Radiation Exposure – Units of Measurement

The following units measure physical effects of radiation:

1. The becquerel (Bq) : This is the smallest unit used to measure the number of disintegrations per second undergone by a radioactive substance. 1Bq = 1 disintegration per second

2. The curie (Ci) : This is the largest unit used to measure the number of disintegrations per second undergone by a radioactive substance. 1 Ci = 37 billion disintegrations per second (NB. 1 g radium emits this amount of radiation)

   NB. The above units give the # of disintegrations per second, but they don't tell the amount of E released.

The following units measure amount of E released:

1. The rad (rd) : This is the smallest unit used to measure the quantity of energy absorbed per kilogram of living tissue.

2. The gray (Gy) : This is the largest unit used to measure the quantity of energy absorbed per kilogram of living tissue. 1Gy = 100 rds

The following units measure the biological damage produced by radiation:

1. The rem : This is the smallest unit used to measure the biological damage resulting from a dose of ionizing radiation absorbed by living matter.

2. The sievert (Sv) : This is the largest unit used to measure the biological damage resulting from a dose of ionizing radiation absorbed by living matter. 1 Sv = 100 rem