

Depleted Uranium: Wonder Weapon or Toxic Hazard?

A Citizen Soldier Guide:

The Facts Your Rights

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1. *Why did the US military develop shells armed with depleted uranium (DU) and did they fully investigate potential health hazards from these weapons?*

The Army began arming tank, artillery and machine gun shells with depleted uranium in the 1980s. DU is a chemically toxic "heavy metal" that emits low levels of alpha radiation. Its extreme density and pyrophoric nature enables it to punch and burn its way through conventional armor. Researchers also discovered that armored plating constructed with depleted uranium provided increased protection from conventional (non DU) shells. The term "depleted" is a misnomer since DU contains about 60% of the radioactivity found in natural uranium.

When a DU shell strikes its target, up to 70% of the depleted uranium vaporizes into fine dust, which then settles out in the surrounding soil and water. Over half of the aerosolized particles are smaller than 5 microns and anything smaller than 10 microns can be inhaled. Once lodged in the lungs, these particles can emit a steady dose of alpha radiation.

An additional hazard is DU's chemical toxicity. An Armed Forces Radiobiology Research Institute study of rats after the Gulf War found that DU exposure damaged their immune and central nervous systems and may have contributed to some of the cancers they developed.

While the Army intensively studied DU's value as a weapon, less effort was made to learn about its possible hazard to health. In fact, the Army's Environmental Policy Institute criticized the command in a 1995 report for its failure to "closely coordinate the planning and performance of experiments for DU health and environmental assessments."

2. *When did the US military first use depleted uranium weapons in combat?*

The American and British militaries first used DU weapons during Operation Desert Storm in the Persian Gulf in 1991. Army and Marine M1A1 Abrams main battle tanks (shown on cover) fired 120mm rounds that each contained 10.5 pounds of depleted uranium. The M1 and M60 model tanks fired a 105 mm round with 8.5 pounds of DU in each shell. The Pentagon later estimated that 14,000 such rounds were expended during the war; 7,000 were fired in Saudi Arabia during target practice, 4,000 were used against Iraqi forces, and another 3,000 were consumed by fires or other accidents.

Another 940,000 30mm DU rounds were fired by A-10 "Warthog" jets in support of their "tank killing" operations during the brief war. All told, the Pentagon has estimated that 320 tons of depleted uranium was fired by US and UK units. As of today, not an ounce of this toxic residue has been removed by either the US or any other agency.

Months before the Gulf War, the Army's Armament, Munitions, and Chemical Command published the following warning: "Following combat, the condition of the battlefield and the long term health risks to natives [sic] and combat veterans may become issues in the acceptability of the continued use of DU for military applications." The report added that DU has been "linked to cancer when exposures are internal."

3. *Why does the Pentagon seem reluctant to support research into possible health hazards from DU weapons?*

From a military point of view, these weapons provided the US and its allies with a distinct advantage over their opponents. Hundreds of Iraqi tanks were destroyed without a single loss of an American armored vehicles, except to "friendly fire." More recently, in Bosnia and then Serbia, DU shells again proved to be devastating weapons both against enemy armor and "hardened" bunkers and troop emplacements.

At the same time, the Army is clearly aware that environmental concerns could eventually undermine support for these dangerous weapons. Not long after the Gulf War ended, an Army colonel stationed at the Los Alamos National Labs wrote to a subordinate: "There continues to be concern regarding the impact of DU on the environment. If no one makes the case for the effectiveness of DU in battle, DU rounds may become politically unacceptable and be deleted from the arsenal." His memo ends with the following: "I believe that we should keep this sensitive issue in mind when "after action" reports are written."

In the first years after the Gulf War, thousands of vets began to experience some chronic health problems and many of them sought evaluation and treatment at either VA medical centers or military hospitals. They reported some or all of the

following symptoms: neurological problems, chronic skin rashes, respiratory problems, chronic flu-like symptoms including severe body aches, immune system disorders, severe fatigue, joint pain, gynecological infection, bleeding gums and lesions, and unexplained rapid weight loss.

Eventually, about 186,000 Gulf vets were examined medically at a VA or military medical facility. Virtually all who reported health problems were eventually told that they suffered from "undiagnosed illness." Very few have received disability payments for service-connected illness. Despite the large number of sick veterans, the Army Surgeon General continued to tell Congress and other investigators that only a tiny number of these cases (where vets had been struck with DU shrapnel) could be attributed to depleted uranium exposure.

Finally, in January 1998, the Pentagon's Office of the Special Assistant for Gulf War Illnesses published the following statement: "Combat troops or those working in support generally did not know that DU contaminated equipment, such as enemy vehicles struck by DU rounds, required special handling. The failure to properly disseminate such information to troops at all levels may have resulted in thousands of unnecessary exposures."

Despite this belated recognition of a serious health risk, the military has still not agreed to fund an epidemiological study that would compare the health of vets exposed to DU with those who weren't exposed.

4. *After the Gulf War experience, did the Pentagon revise its handling of DU weapons in Bosnia or Kosovo/Serbia to reduce the risk of contamination?*

Apparently not. US and British warplanes dropped about 31,000 DU shells of various caliber on Kosovo and Serbia during the 1999 bombing campaign. (They had earlier used about 10,000 DU rounds against Serb forces in Bosnia in 1994-95.)

After the war ended, researchers working with the United Nations asked the Pentagon or NATO to identify areas contaminated with DU residue so that civilian and relief workers living in those areas could be warned. Eight months later, NATO finally confirmed the quantity of DU used, but another seven months passed before it disclosed 112 likely sites of DU contamination. A year and a half after the bombing, NATO officials finally posted warning signs at some of these sites.

Peacekeeping troops, civilians and relief workers in Kosovo and Serbia were surprised to learn about depleted uranium contamination. As in Iraq, Serbian and Kosovan children had been allowed to play on and around destroyed armored vehicles. Adults had been allowed to scavenge this equipment for usable parts and scrap metal.

Plutonium Hazard Concealed

In January 2001, a Swiss lab detected traces of deadly plutonium 239 and radioactive uranium 236 in some of the DU shell residue sent from the Balkans. DU is supposed to be almost entirely composed of uranium 238. The very next day, a Pentagon spokesperson admitted that the US military had made the same discovery a year earlier, although nothing had been disclosed publicly. This spokesperson claimed that "very, very, very small amounts" of plutonium had somehow been added to the depleted uranium that was processed at a nuclear production facility in Paducah, KY. This plant was shut down for 90 days to allow inspectors to insure that plutonium would no longer "contaminate" its DU.

5. *Does the US military now provide training for its armored, artillery, and air units in the proper handling of DU weapons to minimize the risk of contamination?*

Training practices seem to vary from unit to unit and from service to service. Following a critical GAO report entitled *Army Not Adequately Prepared to Deal with Depleted Uranium Contamination* in 1993, the Army produced a series of training videos and manuals in 1995.

Throughout 1996 however, these training materials sat on the shelf while GIs continued to use DU munitions without any safety training.

Finally in June 1997, the Pentagon's chief spokesperson on Gulf War Illness announced that a limited number of servicemen and women would receive DU safety training beginning that summer. Since then, GIs assigned to armored units, tanks, Bradley fighting vehicles, etc., are shown a video that outlines the basic facts about DU hazards. However, the vast majority of US military personnel and those serving with our NATO military allies are still not given this training. Major Doug Rokke (Ret.) led the Pentagon's depleted uranium assessment team, which spent seven months in the Persian Gulf in 1990-91 advising on DU cleanup and on follow-up medical care for US personnel who'd been exposed to DU. He detailed his recommendations in an 1995 Army pamphlet entitled, "Handling Procedures for Equipment Contaminated with Depleted Uranium." Based on his research, Rokke concluded that anyone who comes in contact with DU must get medical attention, not just those who have been fired at, but also those who fired the weapons, as well as anyone who has been near equipment or structures struck with DU shells.

In January 2001, Rokke held a press conference in London during which he condemned both the US and British military for continuing to ignore the health hazards of depleted uranium. He charged that information contained in the Army pamphlet he'd written in 1995 had never been distributed to NATO troops

operating in the Balkans or to civilians living in areas bombarded with DU shells during the Kosovo/Serbian intervention in 1999.

6. *Is there another "heavy metal" with fewer health risks that could be used in place of depleted uranium?* Yes. The German military currently arms its anti-armor shells with tungsten alloy. Tungsten has the same density as DU but doesn't burn like DU when it strikes a target. This eliminates the microscopic dust that can be harmful if inhaled. In 1990, a scientific contractor for the Pentagon who was comparing tungsten with DU described the latter as a "low level alpha emitter, which is linked to cancer when exposures are internal and (to) chemical toxicity causing kidney damage." One argument used by proponents of depleted uranium is that it's provided free of charge - coming as it does from America's vast storehouse of nuclear waste. Tungsten by comparison must be mined at considerable expense. Certainly Americans have the right to expect that such an important decision, with health consequences for so many, would not be made on the basis of financial cost.

Other Resources on Deleted Uranium

Web pages:

Military Toxics Project: www.miltoxproj.org

National Gulf War Resource Center: www.ngwrc.org

Citizen Soldier: www.citizen-soldier.org

Books: *Don't Look: Don't Find* by Dan Fahey (order from NGWRC 800-882-1316 Ext. 162 *Metal of Dishonor: Depleted Uranium* by numerous contributors, \$12.95 postpaid. 238 pages Order from Citizen Soldier (send check or call office to bill to your credit card).

Videos:

The Invisible War: Depleted Uranium and the Politics of Radiation

65 Minutes, CANAL +

Martin Meissonniere's video documents the use of nuclear waste in US weapons and uses studies conducted by many experts to make his point. Available for loan from the [Syracuse Peace Council](http://www.syracusepeacecouncil.org), 472-5478.

Army Training Video on DU, plus several network news programs on the DU issue. 1 hour, \$15.95 postpaid. Order from Citizen Soldier (send check or call office to bill to your credit card). Special "thanks" to Dan Fahey, indefatigable DU researcher and Gulf War veteran