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CDC Health Update

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Update - 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 October 31, November 1, or November 2, for possible exposure to Polonium-210 (Po-210), a radioactive material. British officials found Po-210 contamination at several sites, including the Millennium Hotel Pine Bar, during an investigation related to the death of an individual from acute radiation poisoning. The Millennium Hotel Pine Bar was closed during the early morning hours of November 24, 2006. Extensive risk analyses based on environmental measurements inside the Pine Bar and urine samples of people who were in the Pine Bar between October 31 and November 24, 2006, have led British authorities to conclude that no additional persons are at significant risk from exposure to Po-210. However, anyone who visited the Pine Bar during that time may have come in contact with Po-210. The U.K. Health Protection Agency (HPA) has information about Po-210 and this event on their website at www.hpa.org.uk/.

The HPA has identified those people who it considers may have been exposed to Po-210 contamination, and since December 2006 has been working closely with public health agencies in 48 other countries, including the Centers for Disease Control and Prevention (CDC) in the United States, to contact them. 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 30, all urine test results for the 17 people who chose to be tested indicate no person had amounts of Po-210 of concern for immediate health effects.

CDC advises that if you have visited the Pine Bar of the Millennium Hotel between the end of October through its closure on November 24, 2006, and have specific concerns about your health, you should 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. CDC is also available to assist you, your health care provider, and your state health department in interpreting results of any tests that you and your health care provider may decide to undertake. (You may call CDC's Radiation Studies Branch at 404/498-1800 or send an e-mail to rsb@cdc.gov .)

The following questions and responses provide some additional 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 is used in some devices to eliminate 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).

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 inhale or ingest contamination when handling 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).

What should US Citizens do if they were visitors to London between October 31 and November 23, 2006, and are concerned about exposure to Po-210?

If you were at any of the affected locations and you have specific concerns about your health (see CDC fact sheet at 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 (<http://www.bt.cdc.gov/radiation/isotopes/polonium/clinicians.asp>).

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

The U.K. authorities have informed CDC that they have undertaken extensive environmental testing in locations which were of concern. Any areas shown to have contamination of significance are either still sealed off or have been decontaminated. 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.

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