

**LIGHTNING DATA CENTER  
MINUTES  
May 12, 2006  
St. Anthony Hospital, Denver, Co  
www.Stanthonyldc.org**

Quote of the Month:

“Albert Einstein would soon explain how an ounce of radium emitted four thousand calories an hour almost indefinitely. For two years he had been mulling over his momentous conclusion that all matter in the universe is a repository of enormous, latent energy. And in 1905 he revealed this secret of creation in six strokes of the pen, the equation,  $E=mc^2$ . Einstein also noted that this incredible energy was unknown until the Curies discovered radium.”

Denis Brian, *The Curies*, 2005, Wiley

1. Meeting began at 11:30 am and adjourned at 1:21 pm.
2. Members present: Cherington, Flanders, Foley, R Gift, Y Gift, Langford, McDonough, Nibbe, Stewart, Swanson, Wells, Yarnell.
3. I brought the following articles (abstracted in part here):

William Seybold brought this article to our attention:

- a. Gary S. Settles. High-speed Imaging of Shock Waves, Explosions and Gunshots. New Digital video technology, combined with some classic imaging techniques, reveals shock waves as never before.  
[www.Americanscientist.org](http://www.Americanscientist.org)

“Shock waves are responsible for the crash of thunder the bang of a gunshot, the boom of fireworks. Shock waves play important roles in modern physics and engineering, military operations and medicine. Modern high-speed videography equipment capture the development and progress of these wave fronts.”

- b. Zele D, Bidovec A, Vengust G. Atmospheric flash injuries in roe deer (*Capreolus capreolus*). {PubMed} *Acta Vet Hung* 2006;54:43-49.

“The pathologic and histopathological examination of two female roe deer found dead after a severe thunderstorm is described. The trachea and bronchi of both animals contained aspirated light-red foam. Necropsy revealed diffuse hemorrhages over the epicardium. The liver and kidney exhibited severe congestion.”

4. It has been several years since the LDC Administrative Committee met and held elections. The following members were nominated today:

For President:	Greg Stewart
For Vice President:	Ken Langford
For Clinical Advisor:	Phil Yarnell
For Scientific Advisor:	Michael Cherington
Committee members:	Mike Foley, Gil McDonough, Al Nibbe, Karen Wells, Bob Wallace, & Bruce Paton

Other nominations are invited. The election will be held at the next meeting.

The new committee will look into several issues including: preparing LDC Brochure; improve our Website. I distributed a paper describing our history and Mission. Members are invited to send their recommendations.

5. Karen Wells informed the members about Café Scientifique, an organization that should be of interest our members. The web site is: [Http://cafescicolorado.org](http://cafescicolorado.org). They will have NCAR presentation on Tuesday, May 2006.
6. Phil Yarnell and Mike Foley presented an electrical injury case. The patient is a woman in her 30s who received an electrical shock when unplugging an appliance. She lost consciousness and may have had a seizure. Subsequent neurological examinations were normal. Cognitive tests were not normal. Patient complains of paresthesias of the right upper limb. Mike Foley remarked that the connecting block on the plug was cracked. Path of current is said to have traveled from right hand to the left hand. Electromyography was positive for a mild carpal tunnel syndrome. Phil said that all her symptoms could not be explained by median nerve compression.
7. Gary Flanders, Donor Service Supervisor of Donor Alliance gave an outstanding presentation. His topic was entitled: The Wrath of Zeus and Tissue Donation. He provided much important information on Tissue and Organ Donation that had not been discussed before at LDC meetings. I cannot do justice to presentation in these minutes. I can relay the comments from my notepad.
  - a. Gary started by making kind comments about LDC discussions. He described them as consisting of “mysterious and the majestic.”
  - b. He gave a history of the Colorado-Wyoming Donor Alliance, an organization that facilitates the donation and recovery of tissues and organs.

- c. 99% of all donors are tissue donors. Tissues include: skin, bone, heart valves, and corneas.
- d. Uniform Anatomical Gift Act (applies to all 50 states) was passed in 1987.
- e. Colorado's donor registry was passed in 2001.
- f. One donor can help 60 or more people requiring tissues or organs.
- g. Donor Alliance was formed in 1980 with a grant from Junior League. In 2000, the Colorado Donor Registry was established. People can sign up when they obtain their drivers' licenses.
- h. The first tissue graft was attempted in 1668. Bone from a dog was given to a soldier with a skull bone injury. In 1880, grafts were taken from dead humans. In 1949, the U.S. Navy established a tissue bank. Tissue banks must register with the FDA.
- i. During the years 1980 to 1996, no donors could come from people who had been to Europe. Reason: possible transmission of Jakob-Creutzfeldt disease.
- j. Organ transplants require immediate action after diagnosis of brain death. Tissue transplants can be transferred during a 24 hour period.
- k. Can lightning fatal cases be candidates for tissue or organ transplants? Medical examiners are often uncertain about this.

Next meeting: Friday, June 9, 2006 at 11:30 AM in the Main Auditorium of St. Anthony Central Hospital.

Speaker: Belinda Goody, Forensic Meteorologist

Topic: Forensic Meteorology

Respectfully submitted,

Michael Cherington, MD