



PUBLIC HEALTH STATEMENT

Chlorine Dioxide and Chlorite

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Division of Toxicology

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1.7 HOW CAN FAMILIES REDUCE THE RISK OF EXPOSURE TO CHLORINE DIOXIDE AND CHLORITE

If your doctor finds that you have been exposed to substantial amounts of chlorine dioxide or chlorite, ask whether your children might also have been exposed. Your doctor might need to ask your state health department to investigate.

Families that drink water treated with chlorine dioxide may reduce the risk of exposure to chlorine dioxide and chlorite ions by drinking bottled water that has not been treated with chlorine dioxide or chlorite ions.

1.8 IS THERE A MEDICAL TEST TO DETERMINE WHETHER I HAVE BEEN EXPOSED TO CHLORINE DIOXIDE AND CHLORITE?

Although no medical tests are available to determine whether you have been exposed to chlorine dioxide or chlorite, exposure to very large amounts may result in damage to red blood cells that can be observed through routine blood tests.

1.9 WHAT RECOMMENDATIONS HAS THE FEDERAL GOVERNMENT MADE TO PROTECT HUMAN HEALTH?

The federal government develops regulations and recommendations to protect public health. Regulations *can* be enforced by law. The EPA, the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration

(FDA) are some federal agencies that develop regulations for toxic substances. Recommendations provide valuable guidelines to protect public health, but *cannot* be enforced by law. The Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH) are two federal organizations that develop recommendations for toxic substances.

Regulations and recommendations can be expressed as “not-to-exceed” levels, that is, levels of a toxic substance in air, water, soil, or food that do not exceed a critical value that is usually based on levels that affect animals; they are then adjusted to levels that will help protect humans. Sometimes these not-to-exceed levels differ among federal organizations because they used different exposure times (an 8-hour workday or a 24-hour day), different animal studies, or other factors.

Recommendations and regulations are also updated periodically as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for chlorine dioxide and chlorite include the following:

OSHA regulates the level of chlorine dioxide in workplace air. The occupational exposure limit for an 8-hour workday, 40-hour workweek is 0.1 parts per million (0.28 milligrams per cubic meter [mg/m^3]). The EPA has set a maximum contaminant level of 1 mg/L for chlorite in drinking water and a goal of 0.8 mg/L for both the maximum residual disinfectant level for chlorine dioxide and the maximum contaminant level for chlorite in drinking water that has been treated with chlorine dioxide as a disinfectant.

DEPARTMENT of HEALTH AND HUMAN SERVICES, Public Health Service
Agency for Toxic Substances and Disease Registry