

Asbestos exposure via tap water

executive summary



Asbestos is a harmful substance. Inhaling asbestos fibres (inhalation exposure) can lead to cancer. However, there are still few data on the effects of swallowing asbestos (oral exposure). Asbestos can enter tap water in very low concentrations because part of the drinking water supply system consists of asbestos cement pipes. The State Secretary for Infrastructure and Water Management has asked the Health Council for advice on the risk of oral exposure to asbestos and the possible need for measures. The Committee on Risks of Oral Exposure to Asbestos considered that question. It has focused on tap water, as there are no other significant sources of oral exposure to asbestos in the Netherlands. According to the Committee, there is no increased cancer risk from exposure to asbestos via tap water.

Concentrations of asbestos fibres in Dutch tap water very low

Since 1993, the use of asbestos has been forbidden in the Netherlands. Part of the drinking water network consists of asbestos cement pipes from before the asbestos ban. Asbestos fibres can be released from pipes and end up in the water flowing through them due to wear and tear or work. Drinking water companies work on the composition of the water to prevent erosion of the pipe network as much as possible. In addition, water quality

is measured periodically. In most measurements, concentrations were so low that the presence of asbestos could not be determined.

No evidence of increased cancer risk at much higher concentrations

To determine any health risk from oral exposure to asbestos in tap water, the Committee compared measured concentrations with results from epidemiological studies, all conducted abroad. In those studies, a link with the occurrence of cancers in the digestive system, especially gastrointestinal tumours, has been examined. In most of the epidemiological studies, no link was found between exposure to asbestos fibres in drinking water and the occurrence of gastrointestinal tumours. In these studies, there were much higher concentrations of asbestos fibres than measured in Dutch tap water: millions of fibres per litre compared to a few hundred in the Netherlands. According to the Committee, the conclusion is justified that there is no increased risk of occurrence of gastrointestinal or other types of tumours due to oral exposure to asbestos in Dutch tap water.

Also no health risk from exposure via inhalation of evaporated tap water

Asbestos in tap water can lead to exposure not only through drinking or food preparation, for example, but also through inhalation while showering or using humidifiers. Namely, asbestos fibres from tap water can then become airborne. The Committee estimated the concentration of asbestos fibres in the air based on measured concentrations in tap water.

Exposure via showers and humidifiers remains both below the background concentration to which the general population is exposed in outdoor air and below the so-called negligible risk level: the concentration at which risks to humans are negligible.



No justification for further action

The Committee concludes that there is no justification for further measures to reduce exposure to asbestos via tap water.

However, the Committee does recommend continuing the measurements that the Association of Drinking Water Companies in the Netherlands (VEWIN) now carries out periodically. In doing so, it is important to record the conditions under which all measurements were taken. This will provide insight into causes of elevated concentrations and possibly further reduce exposure. The Committee also recommends taking additional measurements if the situation warrants it, for example when new drinking water sources are commissioned, after extensive work in asbestos cement pipes or if there are concerns due to other circumstances.

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