

Table 1. Dose rate (rem) and health effects of Ionizing Radiation.

	Preclinical	Clinical			Lethal	
Radiation Dose Range	25 to 100 rem	100 to 250 rem	250 to 650 rem	650 to 1000 rem	1,000 to 3,500 rem	3,500 to 5,000 rem
Vomiting Incidents	None	5 to 50% Nausea to vomiting may last up to several days	50 to 100 % Vomiting lasting one to 4 days	100% vomiting	Immediate Vomiting	Immediate Vomiting
Symptom Delay Time	None	3 to 6 hours	2 to 3 hours	10 to 15 minutes	5 to 20 minutes	seconds
Leading Organ	None	Bone Marrow	Blood and Bone Marrow	Bone marrow completely destroyed	Circulatory Collapse	Metabolic Disruption
Clinical Signs	Mild Weakness	Reduced White Blood Cells	Destroyed White Blood Cells	Stomach and Intestines severely affected	Electrolyte imbalance	CNS Disruption
Health Effects	Drop in red blood cell platelet counts. Lymph gland atrophy detectable.	Blood changes increase steadily because blood cells die naturally and are not replaced	Severe Symptoms Blood changes. Initial symptoms last 2 to 6 days	Severe nausea and vomiting, watery or bloody diarrhea, cramps	Prostration, fever, hemorrhagic diarrhea coma	Immediate disorientation, Loss of consciousness, coma
Secondary Effects	Increased risk of infection. High dose may cause sterility in men	Risk of infection is high wounds slower healing	Become severely ill during 3 rd and 4 th week. very susceptible to infection	Survival only due to intense medical intervention General sepsis, recovery takes years.	Coma to death in 2 to 7 days	Muscle convulsions
Latency (Seem to Recover) Effects	None to mild blood cell drop	Latency becomes shorter and full recovery becomes longer,	50% hair loss, 25% fatigue and diarrhea, bleeding in mouth and kidneys	In 5 to 8 days all symptoms reoccur with more intensity	Latency period of several hours to 2 days	Death within 30 to 50 hours
Therapy	Reassurance Note in Medical Records	Blood system restoration	Blood Transfusion, Drugs (Cytokines)	Bone Marrow Transplant Supportive care	Supportive care relief of suffering	Sedation therapy
Prognosis	Excellent	Excellent	Good	Poor	Death	Death
Incidence of Death	None	0% to 15% largely due to infection and lack of medical care	10% to 80% LD ₅₀ is about 300 to 350 rem	Mortality about 60% To 85% Death in 2 to 12 weeks	100% mortality	100% mortality