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CDC HEALTH ADVISORY

Distributed via Health Alert Network
Thursday, November 30, 2006, 0:23 EST (12:23 PM EST)
CDCHAN-00253-2006-11-30-ADV-N

Information Regarding Polonium-210 Involved in Recent Events in the United Kingdom

Recent events in the United Kingdom have brought attention to the radioactive material Polonium-210 (Po-210) as a possible public health concern. The U.K. Health Protection Agency has information about Po-210 and this event on their Web site: (www.hpa.org.uk/polonium/default.htm). Additional information on this topic can be found on the U.K. National Health Service site (www.nhsdirect.nhs.uk/articles/article.aspx?articleId=2086).

The Centers for Disease Control and Prevention (CDC) developed the following basic questions and responses about this topic.

What is Polonium 210?

Po-210 is a radioactive material that occurs naturally at very low concentrations in the environment; although it can be produced in university or government nuclear reactors, it requires expertise to do so. The exposures to this radionuclide in London represent a very rare event. Po-210 emits alpha particles, which carry high amounts of energy that can damage or destroy genetic material in cells inside the body. Po-210 is a particularly energetic radionuclide, giving off 5,000 times more alpha particles than does the same amount of radium. Po-210 is used in some industrial applications such as static eliminators, which are devices designed to eliminate static electricity in processes such as paper rolling, manufacturing sheet plastics, and spinning synthetic fibers.

Is Po-210 harmful to humans?

Po-210 is a radiation hazard only if it is taken into the body through breathing or eating or by entering a wound. This "internal contamination" can cause irradiation of internal organs, which can result in serious medical symptoms or death. Po-210 is not an external hazard to the body—neither polonium nor its radiation will penetrate intact skin or membranes. Most external traces of it can be removed through careful washing. For more information about contamination and irradiation (exposure), see CDC's fact sheet "Radiological Contamination and Radiation Exposure" (http://www.bt.cdc.gov/radiation/contamination.asp).

Are other people at risk if they come into close contact with a contaminated person?

People will not be exposed to radiation (irradiated) simply by being near a person who is internally contaminated with Po-210. Health care workers who are providing care for a contaminated patient will not be exposed to Po-210 unless they inhale or ingest contaminated bodily fluids. Normal hygiene practices in hospitals for microbial contamination will be sufficient to protect workers from radiological contamination. For more information on

radiation protection for health care workers, see CDC's "Radiological Terrorism: Tool Kit for Emergency Services Clinicians" (http://www.bt.cdc.gov/radiation/toolkit.asp).

What should you do if you have concerns about possible exposure related to the London incident?

If you were an overseas visitor during early November 2006 and think you might have had contact with persons or locations involved in the London incident see http://www.hpa.org.uk/. Send an e-mail requesting information to the U.K. Health Protection Agency at overseasadvice@hpa.org.uk.

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national and international organizations.

DEPARTMENT OF HEALTH AND HUMAN SERVICES