TABLE 4-2
SIGNIFICANT RADIONUCLIDE INFORMATION

Radionuclide	Radiation Type	Critical Body Site	Contamination Mode*	Treatment Agent
Americium	α, γ	Bone	I/W	DTPA†
Californium	γ, α, η	Bone	I/W	DTPA
Cerium	β, γ	GI, lung	I/GI	DTPA
Cesium	β, γ	Total body	I/S/GI	Prussian blue£
Curium	α, γ, η	Bone	I/GI	DTPA
Iodine	β, γ	Thyroid	I/GI/S	KI(sat.)¥
Plutonium	α, γ	Bone	I/W	DTPA
Polonium	α	Lung	I	Dimercaprol‡
Strontium	γ	Bone	I/GI	$AlPO_4$**
Tritium	β	Total body	I/S/GI	Forced H_2O§
Uranium	α, β, γ	Bone	I/S/W	$NaHCO_3$***

* I: contamination by inhalation
GI: contamination by gastrointestinal absorption
S: contamination by skin absorption
W: contamination by wound absorption

** The antacid aluminum phosphate in gel form used as a gastrointestinal adsorbent for radiostrontium

*** Sodium bicarbonate to maintain alkalinity of urine used in conjunction with diuretics

† Diethylenetriaminepentaacetic acid used as a tissue chelation agent forming stable complexes which may be excreted by the kidney (approved by the FDA as an investigational new drug)

‡ A mercury poisoning chelation agent (very toxic)

¥ An agent blocking radioiodine absorption in tissues resulting in dilution of the isotope

§ Simple forced intake of water, resulting in isotope dilution

£ A dye used as an ion exchanger (not yet approved by the FDS)

Back