



NEWS FROM NOAA

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION • US DEPARTMENT OF COMMERCE

Contact: Jeff Orrock
(919) 515-8203 or (919) 280-6573

FOR IMMEDIATE RELEASE

NOAA'S NATIONAL WEATHER SERVICE ILLUMINATES LIGHTNING SAFETY INFORMATION *Agency Kick-off Lightning Awareness Week*

The first official week of summer is upon us and with the dog days of summer come thunderstorms and lightning. In order to address the dangers of lightning by increasing awareness the National Weather Service has declared June 21-27, 2009 as National Lightning Safety Awareness Week. The goal of this campaign is to educate everyone about the deadly dangers of lightning. This year's theme is "When Thunder Roars, Go Indoors".

Every crack of thunder that echoes from a storm is caused by lightning jetting across the sky or to the ground with a potentially lethal force. Cloud-to-ground lightning strikes within the United States an average of 25 million times every year. A single bolt, with a length that can exceed five miles and a width of one to two inches, can generate 100 million electrical volts and a temperature near 50,000 degrees Fahrenheit. These factors make lightning both deadly and damaging.

"Lightning poses dangers to people both outdoors and indoors", said Jeff Orrock, Warning Coordination Meteorologist at the National Weather Service Office in Raleigh. Lightning kills an average of 67 people in the United States each year and in terms of absolute numbers of lightning casualties, North Carolina ranks in the top 10 nationally. This number of lightning related fatalities is typically under reported since most lightning deaths are attributed to cardiac arrest caused by the lightning strike.

Exceeding the number of fatalities are the estimated 600-700 lightning survivors that are left with debilitating health effects each year. "While about 90 percent of those struck by lightning survive, they frequently have permanent after effects such as chronic pain, brain injury and thought processing problems," said Dr. Mary Ann Cooper, professor, Department of Emergency Medicine, University of Illinois.

During the development of a thunderstorm, the rapidly rising air within the cloud, combined with the movement of precipitation within the cloud, causes electrical charges to build up within the cloud. Generally, positive charges build up near the top of the cloud, while negative charges build up near the bottom of the cloud. Normally, the earth's surface has a slight negative charge, however, as the negative charges build up near the base of the cloud, the ground beneath the cloud and in the area surrounding the cloud becomes positively charged. As the cloud moves, these induced positive charges on the ground follow the cloud like a shadow. Lightning is a giant spark of electricity that occurs between the positive and negative charges within the atmosphere or between the atmosphere and the ground. Lightning reaches temperatures as great

as 50,000 degrees F causing the rapid expansion of heated air heard as thunder. Since light travels faster than sound in the atmosphere, the sound will be heard after the lightning. Have you ever been under a storm and had your hair stand up? This is one of nature's warning signs that says you are in the wrong place, and you may be a lightning target!

You are particularly vulnerable to lightning strikes when the storm is first approaching especially once the storm is within six miles. Lightning can strike just ahead of the storm as far as 12 miles away, but more commonly within six miles. One of the best rules to follow to remain safe from lightning is the 30/30 rule. When you see lightning, count the time until you hear thunder. It takes sound about five seconds to travel a mile. If the time between the flash of lightning and rumble of thunder is 30 seconds or less, move indoors or get into a vehicle. Wait at least 30 minutes after hearing the last clap of thunder before going back outdoors. This will allow the storm to get far enough away from you once it has past. Never be fooled by sunshine or blue sky. When thunder roars, head indoors. Once inside, avoid contact with plumbing, corded phones, or anything plugged into electricity.

“Lightning deaths in North Carolina are more likely to occur during the summer months and in open areas such as on the beach, open boats, golf courses and playing fields. Lightning’s deadly strike can hit anytime during the year and any time of day,” said Jeff Orrock with National Weather Service Weather Forecast Office in Raleigh.

NOAA's National Weather Service is the primary source of weather data, forecasts and warnings for the United States and its territories. NOAA's National Weather Service operates the most advanced weather and flood warning and forecast system in the world, helping to protect lives and property and enhance the national economy.

The National Oceanic and Atmospheric Administration, an agency of the U.S. Commerce Department, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of the nation's coastal and marine resources.

Lightning safety tips:

- Keep an eye on the sky. Look for darkening skies, flashes of lightning, or increasing wind, which may be signs of an approaching thunderstorm. Get to a safe shelter immediately if a thunderstorm approaches. Coaches and other leaders should listen to NOAA weather radio for the latest forecasts and warnings during practice sessions and games and have a lightning safety plan.
- Do not wait for rain to postpone outdoor activities: many people take shelter from the rain, but most people struck by lightning are not in the rain. Go quickly inside a completely enclosed building, not a carport, open garage, dug out, or covered patio. If no enclosed building is nearby, get inside a hard-topped all-metal vehicle and remain there until the storm has safely passed.
- Places to avoid include: under or close to trees; sheds; picnic shelters; baseball/softball dugouts; bleachers; beaches; and open fields. If there is no shelter

available and lightning threatens, crouch in the open on the balls of your feet and cover your ears. Keep twice as far away from a tree as it is tall. Also stay away from clothes lines, fences, exposed sheds, and electrically conductive elevated objects.

- Get out of the water; it is a great conductor of electricity. Stay off the beach and out of small boats or canoes. If caught in a boat, crouch down in the center away from metal hardware. Swimming, wading, snorkling, and scuba diving are not safe.

Most lightning victims die of cardiac arrest. If some is struck by lightning and is unconscious and not breathing, call 911 and start C.P.R if necessary.

On the Web:

Lightning Safety Week Webpage safety tips, survivor stories and other resources:

<http://www.lightningsafety.noaa.gov>

Lightning Safety Brochure for Coaches:

<http://www.nws.noaa.gov/om/lightning/pdfs/CoachGuide.pdf>

Lightning Safety Brochure for the Family:

<http://www.nws.noaa.gov/om/lightning/pdfs/lightning-safety.pdf>

The Science of Lightning:

http://www.srh.noaa.gov/jetstream//lightning/lightning_intro.htm

NOAA's National Weather Service:

<http://weather.gov/raleigh>