

Reverse Osmosis Water

Health Advantages & Disadvantages

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The popularity of reverse osmosis water (R.O. water) has steadily grown since it was first introduced as a home water purification system in the 1970s.

In addition, the type of treated water most often used by bottled water companies is reverse osmosis water.

The R.O. water purification method involves forcing water through a semi-permeable membrane, which filters out a select number of water contaminants, depending on the size of the contaminants.

In general, if the contaminants are larger in size than water molecules, those contaminants will be filtered out. If the contaminants are smaller in size, they will remain in the drinking water.



Key Health Advantage

Many years ago I drank reverse osmosis water almost exclusively, believing that it was the best drinking water. However, since then I have discovered (through personal experience and research) that the health disadvantages outweigh the advantages.

The main health advantage R.O. water has over tap water is that an R.O. system removes some unhealthy contaminants.

A good R.O. system can remove contaminants such as arsenic, nitrates, sodium, copper and lead, some organic chemicals, and the municipal additive fluoride.

A Few Disadvantages

You might be interested to know that reverse osmosis was actually developed as a water treatment method over 40 years ago. The process was used primarily to **de-salinate water**.

The following are three of the main disadvantages of drinking R.O. water:

1. The water is demineralized.

Since most mineral particles (including sodium, calcium, magnesium, magnesium, and iron) are larger than water molecules, they are removed by the semi-permeable membrane of the R.O. system.

Even though you may find some contradictory information online about the health benefits of reverse osmosis water, I am convinced that drinking de-mineralized water is not healthy.

The World Health Organization conducted a study that revealed some of the health risks associated with drinking demineralized water.

Just a few of the risks include gastrointestinal problems, bone density issues, joint conditions, and cardiovascular disease. (See reference below to review the WHO study online.)

Removing the naturally occurring minerals also leaves the water tasteless. Many people thus have to add liquid minerals to their R.O. water to improve the taste.

2. The water is usually acidic.

One of the primary reasons R.O. water is unhealthy is because removing the minerals makes the water acidic (often well below 7.0 pH). Drinking acidic water will not help maintain a healthy pH balance in the blood, which should be slightly alkaline.

Depending on the source water and the specific R.O. system used, the pH of R.O. water can be anywhere from about 3.0 pH (very acidic) to 7.0 pH (neutral). Most of the R.O. water I have tested has been in the range of 5.0 to 6.0 pH. The only time I have ever seen R.O. water testing at 7.0 is when the R.O. system had the added remineralization element.

In the natural health and medical communities, acidosis in the body is considered an underlying cause of most degenerative diseases.

In fact, in 1931, Dr. Otto Warburg won the Nobel Prize for discovering the cause of cancer. In essence, he said it was caused by a lack of cellular oxygenation due to acidosis in the body.

Medical research has also determined that drinking acidic water (as well as other acidic beverages) will often cause a mineral imbalance in the body.

According to the WHO study, low mineral water increased diuresis (the production of urine by the kidneys) 20% on average and markedly increased the elimination of sodium, potassium, chloride, calcium and magnesium ions from the body.

Purahome only recommends Reverse Osmosis (RO) Drinking Systems for **well water** that is **too salty** to drink. Recognizing the importance of minerals for health, we provide an Aquaspace **Remineralizing** cartridge to our RO systems to elevate pH by adding calcium and magnesium back into the acidic RO water to create healthy alkaline drinking water.

3. Some critical contaminants are not removed.

While reverse osmosis is effective for removing a variety of contaminants in water, the reverse osmosis membrane alone does NOT remove volatile organic chemical (VOCs), chlorine and chloramines, pharmaceuticals, and a host of other synthetic chemicals found in municipal water.

However, some R.O. systems now have multi-stage filtration media (in addition to the R.O. membrane), such as Activated Carbon, which does remove chlorine and certain pesticides.

What to Do If You Currently Have a Reverse Osmosis System

If you currently have a reverse osmosis system and are not ready to give it up, I recommend getting a **remineralization cartridge** or add-on to your R.O. system.

If that is not possible or too costly, you could add liquid ionic minerals to your R.O. drinking water.

However, doing so will not be as beneficial as drinking water that contains minerals naturally, but it will help somewhat with the acid-alkaline balance in the body.

References

[WHO Study: Health risks from drinking demineralised water](#)

[University of Nebraska; Drinking Water Treatment: Reverse Osmosis; 2014.](#) This is a peer reviewed guide by Bruce I. Dvorak, Environmental Engineering Specialist, and Sharon O. Skipton, Water Quality Educator, which has a few good tables that show the types of contaminants that are and are not removed by reverse osmosis.