

History of Radiation Research

- Scientist #1

- Scientist #2

- Scientist #3



Marie Curie (1867-1934)

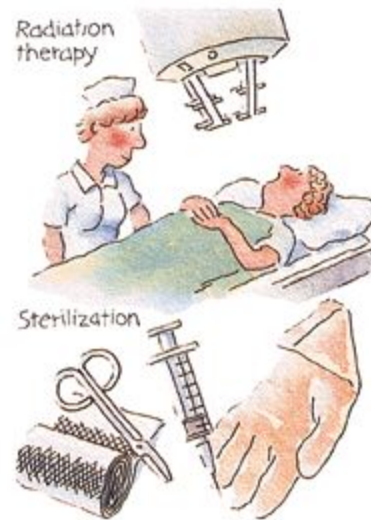


Pierre Curie (1859-1906)

For their work on Spontaneous Radioactivity
1903 Nobel Prize in Physics

Positive Effects of Radiation

List the benefits we receive from radiation



in the medical field.

Negative Effects of Radiation

List the dangers we face from radiation exposure

Effects of radiation exposure

Experts say even small radiation doses, as low as 100 millisieverts (mSv), can slightly raise cancer risk.

Exposure in mSv

10,000 Single dose, fatal within weeks
5,000 Single dose; would kill half of those exposed within a month
1,000 Single dose could cause radiation sickness; nausea, but not death
100 Recommended limit for radiation workers every five years
16.00 CT scan, heart
10.00 CT scan, full body
2.00 Radiation most people are exposed to per year
0.01 Dental x-ray

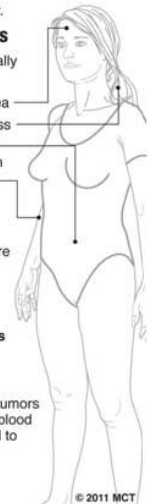
Immediate effects

Cell damage, especially fast-growing cells
Brain Fatigue, nausea
Hair follicles Hair loss
Intestine lining Diarrhea, malnutrition
Skin cells Sores, peeling
White blood cells and bone marrow Immune system failure

Later

DNA damage in cell nucleus
Egg and sperm cells with damaged DNA can produce babies with birth defects
Body cells develop tumors or abnormal growth; blood cell damage can lead to leukemia

Source: U.S. Environmental Protection Agency, Reuters
 Graphic: Melina Yingling

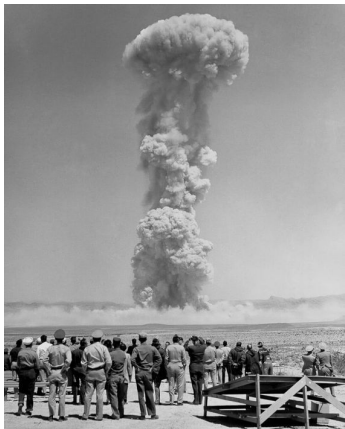


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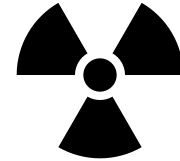
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Sources of Radiation in Washington County

List sources of radiation in our community



RADIATION



Describe

- What is radiation?
- What types of radiation exist?
- Where is radiation found?



FIGURE 15.—Man being bombarded by "invisible" rays.