

Radiation protection



Goal

Minimize the harmful effects from ionizing radiation

Principles



Justifiable exposure

- Whether the radiation exposure benefits outweigh the risks



Dose limits

- Exposures should be below the established limits (medical, biologic, etc)



Optimisation

- Radiation exposure must be **ALARA**: As Low As Reasonable Achievable

Categories



Public radiation protection

- Protection of individual members of the public and of population in general



Occupational radiation protection

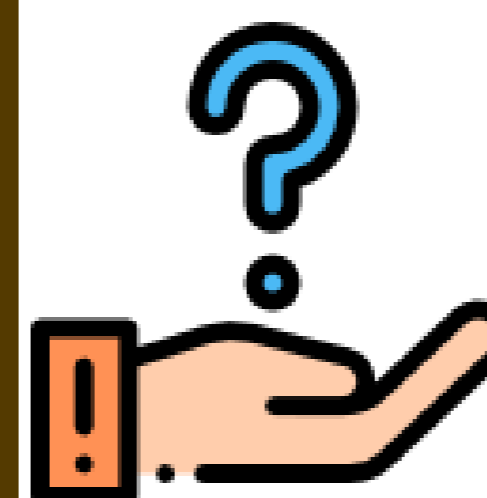
- Protection of workers when their exposure is directly related to their work



Protection of patients

- Protection of people exposed to radiation as part of the
- in diagnosis or treatment

Did you know?

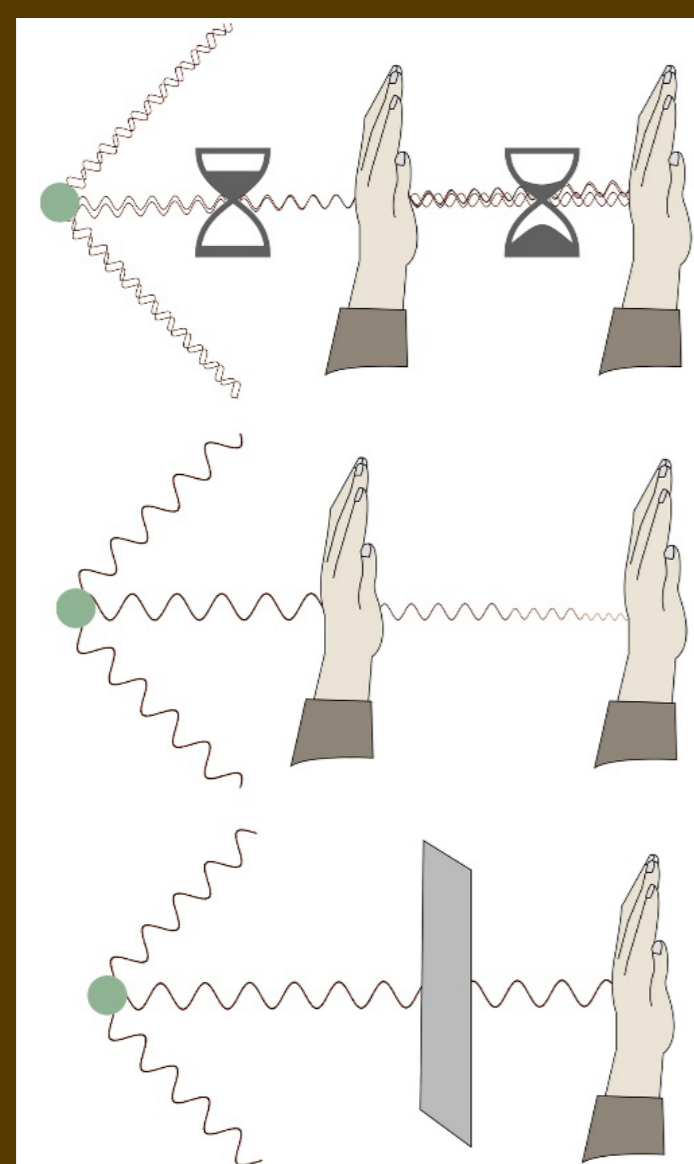


Taking Potassium Iodine (KI) saturates our body (specifically the thyroid gland) with harmless iodine. Thus, our bodies are unable to absorb radioactive iodine (¹³¹I).



Commandments of radioprotection are based on reducing radiation exposure and/or mitigate the radiation effects

Protecting yourself against radiation



Time → Minimize

Distance → Maximize

Shielding → Utilize



Shielding effectiveness depends on the radiation type, energy, and material and thickness of the shield.

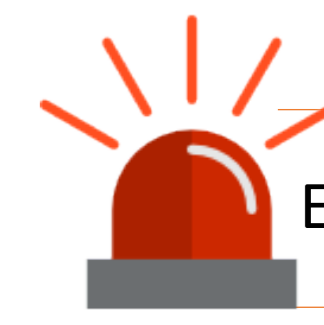
Radiation exposure situations



Existing



Planned



Emergency

Radioactive decay types and radiation penetration

