

**MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH**  
**Use of Potassium Iodide (KI) During Radiological Emergencies**  
**Information for the Public**



*This fact sheet is about a new policy for people, especially those who live within ten miles of a nuclear power plant, who may be exposed to radiation from a nuclear plant emergency. In December 2001, the federal Food and Drug Administration (FDA) said if there was a radiological emergency, people should take a drug that would help protect them from thyroid cancer. This drug is called potassium iodide (KI). The Massachusetts Department of Public Health agrees. The questions and answers below will give you more information.*

**1. What is potassium iodide (KI) and what is it used for?**

If there is a radiological emergency from a nuclear plant, large amounts of something called radioiodine could be put into the air, and this could hurt your thyroid gland, or even cause thyroid cancer later on. You could breathe in the radioiodine or eat food that has some radioiodine in it. When you take the KI pill, it protects your thyroid gland from being harmed.

**2. How does potassium iodide work?**

When you take the KI pill, it fills your thyroid with a kind of iodine that prevents your thyroid gland from taking in any of the radioactive kind of iodine.

**3. What age group has the highest risk from exposure to radioiodine?**

Young children have the highest risk. We have learned this from looking at children in Russia and other areas who were exposed to the radioiodine from the Chernobyl nuclear power plant accident.

**4. When should KI be taken?**

You need to take KI before or just after you are exposed to radioiodine. You can also take it 3 or 4 hours later, but it will not be as helpful.

**5. How will I know if I should take KI?**

If there is an emergency, you will hear an announcement from your local or state health officials. Your local health department will tell you when you should start taking KI and they will also tell you when you can stop taking it.

**6. Does KI work in all radiation emergencies?**

KI will only protect you from radioactive iodine. It does not protect you from other kinds of radioactive material. KI works very well to protect your thyroid gland. However, it protects only your thyroid, not other parts of your body.

**7. What will happen in an emergency?**

You will be told what, if any, actions you should take to protect yourself. This might include leaving the area, staying inside with your windows closed and/or taking KI.

**8. Can people have reactions to KI?**

In general, most people who have taken KI have not had any reactions (side effects). If people did have a reaction, it did not last very long. In a few cases, babies had a reaction in their thyroids. Adults who had reactions had stomach problems or a rash. The federal government thinks the benefits of taking KI are much greater than the risks.

**9. Are there some people who should not take KI?**

Most people can take KI, but you should talk to your doctor before taking it. Talk to your doctor before an emergency occurs. It is not a good idea to take it if you have certain medical conditions or problems. Babies need to be watched carefully if they take KI.

**10. How much KI do I take?**

The table below shows the smallest KI dose that different age groups can take which will protect the thyroid. At the moment, the pill only comes in a 130 mg tablet. In an emergency, it is safe for children at school or day care centers to take the whole pill.

For children or babies who cannot take pills, parents and caregivers can cut or crush the pill to make lower doses. For example, if a 130 mg pill were dissolved in 8 ounces of juice or other liquid, one ounce would contain 16 mg of KI.

Age Group	KI Dosage	Number of 130 mg tablets
Adults over 18 years	130 mg	1
Over 3 – 18 years	65 mg	1/2
Over 1 month to 3 years	32 mg	1/4
Birth-1 month	16 mg	1/8

**11. How often should KI be taken?**

The dose of KI shown in the above table is helpful for about 24 hours. You should keep

taking it until the health department says to stop, or you are out of the emergency area.

**12. Does KI come in liquid or pill form?**

KI is available in both tablet and liquid forms.

**13. If KI has been stored for a while, is it still OK to use?**

The manufacturers say KI stays “fresh” for 3-5 years. If you keep it in a dry, dark and cool place, it should last for many years.

**14. Do you need a prescription to get KI?**

No. You are allowed to get it over-the-counter.

**15. Can KI be purchased at local pharmacies?**

It is not widely available in drugstores yet, but since it is not a prescription drug, you can buy it over the Internet. We intend to pre-distribute KI to individuals living within 10 miles of a nuclear power plant in Massachusetts who want to have the pills available for emergencies.

**For additional information contact:**

Massachusetts Department of Public Health’s Radiation Control Program 617-242-3035

Or [www.state.ma.us/dph/rcp](http://www.state.ma.us/dph/rcp)

**Other sources of information:**

[www.fda.gov/cder/guidance/4825fnl.htm](http://www.fda.gov/cder/guidance/4825fnl.htm)

[www.health.state.ny.us/nysdoh/consumer/enviro/homeenvi.htm](http://www.health.state.ny.us/nysdoh/consumer/enviro/homeenvi.htm)

[www.healthvermont.gov](http://www.healthvermont.gov)

**DECEMBER 2008**