

On Depleted Uranium: Gulf War and Balkan Syndrome*

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The complex clinical symptomatology of chronic illnesses, commonly described as Gulf War Syndrome, remains a poorly understood disease entity with diversified theories of its etiology and pathogenesis. Several causative factors have been postulated, with a particular emphasis on low-level chemical warfare agents, oil fires, multiple vaccines, desert sand (Al-Eskan disease), botulism, *Aspergillus flavus*, *Mycoplasma*, aflatoxins, and others, contributing to the broad scope of clinical manifestations. Among several hundred thousand veterans deployed in the Operation Desert Storm, 15 to 20% have reported sick and about 25,000 died. Depleted uranium (DU), a low-level radioactive waste product of the enrichment of natural uranium with ^{235}U for the reactor fuel or nuclear weapons, has been considered a possible causative agent in the genesis of Gulf War Syndrome. It was used in the Gulf and Balkan wars as an armor-penetrating ammunition. In the operation Desert Storm, over 350 metric tons of DU was used, with an estimate of 3 to 6 million grams released in the atmosphere. Internal contamination with inhaled DU has been demonstrated by the elevated excretion of uranium isotopes in the urine of the exposed veterans 10 years after the Gulf war and causes concern because of its chemical and radiological toxicity and mutagenic and carcinogenic properties. Polarized views of different interest groups maintain an area of sustained controversy more in the environment of the public media than in the scientific community, partly for the reason of being less than sufficiently addressed by a meaningful objective interdisciplinary research.

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