Management of Internal Contamination Accidents

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The key to success in managing accidents is the prompt and accurate response of the emergency team. Literature data on the preparation of well conceived emergency plans for the management of internal contamination accidents include among others the following two publications : The Guidebook for the Treatment of Accidental Internal Radionuclide Contamination of Workers, Radiation Protection Dosimetry, vol.41, 1992 [1] and Assessment and Treatment of External and Internal Radionuclide Contamination, IAEA- TecDoc-869, 1996 [2].

Internal contamination by radionuclides occur most likely by inhalation, ingestion or absorption from wounds The consequences of the contamination depend upon the route of intake, on the physical and chemical properties of the radionuclide and on the amount of activity incorporated. Decisions about treatment of internally contaminated people should only be made by physicians However, an important part of the medical handling of exposed persons is the assessment of the magnitude of internal exposure and the informations on decorporation as a result of treatment.

The techniques to assess intakes depend on the mode and level of intake, the type and energy of the radiation emitted, the biokinetic of the contaminant and the sensitivity and availability of measurement facilities *In vivo* and *in vitro* techniques are used to quantify internal contamination