

LIGHTNING DATA CENTER
Minutes
March 10, 2006
St. Anthony Hospital, Denver, CO
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Quote of the Month:

“Every silver lining has its cloud. Every advance exacts a cost. Medicine grew even more depersonalized. Technology took precedence and patients became secondary. A paradox of my life and its ultimate irony is that my research work facilitated that which I utterly deplore.”

Bernard Lown, MD in *The Lost Art of Healing*, 1999 Ballantine Books

1. Meeting began at 11:30 am and adjourned at 2:00 pm.
2. Members present: Cherington, Clark, Collier, Gahagan, R Gift, Y Gift, Glancy, Olson, Paton, Poulton, Stewart, Studebaker, Wachtel, Wallace, Wells, Wermuth
3. We received several interesting email messages since the last meeting. They include the following:
 - a. Ball lightning has been discussed many times in past LDC meetings. Karen Wells and David Gahagan sent emails on this subject. Both referred to the same report of ball lightning being created in a laboratory. David showed a brief video of the “ball lightning.” Karen sent an article, *Phys. Rev. Lett.* 96 045002 (abstracted in part here):

“Researchers in Israel have built a system that can create lightning balls in the lab. Eli Jerby and Vladimir Dikhtyar from Tel Aviv University in Israel have now been able to make lightning balls in the lab using a ‘microwave drill.’ The device consists of the magnetron from a 600-watt domestic microwave oven and concentrates its power into a volume of just one cubic centimeter. The researchers inject the microwaves through a pointed rod into a solid substrate made from glass, silicon, germanium, alumina or other ceramics. The energy from the microwaves then produces a molten hot spot in the substrate. The drop then becomes a floating fireball.”
 - b. Another recurring topic of discussion is the surfacing of chronic diseases in patients who have been struck by lightning. We received an email from a patient’s mother asking whether lightning strikes can alter one’s immune system. Steve Marshburn sent an email inquiring about the relationship between multiple sclerosis and lightning.

Sheryl Olson told us about the case of a lightning patient who later was found to have a benign brain tumor.

These examples, and others (e.g. Lou Gehring Disease), raise questions about cause and effect relationships between delayed appearance of disease and earlier exposure to lightning. Many members (including Howard Wachtel, Sheryl Olson, Bob Glancy, Steve Clark) engaged in discussion on this topic. No consensus was reached. Some favored the concept that lightning can be a cause of delayed syndromes. Others were somewhat skeptical. Most agreed that the empirical evidence exists. More studies are needed. Bob Wallace remarked that many factors might come together in the evolution and progression of disease. Bruce Paton stated that since lightning cases were few and scattered, it is often difficult to obtain compelling data. My guess is that this interesting topic will occupy our discussions in the future.

4. We received a greetings postcard from our peripatetic colleague Phil Yarnell. The photograph on the post card was of lightning at Table Mountain in Cape Town, South Africa. It is clear that Barb and Phil are having a wonderful trip.
5. Sybil Coffey sent a map of the United States showing *a ranking of states using population weighted* lightning-caused fatalities in the 50 states. She used census population data for the years 1960, 1970, 1980 and 1990. This map, like others, show that lowest rate of lightning fatalities per million people are found in Pacific Ocean states. Bob Glancy pointed out that these *rankings would change if there were a way to count tourism. For example, Rocky Mountain National Park has about two million visitors each year, and many of these are from out of state, and are not included in a population weighted map.
6. Greg Stewart brought several "lightning in the news" items.
 - a. Four airplanes were struck by lightning in Spain on February 19, 2006.
 - b. On March 6, 2006 an Icelandic airplane was struck 5 minutes after takeoff from Iceland. It's destination was to be New York.
7. Greg provided the following information regarding lightning strike injuries: 70% involve one person; 15% involve two people; 15% involve 3 or more people.
8. Greg gave a wonderful summary of the work he and his committee are doing on "Lightning Safety for Outdoor Recreation." The committee members include: Stewart, Burrows, Flanders, Hodanish, Paton, Poulton, Wells and Wermuth. When they first started on this mammoth task, they

limited their recommendations to hikers and campers. Now, they have increased their target audience to other outdoor activities (golfers, swimmers, etc.).

Much of the discussion at today's meeting pertained to the section on "the Last Resort" position. Sheryl Olson pointed out how difficult it would be for many, if not most people, to assume this position for more than a few seconds. Bob Glancy stated that he is reluctant to recommend this position when speaking on lightning safety. One of the problems has to do with possible "false sense of security" message. Greg and committee will make modifications to this section.

Meg Poulton and others suggested that, when the project is completed, the recommendations would be a valuable addition for many publications.

Greg welcomes suggestions. His email address is:
Gslightning@yahoo.com.

Greg and committee, we thank you very much for the great work on this project. We look forward to the final draft.

9. Next meeting: 11:30 am on Friday, April 14 in the Main Auditorium of St. Anthony Central Hospital. The speaker will be Ken Langford. The topic: Upward Streamers.

Respectfully submitted,

Michael Cherington, MD