



## FACT SHEET

Interim Document, 7-30-03

## Facts About Riot Control Agents

### What riot control agents are

- Riot control agents (sometimes referred to as “tear gas”) are chemical compounds that temporarily make people unable to function by causing irritation to the eyes, mouth, throat, lungs, and skin.
- Several different compounds are considered to be riot control agents. The most common compounds are known as chloroacetophenone (CN) and chlorobenzylidenemalononitrile (CS). Other examples include chloropicrin (PS), which is also used as a fumigant (that is, a substance that uses fumes to disinfect an area); bromobenzylcyanide (CA); dibenzoxazepine (CR); and combinations of various agents.

### Where riot control agents are found and how they are used

- Riot control agents are used by law enforcement officials for crowd control and by individuals and the general public for personal protection (for example, pepper spray).
- CS is also used in military settings to test the speed and ability of military personnel to use their gas masks.

### How you could be exposed to riot control agents

- Because they are liquids or solids (for example, powder), riot control agents such as CN and CS could be released in the air as fine droplets or particles.
- If agents are released into the air, people could be exposed to them through skin contact, eye contact, or breathing.

### How riot control agents work

- The extent of poisoning caused by riot control agents depends on the amount of riot control 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.
- Riot control agents work by causing irritation to the area of contact (for example, eyes, skin, 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 (cleaned off).

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### **Immediate signs and symptoms of exposure to a riot control agent**

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 sensation, noisy breathing (wheezing), shortness of breath
- Skin: burns, rash
- Other: 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
- Respiratory failure possibly resulting in death

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

### **Long-term health effects of exposure to riot control agents**

- Prolonged exposure, especially in an enclosed area, may lead to long-term effects such as eye problems including scarring, glaucoma, and cataracts, and may possibly cause breathing problems such as asthma.
- If symptoms go away soon after a person is removed from exposure to riot control agents, long-term health effects are unlikely to occur.

### **How you can protect yourself, and what to do if you are exposed to riot control agents**

- Since inhalation is likely to be the primary route of exposure, leave the area where the riot control agents were released and get to fresh air. Quickly moving to an area where fresh air is available is highly effective in reducing exposure to riot control agents.
  - If the riot control agents were released outdoors, move away from the area where the agents were released. Avoid dense, low-lying clouds of riot control agent 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 riot control agents was indoors, get out of the building.
- If you are near a release of riot control agent, emergency coordinators may tell you to either evacuate the area or “shelter in place” inside a building to avoid being exposed to the chemical. For more information on

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evacuation during a chemical emergency, see “Facts About Evacuation” at <http://www.bt.cdc.gov/planning/evacuationfacts.asp>. For more information on sheltering in place during a chemical emergency, see “Facts About Sheltering in Place” at <http://www.bt.cdc.gov/planning/Shelteringfacts.asp>.

- If you think you may have been exposed to riot control agent, you should remove your clothing, rapidly wash your entire body with soap and water, and get medical care as quickly as possible.
- *Removing your clothing:*
  - Quickly take off clothing that may have riot control agent on it. Any clothing that has to be pulled over the head should be cut off the body instead of pulled over the head.
  - If you are helping other people remove their clothing, try to avoid touching any contaminated areas, and remove the clothing as quickly as possible.
- *Washing yourself:*
  - As quickly as possible, wash any riot control agent from your skin with large amounts of soap and water. Washing with soap and water will help protect people from any chemicals on their bodies.
  - If your eyes are burning or your vision is blurred, rinse your eyes with plain water for 10 to 15 minutes. If you wear contacts, remove them and put them with the contaminated clothing. Do not put the contacts back in your eyes (even if they are not disposable contacts). If you wear eyeglasses, wash them with soap and water. You can put your eyeglasses back on after you wash them. If you are wearing jewelry that you can wash with soap and water, you can wash it and put it back on. If it cannot be washed, it should be put with the contaminated clothing.
- *Disposing of your clothes:*
  - After you have washed yourself, place your clothing inside a plastic bag. Avoid touching contaminated areas of the clothing. If you can't avoid touching contaminated areas, or you aren't sure where the contaminated areas are, wear rubber gloves, turn the bag inside out and use it to pick up the clothes (inverting the bag over the clothes when you have all the clothes picked up), or put the clothes in the bag using tongs, tool handles, sticks, or similar objects. Anything that touches the contaminated clothing should also be placed in the bag. If you wear contacts, put them in the plastic bag, too.
  - Seal the bag, and then seal that bag inside another plastic bag. Disposing of your clothing in this way will help protect you and other people from any chemicals that might be on your clothes.
  - When the local or state health department or emergency personnel arrive, tell them what you did with your clothes. The health department or emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.
- For more information about cleaning your body and disposing of your clothes after a chemical release, see “Chemical Agents: Facts About Personal Cleaning and Disposal of Contaminated Clothing” at <http://www.bt.cdc.gov/planning/personalcleaningfacts.asp>.
- Seek medical attention right away. Dial 911 and explain what has happened.

## How exposure to riot control agents is treated

- Treatment consists of helping the affected person get more oxygen in his or her blood and of 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.

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- 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 from riot control agents.
- Burn injuries to the skin are treated with standard burn management techniques, including use of medicated bandages.

## **How you can get more information about riot control agents**

You can contact one of the following:

- Regional poison control center (1-800-222-1222)
- Centers for Disease Control and Prevention
  - Public Response Hotline (CDC)
    - English (888) 246-2675
    - Español (888) 246-2857
    - TTY (866) 874-2646
  - Emergency Preparedness and Response Web site (<http://www.bt.cdc.gov/>)
  - E-mail inquiries: [cdcresponse@ashastd.org](mailto:cdcresponse@ashastd.org)
  - Mail inquiries:  
Public Inquiry c/o BPRP  
Bioterrorism Preparedness and Response Planning  
Centers for Disease Control and Prevention  
Mailstop C-18  
1600 Clifton Road  
Atlanta, GA 30333

This fact sheet is based on CDC's best current information. It may be updated as new information becomes available.

For more information, visit [www.bt.cdc.gov](http://www.bt.cdc.gov) or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)

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