



A Science of Medicine
The Art of Care

Water – for health, for healing

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The environment we live in is an arid, hostile and unforgiving place. In order to survive, everyone needs a certain amount of water in the body. As our living body is qualitatively hot and moist in nature, water plays a critical role in ensuring survival. Every biological function needs an optimum amount of water, neither too little, nor too much, to be

Water plays a central role in the Tibb approach to treating many ailments and helping in convalescence.

effective. In the human being, if it falls too low, then dehydration will set in. This can be serious, even life-threatening. Conversely, if it goes too high, this can also cause problems, as it upsets the body's electrolyte balance, leading to waterlogged cells and tissues.

We tend to take water for granted, and give little thought to the critical part it plays in our lives. However, our continuing good health is firmly dependent on the both the quality and the quantity of the water we drink. Hippocrates, a pioneer of Tibb, and dubbed the “Father of Modern Medicine”, was one of the first to write about the healing of diseases with water, as long as 2,500 years ago. He was an enthusiastic advocate of its healing powers, using it extensively, both internally and externally, when treating patients with all sorts of illnesses.

Water has supreme healing powers – whether taken internally for health care, or externally for cure and good hygiene.

Water is generally the forgotten nutrient, but getting enough fluid is needed for almost all bodily functions. Without a regular intake of enough clean, pure water we would die within days. We now know that nothing works in the body without an ample supply of water, hence its primary role in our diet and healthcare. It is absolutely essential for the daily maintenance of the body's internal harmony. Water provides the matrix in which all living processes happen, whether it is cell division at the lowest level, or physical movement at the highest. Water is involved in virtually every process in the body, from digestion and absorption of food, to metabolism of the nutrients and the elimination of waste products. It is the main element driving the circulation of blood and lymph.

This article deals only with water as an essential ingredient in the maintenance of health and prevention of disease. Its role as a therapeutic agent – e.g., in hydrotherapy – will be described in a separate article.

Tibb and water

Hippocrates considered that health results from the harmony between a person's intrinsic nature, the lifestyle he or she has adopted, and the physical environment. This is the ecological theory of health and disease. What can be used by the person is taken from the environment, utilised, and whatever is not used is returned to the outside world. Water is a major constituent of the environment, so the person takes in what water he needs from his daily food and drink, and returns the rest, containing waste products and toxins which have built up in the body to the environment.

But even Hippocrates and the other pioneers of Tibb, such as Galen and Ibn Sina, were not fully aware of how important water really is for health, not only in the area of nutrition and as a medium for the body's many activities.

Tibb regards water as the essential ingredient in all living beings. It includes it amongst the major lifestyle factors. This is based on one of its basic tenets, that *moisture* is a dominant quality of most body tissues. It follows, therefore, that water plays a vital role in the health / disease / healing scenario.

Tibb views water from different perspectives:

- As a critically important item in the maintenance of optimum health, especially by avoiding *dehydration*.
- As an essential factor in maintaining balance between the *basic qualities* of moistness and dryness.
- As a component in *dietotherapy*, when used to treat various disorders by the judicious use of dietotherapy.
- As a non-invasive therapy option, when used as *hydrotherapy*, one of the Regimental Therapies.

Physis and water

Physis plays a prominent role in each of the above. Physis ensures that a steady, optimum level of water in the body is maintained. Physis reacts when a person's tissue water level falls too low, or if it climbs too high. If the water level is too low, our thirst mechanism is stimulated, and comes into play. This compels the person to drink more, and so replenish his or her water level in the body.

A mere 2% fall in our body's water content can cause fatigue and trigger dehydration. This leads to problems with memory, thinking and vision.

On the other hand, if a person drinks too much water the body tissues become waterlogged. This upsets the inner electrolyte balance.

Hyponatraemia can develop, in which the blood level of the electrolyte sodium will fall, triggering symptoms like weakness, headache, confusion,

restlessness, and maybe seizures. In this case the Physis response is via the endocrine system and other internal mechanisms. It leads to increased secretion of hormones designed to boost water excretion, mainly via the kidneys and gut.

Water is essential for the proper working of the immune system, an important function of Physis.

- Water improves oxygenation of blood, ensuring that the production of energy from nutrients proceeds smoothly.
- An adequate supply of water is needed for the production of lymph, an essential component of the immune system. Lymph conveys white blood cells and antibodies to all parts of the body to counteract infection and cancer development.
- Water helps Physis to remove toxins from the body via the kidneys.
- Moisture in the eyes and mouth is an essential defence mechanism. Water helps to repel microbes, dust and parasites.
- Much of the immune system resides in the gut. An adequate water intake is essential for good digestive health.

Tibb's traditional focus on water as a major factor in toxin elimination is supported by scientific evidence. Any upset to

The elderly person is more prone to dehydration, as the sense of thirst decreases with age.

the internal water equilibrium or harmony due to dehydration, or the build up of toxins, or drinking impure water, can disturb the body's activity at the cell and tissue level. In the brain, for example, this can affect nervous activity, and lead to disturbances in thinking, feeling and behaviour.

In practical, real-day activities, Tibb advises consuming water of the highest available quality and in quantities appropriate to age, temperament, lifestyle, daily activity and state of health.. This provides the foundation for the maintenance of good health, prevention of disease, and convalescence after illness.

From the Tibb perspective, people with a predominantly cold quality, such as *phlegmatics* or *melancholics*, should

"Life is sustained by heat, and grows by moisture" [Ibn Sina]

avoid consuming cold water (and fluids). This aggravates any qualitative imbalance. Instead, they should drink warm or room temperature fluids. On the other hand, people with a predominantly hot quality, such as those of a *sanguinous* or *bilious* temperament, are fine with cold drinks.

Basic functions of water

Water carries out many functions. Here are the main ones:

Maintaining blood and lymph volume

- Blood and lymph are mainly water – about 92%. Blood's primary function is to carry nutrients and oxygen to all parts of the body. Lymph acts to harvest and expel toxins and cancer cells from the body.
- Water is a universal solvent, so all nutrients are in dissolved form.

Eliminating harmful toxins

- Water flushes toxins and body waste from the body through urination and perspiration.
- Water aids bowel movements, so preventing toxin build-up and health problems like constipation.
- Water lessens the burden of the kidney's and the liver's excretory activities.

Regulating body temperature

- Perspiration from the skin produces a cooling effect. This prevents over-heating.
- When someone becomes overheated, Physis re-directs blood to the surface of the skin, where it is cooled and returned back to the body's interior.

Ensuring homeostasis

- Water maintains acid/alkali and electrolyte balance (homeostasis) by regulating kidney activity.

As a general lubricant

- Water smoothes chewing, swallowing, digestion, gut motility and excretion.
- Water lubricates our internal organs, joints and cartilages, allowing them to move smoothly.

Protecting vital organs

- Water cushions the brain and spinal cord against injury or sudden movements.
- Water defends the unborn child in the womb during gestation.

• ***Water is distributed inside cells, between cells, in blood, in lymph, in spinal fluid, and in secretions.***

• ***Water makes up 90% of blood, 85% of brain, 30% of bones, 70% of the rest of the body.***

• ***An infant is around 75% water, and an old person is approx 40 - 50% water. ♀ Women have a lower water content than men.***

• ***To stay hydrated, the average adult needs to drink 2 – 3 litres of fluid per day.***

Water is the only substance which exists in naturally as gas, liquid and solid.

Dehydration

Water is normally lost from the body as urine. Sweating, breathing and excretion account for the rest. This natural process is essential to remove toxins from the body, and to cool it down.

Many diseases arise from chronic dehydration, leading to the build-up of harmful toxins in the body.

Dehydration occurs when the loss of body water is greater over time than the replacement of it. This results from either too low fluid intake, or too high fluid loss. This latter commonly occurs from persistent diarrhoea and vomiting, or copious sweating or, ominously, internal bleeding.

In dehydration, most water loss is from the interior of the cells; next is loss from extracellular fluid volume, and only a small amount of the loss comes from blood and lymph.

Dehydration may induce contractions in pregnant women.

When someone becomes dehydrated, the blood volume decreases, as does the size of most internal organs. The build-up of toxins in the body becomes a problem, as this also disturbs internal cell activity. The signs and symptoms reflect these:

Signs: Reduced urination in both volume and frequency (any urine produced is dark yellow), chapped lips, decreased body weight, rapid heartbeat, pale dry skin.

Symptoms: A raging thirst, a dry sticky mouth, headache, light-headedness, fatigue and listlessness, constipation.

Severe dehydration, which often occurs in the very young and the elderly, can also cause the following:

Signs: Sunken eyes, shriveled and inelastic skin, low blood pressure, panting, fever, irritability, lack of sweating.

Symptoms: Severe thirst, very dry mouth, skin and mucous membranes, physical exhaustion, confusion.

Dehydration in children

Children lose more water than adults, especially from sweating, because their ratio of surface area to body mass is higher. They also tend to breathe faster, especially when they are sick.

One survey revealed that almost two-thirds of schoolchildren drank too little water.

Compared to adults, children need to take in a relatively larger amount of water.

Furthermore, children are at much greater risk of dehydration because:

- They are more prone to disorders which feature diarrhoea and vomiting.
- They often respond to a respiratory disorder with rapid breathing or panting.
- Sick children tend to drink less frequently, so decreased intake of fluids.
- They are less likely to be aware of the need to consume water regularly.
- They are not as resilient to dehydration and its unwelcome effects as are adults.

How can one tell if a child is dehydrated? The main sign is reduced urine production, and if it becomes deep yellow and more concentrated. Also, the soft spots on the skull – the fontanelles – become shrunken. The reason is that Physis has responded to the lower water content by conserving fluids. In addition, the child becomes very fussy and sleepy, and there are few, if any, tears.

Dehydration in children is usually treated by drinking more fluids. If the child is too agitated or listless, or is vomiting frequently, intravenous fluids are given for a day or two until the child feels better. The amount of fluid given orally or intravenously is based on a standard formula based on body weight.

Health benefits of water

A wide range of common disorders respond to treatment with water. It helps the person's Physis in its efforts to restore harmony to the parts affected by dehydration.

In the *short term*, giving someone water may alleviate:

- Feeling fatigued, or lacking energy.
- Symptoms of sunburn, such as mild fever.
- Head symptoms like dry mouth, bad breath and hiccups.
- Gut symptoms like indigestion, constipation, diarrhoea and haemorrhoids.
- Brain symptoms like dizziness, dry eye, coughing, headaches and hangover.

Water can play a key role in preventing many diseases, especially those linked to dehydration. Over the *longer term*, drinking water as a matter of habit usually makes a valuable contribution to the prevention or treatment of:

- Memory loss, depression, insomnia and dizziness.
- Osteoarthritis, gout and other joint problems.
- Prostate problems and kidney stones.
- Diverticulitis and anal fissures.
- Urinary tract infections.
- Gastric ulcers.
- Accelerated ageing of skin, such as dryness and sagging.

Also, the risk of cancer of the colon, bladder and breast can be reduced markedly when the body's fluid level is in harmony.

One study found that women who drank five glasses of water a day or more were significantly less likely to die from a heart attack than those who drank fewer than two glasses. The protective effect of water was even greater in men.

Tibb advice on water intake

To keep our body in water balance we need to replenish it constantly, otherwise our health will begin to suffer. We do this by drinking water, non-alcoholic beverages and eating moist foods.

Tibb offers the following advice to ensure that proper water harmony is achieved and maintained.

- People who are primarily bilious or melancholic in temperament have a preponderance of the quality of dryness. These people should consume more water as a matter of course, compared to people who are predominantly phlegmatic and sanguinous in temperament.
- When the body is well hydrated and in water-equilibrium, the urine is pale yellow, and urination occurs several times daily.
- Water should be drunk frequently throughout the day, especially in a dry climate like ours. This helps avoid chronic dehydration.
- Drinking water throughout a meal should be avoided, as this dilutes the digestive process. Drink well before and an hour or so after the meal.

In adults an adequate daily intake of water and beverages for males is about 13 cups, and for females 10 cups. This should be taken throughout the day.

- People living in hot or dry climates or seasons should increase their water intake. Two litres per day is usually sufficient to keep dehydration at bay. This applies especially if alcoholic or high-caffeine drinks are being consumed.

- A glass of water should be taken before consuming a caffeine-rich beverage like strong coffee. This dilutes the caffeine present, so reducing the risk of stomach irritation.
- Anyone exercising vigorously, especially for long periods as with road running should increase their water intake substantially.
- People who are ill or convalescing should be encouraged to increase their fluid intake. Water loss is usually higher during these periods, so more water should be taken to maintain harmony.
- For people who prefer domestic tap water, a filter may be valuable, especially in certain regions. This removes impurities like toxic metals, which can lead to cancer, damage to the nervous system, and reduced growth and development in children.
- Bottled versus tap water. Bottled is not always cleaner or safer than tap water. In fact, much bottled water comes from the public water system.
- Alkaline water is favoured by many dieticians, as this seems to confer certain health advantages. It is claimed to neutralise the bad effects of acidic toxins.

Summary

Tibb regards water as the very foundation of life, and the fundamental constituent of nutrition. Water is the vehicle for all metabolic processes in the body, essential to flush out toxins, maintain the optimum body temperature, lubricating bodily movements, and a whole host of other activities. Keeping hydrated by drinking pure, natural water regularly is the keystone of robust health and avoidance of numerous ailments, both acute and chronic. By maintaining the balance between the four primary qualities, water conserves body homeostasis, the integrity of our internal environment. Water actively supports Physis which in turn plays a pivotal role in ensuring water harmony within the body.

An acute shortage of water in the body, or dehydration, can occur at any age. However, it is more of a threat to health in young children and elderly people. Dehydration usually results from reduced intake of liquids, increased urination, or from excessive loss due to sweating, vomiting or diarrhoea. The person affected by dehydration complains of a constant dry mouth, lethargy, dizziness, chapped lips and palpitations. A pale, soggy skin may be evident. Dehydration is a serious and acute disorder, as it can lead to kidney failure and even death. Treatment by increased fluid intake, or by intravenous drip in serious cases, is usually effective.

Tibb considers that proper nutrition plays a vital role in maintaining internal fluid harmony, especially in persons of a bilious and melancholic temperament. The diet should consist of fruits and vegetables which include a predominantly moist quality. This contributes to optimum body fluid content, and replaces electrolyte lost during dehydration.

Drinking water is one of the most positive actions a person can do to encourage health and healing.

Tibb considers that people committed to a healthy lifestyle should ensure that drinking enough pure, natural water becomes a firm habit. After all, we are not just what we eat, but what we drink as well.

Further information

On water and health:

- **Dehydration.** Online at: [http://www.health24.com/Lifestyle/Man/Your-life?Dehydration ...](http://www.health24.com/Lifestyle/Man/Your-life?Dehydration...)
- **Water: How much to drink every day?** Online at: <http://www.mayoclinic.com/health/water/NU00283>
- **Immune system benefits of drinking water.** Online at: <http://www.fitday.com/fitness-articles/nutrition/healthy-eating/5-immune-system-benefits-of-drinking-water.html>

On Tibb theory and practice:

- Bhikha, R H. and Haq, M.A. (2000). *Tibb - Traditional Roots of Medicine in Modern Routes to Health*. Mountain of Light. South Africa.
- Chishti G M. (1991) *The Traditional Healer's Handbook. A Classic Guide to the Medicine of Avicenna*. Healing Arts Press.
- Abu-Asab M, Amri Akima, Micozzi MS. (2013) *Avicenna's Medicine*. Healing Arts Press, USA.
- Bhikha R. (2006). *4 Temperaments; 6 Lifestyle Factors*. Tibb, South Africa.
- Ahmad J and Qadeer A. (undated). *Unani - The Science of Graeco-Arabic Medicine*. Lustre Press, India.