

What Science and Medical Experts have to say. . .

[WATER CONDITIONING & PURIFICATION - March 2001](#)

“Chlorine is used almost universally in the treatment of public drinking water because of its toxic effect on harmful bacteria and other waterborne, disease-causing organisms. But there is a growing body of scientific evidence that shows that chlorine in drinking water may actually pose greater long-term dangers than those for which it was used to eliminate. These effects of chlorine may result from either ingestion or absorption through skin. Scientific studies have linked chlorine and chlorination by-products to cancer of the bladder, liver, stomach, rectum, and colon, as well heart disease and arteriosclerosis (hardening of the arteries), anemia, high blood pressure, and allergic reactions. There is also evidence that shows that chlorine can destroy protein in our body and cause adverse effects on skin and hair. The presence of chlorine in water may also contribute to the formation of chloramines in the water, which can cause taste and odor problems. Since chlorine is required by public health regulations to be present in all public drinking water supplies, it is up to the individual to remove it at the point-of-use in the home”.

[KEMYSTS LABORATORY - Riddle, Ph.D.](#)

“In June 1988 the US National Cancer Institute released the results of an intensive 10,000 – person study, which showed that people who drink chlorinated water for long periods of time, have twice the incidence of bladder cancer as those who don’t drink chlorinated water”.

[ON THE WATER FRONT: MAKING YOUR WATER SAFE TO DRINK](#)

“Conservative calculations indicate that taking a shower exposes you to the equivalent of consuming an additional two liters of chlorinated water each day. Inhalation and skin absorption of chloroform and chlorine by-products is greatest in the shower, where these gases are vaporized.”

[THE WATER YOU DRINK: HOW SAFE IS IT?](#)

“While the purity of our drinking water is of primary importance, contaminants and chlorine byproducts also enter our bodies through the skin via the water in which we bathe and swim. Also, our lungs absorb toxic fumes from the gaseous chlorine byproducts that are released in a steamy shower. Chlorine in shower water can strip protein from our hair and skin causing dry, irritated eyes, itchy skin, and dandruff.”

[WATER: THE ULTIMATE CURE](#)

“The total inhalation exposure (summation of the three scenarios: shower, pre- and post-cooking activities and cooking) was found to be comparable with that for direct ingestion, indicating that inhalation is an important pathway for THM exposure from drinking water.”

[SCI TOTAL ENVIRON -Jan 31, 2000](#)

“The use of chlorine for water treatment to reduce the risk of infectious disease may account for a substantial portion of the cancer risk associated with consumption and use of chlorinated water.”

[ENVIRON HEALTH PERSPECT - Nov. 1995](#)

“Strong relationships were identified between the THM breath concentrations collected after a shower and both the THM water concentration and the THM exposure from a shower. . . .”

[ENVIRON HEALTH PERSPECT - Feb. 1999](#)

“Exposures to chlorination by-products (CBP) within public water supplies are multi-route in water. Cold water is primarily used for ingestion, while a mixture of cold water and hot water is used for washing, showering and bathing, etc. These later two activities result in inhalation and dermal exposure. The overall THM exposures calculated using the THM concentration in heated water were 50% higher than those calculated using the THM concentration present in cold water.”

[RISK ANAL - Feb. 1994](#)

“Especially for volatile organic micro-pollutants, exposure routes from drinking water other than ingestion must be taken into account (inhalation and percutaneous uptake through bathing and swimming in chlorinated water)”.

[FOOD CHEMISTRY](#)

“Individuals are exposed to volatile compounds present in tap water by ingestion, inhalation and dermal absorption.”

[ENVIRON HEALTH PERSPECT - Jan. 1996](#)

“As a result, entry by inhalation route is as important as entry by ingestion route, when conducting exposure analyses of contamination from volatile organic compounds such as TCE.”

[TOXICAL IND HEALTH - Mar.-April 1996](#)

“Although ingestion is commonly considered to be the primary source of exposure to chloroform from tap water, inhalation and skin absorption exposure concentrations in swimming pools were found to be even higher.”

[SCI TOTAL ENVIRON - 11 Jul. 1998](#)

“However, other exposure routes, such as dermal absorption and inhalation, may be important components of an individual’s total exposure to drinking water disinfection by-products.” “The results from this study indicate that household activities such as bathing and showering are important routes for human exposure to THMs.”

[EXOP ANAL ENVIRON EPIDEMIOL - Jul.-Aug. 2000](#)

“Recently, showers have been suspected to be an important source of indoor exposure to volatile organic compounds (VOCs).” “Since estimates of chloroform risk from domestic water use for the three exposure routes—ingestion, inhalation and dermal—are similar, all routes must be used to calculate the total risk when making policy decisions regarding the quality of the municipal water supply.”

[RISK ANAL - Dec. 1990](#)

“A new statistical analysis indicates that people who drink chlorinated water run a 21 percent greater risk of bladder cancer and a 38 percent greater risk of rectal cancer than people who drink water with little or no chlorine.” “I am quite convinced, based on this study, that there is an association between cancer and chlorinated water.”

[SCIENCE NEWS - 11 July 1992](#)

“People who regularly drink water containing chlorine have been found to have a higher risk of bladder cancer by some researchers.”

[PREVENTION - Aug. 1994](#)

“It’s time for government and industry to act on the knowledge that chlorine is a profound threat to human health” says Coling, “and the evidence has shown that the time to start is now.”

[CHEMICAL WEEK - 21 Dec. 1994](#)

“Taking long hot showers is a health risk, according to research presented last week in Anaheim, California, at a meeting of the American Chemical Society. Showers, and to a lesser extent baths, lead to greater exposure to toxic chemicals contained in water supplies than does drinking the water. The chemicals evaporate out of the water and are inhaled. They can also spread through the house and be inhaled by others. House-holders can receive 6 to 100 times more of the chemical by breathing the air around showers and bath than they would by drinking the water.”

[NEW SCIENTIST - 18 September 1986](#)

“Studies indicate the suspect chemicals can also be inhaled and absorbed through the skin during showering and bathing. Ironically, even the chlorine widely used to disinfect water produces carcinogenic traces. Though 7 out of 10 Americans drink chlorinated water, its safety over the long term is uncertain. Drinking chlorinated water may as much as double the risk of the Bladder Cancer, which strikes 40,000 people a year.”

[U.S. NEWS & WORLD REPORT - July 29, 1991](#)

“A long hot shower can be dangerous. The toxic chemicals are inhaled in high concentrations.”

[BOTTOM LINE - August 15, 1987](#)

“On one hand, chlorination has freed civilization from the constant dangers of waterborne epidemics. On the other hand in the mid-70s scientists discovered that chlorination could create carcinogens in water. 80% of the population drinks chlorinated water. There was a higher incidence of cancer of the esophagus, rectum, breast and larynx and of Hodgkin’s Disease among those drinking chlorinated surface waters. Volatile organics can evaporate from water in a shower or bath. Conservative calculations indicate that inhalation exposures can be as significant as exposure from drinking the water, that is, one can be exposed to just as much by inhalation during a shower as drinking 2 liters of water a day. People who shower frequently could be exposed through ingestion, inhalation and/or dermal absorption. Skin absorption of contaminant has been underestimated and ingestion may not constitute the sole or even primary route of exposure.”

[AMERICAN JOURNAL OF PUBLIC HEALTH, Vol. 74-1984](#)

“Showering is suspected as the primary cause of elevated levels of chloroform in nearly every home because of the chlorine in the water.”

[ENVIRONMENTAL PROTECTION AGENCY](#)

“A Professor of Water Chemistry at the University of Pittsburgh claims that exposure to vaporized chemicals in the water supplies through showering, bathing, and inhalation is 100 times greater than through drinking water.”

“As chlorine is added to kill pathogenic microorganisms, the highly reactive chlorine combines with fatty acids and carbon fragments to form a variety of toxic compounds, which comprise about 30% of the chlorination by-products.”

“Epidemiological studies suggest a link between ingestion of toxic chemicals in the water and elevated cancer mortality risks.”

[THE NADER REPORT – TROUBLED WATERS ON TAP](#)

“The National Academy of Sciences estimates that 200 to 1000 people die in the United States each year from cancers caused by ingesting the contaminants in water. The major health threat posed by these pollutants is far more likely to be from their inhalation as air pollutants. The reason that emissions are high is that because water droplets dispersed by the shower head have a larger surface-to-volume ratio than water streaming into the bath.”

[SCIENCE NEWS, Vol. 130](#)

“The cause of arteriosclerosis and resulting heart attacks and strokes is none other than the ubiquitous chlorine in our drinking water.”

[CORONARIES / CHOLESTEROL / CHLORINE - Joseph Price, MD](#)

“In the vast majority of cases where germ-free water is required whether for public supply, or in the swimming pool, the process of disinfection will involve the use of chlorine in one form or another.”

“Chlorine gas was despicably used during WW1. When the war was over, the use of chlorine was diverted to poisoning germs in our drinking water. The combination of chlorine (when in drinking water) and animals fats results in arteriosclerosis, heart attacks, and death.”

“Chlorine is the greatestcrippler and killer of modern times. While it prevented epidemics of one disease, it was creating another. Two decades ago, after the start of chlorination our drinking water in 1904, the present epidemic of heart trouble, cancer and senility began.”

“Cancer risk among people drinking chlorinated water is 93% higher than among those whose water does not contain chlorine.”

[U.S. COUNCIL OF ENVIRONMENTAL QUALITY](#)

“Drinking tap water that is chlorinated is hazardous, if not deadly, to your health.”

[HEALTHY WATER FOR A LONG LIFE](#)

“Known carcinogens are found in drinking water as a direct consequence of the practice of chlorination, a long established public health practice for the disinfection of drinking water.”

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