INFORMATION ON DEPLETED URANIUM (DU)

A RESOURCE FOR VETERANS, SERVICE MEMBERS, AND THEIR FAMILIES

WHAT IS DEPLETED URANIUM?

Uranium is a metal that occurs naturally in the earth's crust and is found in air, water, soil, and food. We all have trace levels of Uranium in our bodies. This natural uranium is a weakly radioactive substance. Depleted Uranium (DU) is what is left over after natural uranium is processed. DU has some of its radioactivity removed during processing. DU is 40% less radioactive than natural uranium. The type of radiation released by DU does not readily go through skin.

WHAT ARE THE SOURCES OF DU EXPOSURE FOR SERVICE MEMBERS?

Because of its density and low cost, DU is used by the US military to make armor on tanks. DU is an excellent metal to use in armor to protect service men and women. It is also used to strengthen projectiles because DU munitions penetrate targets better. The first time DU was used by the US on a large scale was during the 1991 Persian Gulf War.

HOW DOES DU GET INTO THE BODY?

"Exposure" to a substance means that there must be a source and that it gets into the body. DU cannot cause harm as long as it stays out of, and doesn't interact with the body. Just being near items made of DU, including tanks shielded by or shells made with DU, will not result in exposure or pose a health risk. Even when DU munitions are fired close by, there is not a health threat as long as the metal stays out of the body.

Exposure to DU only occurs if it gets into the body via metal fragments that become embedded under the skin (shrapnel) or dust-like particles that are inhaled into the lungs or are swallowed.

Exposure to DU is the highest for service members who were in or on tanks and other armored vehicles when the vehicles were hit by DU munitions. These individuals were at the greatest risk of being hit by DU fragments and of inhaling fine, suspended DU particles, primarily DU oxides. In extremely hot fires involving DU munitions, very fine DU particles can be created, which can then be inhaled and taken into the body. Some of this fine DU dust may settle deep in the lungs and stay there for a long time. If shrapnel which contains DU enters the body, it could also remain in the body for an extended period of time. Service members who entered vehicles hit by DU munitions immediately after impact to rescue wounded occupants and who entered vehicles later to retrieve sensitive items and/or perform salvage and maintenance on the vehicles also had potential exposures to DU.

WHAT HAPPENS TO THE DU ONCE IT'S IN THE BODY?

The very small DU particles breathed in (inhaled) may settle in the lung, while larger particles caught in the nose, throat, and upper respiratory track can be swallowed or coughed up. The DU shrapnel that enters the body through wounds or punctures may be taken out by surgery, or may need to stay in the body due to where it is found. This is a decision best made between an individual and their healthcare provider. DU shrapnel that stays in the body is slowly absorbed into the bloodstream. The DU then leaves the body through urine. The process of DU naturally leaving the body can occur for years. How long the DU stays in the body depends on where it is, the DU particle size, how much DU there is, and how easily it dissolves. While the DU taken into the body is moving through the body, some of the DU may settle in other parts of the body and may remain in the bones, kidneys, and other soft tissues.

WHAT ARE THE POSSIBLE HEALTH EFFECTS FROM DU EXPOSURE?

There are several theoretical concerns about whether there are any long term health effects if DU stays in the body. Some Veterans are concerned about health effects from DU's radioactivity. DU is not