



Q: Who Needs Nuclear Protection Sheltering Strategies?

A: The reasons for learning about and formulating a family nuclear response strategy are as varied as are people's perceptions of the most likely threats to their loved ones in this ever changing world. The following all-inclusive list would require different responses (sheltering or evacuation) depending on the particular nature and location of the threat and your ability and preparations to respond to it.

The specific causes of potential life-threatening nuclear radiation emergencies include...

- Nuclear power plant accidents here or abroad (Three Mile Island, Chernobyl, Fukushima)
- Nuclear materials processing plant accidents (Tokaimura, Japan)
- Nuclear waste storage or processing facilities mishaps (radioactive waste from hospitals, spent fuel and radioactive waste from nuclear power plants, radioactive contaminated materials, etc.)
- Nuclear waste transport truck or train accidents
- Accidents involving non-waste, but normal daily nuclear materials transport (trucks, planes, trains, couriers) One out every 50 HazMat shipments contain radioactive materials. Approximately three million packages of radioactive material are shipped in the United States each year.
- Improper storage of radioactive materials (non-waste) at any point during their normal material life cycle. (Power plants, Medical, Industrial, Academic, etc.)
- Lost or stolen radioactive sources *"Based on information available to the NRC, an average of approximately 375 sources or devices of all kinds are reported lost or stolen each year in the U.S. -- that is, roughly one per day."*[NRC](#)
- Nuclear terrorism here via...
 - An attack on, or sabotage of, a nuclear power plant.
 - Or, conventional explosives used to disperse radioactive materials (dirty bomb) to effectively contaminate an area and much within in it.

- Or, food or water supplies could be contaminated with radioactive materials.
- Or, a strong radioactive source could be placed in a location adjacent to where large numbers of the public would file past. They could be unknowingly and dangerously exposed to it, such as at a subway que, cinema, or sports stadium, etc.
- Or, a real terrorist atomic bomb detonated here
- Limited nuclear war overseas with the fallout carried here by the wind (See [Trans-Pacific Fallout](#) for threat here if any of the 'players' went nuclear in the Mid-East, Iran, Pakistan, India, Korea, China, Russia, etc.)
- Nuclear War involving a direct attack upon the USA by traditional foes or rogue nations

Many find that improbable today, but the Russians apparently don't, as reported [here](#) on July 12, 2010: "**Moscow arms against nuclear attack** - Nearly 5,000 new emergency bomb shelters will be built in Moscow by 2012 to save people in case of potential attacks. Moscow authorities say the measure is urgent as the shelters currently available in the city can house no more than half of its population. In the last 20 years, the area of air-raid defense has been developed little, and the existing shelters have become outdated. Moreover, they are located mostly in the city center, which makes densely populated Moscow outskirts especially vulnerable in the event of a nuclear attack. In order to resolve the issue, the city has given architects a task to construct a typical model of an easy-to-build shelter that will be located all over the city 10 to 15 meters underneath apartment blocks, shopping centers, sport complexes and parks, as in case of attack people will need to reach the shelters within a minute."

While only a few of the potential nuclear threats above would entail blast damage, all would involve possible radiation exposure and some with actual radioactive fallout that the wind had then carried far from the original scene of the incident.

Many variables will determine the nature of the nuclear threat and the level of protection needed at varying distances from ground zero.

For instance, for atomic bombs, whether it was a ground burst or air burst will determine whether there is significant fallout or not. Also, the explosive yield of the bomb, which is typically measured in kilotons (KT) or megatons (MT) of an equivalent quantity of TNT, will determine its blast circumference damage area. (A one-megaton bomb is 1000 times more powerful than a one-kiloton bomb.) Another effect is the thermal pulse or heat flash that can

burn exposed people and ignite combustible materials. These *direct effects*, the blast wave and thermal pulse, are examined first below here. Then, following that, the radiation effects, both the initial radiation and fallout radiation are detailed.

Bottom Line: Exploring and developing your nuclear response strategies in this day and age is cheap family insurance and, like major medical insurance, we can also hope & pray never to have to use it! Also, like any real insurance, it'll be near impossible to quickly figure it all out and implement it after the fact! *Knowledge is King* here while a false embrace of nuclear un-survivability myths could be downright deadly.

Source: Excerpt From KI4U