POLITICS *December 2004*

THE WAR

Weapons of Self-Destruction

Is Gulf War syndrome—possibly caused by Pentagon ammunition—taking its toll on G.I.'s in Iraq?

by David Rose

When he started to get sick, Staff Sergeant Raymond Ramos's first instinct was to fight. "I had joint pains, muscle aches, chronic fatigue, but I tried to exercise it out," he says. "I was going for runs, working out. But I never got any better. The headaches were getting more frequent and sometimes lasted all day. I was losing a lot of weight. My overall physical demeanor was bad."

A 20-year veteran of the New York National Guard, Ramos had been mobilized for active duty in Iraq in the spring of 2003. His unit, the 442nd Military Police company, arrived there on Easter, 10 days before President Bush's MISSION ACCOMPLISHED appearance on the U.S.S. *Abraham Lincoln*. A tall, soft-spoken 40-year-old with four children, the youngest still an infant, Ramos was proud of his physique. In civilian life, he was a New York City cop. "I worked on a street narcotics team. It was very busy, with lots of overtime-very demanding." Now, rising unsteadily from his armchair in his thickly carpeted living room in Queens, New York, Ramos grimaces. "The shape I came back in, I cannot perform at that level. I've lost 40 pounds. I'm frail."

At first, as his unit patrolled the cities of Najaf and al-Diwaniyya, Ramos stayed healthy. But in June 2003, as temperatures climbed above 110 degrees, his unit was moved to a makeshift base in an abandoned railroad depot in Samawah, where some fierce tank battles had taken place. "When we first got there, I was a heat casualty, feeling very weak," Ramos says. He expected to recover quickly. Instead, he went rapidly downhill.

By the middle of August, when the 442nd was transferred to Babylon, Ramos says, the right side of his face and both of his hands were numb, and he had lost most of the strength in his grip. His fatigue was worse and his headaches had become migraines, frequently so severe "that I just couldn't function." His urine often contained blood, and even when it didn't he would feel a painful burning sensation, which "wouldn't subside when I finished." His upper body was covered by a rash that would open and weep when he scratched it. As he tells me this, he lifts his shirt to reveal a mass of pale, circular scars. He was also having respiratory difficulties. Later, he would develop sleep apnea, a dangerous condition in which he would stop breathing during sleep.

Eventually, Ramos was medevaced to a military hospital in Landstuhl, Germany. Doctors there were baffled and sent him on to the Walter Reed Army Medical Center, on the outskirts of Washington, D.C. There, Ramos says, one neurologist suggested that his condition could have been caused by some long-forgotten head injury or might just be "signs of aging." At the end of September 2003, the staff at Walter Reed ordered him to report to Fort Dix, New Jersey, where, he says, a captain went through his record and told him, "I was clear to go back to Iraq. I got the impression they thought I was faking it." He was ordered to participate in a long-distance run. Halfway through, he collapsed. Finally, on July 31, 2004, after months of further examinations, Ramos was discharged with a medical disability and sent home.

Symptoms such as Ramos's had been seen before. In veterans of Operation Desert Storm, they came to be called Gulf War syndrome; among those posted to Bosnia and Kosovo in the 1990s, Balkans syndrome. He was not the only member of the 442nd to suffer them. Others had similar urinary problems, joint pains, fatigue, headaches, rashes, and sleep apnea. Today, some scientists believe that all these problems, together with others found in war-zone civilians, can be traced to the widespread use of a uniquely deadly form of ammunition.

In the ongoing Iraq conflict, just as in the Gulf War of 1991 and in the Balkans, American and British forces have fired tens of thousands of shells and cannon rounds made of a toxic and radioactive material called depleted uranium, or D.U. Because D.U. is dense-approximately 1.7 times as dense as lead-and ignites upon impact, at a temperature of about 5,400 degrees, it can penetrate armor more effectively than any other material.

It's also remarkably cheap. The arms industry gets its D.U. for free from nuclear-fuel processors, which generate large quantities of it as a by-product of enriching uranium for reactor fuel. Such processors would otherwise have to dispose of it in protected, regulated sites. D.U. is "depleted" only in the sense that most of its fissile U-235 isotope has been removed. What's left-mainly U-238-is still radioactive.

Three of the main weapons systems still being used in Iraq-the M-1 Abrams tank, the Bradley Fighting Vehicle, and the A-10 Warthog attack jet-use D.U. ammunition. A 120-mm. tank round contains about nine pounds of solid D.U. When a D.U. "penetrator" strikes its target, up to 70 percent of the shell's mass is flung into the air in a shower of uranium-oxide fragments and dust, some in the form of aerosolized particles less than a millionth of a meter in diameter. When inhaled, such particles lodge in the lungs and bathe the surrounding tissue with alpha radiation, known to be highly dangerous internally, and smaller amounts of beta and gamma radiation.

Even before Desert Storm, the Pentagon knew that D.U. was potentially hazardous. Before last year's Iraq invasion, it issued strict regulations designed to protect civilians, troops, and the environment after the use of D.U. But the Pentagon insists that there is little chance that these veterans' illnesses are caused by D.U.

The U.S. suffered only 167 fatal combat casualties in the first Gulf War. Since then, veterans have claimed pensions and health-care benefits at a record rate. The Veterans Administration reported this year that it was paying service-related disability pensions to 181,996 Gulf War veterans-almost a third of the total still living. Of these, 3,248 were being compensated for "undiagnosed illnesses." The Pentagon's spokesman, Dr. Michael Kilpatrick, deputy director of its Deployment Health section, says that Gulf War veterans are no less healthy than soldiers who were stationed elsewhere.

Those returning from Operation Iraqi Freedom are also beginning to report illnesses in significant numbers. In July 2004, the V.A. disclosed that 27,571 of them-16.4 percent of the total-had sought health care. Of that group, 8,134 suffered muscular and skeletal ailments; 3,505 had respiratory problems; and 5,674 had "symptoms, signs and ill-defined conditions." An additional 153 had developed cancers. The V.A. claims that such figures are "typical of young, active, healthcare-seeking populations," but does not offer figures for comparison.

There is also evidence of a large rise in birth defects and unprecedented cancer rates among civilians following the first Gulf War in the Basra region of southern Iraq, where the heaviest fighting took place. Dr. Kilpatrick says, "I think it's very important to try to understand what are the causes of that high rate of cancer and birth defects. There has to be a good look at that, but if you go to the M. D. Anderson hospital, in Houston, Texas, you're going to find a very high rate of cancer. That's because people from all over the country with cancer go there, because it's one of the premier care centers. Basra was the only major hospital in southern Iraq. Are the people there with these different problems people who lived their entire lives in Basra, or are they people who've come to Basra for care?" It is possible, he says, that some other environmental factor is responsible for the illnesses, such as Saddam's chemical weapons or poor nutrition. "I don't think anything should be taken off the table."

In October 2004, an early draft of a study by the Research Advisory Committee on Gulf War Veterans' Illnesses, a scientific panel run by the V.A., was leaked to *The New York Times*. According to the *Times*, the panel had concluded that there was a "probable link" between veterans' illnesses and exposure to neurotoxins, including a drug given to troops in 1991 to protect them from nerve gas, and nerve gas itself, which was released when U.S.-led forces destroyed an Iraqi arms depot. Asked why there was no mention of D.U. in the report, Dr. Lea Steele, the panel's scientific director, says that her group plans to address it in a later report: "We've only just begun work on this topic. We are certainly not ruling it out."