

# Riot Control Agents

## What are Riot Control Agents?



Riot control or incapacitating agents, sometimes referred to as “tear gas”, are a group of aerosol-dispersed chemical compounds. These compounds temporarily make people unable to function by causing irritation to the eyes, mouth, throat, lungs and skin. Agents of these types can be dispersed from grenade, bomb, spray or canister and are commonly employed by police and military forces to regain control of crowds.

Several different compounds are considered to be riot control agents. The most common compounds are known as:

- Chloroacetophenone (CN or Mace7)
- Chlorobenzylidenemalononitrile (CS or Tear Gas)
- Adamsite (irritating and vomiting agent that acts very similarly to CN and CS)

For immediate assistance, call the Poison Control Center Hotline: 1-800-222-1222.

Other examples may include:

- Oleoresin Capsicum (OC or Pepper Spray)
- Chloropicrin (PS), which is also used as a fumigant (uses fumes to disinfect an area)
- Bromobenzylcyanide (CA)
- Dibenzoxazepine (CR) and combinations of various agents

## Exposure

Riot control agents are used by law enforcement officials for crowd control, and are an effective weapon as they can disable an assailant. Some police SWAT teams have small grenades that contain rubber pellets and/or CS. Riot control agents are also widely used by individuals in the form of pepper spray for personal protection.

If exposed, remove clothing, taking care to avoid skin contact with contaminated clothing, and rapidly wash the entire body with soap and water. If the eyes are burning or vision is blurred, rinse eyes out with plain water for 10 to 15 minutes, if wearing contacts remove and place with contaminated clothing. Seek medical care immediately. Clothing, and any other object that came into contact with the contaminated clothing, should be placed inside a plastic bag, taking care to avoid skin contact with contaminated clothing. Seal the bag, place inside another plastic bag and call 911 or alert emergency services to its location so it can be handled appropriately.

## How Riot Control Agents Work

Riot control agents work by causing irritation to the area of contact, such as eyes, skin or nose, within seconds of exposure. The effects of exposure to a riot control agent are usually short-lived (15-30 minutes) after the person has been removed from the source and decontaminated.

The extent of poisoning caused depends on the amount of agent to which a person was exposed, the location of exposure (indoors versus outdoors), how the person was exposed, and the length of time of the exposure.

## Health Effects

People exposed to riot control agents may experience some or all of the following symptoms immediately after exposure:

- Eyes: Excessive tearing, burning, blurred vision, redness
- Nose: Runny nose, burning, swelling
- Mouth: Burning, irritation, difficulty swallowing, drooling
- Lungs: Chest tightness, coughing, choking, wheezing, shortness of breath
- Skin: Burns, rash
- Other symptoms: Nausea and vomiting

Long-lasting exposure or exposure to a large dose of riot control agent, especially in a closed setting, may cause severe effects such as the following:

- Blindness
- Glaucoma: A serious eye condition that can lead to blindness
- Immediate death: Due to severe chemical burns to the throat and lungs and respiratory failure

Note: Showing these signs and symptoms does *not* necessarily mean that a person has been exposed to riot control agents.

## Treatment

Since inhalation is likely to be the primary route of exposure, leave the area where the agents were released and get to fresh air. Avoid dense, low-lying clouds of riot control vapor. Go to the highest ground possible, because riot control agents will form a dense vapor cloud that can travel close to the ground. If the release of the agents was indoors, get out of the building. Local officials may recommend that persons near the exposure evacuate or shelter-in-place.

Treatment consists of helping the affected person get more oxygen in their blood and stopping agent-caused chemical burns from getting worse. Medications that are used to treat asthma, such as bronchodilators and steroids, may also be used to help the person breathe.

Eye exposures are treated by rinsing the eyes with water until there is no evidence of riot control agents in the eyes. No antidote exists for poisoning. Burn injuries to the skin are treated with standard burn management techniques, including use of medicated bandages.



**For more sources of information on this topic visit or contact:**

ST. CLAIR COUNTY HEALTH DEPARTMENT [www.scchealth.co](http://www.scchealth.co)

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES [www.michigan.gov/mdhhs](http://www.michigan.gov/mdhhs)

CENTERS FOR DISEASE CONTROL AND PREVENTION [www.cdc.gov](http://www.cdc.gov)

MICHIGAN DEPARTMENT OF COMMUNITY HEALTH TOXICS AND HEALTH HOTLINE: 1-800-648-6942

MICHIGAN OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (MIOSHA) [www.michigan.gov/miosha](http://www.michigan.gov/miosha)

THE AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY: [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov) 1-888-422-8737