



The Portable Well Company 2023



The World Health Organization issues a warning about reverse osmosis water.

Reverse Osmosis (RO) filters or systems remove impurities from water efficiently. Despite this, only some are aware that they also remove beneficial minerals.

Calcium and magnesium are 99% removed by reverse osmosis. In addition, it removes an even more significant amount of trace elements.

A World Health Organization report analysing hundreds of scientific studies concluded that demineralized or reverse osmosis water "definitely adversely affects the human and animal organism."

In their efforts to remove as many things from water as possible, consumers have forgotten to ask whether the resulting water is healthy or unhealthy. Health is assumed to be better when there are no contaminants. Nevertheless, the World Health Organization emphasizes that healthful water is more than pollution-free.

It is possible to experience serious side effects even after consuming reverse osmosis water for a few months. "Most of the chemicals that are commonly found in drinking water become apparent over a long period of time." However, "a short period of exposure may be sufficient to reveal the effects of water low in magnesium and/or calcium."

As part of a government program to address contaminants, the Czech and Slovak populations installed reverse osmosis systems in 2000-2002.

Due to the rapid and widespread deployment of reverse osmosis systems in these populations, their health effects could be studied. In several weeks or months, various health complaints suggest an acute magnesium (and possibly calcium) deficiency. There are several severe side effects that occur over a period of time, including cardiovascular disorders, fatigue, weakness, and muscular cramps.

As reverse osmosis water lacks minerals, it also leaches minerals from the body. Thus, mineral and vitamin contents of food are lost through urination.

The combination of fewer minerals consumed, and more minerals excreted results in serious side effects and significant health issues.

In a scientific study conducted to see if minerals consumed in food could compensate the lack of minerals in reverse osmosis water, scientists found that "reduced mineral intake was not compensated by their diets...low-mineral water led to an increased removal of minerals from the body.

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The distribution of body water between compartments may be insufficient, compromising vital organ function. Symptoms of this condition include fatigue, weakness, headaches, and muscular cramps."



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Is it possible to add minerals back into RO filters?

It is becoming increasingly popular to add minerals back to reverse osmosis water since reverse osmosis water has been scientifically proven to have adverse side effects. In response, scientists advising the World Health Organization said that "there is no guarantee that any of the commonly used methods of re-mineralization are optimal since the water does not contain all of its beneficial constituents."

Even a relatively low intake of a given element through drinking water can play a significant health-promoting role."

Reproducing natural water with all its minerals and trace elements is practically impossible. If healthful alternatives are available, why risk the side effects of reverse osmosis water?

The World Health Organization report continues...

Magnesium and calcium are both essential elements. Bones and teeth are largely composed of calcium.

As well as regulating neuromuscular excitability and conducting myocardial function, cells also transmit intracellular information and control heart and muscle contractions. Among the many enzymes that require magnesium as cofactors or activators are glycolysis, ATP metabolism, sodium, potassium, calcium transport through membranes, protein synthesis, nucleic acid synthesis, neuromuscular excitability, and muscle contraction.

It is not the primary source of calcium and magnesium we consume, but supplemental intake of these elements from drinking water may be more beneficial to our health than its nutritional contribution expressed in terms of total daily consumption. In industrialized countries, low calcium and magnesium levels in drinking water may not fully compensate for a diet deficient in calcium and magnesium.

Although drinking water, in most cases, does not provide essential nutrients to humans, it may still be necessary for several reasons. Minerals and microelements may not be readily available in the modern diet of many people. Generally, the elements in water exist as free ions, so they are more readily absorbed from water than from food, which is mostly bound to other substances. If a given element is borderline deficient, even a relatively low intake of the element through drinking water may play a significant protective role.

The consumption of water low in calcium and magnesium has been associated with increased cardiovascular mortality and morbidity in many countries worldwide since the early 1960s.



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A recent study suggests that children who consume low-calcium water (reverse osmosis water) may be more likely to fracture.

(Verd Vallespir et al. 1992), certain neurodegenerative diseases (Jacqmin et al. 1994), preterm birth and low birth weight (Yang et al. 2002) as well as cancer (Yang et al. 1997; Yang et al. 1998).

Water containing low magnesium levels has been linked both to sudden death (Eisenberg 1992; Eisenberg et al. 1995; Garzon & Eisenberg 1998), as well as neuronal motor disease (Iwami et al. 1994), pregnancy disorders (preeclampsia) (Melles & Kiss 1992), and certain cancers (Yang et al. 1999a, Yang et al. 2000).

In recent epidemiological studies, reverse osmosis water has been linked to hypertension, coronary heart disease, gastric ulcers, chronic gastritis, goitre, pregnancy complications, as well as a number of new-born and infant complications, such as jaundice, anaemia, fractures and growth disorders.

In reverse osmosis water, all essential elements from food (vegetables, meat, cereals) are lost when reverse osmosis water is used for cooking. In some cases, such losses may exceed 60% for magnesium and calcium, and even more for micro-elements (such as copper 66%, manganese 70%, and cobalt 86%). Using mineralized water for cooking, on the other hand, results in a much lower loss of these elements. There are some reports of even higher calcium content in food after cooking.

Most people's current diets only provide some essential elements in sufficient quantities, so any factor that results in a loss of essential elements and nutrients during processing and preparation could be harmful.

A multi-city study found that women living in cities with low-mineral water were more likely to experience cardiovascular changes (as measured by ECG), high blood pressure, somatoform autonomic dysfunctions, headaches, dizziness, and osteoporosis (as measured by X-ray absorptiometry). living in cities with higher mineral content water.

To be continued