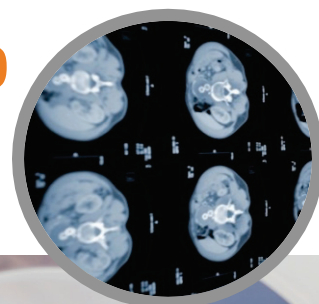


Is X-ray Inspection of Packaged Food Safe?

Finding physical contaminants in food products is critical to the general health of the public. X-ray inspection is one of the most effective ways to keep products safe. But some people are under the false impression that it may be a health hazard. Food X-ray inspection systems do not use radioactive materials to generate X-rays. Instead they utilize X-ray tubes that are run at very high voltage where electrons are accelerated across a gap bombarding a tungsten material to generate images. When the tube is turned off no X-ray energy is emitted. On average, Americans receive a radiation dose of about 0.62 rem [620 millirem (mrem)] each year. Half of it comes from natural background radiation.* International Standards allow exposure to as much as 5,000 mrem a year for those who work with and around radioactive material. According to the U.S. Food and Drug Administration (FDA) website: There are no known adverse effects from eating food, drinking beverages, using medicine, or applying cosmetics that have been irradiated by a cabinet X-ray system used for security screening. Here are the average doses of radiation people receive from exposure to these common products/situations.

Full Body CT Scan

1,000 mrem



Natural/ Cosmic

310 mrem/year



Trans-Atlantic Flight

2.5 mrem



Dental X-Ray

1.5 mrem



Food X-Ray Inspection

0.1 mrem/hour**



*Resources: US Nuclear Regulatory Commission: <http://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html> and <http://www.ans.org/pi/resources/dosechart/>.

**When in operation, food inspection systems can emit this maximum level of radiation per hour, typically very close to the input/output of the aperture only. Because human operators spend limited time in this location they would receive much less (usually zero) radiation dose in an average work shift.