



Crowd Control Agents (formerly riot control agents)

Information for Healthcare Facilities

Adapted with permission from the Kansas Poison Control.

Last revised: August 2026

Causative Agent

Crowd control agents are intentionally non-lethal chemical compounds used to temporarily disable exposed individuals. Examples include mace (CN), tear gas (CS), and pepper spray (OC).

Hospital Precautions

Standard Precautions

Transmission

Most likely to be disseminated as aerosols or as smoke from incendiary devices when used for crowd control.

Decontamination

Contaminated clothing should be removed and placed in airtight bags to prevent secondary exposures. Skin irrigation with copious amounts of cold water should be used for significant dermal exposures. Exposed eyes should be flushed with water for 10-15 minutes.

Mechanism

Agents such as CN and CS are alkylating agents and react with sulfhydryl-containing compounds and enzymes, resulting in tissue injury. OC activates heat-dependent nociceptors, causing those exposed to feel the sensation of heat or burning.

Routes

Inhalation, ocular, dermal, mucous membrane contact.

Symptoms/ Onset

Symptom onset is within seconds to minutes. Delayed onset dermatitis could occur as well.

- Ocular symptoms: irritation, conjunctival injection, lacrimation, photophobia, and blepharospasm
- Inhalation symptoms: chest tightness, cough, sneezing, wheezing, and increased secretions.
- Those with pre-existing lung disease could develop significant pulmonary symptoms.
- Large inhalational exposure could result in pulmonary edema.
- Dermal exposure (dose dependent): burning sensation, erythema, or vesiculation

Treatment

Primary treatment for all agents is removal from exposure, including removal of contaminated clothing.

In addition to seeking fresh air and decontamination, symptomatic treatment may include topical ophthalmic anesthetics, nebulized bronchodilators, or oral antihistamines and corticosteroids for severely affected individuals.

The M-40 protective mask is effective in preventing aerosol exposure. There is no known prophylaxis for exposure to riot agents.