

# 101 Critical Days Of Summer

## Safety Tip #3 - Severe Weather

### Thunderstorms

Thunderstorms pose many hazards. They produce lightning and hail. Their torrential rains can trigger floods; their strong winds can create deadly tornadoes. You have to worry about them when they get to be "severe," which the National Weather Service defines as having winds of more than 57 mph and/or hail about the size of a marble. About 100,000 thunderstorms occur in the U.S. each year; 10 percent become severe. Every state has thunderstorms. When it's your turn, stay tuned to the latest weather forecasts, and listen for watches and warnings for tornadoes and floods. If the weather service issues a watch:

- Tie down lawn chairs, picnic tables and trash cans, or bring them inside.
- Park your car under an awning or inside a garage.
- Close windows and draw the blinds or curtains. This precaution will lessen the hazard of flying glass if a window gets broken.
- Remember, rubber-soled shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal.
- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Use a corded telephone only for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.
- Listen to radio or television for warnings.
- Just before and during the storm, count the seconds between seeing lightning and hearing thunder. If this time is 30 seconds or less, then the lightning is a threat. Seek shelter.
- After seeing the last lightning flash, wait 30 minutes before leaving shelter. More than half of the people killed by lightning died after the storm passed.



### Lightning

Once a bolt of lightning flashes toward the ground, it strikes the tallest object in a predetermined, 50-yard radius. In other words, it won't "look for" a tall tree that is 100 yards away from you. If a bolt is going to hit near you, don't be the tallest thing within that 50-yard radius. The only completely safe approach is to avoid being exposed. Given a choice, get inside a building.

- Your second choice is a car or truck. If you are already in an exposed location when a storm hits, your options are limited:
- Stay as low as you can, to avoid being the highest object.
- Squat down, but don't lay flat. You don't want your whole body touching the ground if lightning hits nearby, because the current will spread outward.
- If you're in the woods, avoid the tallest trees but stay away from clearings that are more than 100 yards across.

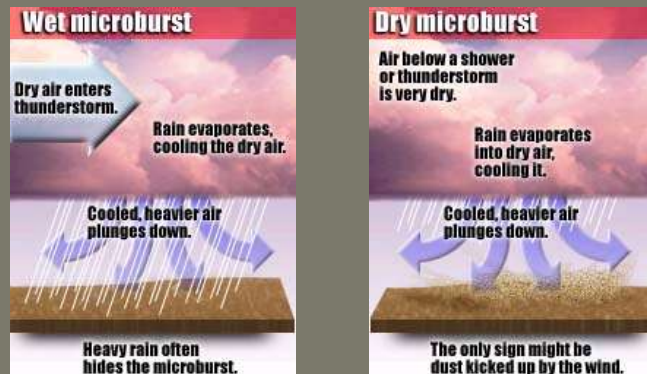
- Stay away from doors and windows. Do not use the telephone. Take off head sets. Turn off, unplug, and stay away from appliances, computers, power tools, & TV sets. Lightning may strike exterior electric and phone lines, inducing shocks to inside equipment.
- If you are boating or swimming, get out of the water immediately and move to a safe shelter away from the water!

You can usually hear thunder 10 miles away, unless the noise of rain and wind interferes. When you see lightning, count the number of seconds until you hear thunder. Sounds travels one mile every five seconds. Most experts recommend 30 seconds (6 miles) as the signal for you to stop what you're doing and get to a safe location.

The typical lightning threat lasts less than an hour. Wait 30 minutes after you see the last lightning bolt or hear the last thunder before going back to golfing, fishing, or whatever else you were doing outdoors. Water does not "attract" lightning, but it is a great conductor. Lightning has killed or injured people who were swimming, wading, fishing, boating and surfing. Since ponds and lakes tend to be cooler than nearby land during the summer, thunderstorms are less likely to build or continue to develop over them. A car protects you from lightning because the lightning will follow its metal structure to the ground. But don't leave the windows down, because the lightning can jump into the car.

## Microbursts

We thought we would put in this information since we have had a couple in the area before: Any strong winds coming down from showers and thunderstorms are known as "downbursts." If damaging winds are concentrated in an area extending 2.5 miles or less, are short-lived, usually lasting from about 5 to 15 minutes, it's called a "microburst." If the winds cover a larger area, it's a "macroburst." Such "microburst" winds can reach more than 150 mph. Sometimes microbursts are concentrated into a line structure, and under these conditions, activity may continue for as long as an hour. Once microburst activity starts, multiple microbursts in the same general area are not uncommon and should be expected. In addition to damaging buildings and blowing down trees, microbursts blasting down to the ground are a major aviation hazard and have caused several crashes.



A few sites to browse through:

<http://www.nws.noaa.gov/om/brochures/ttl.pdf>

<http://www.lightningsafety.com/>

<http://www.weather.com/safeside/>

[http://cimms.ou.edu/~doswell/tstm\\_camping\\_safety.html](http://cimms.ou.edu/~doswell/tstm_camping_safety.html)

[http://www.suite101.com/article.cfm/science\\_sky/100918/1](http://www.suite101.com/article.cfm/science_sky/100918/1)

<http://www.weather.gov/safety.php>

<http://www.stormfax.com/safepage.htm>

**Stay Dry and Safe - From Your Risk Management Staff!!**

**This document was derived from multiple sources. Sources are available upon request in the 157 ARW/SE Office.**