

Illness from tap water

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Bacteria and virus

In every water pipe there are billions of bacteria and virus in layers of sediment and sludge. When released in small numbers, they are instantly killed by the chlorine in the water, but when pieces of sludge are ripped off by pressure changes in the pipes, there is not enough chlorine and you may get "intestinal flue" or some more serious ailment.

Chlorine

Chlorine is a very efficient poison. In normal cases it kills all bacteria and virus in your tap water. In order to be on the safe side and in order to make the chlorine last until the end of the system, water utilities may sometimes add too much chlorine. That is not healthy.

Trihalomethanes

When chlorine breaks down bacteria, trihalomethanes, such as chloroform, trichloroethylene, bromoform, dibromochloromethane, and bromodichloromethane, result. The American authorities have set the limit of trihalomethanes to 100 micrograms per liter. In tap water, the amount of trihalomethanes is normally below 50 microgram per liter, but there are examples of tap water containing up to 1000 micrograms per liter. As long as the water purification plants continue to use chlorine in order to fight bacteria, there is going to be some trihalomethanes in the drinking water.

Aluminum

Scientific studies, in the USA, Guam, Norway and England, have shown a connection between an the amount of aluminum in drinking water and the number of neural disorders. One of these disorders is Alzheimer's disease, a serious kind of senility which begins with loss of memory and confusion and ends with death. Aluminum is also suspected of increasing the number of "normal" senile dementia and Parkinson's.

Other contaminants

In addition to bacteria, virus, chlorine, trihalomethanes and aluminum, there are also other kinds of unhealthy substances in our drinking water: nitrate, copper, lead, cadmium, arsenic, radon, asbestos, etc. Limits for all of these substances are controlled at the water utility, but some contaminants get into the water on its way to the tap.

"It is well known that water quality can deteriorate in the system between the point of treatment and consumption. For example, many mechanisms can introduce bacteria into drinking water during distribution. These include open reservoirs, enclosed reservoirs to which chlorine is not added, new construction that may disturb the existing distribution system, main breaks (which may become an increasing problem as distribution system age), back pressure, dead ends in the mains with stagnant water, and living organisms that may release bacteria into the drinking water when the mains are disturbed. In addition to bacterial contamination, corrosion by-products can also cause deterioration of water quality and it is well established that disinfection by-products, forming during treatment, increase with time in the distribution system." from **Effects of the distribution system on drinking water quality**, R.M. Clark, J.A. Goodrich, L.J. Wymer, Risk Reduction Engineering Laboratory, Office of Research and Development US. Environmental Protection Agency, Cincinnati, Ohio 45268, USA. - J Water SRT - Aqua Vol. 42, No 1, pp. 30-38, 1993.