

EXPOSURE TO RADIATION

Ionizing (x-rays, radionuclides) and non-ionizing radiation (UV, lasers) exposure may occur in health-care settings and pose specific risk to the health and safety of health workers.



Key facts

- ✓ Exposure to ionizing radiation may cause skin and blood damage, cataract, infertility, birth defects and cancer.
- ✓ The probability of radiation adverse health effects is proportional to the dose received, but no level of radiation exposure is completely safe.
- ✓ Exposure to ultraviolet (UV) radiation can cause skin cancer, skin burn and cataract, while lasers can cause tissue burns, eye damage, fire and explosion and system failures.

Preventive measures:

- ✓ Use radiation only to cases where the benefits outweigh the risks.
- ✓ Put in place shielding, protective barriers, safety interlocks, warning signs and signals.
- ✓ Obtain permission from the relevant authority for medical use of radiation and follow the recommendations for safe use.
- ✓ Restrict access to areas where radiation is used to authorised persons only.
- ✓ Train workers on safe use of equipment and sources of radiation.
- ✓ Organize regular inspection of medical radiation devices by the competent authority.
- ✓ Determine the level of exposure of different occupational groups for planned exposure.
- ✓ Monitor exposure and organize medical surveillance of exposed workers.
- ✓ Encourage female workers to report if they become pregnant and reallocate them to tasks without radiation exposure.
- ✓ Develop standard operating procedures for action in case of accidental exposure to radiation.
- ✓ Report all accidental and planned exposures above the exposure limit.
- ✓ Report cases of occupational injuries and diseases due to radiation exposure to national authorities responsible for compensation.
- ✓ Provide workers with adequate personal protective equipment including protective clothing, respiratory protective equipment, protective aprons, gloves and organ shields
- ✓ Follow the measures recommended by the manufactures for use of medical devices with non-ionizing radiation, such as UV (phototherapy and germicidal lamps) and lasers.
- ✓ Use eye and skin protection and proper clothing while working outdoors with high levels of UV index from solar radiation.

Source:

<https://www.who.int/tools/occupational-hazards-in-health-sector/exposure-to-radiation>

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<https://www.who.int/activities/protecting-health-and-safety-of-health-workers>



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