



**Damage per 1 mGy of X-rays
(per cell)**

Base damage **2.5 locations**

Single-strand break **1 location**

Double-strand breaks **0.04 locations**

Source: Morgan, Annual Meeting of the National Committee on Radiation Protection and Measurements (NCRP) (44th, 2008)

When radiation hits DNA, part of the DNA may break depending on the amount of radiation.

It is said that exposure to 1 mGy of X-rays causes a single-strand break at one location per cell on average. This amount of radiation is equivalent to 1 mSv. Double-strand breaks occur less frequently, at 0.04 locations per cell, which means that if 100 cells are evenly exposed to 1 mGy of X-rays, double-strand breaks occur in four cells.

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