

TORNADOES . . .

What causes tornadoes?

Thunderstorms develop in warm, moist air in advance of eastward-moving cold fronts. These thunderstorms often produce large hail, strong winds, and tornadoes. Tornadoes in the winter and early spring are often associated with strong, frontal systems that form in the Central States and move east. Occasionally, large outbreaks of tornadoes occur with this type of weather pattern. Several states may be affected by numerous severe thunderstorms and tornadoes.

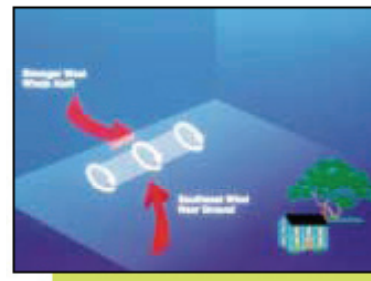
During the spring in the Central Plains, thunderstorms frequently develop along a "dryline," which separates very warm, moist air to the east from hot, dry air to

the west. Tornado-producing thunderstorms may form as the dryline moves east during the afternoon hours.

Along the front range of the Rocky Mountains, in the Texas panhandle, and in the southern High Plains, thunderstorms frequently form as air near the ground flows "upslope" toward higher terrain. If other favorable conditions exist, these thunderstorms can produce tornadoes.

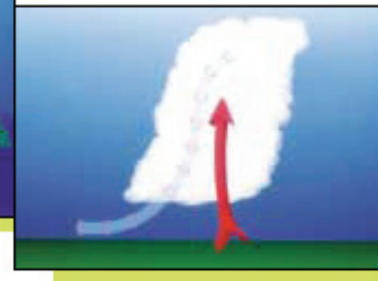
Tornadoes occasionally accompany tropical storms and hurricanes that move over land. Tornadoes are most common to the right and ahead of the path of the storm center as it comes onshore.

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.



How do tornadoes form?

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



An area of rotation, 2-5 miles wide, now extends through much of the storm. Most strong and violent tornadoes form within this area of strong rotation.



Shapes and Sizes 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

Tornado Variations

- Some tornadoes may form during the early stages of rapidly developing thunderstorms. This type of tornado is most common along the front range of the Rocky Mountains, the Plains, and the Western States.
- Tornadoes may appear nearly transparent until dust and debris are picked up.
- Occasionally, two or more tornadoes may occur at the same time.

Weather Radar

Meteorologists rely on weather radar to provide information on developing storms. The National Weather Service is strategically locating Doppler radars across the country which can detect air movement toward or away from the radar. Early detection of increasing rotation aloft within a thunderstorm can allow life-saving warnings to be issued before the tornado forms.

Tornado Myths

MYTH: Areas near rivers, lakes, and mountains are safe from tornadoes.

FACT: No place is safe from tornadoes. In the late 1980's, a tornado swept through Yellowstone National Park leaving a path of destruction up and down a 10,000 ft. mountain.

MYTH: The low pressure with a tornado causes buildings to "explode" as the tornado passes overhead.

FACT: Violent winds and debris slamming into buildings cause most structural damage.

MYTH: Windows should be opened before a tornado approaches to equalize pressure and minimize damage.

FACT: Opening windows allows damaging winds to enter the structure. Leave the windows alone; instead, immediately go to a safe place.

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BE ASSURED
the Norton County Hospital will be there in Case of an Emergency

NCH

The Norton County Hospital has implemented a plan which would become effective once notified by the Emergency Preparedness Team.

Norton County Hospital would continue to function in a full or limited capacity to offer:

- EMERGENCY SERVICES —
 - Primary Triage-Emergency Care
 - Secondary Triage-Advanced Care
 - Walking Wounded Care-Non Critical Care
- LAB WORK •X-RAY •LIMITED ELECTIVE SURGERIES

FOR MORE CRITICAL CARE UNTIL CRISIS WAS OVER

Think "Safety First" After Storms

Consider all downed power lines and hanging wires **ENERGIZED and DANGEROUS!**

Can YOU tell the difference?

Severe Thunderstorm Watch
Severe thunderstorms are likely to occur.

Severe Thunderstorm Warning
Severe thunderstorms have been spotted, and people in the path of the storm are in danger.

Tornado Watch
Tornadoes are possible in the area. Stay tuned to the radio or TV and watch the sky.

Tornado Warning
A tornado has been sighted. Take cover at once.

Be aware of weather around you and listen to watches and warnings!
Post this where you can see it when severe weather occurs

FROM THE
Norton County Sheriff's Office
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Norton County Emergency Preparedness