hand, due to increased agni and digestion, acidity reduces.

Besides the above applications, copper is widely used today in dental amalgams and in IUDs and their use is considered very safe. The use of copper as the coating on the surface of the furniture

in the hospital, for the reduction of bioburden. It reduces the risk of skin pathologies especially in diabetic patient pillowcases that reduces wrinkles wound dressings reduces the contamination and enhances the wound repair.

Copperized Water is safe, natural way of drinking water. There are few studies on physiological parameters of this copperized water. So the aim of present review to analyze and to establish the effect of copperized water on the body based on previous studies.

Benefits:

- It is especially effective against **E.coli** and **S.aureus**. Two bacteria are commonly found in our environment and they are known to cause severe illness in the human body.
- Copper promotes the breakdown and elimination of fat cells.
- Copper helps to cleanse and detox stomach.
- Copper helps to regulate blood pressure and heart rate.
- Plays a important role in fighting anaemia.
- Copper is known to be a brain stimulant and have anti convulsive properties.
- Have a important role as anti carcinogenic.
- It have bone and immune system strengthening properties.
- Copper helps produce new and healthy skin cells.
- It regulates the functioning of the thyroid gland.

In Details:

1. Improve the digestive system: Copper water flushes out the stomach and digestive tract and helps to detox the liver and kidneys. It also increases the absorption of the nutrients from the food. It encourages the movements like contraction and relaxation of the stomach to facilitate the digestion of the food and pass through the digestive system. Drinking copper water also prevents an upset of stomach by helping to kill harmful bacteria like **E.coli**. **Coli 157** bacteria can live happily on metals for months together but copperised water at room temperature can kill them in just 4 hours. Copperised water makes a great remedy for ulcers, indigestion.

2. Fabricates a strong immune system: Copperised water i.e., Water stored in copper vessel dramatically decreases the risk of bacterial infection. The

copperised water is well known incredibly for antibacterial (especially **E.coli and S.aeriosus**), antiviral and anti inflammatory properties. Storing water in copper vessel dramatically decreases the risk of bacterial contamination. In countries like India, copper vessels have been used for centuries where the lack of good sanitation system in order to help prevent water borne diseases.

3. Maintains cardiovascular health: Copper helps minimize the risk of developing heart disease, helps to regulate blood pressure and lowers cholesterol levels. It limits the danger of creating coronary illness. Copper also helps to prevent the build up of plaque in the arteries and dilates blood vessels to allow better flow of blood to the heart.

4. It stimulates the brain: Copper is a known brain stimulant and helps the mind to work quicker or faster and more efficiently. The brain works by transmitting impulses from one neuron to another through an area known as synapses. These neurons are covered by the myelin sheath. It acts like a sort of conductive agent. Copper aids in the synthesis of essential materials for the formation of these myelin sheaths.

5. Supports weight loss: With many benefits, copper water taken in the morning helps in loss of weight. Copperized water helps body in breakdown of fat and turns that into carbohydrates and eliminates it as efficiently as possible. This will reduce carb intake and in return, it will noticed weight loss. Copperized water is a safe and natural way to maintain a healthy weight combined with healthy diet and regular exercise.

6. Prevents cancer: Copperized water is highly loaded with antioxidants, it may be effective at helping, prevent and fight off free radicals and negate their ill effects which is one of the main reasons for the development of cancer. The studies show (American CA society) that the copper complexes have significant anti carcinogenic effect on the body and may prevent the onset of cancer.

7. Supports thyroid gland: Copper is one of the most important mineral which is not delivered inside the body and sourced from outside. It is essential for thyroid gland and body to function properly. The people experiences the problems with their thyroid like hypothyroidism and hyperthyroidism generally suffer from low levels of copper or copper

deficiency. This copperized water helps to combat copper deficiency and regulate the proper functioning of the thyroid gland.

8. Beats anaemia: Being an essential mineral for the function of the body, copper is required in most of the processes from cell formation to aiding in the absorption of iron. It helps in keeping anaemia at bay. An essential component in the entire process of absorbing and using iron present in the body. Copper helps to keep the levels of haeme (iron) up and regulates its flow in the body vessels.

9. Helps in faster wound healing: It has immense antibacterial, antiviral and anti inflammatory properties, it helps in a quick wound healing both gm+ and gm- bacteria including antibiotic resistant bacteria as well as hard to kill bacterial spores, fungi, viruses when exposed to high concentrations. As it enhances, strengthens the immune system, aids in the production of the new cells. It helps the wound healing externally as well as internal body wounds especially the stomach. It cures the athlete's foot infections and improves skin elasticity.

10. Promotes skin health and melanin production: This copperised water is the main component in the production of melanin in the body. It aids in the production of the new cells that replenishes the top most layer of the skin and melanin helps the body stay safe from sun damages, speeds up wound healing, also cover up scars, and production of new cells. It gives blemish free and new, soft, clear, glowing skin.

11. Fights arthritis and inflamed joints: Copper's anti inflammatory, calming properties help to mitigate a throbbing pain, aches caused by inflamed and aroused joint, arthritis and rheumatoid arthritis. This copperized water also strengthens the bones and immune system that makes excellent remedy for arthritis and rheumatoid arthritis.

12. Helps in fertility: Copper is an essential trace element that required for the normal development of living organisms. It plays an important role for the production of male gametes. It has important role in processes of cell division (mitotic and meiotic). Copper dependant enzymes like ceruloplasmin, superoxide dismutase SOD1 and SOD3, group of metallothionein and cytochrome C oxidase are present at all stages of gamatogenesis as well as in the somatic cells of testis and epididymis. Copper

has direct and positive effect on semen quality, parameters.

13. Prevents ageing: Copperized water dramatically decreases the appearance of fine lines and slows the ageing. Copperized water is loaded with antioxidants, aids the production of new skin cells and fights off free radicals which contribute to the appearance of ageing.

Conclusion:

Copperized Water is anti oxidant, anti inflammatory and most important is anti bacterial, anti viral. So it boosts immune system and thus it is useful in digestive system, cardio vascular system. Also promotes the function of skin, thyroid gland and brain. It also prevents ageing. It is helpful in anaemia, cancer and for weight loss. This old tradition of Tamra Jal explains its therapeutics potential. Thus it should be a need to incorporate Tamra Jal or copperized water in modern lifestyle for healthy body.

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