



# Nuclear Explosion

 English [Español](#)

Nuclear explosions can cause significant damage and casualties from blast, heat, and radiation but you can keep your family safe by knowing what to do and being prepared if it occurs.

A nuclear weapon is a device that uses a nuclear reaction to create an explosion.

Nuclear devices range from a small portable device carried by an individual to a weapon carried by a missile.

A nuclear explosion may occur with or without a few minutes warning.

Fallout is most dangerous in the first few hours after the detonation when it is giving off the highest levels of radiation. It takes time for fallout to arrive back to ground level, often more than 15 minutes for areas outside of the immediate blast damage zones. This is enough time for you to be able to prevent significant radiation exposure by following these simple steps:

## GET INSIDE

**Get inside the nearest building** to avoid radiation. Brick or concrete are best.

**Remove contaminated clothing and wipe off or wash unprotected skin** if you were outside after the fallout arrived. Hand sanitizer does not protect against fall out. Avoid touching your eyes, nose, and mouth, if possible. Do not use disinfectant wipes on your skin.

**Go to the basement or middle of the building.** Stay away from the outer walls and roof. Try to maintain a distance of at least six feet between yourself and people who are not part of your household. If possible, wear a mask if you're sheltering with people who are not a part of your household. Children under two years old, people who have trouble breathing, and those who are unable to remove masks on their own should not wear them.

## STAY INSIDE

**Stay inside for 24 hours unless local authorities provide other instructions.** Continue to practice social distancing by wearing a mask and by keeping a distance of at least six feet between yourself and people who not part of your household.

**Family should stay where they are inside.** Reunite later to avoid exposure to dangerous radiation.

**Keep your pets inside.**

## STAY TUNED

Tune into any media available for official information such as when it is safe to exit and where you should go.

Battery operated and hand crank radios will function after a nuclear detonation.

Cell phone, text messaging, television, and internet services may be disrupted or unavailable.

HOW TO STAY SAFE IN THE EVENT OF A NUCLEAR EXPLOSION

## Prepare NOW

**Identify shelter locations.** Identify the best shelter location near where you spend a lot of time, such as home, work, and school. The best locations are underground and in the middle of larger buildings.

**While commuting, identify appropriate shelters to seek in the event of a detonation.** Due to COVID-19, many places you may pass on the way to and from work may be closed or may not have regular operating hours.

**Outdoor** areas, vehicles, mobile homes do NOT provide adequate shelter. Look for basements or the center of large multistory buildings.

Make sure you have an [Emergency Supply Kit](#) for places you frequent and might have to stay for 24 hours. It should include bottled water, packaged foods, emergency medicines, a hand-crank or battery-powered radio to get information in case power is out, a flashlight, and extra batteries for essential items. If possible, store supplies for three or more days.

- If you are able to, set aside items like soap, [hand sanitizer](#) that contains at least 60 percent alcohol, disinfecting wipes, and [general household cleaning supplies](#) that you can use to disinfect surfaces you touch regularly. Keep in mind each person's specific needs, including medication. Don't forget the needs of pets. Obtain extra batteries and charging devices for phones and other critical equipment.
- Being prepared allows you to avoid unnecessary excursions and to address minor medical issues at home, alleviating the burden on urgent care centers and hospitals.
- Remember that not everyone can afford to respond by stocking up on necessities. For those who can afford it, making essential purchases and slowly building up supplies in advance will allow for longer time periods between shopping trips. This helps to protect those who are unable to procure essentials in advance of the pandemic and must shop more frequently. In addition, consider avoiding WIC-labeled products so that those who rely on these products can access them.

## Survive DURING

**If warned of an imminent attack, immediately get inside** the nearest building and move away from windows. This will help provide protection from the blast, heat, and radiation of the detonation.

- When you have reached a safe place, try to maintain a distance of at least six feet between yourself and people who are not part of your household. If possible, wear a mask if you're sheltering with people who are not a part of your household. Children under two years old, people who have trouble breathing, and those who are unable to remove masks on their own should not wear them.

**If you are outdoors when a detonation occurs** take cover from the blast behind anything that might offer protection. Lie face down to protect exposed skin from the heat and flying debris. Avoid touching your eyes, nose, and mouth, if possible. If you are in a vehicle, stop safely, and duck down within the vehicle.

After the shock wave passes, **get inside the nearest, best shelter location** for protection from potential fallout. You will have 10 minutes or more to find an adequate shelter.

**Be inside before the fallout arrives.** The highest outdoor radiation levels from fallout occur immediately after the fallout arrives and then decrease with time.

**Stay tuned** for updated instructions from emergency response officials. If advised to evacuate, listen for information about routes, shelters, and procedures.

If you have evacuated, do not return until you are told it is safe to do so by local officials.

- Make plans to stay with friends or family in case of evacuation. Keep in mind that public shelter locations may have changed due to COVID-19. Check with local authorities to determine which public shelters are open.
- If you are told by authorities to evacuate to a public shelter, try to bring items that can help protect yourself and your family from COVID-19, such as hand sanitizer that contains at least 60 percent alcohol, cleaning materials, and two masks per person. Children under two years old, people who have trouble breathing, and people who cannot remove masks on their own should not wear them.
- Review the CDC's guidelines for "[Going to a Public Disaster Shelter During the COVID-19 Pandemic.](#)"

## Be Safe AFTER

**Immediately after you are inside shelter, if you may have been outside after the fallout arrived.**

**Remove your outer layer of** contaminated clothing to remove fallout and radiation from your body. Avoid touching your eyes, nose, and mouth, if possible.

**Take a shower or wash** with soap and water to remove fallout from any skin or hair that was not covered. If you cannot wash or shower, use a wipe or clean wet cloth to wipe any skin or hair that was not covered. Hand sanitizer does not protect against fall out. Avoid touching your eyes, nose, and mouth, if possible. Do not use disinfectant wipes on your skin.

**Clean any pets that were outside after the fallout arrived.** Gently brush your pet's coat to remove any fallout particles and wash your pet with soap and water, if available.

**It is safe to eat or drink packaged food items or items that were inside a building. Do not consume food or liquids that were outdoors uncovered and may be contaminated by fallout.**

**If you are sick or injured,** listen for instructions on how and where to get medical attention when authorities tell you it is safe to exit. If you are [sick and need medical attention](#), contact your healthcare provider for instructions. If you are at a public shelter, immediately notify the staff at that facility so they can call a local hospital or clinic. If you are experiencing a medical emergency, call 9-1-1 and let the operator know if you have, or think you might have, COVID-19. If you can, put on a mask before help arrives.

Engage virtually with your community through video and phone calls. Know that it's normal to feel anxious or stressed. Take care of your body and talk to someone if you are feeling upset. Many people may already feel fear and anxiety about the coronavirus 2019 (COVID-19). The threat of a nuclear explosion can add additional stress. Follow CDC guidance for [managing stress during a traumatic event](#) and [managing stress during COVID-19](#).

## Hazards related to nuclear explosions

- **Bright FLASH** can cause temporary blindness for less than a minute.
- **BLAST WAVE** can cause death, injury, and damage to structures several miles out from the blast.
- **RADIATION** can damage cells of the body. Large exposures can cause radiation sickness.
- **FIRE AND HEAT** can cause death, burn injuries, and damage to structures several miles out.
- **ELECTROMAGNETIC PULSE (EMP)** can damage electrical power equipment and electronics several miles out from the detonation and cause temporary disruptions further out.
- **FALLOUT** is radioactive, visible dirt and debris raining down from several miles up that can cause sickness to those who are outside.

## Associated Content

- [Nuclear Detonation Safety: Food, Drinking Water and Medicine](#) (PDF)
- [Nuclear Explosion Information Sheet](#) (PDF)
- [Download the FEMA app](#)
- [Centers for Disease Control](#)
- [Get inside, Stay inside, Stay Tuned Video \(English\)](#)
- [Get inside, Stay inside, Stay Tuned Video \(Spanish\)](#)
- [U.S. Environmental Protection Agency](#)
- [Coronavirus](#) (Federal Government Response)
- [Keeping Children Healthy During the COVID-19 Outbreak](#)

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**Disasters and Emergencies** **Make a Plan** **Get Involved** **Ready Business** **Ready Kids** **Resources**



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