

Minnesota Poison Control System Treatment Guideline: Riot Control Agents

Common Agents:

- Chloracetophenone(CN), chlorobenzylidenemalononitrile(CS), chloropicrin(PS), bromobenzylcyanide(CA), dibenzoxazepine(CR), oleoresin capsicum (OC)
- May be stored and used in liquid, solid, or powder form.

Mechanism of action:

- Irritation to areas of contact within seconds of exposure.
 - Duration of action minutes to hours depending on dose of exposure and any decontamination that occurs.

Signs/Symptoms:

- **Eyes:** excessive tearing, burning, blurred vision, redness
- **Nose:** runny nose, burning, swelling
- **Mouth:** burning, irritation, difficulty swallowing, drooling
- **Lungs:** chest tightness, coughing, choking sensation, wheezing, shortness of breath. Fatal asthma attacks have been related to riot control agent exposure.
- **Skin:** burns (especially in hot weather or if liquid on clothing), rash
- **GI:** nausea, vomiting
- **Note:** Long term exposure or large doses can lead to: blindness, glaucoma, respiratory failure, chemical burns to throat and lungs

Decontamination:

- Move the exposed patient to fresh air.
- Remove all clothing and seal in a plastic bag.
- Wash skin with soap and water (consider 25% dish soap and 75% water). Agents can be very persistent and require copious amounts of irrigation. In such cases, room temperature or warm water should be used to avoid hypothermia.
 - Alternative irrigation or topical agents such as Maalox, lidocaine, or milk have NOT been shown to improve symptoms compared with water after OC exposure.¹
- For severe dermal discomfort, continue with copious irrigation with water or soap/water solution. **DO NOT USE BLEACH.**
 - Scrubbing or rubbing the area vigorously may irritate skin more.¹ Gentle irrigation is recommended.
- Clothing may later be safely washed in washer with usual detergent – fill washer then place opening of bag underwater to prevent re-exposure and press clothes into water, remove bag, wash hands with soap and water.
- **Care providers should be careful not to come in direct contact with the substance.**
 - **Wear splash-proof PPE when helping decontaminate patients.**
 - **May require respirator use if high concentrations on patients (PAPR with filter for riot control agents / charcoal filter or SCBA).**
 - **Use Universal Precautions after decontamination.**

Treatment:

- No specific antidotes for riot control agents.
- Treatment is typically symptomatic after decontamination has been completed.
- O₂, bronchodilators, steroids and/or intubation may be necessary in case of significant respiratory involvement.
- Eye exposures are treated by irrigating eyes with water or NS.

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- Burns require standard burn treatment.

For more information contact Minnesota Poison Control System at 1-800-222-1222

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References

1. Barry JD, Hennessy R, McManus JG Jr. A randomized controlled trial comparing treatment regimens for acute pain for topical oleoresin capsaicin (pepper spray) exposure in adult volunteers. *Prehosp Emerg Care.* 2008;12(4):432-437.