



Poison HOTLINE

1-800-222-1222

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Did you know

The chemicals most commonly used in tear gas and pepper spray are oleoresin capsicum (OC), ortho-chlorobenzylidene malononitrile (CS), and chloroacetophenone (CN).

Symptoms after an exposure are short-lived (15-30 minutes) with rapid recovery. Mortality is extremely rare and is usually due to respiratory complications combined with exposures occurring in an enclosed space.

Symptoms include intense irritation to eyes, nose and throat, lacrimation, rhinorrhea, skin burning and redness, chest tightness and shortness of breath. Prolonged skin contact can cause burns and blistering.

Decontamination should be started soon after the exposure. Irrigate eyes with copious amounts of tepid water for 15 minutes. Wash skin with soap and water.

Thyroid Medications

The thyroid is a butterfly-shaped gland situated along the windpipe in the neck and uses iodine from food to make two main hormones triiodothyronine (T₃) and thyroxine (T₄). Thyroid medications are made up of synthetic versions of these hormones or desiccated animal thyroid. The thyroid hormones act throughout the body to influence the metabolism and function of many organs, along with regulation of temperature, heart rate, growth and development. T₃ is the active form of the thyroid hormone. The majority of thyroid hormone produced in the body is T₄. Before the body can use T₄, it must be converted to T₃. Deficiencies in the neurotransmitters serotonin and dopamine hamper conversion of T₄ to T₃ and slow down the brain's communication with the thyroid.

Like hyperthyroidism, overdose of thyroid medicines can cause adrenergic overstimulation (thyrotoxicosis), resulting in the clinical effects of tachycardia, diaphoresis, nausea/vomiting, agitation, psychosis, hyperthermia and hypertension. Prolonged stimulation may result in cardiovascular collapse due to high output heart failure. Individuals with normal thyroid function may have higher tolerance to the effects of an acute overdose. Patients with preexisting cardiac disease or chronic overmedication have a lower threshold of toxicity.

The effects of T₃ overdose are manifested within the first 6 hours after ingestion. However, symptoms of T₄ overdose may be delayed 2-5 days while the metabolic conversion to T₃ occurs.

Treatment consists of good supportive care. Obtaining bloodwork for free T₄ and total T₃ concentrations can help to ascertain diagnosis. However, it is important to know that these levels do not strongly correlate to clinical effects or prognosis and are not helpful in guiding therapy. Therapy is guided by the patient's symptoms. Obtain ECG and continuous cardiac monitor. Serious tachyarrhythmias may need a beta-adrenergic blocker such as propranolol. Propylthiouracil (PTU) can be used to block the conversion of T₄ to T₃ but it may have limited usefulness in a large overdose of T₄.

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