

BUREAU OF HEALTH
MAINE DEPARTMENT OF HUMAN SERVICES
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Protocol on the Distribution and Administration of Potassium Iodide

Protocol

On the advice of the Radiation Advisory Committee, Potassium iodide (also known as "KI") will be provided to help protect the people of the State of Maine from some of the harmful effects of exposure to radioactive forms of iodine released into the environment as a result of a nuclear emergency.

It must be stressed that evacuation from an affected area is the priority in protecting the general public against exposure to radiation. Potassium iodide may be used as a preventative measure primarily after evacuation to reduce thyroid exposure from radioactive iodine when exposure occurs before or during evacuation. The Director of the Bureau of Health, Maine Department of Human Services or designee shall order the administration of potassium iodide.

Rationale

Potassium iodide is a thyroidal blocking agent developed for use during nuclear accidents where radioactive forms of iodine may be released as a gas. Potassium iodide is highly effective at blocking or reducing the uptake of radioactive forms of iodine by the thyroid.

Exposure of the thyroid to radiation is known to increase the long term risks of developing thyroid nodules or thyroid cancer. These risks are greatest for children and young adults. There is also an increased risk of hypothyroidism following radiation exposure which may result in effects on growth and development in young children. Potassium iodide administration also may help reduce these potential effects.

Evacuation will provide the greatest safety from radioactive iodine exposure in the events of a nuclear accident. However, there is a possibility that exposure to radioactive iodine could occur before or during evacuation. In this instance, administration of potassium iodide at the reception center may provide protection against thyroid uptake of radioactive iodide.

Recommended Administration

Implementation of this potassium iodide policy should be coordinated with the Maine Emergency Management Agency.

Emergency workers and institutionalized individuals, who may be exposed to radioactive forms of iodide while performing duties or who may be delayed in evacuation, shall be considered for the administration of potassium iodide as a prophylactic measure to prevent radioactive iodine uptake by the thyroid. For others, who have had known or suspected radiation exposure before or during evacuation, potassium iodide should be administered as soon as possible, but preferably no later than 4 hours after the exposure to radioactive forms of iodine. This administration is based upon a determination involving the best judgment of health officials that an individual or group of individuals is likely to be or have been exposed to radioactive forms of iodine such that exposure to the thyroid may meet or exceeds 25 rem.

Dose Guidelines

Individuals who have received a single exposure and do not risk additional exposure should receive potassium iodide for three days. Individuals who risk multiple or chronic exposure should receive potassium iodide for the course of the exposure.

Recommended doses:

Adults (including pregnant women)	130 milligrams/day
Breast Feeding Mothers	130 milligrams/day
Children, older than 12 years	130 milligrams/day
Children, ages 6 to 12	65 milligrams/day
Children, less than 6 years	32 milligrams/day
Nursing infants	receives iodide from mother (transfer to breast milk)

Note: Individuals with known thyroid disorders or allergies toward iodine should avoid the use of KI. The adverse reaction rate of orally administered KI appears to be very small. However, potential reactions are: gastrointestinal upset, iodide-induced hypothyroidism or hyperthyroidism, angioedema, hemorrhage, fevers, periarteritis, hives, and anaphylactic (hypersensitivity) reactions.

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