



FLASH! BAM!

By Chad Eberhardt

When seeking shelter from lightning storms, most people follow old wives' tales and other questionable advice.

The problem, according to a national lightning expert, is that these tips are merely myths and do not protect people from the greatest dangers of lightning.

"Carrying heavy metal does not increase your chances of being hit by lightning...wearing cleats does not increase your chances of being hit and wearing heavy galoshes does not protect you," said Theodore Bernstein, UW-Madison professor emeritus of electrical engineering.

Bernstein's two biggest tips for those caught outside during lightning strikes are:

- Get inside as quickly as possible.
- Or, if stuck outside, stay away from tall objects, which are more likely to be struck by lightning, and remain as close to the ground as possible.

Gathering under a large tree was the mistake made at this year's U.S. Open at Hazeltine National Golf Club in Chaska, Minnesota, Bernstein said. One man was killed and several others were injured by a lightning strike there.

"If you are out-of-doors, your probability of being struck by lightning is related to your height," he said. The chances of a person 5 feet tall being struck by lightning are increased 20 times if they stand under a tree 100 feet tall.

Each year, lightning kills nearly 100 people and injures 250 to 300 people in the United States. This is down from the early 1900s when 300 to 400 people died each year from lightning strikes. The decrease can be attributed to the fact that people spend more time inside, according to Bernstein.

With May to October being lightning season, Bernstein had some advice on how to stay safe in a lightning storm:

• On a golf course, continue to walk toward or stay on the open course. Do not seek shelter under trees or in ungrounded small shelter houses. Avoid tractors and other golf course maintenance equipment.

• Stay inside a metal car. The lightning will travel harmlessly around, along the metal body, into the ground.

• If stuck outside, squat down keeping feet together to reduce current that could be running through the ground. The greater the distance between the feet the larger the current flow. If possible, put a raincoat or tarp underneath you. Do not lie down!

• If in a boat, get off the water immediately since you tend to be the tallest object in the area.

• Swimming is unsafe because the current travels faster and farther in water, but you do not increase your chances of being hit if you are in the water.

Deaths and injuries can be avoided by simply not getting caught in lightning storms. If one waits until lightning is seen and thunder heard, the common advice given by the majority of members in our profession to their crew members, it may be too late. Until recently, the only way to determine the presence and proximity of electricity in the air was to call a local weather service. Personally, I've been starting to wonder if the "1991 Old Farmer's Almanac" isn't a more reliable source.

Recently, technology has been developed by Airborne Research Associates for the NASA/Kennedy Space Center called the M-10 Lightning De-

tor. Introduced last year, the M-10 has been widely accepted and is being used with much success by every major professional golf tour.

One simply points the M-10 at suspicious looking clouds and listens for beeps caused by rapid invisible light intensity changes. As a storm approaches, it can determine distance to the lightning.

Looking back at that dark cloud that will forever cloud one of the best Open courses ever, one can easily blame the M-10 for not doing its job. In reality, from all accounts, the M-10 successfully warned of imminent severe lightning. Play was suspended and the golfers fled to vans for protection back to the clubhouse.

But no such provisions can be made for over 40,000 spectators. It was an accident waiting to happen, and worse yet, there was tragedy. A very valuable lesson should be taken from this incident and applied to our profession. Under no circumstances should an employee be expected to be out on the course to finish up that last fairway or any other job. It must be stressed upon crew members the seriousness of seeking proper shelter or taking necessary precautions as mentioned earlier by Professor Bernstein.

After reading numerous reports and success of the M-10 Lightning Detector, I feel every golf course would find the device beneficial in not only clearing the course of golfers but also employees. It would certainly eliminate the hit and miss situation of a local weather service.

Contact ARA for more information (617) 899-1834 - Ralph Markson Ph.D., President.

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