

POTASSIUM IODIDE TABLETS (KI) Fact Sheet

In the unlikely event of a nuclear incident involving a release of radioactive iodine, one of the health risks is a possible internal exposure of the thyroid gland to radioactive iodine. One way to protect the thyroid from the harmful effects of radioactive iodine is to take potassium iodide (KI). Here are some commonly asked questions about KI tablets:

Q: What is KI?

A: KI (the chemical name for potassium iodide) is a salt of stable (not radioactive) iodine. Stable iodine is an essential nutrient needed in very small quantities for the thyroid gland to function properly. KI comes in tablet form and can be easily swallowed.

Q: How does KI work?

A: When swallowed just prior to or shortly after exposure to radioactive iodine, KI fills up the thyroid with stable iodine so it cannot absorb any other iodine for a period of time. This prevents the thyroid from absorbing harmful levels of radioactive iodine so that the radioactive iodine will not accumulate, and the body will naturally excrete it. This process is also called iodine thyroid blocking.

The thyroid gland does not know the difference between non-radioactive and radioactive iodine and can absorb both. Absorption of harmful levels of radioactive iodine can increase the risk of thyroid cancer later in life, especially in children.

Q: Can KI be used to protect against all forms of radiation?

A: No. KI provides protection only to the thyroid gland and only against internal contamination from radioactive iodine. Radioactive iodine may be found in emissions from nuclear generating stations during an accident. KI will not protect against exposure to other contaminants contained in those emissions.

Q: When should I take KI and how will I know to take it?

A: If possible, KI should be taken before exposure to radioactive iodine during a nuclear emergency. The optimum time is two to six hours earlier. If that is not possible, KI should be taken as soon as possible after first exposure, ideally within three hours. There is no benefit to taking KI if there has been a 24-hour delay.

If there is a threat of significant exposure to radioactive iodine from a nearby nuclear generating station during an accident,

This fact sheet provides basic information only and is sourced from Ontario Ministry of Health and Long Term Care and Health Canada websites. This information must not take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have and before you make any changes to your diet, lifestyle or treatment.

the Chief Medical Officer of Health for Ontario or the Quebec Public Health Director will provide instructions through radio, TV, Internet and other available channels on where, when, how, and by whom KI should be taken. KI is only to be used during an emergency situation at a nuclear generating station that impacts Ontario and Quebec.

KI is only to be taken when instructed to do so by provincial authorities.

Q: How long are KI tablets good for? How should they be stored?

A: The expiry date is printed on the label of the KI packaging. The KI tablets should be kept sealed at room temperature and away from light.

Q: Are there any side effects from taking KI?

A: The risk of side effects from taking a dose of KI is extremely low for all age groups who have normal thyroid function. The overall benefit during a nuclear emergency outweighs the risks of side effects.

There is an increased risk of side effects for people with thyroid disorders i.e., auto-immune thyroiditis, Graves' disease, iodine deficiency, and nodular goiter. These disorders are more common in adults and the elderly, and are rare in children. Rare side effects in other parts of the body, such as gastrointestinal effects or hypersensitivity reaction, may occur but are generally mild. People who are sensitive to iodine or who have an existing or previous thyroid disorder or any other concerns should consult their doctor or nurse practitioner prior to taking KI.

More information on potassium iodide can be found online:

Ministry of Health and Long Term Care

www.ontario.ca/radiationhealth

Health Canada

www.hc-sc.gc.ca

Renfrew County and District Health Unit

www.rcdhu.com

Canadian Nuclear Laboratories

www.cnl.ca/ki

Quebec Public Health

www.santepublique-outaouais.qc.ca



Renfrew County and District Health Unit



Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens