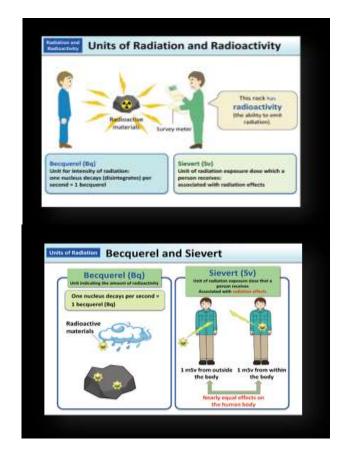
Al-Mustaqbal University College
Department of Medical Physics
The Fourth Stage
First Course



# Radiation Protection LECTURE FOUR

# LECTURE FOUR Units of Radiation Protection

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### LECTURE FOUR: Units of Radiation Protection

## One – Rad (radiation absorbed dose)

- 1 Rad is a unit of **absorbed dose** of radiation.
- 2 Rad unit is a measure of the amount of energy deposited in tissue
- 4 Rad unit can be used for any type of radiation.
- 5- Rad unit dose not **describe the biological effects on** the human body of the different radiations due to the weighting factor of radiation type Q.

Dose: it is a quantity of a radiation or drug taken or recommended to be taken at one time.

**Radiation weighting factor:** is a factor used to determine the equivalent dose from the absorbed dose averaged over a tissue or organ based on the type of radiation absorbed.

# Two - Rem (Roentgen equivalent man)

- 1- Rem unit is used to measure biological effects on the human body.
- **2-** Rem unit is a unit that measures the **low levels** of different types of ionizing radiation.
- **3-** Rem unit is a unit of **equivalent absorbed dose** of radiation which takes into account the biological effects.
- 4- The dose in rem equals the dose in rad multiplied by the quality factor (Q).