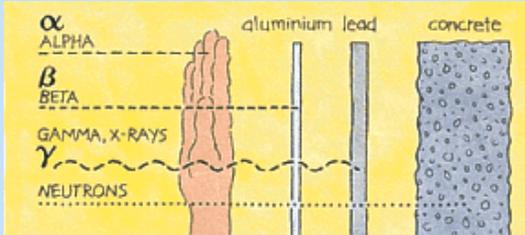




Educational Material

Ionizing Radiation: Has enough energy to dislodge electrons from the atom. Mostly associated with medical X-rays and radioactive decay.



Protective Measures:

TIME: reduce the amount of time spent in a radiation area.

DISTANCE: increase distance from a radiation source.

SHIELDING: shield yourself from a radiation source.

U.S. Occupational Dose Limits:

Whole body 5,000 mrem / yr
Hands, feet, and skin 50,000 mrem / yr

NIOSH HHE Contacts

NIOSH

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Occupation: **TSA Screener**
Scenario: **Baggage Screening Operations**

What is NIOSH doing?

The Transportation Security Administration requested that National Institute for Occupational Safety and Health (NIOSH) conduct an independent study to determine the potential radiation exposures to employees who operate X-ray generating machines. NIOSH researchers will also assess the work place practices, training information, and equipment and maintenance requirements. NIOSH will use its findings to make recommendations regarding the need for radiation badges.

Why is this study being done?

With recent changes to screening requirements, procedures, and equipment, new information is needed to assess the radiation hazard to employees operating X-ray generating machines.

How long will the study take?

About two years, since several hundred TSA employees, as well as areas around the X-ray machines, will be monitored for at least six months, and possibly up to a year.

How were the airports selected for this study?

NIOSH researchers met with TSA management and employees. After considering (1) baggage volume, (2) number and variety of X-ray generating machines, (3) seasonal travel patterns, (4) number of TSA employees operating X-ray generating machines, (5) work practices (rotation and work shifts), (6) type of airport (originating vs. connecting), (7) prior employee complaints, and (8) geographic location, we ultimately focused on 12 airports. These 12 airports are listed below, along with the airport category (size) and the type of activities that will be conducted during the NIOSH study:

Airport	Characterize Category	Work Practices	Radiation Monitoring*
Baltimore	X	Yes	Yes
Boston	X	Yes	Yes
Chicago	X	Yes	No
Cincinnati	I	Yes	Yes
Harrisburg	II	Yes	No
Honolulu	X	Yes	No
Las Vegas	I	Yes	No
Los Angeles	X	Yes	Yes
Miami	X	Yes	No
Philadelphia	X	Yes	No
Providence	I	Yes	Yes
West Palm Beach	I	Yes	Yes

* Airports with no radiation monitoring will have their work practices compared to similarly sized airports with radiation monitoring data to decide if additional radiation monitoring is warranted.

What can I do?

Contact TSA Management, Screener Representatives, or NIOSH researchers
Provide comments or suggestions to improve the study

Further NIOSH Information:
1-800-35NIOSH

<http://www.cdc.gov/niosh>

Additional resources for radiation protection:

FDA FAQs about X-ray Machines:
www.fda.gov/cdrh/comp/cabinetxrayfaq.html

EPA Radiation: www.epa.gov/radiation/



Safety and Health – Through Prevention and Research