

Laboratory

RADIATION

I. Protocol Overview

People are exposed to small amounts of radiation every day in varying degrees. Radiation exposure can occur from naturally occurring sources, man-made sources, electronic equipment, medical sources, and from nuclear weapons testing. The amount of radiation from natural or man-made sources to which people are exposed is usually small. A radiation emergency, such as a nuclear power plant accident or a terrorist event, could expose people to small or large doses of radiation, depending on the situation. Release of radioactive materials can cause contamination of air, water, surfaces, soil, plants, buildings, people, or animals in the form of dust, powder, liquid, or a gas when deposited on an object.

Exposure occurs when radioactive waves or particles penetrate the body. A person exposed to radiation is not necessarily contaminated with radioactive material. An uncontaminated person can be exposed by being too close to radioactive material or a contaminated person, place, or thing.

Radiation can affect the body in a number of ways. The adverse health effects of exposure may not be apparent for many years and can range from mild effects, such as skin reddening, to serious effects, such as cancer and death, depending on the amount of radiation absorbed by the body, the type of radiation, the route of exposure, and the length of time a person was exposed. Exposure to very large doses of radiation may cause death within a few days or months. Exposure to lower doses of radiation may lead to an increased risk of developing cancer or other adverse health effects later in life. Decontamination of patients is vital.

For all suspected chemical exposures, consult the Poison Control Center (800-222-1222) located at Children's Hospital of Philadelphia. Information and treatment advice is available to the public and healthcare professionals at no charge.

Alpha and gamma spectrometry methods are used to detect the urinary radiation exposure and identification. Environmental and food samples may be analyzed in the same way. External contamination may be measured by hand-held radiation monitors.

The Delaware Public Health Laboratory does not perform this testing. Contact the CDC or the Poison Control Center.

II. Contact Information

24/7 CDC Emergency Contact Number: 1-888-295-5156

Poison Control Center: 215-386-2100

III. CDC Website

http://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=483&tid=86

24/7 Emergency Contact Number: 302-223-1520