



Important Information on the Use of Potassium Iodide (KI) Tablets



What is Potassium Iodide (KI)?

KI is a non-prescription drug used to help protect the thyroid when there is a risk that a person might be exposed to a potentially harmful amount of radioactive iodine.

Radioactive iodine or “radioiodines” are by-products of nuclear fission such as that which occurs within a nuclear reactor or as a result of a nuclear weapon explosion. The fission process also produces other dangerous radioisotopes, all of which present an exposure hazard to anyone who remains in close proximity to them once they are released into the environment.

When inhaled or ingested in significant quantities, radioactive particles circulate in the bloodstream where they become available to various body systems. Some concentrate in muscle tissue; others in the bones. Radioiodines concentrate in the thyroid gland, which processes iodine to create hormones that control the body’s metabolism.

How does KI work?

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods like iodized salt or fish. The thyroid can “store” or hold only a certain amount of iodine. In a nuclear radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage. If you take KI, it will block or reduce the chances that radioactive iodine will enter your thyroid gland.

KI will not reduce or prevent the total body exposure that may occur as a result of being in the presence of radioiodine and other radioisotopes released during a nuclear incident.

When should KI be taken?

KI should be taken as soon as possible after public officials tell you. A single dose of KI protects the thyroid gland for 24 hours. A one-time dose at the levels recommended in this fact sheet is usually all that is needed to protect the thyroid gland. In some cases, radioactive iodine might be in the environment for more than 24 hours. If that happens, public officials may tell you to take the second dose 24 hours after the first dose. Do not take it sooner. More KI will not help you because the thyroid can “hold” only certain amounts of iodine. Taking more than one dose per day will increase the chances of side effects.

KI should NOT be used as a substitute for evacuation or sheltering in place when state and local authorities recommend those actions. The most effective means of preventing unnecessary exposure is to follow the broadcast recommendations provided by local officials. KI should NOT be used as a substitute for avoiding consumption of contaminated food, milk and water following a radiological incident.

How much KI should I take?

The U.S. Food and Drug Administration has issued age-related guidelines on the amount of KI that can be safely consumed. These guidelines (listed below) are important to follow, particularly for children and infants whose thyroid glands are more active than adult thyroids and thus more sensitive to iodine levels.

AGE	AMOUNT
Adults over 18 years	two 65 mg tablets (130 mg total)
Children ages 12 to 18 years who weigh at least 150 pounds	two 65 mg tablets (130 mg total)
Children over 12 years to 18 years who weigh less than 150 pounds	1 tablet (65 mg) OR 8 teaspoons liquid mixture (see preparation directions below)
Children over 4 years to 12 years	1 tablet (65 mg) OR 8 teaspoons liquid mixture (see preparation directions below)
Children ages 1 month to 3 years	4 teaspoons liquid mixture (see preparations directions below)
Babies less than 1 month	2 teaspoons liquid mixture (see preparation directions below)

Preparing KI liquid mixture:

- Put one 65 mg KI tablet into a small bowl and grind it into a fine powder using the back of a metal teaspoon against the inside of the bowl. The powder should not have any large pieces.
- Add 4 teaspoons of water to the crushed KI powder in the bowl and mix until the KI powder is dissolved in the water.
- Take the KI water mixture solution and mix it with 4 teaspoons of milk, orange juice, flat soda, raspberry syrup or infant formula.
- The KI liquid mixture can be stored in the refrigerator for up to seven days.

Overdosing children and infants may cause thyroid problems affecting growth and development, and parents and guardians are cautioned to carefully monitor and control the use of the drug.

Do not take more than the recommended dose during a 24-hour period. Consuming additional quantities of the drug will not increase the level of thyroid protection and may cause serious medical complications.

KI is Not Safe for Everyone!

Pregnant women, nursing mothers and individuals taking certain heart medications or anti-psychotic drugs should consult their physicians before deciding to use KI. Taking KI may be harmful for some people because of the high levels of iodine in this medicine. You should not take KI if you know you are allergic to iodine. If you are unsure about this, consult your doctor. A seafood or shellfish allergy does not necessarily mean that you are allergic to iodine.

DO NOT substitute other sources of iodine (such as Iodine tablets for water purification or Tincture of Iodine drops) for KI. These products contain a different form of iodine that can be poisonous if misused.

It's very important to read the information sheet inside your box of KI pills. As with any medication, you should consult your physician to determine if KI is safe for you. Keep this and all drugs out of the reach of children.

Additional information on KI is available at www.Ready.Illinois.gov. If you have any questions regarding KI, contact the Illinois Poison Control Center at 800-222-1222.



The State of Illinois is providing free potassium iodide (KI) tablets to Illinois residents who live within the 10-mile emergency planning zones around Illinois nuclear power plants. KI can provide temporary and limited protection against the uptake of radioactive iodine by the human thyroid gland that might occur in the event of a release from a nuclear power plant or a nuclear explosion.

Each household within an emergency planning zone is eligible to receive a supply of pills adequate for everyone residing in the home. However, you are strongly encouraged to consult with a physician to determine whether KI is safe for all members of your household.

In the event of a possible release of radiation from a nuclear power plant, Illinois emergency response officials will give directions for appropriate protective actions, which would likely include evacuation in the event of a significant nuclear incident. Those messages could also include guidance regarding the administration of KI pills for those who can safely take this medication.

Additional information about KI and Illinois' nuclear safety and preparedness program can be found at www.Ready.Illinois.gov. If you have questions regarding KI, please contact the Illinois Poison Control Center at 800-222-1222.

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