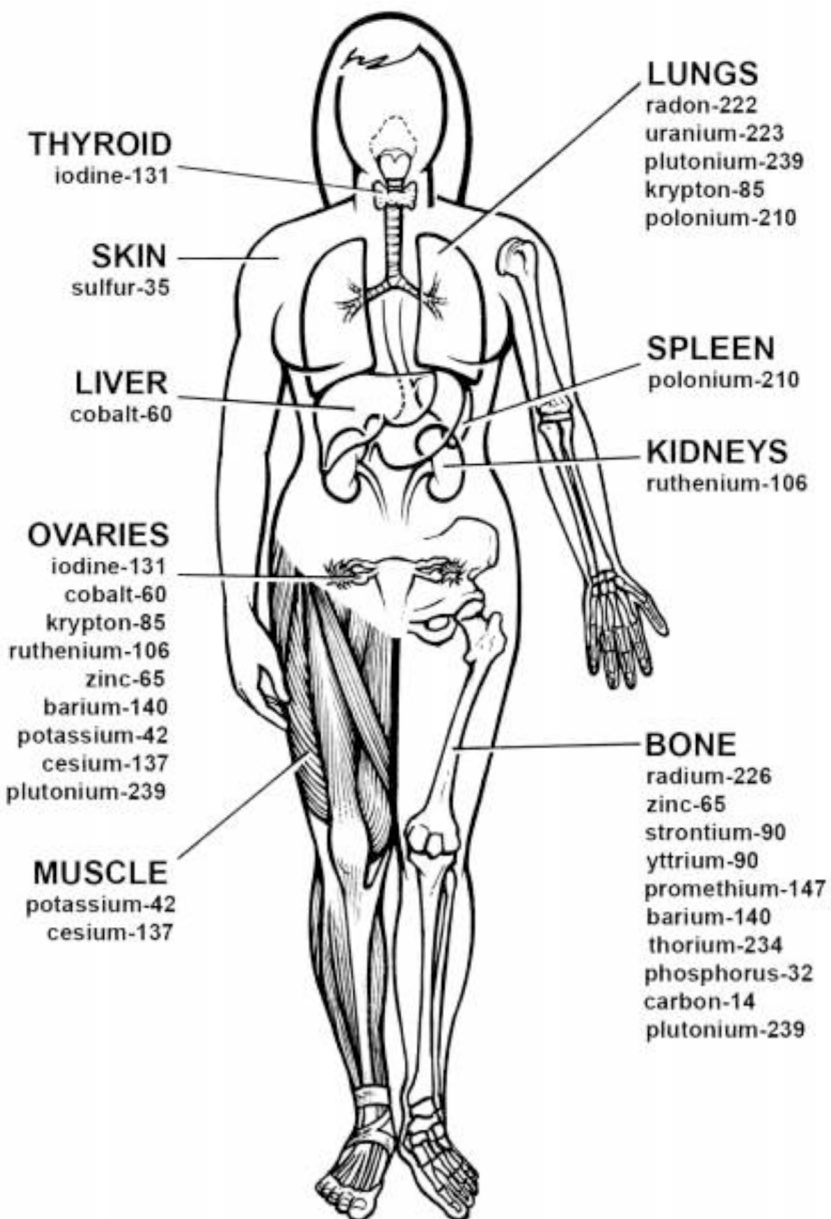


# RADIATION AND THE HUMAN BODY



**Ionizing radiation can cause:** cancer, leukemia and genetic damage - sometimes seen as birth defects or chronic disease.

**Radiation can also cause:** cardiovascular & renal disease, immune system damage, cataracts, sterility, premature aging, miscarriages, premature births & increased infant mortality.

*All human organs and tissues are adversely affected by ionizing radiation to varying degrees. Different radioactive isotopes are attracted to different organs or tissues according to their chemical makeup (see diagram).*

*The common fission product strontium-90 acts like calcium and concentrates in bone, teeth and breast milk as calcium does. Radioactive iodine-131 is rapidly absorbed by the thyroid gland replacing normal iodine. Cesium-137 mimics potassium inside the body, seeking out muscle tissue.*

**Females are more radiosensitive than males. Girls 1 - 5 years old are twice as likely to suffer harm as boys. Fetuses are particularly sensitive to radiation during their early development, between weeks 2 and 18 of pregnancy (the first trimester).**

**Sources:** International Commission on Radiation Protection (ICRP); United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR); Center for Disease Control, U.S. (CDC); Biological Effects of Ionizing Radiation BEIR VII, 2006

