

What are YOU gonna do about...

Preparing for a nuke?

Please note, this topic is covered more extensively in our IT'S A DISASTER! book, but here are some key tips.

No one wants to think about a nuclear crisis - and hopefully it will never happen - but we as a nation must accept the fact nuclear tensions are rising globally (plus Al-Qaeda and others are seeking nukes) so we should prepare ourselves and our loved ones in the event the unthinkable strikes our soil.

For decades, movies and some in the media have portrayed a nuclear attack as a "doomsday" event implying most people would be killed on impact ... and survivors would want to die once they come out of their shelters. In reality, unless you are actually at ground zero or within a several mile radius of the blast zone (depending on the size of the nuke, of course), there is a very high probability you'll survive as long as you limit your exposure to radiation, take shelter with proper shielding, and wait for the most dangerous radioactive materials to decay.

In other words, you CAN survive a nuke attack ... but you MUST make an effort to learn what to do! By learning about potential threats, we are all better prepared to know how to react if something happens.

Both the initial nuclear radiation and residual nuclear radiation (also called radioactive fallout) are extremely dangerous. But as the materials decay or spread out radiation levels will drop.

Types of radiation - Nuclear radiation has 3 main types of radiation...

- **alpha** - can be shielded by a sheet of paper or by human skin. If alpha particles are inhaled, ingested, or enter body through a cut, they can cause damage to tissues and cells.
- **beta** - can be stopped by skin or a thicker shield (like wood). Beta particles can cause serious damage to internal organs if ingested or inhaled, and could cause eye damage or possible skin burns.
- **gamma** - most dangerous since gamma rays can penetrate the entire body and cause cell damage throughout your organs, blood and bones. Since radiation does not stimulate nerve cells you may not feel anything while your body absorbs it. Exposure to high levels of gamma rays can lead to radiation sickness or death, which is why it

is critical to seek shelter from fallout in a facility with thick shielding!

Radiation detection devices - You can't see, smell, taste or feel radiation, but special instruments can detect even the smallest levels of radiation. Since it may take days or weeks before First Responders could get to you, consider having these devices handy during a crisis or attack since they could save your life.

- **survey meter** - measures rate of exposure or intensity of radiation at that specific location if you stayed there for an hour ... like a speedometer in a car (cost: \$300-\$1,000+)
- **dosimeter** - a pen-like device you can wear that measures total dose or accumulated exposure to radiation as you move around (needs a charger too - cost: \$45-\$65+ each)
- **KFM kit** - (Kearny Fallout Meter) measures radiation more accurately than most instruments since it's charged electrostatically. Find plans online or available as a low-cost kit (\$40-\$75). And it's a great science project for kids.
- **NukAlert** - a patented personal radiation meter, monitor and alarm small enough to fit on a key chain. The unit warns you with chirping sounds if it detects radiation. (cost: \$145 - \$160)
- **RADsticker** – postage stamp sized card (cost: \$2-\$5 ea)

Reduce exposure - Protect yourself from radioactive fallout with ...

- **distance** - the more distance between you and fallout particles, the better
- **shielding** - heavy, dense materials (like thick walls, earth, concrete, bricks, water and books) between you and fallout is best. Stay indoors or below ground. *(Taking shelter in a basement or a facility below ground reduces exposure by 90%. Less than 4 inches (10 cm) of soil or earth can reduce the penetration of dangerous gamma rays by half.)*
- **time** - most fallout loses its strength quickly. The more time that passes after the attack, the lower the danger.

The "seven-ten" rule - For every sevenfold increase in time after the initial blast, there is a tenfold decrease in the radiation rate. For example,

a 500 rad (5 Sv) level can drop to 50R (0.5 Sv) in 7 hours and down to 5R (0.05 Sv) after 2 days (49 hours). In other words, if you have shelter with good shielding and stay put for even just 7 hours ... you've really increased your chances of survival. Your detection devices, emergency radio or cell phone [if the last 2 are working, that is] can assist you in knowing when it's safe to come out.

Indoor shelter locations - If you don't have a fallout shelter, these options could provide protection from dangerous radiation by using proper shielding materials.

- **basement** - find the corner that is most below ground level (the further underground the better)
- **1-story home / condo / apartment** - if no underground facility, find a spot in center of home away from windows
- **trailer home** - find sturdier shelter if possible (like a basement or brick or concrete building)
- **multi-story building or high-rise** - go to center of the middle section of building. Note: if rooftop of a building next to you is on that same floor, move one floor up or down since radioactive fallout would accumulate on rooftops. Avoid first floor (if possible) since fallout will pile up on ground outside.

A FEMA graphic showing the dose reduction factor for various shelters is available at www.ready.gov/america/beinformed/shelter.html .

Indoor shelter shielding - Some very basic ways to build an expedient last-minute shelter in your home, apartment or workplace to help protect you from dangerous radiation include...

- Set up a large, sturdy workbench or table in location you've chosen. If no table, make one by putting doors on top of boxes, appliances or furniture.
- Put as much shielding (e.g. furniture, file cabinets, appliances, boxes or pillowcases filled with dirt or sand, boxes of food, water or books, concrete blocks, bricks, etc.) all around sides and on top of table, but don't put too much weight on tabletop or it could collapse. Add reinforcing supports, if needed.
- Leave a crawl space so everyone can get inside and block opening with shielding materials.

- Leave 2 small air spaces for ventilation (about 4-6" each) - one low at one end and one high at other end. (This allows for better airflow since warm air rises.)
- Have water, detection devices, KI, radio, food and sanitation supplies in case you have to shelter in place for days or weeks.

EMP - A nuke causes an electromagnetic pulse (EMP) that could disrupt or crash systems so you may not have access to TV or radio, phones, the Internet, ATMs, and other devices. It could also impact response efforts, electrical and water systems, food distribution, transportation and more.

In summary, those within the blast zone of Ground Zero (depending on the size of the nuke) won't make it .. BUT .. if you are a few miles outside the zone your chances of surviving it are high but you **MUST** have detection devices to monitor levels of radiation and a plan to stay sheltered for at least 48 hours or up to a few weeks. First Responders will have to wait for the deadly fallout to decay before they enter a hot zone so the more you prepare, the better your odds of surviving a terrorist nuke.

You can read more about preparing for nuclear and radiological threats (and many other disasters and emergencies) in the 5th Edition of IT'S A DISASTER! ...and what are YOU gonna do about it?