

Natural Disasters: Tornado

Definition and Characteristics:

A tornado is an intense current of wind associated with a thunderstorm. They may occur one at a time, or in groups along a weather squall line. Tornadoes are nature's most violent storms. They can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long.

Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible. Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

Tornado Facts:

- Tornadoes may strike quickly, with little or no warning.
- They may appear nearly transparent until dust and debris are picked up.
- The average tornado moves Southwest to Northeast, but tornadoes have been known to move in any direction.
- The average forward speed is 30 MPH, but may vary from stationary to 70 MPH.
- Waterspouts are tornadoes that form over water.
- Tornadoes are most frequent east of the Rocky Mountains during spring and summer.
- Peak tornado season in the southern states is March through May; in the northern states, it is late spring through early summer.
- Tornadoes are most likely to occur between 3:00 PM and 9:00 PM but may occur at any time.

Terminology:

Tornado Watch	Tornadoes are possible due to current environmental conditions. Remain alert for approaching storms. Watch the sky and stay tuned to NOAA Weather Radio, local radio, or television for information.
Tornado Warning	A tornado has been sighted or indicated by weather radar. Take shelter immediately.

Public Information / Recommended Actions:

Before	Make a plan: Be alert to changing weather conditions. Listen to NOAA Weather Radio or local radio or television newscasts for the latest information. Locate safe spots in your home under a sturdy table or against an inside wall, and practice drills with your family. If you see approaching storms or any of these danger signs, be prepared to take shelter immediately:
--------	---

	<ul style="list-style-type: none"> • Dark, greenish sky • Large hail • A large, dark, low-lying cloud (particularly if rotating) • A loud roar, similar to a freight train.
During	<p>Take shelter immediately!</p> <ul style="list-style-type: none"> • If in a structure: Go to a pre-designated shelter area such as a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest level away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck. Do not open windows. • If in a vehicle, trailer, or mobile home: Get out immediately and go to the lowest floor of a sturdy, nearby building or a storm shelter. Mobile homes, even if tied down, offer little protection from tornadoes. Never try to outrun a tornado in urban or congested areas in a car or truck. Leave the vehicle immediately for safe shelter. • If outside with no shelter: Lie flat in a nearby ditch or depression and cover your head with your hands. Be aware of the potential for flooding. Do not get under an overpass or bridge. You are safer in a low, flat location. Watch out for flying debris, the cause of most fatalities and injuries.
After	<ul style="list-style-type: none"> • Listen for news reports for information and instructions from authorities. • Use extreme caution when entering damaged areas of buildings. • Stay away from downed power lines, and report them to the power company. Be alert for gas leaks and report them to the gas company.

Additional Information:

A safe room or a wind shelter can provide a place of safety for you and your family during a violent storm. Safe rooms built below ground level provide the greatest protection, but a safe room built in a first-floor interior room also can provide the necessary protection. Below-ground safe rooms must be designed to avoid accumulating water during the heavy rains that often accompany tornadoes.

Consider the following when building a safe room:

- To protect its occupants, a safe room must be built to withstand high winds and flying debris, even if the rest of the residence is severely damaged or destroyed.
- The safe room must be adequately anchored to resist overturning and uplift.
- The walls, ceiling, and door of the shelter must withstand wind pressure and resist penetration by windborne objects and falling debris.
- The connections between all parts of the safe room must be strong enough to resist the wind.
- Sections of either interior or exterior residence walls that are used as walls of the safe room must be separated from the structure of the residence so that damage to the residence will not cause damage to the safe room.