

# ICRP Task Group 95: Internal Dose Coefficients

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**Abstract**—Internal doses are calculated using biokinetic and dosimetric models. These models describe the behaviour of the radionuclides after ingestion, inhalation and absorption to the blood, and the absorption of the energy resulting from their nuclear transformations. ICRP develops such models and applies them to provide dose coefficients and bioassays functions for the direct calculation of equivalent or effective dose from knowledge of intakes and/or measurements of activity in bioassay samples. During the past few years, ICRP has devoted a considerable amount of effort to the revision and improvement of models to make them more physiologically realistic representations of uptake and retention in organs and tissues and of excretion. Provision of new biokinetic models, dose coefficients, monitoring methods and bioassays data is the responsibility of Committee 2 and its Task Groups. Two reports in a series of documents replacing the *Publication 30* series and *Publications 54, 68 and 78* have been issued (OIR Part 1 and part 2). The first report describes the assessment of internal occupational exposure to radionuclides, biokinetic and dosimetric models, methods of individual and workplace monitoring, and general aspects of retrospective dose assessment. The following reports of the series (Parts 2 to 5) provide data on individual elements and their radioisotopes, including information on chemical forms encountered in the workplace; a list of principal radioisotopes and their physical half-lives and decay modes; the parameter values of the reference biokinetic model; and data on monitoring techniques for the radio-isotopes most commonly encountered in workplaces. For most of the elements, reviews of data on inhalation, ingestion and systemic biokinetics are also provided. Dosimetric data provided in the printed reports of the series include tables of committed effective dose per intake (Sv per Bq intake) for inhalation and ingestion, tables of committed effective dose per content (Sv per Bq measurement) for inhalation, and graphs of retention and excretion data per Bq intake for inhalation. These data are provided for all absorption types and for the most common isotope(s) of each element section. The electronic annex that accompanies this series of reports contains a comprehensive set of committed effective and equivalent dose coefficients, committed effective dose per content functions, and reference bioassay functions.