

# Nuclear Waste as a Weapon

## Depleted Uranium (DU) Ammunition

1945: U.S. Nuclear bombs hit Japan

1991-Present: U.S. Radiological munitions used in combat

DU, "Depleted" Uranium, is a chemically toxic radiological component of many munitions currently used in combat by the United States and other countries.

Enrichment of uranium for use in nuclear weapons and reactors produces various waste products, including DU. The U.S. military has made weapons with "depleted" uranium for over twenty-five years. These weapons have proliferated to over twenty other countries and are being sold on the world arms market by U.S. manufacturers and others. The most common DU weapons in the U.S. arsenal are 120mm shells fired by M1 tanks and 30mm shells fired by A-10 aircraft.

Bunker-buster bombs produced at the McAlester Army Ammunition Plant contain DU.

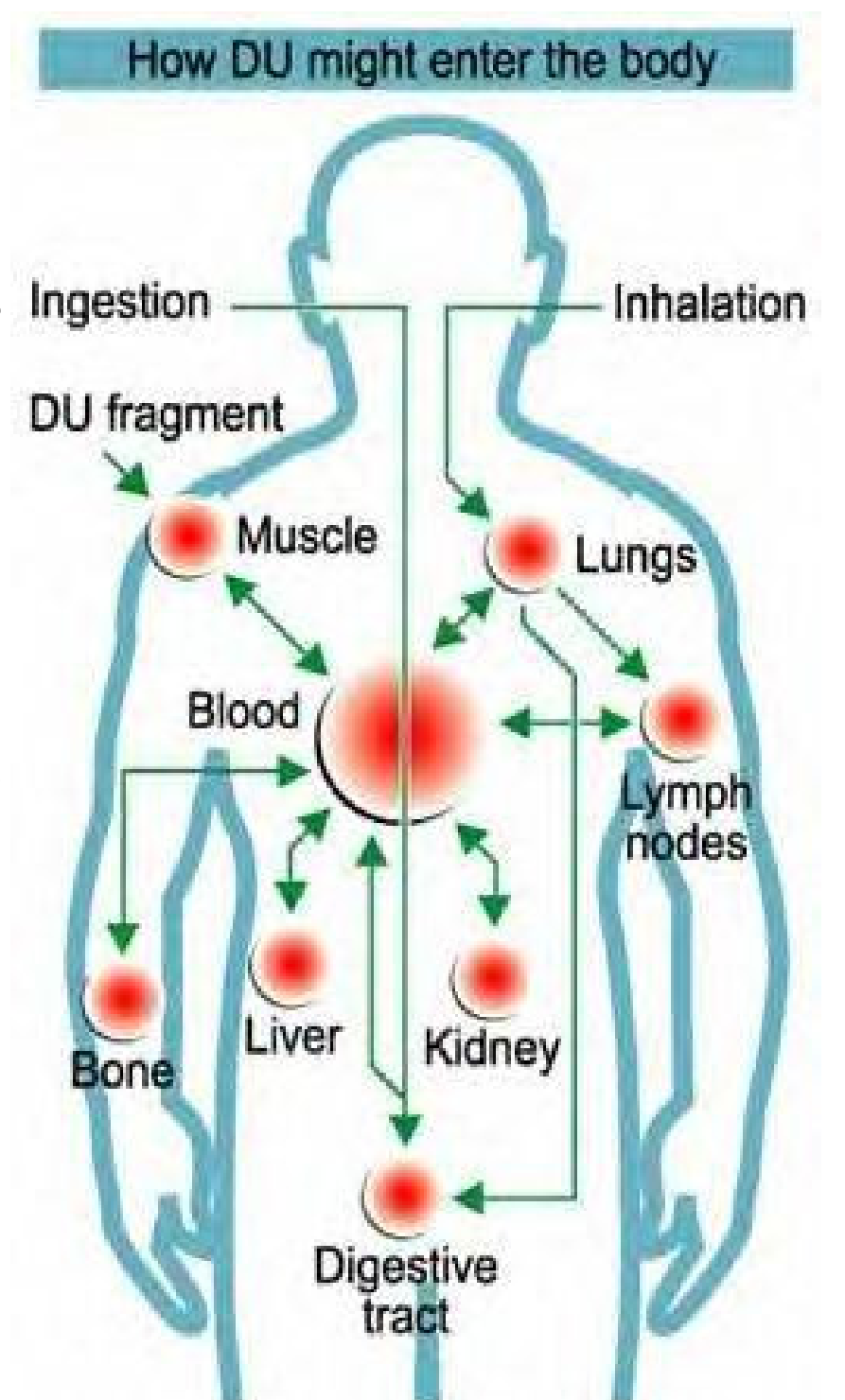
Evidence of environmental and human health damage caused by DU has steadily increased, despite Pentagon assertions that such impacts would not occur. The United Nations Human Rights Commission Sub-Commission on Prevention of Discrimination and Protection of Minorities considers DU munitions to be "weapons of mass destruction or with indiscriminate effect" and incompatible with international humanitarian law. The half-life of DU (the time it takes for half to decay and turn into another substance) is 4.5 billion years. DU remains in the environment for many years after use in combat or testing and can reach humans through a variety of pathways, including soil, air, drinking water, and food.

The term "depleted" uranium does not mean that DU is harmless. DU emits about 60%-85% as much radiation as naturally occurring uranium that has been processed and concentrated, and has about the same chemical toxicity as natural uranium.

In the impact of battle, DU munitions ignite and burn, releasing tiny particles of radioactive gas which can enter the human body.

DU weapons were first used in conflict by the U.S. during the first Gulf War in 1991. Over 350 tons of DU were left in the soil, air, and water of Iraq and Kuwait at that time. DU was also used in Bosnia (1994-1995), Kosovo (1999), Afghanistan (2001-2003) and continues to be used in the current Iraq conflict.

When a DU shell hits a hard target such as a tank or building, it burns and produces a tiny ceramic dust. These particles remain in the environment for many years, travel for miles on air currents, re-suspend into the air when disturbed, and migrate into soil and groundwater. DU particles that are ingested or inhaled can lodge in the lungs, bones, kidneys, and reproductive organs causing damage through radiation and toxic properties.



Research over the past decade has produced increasing evidence that DU can harm humans.

A few examples of this research:

- DU has been found in the urine of Gulf War veterans and Iraqi civilians eight years after exposure.
- A recent U.S. military study found that DU damages the human chromosomes.
- At the former Jefferson Proving Ground in Indiana, DU has entered the food chain and been found in deer, clams, and fish.
- Investigators found widespread DU contamination in soil, air, and lichen in Serbia and Montenegro over two years after the conflict there.
- DU remains in Bosnia and Herzegovina over seven years after its use. Particles were found suspended in the air inside buildings and in drinking water.



### Effects of DU on humans include:

Leukemia  
Birth Defects  
Multiple Cancers  
Kidney Damage  
Immune System Damage  
Nervous System Damage



*"People have always assumed low doses are not much of a problem, but they can cause more damage than people think."*  
Alexandra Miller,  
U.S. Armed Forces Radiobiology

*"Veterans and civilians in these wars WERE exposed to DU, and this inhaled DU represents a seriously enhanced risk of damaged immune systems and fatal cancers."*  
Rosalie Bertell, Ph.D., GNSH