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Get the Facts About Exposure to I-131 Radiation



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How Americans Were Exposed to I-131

During the Cold War, the United States developed and tested nuclear weapons in an effort to deter and to be fully prepared for nuclear attacks from other nations. Most of the aboveground U.S. nuclear tests were conducted in Nevada from 1951 to 1963. As a result of these tests, potentially health-harming radioactive materials were released into the atmosphere and produced fallout.



I-131 was among the radioactive materials released by the atomic bomb tests. It was carried thousands of miles away from the test areas on the winds. Because of wind and rainfall patterns, the distribution of fallout varied widely after each test. Therefore, although all areas of the U.S. received fallout from at least one nuclear weapons test, certain areas of North America received more fallout than others.

Scientists estimate that the larger amounts of I-131 fell over some parts of Utah, Colorado, Idaho, Nevada, and Montana. But I-131 traveled to all states, particularly those in the Midwestern, Eastern, and Northeastern United States. Some of the I-131 collected on pastures and on grasses, where it was consumed by cows and goats. When consumed by cows or goats, I-131 collects in the animals' milk. Eating beef from cows exposed to I-131 carried little risk. Much of the health risk associated with I-131 occurred among milk-drinkers--usually children. From what is known about thyroid cancer and radiation, scientists think that people who were children during the period of atomic bomb testing are at higher risk for developing thyroid cancer.

In addition to nuclear testing in Nevada, Americans were exposed to I-131 through:

- Nuclear testing elsewhere in the world (mainly in the 1950s and 1960s)
- Nuclear power plant accidents (such as the Chernobyl accident in 1986, also known as Chernobyl)
- Releases from atomic weapons production plants (such as the Hanford facility in Washington state from 1944 to 1957)

Scientists are working to find out more about ways to measure and address potential I-131 exposure from other sources. Scientists are also working to find out more about other radioactive substances released by fallout and about their possible effects on human health.

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