

## Quote of the Month:

"Who is wise? He that learns from every one.  
 Who is powerful? He that governs his passions.  
 Who is rich? He that is content.  
 Who is that? Nobody."

Benjamin Franklin 1955

1. Meeting began at 11:30 am and adjourned at 1:30 pm.
2. Members present: Breed, Cherington, Fischer, Foley, Glancy, Haviland, Hodge, Keen, Langford, Simmons, Wachtel, Yarnell.
3. New members introduced:
  - Deb Haviland, Provenant St. Anthony Hospitals.
  - Bob Glancy, National Weather Service  
 10230 Smith Rd. Denver, CO 80239  
 Phone 361-0661

Bob is the Warning Coordination Adviser for weather events such as lightning, tornados and floods.
4. I read letters and newspaper articles sent to me by a woman from the midwest who had been struck by lightning as had several family members:
  - a. Her grandfather was killed by lightning while working on his farm on August 18, 1921.
  - b. His brother was killed by lightning in the mid 1920's. He was standing in the doorway of his house.
  - c. A teenage boy was killed (between 1917 and 1920).
  - d. She was struck by lightning in August 1965. She was carrying an umbrella walking from a building to her car. She lost consciousness and then recovered.
  - e. Her cousing was struck by lightning in the 1970's. She also was carrying an umbrella. She recovered.
  - d. Her nephew was struck by lightning and suffered temporary blindness.

In the discussion that followed, George Hodge and Howard Wachtel emphasized the phenomenon of randomness which can explain isolated pockets of higher incidence of certain medical events. Warren Simmons raised the possibility that some people might be lightning prone. Phil Yarnell suggested that everyone has their own 'electrical field' profile. Howard and Ken Langford suggested that the people mentioned in the above history may be victims of being in a high risk place at the wrong time. The group suggested that the woman who sent the letter should take precautions to avoid lightning storms. She might read texts such as those by Vermeister and by Uman. I also suggested she might contact Bob Glancy about receiving literature from the National Weather Service on how to reduce the risks of lightning injuries.

I mentioned that I has spoke with our medical librarian about allocating space in our library for lighting related material. All in the group agreed that this would be a good idea. Please bring in any materials (books, reprints, photographs, etc.) that can be placed in the library.

I referred to a letter by Peter Brigham of the Burn Foundation in Philadelphia which appeared in the October 1995 issue of Annals of Emergency Medicine.

He discussed the issue of data collection of lightning injuries and fatalities.

5. George Hodge reported the news from NASA that Galileo space probe has reached the vicinity of Jupiter and lightning has been detected at that planet. George also stated that his office now has a page scanner which has the capability of transferring paper material to disks. George brought photographs take at the house in Niwat, Colorado that suffered major damage from a lightning strike.
  6. Richard Keen showed a map of satellite imaging by Robert Banta and Crystal Barker Schaaf that gave visual detail of lightning strikes in the Colorado mountain areas for the past three years. Highest lightning strike regions are: Mt. Evans, Sangre de Cristo Mountain regions, and Wolf Creek Pass.
  7. Michael Foley suggested that our members submit curriculum vitae so that other members can read them. I suggested that we all bring our CV's in next month along with library materials mentioned above (paragraph 4). All this material can be housed in the library and the librarian can furnish copies of CV's to interested people. Michael, along with Rich Kithil and Dave Breggin, will continue to study the pros and cons (if any) regarding our association with NFPA. He report back with recommendations at the next meeting.
  8. Howard Wachtel reported that he attended a meeting where EMF issues were discussed. One group detected changes in heart rates were related to changes in electric fields. Parameters were 60 Hz, 200 milliGauss. Howard stated that the field produced by the light fixtures in the room were probably about 1 to 10 milliGauss. (1 Tesla unit = 10,000 milliGauss). Heart rate changes were in the neighborhood of 10 %. It was suggested that changes in magnetic fields induced currents responsible for these changes in heart rates. The people who had these changes in heart rates did not experience any abnormal sensations. Howard pointed out that the salient feature was the on/off of electric fields resulting in transients; not the presence of an unchanging electric field. He speculated that this may be a factor in physiological events related to exposure to powerlines. George Hodge pointed out that transients related to cell phones and computers can interfere with electronics on aircraft.
  9. Dick Fischer presented data on on a fatal lightning strike that occurred in July 1994 at a Strip mine in Clearfield County, PA. The victim was 30 feet from a bulldozer. The cause of death was listed as 'cardiac arrhythmia due to electrocution.' Often these cases are listed as "fatal other" rather than due to lightning.
  10. Ken Langford read a sample letter that he and Phil Yarnell had composed that can be used to send to lightning victims to request information about the details of the lightning strike.
  11. Dan Breed stated that he will fax to the office a copy of the Atmospheric Electricity Newsletter so that it could be attached to our minutes. He also will check with the Natural History Museum to learn if they could supply a conference type room for our next meeting. If so, we could then attend the 1:00 pm performance of "Storm Chasers" at the IMAX theatre. If that can be arranged we will meet there next month instead of at the Hospital. That information will be included with these minutes. If we do not have a definite room assignment to notify our members with these minutes, we shall meet at St. Anthony Hospital as per usual.
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12. Phil Yarnell presented clinical data on a patient who presented as a telephone-mediated lightning injury. He stated that different opinions were arrived at by the consultants who reviewed the case. The patient had many symptoms including memory loss, visual loss, sensory abnormalities, etc. but no objective abnormalities. Phil pointed out, as he has on other occasions, that these type of lightning cases resemble "whiplash" cases or mild brain injury cases which are difficult medical (and often legal) problems. Michael Foley out that often telephone-mediated "shocks" result from voltage differences between the telephone and the ground. Chris Andrews has written extensively on this subject. George Hodge pointed out that cases of "cordless" phone trauma is due to radiofrequency change and is more an acoustic phenomenon rather than an electrical one.
13. Next meeting: Friday, January 12, 1996 at 11:30 am at Provenant St. Anthony Central Hospital in the One East Conference Room. (If an alternate site is chosen i.e. at the Imax Theater, that will be known before these minutes are mailed and that information will be attached to these minutes.)

Happy Holidays everyone.



Michael Cherington, MD  
Chair, LDC