

LIGHTNING DATA CENTER MINUTES

October 8, 2021
ST. ANTHONY HOSPITAL
www.lightningdatacenter.org

Monthly Quote: “Village atheists still climax tirades by challenging God to destroy them with a stroke of lightning (atheists are usually extremely superstitious).” Evening Star, May 28, 1933.

Meeting began at 11:45 AM and ended at 12:36 PM. Members present: Clark Swanson, Stemple and Swanson.

1. **VERY IMPORTANT – PLEASE READ!** As of October 2021, we will continue to hold meetings via Zoom only. The number of COVID cases here in Colorado and the nation has risen, mostly among younger people and those who are not vaccinated or partially vaccinated. Some hospitals here in Colorado and across the country are being stretched pretty thin in terms of staffing and physical room for COVID patients and normal surgeries. The Delta variant of COVID is the dominant strain of the virus. At the present, masks in Colorado are recommended but not required. Local governments and business will be able to require mask use as they wish; however, indoor mask use is required for unvaccinated or partially vaccinated in certain places.
2. The LDC is accepting donations, either as cash or check. If you donate via check, please make your check payable to Steve Clark at 755 S. Clinton Street, #2A; Denver, CO 80247. He will cash the check and keep the cash holdings specifically for the LDC. When the LDC incurs expenses, Steve will pay for services rendered through his bank account using the cash from LDC’s cash holdings. A log will be maintained detailing the inflow and outflow of monies. At the present, the LDC has \$682.00 in cash.
3. Next year in 2022, it appears the LDC will NOT be hosting the 33rd Annual Conference of the Lightning Strike & Electric Shock Survivors International (LS&ESSI) due to continuing concerns over COVID. Stay tuned for further updates.
4. Dr. Phil Yarnell presented two cases.

The first case involved a radio operator onboard a ship at sea. A little under 60 years ago, a storm had come up and the man was on the radio holding an earphone tight against his ear. Lightning struck, knocking him to the floor. He was given pain relievers for a headache. His recall of the event was not clear, but he remembered being in severe pain. He was disoriented. Later that year, he took a physical and was told he had high-frequency hearing loss. At some point in time, he was diagnosed with severe bilateral sensory-neurologic hearing loss. He was able to work for another 8-10 years and now, he is well into his senior years. Nowadays, he feels like he is locked inside his own head. He hears partial words and misunderstands things said to him. He says hearing loss and tinnitus destroyed his life. He feels isolated and frustrated and he suffers from memory loss and confusion.

Phil said hearing loss contributes to Alzheimer's. He said hearing tests are recommended for seniors as a potential indicator of Alzheimer's. Alzheimer's is one of the largest causes of disability in the US and millions of dollars are spent on Alzheimer's research every year. Phil said at this point in time it would be hard to prove this man's condition is a residual from a lightning strike, given that the event took place around 60 years ago.

Phil gave a personal account of lightning and phones. His brother had picked up the phone during a storm. Phil told him to put it down. Just after setting down the handset, lightning struck and sparked through the phone. Thankfully, no one was hurt.

Barb Stemple reported she has tinnitus and hearing loss. She also said during the 1970s when she was at her job in the mountains, lightning struck nearby, destroying the telephone switchboard at her workplace. Carl Swanson said he has hearing loss due to the use of firearms.

We also recalled some cases of lightning strikes to people on the phone and those wearing earphones or headphones as discussed in previous LDC meetings. In particular, we recalled the lady struck by lightning 7 times, 2 times while on phones (cell and cordless).

Phil closed this segment of his presentation with a question for the group: What is the pathophysiology of lightning coming through a phone or a headset?

5. Phil's second case involved a man who had an urological procedure. The episode occurred when he inadvertently urinated on a headset that was plugged into a cellphone. He was shocked in the genital area. The phone was not plugged into the AC line. He has ongoing pain in the genital area. He has seen multiple specialists including a chiropractor, a physical therapist, a general practice physician, a neurologist, an acupuncturist and a nutritionist. Phil wants to know if urine in contact with headphone wires connected to a cellphone can cause a shock. Urine is highly conductive, comprised mainly of positive ions of sodium, potassium, ammonium and calcium and negative ions of chloride, sulfate, phosphate and bicarbonate. See link below.
6. Screenshots of the peer-reviewed literature for cases similar to those presented by Phil are attached to these minutes underneath the lightning links section. Some have abstracts and some do not. Perhaps our medical colleagues could pull these papers for further discussion?
7. LDC welcomes your medical questions. Please send them via e-mail to Steve Clark at sclarktoto@gmail.com. Your medical questions will be forwarded to Dr. Phil Yarnell for his review and will usually be taken up for discussion in the next month's meeting. Please be advised any questions posed are for the general consideration by the group and do not constitute a formal medical opinion. If a formal evaluation is requested, arrangements can be made directly with Dr. Yarnell. If you have a medical emergency, please call 911 or your local EMS.
8. Questions, comments, error notifications, and critiques of these minutes are welcome. Please forward those to Steve Clark. Please keep your communications professional and respectful. Communications will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.

9. LDC Disclaimer: These minutes do not represent official positions of the LDC or its members. They simply reflect the comments made at the meeting. Furthermore, the LDC does not implicitly or explicitly recommend or endorse any product or service. Any product or service presented in these minutes is done so for purposes of discussion and analysis. The merit (or lack thereof) is open for the consideration and review by the entire membership.
10. Next meeting: Zoom meeting. Friday, November 12, 2021, from 11:45 AM to 1:00 PM MDT.

Respectfully Submitted,
Steven E. Clark, Consulting Meteorologist

Lightning Links

This is a monthly listing of periodicals, websites, and videos about lightning and allied areas from a variety of sources. A headline or description is listed, followed by the link. Please note that some of the links are perishable, which means you'll need to go to the source for the information.

Pollack, N., 2021: A Wyoming rancher was struck by lightning. His family calls his survival a miracle. *Casper Star Tribune*. August 7, 2021. Link: https://trib.com/news/state-and-regional/a-wyoming-rancher-was-struck-by-lightning-his-family-calls-his-survival-a-miracle/article_8aef4af3-5e23-5dec-b1cb-5ae40f65497a.html

Kirchmann, H. and S. Pettersson, 1994: Human Urine: Chemical Composition and Fertilizer Use Efficiency. *Fertilizer Research*. January 1994. Link to abstract: <https://link.springer.com/article/10.1007/BF00750100>

Other | HEAD & NECK

Lightning Strike: A Rare Cause of Bilateral Ossicular Disruption

C. Offiah, M. Heran and D. Graeb

American Journal of Neuroradiology May 2007, 28 (5) 974-975;

Case Reports > [Am J Emerg Med. 1990 Jul;8\(4\):326-8. doi: 10.1016/0735-6757\(90\)90087-g.](#)

Destruction of hearing aid by lightning strike

D Tandberg ¹, C M Brown

Affiliations + expand

PMID: 2363756 DOI: [10.1016/0735-6757\(90\)90087-g](#)

Abstract

A 20-year-old woman was struck by lightning while seeking shelter under a tree. The discharge entered at the site of the victim's behind-the-ear type hearing aid, destroying it. She suffered cardiorespiratory arrest, burns, left ventricular failure, and myoglobinuria, yet recovered fully. It is widely known that carrying a metallic object such as an umbrella or golf club above one's head increases the risk of being struck. However, few people know that small metallic objects worn on the head are similarly dangerous. Persons caught outside in a lightning storm might decrease the probability of being struck by removing all metallic objects from their head.

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Electrical Injuries to the Inner Ear

Timothy C. Hain, MD • Content last updated: March 7, 2021

[Auricular consequences of lightning (author's transl)]

[Article in French]

[M Leveillé-Nizerolle](#), [J P Lintzer](#), [A Bérézin](#)

PMID: 749610

Abstract

Auricular accidents provoked by lightning and induced by telephone are extremely rare. The authors of this paper relate the case of a young lady suffering from an inflammation of the external auditive canal and of an irritation of the tympanic membrane with an perception's hypacusis of 30 db. A physiological explanation is proposed and two factors come into account:--The acoustic traumatism induced by the thunder;--The burn produced by the electrical current.

> [J Trauma.](#) 1989 May;29(5):665-71. doi: 10.1097/00005373-198905000-00022.

Telephone-mediated lightning injury: an Australian survey

[C J Andrews](#)¹, [M Darveniza](#)

Affiliations + expand

PMID: 2724384 DOI: [10.1097/00005373-198905000-00022](#)

Abstract

Each year in Australia, about 60 people report injuries attributable to lightning surges while using a telephone during nearby thunderstorms. This paper presents information about such incidents and describes a retrospective survey of more than 300 telephone users reporting injuries possibly attributable to lightning. Questionnaires yielded 132 usable responses, and the results were analysed to identify the extent and nature of the lightning injuries. These are compared with direct strike injuries. Three distinct telephone-mediated lightning strike syndromes are identified (statistically) among the victims.

> [J R Nav Med Serv.](#) 1979;65(3):165-70.

Struck by lightning -- the effects upon the men and the ships of HM Navy

H Cannell

PMID: 395298

Case Reports > [J Laryngol Otol.](#) 1986 Sep;100(9):1067-70. doi: 10.1017/s0022215100100593.

Lightning causing inner ear damage and intracranial haematoma

P Poulsen, P Knudstrup

PMID: 3760690 DOI: [10.1017/s0022215100100593](#)

Abstract

Lightning can transmit energy by way of the telephone network to the middle and the inner ear and thus cause pronounced injuries. In the patient mentioned here, the middle ear remained intact, while the inner ear was the seat of widespread damage combined with vascular rupture, the latter causing the formation of an intracranial haematoma. This was originally interpreted wrongly as a neoplasm.

[More on thunderstorms and iPods.](#)

44 Mick PT, Lee PK, Longridge N.

Cite N Engl J Med. 2007 Oct 4;357(14):1447-8; author reply 1448.

PMID: 17918312 No abstract available.

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[Thunderstorms and iPods--not a good idea.](#)

45 Heffernan EJ, Munk PL, Louis LJ.

Cite N Engl J Med. 2007 Jul 12;357(2):198-9. doi: 10.1056/NEJMc070260.

PMID: 17625137 No abstract available.

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