

# Potassium Iodide (KI) Fact Sheet

## What is potassium iodide?

Potassium iodide is a chemical compound that contains iodine, which is necessary for the normal functioning of the thyroid gland. It is known by its chemical symbol, KI.

Potassium iodide is the iodine in iodized salt. Most people ingest it every day without being aware of it.

Potassium iodide is also manufactured in pill form to be used as a supplement to help prevent the thyroid gland from absorbing radioactive iodine that might be released during an emergency at a nuclear power plant. It is intended to protect against thyroid gland cancer caused by radioactive iodine.

**Potassium iodide is not an “anti-radiation” pill. It is a supplemental protective measure, secondary to evacuation or sheltering in place. Evacuation and sheltering in place remain the primary protective actions during a radiological emergency.**

## How does it work?

Potassium iodide protects the thyroid gland by preventing the accumulation of radioactive iodine. When taken under the direction of public health officials, potassium iodide is absorbed into the thyroid gland, thus protecting it from absorbing any radioactive iodine.

Potassium iodide does not protect parts of the body other than the thyroid gland, nor does it provide protection against other forms of radiation.

## Who can take potassium iodide?

Most people can take potassium iodide without side effects. A small number of people could have an adverse reaction.

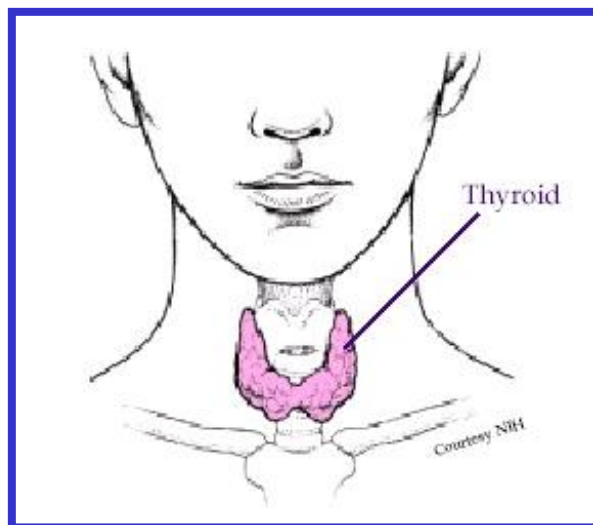
**Anyone with an existing thyroid gland condition and/or allergies to iodine or shellfish should NOT take it.** Consult your physician if unsure whether you should take potassium iodide.

## How will I know when to take potassium iodide?

To be effective, potassium iodide should be taken immediately before or within a few hours after exposure to radioactive iodine. Take potassium iodide **only** at the direction of public health officials, who will decide the most appropriate time to do so. The recommendation will be announced through the Emergency Alert System and the news media. People living or working within the Emergency Planning Zone (EPZ) around the San Onofre Nuclear Generating Station should review the community information section in their local phone book for details on emergency notification.

## What would happen if I took potassium iodide without being told to?

It is very unlikely you would suffer any ill effects if you took potassium iodide because of a false alarm or “just in case” you thought there was a radiological emergency under way. The potassium iodide would simply pass through the body in a day or two.



## What are the side effects of potassium iodide?

Side effects are unlikely because of the low dose and the short time you will take the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and “iodism” (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold and sometimes stomach upset and diarrhea).

A few people may have an allergic reaction with more serious symptoms. Those could be fever and joint pain, or swelling of parts of the face and body and at times severe shortness of breath requiring immediate medical attention.

In rare instances taking potassium iodide may cause over activity, under activity, or enlargement of the thyroid gland (goiter).

## What should I do if side effects occur?

If side effects are severe or if you have an allergic reaction, stop taking potassium iodide. Then, call a doctor or public health authority for instructions.

## Is taking potassium iodide mandatory?

No. The use of potassium iodide is voluntary. No one is required to accept or use it.

## Should I have potassium iodide for my children?

Very young children (under 14 years old) are more susceptible to thyroid gland cancer than adults because they are growing rapidly. Therefore, you should consider potassium iodide not only for the adults in your home, but also for any children.

## How much potassium iodide should I take? How much should I give my children?

Potassium iodide presently comes in both 65 mg and 130 mg tablets. The table on the other side of this page shows the recommended FDA dosage. Take one dose every 24 hours. More will not help you. Too much medicine may increase the chances of side effects.

Daily Dosage (According to FDA)			
Group	KI Dose (mg)	# of 65 mg tablets	# of 130 mg tablets
Adults over 18 years	130	2	1
Pregnant or lactating women			
Adolescents over 12 yrs through 18 yrs who weigh at least 150 pounds	130	2	1
Adolescents over 12 yrs through 18 yrs who weigh less than 150 pounds			
Children over 3 yrs through 12 yrs	65	1	½
Children over 1 month through 3 years			
Babies – Birth through 1 month*	16.25	¼	1/8

When directed to give KI in an emergency it may be better to give children over 1 month a larger dose than none at all if it is difficult to precisely divide the dose. Do not give solid tablets to children under 3 as they may cause choking.

The U.S. Food and Drug Administration has recognized that it may be difficult to cut the potassium iodide tablets into smaller portions and give them to children. **Potassium iodide may be crushed and mixed into many liquid mixtures.** Follow the instructions on the package. If the instructions are not available, use the guidelines below:

Crush a single (either 65 or 130 mg tablet) in a small bowl and add 4 **teaspoons** (not tablespoons) of water, stir until dissolved, then add 4 teaspoons of flavored drink such as juice, flat cola or chocolate milk, or formula (to hide the taste.)

For ThyroSafe™ brand (65 mg tablet) give them the following amount of liquid:

Age	Teaspoons	Mg
3 yrs - 12 yrs	8	65
1 month - 3 years	4	32.5
Birth to 1 month*	2	16.25

For IOSAT™ brand (130 mg tablet) give them the following amount of liquid:

Age	Teaspoons	Mg
3 yrs - 12 yrs	4	65
1 month - 3 years	2	32.5
Birth to 1 month*	1	16.25

\*In the first few weeks of life an infant is more prone to developing thyroid problems from too large a dose. In this age group, it is important not to give more than directed and to see a physician to check the thyroid within a week or two after the dose is given. After the first month, side effects or complications of too much iodine are unlikely.

## Where can I get potassium iodide?

Potassium iodide is being distributed in the spring of 2010 at no charge to residents through a one-time mail program by the cities of San Clemente, Dana Point and San Juan Capistrano. Potassium iodide will be distributed to residents of U.S. Marine Corps Base Camp Pendleton through a separate program.

Individuals interested in obtaining additional potassium iodide, or who were not living in the EPZ in the spring of 2010 can readily purchase the tablets from FDA-approved manufacturers and some local pharmacies without a doctor's prescription.

The following manufacturers are approved for the sale and distribution of potassium iodide by the U.S. Food and Drug Administration:

### Anbex

Website: [www.anbex.com](http://www.anbex.com)  
 Phone: 1-866-463-6754 (toll free)  
 Brand name: IOSAT™ tablets

### Recip

Website: [www.thyrosafe.com](http://www.thyrosafe.com)  
 Phone: 1-866-849-7672 (toll free)  
 Brand name: ThyroSafe™ tablets

**In the event of an emergency at the San Onofre Nuclear Generating Station, potassium iodide will also be made available to the public at Reception and Decontamination Centers in Orange County, San Diego County and on U.S. Marine Corps Base Camp Pendleton.**

## Contact

Orange County Sheriff's Department  
 Emergency Management Bureau  
 714-628-7054

City of San Clemente  
 949-361-8200

City of Dana Point  
 949-248-3579

City of San Juan Capistrano  
 949-493-1171

County of San Diego  
 858-565-3490

U.S. Marine Corps Base Camp Pendleton  
 760-725-5061

## References

US Food and Drug Administration (FDA) Center for Drug Evaluation and Research, Division of Pharmaceutical Analysis.

FDA, Guidance: Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, December 2001.