The problem
Unfortunately, chlorine does more than kill germs. When chlorine comes into contact with organic matter—dirt, sloughed-off skin, perspiration, soap, shampoo, and body lotions—it causes a chemical reaction. This reaction produces byproducts, the most common of which are trihalomethanes (THMs).

These gaseous compounds, including chloroform, are discharged when you shower. You absorb THMs directly through your skin or by inhaling them. The vaporized particles can also spread through the house where others inhale them as well.

The question is: While chlorine is killing disease-causing organisms, what is it doing to you?

The effects
In 1986 an article by Ian Anderson in New Scientist magazine warned that taking long, hot showers posed a health risk because bathers could receive up to 100 times more chemicals by breathing the air around showers and baths than by drinking tap water.

Some people who shower with chlorinated water experience dry, brittle hair; itchy, flaky skin; or red, irritated eyes. For asthma sufferers or people with skin conditions, chlorine byproducts can intensify the problems. Some scientists claim these byproducts are responsible for a host of health problems ranging from increased cancer and heart disease to miscarriages.

The research
The research is contradictory. Several American studies published in the late 1990s showed an increased incidence of colon, bladder, and rectal cancers among people who drank chlorinated water for 35 to 40 years.

A 1998 California study suggested an increase in miscarriages among women...
who drank large amounts of tap water with high levels of THMs. A more detailed 2005 US study that investigated women's patterns of water use, including drinking and bathing habits, uncovered no clear-cut evidence that THMs harmed women or their developing infants.

Health Canada has established a guideline for THMs of 0.1 milligrams per litre and believes, at that level, the cancer risk is extremely low. The government has set up a task force to review guidelines for THMs and other chlorination byproducts and to study further research regarding potential health effects.

The solution
Given the potential risk of THMs, the simplest solution is to buy an activated charcoal shower filter system that connects to your shower. They cost around $50 and remove about 90 percent of chlorine, plus sediment, rust, and odours from your water. Replace the cartridge every three to six months, depending on the model, for around $20. Keep the bathroom well ventilated while showering; take cooler, shorter showers; and go easy on the shampoo and soap.

Even if chlorine turns out not to be a health risk, filtering out the disinfectant from your shower should result in moister, younger looking skin and softer, more manageable hair. If it does turn out to be a carcinogen or cause heart or lung problems, removing chlorine and its THMs could potentially add years to your life.

"Chlorine byproducts can intensify the problems for asthma sufferers or people with skin conditions."

Harriet Cooper is a Toronto freelance writer who specializes in health issues.