



## NCRP Report No. 180: Management of Exposure to Ionizing Radiation: Radiation Protection Guidance for the United States (2018)

### Overview

The National Council on Radiation Protection and Measurements (NCRP)\* is proud to announce the newest guidance for radiation protection in the United States with the publication of NCRP Report No. 180: *Management of Exposure to Ionizing Radiation: Radiation Protection Guidance for the United States (2018)*. This report contains NCRP's recommendations to guide active decision making for radiation protection.

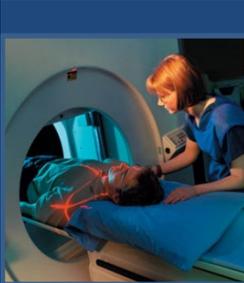
NCRP recommendations are the basis for radiation protection programs in the United States. This Report is primarily for federal and state agencies responsible for the well-being of individuals exposed to ionizing radiation and those agencies with responsibility for protecting nonhuman biota from such sources. This Report provides useful information for health physicists, medical physicists, physicians and other medical professionals, radiation safety officers, managers, workers, members of the public, and the media.

NCRP Report No. 180 gives an integrated and coherent approach for radiation protection in all exposure situations, stating that optimization of protection universally applies, ensuring benefits from radiation taking into consideration societal, economic, and environmental aspects; addressing all hazards; and striving for continuous improvement when it is reasonable to do so. The report includes numeric criteria for individual dose management that provide an adequate basis for protection. The recommended criteria are influenced by the type and knowledge of the source, the existence of an appropriate radiation control program, and whether that program can be established in advance of introducing the source.

The photos to the left illustrate some of the categories of radiation protection discussed in this Report, including: medicine; worker safety and naturally occurring radioactive materials; public safety, including sensitive populations; environmental protection; emergency response; and research and industry.

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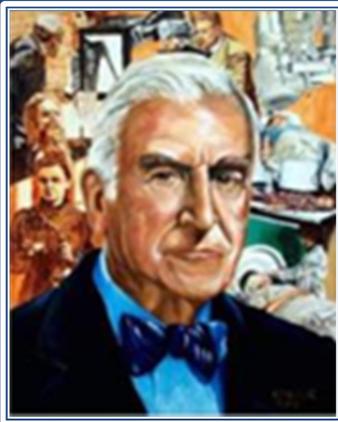




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The Report includes new topics that have emerged in the last 25 years and builds on the many NCRP recommendations issued since the previous recommendations in Report No. 116 (1993). The treatment of medical exposure is significantly expanded, including optimization for patients, coverage of comforters and caregivers, and biomedical research participants. Emergency workers are defined as a new category of exposure, and NCRP recommends that they be handled separately from occupational exposure or public protection. Protection of the environment, including nonhuman biota, is covered with recommendations to support decision making under the National Environmental Policy Act.

In addition to the knowledge of human biological effects of ionizing radiation, ethical values, stakeholder engagement, and safety culture are emphasized as contributing to radiation protection decisions and practice. Ethical values support decision making in complex situations; stakeholders are key in making decisions concerning the management of their radiation exposure and the achievement of sustainable and suitable decisions; and a strong safety culture is intrinsic to effective radiation protection programs.



*Radiation protection is not only a matter of science. It is a problem of philosophy, and morality, and utmost wisdom.*

Lauriston S. Taylor  
Founder of NCRP

\*NCRP is the National Council on Radiation Protection and Measurements, a Congressionally chartered body that seeks to formulate and widely disseminate information, guidance and recommendations on radiation protection and measurements which represent the consensus of leading scientific thinking.

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