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What is a Tornado?

A **tornado** is a violently rotating column of air which is in contact with both a cloud base and the surface of the earth. Tornadoes can come in many shapes, but are typically in the form of a visible condensation funnel, with the narrow end touching earth. Often, a cloud of debris encircles the lower portion of the funnel.

Tornadoes are the most destructive storms on earth. Most have winds of 112 mph or less, are approximately 250 feet across, and travel a mile or more before dissipating. However, some tornadoes can have winds of more than 300 mph, be more than 2 miles across, and stay on the ground for dozens of miles.

How do they form?

Before thunderstorms develop, a change in wind direction and an increase in wind speed with increasing height creates an invisible, horizontal spinning effect in the lower atmosphere.

Rising air within the thunderstorm updraft tilts the rotating air from horizontal to vertical.



An area of rotation, 2-6 miles wide, now extends through much of the storm. Most strong and violent tornadoes form within this area of strong rotation.

Facts about Tornadoes

- Tornadoes can occur at any time of the year.
- In the southern states, peak tornado occurrence is in March through May, while peak months in the northern states are during the summer.
- Note, in some states, a secondary tornado maximum occurs in the fall.
- Tornadoes are most likely to occur between 3 and 9 p.m. but have been known to occur at all hours of the day or night.
- The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction.
- The average forward speed is 30 mph but may vary from nearly stationary to 70 mph.

Terminology

TORNADO WATCH:

Tornadoes are possible in your area. Remain alert for approaching storms.

TORNADO WARNING:

A tornado has been sighted or indicated by weather radar. If a tornado warning is issued for your area and the sky becomes threatening, move to your pre-designated place of safety.



Signs To Look For

- Dark, often greenish sky
- Wall cloud
- Large hail
- Loud roar; similar to a freight train

Characteristics of Tornadoes:

Weak Tornadoes

- 69% of all tornadoes
- Less than 5% of tornado deaths
- Lifetime 1-10+ minutes
- Winds less than 110 mph

Strong Tornadoes

- 29% of all tornadoes
- Nearly 30% of all tornado deaths
- May last 20 minutes or longer
- Winds 110-205 mph

Violent Tornadoes

- Only 2% of all tornadoes
- 70% of all tornado deaths
- Lifetime can exceed 1 hour
- Winds greater than 205 mph



Who's Most At Risk

- People in automobiles
- The elderly, very young, and the physically or mentally impaired
- People in mobile homes
- People who may not understand the warning due to a language barrier

If a Warning is issued or if threatening weather approaches:

What To Do If....

- In a home or building, move to a pre-designated shelter, such as a basement.
- If an underground shelter is not available, move to an interior room or hallway on the lowest floor and get under a sturdy piece of furniture.
- Stay away from windows.
- Get out of automobiles.
- Do not try to outrun a tornado in your car; instead, leave it immediately.
- Mobile homes, even if tied down, offer little protection from tornadoes and should be abandoned.

“Occasionally, tornadoes develop so rapidly that advance warning is not possible. Remain alert for signs of an approaching tornado. Flying debris from tornadoes causes most deaths and injuries.”



The Fujita Scale

F-Scale Number	Intensity Phrase	Wind Speed
F0	Gale tornado	40-72 mph
F1	Moderate tornado	73-112 mph
F2	Significant tornado	113-157 mph
F3	Severe tornado	158-206 mph
F4	Devastating tornado	207-260 mph
F5	Incredible tornado	261-318 mph
F6	Inconceivable tornado	319-379 mph