

**Compilation of 2004 Review<sup>[7]</sup> Information Regarding Uranium Toxicity**

<b>Body system</b>	<b>Human studies</b>	<b>Animal studies</b>	<b><i>In vitro</i></b>
Renal	Elevated levels of protein excretion, urinary catalase and diuresis	Damage to Proximal convoluted tubules, necrotic cells cast from tubular epithelium, glomerular changes	No studies
Brain/CNS	Decreased performance on neurocognitive tests	Acute cholinergic toxicity; Dose-dependent accumulation in cortex, midbrain, and vermis; Electrophysiological changes in hippocampus	No studies
DNA	Increased reports of cancers	Increased urine mutagenicity and induction of tumors	Binucleated cells with micronuclei, Inhibition of cell cycle kinetics and proliferation; Sister chromatid induction, tumorigenic phenotype
Bone/muscle	No studies	Inhibition of periodontal bone formation; and alveolar wound healing	No studies
Reproductive	Uranium miners have more first born female children	Moderate to severe focal tubular atrophy; vacuolization of Leydig cells	No studies
Lungs/respiratory	No adverse health effects reported	Severe nasal congestion and hemorrhage, lung lesions and fibrosis, edema and swelling, lung cancer	No studies
Gastrointestinal	Vomiting, diarrhea, albuminuria	n/a	n/a
Liver	No effects seen at exposure dose	Fatty livers, focal necrosis	No studies
Skin	No exposure assessment data available	Swollen vacuolated epidermal cells, damage to hair follicles and sebaceous glands	No studies
Tissues surrounding embedded DU	Elevated uranium urine	Elevated uranium urine concentrations, perturbations in biochemical and	No studies

fragments	concentrations	neuropsychological testing	
Immune system	Chronic fatigue, rash, ear and eye infections, hair and weight loss, cough. May be due to combined chemical exposure rather than DU alone	No studies	No studies
Eyes	No studies	Conjunctivitis, irritation inflammation, edema, ulceration of conjunctival sacs	No studies
Blood	No studies	Decrease in RBC count and hemoglobin concentration	No studies
Cardiovascular	Myocarditis resulting from the uranium ingestion, which ended 6 months after ingestion	No effects	No studies