



Water as Natural Immunity Booster and Source of Minerals

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Abstract

Most of the people assume that water is just water. They know it is essential in order to survive, but they aren't really aware of its nutritional value. Water can do several wonders for our body, it is especially crucial today, in the times of Corona. This is because water is one of the most natural immunity boosters and source of the minerals that can power up our body. Water keeps our body at a constant temperature, it helps eliminate waste, it facilitates digestion and, above all, it is necessary for the transportation of nutrients that are essential for the proper functioning of cells. Minerals in water are important for the human health, since they appear in ionic form and are generally more easily absorbed in the intestines from water than they are from food. The aim of this article is to review the role of water as natural immunity booster and source of the minerals.

Keywords: Water; Essential; Survive; Immunity booster; Minerals

Introduction

Water is the basic necessity of life. Each and every system in our body requires water to function appropriately. Our body makes use of the water present in its tissues, organs and cells to maintain bodily functions and help regulate temperature [1-5]. The natural immune system of our body is our first line of defense against disease, and plays a great role in maintaining our health. Our immunity drives the health of our body and determines our capability to fight diseases.

When we think about boosting our immune system, the first things that come to mind are likely healthy eating, adequate rest, taking vitamins, or reducing stress. Water is a secret weapon we need to stay healthy and it can help improve the overall immunity of our body. It carries nutrients and minerals to different parts of the body and flushes out toxins and waste. Apart from this, it also helps to regulate the body's temperature. When we are fighting the common cold, preparing for flu season, or have more serious water play important role to boost our immune system. Water can do wonders for our body, especially when it works as an immune system booster. Drinking plenty of water is viewed as a preventative type of health maintenance [7-9].

Sources and Types of Water

The three main sources of water: groundwater, surface water and rainwater. Another potential source of water is treated wastewater. In practice, the term 'water source' can be used to mean both the origin of the water and also the place where we get water. Certain types of water that can play an important role in boosting our immune system discussed here.

Warm Water

The benefits of drinking warm water are clearly mentioned in Ayurveda. Warm water stimulates appetite, helps indigestion, flatulence, cleans the urinary bladder, good for some diseases like throat infection, cough, fever, hiccups, running nose, accumulation of undigested materials etc. Warm water is a vasodilator, meaning it expands the blood vessels, improving circulation. This helps reduce pain and relaxes muscles. Warm water helps lose excess weight as it increases metabolism, absorbs nutrients, and flushes out waste.

However, various rules should be followed while drinking warm water like it should not be consumed too hot, excess of water, before and immediately after taking meal, it should be consumed slowly.

Lemon Water

Lemon water is not only delicious and incredibly good for health but it's also easy to make and relatively inexpensive to make. Sipping lemon water is one of the simplest ways to hydrate our body and enhance our immunity. Lemons are an excellent source of vitamin C, a natural antioxidant that improves the immune system and has antiviral qualities. The referencing taste of lemon water makes it great drink to have throughout the day and strengthen our immunity. Having a glass of lemon water in morning purges the liver of toxins it collects during the night and flushes it out of the body. Thus we can strengthen our immunity by consuming lemon water multiple times a day.

Infused Water

Infused water is totally different from Flavoured water which is made by adding juices or extracts to water. We can make infused water by adding slices or chunks of fruit like pineapple, mango, pear, apple, berries, orange, cucumber, passion fruit and veggies like fennel, carrots or celery in water and leave it for a few hours so that the flavours can infiltrate the water. Infused water can help us to make drinking water more flavourful using a bunch of natural ingredients and improve the immune system.

Alkaline Water

Alkaline water has a pH level between 8 and 10. The difference between regular water and alkaline water is its acidity, which means it has more hydroxide than hydrogen ions. Alkaline water contains minerals like magnesium, potassium and calcium. It is known to neutralize toxic compounds present in the body. Although alkaline water makes our immune system stronger, improves the performance of our circulatory system, alters the quality of blood, strengthens bones, supports digestion and assimilation, detoxifies, contains antioxidant properties and acts as a remedy to gastroesophageal reflux but excess alkalinity in the body may cause skin irritation and gastrointestinal issues, so it is best to intake alkaline water as medicine.

How Water Can Boost Our Immune System?

Water is one of the most natural immunity boosters that can power up our body. Every system in the body, from cells and tissues to vital organs, requires water to function. Water boosts our immune system by different ways some of them discussed here.

Aids Digestion

A strong immune system is possible only with a strong nutrition level. Water is a significant ingredient in healthy digestion. A major part of absorption of water into our bloodstream happens just after it passes through our stomach and into the intestines. The large intestine, with the help of water improves our digestion and assures good bowel health. Adequate water level is a must so that we are not constipated or end up having digestive problems.

Remove Waste

Good gut health is crucial for our immune system. When we consume adequate water, our body is easily able to excrete waste through defecation, urination and perspiration. With the help of water, our kidneys remove waste from our body in the form of urine. It also ensures free flow of blood and nutrients through the blood vessels to reach our kidneys.

Prevents Dehydration

Dehydration can cause constipation, lethargy, headaches, negatively affect our mood and also impact our attention span and memory. Dehydration can lead to lower blood volume and retain more sodium that in turn makes the blood thick and restricts its free flow. Thus, it is important to restore our body's natural hydration level by increasing our fluid intake. A hydrated heart can comfortably pump blood and oxygen, allowing the muscles to function smoothly.

Flushes out Toxins and Oxygenates the Blood

Water acts as a carrier for blood to carry oxygen to all cells of human body. For the body systems to function optimally, it's imperative that it gets adequate oxygen. Adequate water also allows kidneys to get of toxins from the body, and whenever there is inadequate water; toxins build up their base and destroy the immune system.

Production of Lymph

Our body's immune system uses lymph to circulate WBC (White Blood Cells) and nutrients to all of our body tissues. Body needs water in order to produce lymph, and in the absence of lymph, the WBC and other immune cells will not be able to travel across our body to combat serious ailments or diseases.

Brain Function Optimally

One of the vital functions of water is keeping the brain cells hydrated to maintain the cerebral functions. With 75% water constitution in our brain, hydration keeps regulating brain activities appropriately. Water contains trace amounts of electrolytes such as calcium, magnesium, potassium and sodium. Adequate electrolytes are crucial for optimal functioning of the body. In the absence of adequate water, our brain can't produce enough serotonin. The brain needs water to produce melatonin and inadequate levels of water could lead to insomnia.

Regulate Body Temperature

Water helps regulate the internal temperature of our body while responding to the external temperature. Sweat is one of the primary means by which water prevents overheating of our body in extreme heat.

Minerals in Water

Most of the minerals required by the body come from food and dietary supplements, many important minerals like magnesium, calcium and potassium are found in water. When pure water in the form of rainfall lands on the soil, it passes through the earth and gets mineralized with important minerals like calcium, potassium and sodium [6].

Water is indispensable for human survival and plays a significant role in the optimum functioning of the body. Research suggests that water is quite the vital source of minerals for the human body. This is because, minerals and trace elements that are found in water exist in their ionized form, and such ions are easily absorbed by our gastrointestinal tract.

Drinking water supplies may contain some of these essential minerals naturally or through deliberate or incidental addition.

Water supplies are highly variable in their mineral contents and, while some contribute appreciable amounts of certain minerals either due to natural conditions (e.g., Ca, Mg, Se, F, Zn), intentional additions (F), or leaching from piping (Cu), most provide lesser amounts of nutritionally essential minerals.

Minerals are naturally occurring inorganic elements or compounds and essential for the basic functions of the human body to take place. Minerals contribute to strong teeth, bones, healthy skin and hair. They are also very important for the growth and development of the body. They help to control bone growth, regulate fluids, normalize nerve and muscle functions, keep up metabolism, grow connective tissues, and so much more [10].

Fourteen mineral elements are established as being essential for good health; these elements in combined form affect bone and membrane structure (Ca, P, Mg, F), water and electrolyte balance (Na, K, Cl), metabolic catalysis (Zn, Cu, Se, Mg, Mn, Mo), production of haemoglobin and oxygen binding (Fe), and hormone functions (I, Cr).

Health consequences of mineral deficiencies include increased morbidity, due to reduced immune defense systems and impaired physical and mental development. Deficiencies of several mineral elements, particularly iron and iodine, are the basis of health problems in many parts of the world.

The potential contributions of drinking water to boost immune system and maintain minerals status depend on water consumption, which is highly variable depending on both behavioral factors and environmental conditions.

Conclusion

On the basis of above review it is concluded that inadequate intake of water is associated with adverse health consequences. Thus there is a need for more intakes of water and other aqueous beverages. Adequate intake of water boosts our immune system and the presence of minerals in water is very important for mineral nutrition.

References

1. Health and Environment Linkages Initiative – HELI, Water, health and ecosystems. Directories of resources
2. Petraccia L, Liberati G, Masciullo SG, et al. Water, mineral waters and health. *Clin Nutr.* 2006; 25(3):377–385.
3. Pritchard M, Makandawire T, Neill GJO. Groundwater pollution in shallow wells in southern malawi and a potential indigenous method of water purification phys. *Chem. Earth.* 2008; 33: 812–823.
4. Jéquier E, Constant F. Water as an essential nutrient: the physiological basis of hydration. *Euro. J. Clin. Nutr.* 2010; 64:115–123.
5. Barry M Popkin, Kristen ED Anci, Irwin H Rosenberg. Water, hydration, and health. *Nut. Rev.* 2010;68(8): 439–458.
6. Soetan KO, Olaiya CO, Oyewole OE. The importance of mineral elements for humans, domestic animals and plants: A review. *African J of Food Sci* 2010;4(5):200-222.
7. Casado Á, Ramos P, Rodríguez J, et al. Types and characteristics of drinking water for hydration in the elderly. *Crit Rev Food Sci. Nutr.* 2015; 55(12):1633–1641.
8. Sara Q, Barbara P, Maria LB. Natural mineral waters: Chemical characteristics and health effects. *Clin Cases Miner Bone Metab.* 2017;13(3):173–180.
9. Lawrence E Armstrong, Evan C Johnson. Water Intake, water balance, and the elusive daily water requirement. *Nutrients*, 2018;10(12):1928;1-25.
10. Mishra S. and Patel M. Role of Nutrition on Immune System during Covid-19 Pandemic. *J Food Nutr Health.* 2020;3(2):1-6.