DEPLETED URANIUM & HEALTH

Pocket Guide for Clinicians

What is Depleted Uranium (DU)

Creating enriched uranium from natural uranium for use in nuclear reactors or weapons leaves "depleted" uranium (DU). DU is a heavy metal, nearly twice as dense as lead, with 40% less radioactivity. Small amounts of natural uranium are found in all people since it is in the soil, in the food and water we consume, and the air we breathe.

The Department of Defense (DoD) has used DU for tank armor and armor-piercing munitions (bullets) beginning with the 1991 Gulf War, and in more recent conflicts in Southwest Asia. Use of DU munitions may cause unintentional exposures to US personnel due to inhalation or ingestion of small DU particles, or by wounding of US personnel with DU fragments.

Concerns

Veterans may have concerns about how DU exposure could affect their or their families' health, based in part upon what they have heard from peers or seen in media reports and other sources.

Helping Your Patients

Listen carefully to your patient's concerns about possible DU exposure. Discuss possible DU exposure events such as being near DU munitions or areas where these weapons were used (continued next page).

Produced by the Office of Public Health and Environmental Hazards, Department of Veterans Affairs and the Department of Defense Health Affairs

IB 10-200 May 2007

(Continued from front) Let your patients know that scientists have not detected clinically important health effects from military DU exposures, but that the Department of Veterans Affairs (VA) and DoD continue to carefully monitor the most exposed veterans and Service members.

DU Background Information:

- DoD and VA policies call for DU exposure testing for all combat DU exposed Service members and for any additional Service members or veterans who requests it.
- A 2000 Institute of Medicine (IOM) review of DU health effects concluded that evidence does not support an association between DU exposure and health effects including renal dysfunction; lung, lymphatic, or bone cancer; nervous system disease; and nonmalignant respiratory disease.
- The IOM's conclusions are consistent with similar scientific reviews by the Center for Disease Control and Prevention Agency for Toxic Substances and Disease Registry, DoD's Capstone Human Health Risk Assessment, and the United Kingdom's Royal Society.
- DU is only slightly radioactive, producing mostly alpha radiation that cannot penetrate skin or clothing -- toxicity as a heavy metal may be a greater concern.
- Most inhaled DU is rapidly cleared from the body.
- Some troops who survived "friendly fire" incidents have embedded DU fragments in muscle and soft tissue.

- The VA is currently reviewing indications for surgical removal of DU fragments. If you have a VA patient with potential retained DU fragments contact VA's Baltimore DU Program (below).
- More than 700 1991Gulf War veterans and over 2,200 veterans of Operation Iraqi Freedom (OIF) have had DU urine screening. Nearly all had normal urine uranium levels with no DU in their urine. For the very few who had DU fragments still in their bodies, they usually had elevated uranium levels and DU in their urine.
- VA's Baltimore DU Follow-up Program evaluates DU health among veterans and some Service members with the greatest potential DU exposures from inhalation or retained DU fragments, including 74 veterans of the 1991 Gulf War, and recently a few OIF veterans. No clinically significant uranium-related health effects have yet been identified.
- VA and DoD will continue to monitor potential DU health effects, especially among veterans with retained DU fragments.

VA's DU Follow-up Program:

- In 1993, VA and DoD established the DU Follow-up Program at the Baltimore VA Medical Center to monitor possible health effects of embedded DU fragments and to provide treatment recommendations.
- The program provides detailed physical exams and testing of the hematopoietic, immune, reproductive, and central nervous systems, and of the kidneys and liver of veterans typically with embedded DU fragments.

DU Screening:

- In 1998, the VA DU program expanded to offer uranium screening for all veterans concerned about possible DU exposure, using an exposure questionnaire and mail-in, 24-hour urine collection test (for referral information see **www.va.gov/vhapublications/ViewPublication.asp?pub_ID=1158)**.
- Physicians wishing to refer a patient to the VA for DU exposure evaluation should refer to VHA Handbook 1303.1 (1303.4 for non-Gulf War veterans). Similar procedures for DoD personnel are at www.pdhealth.mil/du.asp.

Contacting the VA DU Follow-up Program:

- For instructions on obtaining specimens and patient exposure data, primary care providers can contact the DU Follow-up Program at **1-800-815-7533**.
- Program staff will interpret results, and provide a report and additional consultation to the provider.

Further Information:

VA:

www.vethealth.cio.med.va.gov/DUProgram.htm

www.va.gov/EnvironAgents

DoD:

www.pdhealth.mil/du.asp

http://fhp.osd.mil/du/

The information in this card is not meant to be complete but to be a quick guide.