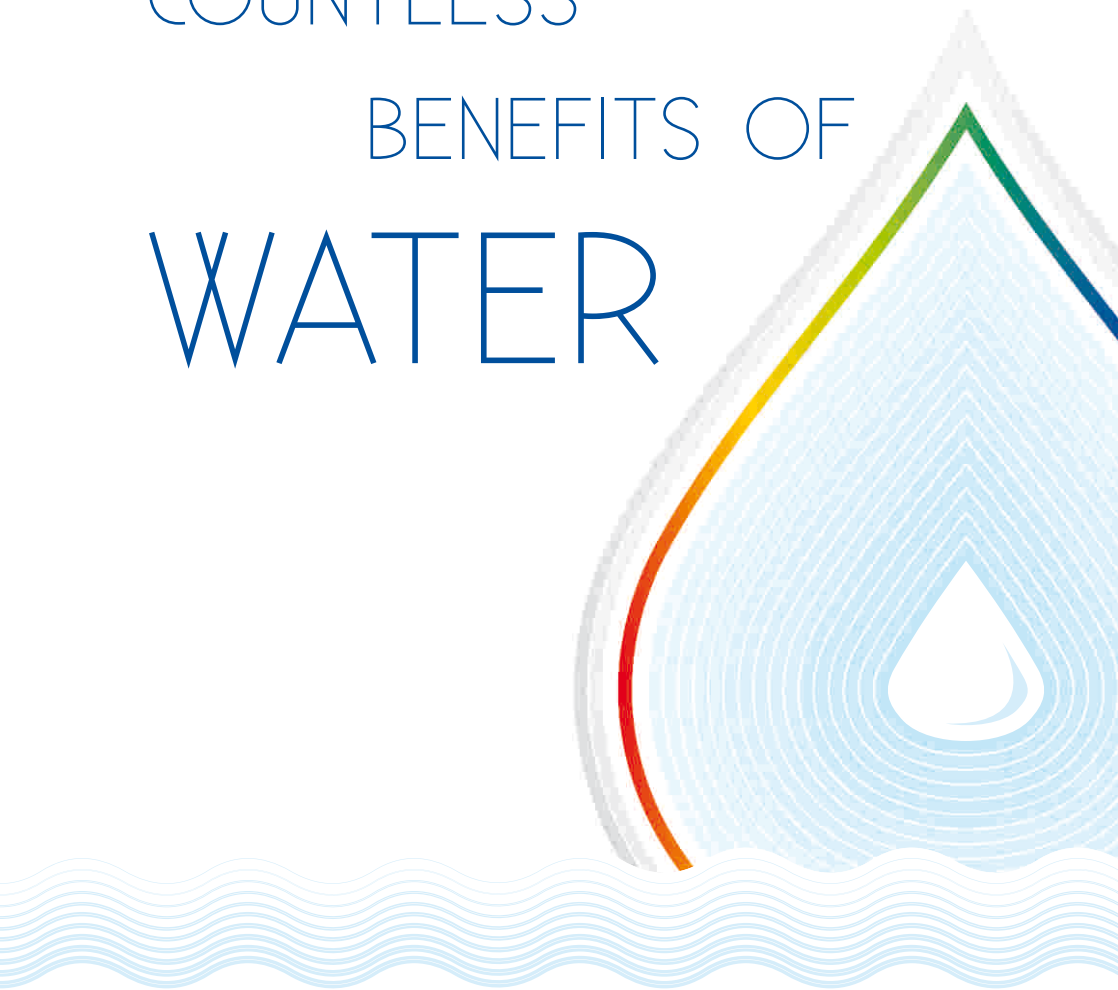


COUNTLESS
BENEFITS OF
WATER



IONISED ALKALINE, IONISED ACIDIC AND SILVER WATER



IONISED WATER

“Alkaline water produced by a water ioniser has become the most important advancement in healthcare since Sir Alexander Fleming’s discovery of penicillin.”

Dr. W. Kelley, College of Metabolic Medicine, author of *CANCER: Curing the Incurable*.





About 70% of our body mass is composed of water, and this has a great influence on the vital processes that occur in our bodies. Human beings can survive longer without food than without water. We often misleadingly feel hunger, when it is water that our body actually needs. Having all of this in mind, everyone should always remember one simple rule: stay hydrated every day. However, it is not only the amount of water you consume that matters. The quality and properties of the water you drink matter just as much. The question still remains: do we really take full advantage of all the properties that water has to offer?

This publication describes the concept of ionised water, its properties and its potential applications. You will learn about the differences between ionised alkaline water and regular water, how it affects the body and how ionised acidic water can be used for the purposes of disinfection. You will also be introduced to silver-enriched water and its unique anti-bacterial properties.

BODY ACIDIFICATION

A POLLUTED ENVIRONMENT, BAD NUTRITION, FATIGUE, STRESS, SMOKING AND THE CONSUMPTION OF ALCOHOL

FREE RADICALS, TOXINS, ACIDIFICATION OF BODY

DISEASES

A polluted environment, bad nutrition, fatigue, stress, smoking and the consumption of alcohol – all of it affect the balance of human body. These factors lead to the accumulation of toxins in our bodies, increased acidification and the negative effect that free radicals have on our bodies.

Free radicals are molecular structures lacking one electron. They form naturally within the body as a result of vital processes and play a crucial role in protecting us from various bacteria and viruses by destroying altered cells. The issue arises when body produces a surplus of free radicals. The need to acquire the missing electron force free radicals to constantly attack healthy cells, thus impairing cell and organ functions, which leads to various diseases.

Bad nutrition, insufficient physical activity, harmful habits, stress and many other factors damage our health while we are still young. However we usually begin to pay more attention to these harmful factors when health problems already exist. The sooner we understand that we have to focus on preventing diseases rather than just treating them, the fewer problems we will have in the future.

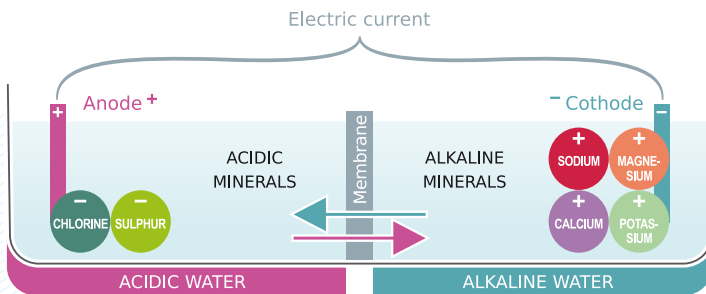
Maintaining an acid and alkaline balance is essential if we wish to feel good and full of energy. One way to deal with excess of free radicals and body acidification is to drink ionised alkaline water.

The ionisation process

We all know that the chemical formula for water is H₂O. However, this very same chemical formula of water can have completely different properties (e.g. rainwater, sea water, mineral-enriched, distilled water, etc.). Electrolysis is one of methods to transform properties of water. The water that is produced by means of electrolysis is called ionised water. This type of water acquires unique properties, making it optimally adjusted to the fluids within the human body, and substantially improving vital processes inside it.

During the process of electrolysis, mineral salts dissolve into the water and break up into positively charged metals (calcium, magnesium, potassium, sodium) as well as negatively charged non-metals and acid residues (chlorine, sulphur, phosphorus, etc.) ions. Positive metal ions are attracted to the cathode (the light electrode), while negative metal ions - to the anode (the dark electrode). As a result - alkaline metals (CA, Mg, K, Na) and hydroxyl OH ions (ionised alkaline water) will accumulate in one part of the ioniser, next to the cathode, and (CL, S, P) and hydrogen H⁺ ions (ionised acidic water) will accumulate in another part, next to the anode. Both electrodes are separated by a membrane, which keeps ionised alkaline and acidic water in separate compartments of the ioniser.

How does water ioniser work?



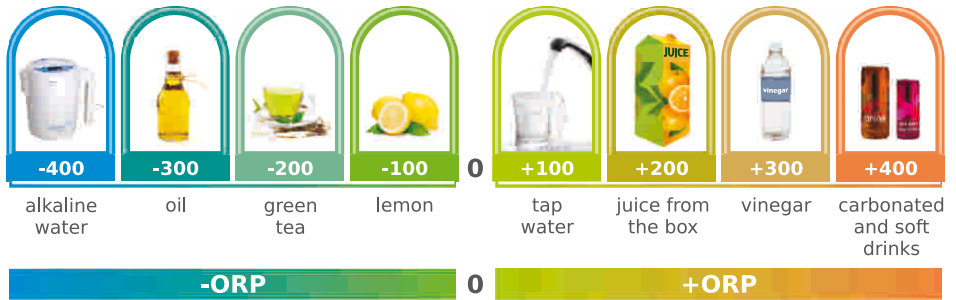
The history of the ioniser

It all date back to the nineteenth century when the principles of electrolysis were written down for the first time. First water ionisers of the twentieth century were used for scientific research in universities of Japan. As the technology developed, more applications for the water ioniser were found and in 1958, the first commercial water ioniser was introduced. South Korea, the United States of America and Russia immediately showed an interest in this technology and the idea of water ioniser began to spread rapidly.

IONISED ALKALINE WATER

Property 1. Antioxidant

The ionised alkaline water produced by electrolysis process has antioxidant properties, a higher pH, and is composed of smaller molecular compounds than those of regular water.

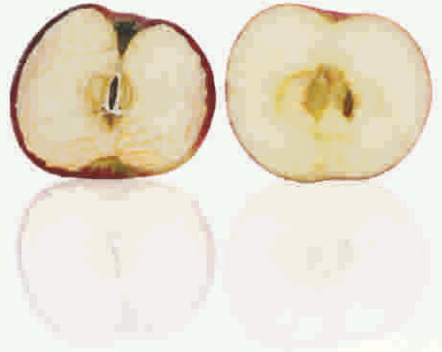


In order to maintain a proper acid and alkaline balance in the body, the damaging effect of free radicals has to be reduced. This is exactly what antioxidants do. The antioxidant properties of a substance are measured by ORP (oxidation reduction potential), which indicates the solution's ability to accept or donate electrons. If the value of this measure is negative, then the substance is an antioxidant because it can donate a portion of its surplus electrons. If the value of the measure is positive, the substance qualifies as an oxidant (i.e., a free radical) because it accepts electrons. The ORP of the human body ranges from 50 to -200 mV. Meanwhile, the ORP of most drinking water and practically all carbonated beverages is positive (oxidative) and on average varies within the range from +150 to +250 mV.

Ionised alkaline water has a negative ORP (0-900 mV). As ionised alkaline water is consumed, the body acquires an additional supply of free electrons, which are then attached to free radicals. This neutralises the harmful effect of free radicals, protecting healthy cells, preventing their mutation, strengthening the immune system and slowing down the ageing process.

It is important to know that the ionised alkaline water produced by electrolysis process can only maintain its negative ORP for a short period of time - up to 24-36 hours. Once this period of time passes, the ORP value of the water goes back to being neutral or a weak positive. Therefore it is recommended to consume the ionised alkaline water as fresh as possible, preferably within 12 hours of the electrolytic process. This also explain why ionised alkaline water cannot be bottled and sold to the consumers directly.

An apple is a great example of what free radicals and antioxidants can do. Once the protective layer of an apple is severed (i.e., when the apple is cut in half), the oxidation process begins. After a while, the apple turns brown. This is a result of the effect of free radicals. Antioxidants, such as ionised alkali water or lemon juice, protect the apple flesh from oxidation. Adding a few drops of lemon juice to the apple or submerging it into ionised alkaline water will interrupt the oxidation process.



IONISED ALKALINE WATER

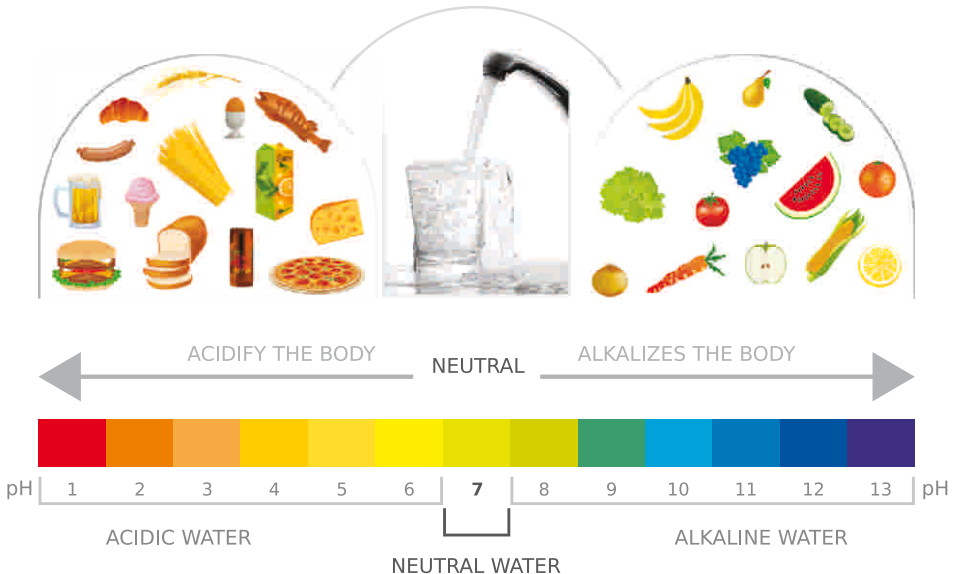
Property 2. Water alkalinity (pH)

The pH scale measures the acid-content (i.e., the number of H+ hydrogen ions) of a given substance. The value of pH can range from 0 to 14. As pH increases from 7 to 14, alkalinity increases (the liquid contains more alkaline hydroxyl and less hydrogen ions). As pH decreases from 7 to 0, acidity increases (the liquid contains more hydrogen and fewer hydroxyl ions).

The fluids of the body (the blood, cerebrospinal fluid, lymph, intercellular fluid, etc.) have a weak alkalinity, except for the stomach, skin and the female vagina, which are naturally acidic. Blood parameters are especially important. The body can only function normally when the blood has low-level alkalinity (7.35-7.45), and even the slightest deviation from this range can be very dangerous.

The pH of bodily fluids changes and decreases (acidifies) due to negative environmental factors. In order to neutralise these acidifying effects, the body must be provided with a sufficient amount of alkalis.

Apart from hydroxyl ions, ionised alkaline water also contains easily absorbable alkaline metal (calcium, magnesium, potassium, sodium) ions necessary for neutralising acidic waste. Thus daily consumption of alkaline water provides the body with a cocktail of alkaline ions, that it needs in order to maintain the alkali-acidic balance of its fluids.



⚠ MYTH or FACT?

Does the stomach neutralise alkaline water?

Gastric fluids are typically highly acidic. Gastric acid is not produced in advance, and gastric cells only secrete it based on necessity, i.e., when food enters the stomach. When ionised alkaline water enters the stomach, the stomach begins to fight the increasing pH and secretes more gastric acid. It would seem that this should reduce the effect of the alkaline water to a minimum, however, as the stomach produces gastric acid, byproducts essential to the process - such as sodium and potassium hydrocarbonates, are also produced. They are released into the blood and not the stomach, thus reinforcing the alkaline buffer of the blood and increasing its capacity to neutralise surplus acids in the body.

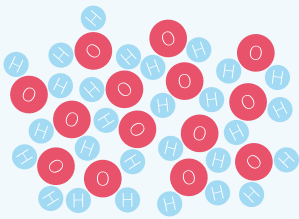
IONISED ALKALINE WATER

Property 3. Smaller molecular compounds

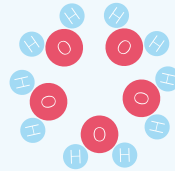
Water molecules have a special property that allows them to bond into molecular compounds (also known as microclusters). Ionised alkaline water molecules are bound into substantially smaller compounds (5-6 molecules) compared to regular drinking water (10-13 molecules). Therefore, alkaline water is more fluid, passes through cell membranes more easily and participates directly in metabolic processes, i.e., the body no longer needs additional energy in order to absorb the water. Alkaline water enters tissues much more easily than regular water, removing built-up toxins, supplying cells with water, necessary nutrients and oxygen more easily. Because of the smaller molecular compounds, the acidic waste that is produced as a by-product of regular body functions is easier to dissolve in alkaline water and is then discharged through the kidneys or in other natural ways.

Smaller molecular compounds of alkaline water – body absorbs water faster.

Alkaline water is more fluid, therefore cells are better supplied with water, and also toxins are effectively removed from the body.



Ordinary tap water molecular compounds – clusters – are formed from 10-13 molecules.



Ionised alkaline water molecular compounds are formed only from 5-6 molecules.

»» EXAMPLE

When a teabag is submerged into a cup of regular cold water, its properties are not assimilated as rapidly as the properties of a teabag in cold ionised alkaline water due to the smaller molecular compounds of the latter.



Cold ordinary water



Cold ionised alkaline water

IONISED ACIDIC WATER

During the electrolytic process, ionised acidic water, with properties very different to those of alkaline water, is produced and accumulates around the anode. Ionised acidic water has a low pH (less than 7) and a positive ORP (0-+1100 mV), which describes its deficiency of electrons. The acidic water acquires electrons it lacks from microbes, bacteria, fungi and other pathogens, thereby destroying them.

Microorganisms cannot live and reproduce in such an acidic environment, which is why ionised acidic water is recommended for external use, i.e., disinfection. Unlike chemical disinfectants, ionised acidic water is natural - no additional substances are added during the process of making it. Therefore it does not cause any allergies or skin irritation.



Silver ions act as sort of secondary immune system and, by protecting the body, helps us to feel good.



SILVER WATER

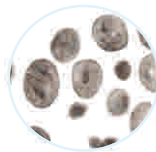
The properties of silver, as a natural antibiotic, have been known since the olden days. In order to enrich their water with silver, people used to keep water in silver dishes or keep silver utensils and coins in the water itself. This silver enriched water was used for the purpose of disease prevention and disinfection. However, silver dishes and other utensils were made of silver alloys and not pure silver, so along with the silver, the water absorbed other harmful metals as well.

This primitive method of producing silver water has now been replaced by a new, effective and safe method. aQuator water ioniser enriches water with a set amount of silver ions from 99.99% pure silver through the method of electrolysis.

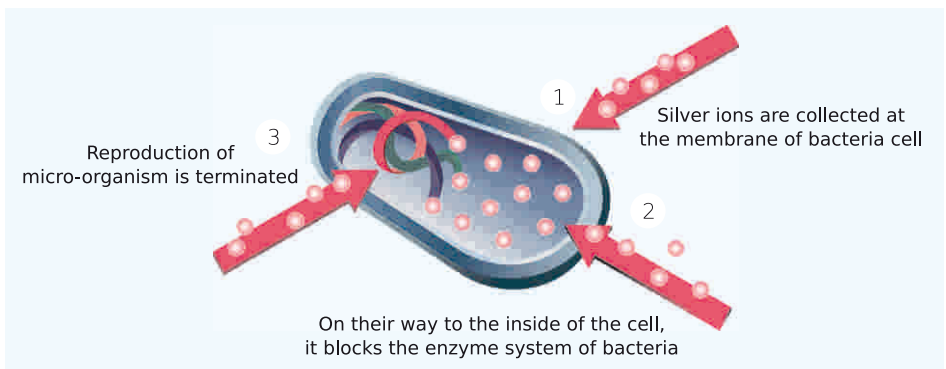
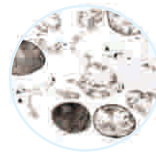
Silver water is enriched with dissolved positive silver ions, which have an antibacterial effect. The silver ions move towards the cell walls of bacteria and, being smaller, easily enter the interior of these micro-organisms. Once they are inside, silver ions impair the function of the bacteria's enzymes and proteins, thereby killing it. Apart from destroying bacteria, silver kills fungi and viruses. More importantly, bacteria and viruses cannot adapt to the effect of silver water and, as a result, cannot become immune to it, which is not the case for widely used antibiotics.

How silver ions affect microbe?

Bacteria before
the effect of silver ions



Bacteria after
the effect of silver ions



POSSIBLE USES FOR ALKALINE WATER



The recommended water pH for daily consumption is 8.4-8.8. Based on the recommendations of nutrition specialists, a person's daily intake of water should be 30 ml of water per kg of weight (for example, a person that weighs 70 kg should drink 2.1 litres of water a day ($0.03 \text{ l} \times 70$)).

POSSIBLE USES FOR ACIDIC WATER



WATER IONISER

aQuator water ioniser

(mod. „Classic“ and „Silver“)



The device produces following types of water:

- ✓ Alkaline water;
 - ✓ Acidic water;
 - ✓ Silver water (mod. „Silver“).
-
- ✓ Silver electrode (.999 silver), 9,7 g (0,34 oz);
 - ✓ Container size: 3 litre (alkaline water – 2,7 l);
 - ✓ Supply voltage: V~ 110-230;
 - ✓ **CE** ;
 - ✓ Anode (dark electrode) is covered with rare inert metal oxide alloy (ruthenium and iridium) on a titanium base.

PVT water ioniser

(mod. AL and KL)



The device produces following types of water:

- ✓ Alkaline water;
 - ✓ Acidic water;
 - ✓ Silver water (mod. KL).
-
- ✓ Silver electrode (.999 silver), 9,7 g (0,34 oz);
 - ✓ Container size: 1,5 litre (alkaline water – 0,8 l);
 - ✓ Supply voltage: V~ 110-230;
 - ✓ **CE** ;
 - ✓ Anode (dark electrode) is covered with rare inert metal oxide alloy (ruthenium and iridium) on a titanium base.