METAL EXPOSURES & DEPLETED URANIUM (MEDU) SURVEILLANCE CENTER

DEPLETED URANIUM (DU)
INFORMATION FOR VETERANS

MEDU SURVEILLANCE CENTER
The Metal Exposures and Depleted Uranium (MEDU) Surveillance Center is located at the Baltimore VA Medical Center. The Center has two missions related to Depleted Uranium (DU):

1. To provide screening, testing, and follow-up for 1991 Gulf War Veterans exposed to DU through 'friendly fire' incidents, and
2. To offer DU screening and testing to any Veteran worried about DU exposure.

WHAT IS DEPLETED URANIUM (DU)?
Uranium is a naturally occurring element that is present in air, water, soil, rocks, plants, and animals. It is a weakly radioactive substance.

Depleted Uranium (DU) is a by-product of uranium processing. DU is what remains after some of the more radioactive components (called isotopes) are removed from natural uranium for use in nuclear fuel. Therefore, DU is 40% less radioactive than natural uranium but has the same chemical properties as natural uranium.

HOW HAS THE MILITARY USED DU?
The U.S. first used DU on a large scale during the Gulf War. Due to its high density, it has been used in the armor of tanks to protect our troops. It has also been used in some weapons due to its ability to destroy enemy armored vehicles.

HOW ARE SERVICE MEMBERS EXPOSED TO DEPLETED URANIUM?
Exposure to a hazardous substance, such as DU, requires not only that it be present, but that the material gets into the body. DU can enter the body via breathing, eating, skin absorption, and/or being wounded with a fragment of DU.

Just being near tanks or ammunitions that contain DU will not result in exposure or cause a health risk.

Exposure to DU is most likely for service members who were in or on a vehicle struck by DU weapons. Other service members may have been exposed if they:

- entered vehicles immediately after impact, or
- were near fires or explosions involving DU weapons or armor.

When these fires are very hot, very fine dust-like DU particles are created. The particles can be inhaled into the lungs, swallowed, or contaminate open wounds. Inhaled DU particles can take several years to be cleared from the lungs. Shrapnel containing DU embedded in tissue, can also remain in the body for many years.

WERE SERVICE MEMBERS EXPOSED TO DU AT KARSHI KHANABAD (K-2)?
K-2 is an Air Base that had previously been the site of Soviet missile destruction. Exposure risks to the DU contaminated soil were reduced by containment and protective measures, but service members are eligible for DU screening. Long-term adverse health effects would not be expected.

WHAT TYPE OF HEALTH PROBLEMS MIGHT OCCUR?
It is important to note that any health effects would be due to the ***total*** amount of uranium present. Health effects would also be related to the ***amount of time*** a person is exposed. It is unlikely that a person will have long-term health effects after a ***single*** exposure to DU.

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The MEDU Surveillance Center has monitored the health of Veterans at highest risk, those exposed to DU from 'friendly fire' events, for over 30 years.

Some of these Veterans continue to have higher urine uranium levels due to embedded DU fragments in their bodies. However, to date, few uranium-related health effects have been seen in this group.

Older studies in uranium manufacturing workers showed high exposures to uranium may affect the kidney. In the Veteran group being followed, no health effects on the kidney have been found.

However, recent studies suggest an association between higher urine uranium levels and lower bone mineral density. This continues to be evaluated.

HOW CAN I BE TESTED FOR DU?

If you are worried about possible exposure to DU, talk to your local Environmental Health Coordinator Environmental Health Coordinators - Public Health (va.gov) or VA medical provider. Ask to be tested for DU.

The steps for testing include:

1. Your VA facility orders a special urine collection kit from the MEDU Surveillance Center.
2. Your VA provider works with you to complete a DU exposure questionnaire and submit a urine sample.
3. You will visit one of the main VA medical facilities for the urine collection.
4. Your local facility submits your specimen and questionnaire to the MEDU Surveillance Center.

WHAT WILL BE MEASURED IN THE URINE SAMPLE I PROVIDE?

The DU urine test measures total urine uranium. Remember that natural uranium is found in the food you eat and the water you drink. Therefore, everyone excretes uranium in their urine. If the sample has enough total uranium content, an added test is performed on the same urine sample to decide if the uranium is DU.

Please note that these are very specialized tests. It may take up to 30 days, sometimes longer, to receive results.

WHAT DO THE RESULTS MEAN?

Your total uranium level will be compared to the common range found in the general public. The added test will tell us if DU is present in your urine.

If the result shows a high total urine uranium level or shows that DU is present, you will need to talk to your doctor about whether follow up is needed. The MEDU Surveillance Center will send a letter to you and your provider that explain your result and recommended follow-up actions.

HOW MANY VETERANS HAVE BEEN SCREENED FOR DU?

As of January 1, 2024, over 8,500 concerned Veterans have submitted a urine sample for DU testing. However, only five have tested positive for DU. The Veterans who tested positive were all involved in 'friendly fire' events that involved DU. These Veterans were invited to be part of the DU Follow-up Program offered by the MEDU Surveillance Center.

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