

# Depleted Uranium for Dummies

## The Most Toxic Battle In Western Military History

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*At the beginning of George W. Bush's 2003 invasion of Iraq, 1991 Operation Desert Storm vets suffering from Gulf War Illness were praying that United Nations weapons inspectors were right and that Bush and Cheney were lying about Saddam Hussein possessing weapons of mass destruction (WMD). After all, the ailing vets were casualties of those weapons even though the Pentagon maintains that Iraq never used them.*

How could that be?

First, on the issue of weapons of mass destruction, the United States government is not a reliable source, as you know if you have been paying attention for the past six years. This is also the case with the causes of Gulf War Illness.

Second, Iraq possessed weapons of mass destruction in 1991. Many were illegally supplied by the Reagan-Bush administration, in which both Dick Cheney and Donald Rumsfeld served. [Dr. Doug Rokke](#) was a health physicist for the US Army. He was part of the professional team on the ground training the troops to protect themselves from WMDs. He is prominently featured in the DVD, [Beyond Treason](#).

In a recent interview he informed me that Iraq employed WMDs on a limited basis via sprayers, a few missiles and land mines. But most of Iraq's chemical, biological, and nuclear substances were delivered to our troops by their own government.

Under the direction of Secretary of Defense Cheney, the 1991 Gulf War began with a "shock and awe" bombing campaign that destroyed large biological laboratories, chemical plants, and nuclear enrichment facilities, most of them around Baghdad. As the supplier, the United States government knew the locations.

Biological, chemical and nuclear weapons damage the bodies of soldiers in distinct ways. The first employs deadly bacteria and viruses to cause known illnesses. The second uses poisonous, or toxic, substances to attack the body's chemistry. Nuclear weapons, such as depleted uranium (DU), were unimaginable before World War II. They attack the body with invisible radioactive energy that, as you will soon read, produces a wider variety of symptoms that develop over a longer period of time. Radioactive heavy metal particles embedded in the body are both radioactive and toxic.

Biological, chemical and nuclear weapons can potentially "blow back." Once they are released, they can kill and maim civilians as well as enemy soldiers. Hence all three have been [banned by international treaties](#) which the United States signed.

They also blow back on the army that uses them. The practical danger to America's own troops prevented the widespread use of WMD's until the atomic bombs in World War II and the chemical herbicide Agent Orange in Vietnam. Hundreds of thousands of American troops suffered and died because of the testing and use of these weapons.

When George Bush Sr., Cheney, and Rumsfeld supplied brutal tyrant Saddam Hussein with these substances in the 1980's they showed disregard for the lives of folks living in the Middle East. When they ordered the 1991 aerial destruction of stockpiles of these weapons, they showed a deadly contempt for their own citizen-soldiers.

Those early bombing attacks sent clouds of miniscule toxic and radioactive particles into the air that floated over the future battlefield and bivouac camps where hundreds of thousands of American troops were awaiting the invasion.

Bush Sr.'s February 1991 ground war was even shorter than Bush Jr.'s 2003 "Mission Accomplished" operation. The former lasted only 100 hours. Afterwards 105 sites stockpiling dangerous chemical and biological weapons were destroyed, contaminating everything around them. In March, a huge weapons storage dump in [Khamisiyah](#) was blown up by American engineers, sending a second huge toxic cloud over troops preparing to depart for home.

Sgt. Dan Topolski, of the 87th Engineer Battalion, participated in the Khamisiyah demolition. He speculates in *Beyond Treason* that the hasty action, without prior inspection, inventory, or proper safety precautions, was political. Topolski suggests this stupid order was motivated by Bush Sr.'s desperate desire to hide the United States origin of that weaponry from United Nations inspectors and the American people.

Years later, ailing vets would force the government to admit that CIA satellites had tracked the movement of the mass of Khamisiyah contaminants in real time. The size and path of the cloud explains the otherwise inexplicable incidences of Gulf War illness among Navy personnel and pilots on battleships in the Persian Gulf downwind.

## **Demolition at Khamisiyah**

During the early aerial bombardment and later tank war, President Bush and Secretary Cheney authorized the use of massive amounts of depleted uranium armaments for the first time in the history of warfare. This material is produced only by the United States and had been used experimentally in Vietnam and the 1973 Israel-Arab War. Internal Department of Defense reports had warned since 1943 about its use, and accurately predicted its poison gas effects on our troops.

## **The Most Toxic Battle In Western Military History**

In his article, ["The Gulf War Was The Most Toxic Battle In Western Military History,"](#) Dr. Malcolm Hooper, emeritus professor of medicinal chemistry at the University of Sunderland UK, attributes the symptoms of mysterious "Gulf War Illness" among American and coalition troops to a combination of toxic substances to which they were subjected.

These included, in addition to weapons of mass destruction, experimental vaccines, anti-nerve gas tablets, aerosolized pesticides, and smoke from hundreds of burning oil wells. Some of the vaccines were not approved by the FDA and had never been used on human

subjects. No one had studied the interactive effects of as many as seventeen vaccines administered at the same time. Many soldiers became violently ill immediately after receiving the battery of shots and others developed a variety of symptoms later. Strangely, the normally bureaucratic military kept no records of who received what shots and when.

However, most researchers cite radioactive poisoning from depleted uranium shells as the deadliest element in the Gulf War Illness “cocktail.” In the 1991 war the [Pentagon fired more than 340 tons](#) of DU projectiles at targets in Iraq and Kuwait. More than a half million Gulf era veterans are on medical disability.

At last count, more than [1,000 tons have been used in Afghanistan and more than 3,000 tons in Iraq](#). Significantly, most Gulf War tours of duty were short. Three quarters of today’s troops in Iraq and Afghanistan have served multiple tours: [26% are on their first tour of duty, 45% are on their second tour, and 29% are in Iraq for a third time or more](#). Some are now being ordered to a fourth tour of duty.

Simple math suggests that depleted uranium may eventually prove a hundred times more deadly to our forces than all the Iraqi resistance fighters’ improvised explosive devices (IED’s) and rocket propelled grenades (RPG’s) combined.

Leonard Dietz is a retired physicist from the Knolls Atomic Power Laboratory in upstate New York. Dietz, who pioneered the technology to measure uranium isotopes, is [quoted as saying](#), “Anybody, civilian or soldier, who breathes these particles has a permanent dose, and it’s not going to decrease very much over time. . .In the long run. . .veterans exposed to ceramic uranium oxide have a major problem.”

### **The Double Whammy Cocktail**

A DU shell bursts into flames as soon as it leaves the delivery device. When it hits a target, as much as 70 percent burns on impact at a high temperature, releasing into the air billions of invisible radioactive particles. This infinitesimally fine dust of aerosolized uranium oxide consists of metallic micro-particles that are smaller than viruses or bacteria.

All of our bodies contain tiny amounts of natural uranium because it is found in water and in the food supply. But natural uranium is quickly and harmlessly excreted by the body. However the velocity and heat of the impact of D.U munitions convert the poisonous uranium oxide from a heavy metal into a *ceramic* heavy metal that makes it insoluble and therefore difficult to excrete.

Where does depleted uranium come from? It doesn’t occur in nature. Natural uranium has to be “processed” to remove less than one half of one percent of a special kind of uranium called U-235. Bomb makers use U-235 to make thermonuclear bombs that can explode with a force equivalent to 100 million tons of TNT.

U-235 is also used to make fuel rods for nuclear reactors. Used fuel rods are extremely radioactive for many years and will kill any person near them in ten seconds. No one on earth knows what to do with used fuel rods. Tons of deadly, radioactive used fuel rods have been in temporary storage for more than 50 years.

DU is “depleted” only in the sense that more highly radioactive forms of uranium have been partially removed. What’s left, depleted uranium, mainly U-238, is still highly radioactive and dangerous. It is used to make military bullets, shells, land mines, armor plating, missiles

and bombs.

As we are all [taught in elementary school](#), radioactivity is dangerous because it causes cancer. That's why your dentist covers your body with a lead apron before your X-ray.

According to a [June 2002 National Radiological Protection Board](#) report,

"All uranium, whether natural, depleted or enriched, is a toxic radiological element. Each differs from the other in atomic structure by less than one percent. DU emits three types of ionizing radiation: alpha and beta particles and photons. Alpha particles are blocked by objects as light as a sheet of paper and humans exposed to them are naturally protected by their skin. Beta particles (high speed electrons) can penetrate human skin to a depth of one centimeter while photons (x-rays and gamma rays) are more penetrating and can pass completely through a human body."

Although blocked by the skin, alpha radiation can be inhaled, ingested, and absorbed into the blood stream through scratches and wounds. It is highly dangerous internally. In addition to being physically radioactive it is also chemically toxic. This explains the "double whammy" effect. Soldiers who are exposed can become immediately ill from the toxicity, recover, and then suffer severe additional symptoms from the radioactivity years or decades later.

A study in the [April 2003 New Scientist magazine](#) suggested that DU toxicity combines synergistically with its radioactivity to produce more serious effects.

Dr Keith Baverstock, a senior radiation advisor to the World Health Organization, is quoted as saying, "The radiation and the chemical toxicity of DU could also act together to create a 'cocktail effect' that further increases the risk of cancer."

Hence Gulf War vets were served a cocktail inside a cocktail.

More troubling still is [another study of the materials inside the DU weapons used in Iraq and Afghanistan](#). That report found that in addition to U-238, today's munitions contain plutonium, neptunium, and the highly radioactive uranium isotope U-236. An isotope is one of several slightly different atomic structures within the same element, in this case uranium. According to a 1991 study by the UK Atomic Energy Authority, these elements are 100,000 times more dangerous than the U-238 in so-called depleted uranium.

U-236 is another man-made metal. It is created inside operating nuclear reactors and is intensely radioactive. U-236 has been found in the urine of sick Afghan and Iraqi villagers and on the ground next to bomb craters.

[Geologist Leuren Moret](#) is an independent scientist and internationally recognized expert on radiation, DU, and public health. She estimates that "one millionth of a gram [of depleted uranium] accumulating in a person's body would be fatal. There are no known methods of treatment."

## **Quiet and Invisible Guests That Never Leave**

[Why the wide variety of illnesses?](#)

Depleted uranium contamination causes virtually every known illness from acute skin rashes, severe headaches, muscle and joint pain, and general fatigue, to major birth defects, infection, depression, cardiovascular disease, brain tumors, and every other type of cancer. Uranium replaces calcium, destroying teeth and bones.

[DU is causing permanent disability and death for hundreds of thousands of American veterans who served in the Middle East.](#)

For more information, every military family should watch *Beyond Treason*, and every high school should play the DVD for students subjected to military recruitment. According to experts interviewed on the DVD, some soldiers return home contaminated with billions of radioactive ceramic particles.

Let's follow the journey of these microscopic invaders after they are inhaled. They attach first to the trachea and stick to lung tissue. The heavy metal ceramic specks are practically insoluble; so they so don't easily dissolve into the bloodstream. They cling to the respiratory system for years, even decades, and irradiate the surrounding tissues, damaging neighboring organs. Gradually they pass through the lung-blood membranes into the bloodstream and lymphatic system, causing illnesses and damage to the entire body. Radiation mutates cells, causing cancers, leukemia, lymphoma, congenital disorders, and birth defects.

Here's what happens when these microscopic radioactive particles are ingested through the mouth or penetrate the body through buried DU shrapnel or open wounds. They enter the bloodstream and circulate freely throughout the body, emitting radiation as they travel. Some concentrate in the lymph nodes and cause lymphatic cancer. DU also damages the immune system by hastening the death of white blood cells, and impairing their ability to attack bacteria.

Other ceramic particles cause "low-level" cell irradiation in the bone marrow and the stem cells that the body creates there. Stem cells are the progenitors of all the other cells that the body manufactures in order to renew itself.

[Dr. Asaf Durakovic](#), formerly in charge of Nuclear Medicine Service at the Department of Veterans Affairs Medical Center, was ailing veteran Terry Riordan's doctor whom we cited in the March 8 installment. Dr. Durakovic is now the Director of the Uranium Medical Research Institute.

"Stem cells are very vulnerable," he says. "Bombarded with alpha particles, their DNA will fall apart, potentially affecting every organ."

The process is similar to building a house with defective materials or cooking a meal with spoiled ingredients. If malfunctioning stem cells become new liver cells, then the liver will malfunction. Hence defective stem cells cause many veterans to suffer kidney failure, brain damage, and poorly functioning joints and muscles.

DU may transform semen into a caustic alkali, which explains Terry and Susan Reardon's experiences during lovemaking that we described the March 8 installment. This explains the severe urinary problems among veterans just back from Iraq to be described in the April 18 installment. Dr. Malcolm Hooper, at the University of Sunderland, is familiar with 4,000 such cases among UK Gulf War veterans.

Radiation expert Leuren Moret calls D.U, “The Trojan Horse of nuclear war . . . There’s no way to clean it up, and no way to turn it off because it continues to decay into other radioactive isotopes. . .”

## **42nd Infantry Division soldiers in Iraq**

As far back as 1979, Leonard Dietz, the retired New York State physicist, discovered that aerosolized DU particles less than a millionth of a meter in diameter can travel long distances. Some months ago, [Leuren Moret told Dr. Elias Akleh](#), an Arab-American writer, “DU dust is now everywhere. A minimum of 500 tons to 600 tons now litter Afghanistan, and several times that amount are spread across Iraq.” As you will read April 18, a serious level of depleted uranium particles [reached the UK nine days](#) after the United States’ 2003 “Shock and Awe” bombing of Iraq. It’s likely that I am inhaling them as I peck on my keyboard, and so are you as you read my words.

Compare the latest tonnage to the 340 tons used in the Gulf War. Dr. Doug Rokke, the health physicist for the U.S. Army, who oversaw the partial clean up of depleted uranium bomb fragments in Kuwait in 1991, reminded Alliance of Atomic Veterans writer [Vincent L. Guarisco](#) that, in Bush and Cheney’s new war, the massive radioactive arsenal has been used mainly in Iraqi urban centers and civilian neighborhoods, rather than in desert battlefields.

Over time, the health of all foreign troops will be affected. The health effects on the natives of Iraq and Afghanistan will be catastrophic. Based on the increase in cancer rates in the aftermath of the Chernobyl and Three Mile Island nuclear meltdowns, many Iranians, Saudis, Syrians, Lebanese, Palestinians and Israelis will die prematurely thanks to our government’s unprovoked nuclear attack on Iraq.

As you will read on April 18, because of their more rapid cellular development, children are the most vulnerable to depleted uranium poisoning.

## **Radioactive Showers and Chow**

In Iraq’s arid climate, sandstorms blow tiny particles of DU away from the blast epicenter, impacting the surrounding environment without geographical limitations. It enters the soil, polluting the water table, the Tigris and Euphrates rivers, and infecting the food chain. Fertile, DU-contaminated grasslands west of Basra in southern Iraq produce vegetables and grains for livestock that are consumed by American troops as well as Iraqis.

The New York State National Guard Rainbow Division just returned from six months stationed in Camp Forward Danger on the Tigris River near Tikrit, north of Baghdad. Saddam Hussein’s rebellious hometown was the site of major combat using DU munitions during the initial invasion and for months afterward.

An official [June 2005 United States Central Command communiqué](#) reported that soldiers of the 62nd Quartermaster Company from Fort Hood, Texas were supplying Camp Forward Danger’s water from the Tigris River. The engineers ran it through a reverse osmosis water purification unit that dissolved the solids. The water is purified again and chlorinated. However it seems that it is not tested for radioactivity.

I have attempted to verify the degree of radioactive poisoning to which the New York National Guard members were subjected. I had contacts with officers at the base before this



series went on line. However, Pentagon public relations officers Capt. Bill Roberts and 1st Lt. Tawny M. Dotson, have ignored my request for email access to Camp Forward Danger. I've appealed to Maj. Richard J. McNorton, [CENTCOM's special officer](#) in charge of helping bloggers obtain accurate information, but he hasn't responded either. We'll keep you posted Even if the water were monitored, there is no way, outside a sophisticated nuclear laboratory, to remove carcinogenic depleted uranium from water, air or food — as you can understand from the discussion above.

According to a recent interview with Dr, Doug Rokke, formerly the military's top expert in this field, the only way to monitor bacteria-sized DU particles would be to send samples to a specialized laboratory.

Depleted uranium is nasty stuff. Think about this as you read news reports of the [current massive aerial bombing](#) campaign the U.S. is waging around Samarra, north of Baghdad. You might have thought "insurgents" would be the only casualties before you read "Depleted Uranium For Dummies." But you're not a "dummy" anymore.

Our men and women of the New York State National Guard have just spent six months taking radioactive showers and washing small open wounds in a depleted uranium broth. They've eaten over 500 meals with food, plates and silverware washed with hot water, in two senses of the word. Thanks to George Bush Sr. and Dick Cheney's decision to use depleted uranium munitions in 1991, the Tigris river, the Bible's Edenic river of life, has become a modern river of death. And our brothers and sisters are drinking the forbidden water, with knowing it—despite [informational videotapes produced for them by Major Doug Rokke and his team](#). The tapes, pamphlets, and bulletin board posters are mandatory, but how many of our men and woman serving in radioactive areas have seen them?

Our troops inhale depleted uranium with every single breath. Radioactive particles the size of a virus cannot be filtered outside a laboratory. [Even the 800,000 gas masks provided Gulf War troops were useless because the charcoal filters became inert within days.](#) The only protection is airtight MOPP suits connected to oxygen tanks.

No place in Iraq is free from radioactive contamination, including today's supposedly "safe" Green Zone in Baghdad where top military officers, civilian occupation authorities, international journalists, and the Iraqi government leaders live and work.

Saddam Hussein's former palace is now the middle of the Green Zone. It was bombarded with DU munitions before and during the invasion. So has greater Baghdad ever since. So Green Zone residents inhale and ingest depleted uranium every day. Perhaps that's why, during President Bush's Thanksgiving visit, he was served a plastic turkey.

[UPI reported last December](#) that Wilder Gutierrez Rubio, 38, had died a few hours after returning home to Lima, Peru. He had been diagnosed by doctors at Ibn Sina Hospital in Baghdad with severe leukemia, which they attributed to depleted uranium exposure, even though he had served in Baghdad only a short time. Gutierrez was part of a contingent of Latin Americans recruited by a U.S. company to provide security for Baghdad's Green Zone.

Tragically, Major Matt Tully and his celebrated comrades of the New York State National Guard Rainbow Division are home from Camp Forward Danger, but not home free from danger.

After Dick Cheney sprayed the entire Army, Army Reserves, and National Guard with God-zillions of time-release miniscule radioactive ceramic buckshot, why should he feel guilty about shooting a few dozen ordinary pellets into one Texas lawyer?

### **Is Poisoning Your Entire Army an Impeachable Offence?**

Can you understand why [a majority of Americans polled](#) agree that Bush and Cheney should be impeached if they lied to Congress and the American people in order to launch this war? According to the latest poll, a plurality of Americans say that it's time for impeachment, period.

The troops want to come home.

[Last month's Zogby poll](#) of troops on the ground in Iraq reported that 29% of the respondents, serving in various branches of the armed forces, said the U.S. should leave Iraq "immediately." And 89% of the reserves and 82% of those in the National Guard said the U.S. should leave Iraq within a year.

And most of these folks have yet to read about the depleted uranium lodged throughout their bodies.

Your financial support is necessary if we are to continue to warn the troops, despite the government cover up, and to inform the voters, despite the corporate media blackout.

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The 2006 election is nine months away. Are you registered to vote? Have you called your congressperson, senator or local opposition candidates?

We did — earlier this month. We e-mailed all five candidates for New York's 24th District seat now held by U.S Rep. Sherwood Boehlert. We also reached both Democratic contenders for New York's 20th district seat now held by U.S. Rep. John Sweeney.

We urged that they check out this website and our sources.

Four out of seven responded promptly — with thanks. These were Michael A. Arcuri, Kirsten Gillibrand, Leon Koziol and Les Roberts, all Democrats. Like the overwhelming majority of citizens, they were not fully informed about depleted uranium. Their positions on eliminating DU and promptly withdrawing the troops will be announced here. Now that you understand DU, you can oppose the position of many "Bush-lite" Democrats who want to withdraw some troops but to increase the tonnage of DU bombs dropped in civilian areas. Only ignorance prevents them from realizing this policy will kill more American troops than Iraqi resistance fighters.

Contact your representative about *We're Not in Kansas Anymore*. Let us know their responses. Call your current representative, toll free, in Washington, D.C., at 1-800-426-8073. Warn them about the devastating effects on our troops, and the residents of the Middle East if Cheney launches a nuclear attack on Iran's nuclear facilities. Such an action is a death warrant for most of our loved ones serving in Iraq and Afghanistan.



Please don't just sit in your chair while a million men and women — who volunteered to defend your freedoms — are exposed to a triple whammy of deadly radiation and condemned to a slow and agonizing death like a half million Gulf War vets.

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