

Neurotoxicity of Depleted Uranium

Reasons for Increased Concern

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ABSTRACT

Depleted uranium (DU) is a byproduct of the enrichment process of uranium for its more radioactive isotopes to be used in nuclear energy. Because DU is pyrophoric and a dense metal with unique features when combined in alloys, it is used by the military in armor and ammunitions. There has been significant public concern regarding the use of DU by such armed forces, and it has been hypothesized to play a role in Gulf War syndrome. In light of experimental evidence from cell cultures, rats, and humans, there is justification for such concern. However, there are limited data on the neurotoxicity of DU. This review reports on uranium uses and its published health effects, with a major focus on in vitro and in vivo studies that escalate concerns that exposure to DU might be associated with neurotoxic health sequelae.

Index Entries: Uranium; depleted uranium; neurotoxicity; Gulf War syndrome.