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**CHRONIC EFFECTS OF IONIZING RADIATION ON ANIMALS AND HUMANS**

Numerous experimental radiobiological studies and medical observations were conducted after the Chernobyl disaster based on the published results; patterns and characteristics influence of the fission products of nuclear materials on the body of mammals, including humans were analyzed. Chronic exposure to low doses leads to the changes in the hemopoietic system was founded and increases the risk of myeloproliferative diseases. The consequence of radiation-related immunodeficiency is the autoimmune disease and chronic fatigue syndrome. Radiation damage leads to endocrine system disruption of the body and of polipatological states. High radiosensitivity of the central nervous system was founded. Genotoxic chronic radiation exposure threatens the stability of the genome.

*Keywords:* ionizing radiation, effects on mammals and humans, chronic exposure, the major systems of the body, the effects of radiation damage.