



## Ayurvedic Concepts of Water: Types, Seasons and Forms for Healthy Living with Scientific Evidence

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### Abstract

*Water is the most limited resource in the world and additional water resources must be found to provide clean and safe water for the growing population. Aim of this study is to analyze the ancient Ayurveda knowledge and to integrate with modern science to achieve global water need. Extensive literature survey was done on water based on ancient Ayurveda texts including Charaka Samhita, Susruta Samhita, Bhavaprakasha as well as published journal articles across the databases of google scholar, PubMed and Science Direct to justify the purpose of the study. Ayurveda classifies water as Divya jala (water from sky) and Bhauma jala (terrestrial water) and has extensively indicated their health benefits. Bhavaprakasha and Susruta samhita both have recommended specific types of water to be used for domestic purposes during specific seasons depending on their qualities and therapeutic actions to the body. Accordingly, lake and tank water is recommended during early winter, water from wells and waterfalls or springs during spring and summer seasons. All types of water are suitable to be consumed during autumn season due to natural purification by the Agastya nakshatra (star Canopus) because water collected during the Star Canopus scientifically proved of reduced levels of pH, total alkalinity, chlorides,  $CaCO_3$ , biological oxygen demand and microbiological bacterial count. Ayurveda text also explains the suitable forms of water for consumption for adults and children, storage of water in different types of vessels and their health benefits. Therefore, the traditional knowledge of Ayurveda on water is valuable information at the present scientific context, to provide safe and clean water for the growing population for healthy living.*

**Key words:** Ayurveda, water, healthy living, sanitation

### 1. Introduction

Water is the essential resource, prevailing to ensure the existence of all living beings and proposing a part of larger ecosystem (UN-Water, 2015). Man has sustained even in deserts for thousands of years and succeeded on it by the skillful management of the vital and scarce resource, water. Even more, availability of sufficient water is an indication of the development of a country (Weerarathna *et al.*, 2009). Therefore, the sustainability of water should be ensured to sustain the existence of living creatures in the earth. The availability of water was balanced before the interference of humans in the natural water cycle. But after human intrusions such as deforestation for urbanization, wetland drainage and other means of pollution, the balanced and favorable sequence of the water cycle started to collapse, and it has led

the world towards water related issues (Charles, 2000). The ultimate reaction will be that one third of the world population is going to face hardships because of water scarcity. Asia is in the worst condition in the case of water availability because it consists of 60% from the world total population but the availability of the water is only 36% from the total available water (UNESCO,2003).

As per World Health Organization, approximately 3.4 million people, mostly children die from water related diseases, like typhoid, cholera, poliomyelitis, hepatitis and skin infection through contaminated water. Millions of people worldwide lack access to safe drinking water and water for sanitation and hygiene (WASH). Since water is an essential component of life, the lack of safe and qualitative water affects the health of the human body. Available data portrays Sri Lanka as a country with either low scarcity or no water scarcity (Ariyananda, 2010), some dry zone areas during the dry season face severe water shortages for safe and clean water. Statistically, the water supply of the country covers 78% of the population in terms of drinking water. Due to population growth, limitation of water resources and climatic change, the availability of water is getting diminished and the demand for safe and clean water is getting increased (Ariyananda, 2010). It is gradually getting into a scenario of scarcity and therefore we need to think about tenable ways to strengthen the sustainability of available water. Safe and clean water has been used for generations according to the traditional and ayurveda methods for 5000 years. Therefore, aim of this research is to analyze the ancient ayurveda concepts including the types of water, water types most suitable for use according to the seasons with scientific correlation and to disseminate this valuable knowledge to the present generation to revive the age-old concepts to provide safe and clean water for the growing population.

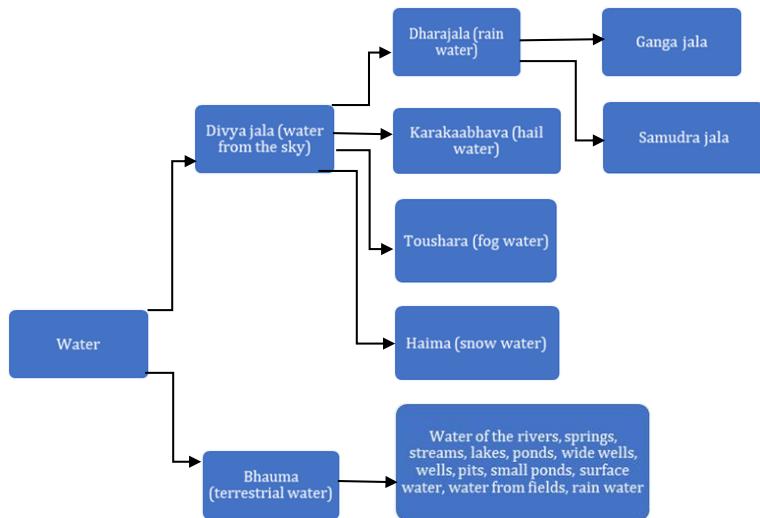
## **2. Methodology**

The literature was gathered from various Ayurveda authentic texts; *Charaka Samhita, Susruta Samhita, Ashtanga Hrdaya Samhita, Ashtanga Samgraha Samhita, Bhavaprakasha, Sharangadhara Samhita, Bhela Samhita and Kashyapa Samhita*as as direct quotations, interpretations and translations. Information on modern concept of water and quality studies to support the ayurveda concepts were only collected from research articles in published journals across the databases PubMed, Science Direct and Google Scholar using key words such as, types of water, rainwater, surface water, water quality aspects of rain water and surface water, seasonal water quality and seasonal changes in water quality aspects.

## **3. Results and Discussion**

According to *Bhavaprakasha*, water is considered the divine nectar that is needed for the creation of life. It is a cordial, nutritious, cooling substance that is of unmanifested taste and light to digest. It reduces excess sleep, aids in the formation of the different tastes, cures indigestion conditions and provides strength to the heart. Since it relieves thirst, drowsiness, fatigue, tiredness, syncope and constipation, water is considered best for daily use. *Salila, nira, kilala, jala, ambu, aapah, var, vari, kam, toyam, payah, patha, udaka, jiavana, vana, ambha, arna, amrta* and *Ghana rasa* are the synonyms given for water in the *Bhavaprakasha*. According to

*Bhavaprakasha* the classification of water is mentioned in Figure 1 (Chuneker et al, 2018)



**Figure 1.** Types of water according to *Bhavaprakasha*

### 3.1 Types of Water

#### *Divya jala*

*Divya jala* mentioned by *Bhavaprakasha* as the water that originates from the sky is classified into 4 types as *Dhara jala* (rainwater), *Karakaa jala* (hail water), *Toushara jala* (fog water) and *Haima jala* (Figure 1). He further goes on to give in-detail descriptions and the effects of each type of water on the human body.

- *Dhara jala (rainwater)*

*Dhara jala* is described as the water that is steadily flowing from the sky and collected from stone or the earth. It is correlated to rainwater. According to ayurveda, rainwater pacifies the *Tridosha* (three essential life energies—Vata, Pitta, and Kapha—that govern all bodily and mental functions) it is of un-manifested taste and light to digest. It is pleasant, satisfying, charming, strengthening and lifesaving. It is a vitalizer and digestant. This type of water improves brain function, reduces syncope, burning sensation, drowsiness, exhaustion of motor and sensory organs and pacifies thirst. Rainwater is thus considered to be the most wholesome for the body (Chuneker et al, 2018). However, these properties can only be credited to the water that is collected in a clean vessel a little after the beginning of the rain (Srikantha, 2010). The properties of the water would be enhanced if at the time of collection of the rainwater there is the presence of the sun or moonlight (Srikantha, 2010). According to the ancient texts the rainwater that is wholesome is said to be during the *Sharad ritu* (autumn season) that is, from mid-September to mid-November and at an area with a moderate climate. This concept tallies with the

modern concept that rainwater is collected in the dry zone with the wet season rains that commence in the second inter monsoon period in mid-September /October to mid-November (Ariyananda, 2010; De Silva and De Silva, 2024). Further this water should then be filtered using a thick cloth and stored in a vessel made from either gold, silver, copper, glass, crystal or earth according to ayurveda textual references and also agrees with modern scientific evidence-based research (Agrawal and Bhalwar, 2011).

- *Karaka jala (hail water)*

According to ayurveda, this is the type of water that is solidified in the upper atmosphere due to the influence of *vata* (air) and *agni* (fire), it reaches earth through rainfall. Hail water is said to be drying, clearing, cooling, concentrated and heavy. It produces stamina and aggravates *kapha dosha* (physiological humor mainly responsible for union and stability etc. functions and actions of the body) and *vata dosha* (physiological humor responsible for the movements of the body in the micro and macro level) while pacifying *pitta dosha* (physiological humor responsible for metabolic reactions, transformations and enzymatic reactions) (Chuneker et al, 2018).

- *Tousharajala (fog water)*

Fog water is smoky in appearance and is the water that manifests over the rivers and seas due to their surface heat. Water from fog, although ideal for plants, is not a good source of water for the living beings. It is drying, cool, aggravates the *vata dosha*, pacifies *kapha*, cures throat and eye related diseases, stiff pelvis, disorders of the urinary tract and lymphadenitis (Chuneker et al, 2018).

- *Himajala/ Haima jala*

*Haima jala* according to ayurveda, is the water that has evaporated from the oceans due to the *badabaanala* (fire present in the seas) and solidified on the mountain tops due to the influence of *vata dosha*. This type of water is mentioned as cooling, drying, hard and finely penetrating. Moreover, it does not increase any of the *Tridosha* (Chuneker et al, 2018).

### ***Bhauma jala (terrestrial water)***

According to *Bhavaprakasha*, water on earth is 3 types based on the type of land. They are *Jangala* (arid land), *Anupa* (wetlands) and *Sadharana* (land with a balanced climate) (Chuneker et al, 2018).

- *Jangala*

This is the type of water that is present in the dry lands, where less water and vegetation is seen and where diseases due to the vitiation of *pitta* and *rakta* (**blood**) are widespread. Such water possesses qualities like drying, salty in taste, light to digest, *pitta* pacifying, enhance digestion, diminishes *kapha*, ideal to drink and cures many diseases (Chuneker et al, 2018). Silva (2004) also found that the water quality in the arid zones of Sri Lanka is generally characterized by high levels

of salinity, hardness, and fluoride, which are exacerbated by arid climate conditions. This shows that the ancient ayurveda classification of water and quality agrees with the scientific findings of the present context.

- *Anupa*

This is the type of water present in wetlands where water and vegetation are abundant. Such regions are prevalent in diseases that originate due to the vitiation of *vata* and *kapha dosha*. *Anupa jala* exhibits qualities like channel blocking, palatable, demulcent, concentrated, heavy, digestive capacity diminishing, *kapha* enhancing, cordial and cause many diseases (Chuneker et al, 2018). This agrees with research findings of Senanayake et al., (2025) on assessment of water quality of an urban wetland: Bellanvila-Attidiya, Colombo, Sri Lanka.

- *Sadharana*

Water from regions where *anupa* and *jangala* characters are mixed. Such water displays qualities like sweet in taste, appetizer, cooling, light to digest, satisfying, increase taste perception, cures thirst, burning sensation and vitiation of *Tridosha* (Chuneker et al, 2018). Accordingly, the digestibility of water depends on whether the source is located in a desert, mountain or swampy region (Srikantha, 2010). Water from desert regions is easier to digest while water from the mountain regions is still more easily digestible and water from swamps is hard to digest (Srikantha, 2010). *Susruta* mentions that since water from marshy lands includes many defects, they are slimy and despicable, while water from the arid (desert) region is free from the defects and is harmless. Water from the moderate lands, however, is non burning during digestion, pleasing, agreeable, cold, light, alleviates thirst and is an appetizer (Sharma, 2013). These ancient concepts of *Susruta* agrees with scientific findings for Silva, (2004) and Senanayake et al., (2025).

*Bhavaprakasha* mention 12 types of terrestrial water. (Chuneker et al, 2018). *Sushruta samhita* mention 12 types of Terrestrial water (Sharma, 2013). According to *Ashtanga samgraha* the terrestrial water is of 8 types, and they are called *Ashtavidha bhumishta jala* (Srikantha, 2013). The types, their descriptions, effect of the dosha and their qualities as mentioned in *Bhavaprakasha*, *Sushruta samhita* and *Ashtanga samgraha* are summarized in Table 1 for comparative clarity.

**Table 1.** Types of Terrestrial water according to *Bhavaprakasha*, *Sushruta Samhita* and *Ashtanga samgraha*

Types	Description	Dosha karma	Qualities
River water ( <i>Nadeya</i> )	Water flowing towards east ( <i>nadi</i> ) and west ( <i>nada</i> ) are called <i>nadeya</i>	Enhances <i>vata</i> , pacify <i>kapha</i> and <i>pitta</i> ( <i>Bhavaprakasha</i> ). Increases <i>vata</i> , rough, light, stimulates digestive power and reduces body	Drying, light to digest, appetizer, clearing and pungent in taste. Water from rivers that flow fast and that have clear water are light to

		weight. If the water is sweet and thick, it is heavy in quality, increase mucus secretion and <i>kapha</i> ( <i>Sushruta Samhita</i> ). Increases <i>vata</i> ( <i>Ashtanga samgraha</i> )	digest while water from sluggishly flowing rivers covered in algae and dirt is heavy to digest.
Springs ( <i>audbhida</i> )	These are mentioned as the sources from which water forcefully expels from underground- <i>audbhidha jala</i>	Pacifies <i>pitta</i> , aggravates <i>vata</i> slightly ( <i>Bhavaprakasha</i> ). Sweet, pacifies <i>pitta</i> and non-burning ( <i>Sushruta Samhita</i> ). Mitigates <i>pitta</i> ( <i>Ashtanga samgraha</i> )	Non-irritant, very cooling, satisfying, sweet in taste, strengthening and light to digest.
Streams ( <i>Nairjhara</i> )	Water that is flowing out from hills and mountains are called <i>nairjhara jala/jhara/prasravana</i>	Pacifies <i>kapha</i> , increase <i>vata</i> ( <i>Bhavaprakasha</i> ).	Palatable, appetizer, light to digest, sweet in taste and pungent in post-digestive effect
Lakes ( <i>Saara</i> )	Lakes ( <i>saara</i> ) are widened areas of water formed when rivers are blocked by valleys or hills, these are full of lotuses. Water from these is called <i>saarasa</i> .	Astringent, sweet, light, alleviates thirst and promotes strength ( <i>Sushruta Samhita</i> ). Does not increase <i>vata</i> greatly ( <i>Ashtanga samgraha</i> )	Strengthening, pacifies thirst and sweat, astringent in taste, light to digest, palatable, drying, cause constipation and reduces quantity of urine. Improves digestion, sweet and easily digestible
Pond ( <i>tadaaga</i> )	Water from reservoirs that have existed	Increases <i>vata</i> , cure aggravation of <i>pitta</i> and <i>kapha</i> ( <i>Bhavaprakasha</i> ).	Palatable, astringent in taste, pungent in post digestive

	for many years.	Sweet, astringent, <i>katu</i> in post digestive state and increases <i>vata</i> ( <i>Sushruta Samhita</i> ).	effect, constipative, reduce amount of urine and cure aggravation of <i>rakta</i> , Hard to digest
Wide well ( <i>vappi</i> )	<i>Vapi</i> is a very large well built from stones or bricks with steps. The water from these sources is called <i>vapyam</i> .	If water is alkaline, they increase <i>pitta</i> and pacify <i>kapha</i> and <i>vata</i> . If water is sweet, increases <i>kapha</i> and pacify <i>pitta</i> and <i>vata</i> ( <i>Bhavaprakasha</i> ). Alleviates <i>vata</i> and <i>kapha</i> , alkaline, pungent and increases <i>pitta</i> ( <i>Sushruta Samhita</i> ).	
Well ( <i>kupa</i> )	<i>Kupa</i> is a source of water made by scattering or damming up earth in depth and in circular shape, whether bound or unbounded. The water from these is called <i>kaupama</i> .	If water is sweet, then pacify <i>Tridosha</i> . If water is alkalines then pacify <i>kapha</i> and <i>vata</i> and increase <i>pitta</i> ( <i>Bhavaprakasha and Ashtanga samgraha</i> ). Well-water is of 2 types. One is alkaline and the other is unmanifest taste. Alkaline, <i>pitta</i> increasing, <i>kapha</i> alleviating, appetizer and light ( <i>Sushruta Samhita</i> ).	Ideal to drink, light to digest appetizer
Pit ( <i>caunjya</i> ) Shallow well ( <i>chaundya</i> )	Water from a pit formed naturally and filled with stones and covered by bushes and creepers.	Pacify <i>kapha</i> and <i>pitta</i> ( <i>Bhavaprakasha</i> ). Rough, sweet, promotes <i>agni</i> , and does not increase <i>kapha</i> ( <i>Sushruta Samhita</i> ).	Appetizer, drying, light to digest, sweet, palatable, digestant and clearing.

		Increases pitta. <i>Ashtanga samgraha</i>	
Small pond ( <i>palvala</i> )	Sources of water where there is an absence of water during the month of May, when the sun enters <i>chandra nakshatra</i> .	Increase <i>Tridosha</i> ( <i>Bhavaprakasha</i> ).	Blocks channels, heavy to digest and palatable.
Surface water ( <i>vikira</i> ) Sandy water ( <i>vaikira</i> )	This is water that is yielded when sandy areas near riverbanks are dug up. These are superficial water and are called <i>vikirajala</i> .	If water is astringent and sweet they pacify <i>pitta</i> , if water is alkaline then they increase <i>pitta</i> ( <i>Bhavaprakasha</i> ). Pungent, alkaline and alleviates <i>kapha</i> , light and stimulates <i>agni</i> ( <i>Sushruta Samhita</i> ).	Cooling, clear and light to digest
Water from fields ( <i>Kaidara</i> ) Fallow land water <i>kaidara</i> )	Water available from a field used for cultivation is called <i>Kaidara</i>	Aggravates <i>dosha</i> ( <i>Bhavaprakasha</i> ). Sweet, heavy in <i>vipaka</i> and vitiates <i>dosha</i> ( <i>Sushruta Samhita</i> ).	Blocks channels, sweet in taste and heavy to digest
Rainwater	Rainwater collected in ponds and on surface structures		Rainwater that is collected from the ground on the same day will cause diseases while rain water collected after three days will be like nectar.
Waterfall ( <i>prashravanodbhava</i> ) (Only mentioned by <i>Sushruta Samhita</i> and <i>Ashtanga samgraha</i> )		Alleviates <i>kapha</i> , aggregable, light and stimulates <i>agni</i> ( <i>Sushruta Samhita</i> ). Mitigates <i>tridosha</i> ( <i>Ashtanga samgraha</i> )	

(Chuneker et al, 2018 and Srikantha, 2012, Sharma, 2013).

- *River water*

*Ashtanga hrdaya, Charaka and Susruta samhita* specifically opine about the river type of terrestrial water and their qualities. Waters of rivers flowing to the western ocean/ Arabian sea, that are swift and consists of uncontaminated water is good for health (Srikantha, 2010). The reason being the water is lighter in nature therefore is wholesome (Sharma, 2013).

However, the river water flowing to the east is heavier in nature (Sharma, 2013) and is bad for health (Srikantha, 2010). The water of the rivers flowing towards the south has moderate quality and therefore is not so vitiating (Srikantha, 2010). The rivers that flow fast and consist of clean water are light in nature while the rivers covered in *shaivala* and dirt, and flowing slowly are heavy in nature (Srikantha, 2010). Usually, the rivers that are found in the desert region are bitter, salty and sweet in taste, light, aphrodisiac and promoter of strength (Srikantha, 2010).

Water that originates from the Himalaya Mountain ranges, have their water dispersed and hit by stones are considered sacred, wholesome and to be used by sages, while those originating from the *malayas* and carrying stones and sand and consist of clear water are like nectar (Sharma and Dash, 2014). *Acharya Susruta* mentions that there are 2 types of rivers originating from the Himalaya region and while those originating from the upper part are wholesome, those that originate from the lower part led to heart diseases etc., likewise, there are 2 types of rivers originating from the *Malaya* region, those with stones and sand are considered wholesome while the other is said to produce worms (Sharma, 2013).

According to *Ashtanga hrdaya samhita* however, water of rivers that arise from the Himalayas and the Malaya Mountain ranges, if they get churned up well and dispersed against the rocks will be good of health, however if the water gets stagnated, it will give rise to intestinal parasites, filariasis, diseases of the heart and throat and head (Srikantha, 2010). Several scientific findings, including Dias et al., (2017) proved that stagnated water has poor quality characteristics as indicated by *Ashtanga hrdaya Samhita*.

Rivers that are originating from the *Pariyaatra* (western *vindhya, vindhya* and *sahya* ranges) are mentioned as responsible for the diseases of the head, heart, filaria and skin diseases like leprosy (Sharma and Dash, 2014). However, *Acharya Susruta* declares that the rivers originating from the *pariyatra* are also of 2 types, the rivers that originate from ponds, which are wholesome and the rivers that originate from caves, which lead to diseases (Sharma, 2013).

Cao et al (2025) also proved that the water quality of the cave river water is not good which agrees with *Acharya Susruta*.

Both *Susruta samhita* and *Ashtanga hrdaya samhita* mentions the diseases that may occur due to the intake of water from certain regions. Regions and diseases according to *Acharya Susruta* (Sharma, 2013) and *Ashtanga Hrdaya Samhita* are given in Table 2.

**Table 2.** Regions and Diseases according to *Acharya Susruta* (Sharma, 2013) and *Ashtanga Hrdaya Samhita* (Srikantha, 2010).

Region	Disease according to <i>Acharya Susruta</i>	Disease according to <i>Ashtanga Hrdaya Samhita</i>
<i>Sahya</i> (Mountain range)	<i>Kushta</i> (skin diseases)	Leprosy, anemia and head diseases
<i>Vindhya</i> (A complex and discontinuous chain of hills and plateaus)	<i>Kushta</i> and <i>panduroga</i> (anaemic conditions)	Leprosy, anemia and head diseases
<i>Malaya</i> (A mountain range, most famously the known for its abundance of sandalwood trees- Western Ghats)	Worm disease	
<i>Mahendra</i> (A holy mountain range, Eastern Ghats)	Elephantiasis and <i>udara roga</i> (abdominal diseases)	Enlargement of the abdomen and filariasis
<i>Himalayas</i> (Abode of Snow)	Heart disease, edema, headache, elephantiasis, goiter.	
Eastern and western <i>avanti</i>	Hemorrhoids	Hemorrhoids
<i>Pariyatra</i> (A mythical mountain range)	Wholesome and promotes strength	Mitigate aggravated dosha, bestow strength and sexual vigor.

(Sharma, 2013, Srikantha, 2010).

According to *Vishvamitra*, generally the water from rivers originating from lakes are good for health and give good strength while water from the rivers originating from caves will lead to diseases (Sharma and Dash, 2014). It is mentioned that the water of pond, well, lake, spring, tank and waterfall has the qualities depending on the land in which they are situated whether it be a desert, mountain or marshy land, while in any type of water if they are, slimy, full of parasites and contaminated with leaves, moss and mud of ugly color, high density, bad taste and smell, are to be considered unwholesome, and responsible for many diseases (Sharma and Dash, 2014). These ancient beliefs of Vishvamitra agree with the modern scientific findings of Dias et al., (2017) and several others that the water originating from cave have poor quality water and is unsuitable for human consumption.

### 3.2 Usage of water according to the seasons

*Bhavaprakasha* and *Susruta samhita* both mention about the usage of water according to the seasons (Table 3). Accordingly, lake or pond water is ideal during the winter and autumn seasons, while water from wells, large wells, streams, springs, and rain is ideal during the seasons of spring and summer (Chunekar et al., 2018).

However, river water should not be used since it can be contaminated with leaves and other poisonous plant parts (Chunekar *et al*, 2018). In tropical climates do not experience the distinct four seasons of winter, spring, summer, and autumn; instead, they have two main seasons: a **wet season** and a **dry season**. This is because tropical regions near the equator receive more consistent, direct sunlight year-round, leading to only small temperature variations that are not distinct enough to define the four seasons. The primary seasonal difference is the amount of rainfall.

Both *Bhavaprakasha* and *Susruta samhita*'s facts agree with scientific research of Maheswaren and Mahalingham (1983) that wells and large wells and rainwater is suitable for drinking during dry season (March to September) in the Dry zone areas of Sri Lanka. Further De Silva and Ayomi (2004) found that the well water is not suitable for drinking during wet season as the fertilizers and other solutes leached into the well during wet season.

Nevertheless, water from rivers and *Amshudaka* (water which has been exposed to both the rays of the sun or the moon) are ideal to be used during the post monsoon seasons (Srikantha, 2012). *Amshudaka* is demulcent, pacifies the *tridosha* and doesn't aggravate the *dosha*, doesn't block the channels, strengthening, nourishes the brain, cooling, light to digest, similar to rain water in properties and similar to divine nectar (Chunekar *et al*, 2018).

**Table 3.** Season and water type for healthy use according to *Acharya Susruta* (Sharma, 2013).

<b>Season</b>	<b>Water type that should be used</b>
Rainy	Rain or springs
Autumn	All types because it is purified due to rising of the Agastya star
Early winter	Lake, tank
Spring	Well, waterfall
Summer	Well, waterfall
Early rains	Shallow well, lake, tank, water that did not occur due to rain.

*Kashyapa samhita* mentions the types of water that should be used for children according to the seasons (Table 4) (Chunekar *et al*, 2018).

**Table 4.** Season and type of water suitable for children

<b>Season</b>	<b>Type of water for children</b>
<i>Hemantha</i> and <i>sisira</i> (early and late winter)	Lake, river or pond
<i>Vasanta</i> (spring) and <i>greeshma</i> (summer)	Vapi (circular reservoir), flown out water and spring water
<i>Varsha</i> (rainy season)	Well water heated and cooled
<i>Sarath</i> (autumn)	Sky water heated in sun rays

(Chunekar *et al*, 2018)

### 3.3 Suitable forms of water for healthy living

*Apakvajala* (un-boiled water), should be avoided even in small quantity as it increases all *tridosha*. It should be specially avoided by those with weak digestive capacity, those who have become weak due to illnesses and those with even a mild increase of the *dosha* (Srikantha, 2010).

*Kvathitajala* (boiled water), is water that is boiled to 1/4<sup>th</sup>, 1/3<sup>rd</sup> and 1/2<sup>th</sup> of the original quality depending of the season, area and hardness of water (Srikantha, 2012). Water from the rainy season and marshy land are not easily digestible while the water from the autumn and spring seasons and desert lands are considered as easily digestible, accordingly, if the water is very hard to digest then it should be boiled to 1/2 of its quantity, if moderately hard to digest then should be reduced to 2/3rds, and if slightly hard to digest then it should be reduced to 3/4th of the taken quantity (Srikantha, 2012). Water made warm by immersing into it heated balls of stone, silver, mud, gold and bitumen or by exposing it to sunlight and used for either drinking warm or cold, alleviates all three *dosha* and quenches thirst (Srikantha, 2012). Even modern science, heating by solar radiation is recommended for safe and clean water (Murugan and Ram, 2018; Rajasooriyar (2002). Boiled and cooled water is easily digestible, removes fatigue and is ideal in disorders of *pitta* and *kapha* combined diseases and diseases caused by the combination of the *Tridosha* (Srikantha, 2012). Furthermore, it will not increase the moisture in the body too much (Srikantha, 2010). Water generally takes 6 hours to digest, if boiled and cooled, then 3 hours to digest, if luke warm water then only 1 ½ hours to digest (Chunekar et al, 2018). Water that is cooled after boiling is advised to be taken by those who suffer from diseases due to intake of alcoholic drinks and vitiation of *pitta* or *sannipata*, since it is useful in disorders like burning sensation, diarrhea, vitiation of *pitta*, vitiation of *rakta*, *raktaghata*, fainting, alcoholism, poisoning, thirst, vomiting and giddiness (Sharma, 2013). Boiling water before use is a purification method used even at the present context. Boiling kills the microorganism and fecal coliform (Ariyananda, 2010)

*Paryushitam*, the water that has been kept over-night, should not be used since it is acidified, aggravates *kapha*, and not wholesome for the thirsty (Sharma, 2013). It is also considered to have lost all the good effects of boiling and an aggravator of all the *Tridosha* (Srikantha, 2012).

*Ushna jala* (hot water), means the water that has been reduced to one half by boiling (Sharma, 2013). It is cold in potency and *svadu* (**sweet**) in *vipaka* (**post-digestive effect**) (Srikantha, 2012). It relieves hiccup, distention of the abdomen, disorders of *vata* and *kapha*, is ideal for those having undergone purificatory therapy and nascent fever, cough, *ama*, running nose, dyspnea and pain in the flank (Srikantha, 2010). Furthermore, it reduces *medas* (**fatty tissue**), purifies the urinary bladder and stimulates digestive fire (Sharma, 2013). It is good to be used by children who have predominantly *kaphaja* (resulting from, **Kapha**) disorders and pregnant women when diseased (Tewari, 2008). It is specially advised to be taken by those suffering from conditions of *ajirna* (**indigestion**) (Srikantha, 2012). Since the obstruction caused by large quantities of accumulated *kapha* and *vata* will be released, the food that is liquefied by hot water undergoes fast digestion (Srikantha, 2012). However,

large quantities of water are contraindicated for use since it will destroy the digestive capacity (Srikantha, 2012). Excess of hot water can also lead to the vitiation in the formation of semen, ovum and implantation and vitiation in the formation of *rasa* (**taste**) (Tewari, 2008). Furthermore, hot water is also contraindicated after taking milk, curd, preparations made with honey, in the disorders due to vitiation of *pitta*, hemorrhage, abortion and in *garbhadaha* (burning sensations during pregnancy) (Tewari, 2008).

*Shita jala* (cold water) pacifies alcoholism, exhaustion, fainting, vomiting, fatigue, giddiness, thirst, burning sensation, *visha* and disorders caused by the vitiation of *pitta* and *rakta* (Srikantha, 2010). *Bhavaprakasha*, *Susruta samhita* and *Kashyapa samhita* mention the indications and contraindications of cold water (Table 10). Moreover, according to *Kashyapa samhita*, cold water is also indicated in women after delivering, those who are confused due to the use of *pugaphala* (*Areca catechu*) and stupefied by *madanaphala* (*Randia dumetorum*), intoxicated due to the ingestion of *bhallataka* (*Semecarpus anacardium*), and *kimpaka*, suffering from artificial poisons, those who always intake betel leaf and *puga* (*Areca catechu*), and those who have eaten honey (Tewari, 2008). Water from hail stones (*himakara jala*) are considered as cold, heavy, solid and aggravators of *kapha* and *vata* (Srikantha, 2010).

*Chandrakaantodbhavamvaari*, that is, the water emanating from moonstones or white marble is supposedly related to both the sky and the ground, relating to the sky due to its contacts with the moon rays and relating to the ground due to its close relation to the stones (Srikantha, 2012, Sharma, 2014). This type of water is said to cure conditions due to *rakshasa* (harmful bacteria, insects, worms etc.), poison and fever caused by *pitta* (Srikantha, 2012). It is cooling, exhilarating and clean (Sharma, 2014). Furthermore, it improves vision, intelligence and strength of the body is sweet, cold and easily digestible (Srikantha, 2012).

*Kashyapa samhita* mentions about a special type of water called the *Hamsodaka* (purified or sacred water), which is the water that falls from the sky, purified by the sun rays, and detoxified by the Agastya constellation and that which falls after the early rain during the month of Ashwin (October) (Tewari, 2008). According to *Bhavaprakasha* and *Susruta Samhita*, all types of water are suitable to be consumed during autumn season due to natural purification by the *Agastya nakshatra* (star Canopus) (Chunekar et al., 2018). Physicochemical studies of water collected during the Star Canopus by Sajjan and Giridhar (2021) observed reduced levels of pH, total alkalinity, Chlorides,  $\text{CaCo}_3$ , biological oxygen demand and microbiological bacterial count agree with the Kaspha Samhita's findings. Water is considered as an excellent *Anupana* (after drinks), plain water should be taken after consuming *hayana*, cold water as an after drink for lotus tubers and for the four kinds of unctuous foods, hot water should be used as an after drink (Krishnamoorthy et al, 2008). The benefits of after drinks are the better digestion of food, pleasing to the consumer, moving down of excrements and compatibility to men (Krishnamoorthy et al, 2008).

#### 4. Conclusion

Ancient Ayurveda texts explain comprehensively about safe and clean water for healthy living. According to the World Health Organization, access to safe and clean

water is the fundamental right of human beings. Ayurveda texts explain the types of water and their qualities for healthy living and the seasons of water suitable for drinking and domestic purposes. It also describes the form of water such as unboiled, boiled and cooled water warm and its impact on vitiation of *pitta*, *kapha* and *vata* *doshas*. Furthermore, Ayurveda text explains the water suitable for children and patients. All these ancient findings agree with scientific evidence in the present context. Considering the present crisis on water quality and pollution aspects the information in ancient ayurveda texts will be valuable solution to ensure safe and clean water for growing population. These findings can be used develop policies for water conservation, purification and health aspects.

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