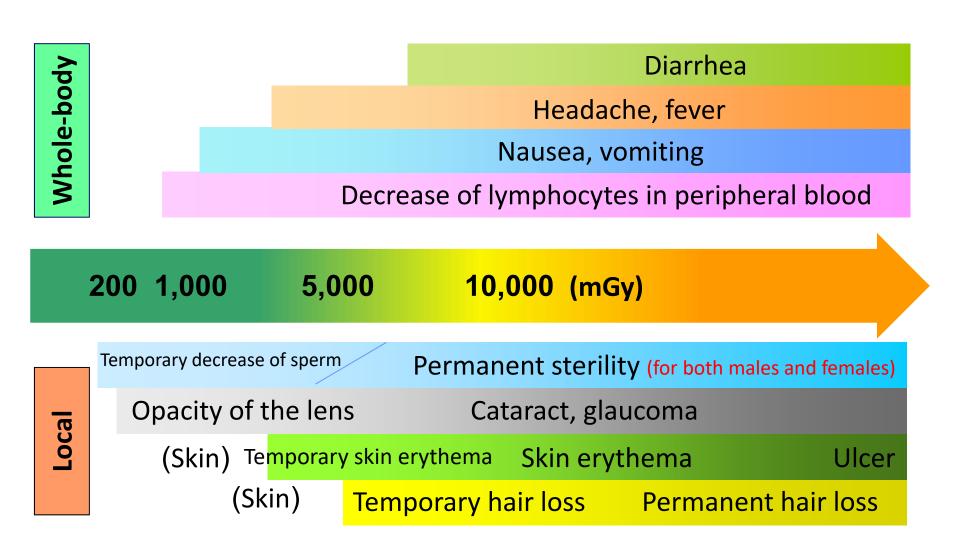
Whole-body Exposure and Local Exposure



Acute Radiation Syndromes

Upon exposure

Time when acute radiation syndrome appears

Lapse of time

Prodromal phase
- 48 hours

Nausea and vomiting
(1 Gy or more)
Headache(4 Gy or more)
Diarrhea(6 Gy or more)
Fever(6 Gy or more)
Disturbance of

Onset phase

exposure doses

ncrease in

Convalescent phase (or death)

Hematopoietic disorders
(infection, bleeding)
Gastrointestinal tract disorders
Skin injury
Nerve and blood vessel disorders

Source: "Basic Knowledge on Radiation" (a text for the Emergency Exposure Medical Treatment Training), Nuclear Safety Research Association

consciousness

(8 Gy or more)

^{*} Acute radiation syndromes observed in the case of whole-body exposure to radiation exceeding 1 Gy (1,000 mGy) at one time

Threshold Values for Various Effects

Threshold acute absorbed doses of γ-rays

Disorders	Organs/Tissues	Incubation period	Threshold value (Gy)*
Temporary sterility	Testis	3 to 9 weeks	Approx. 0.1
Permanent sterility	Testis	3 weeks	Approx. 6
	Ovary	Within 1 week	Approx. 3
Deterioration of hemopoietic capacity	Bone marrow	3 to 7 days	Approx. 0.5
Skin rubor	Skin (large area)	1 to 4 weeks	3 to 6 or lower
Skin burn	Skin (large area)	2 to 3 weeks	5 to 10
Temporary hair loss	Skin	2 to 3 weeks	Approx. 4
Cataract (failing vision)	Eyes	20 years or longer	Approx. 0.5

^{*} Threshold doses for symptoms with clear clinical abnormalities (doses causing effects on 1% of people)