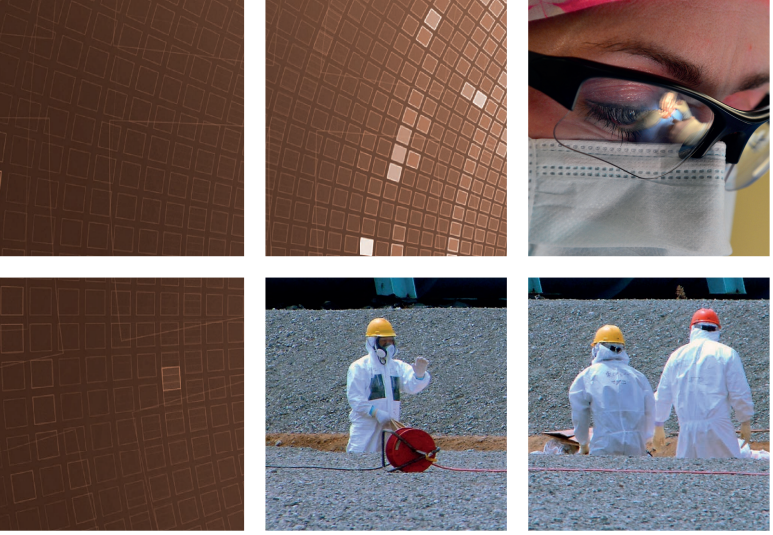


IAEA 60 Years
Atoms for Peace and Development

Factsheet for Decision Makers

Radiation Protection of Workers

DOSE LIMIT FOR THE LENS OF THE EYE

Why is it important?

A recent scientific review carried out by the International Commission on Radiological Protection (ICRP) concluded that the threshold dose for cataracts in the lens of the eye is considerably lower than was previously reported. As a result, the occupational dose limit for the lens of the eye was reduced by a factor of 10. The corresponding dose limit for the public, and for apprentices and students, remains unchanged.

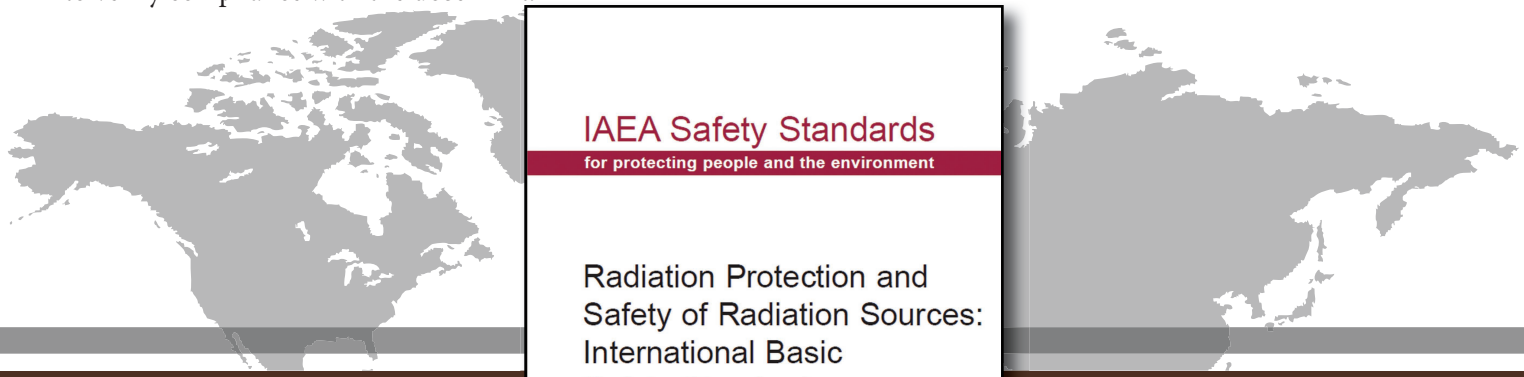
What do I need to know?

Appropriate protective actions need to be taken to ensure that doses to the lens of the eye do not exceed the new dose limit. Workers potentially at risk include medical specialists operating image guided equipment in interventional cardiology and interventional radiology, medical specialists performing some tasks in nuclear medicine, workers involved in some tasks in the decommissioning of nuclear facilities, workers in nuclear facilities using glove boxes, workers that carry out some tasks in fuel cycle facilities, emergency response workers and industrial radiographers.

Actions to optimize protection of workers against high doses to the lens of the eye rely on:

- Engineered controls such as shielding to reduce exposure of the eyes.
- Administrative controls such as written rules to control exposure in normal operations.
- Use of personal protective equipment such as protective glasses. Glasses made of perspex may be sufficient for those workers where the exposure is primarily due to beta radiation. Protective glasses containing lead can be used to protect against scattered low energy X rays.
- Information, instruction and training for workers on any changes to the radiation protection program to reduce doses.

When considered necessary, appropriate dosimeters are provided to workers to measure the dose to the lens of the eye to verify compliance with the dose limit.



The International Basic Safety Standards (BSS) are the international benchmark for radiation safety. The BSS are used in many countries as the basis for national legislation to protect workers, patients, the public and the environment from the risks of ionizing radiation.

The BSS are based on the most recent scientific evidence on the effects of ionizing radiation and take into account practices and experiences from around the world in the use of ionizing radiation and nuclear techniques. Eight international organizations sponsor the BSS.

What actions are required?

The regulatory body is responsible for establishing and enforcing compliance with the new dose limit for the lens of the eye.	Employers have prime responsibility for radiation protection and safety of workers.	Employers are responsible for carrying out a safety assessment to identify those workers at risk of receiving doses to the lens of the eye that may exceed the new dose limit.	Workers are responsible for fulfilling their obligations for protection and safety and for carrying out their duties in a safe manner.

Resources

Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, No. GSR Part 3
http://www-pub.iaea.org/MTCD/publications/PDF/Pub1578_web-57265295.pdf

Occupational Radiation Protection Networks
http://www-ns.iaea.org/tech-areas/communication-networks/orpnet/

Implications for Occupational Radiation Protection of the New Dose Limit for the Lens of the Eye
http://www-pub.iaea.org/MTCD/Publications/PDF/TE-1731_web.pdf

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