



### Information about Public Health Issues Related to Polonium-210 Contamination in the United Kingdom

In November 2006, public health officials in the United Kingdom announced that they would be assessing individuals who visited several London locations on November 1 or 2 for possible exposure to Polonium-210 (Po-210). Officials found Po-210 contamination at these sites during an investigation related to the death of an individual from acute radiation syndrome. The U.K. Health Protection Agency has information about Po-210 and this event on their website at ([www.hpa.org.uk/](http://www.hpa.org.uk/)).

In December 2006, the U.K. Health Protection Agency began working with public health agencies in other countries, including the Centers for Disease Control and Prevention (CDC), to contact people who may have visited the contaminated sites in London during that time period. The CDC, in turn, has been working with state and local health officials in 20 states to contact about 160 people to inform them about the potential for exposure and to assess their need for specific testing for Po-210 exposure. As of January 17, all urine test results obtained thus far indicate no sample had amounts of Po-210 of concern for health effects.

The following questions and responses provide some basic information about this topic.

#### What is Polonium 210?

Polonium-210 (Po-210) is a radioactive material that occurs in nature at very low levels. Although Po-210 can be made in university or government nuclear reactors, it requires expertise to do so. The exposures to this radioactive material in London are 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 gives off 5,000 times more alpha particles than does the same amount of radium. Po-210 is used in some devices to get rid of static electricity in processes such as rolling paper, 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 radiation exposure (irradiation) of internal organs, which can result in serious medical symptoms or death. Po-210 is not a hazard to the outside of the body—neither polonium nor its radiation will go through unbroken skin or membranes. Careful washing will remove most external traces of Po-210. For more information about contamination and irradiation, see CDC's fact sheet "Radiological Contamination and Radiation Exposure" ([www.bt.cdc.gov/radiation/contamination.asp](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 just 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 breathe in, eat, or drink contaminated bodily fluids. Normal hygiene practices in hospitals for microbial contamination will 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" ([www.bt.cdc.gov/radiation/toolkit.asp](http://www.bt.cdc.gov/radiation/toolkit.asp)).

#### What should you do if you were a visitor to London between October 31 and November 2, 2006, and are concerned about exposure to Po-210?

The U.K. Health Protection Agency provides updates on current investigations into Po-210 contamination at [www.hpa.org.uk](http://www.hpa.org.uk). The site has information on areas where contamination has been found and advises that you contact the agency for further information if you visited those sites during the above time period. The agency indicates that on the basis of the monitoring results received so far from a range of sites, they "still believe that the risk to the general public of having been exposed to Po-210 is likely to be very low."

## **Information about Public Health Issues Related to Polonium-210 Contamination in the United Kingdom** (continued from previous page)

If you were at any of the affected locations and you have specific concerns about your health or symptoms such as nausea, vomiting, diarrhea, hair loss, or unusual bleeding (see CDC fact sheet at [www.bt.cdc.gov/radiation/ars.asp](http://www.bt.cdc.gov/radiation/ars.asp)), see your health care provider, who should be able to advise whether further evaluation or testing is needed. Your health care provider may contact your state health department for additional information on assessing your Po-210 exposure or contamination ([www.bt.cdc.gov/radiation/isotopes/polonium/clinician.asp](http://www.bt.cdc.gov/radiation/isotopes/polonium/clinician.asp)).

### **Should you be concerned about possible polonium exposure if you are planning to travel to London now?**

There is no evidence to suggest that you are at any risk for radiation exposure or contamination if you are traveling to the United Kingdom.

For more information, visit [www.bt.cdc.gov/radiation](http://www.bt.cdc.gov/radiation),  
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

January 23, 2007

Page 2 of 2