

Health Effects of I-131

External exposure to large amounts of I-131 can cause burns to the eyes and on the skin. Internal exposure can affect the thyroid gland. The thyroid gland uses iodine to produce thyroid hormones and cannot distinguish between radioactive iodine and stable (nonradioactive) iodine.

If I-131 were released into the atmosphere, people could ingest it in food products or water, or breathe it in. In addition, if dairy animals consume grass contaminated with I-131, the radioactive iodine will be incorporated into their milk. Consequently, people can receive internal exposure from drinking the milk or eating dairy products made from contaminated milk.

Once inside the body, I-131 will be absorbed by the thyroid gland exposing it to radiation and potentially increasing the risk for thyroid cancer or other thyroid problems. However, once thyroid cancer occurs, treatment with high doses of I-131 may be used to treat it. Doctors also use lower doses of I-131 to treat overactive thyroids. Low doses can reduce activity of the thyroid gland, lowering hormone production in the gland. Doctors must maintain the fine balance between the risks and benefits of using radioactive iodine.