

Ayurvedic Principles on Copper Usage: A Guide to Optimal Health Benefits

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Abstract

Ayurveda is a holistic health philosophy and personalized medicine system. Coli structure not set in stone, on capacity for various time spans, in copper and metal vessels. The fact that how much E makes it seen. coli in the copper vessels dropped emphatically over the long haul. It is interesting to note that Ayurveda can treat many chronic diseases that modern medicine cannot treat, such as asthma, diabetes, cancer, and arthritis. Unfortunately, this priceless gift from our ancestors is languishing because various concepts lack scientific validation. It has thousands of medical concepts and hypotheses, making it one of the oldest medical systems. Subsequently, proof based research is exceptionally required for worldwide acknowledgment and acknowledgment of Ayurveda, which needs further headways in the examination technique. The survey further concentrations to further develop the examination philosophy for Ayurveda with primary accentuation on the basic exploration. The current audit features different fields of examination including artistic, essential, medication, drug, and clinical exploration in Ayurveda. This endeavor will positively urge youthful specialists to chip away at different areas of examination for the turn of events and advancement of Ayurveda.

Keywords: Ayurvedic medicine, copper vessels, copper usage, *Rasayana*, traditional medicine.

I. INTRODUCTION

The oldest surviving traditional Indian medical system is Ayurveda, which is based on a solid philosophical and experimental foundation. A discipline centers around a complete perspective on wellbeing and individualized clinical consideration. Perceived as an exhaustive clinical framework includes physical, mental, philosophical, moral, and profound wellbeing. Ayurveda sees every cell as a significant indication of unadulterated insight, which is the reason it is alluded to as a self-mending science. In addition to the self-healing philosophy, this Indian traditional medical system places a significant emphasis on herbal treatment. Around 70-80% of the worldwide populace involves capricious home grown solutions for their treatment, as expressed by the World Wellbeing Association. The public's advantage in corresponding and elective medication is generally determined by the ascent in aftereffects related with manufactured drugs, the shortfall of conclusive therapies for a few ongoing circumstances, the high costs of new meds, microbial opposition, and the rise of new problems. Although many major Ayurvedic pharmaceuticals' modes of action, pharmacology, pharmacokinetics, and pharmacovigilance are poorly understood, Ayurvedic medicine is highly effective. In addition, due to a lack of evidence, the comprehensive comprehension of Ayurveda's fundamental principles is not widely accepted in scientific circles. Due to established research and cutting-edge technology, the Western medical system has reached a high level, so it is necessary to validate the Ayurvedic system's fundamental concepts and medications using cutting-edge research techniques. Promoting Ayurveda requires significant advancements in research methods.

II. LITERATURE REVIEW

Dr Sumi Jain [2019] For a healthy life, Ayurveda's "Swasthasya Swasthya Rakshanam" and "Aturasya Vikar Prashmanam" prayojnams manage disorders. In order to adhere to the Panchakarma, Rasayan, and Vajikaran for uttamsantan, Ritucharya, Dincharya, and Sadvratasatvavjaya Viruddhaaharvihara, smoking, alcohol, pollution, unhealthy and preserved food consumption, competition with others, impaired digestion and metabolism, decreased immune system, and dysfunction of the body affected human life and led to a variety of life style disorders like dyslipidemia, hyperacidity, Khalitya, Palitya, acne, pigmentation, hypertension, paralysis, stroke, cardiovascular disease, hypothyroidism, diabetes, hemorrhoids, Copd, Pcod, infertility, Ayurveda plays a significant role in health promotion by establishing homeostasis between dosha-dhatu-mala with the assistance of three pillars—Ahar, Nidra, and Brhamcharya—and by adhering to appropriate lifestyle recommendations—such as dietary management, panchakarma, rasayana, and so on.

Suchitra S Godbole [2018] A protected and helpful wellspring of drinking water is of vital significance to human wellbeing. In developing nations, most people live in rural areas. Individuals trust that conventional utilization of copper/metal vessels for putting away drinking water offers some assurance against affliction. A comparison of the effects of storing water samples in copper and brass vessels on the indicator microorganism, *E. coli*, is the subject of this paper. The drinking water tests gathered from various sources were put away in copper and metal vessels for 24-48hrs and after each 6hr examples were removed from the put away water, for the count of Absolute coliforms and waste coliforms by MTFT and MFT. Coli structure not set in stone, on capacity for various time spans, in copper and metal vessels. The fact that how much *E. coli* makes it seen. *E. coli* in the copper vessels dropped decisively over the long run, and tumbled to imperceptible levels in 18-24 and putting away water tests in metal vessels killed the pointer *E. coli*, inside 30-36hrs, subsequently making water alright for utilization from microbiological keen. The discoveries of the current review have significant ramifications corresponding to the pragmatic utilization of copper vessels in provincial areas of India and somewhere else.

Helen Benny [2012] This study investigates the way figuring out how to cook stays significant for the support of 'ethnic' food customs and how sharing food information assumes a part in intercultural trades. We present ethnographic data from a current Melbourne study to show how cooking education incorporates both tradition and innovation in everyday practices. Utilizing an ordinary multiculturalism viewpoint, the review was intended to examine the flexibility of ethnic food societies notwithstanding expanding industrialization in worldwide food frameworks. In this paper, I center specifically around the transaction among custom and development in ordinary settings by moving intently on three ladies' records of cooking and learning.

Deep Jyoti Deuri [2012] As an indigenous community in Assam, the Deori tribe has a distinct cultural heritage that emphasizes traditional food preparation methods. This paper investigates the social food propensities for Deori clan and impact of current period on social food legacy. The study, which was carried out in the Bahgorah village in the Lakhimpur District of Assam, focuses on the traditional ways of cooking food and how they help keep the Deori culture and identity alive. The purpose of this paper is to shed light on the ways in which these food practices contribute to the cultural resilience of the community.

Swapnil Y. Chaudhari [2013] The metal, Tamra however referenced in Ayurveda with a large number of restorative utilities; is ascribed with Ashta Maha Dosha. Thus, one ought to be wary while utilizing Tamra Bhasma. Numerous studies have been conducted at various Indian centers in light of the therapeutic value of Tamra. Absolute eleven examinations on TamraBhasma, which revalidated the effect of old style rules, wellbeing issues, and remedial utilities, were screened from PG Division of RS and BK, Establishment for Post-Graduate Educating and Exploration in Ayurveda, Gujarat Ayurved College, Jamnagar. TamraBhasma is safe in clinical and experimental settings at Therapeutic Equivalent Dose (TED) levels, as no toxic risks were found during the treatment period in any of the studies. Somnathi Tamra Bhasma is superior to Tamra Bhasma in every way—clinical, pharmaceutical, and pharmacological.

Ancient methods of research in Ayurveda

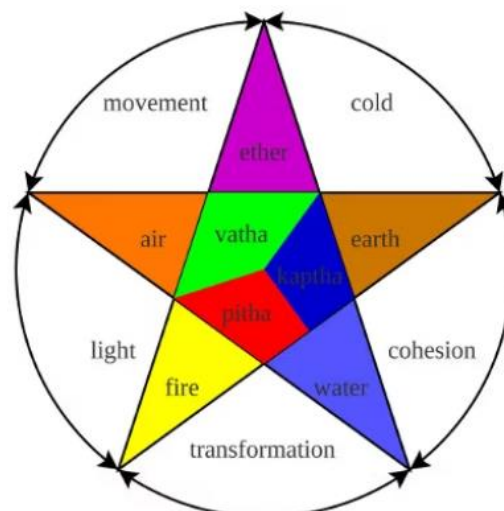
Ayurveda's exploration strategy in the past was established on assessment apparatuses called Pareeksha, affected by the philosophical idea of Pramaana, which relates to verification. Direct observation (Pratyaksha), inference (Anumana), and authoritative testimonials or literature (Aptopadesha) are the examination tools. The three fundamental instruments of modern research have seen their effectiveness enhanced by the utilization of cutting-edge scientific and technological tools. Through fundamental research, the investigations aim to establish the Ayurvedic system's fundamental concepts. Using cutting-edge scientific techniques, high-quality research on fundamental Ayurvedic principles has the potential to advance our understanding of modern medicine and its development. Over the past sixty years, drug research in Ayurveda has mostly failed to improve Ayurvedic knowledge or concepts. The modern medical community now has a better understanding of Ayurveda as a result of these studies.

Promotion of research on Ayurvedic principles

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Ayurvedic Principles You Should Follow

Ayurveda is a natural and holistic way of life that dates back 5,000 years and is rooted in India's Vedic culture. The standards of Ayurveda depend on nature's five components and three life-energies. You will not only be able to achieve harmony in your body by adhering to these tried-and-true guidelines, but you will also be able to lead a life that is both balanced and peaceful. The ten principles listed below can be applied to any aspect of life, from diet to exercise to mental calm.



Know your dosha: As per The Chopra Focus of Ayurveda, the three primary life energies are Vata(wind), Pitta (fire) and Kapha(earth). Every individual has a predominant dosha that shapes our brains and bodies. For instance, a person with a dominant Vata energy will probably have smaller bones and be thin, light, and energetic. Pitta energies are extraordinary and scholarly animals. A person with Kapha as their dominant astrological sign typically has a nurturing, laid-back personality.

Like increases like: Balance can be achieved by consuming certain foods and engaging in activities related to a particular element. Eat light, sticky, and fatty foods only if you have dominant Kapha doshas. Pitta energies as of now have fire, so eating heat-delivering food varieties just makes pointless intensity. Utilize this standard to address any uneven characters in the body.

Copper in Ayurveda: Healing Benefits and Uses in Daily Life - Pure copper water bottle



Benefits of Drinking Copper-Infused Water

Boosts Immunity: Copper is known for its immune-boosting properties. Therefore, regular consumption of copper-infused water can strengthen your immune system and protect you from infections.

Aids Digestion: Copper-infused water stimulates the digestive system, helping break down food more efficiently and reducing acidity and gas.

Supports Skin Health: Copper is essential for melanin production, which gives your skin its color and protects it from harmful UV rays. Drinking water from a copper water bottle can promote clear and healthy skin.

Enhances Brain Function: Copper plays a vital role in synthesizing phospholipids, which are crucial for forming myelin sheaths that protect neurons. Consequently, this helps improve brain function.

Important points of copper

- Copper is bendable, semi-valuable metal with exceptionally high warm and electrical conductivity.
- Unadulterated copper is delicate and moldable, an uncovered surface has a rosy orange stain. It is a building material, a heat and electricity conductor, and a component of numerous metal alloys. The metal and its combinations have been utilized for millennia.
- The name "cyprium," which means "metal of Cyprus," which was later changed to "cuprum," comes from the fact that copper was primarily mined on Cyprus during the Roman era.
- Metallic copper is not poisonous, but some of its salts are poisonous, such as blue vitriol (nilatutia) or sulphate, which can be found in large blue crystals, and subacetate or verdigris (zangal), which can be found in bluish-green masses or powder.
- Two additional copper compounds, namely Arsenic has already been taken into consideration, as has acetoarsenite and arsenite. Copper is a strong inhibitor of catalysts.

Chemical properties

Copper does not react with water, but it does slowly react with oxygen in the air to form a layer of brown-black copper oxide. This layer protects the underlying copper from more extensive corrosion, unlike the rust that forms when iron is exposed to moist air. On older copper structures like the Statue of Liberty, a layer of green verdigris (copper carbonate) can frequently be observed. Sulfides react with copper to form various copper sulfides, which cause copper to tarnishes.

III. OBJECTIVES

- To assess the Ayurvedic treatment of lifestyle disorders;
- To assess the Ayurvedic fundamental principles for a healthy life.
- To comprehend and contrast the concept of Sira in Sushrutasamhita and Modern Anatomy.
- To investigate the toxicity of Tamra Visha on mutravahasrotas that lead to CKD in ayurvedic literature.
- To investigate Tamra's role in mutravahasrotasdusti—chronic kidney disease—in various classical texts.

IV. RESEARCH METHODOLOGY

In pre-sterilized glass bottles, samples of drinking water were collected from various well water sources in rural Nagpur. The water samples that were gathered in this manner were kept at room temperature for 24-48 hours in separate copper and brass vessels. The effect of storage in copper and brass vessels on total and fecal coliform counts by MTFT and MFT was examined using three well water samples. To determine the coliform count at zero hours using MTFT and MFT, the samples were brought to the laboratory immediately and tested for total and fecal coliform. up to 48 hours, every six hours. The water tests were removed from the vessels for assurance of aggregate and waste coliforms and the impact of capacity of drinking water tests for various time stretches in copper and metal vessels was contemplated. The coliforms were distinguished according to the APHA standard strategies for water and wastewater examination.

V. DATA ANALYSIS

The trials were performed with well water tests from provincial regions. The purpose of this study was to determine how effective the ancient practice of storing drinking water in copper or brass vessels was at removing coliform bacteria. The examples were put away in copper and metal vessels for various time spans and tests removed like clockwork for location of coliform by MTFT and MFT strategies. The consequences of MPN procedure performed for water tests 1, 2, 3 put away in copper vessel and metal vessel are accounted for in Table 1 and Figure 1.



FIGURE 1: WATER SAMPLES STORED IN COPPER AND BRASS VESSELS ON M-ENDO AGAR PLATES FOR TOTAL COLIFORM COUNT BY MFT

The PH of the water samples was in the range of 7.4 ± 0.4 . Even though copper and brass both were effective in reducing the coliform count, storage of water in copper vessel was found to be more effective as it reduced the coliform to undetectable levels within a short span of time.

TABLE 1: STORED MTFT IN DRINKING FORM WATER SAMPLE COLIFORMS IN COPPER VESSEL AND BRASS VESSELS

Time of Storage of Water Sample	Copper Vessel			Brass Vessel		
	Sample1	Sample2	Sample3	Sample1	Sample2	Sample3
0hr	2400	1100	2400	2400	2400	1100
6hrs	1100	1500	210	1100	1100	210

12hrs	150	20	39	150	210	20
18hrs	4	4	23	28	28	24
24hrs	0	0	0	11	14	10
30hrs	0	0	0	4	5	5
36hrs	0	0	0	0	0	0
42hrs	0	0	0	0	0	0
48hrs	0	0	0	0	0	0

** All values are CFU/100ml of water sample calculated from MPN chart

The findings in the present study indicates that the drinking water sample collected from the wells in rural areas were highly contaminated and not good for consumption without treatment. Initially at 0hr, where the count was TNC (too numerous to count), it fell down to 0 in 18-24 hours in copper vessel and beyond 30-36 hours in brass vessel.

TABLE 2: TEST FOR COLIFORMS IN DRINKING WATER SAMPLE STORED IN BRASS VESSEL AND COPPER VESSEL

Time	Confirmed Test for Water Stored in Copper Vessel			Confirmed Test for Water Stored in Brass Vessel		
	Sampl e1	Sampl e2	Sampl e3	Sampl e1	Sampl e2	Sampl e3
0hour	+	+	+	+	+	+
6hours	+	+	+	+	+	+
12hours	+	+	+	+	+	+
18hours	+	+	-	+	+	+
24hours	-	-	-	+	+	+
30hours	-	-	-	+	+	+
36hours	-	-	-	+	+	-
42hours	-	-	-	-	-	-
48hours	-	-	-	-	-	-

+ = Positive confirmed test, - = Negative confirmed test

The concentrate likewise demonstrates that when these water tests were put away in copper and metal vessels, the reasonable count of E. coli in copper vessel dropped over the long run, and following 18-24 hours they tumbled to imperceptible levels in every one of the three examples tried, while in metal vessels it took 30-36hrs to drop as far as possible.

TABLE 3: WATER SAMPLES STORED IN COPPER AND BRASS FOR TOTAL COLIFORM COUNT BY MFT

Time	Number of Colonies per 100ml of Sample					
	Result for Copper Vessel			Result for Brass Vessel		
	Sample1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3
0hour	TNC	TNC	TNC	TNC	TNC	TNC
6hours	400	335	270	389	333	271
12hours	114	118	105	100	200	117
18hours	31	55	42	20	90	43
24hours	1	4	3	11	41	28
30hours	0	0	0	3	28	8
36hours	0	0	0	0	6	1
42hours	0	0	0	0	0	0
48hours	0	0	0	0	0	0

Vessels on M-Endo agar plates

Its working isn't subject to fuel, power, replaceable channels, force of daylight, and so forth to work or keep up with it; It is merely a passive water storage system. Because copper and brass pots are used frequently in Indian households, they are likely to be socially accepted. In this manner, aftereffects of our review show that copper holds potential to give miniature naturally safe drinking-water to the provincial masses in non-industrial nations.

VI. CONCLUSIONS

This current examination likewise demonstrated that the capacity of water in copper and metal vessels can decrease the water borne microbes and can be utilized to store the water securely, as additionally validated by different specialists. In its section chikitsa, Charak begins with a comprehensive examination of rasayan therapy, covering its physiological, pharmacological, therapeutical, and clinical aspects. In order to prevent and treat lifestyle disorders, globalization of ayurvedic principles like charak, sushrut, and vagbhata is crucial. Waterborne diarrheal disease could be reduced by empowering communities and households without access to potable water to protect themselves from a variety of waterborne pathogens through this strategy. In addition, the sushrutsamhita describes two forms of naimittikrasayan, which is used to treat disease, and another called rasayan-kamaya-rasayan. In the charaksamhita section sutra sthan, "swastha-chatuska" personal hygiene for maintaining good health is fully described. This includes the matrasitiya chapter (ahar description), the tasyasitiya (ritucharya), the navedgannadharniya (should not suppress natural urges), and the indriyopkramneeya (sadvrat) sections, all So ayurveda texts assume a significant part in advancing the wellbeing & prolonging the life expectancy by laying out homeostasis between dosha dhatu mala. It aids in preventing disease. utilizing the ayurvedic medical system to promote psychosomatic health in order to lessen society's burden and morbidity.

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