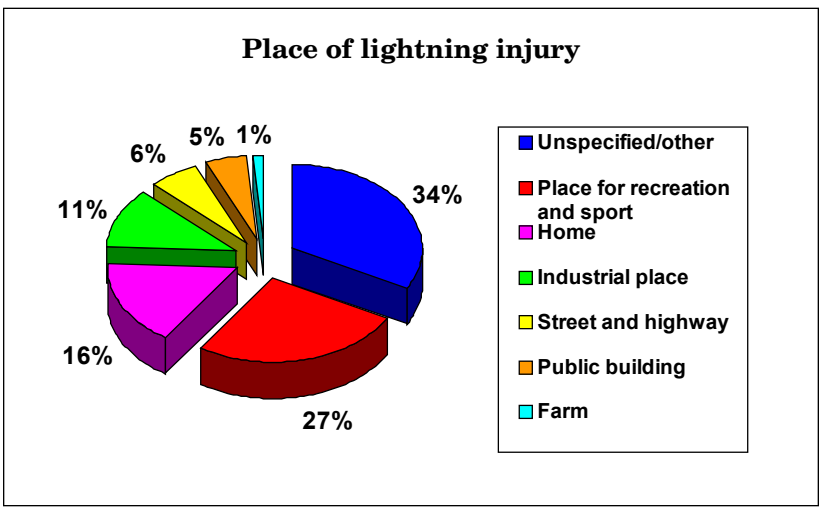
NTDB® data points

Zeus on the 18th hole

by Richard J. Fantus, MD, FACS, Chicago, IL, and John Fildes, MD, FACS, Las Vegas, NV



According to the National Oceanic and Atmospheric Administration's National Weather Service (NWS), at any given moment there are 1,800 thunderstorms in progress somewhere on earth. In the U.S., there is an average of 25 million flashes of lightning from the clouds to the ground every year. Each spark of lightning may span over 5 miles in length, reach temperatures of 50,000° Fahrenheit, and contain 100 million electrical volts. Lightning is the second most frequent weather killer in the U.S. and is responsible for more deaths than hurricanes and tornadoes combined. There are approximately 1,000 lightning injuries resulting in 100 lightning strike deaths (10% mortality) each year.

According to the NWS Web site (*http://www.nws.noaa.gov/*), an average person, in an average location, with average outside activities, and average lightning safety behavior has a one in 3,000 lifetime risk of being struck by lightning and a one in 35,000 lifetime risk of being killed by lightning. These are far better odds than hitting the lottery. Is it any wonder why one of the NWS' slogans is "When Thunder Roars, Go Indoors"?

In order to examine the occurrence of these injuries in the National Trauma Data Bank® Dataset 5.0, we utilized the cause of injury code (E code) E 907 for Lightning. Although there were only 95 records, nine records showed a result in death, a similar mortality rate to what has been reported on the NWS Web site. Place of injury was queried—27 percent occurred at a place for recreation and sport whereas 32 percent occurred indoors. These patients were predominantly male, on average 35 years of age, had an average length of hospital stay of 2.7 days, and the average injury severity score was 9.6. These data are depicted in the figure on this page.

To avoid lightning injury, if you see lightning and then hear thunder within 30 seconds, seek shelter in a substantially constructed building (one that contains wiring and plumbing) because the thunderstorm is close enough to be dangerous. Once inside, do not answer the phone. The leading cause of lightning death indoors is through land-based phone wires. Avoid leaning against concrete walls or lying on concrete floors, as they may contain metal reinforcement bars. A car with a metal roof and sides is the second best protection against lightning. It is the metal shell, not the rubber tires, that protects you. Lastly, if you are on the golf course, go inside or you may see Zeus on the 18th hole!

For more information on lightning prevention, visit the

ACS Committee on Trauma Subcommittee on Injury Prevention and Control Web site at *http://www.facs.org/trauma/injmenu.html*.

Throughout each year, we will be highlighting these data through brief monthly reports in the *Bulletin*. The full NTDB *Annual Report Version 5.0* is available on the ACS Web site as a PDF file and a PowerPoint presentation at *http://www.ntdb.org*.

If you are interested in submitting your trauma center's data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.