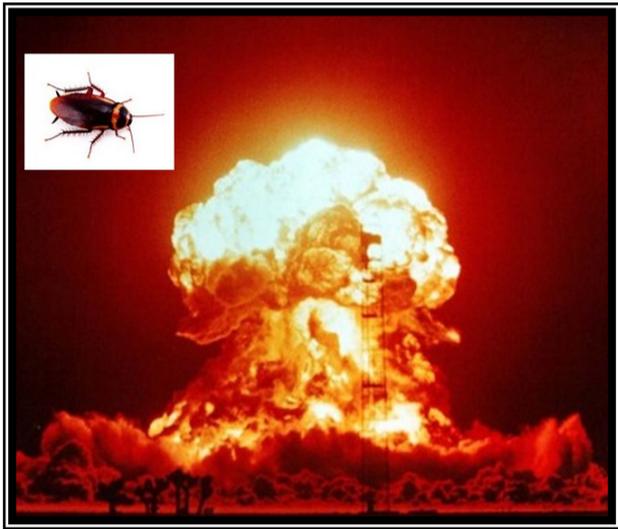




CAN COCKROACHES SURVIVE A NUCLEAR BLAST?



A nuclear war, if it comes, will not be won by the Americans... the Russians... the Chinese. The winner of World War 3 will be the cockroach.

An atomic bomb explodes by producing a massive volume of gas from a small volume of solid matter. Organisms die through immediate impact of the expanding gas wave, impact of shrapnel and debris, or direct thermal burning.

Cockroaches and humans have a different biology and ecology though, and this must be taken into account as these bombs are designed to be air detonated to kill as many humans as possible.

Cockroaches live below ground or in otherwise cryptic hiding places which make them less likely to be affected by the thermal and blast damage from such weapons. Living below ground will also help them survive the effects of radiation. Radioactive metals in the bomb will combine with soil particles from the blast and fall as a surface layer.

This is a key difference between conventional explosives and a nuclear bomb, the radioactive particles remain a serious hazard to health long after the immediate effects of the blast.

Given enough time, the radioactive metals will decay past a point that they are harmful to life. American cockroaches can live for approximately 30 days without food or water, after which time the risk of death from radiation causing cellular damage would be much reduced.

Cockroaches do indeed have a much higher radiation resistance than vertebrates, with the lethal dose perhaps 6 to 15 times that for humans.

Cockroaches undergo incomplete metamorphosis (shedding their skins to grow into bigger versions with the same shape) several times until they reach adulthood. Juvenile cockroaches would shed radioactive material as they aged, reducing the risk of prolonged cellular damage.

Can cockroaches survive a nuclear blast? Not directly. Their physiology means they have a greater chance of surviving a blast from a much closer distance to ground zero than humans or any other vertebrate has.



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