

# Tornado Preparedness



# Reinforce your Home

Since tornadoes are unpredictable and violent, it's essential to fortify your home before their risk becomes prominent.

The peak times for the season vary between locations, but the National Severe Storms Laboratory states that for the southern Plains, it occurs during May and early June. For Midwestern states, the phenomenon is more likely in June or July.

The weather organization also declares that most of these significant storms form between 4 and 9 p.m. However, when conditions are right, an outbreak can take place at any time. Consider these tips from the Insurance Institute for Business and Home Safety to reinforce your home before the threat of severe weather is upon you.

## REINFORCE THE ROOF

The high winds inside a tornado can result in significant roof damage that compromises the overall balance of your home's structural integrity. Make it a habit to inspect your roof before the storm season each year and replace compromised shingles or boards.

For further support, consider hiring an expert to install hurricane clips. Essentially, the hardware is fastened directly to roof trusses or raf-



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ters and secures a load-bearing wall. There are numerous options to include various strengths and fit multiple building designs. A professional can recommend the best fit for your property.

## WINDOW UPGRADES

The high speeds associated with tornadic winds are noto-

rious for turning everyday objects into flying debris. It's crucial to protect your home's doors or windows to prevent shattered glass and from being ripped from its hinges.

For peace of mind during a tornado, install permanent storm shelters to be utilized when the threat of severe weather is present. You

should also consider investing in shatter-proof windows to reduce the amount of damage during high winds.

## LOCATE UTILITY SWITCHES

Heavy storm activity can also frequently cause gas leaks, flooding and electrical fires. You can be proactive in

limiting these instances by understanding how to turn off the source of these causes if your home is damaged during a tornado.

If you're unsure of how to find valves or main circuit breakers, hire an expert to analyze your home and teach you how to operate the main shut off points.

# Know your Plan

While the doppler radar can predict severe weather and tornado conditions, an actual funnel cloud can erupt without warning.

According to the National Weather Service, storm spotters look for visual cues like a rear-flanking downdraft and the tornadic vortex signature to determine when threats are imminent.

Because the formation of a tornado can occur unexpectedly, it's crucial to have a plan in place to keep yourself and your family safe. From choosing a secure spot in the home, preparing it with necessities and creating a strategy to regroup after the storm, tornado preparations can be the difference between life and death.

## PLANNING AT HOME

While there may be no area that is completely safe during a tornado, experts at the Centers for Disease Control and Prevention urge you to find the most secure place in your home. A basement is often preferred as it is below ground level and can avoid most of the dangers caused by a significant storm.

If you don't have a lower level in your home, you should seek refuge in the most interior room without windows. For instance, a bathroom, closet or center hallway can all be safe



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spots for refuge. Ensure your entire family knows where to go when the sirens signify an emergency.

## STOCKING UP YOUR SAFE ROOM

After you decide where your safe place is, the American Red Cross suggests stocking it with

an emergency kit. Make sure it includes:

- A three-day supply of water with one gallon per person.
- A three-day supply of non-perishable foods.
- Batteries, flashlights, first aid kit and sanitation items.
- An accessible weather radio and extra mobile charging

equipment.

Ensuring your home is stocked with necessities can make you safe while waiting for evacuation and keep you informed about the weather outside.

## MEETING UP

To prepare for you or a fami-

ly member experiencing a tornado away from home, it's crucial to have a meeting spot after the threat has passed. Since communications are sometimes compromised during a storm, designating an area for your family to regroup is key to knowing everyone is safe.

# The Signs of a Tornado

If your area is under a tornado warning, it's crucial to seek shelter and remain there until the threat passes.

Unfortunately, we are not always in the most secure place when a severe storm erupts. Keep yourself safe by recognizing the signs of tornadic activity when you're away from your protected place.

The most efficient way to stay safe is to pay attention to your local forecast. If experts are warning of potential tornadoes, it's a good idea to stay home when possible or understand the emergency plan for the building you are visiting. If you don't have access to the weather forecast, watch for these signs of activity when severe weather is a threat.

## **TORNADO SIREN**

Most local communities employ a siren when something life-threatening is taking place in the area. Get to know the sound of your tornado alert during regular testing, so you recognize it when it signifies a real emergency.

## **A LOUD ROAR**

While it is not recommended to be outdoors during a potential tornado, when caught outside, you will notice a significant noise as a funnel is approaching. According to the National Oceanic and Atmospheric Administration, people who have been in a cyclone report sounds like a jet engine or a freight train.

## **A VISUAL FUNNEL CLOUD**

It's necessary to know how to recognize a funnel cloud, especially when you are away from home or on the road. The National Severe Storms

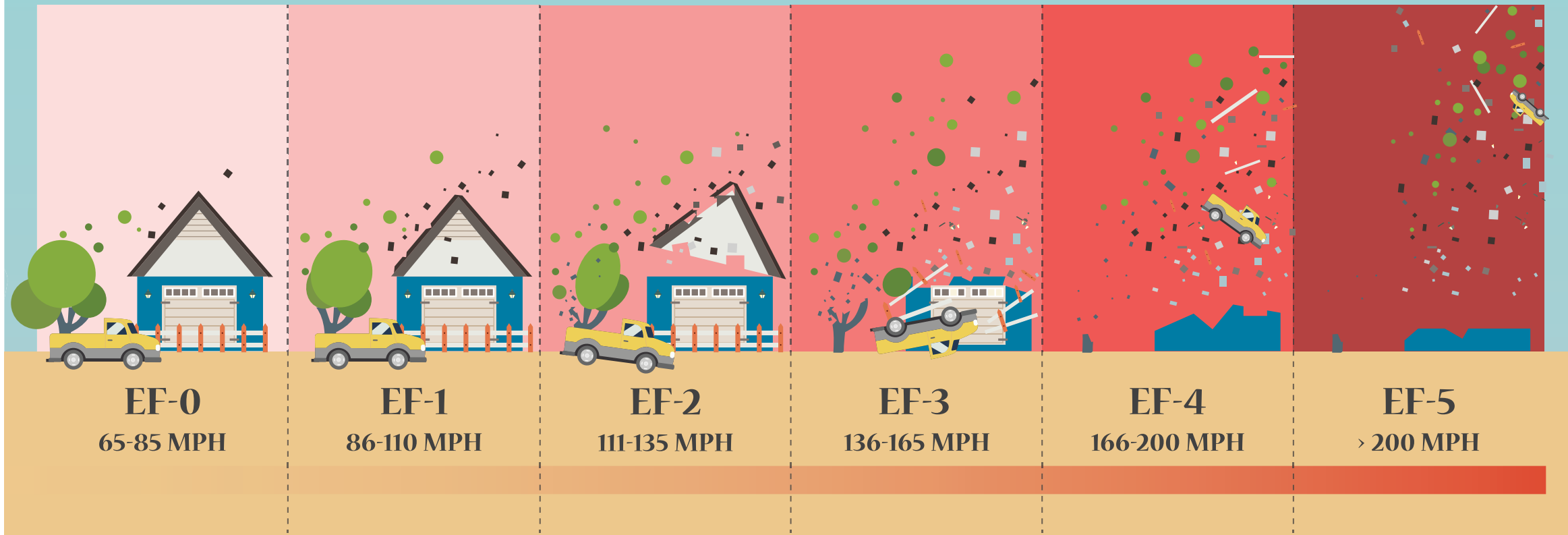
Laboratory suggests that a funnel cloud is a form of rotating condensation in the sky. Once these funnels contact the ground, the phenomenon is classified as a tornado.

If you're traveling in severe weather conditions, keep your eyes to the skies and travel away from the signs of threats from above. When driving through a tornado, experts recommend traveling away from the storm at 90-degree angles.

## **CALM CONDITIONS**

You have likely heard of the calm before the storm, and it's a frequent occurrence before a tornado outbreak. This is mainly because a funnel cloud often develops near the trailing edge of a thunderstorm. After a wave of storms, pay attention to reports from your local meteorologists to determine if the threat has ultimately passed.

Enhanced Fujita Scale



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# The Risks of a Tornado

Tornadoes are known for causing mass destruction to entire neighborhoods. The rotating storms quickly destroy homes, office buildings and automobiles.

To understand the seriousness regarding tornadic warnings, you should understand the significant damage they cause.

According to the National Severe Storms Laboratory,

tornadoes are formed during both supercell and non-supercell thunderstorms. Those that form during a supercell are the most common, and especially dangerous. It is believed that the most violent tornadoes include wind speeds of up to 300 mph.

### HOW TORNADOES ARE MEASURED

In 2007, the Enhanced Fujita Scale replaced the traditional Fujita Scale in terms of measuring the strength of tornadoes. The storms are given an EF rating based on the alignment between its wind speed and the damage it

caused. Here are how the classification works to compare categories with three-second wind gusts, according to the National Weather Service

- EF0: 65-85 mph.
- EF1: 86-110 mph.
- EF2: 111-135 mph.
- EF3: 136-165 mph.
- EF4: 166-200 mph.
- EF5: Over 200 mph.

### RISKS OF FLYING DEBRIS

The National Oceanic and Atmospheric Administration report that flying debris is the leading cause of deaths and injuries during a tornado. While elements like sand,

rock and dirt are thrown at incredible speeds, the storms can also hurl tree branches, lawn furniture and other large objects that aren't secured.

Because of the potential risk of any object becoming a flying weapon during a cyclone, it's imperative to seek shelter inside a safe structure.

### FIND SHELTER

If you are away from your safe space when a tornado is imminent, you should know how to make the most out of your surroundings. Consider these tips from the Storm Prediction Center before

you're caught off guard in a storm away from home.

**On the road:** Vehicles are not a safe place during a tornado. If you can find a lower area than the road, get there and protect your head with your hands.

**At work:** Understand the emergency protocols made by office officials. Plans should include where to seek shelter and meet after the storm.

**In a mobile home:** Even a secured mobile home should never be considered a safe, sturdy structure during a tornado. Plan and discuss meeting at a friend or loved one's home to wait out the storm.

# Inspecting Your Home

A key strategy during tornado prep is reinforcing your home before the threat of storms arises. However, you should also know how to analyze your property for damage after the event.

Because the violent storms can cause unpredictable damage, vital components to your home can be compromised.

Since tornadoes are considered acts of God, damage caused by the storms should be covered by your homeowner's insurance plan. It's good practice to analyze your policy before the severe weather season arrives to ensure your belongings are protected. Call your agent to discuss increasing your coverage if need be.

When local officials deem it safe to go outdoors after a tornado, check for damage commonly produced by these storms, as recommended by the International Association of Certified Home Inspectors.

## **ELECTRICAL SYSTEM**

If you notice downed power lines on your property, it's crucial to avoid them even if you don't believe they are operating. Call your utility provider to have a professional inspect and resolve the



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hazard.

Around the home, ensure all electrical equipment is dried and free from frayed wires before being returned to service.

You should also inspect your main circuit box for flipped breakers or the smell of burning insulation.

## **PLUMBING SYSTEM**

Homes can be significantly shaken or rattled during a tornado, causing plumbing lines to twist or crack under pressure. Check all visible pipes for signs of leakage or breaks and turn off the main supply if malfunctions are noted. Because plumbing

issues are common after a tornado, it's crucial to have plenty of water on hand as it may be challenging to hire a plumber for remediation.

## **ROOF DAMAGE**

You should also scale your roof to investigate for damage that wasn't present before a

storm. Incidents like missing or torn shingles should be resolved immediately as they present the opportunity for water to enter your home. If you cannot afford the repairs before the next wave of wet weather, it's crucial to cover the affected area with a waterproof tarp.

# Installing a Shelter

The Storm Prediction Center suggests seeking shelter in a basement or the most interior room in your home during a tornado. If your home is not equipped with a lower level, installing an independent shelter is a good strategy.

Storm shelters are typically much more cost-efficient than installing a basement under your current structure. According to Home Advisor, the cost to add a lower level and its foundation can reach \$175,000, while a shelter typically costs about \$6,200. Before investing in a refuge, you should compare the pros and cons of the available options.

## ABOVE GROUND STRUCTURE

You may think that an above-ground shelter goes against everything you have learned about surviving a tornado. While the lower level of a home is often praised as the safest place, a safe room can be a beneficial alternative. According to the Federal Emergency Management Agency, a hardened structure must meet strict federal guidelines to be approved by the organization.

The advantage of an above-ground housing is the ability to install it anywhere on your property. Most consumers choose to set it up in a garage or shed that is attached to their home. An in-home location is beneficial as you won't find yourself traveling in adverse weather conditions to reach safety. An above-ground safe house is the best option for those with limited space outside or who live in flood zones.

## UNDERGROUND SHELTER

If you have ample room on your

property, consider installing an underground storm shelter to protect you during severe weather. Generally, they can be constructed in the yard or even underneath a concrete floor in your garage or patio.

Allow an expert to analyze the best location to place the shelter. If it's deemed that it will be most effective outside, attempt to keep it near an exit point of your home to limit your time outside when seeking shelter.

## SUPPLIES

Having a storm shelter is great, but make sure you've got the right items stocked. Here are some essential items to have on hand, according to the Federal Emergency Management Agency:

- Battery-powered radio.
- Pillows, blankets and other bedding.
- Essential documents (birth certificate copies, insurance policies, etc.).
- Toilet paper and bags for sanitation.
- Personal sanitation items.
- A whistle for signaling for help if trapped.
- A change of clothes per person.
- Close-toe shoes and extra socks per person.
- Wrench or pliers to turn off utilities.
- Dust mask or cotton T-shirt to filter the air.



# Protecting Yourself

Reacting to a tornado can cause a sense of panic if you're unprepared. Before the risk of a significant event is present, practice methods to keep yourself safe during an actual storm.

It's important to include your entire family, especially young children. Ensuring that they know how to find your safe spot and what to do during severe weather helps keep them calm when a storm is occurring. When introducing a strategy to survive a tornado, instill these tips from the Federal Emergency Management Agency.

## PRACTICE DRILLS

Before tornado season begins, take time to practice entering your designated safe place. Participate in drills beginning in different areas of your home. Keep a note of how long the process takes and try to improve your speeds until satisfied.

You can also imitate a power outage by rehearsing your drills with the lights out. Make sure there are plenty of available flashlights throughout your home so you can illuminate your path even in the dark.

## COVER YOURSELF

Once you're in the safe room, choose the location where you will stay until a storm passes. FEMA states that additional coverage can be beneficial, even when in an underground basement.

- Use a suitable-sized table in your safe room to hide under.
- Cover your head and neck with your arms.
- Use a blanket or coat to cover yourself to provide more protection.

## PRACTICE FIRST AID

The American Red Cross states that each year, more than three million people gain the skills they need to prepare and respond during emergencies. Attend training to learn the proper procedures to protect an injured loved one until medical professionals arrive. Keep in mind that during a storm, response time may be delayed, so learning first aid can be lifesaving.

Remember these guidelines from FEMA when you are tending to someone who experienced tornado injuries.

- If someone stops breathing, begin CPR if trained.
- Stop a bleeding injury by applying direct pressure to the wound.
- Have puncture wounds evaluated by a physician.
- Do not attempt to move seriously injured people unless they are in immediate danger.

