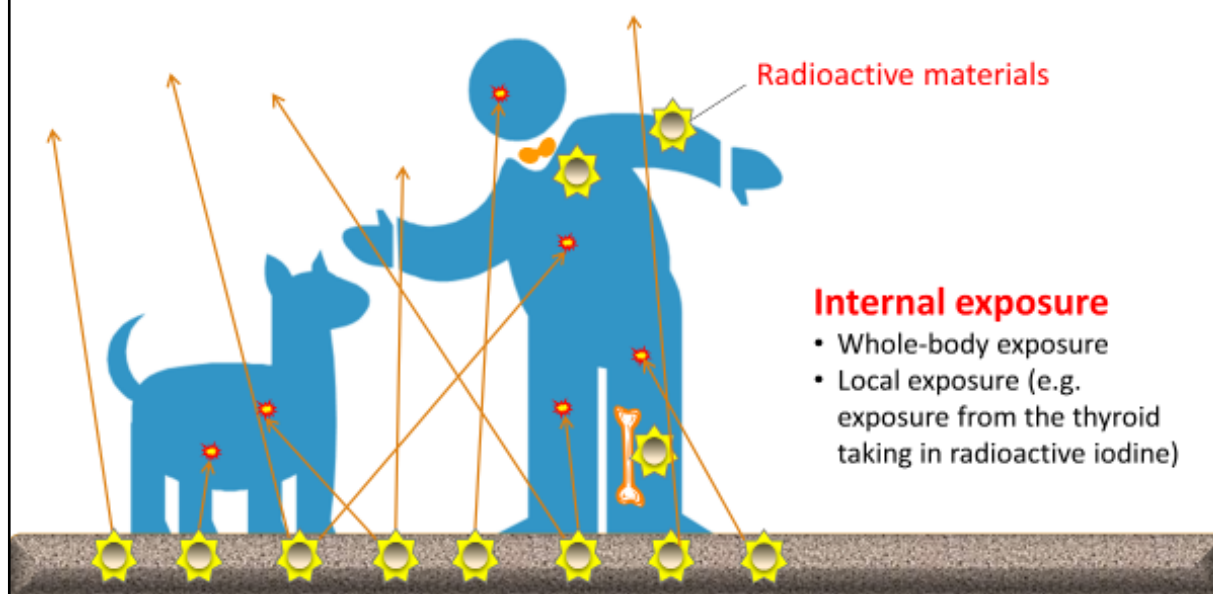


Exposure
Routes

Various Forms of Exposure

External exposure

- Whole-body exposure
- Local exposure (e.g. exposure by X-ray examination or local body surface contamination)



To what extent the body will be affected by radiation exposure depends on the location and the extent of the exposure.

Whole-body exposure refers to exposure of the entire body to radiation, while local exposure refers to exposure of a part of the body to radiation.

In whole-body exposure, all the organs and tissues may be affected by the radiation, while in local exposure, the effects are, in principle, confined to the exposed organs and tissues. If any organ of the immune system or endocrine system is included in the part exposed, distant organs or tissues could be indirectly affected, but the main concern is basically with the effects on the exposed organs and tissues.

Organs differ in sensitivity to radiation. In local exposure, therefore, the extent of the effects varies greatly depending on whether the exposed part includes organs that are highly sensitive to radiation.

In internal exposure, organs and tissues where radioactive materials are likely to accumulate will receive high doses of radiation. If such organs and tissues that are prone to accumulation have high sensitivities to radiation, they are more likely to be affected by the radiation. In Belarus and Ukraine, after the Chernobyl NPS Accident, there was an increase in the number of thyroid cancer cases among children. It was due both to the tendency of radioactive iodine to accumulate in the thyroid and children's thyroids having a higher sensitivity to radiation than adults'.

(Related to p.4 of Vol. 1, "Types of Exposure")

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