



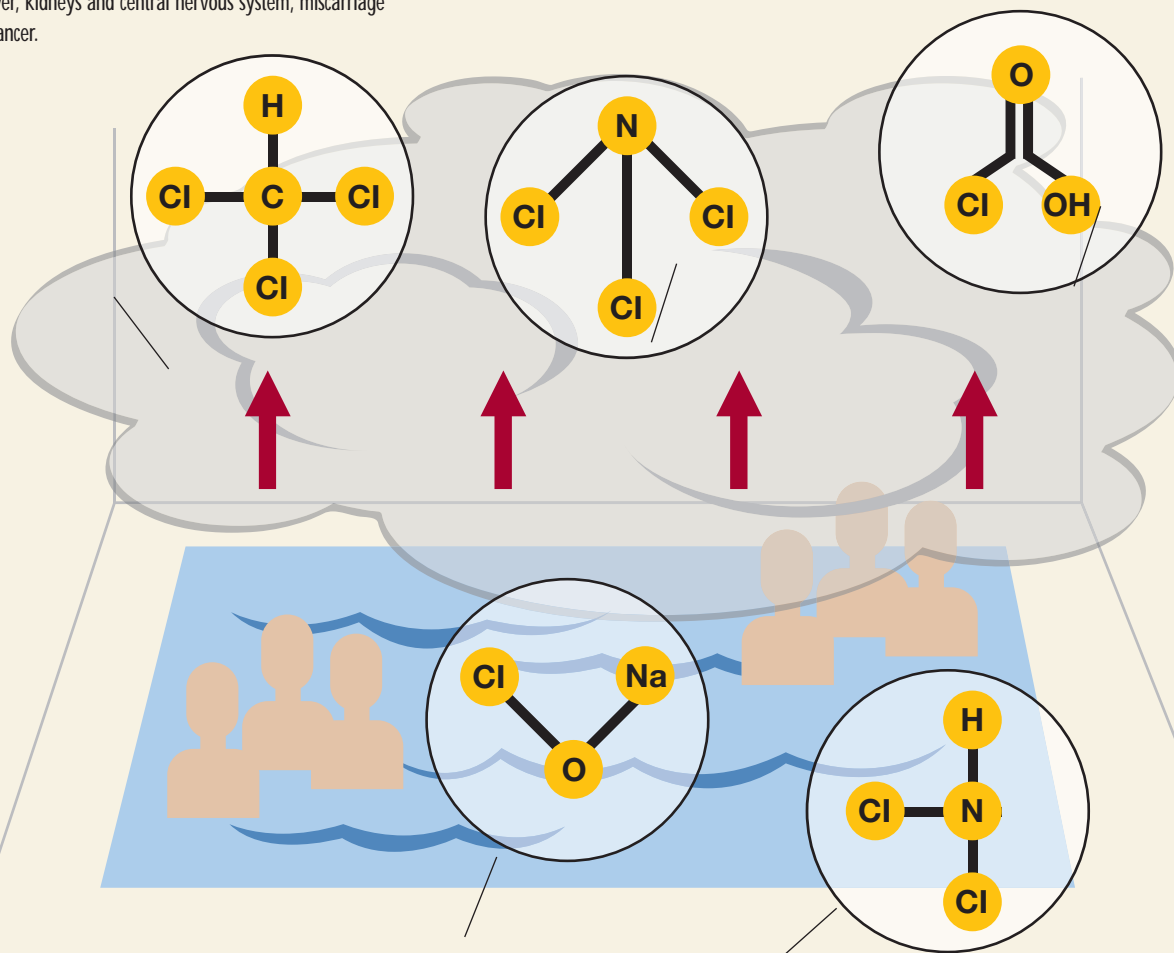
AIR QUALITY 101

In an indoor pool environment, attention to air quality is essential. As chlorine reacts to organic matter introduced by swimmers, it forms byproducts that linger over the pool. When swimmers come up for air, they exchange the carbon dioxide in their lungs for fresh oxygen. In many facilities, they also breathe in fumes that, in great doses, can be harmful. Here's a look at what's in the air.

TRIHALOMETHANES Common types include chloroform and bromoform. Long-term, low-level exposure does not cause problems in people, but laboratory animal tests have shown that high doses may cause birth defects, damage to the liver, kidneys and central nervous system, miscarriage and cancer.

NITROGEN TRICHLORIDE This type of chloramine creates a heavy odor that can trigger asthma and allergies. The chloramines also cause eye and nose irritations, breathing problems and red eyes.

HALOACETIC ACIDS When ingested in large quantities, haloacetic acids have been shown to cause cancer in laboratory animals.



FREE CHLORINE Sanitizer that is used to kill bacteria and viruses in the water.

MONOCHLORAMINES First step in the breakdown process of free chlorine. Some water companies use monochloramines instead of free chlorine to sanitize water. The problem is that it introduces chloramines into the water, which then continue to bond with ammonia to form dichloramines and then nitrogen trichloride.