

Minutes February 9, 1996 Lightning Data Center Provenant SAC

Quote of the Month:

"Darkness and the mystery of...cruelty cover it...in History as...in Nature. The chaotic Thundercloud, with its pitchy black, and its tumult of dazzling jagged fire, in a world all electric: thou wilt not undertake to show how that comported itself,--what the secrets of its dark womb were; from what sources, with what specialties the lightning it held did, in confused brightness of terror, strike forth, destructive and self-destructive, till it ended?"

Thomas Carlyle in the French Revolution, Vol III,vi,i, p212

1. Meeting began at 11:30 am and adjourned at 1:40 pm.
2. Members present: Breed, Carney, Cherington, Collier, Cusack, Doane, Fischer, Foley, Glancy, Gustafson, Hasbrouck, Hoffmann, Keen, Kithil, Langford, Larson, Rossie, Rewerts, Risley, Simmons, Wachtel, Yarnell.
3. New members:
 Jerry Cusack. Retired teacher. Mountain climber.
 Chris Doane. Sales Engineer of Entrelec, Inc.
 Roger Rewerts, Safety Officer, Provenant Health Partners.
 Wayne Risley, Provenant Health Partners.
4. Peggy Gustafson said that she would try to arrange a new and larger location in the Hospital for our future meetings. Our membership numbers have grown so that the current meeting room is too small for comfort.
5. I distributed copies of Seminars in Neurology 1995, Volume 4 on Lightning and Electrical Injuries, Part 2, to our members. Our thanks to Peggy and Mr. Michael Erne, CEO for purchasing these issues.
6. Rich Collier has been working with radio statios KOA and KTLK in order to study their transmission systems with regard to lightning strikes. Rich reports that the transmitters are struck about 2 to 3 times per year. One tower is in Parker and the other in Brighton.
7. Michael Foley made his recommendation regarding our joining NFPA. He suggested that we join as an organization with directed votes. We shall submit the names of Warren Simmons as the voting member and Phil Yarnell as the alternate member. Rich Kithil pointed out that the NFPA has had a committee on Lightning Protection Standards and we could have an input on matters of lightning Safety. Ron Larsen mentionned that he is on an NFPA technical committee.

Michael raised a terminology question: When does one use lightning strike and when lightning stroke? Rich Hasbrouck pointed out that "stroke" refers to the return stroke. Lightning flash consists of multiple return stroke -- as many as 20 (average 3 strokes per flash). Lightning strike is a generic term. Warren Simmons pointed out that the word "stroke" is often used to describe an activity on the golf course. Finally, I suggested the word "stroke" also has medical connotation. We have seen lightning victims who have suffered a stroke as a consequence of being struck by lightning.

8. Melissa Carney asked members to submit their current addresses, phone and fax numbers and Email addresses for our new directory. Melissa will also keep a file of our articles, books, and other materials supplied by our members. Our office phone number is 629-4158.
9. Jerry Cusack recounted his past experiences with lightning during mountain hiking. He has been witness to lightning storms where his hiking associates have had their hair "stand on end." Fortunately, he has escaped any injury.
10. Warren Simmons reported that golf course on the closed Lowry Air Base has been purchased by the Colorado Golf Association and will be opened later this year. Warren said that the shelters will be better equipped with regard to lightning safety.
11. Rich Kithil distributed two items: a. Lightning Safety Tips which gives important information that should be useful to the public. b. A summary of symptoms found in lightning victims as enumerated by GH Englestatter. Rich provided a dynamic demonstration of the importance of surge protection by utilizing a surge protector and a Van de Graaff generator. The Van de Graaff generator is a high voltage electrostatic generator.
Richard Hasbrouck pointed out that electrical surges can come from not only lightning but other sources as well (e.g. electric arc welder).
Rich Kithil emphasized that when it comes to lightning, one cannot speak about absolute protection. He also pointed out that "shelters" may be less safe when they are built in an inferior location (e.g on high ground rather than low ground).
12. Richard Hoffmann, MD, Director of the Colorado Department of Health stated that although there were no state funds for epidemiology studies on head and spinal cord trauma, federal funds may be available. We will ask the Provenant Health Foundation to help us with an application for funds.
13. Richard Hasbrouck brought to our attention three items. a. A letter in an Ann Landers column which he felt contained misleading information. He wrote to the newspaper but received no response. b. Mark Twain wrote a story, Political Economy, in the "Complete Short Stories of Mark Twain," where he writes about his confrontation with a lightning rod salesman. c. Andrew White writes about Benjamin Franklin in "The History of Warfare of Science and Theology" published by Peter Smith, 1978 Gloucester, Mass. Richard will be participating at a Skin Industry Safety Seminar in Marmouth in May.
14. Richard Keen and his publisher donated a copy of his first book, Skywatch to our library. Thanks, Rich.
15. Ken Langford informed us that George Hodge assisted him in placing his photographs on the Internet. Ken recently spoke with Ron Holle. Ron recently studied the relationships between lightning and insurance claims for property damage. There are 300,000 lightning-related claims per year in the USA with a cost of \$300 million. The Colorado experience is 5000 claims per year and \$6 million. Ken presented a Lightning and Hypothermia Safety Bag in a personal safety envelop. He also brought a book entitled: "Electrostatic Discharge Control" by Owen McAteer. Finally he showed us a book containing some of his photographs. The book, Hazardous Mountain Winds, was published by NOAA.

16. Phil Yarnell stated that unexplained outdoor deaths can be lightning related. He recently communicated with the Routt County Coroner about 3 lightning fatalities: a. one at a ranger station; b. another was a bow hunter; c. the third was a woman walking in a field. Phil also spoke with the New Mexico Coroner who has photographs of the scenes of lightning accidents. Phil brought a copy of Cancer Journal Clinics (Jan 96) which includes an article by Clark Heath on the relationship between EMF and cancer.
17. Howard Wachtel will be attending a conference on EMG in Bologna, Italy. Howard mentioned that Bologna was the home of Galvani. Luigi Galvani used a Leyden jar to electrically stimulate a frog nerve and evoke a muscle contraction. He also carried out an experiment during a lightning storm with a wire attached to the frog's sciatic nerve. These experiments were conducted at the end of the eighteenth century.
18. Next meeting: Friday, March 8, 1996 at 11:30 am at St. Anthony Central Hospital. We will congregate at the One East Conference Room as usual. If a new, larger, and more comfortable room has been found, a sign with directions will be placed on the door.

Respectfully submitted:



Michael Cherington, MD