

Factsheet: The Effects of a Nuclear Weapon Explosion

<https://cnduk.org/the-effects-of-nuclear-weapons/>



Instantaneous

The heart of a nuclear explosion reaches a temperature of several million degrees centigrade. Over a wide area the resulting heat flash literally vaporises all human tissue. At Hiroshima, within a radius of half a mile, the only remains of most of the people caught in the open were their shadows burnt into stone.

Near-immediate

People inside buildings or otherwise shielded will be indirectly killed by the blast and heat effects as buildings collapse and all inflammable materials burst into flames. The immediate death rate will be over 90%. Various individual fires will combine to produce a fire storm as all the oxygen is consumed. As the heat rises, air is drawn in from the periphery at or near ground level. This results in lethal, hurricane force winds as well as perpetuating the fire as the fresh oxygen is burnt.

Short Term

Survivors will be affected within a matter of days by radioactive fall-out. The extent of the fall-out will vary according to whether the nuclear bomb detonates in the air (as at Hiroshima) or upon impact on the ground. While the former will entail more blast impact, the latter will throw up much larger quantities of radioactive debris into the atmosphere.

Long Term

Radiation-induced cancers will affect many, often over twenty years later. Certain cancers such as thyroid cancer in children are particularly associated with exposure to radiation. The children of those exposed to radiation are statistically more likely to be born with abnormalities and suffer from leukaemia.