

## 10 FAST FACTS ABOUT U & DU

### Uranium (U)

- Uranium is in the air we breathe and the food we eat – we all have some level of uranium in our bodies.
- The body is naturally very efficient at eliminating uranium.
- Uranium's radiation penetrates poorly, and does not go through the skin or clothing; uranium is not a health threat outside the body.
- Fifty years of extensive research on workers who mine and process uranium has not revealed significant adverse health effects associated with exposure.

### Depleted Uranium (DU)

- DU is the metal left over when the two most radioactive isotopes of natural uranium are removed. DU behaves the same as natural uranium in the body.
- DU is *significantly less radioactive* than natural uranium.
- Working with DU munitions or in a tank with armor reinforced by DU does not pose a health risk.
- An exposure event may occur if DU has been inhaled or ingested, or if a DU fragment has been embedded in the body.
- DU health effects have been studied by the National Academy of Sciences, Institute of Medicine, Royal Society, and numerous academic and government scientists.
- Minnesota veterans who wish to be evaluated for possible DU exposure should contact their local VA environmental health coordinator.

## RESOURCES FOR VETERANS ENVIRONMENTAL HEALTH COORDINATORS

### MINNEAPOLIS VA MEDICAL CENTER

Deborah A. Walzel  
(612) 467-2320  
Debbie.Walzel@va.gov  
www1.va.gov/minneapolis

### ST. CLOUD VA MEDICAL CENTER

Mary L. Garding, RHIT  
(320) 255-6407  
Mary.Garding@va.gov

### FARGO VA MEDICAL CENTER

Cindi K. Nordick  
(701) 239-3700 x2982  
Cindi.Nordick@va.gov

### SIoux FALLS VA MEDICAL CENTER

Debbie Sands  
(605) 336-3230 x6356  
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### ABOUT THE MINNESOTA DEPARTMENT OF VETERANS AFFAIRS (MDVA)

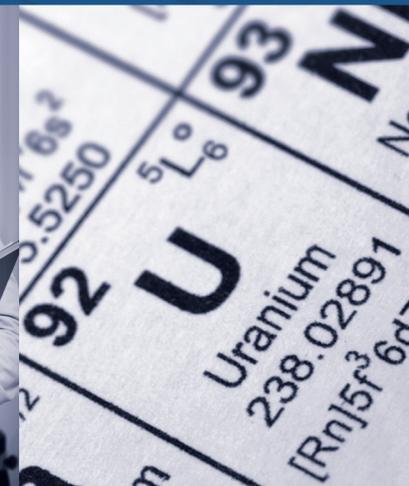
MDVA assists Minnesota's 410,000 veterans and their dependents to obtain the benefits and services provided by the United States Department of Veterans Affairs, formerly called the Veterans Administration.

Minnesota Department of Veterans Affairs  
Veterans Service Building  
20 West 12th Street  
St. Paul, MN 55155-2006  
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## DEPLETED URANIUM

What Veterans & Service Members  
Need to Know



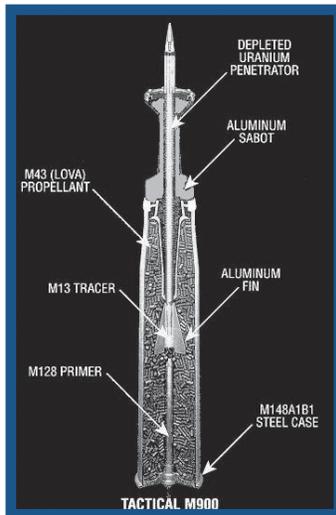
## WHAT IS DEPLETED URANIUM (DU)?

Depleted uranium (DU) is a very dense metal that the U.S. military uses in munitions for its armor-piercing properties and in tank armor for its ability to protect against standard munitions. It is created when the two most radioactive isotopes of natural uranium are removed to make enriched uranium. While its chemical properties are similar to natural uranium, DU is 40 percent less radioactive.

Natural uranium (U) is found in the air we breathe, the food we eat and the water we drink. As a result, uranium exists in small amounts in every person. Our bodies are very good at eliminating the uranium we ingest, so normal "exposure" doesn't pose a health risk.

## DU EXPOSURE AND HEALTH EFFECTS

Munitions and armor containing DU generally do not pose a threat to the health of service members since the radiation from DU is poorly penetrating and does not go through skin or clothing. True "exposure" only occurs when DU has been inhaled, ingested or embedded in the body as metal fragments.



Health researchers have closely studied DU's effects on the human body and to date have found little to no evidence of adverse health effects after it has entered the body in these ways. In fact, it is unlikely that a person could ever inhale or ingest enough to pose a danger to their health.



## DU RESEARCH

Decades of research suggest that DU is not a health concern for the vast majority of service members. For example, studies of uranium miners and processors – who are exposed to much greater levels of uranium over a much longer period of time than service members – have not revealed significant health effects.

These findings are supported by surveillance conducted over the past 15 years by the Depleted Uranium Follow-up Program at the Baltimore VA Medical Center. This program is designed to identify, characterize and monitor individuals with known or suspected embedded DU fragments, DU-contaminated wounds or significant amounts of inhaled DU. To date, no service member involved in this program has shown clinically important negative health effects in any organ or system, including the brain, lungs, kidneys or reproductive organs.

Of the more than 2,000 service members who have been tested for DU because of concern about possible exposure, none were found to have evidence of DU exposure except for those who had been involved in friendly fire incidents.

Question about exposure	Possible Exposure(s)	Chance of DU in Body
Did you have contact with intact DU equipment?	Handling DU munitions or sitting inside or near a vehicle with intact DU armor.	None.
Were you in a vehicle when it was struck by friendly fire, or afterwards, during cleanup?	Being in the dust cloud when a DU-armored vehicle, such as an Abrams battle tank or Bradley Fighting Vehicle is struck by a DU munition.	Inhalation and/or ingestion of DU particles may have occurred.
Do you have retained fragments in your body?	Metal fragments from DU armor or DU munitions remain in the body after an attack or accident.	High chance of DU in the body; could be non-DU fragments, however.

## DU TESTING

Any Minnesota service member or veteran who believes he or she may have been exposed to DU may request an evaluation through their local VA environmental health coordinator.

If testing is warranted, the test consists of collecting a 24-hour urine sample using a kit obtained from your local VA Medical Center, which is sent to the Baltimore VA Medical Center for analysis. The sample is tested to determine the total uranium level present, including DU. If the urine's uranium levels are higher than normal, and determined to be DU rather than natural uranium, the person being tested will be referred to the Baltimore VA Depleted Uranium Follow-up Program for health surveillance.