Clear Water Club

Frequently asked questions

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Let's start with a truism: water is essential for our environment and of existential importance for all forms of life and especially for our health. This means that the more we know about water, what it does, why we need it and how we should treat it, the better it is for us. The importance of drinking clean water cannot be overstated. It is the first and most important point when it comes to long-lasting health. This realization is where it all began for the *Clear Water Club.* This is our starting point. And our mission...

Why is water quality such a big issue?

Many people around the world ask themselves a crucial question every day: where can I get clean drinking water? No wonder: the consumption of contaminated water from questionable sources - such as open wells, rivers, lakes or public facilities - is still the biggest health risk worldwide.

Surprisingly, this problem is not (or no longer) limited to developing or emerging countries. Even in technologically advanced societies with supposedly good sewage treatment plants, polluted drinking water or tap water is becoming an ever greater problem.

The reason: countless pollutants from industry, agriculture and pharmaceuticals have accumulated in our water cycle and are difficult to remove. Medicines, heavy metals, microplastics and the like end up in our tap water, along with the unappetizing residues from our piping systems. Raising awareness of this problem is therefore more important than ever.

Why is water important for my health?

Preparing food, showering, brushing our teeth, drinking coffee - we are constantly dependent on water for our daily lives. The quality of the water plays an immense role in this: you are what you drink. As 70 percent of our body consists of water, the purity of your water has a major impact on your well-being. No wonder: after

all, it flows into every single cell in your body. That's why it needs to be as clean as possible.

For optimal rehydration, about 1 to 3 liters of clean water are needed daily - depending on age, weight, height, physical activity and outside temperatures. All our bodily functions, digestion, metabolism, organs, nervous system and reproductive system depend on this hydration. Just as importantly, water also helps us to remove waste products and environmental toxins from the body. Clean water is crucial here too!

The bottom line: If you care about your health and want to protect it as much as possible, drinking clean water should be your top priority. Everything else is secondary.

Why is our water so polluted?

Let's not beat about the bush: industrialization is to blame. In addition to all the benefits and conveniences it has brought us, it has unfortunately also ensured that countless (sometimes novel) chemical compounds have been released into the environment. These have made their way into the water cycle in recent decades and can now be found not only in tap water around the world, but also in our bodies.

Some people will now say: "But we have modern water treatment plants! They'll sort it out, won't they?" Not really. The fact is that even our modern sewage treatment plants simply cannot keep up with the quantity and variety of pollutants and contaminants that are present in the environment today. Additional purification stages would be too complicated and, above all, too expensive, as the responsible authorities emphasize. Well!

The bottom line: today's water supply is so heavily contaminated by chemicals, heavy metals, microplastics, hormones, pharmaceutical residues and bacteria that regular consumption of tap water can have serious health consequences.

What pollutants are in my tap water?

Let's ask the counter question: What pollutants are not found in our tap water these days? The list would probably be shorter. But joking aside. Here's an (incomplete) list of the most common pollutants dripping out of your tap today - including their potential impact on your health.

1. **Pathogens**: Contamination of tap water with bacteria, viruses and parasites can have very different causes. Possible consequences: Infections, diarrhea, gastrointestinal complaints and other illnesses.
2. **Nitrates and nitrites**: These compounds can come from agricultural fertilizers, wastewater and waste products and at high concentrations can cause serious health problems such as methemoglobinemia (blue discoloration of the skin) in infants.
3. **Hormones**: Hormones such as oestrogens and androgens can enter the water, mainly through human and animal excreta or wastewater from sewage treatment plants. These hormones can affect the endocrine system and lead to hormonal imbalances and other health problems.
4. **Microplastics**: Microplastic and nanoplastic particles are tiny plastic fragments that are widespread in the environment, including in water. They mainly enter the water through the degradation of larger plastic products or through direct discharges of plastic waste. The long-term health effects of exposure to microplastics are not yet fully understood, but some studies suggest that there may be potential risks to health, including cancer.
5. **Heavy metals**: These mainly include lead, copper, arsenic, cadmium and mercury. These can come from old pipes, industrial wastewater or natural deposits. Heavy metals can cause serious health problems and neurological disorders, especially with long-term exposure and in young children.
6. **Medication**: Drug residues from ibuprofen, diclofenac and X-ray contrast agents are increasingly finding their way into drinking water. Although they normally occur in very low concentrations, their long-term effects on health are not fully known.
7. **Pesticides and herbicides**: Such chemical compounds can originate from agricultural applications, where they are mostly used as weed killers, and get into the groundwater. They can accumulate in the body and lead to inflammation and other illnesses after prolonged exposure.

What's the problem with bottled water?

All those who are already aware of the tap water problem are to be congratulated. Instead of drinking from the tap, they are turning to bottled water. This is definitely a step in the right direction. But there are also a few disadvantages: Apart from the logistics, the comparatively high costs and the

transportation back and forth (e.g. because of the bottle deposit), there are also some issues with the ingredients of bottled water that we need to talk about.

Recent studies show that water in plastic bottles contains more microplastics than previously assumed. This would at least suggest that we should opt for water in glass bottles. But there is another problem: assuming we can avoid microplastics by choosing glass bottles, what about other pollutants? Many bottled waters contain substances such as "fluoride" - a chemical normally found in toothpaste that can be harmful if swallowed. In numerous tests, laboratories have also repeatedly discovered heavy metals, faeces, bacteria and other undesirable substances in bottled water - even in glass bottles. Bad news!

The bottom line: moving away from tap water and opting for bottled water (in glass bottles!) is undoubtedly a big step forward. However, there are also some serious disadvantages. Apart from the impractical logistics and higher costs, many brands still contain harmful substances that are best avoided.

Why are water filters not a solution either?

As soon as you realize the paramount importance of clean drinking water for your health and you realize that neither tap water nor water from the supermarket can be the optimal solution, the question automatically arises: What other solutions are there? And which is the best?

The criteria are clear: above all, our water must be inexpensive and absolutely pure. Ideally, there should be no need to transport bottles or crates of water at all. Tap water and bottled water are therefore out of the question. What remains: Various options for producing clean water at home. Water filters with activated carbon, reverse osmosis systems or similar technologies are the main options here.

Many people have already installed water filter systems in their homes and are satisfied with the results. However, such systems have a few disadvantages. The first is the relatively high purchase price. Good systems are not exactly cheap. You can expect to pay upwards of €500. Added to this is the rather complicated installation and regular maintenance of such filter systems.

Perhaps the biggest drawback is that water filters of all types need to be replaced regularly to ensure full filter performance. Once the filters are "clogged" with all the pollutants filtered out, the water produced is only drinkable to a limited extent. Depending on the system, filters need to be changed every three to six months. Another weak point: to date, there is no water filter that really removes all pollutants efficiently. Although good osmosis systems come close, in the end they cannot keep up with other treatment methods. One in particular has a clear advantage...

The bottom line: *water filters are now a widely used method of water treatment that works satisfactorily for many people. However, there are also some disadvantages that make it clear that water filters still have room for improvement in terms of purity and cost efficiency.*

Why is distillation superior to all water filters?

The fact is: the best water filter is not a filter at all. It is? A distiller. To this day, no more efficient method of water purification has been discovered than distillation. If you buy a water distiller instead of a water filter, you kill half a dozen birds with one stone: the water can be produced at home, is inexpensive and absolutely pure. 99.9999% of all organic and inorganic pollutants are reliably removed by distillation - without any loss of performance.

With a distiller, there is no need to replace filters, no maintenance and no complicated installation. What's more, the purchase price for a robust distiller is a reasonable 100 to 250 euros, depending on the model. And the cost of the water produced is also a strong argument: the power consumption of a 750 watt distiller is 2.3 KWh per day. If you generously assume an electricity price of 40 cents per kilowatt hour, the cost of 4 liters of high-purity water is 90 cents. That's just under one euro per day, or €7 per week, or €330.00 per year.

The bottom line: anyone looking for the optimum solution for their own supply of ultra-pure water needs to consider several aspects. The most efficient, cheapest and certainly the simplest solution is distillation. If you order a distiller, you'll be covered when it comes to water quality and will never have to worry about pollutants again. It can be that simple!

What exactly is distilled water?

Isn't it always amazing what great ideas man can take from nature and make use of them? Distillation is one such idea. In short, it is nature's purification mechanism for the global water cycle. The highly efficient purification takes place at the moment when the water changes from a liquid to a gaseous state. Here, the water molecule releases all the compounds it has formed with other substances. What remains: Nothing but pure H_2O.

This means that distilled water is simply the purest form of water there is. Through the process of "distillation", all components in the water such as microbes, medicines, metals, chemical compounds and other particles of an organic or inorganic nature are removed. And it is precisely this natural process that is recreated in distillers. A distiller heats water, turns it into steam, cools it down again and collects the water that has become liquid. That's all. Ingenious, isn't it?

The bottom line: the process of distillation mimics nature's "water cycle", which recycles and purifies all water on earth through repeated evaporation and condensation. Distilled water is therefore the softest, "emptiest" and cleanest original form of water there is. The term "distilled" simply means "not still" or "not hard".

What is distilled water normally used for?

Distilled water" is normally found in plastic containers in grocery stores or at petrol stations. Such water is usually used for aquariums, car radiators, to fill car batteries or for ironing. Why? Because distilled water is free of any minerals that contribute to scaling, corrosion or staining. Good to know: This distilled water - despite the name - is not the water we recommend for drinking.

The difference between the distilled water sold in your supermarket and the type of distilled water produced by a distiller in your home is significant. While a distiller makes purified water by evaporating and then cooling the water, the distilled water you can buy in your store is usually made through a process called "de-ionization" or "chemical demineralization".

In this process, all inorganic substances in the water are separated from the actual liquid through an electrolytic process without changing the physical state of the water. This type of water may be fine for technical applications, but it is by no means safe to drink as it still contains any bacteria, viruses, toxins and chemicals that may have been present in the source water. And where that came from, we will probably never know.

The bottom line: With distilled water, a distinction must be made between chemically deionized and actually "distilled water". For distilled water to reach the level of purity we want and need, it must be boiled, turned into steam and then cooled before being collected in a separate (and absolutely clean) container. This is exactly what a distiller does for you.

What impurities does distillation eliminate?

Good news: All of them! By boiling the water, forcing it to change state and filtering it through activated carbon at the end of the process, which also removes so-called VOCs (volatile organic compounds such as chlorine or benzene), distilled water is the most efficient form of water treatment ever invented. No other method delivers such consistently good results. Nothing but pure H^2O collects in the distiller's collection tank, and that's exactly what we want! Hormones, heavy metals, microbes, drug residues and countless other toxins remain at the bottom of the distiller and can be easily rinsed out.

Scientific studies have shown that the efficiency is actually close to 100 percent. A study paper from 2020 explains the special properties of distillation in the production of "high-quality water". Interestingly, distillation even works with "seawater, contaminated brackish water, industrial wastewater containing any combination of polluting chemicals or dissolved salts".

What does distilled water taste like?

Ha! Who would have thought? It actually tastes like nothing at all! No metallic aftertaste, no salty note, no sour aftertaste, no smell, nothing. Due to its purity and neutral pH value, distilled water is as neutral in taste as it gets. The texture is incredibly soft and velvety. In short: distilled water is an absolute delight for the palate - and goes down twice as well because you know that it is absolutely free from any harmful substances!

The fact that the taste of distilled water took some getting used to for us at first can be explained by the fact that our taste buds first had to get used to the taste of pure water. Anyone who only ever drinks mineral water, tap water or bottled water will notice: The difference is noticeable. After a few weeks, however, you get so used to it that you no longer prefer anything else. The difference to tap water is particularly noticeable when using distilled water for coffee or tea.

The bottom line: distilled water delivers what it promises. It is absolutely tasteless and odorless, super soft in texture and goes down like... well, water. If you find the taste of pure water boring, you can of course always help it along a little. How about a pinch of Himalayan salt or a squeeze of lime juice, for example?

Why is distilled water still so unknown?

That's exactly what we asked ourselves! It's healthy, has a pleasant taste, is easy to make, inexpensive and solves the problem of contaminated drinking water once and for all. So why don't many more people use it? Despite all the benefits and positive aspects, why hasn't drinking distilled water (yet) caught on with the general public?

The answer is quite simple: because most people simply don't know any better, because they don't yet know the benefits, and because the big companies that sell bottled water (or water filter systems) naturally have no interest in promoting this method of creating private water autonomy. After all, who would buy water from Nestlé or Coca Cola if he or she had a distiller at home? Exactly.

The bottom line: it is somewhat astonishing that the knowledge about distilled water as the optimal water for our health has not yet spread to every last corner of the world. This is exactly where Clear Water Club wants to come in, spread the word and help distilled water achieve the popularity it deserves.

Is distilled water dangerous for my health?

Ludicrous articles and "expert opinions" are circulating on the internet claiming that distilled water is not only unhealthy, but also highly dangerous for the body. The silliness on some forums and platforms has even reached the point of claiming that drinking distilled water can "burst your cells". This myth was refuted by Prof. Dr. Oberleitner (University of Munich) on the German medium *MDR in* mid-2022. He clarified: "There are no acute health risks to be feared when drinking distilled water in normal quantities."

When we first came across this rumor, we were honestly quite surprised. Can clean drinking water really be unhealthy? How is that possible? Well, you could overdo it and drink 20 liters of it, which would amount to "water poisoning", but otherwise? It was clear to us that we had to get to the bottom of the matter. What we found out in the end amused us greatly. It's a pretty funny story - one that we'll soon be telling in detail on our blog.

The short version goes like this: some people seem to believe that distilled water is harmful because the water "lacks minerals" or - depending on the claim - it "flushes" minerals out of our bodies. Both claims are nonsensical in their own way. Firstly, we take in all the minerals we need from our food. The quantities present in water would also be so small that we would have to drink unrealistically large quantities to cover our need for calcium, sodium, potassium, magnesium, iron, etc. And secondly, distilled water cannot wash out minerals that are already bound in our bodies and have entered our cells. This is simply not physiologically possible.

The bottom line: the claim that pure distilled water has any undesirable side effects on health is simply wrong and is based on long-disproved assumptions about the mineral content of water. Not only is it not a problem to drink distilled - i.e. mineral-free - water, it actually has numerous benefits. Deficiency symptoms or other problems do not occur as we get all our nutrients from food. Water is merely a means of transport for these nutrients.

Who benefits most from distilled water?

For a long time, we were not fully aware of the enormous benefits of distilled water for specific groups of people. The more we looked into the subject, the more clearly certain profiles emerged that benefit in particular. Here are a few examples:

- **Young children & adolescents**: Pollutants in tap water or drinking water are a particular problem for young people with immature immune systems. What a full-grown person can tolerate could cause damage, especially to infants. It is not for nothing that it is recommended to use so-called "baby water" for preparing baby food. Giving your own children tap water with a potentially incalculable risk does not seem advisable.

- **Senior citizens and immunocompromised persons**: If people are already susceptible to infections due to their age or existing illnesses or are already taking medication, care should also be taken to only consume particularly pure water. It is simply not in the interests of such people to put additional strain on their bodies by drinking contaminated tap water.

- **Pregnant women:** What was also true for the aforementioned groups undoubtedly applies to pregnant women: pregnancy is a particular burden for the mother. The supply of pure drinking water free of contaminants therefore plays a crucial role in maintaining health, especially during this time. In addition, all pollutants ingested by the mother - for example through the consumption of tap water - are also passed on to the unborn child. Especially pure, pollutant-free water is an absolute must here.

- **Athletes and physically active people**: It is common knowledge: People who do a lot of exercise and physical exertion also need a higher fluid intake. Now, of course, the question arises as to whether, with increased consumption, particular attention should be paid to the quality of the water. We think so: Absolutely. The more water you drink, the more pollutants will accumulate in the tap water, which the body then has to deal with. What's more, athletes are likely to have an increased interest in keeping their bodies

healthy and fit for a long time and avoiding any exposure to hormones or drug residues from tap water.

The bottom line: everyone, young and old, benefits from a supply of absolutely pure drinking water. There can be no two opinions here. However, the reduction of harmful substances appears to be particularly important for people who do not yet have a fully developed or weakened immune system. Here it is particularly worthwhile to avoid the tap water cocktail and prefer distilled water. It is also clear that health-conscious and physically active people should also consider switching to distilled water in view of the many benefits.

What are the benefits of distilled water for my health?

Technically speaking, the main health benefits of distilled water are that it is completely free of harmful substances and minerals, which benefits the body in various ways. But there are even more arguments in favor of distilled water.

Prophylaxis & cleansing: The body is spared exposure to countless harmful and toxic substances that would normally enter the body by drinking tap water or other beverages. What these substances - including new ones such as microplastics or nanoplastics - do to our bodies in the long term is still unclear. In this respect, drinking distilled water is a **prophylactic cleansing measure** with potentially great benefits - and no side effects.

Reduction of deposits: Drinking distilled - i.e. "empty" - water massively reduces the **deposition of "inorganic" minerals** over time. In contrast to organic minerals from animal or plant foods, these minerals can hardly or not at all be digested or metabolized by the body, but according to some doctors (see votes), they are deposited everywhere in the body over the years. Possible consequences: arthritis, arteriosclerosis, kidney stones and similar diseases, which are often accompanied by vasoconstriction and can lead to pain, high blood pressure or worse.

Improvement of kidney function: Although this has not yet been confirmed by large-scale scientific studies, it seems plausible that distilled water positively influences and supports the function of the internal organs. The **positive effects on**

kidney function in particular should be mentioned here. As distilled water does not contain any harmful substances or minerals, the kidneys do not have to filter these out and can therefore work more efficiently and perform the task of detoxifying the body better.

Improved digestion: Another hypothesis, which has yet to be proven by appropriate studies and experiments, is that distilled water **improves digestion** as it cleanses the gastrointestinal tract of impurities and toxins, thereby facilitating the absorption of nutrients. This assumption seems particularly conceivable because the gastrointestinal tract, with its sensitive bacterial flora and fine cell structure on the stomach and intestinal wall, could be particularly affected by toxins in tap water. Stomach complaints and intestinal problems ("leaky gut") are often the result of inflammation in the gastrointestinal tract, which could be exacerbated by contaminated tap water.

Healthier teeth: As distilled water does not contain any minerals, some doctors say it could also help to reduce tartar build-up and **improve dental health**. This assumption also remains a hypothesis until it has been proven by concrete studies.

Improved skin appearance: Some people have long reported that regular consumption of distilled water leads to improved skin health, including clearer skin, a **reduction in acne** and a more radiant complexion. We can confirm this observation ourselves. The explanation is obvious: the skin is the body's largest organ for detoxification. Any toxins that the body wants to eliminate are usually excreted through the pores of the skin. Drinking distilled water noticeably reduces the excretion of such toxins.

Better hydration: Also not necessarily a surprise is the fact that some medical and nutrition experts argue that distilled water hydrates better than other types of water due to its purity, as it does not contain potentially harmful impurities that could interfere with the process of getting water into the cells.

But there is another reason. How quickly a fluid is absorbed by the body depends on how large (or small) the pressure gradient is between the supplied fluid and the fluid in the cells or in the blood. This is also referred to as "osmotic pressure". This is characterized by the amount of dissolved particles in the water. As distilled water

is practically "empty" and the pressure is low, it is literally drawn in by the cells at a higher pressure in order to restore the balance. This is also referred to as a "hypotonic" solution. The absorption of distilled water into the blood is therefore faster, which is an advantage.

How do I look after my distiller?

Once you have decided to use a distiller to produce your ultra-pure drinking water, there are only three things you need to do:

1. fill the distiller with the specified amount of tap water (4L for most models).

2. press the "Start" button.

3 Clean the distiller after use.

The operation and handling of a distiller could hardly be easier. To ensure that fresh, purified water is always available when you need it, we got into the habit at home of filling and switching on the distiller in the evening so that everything is ready the next morning when we get up and the distillate has already had time to cool down.

There is also little to say about cleaning and maintaining the appliance. As the pollutants and residues that have been removed from the water collect at the bottom of the distiller, it is advisable to add a few splashes of vinegar or citric acid to the container once the appliance has cooled down. This dissolves the residues and can be easily removed with a washing-up brush.