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#### Newsletter

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# Chicago Bear Great - Suicide

Dave Duerson, former all-star defensive back and member of the Chicago Bears and the New York Giants Superbowl winning teams, was found dead in his home in Sunny Isles Beach, Florida on February 17, 2011. Duerson was 50 years old, and 18 years past his retirement from pro football. Duerson was found dead of a self inflicted gunshot wound to the chest with instructions that his brain be donated to the Boston University School of Medicine study on chronic traumatic encephalopathy (CTE).

CTE is the end result of repetitive concussion or mild traumatic brain injury and occurs in about 17% of those experiencing this kind of trauma. Most concussed athletes recover within a few days or weeks but a small subset will develop long-lasting or progressive symptoms. Repetitive closed head injury occurs in many different kinds of sports from martial arts to football and hockey to a sport more innocuous (in terms of repetitive contact) like skiing or parachuting. Pathologically verified cases of CTE have been identified in professional football players, wrestlers, and soccer players as well as epileptics, head bangers and domestic abuse victims. Military veterans may also be a subset of those individuals more prone to developing CTE.

There have been 3 stages of clinical deterioration described for CTE. The first stage is characterized by emotional disturbances and psychotic symptoms such as irritability, confusion, violent and/or aggressive behaviour. The second stage symptoms include

social instability, erratic behaviour, memory loss, and the initial stages of Parkinson disease. The third stage symptoms consist of general cognitive dysfunction that progresses to dementia and will often occur with full-blown Parkinsonism. The severity of the disorder appears to correlate with not only the length of time engaged in the concussive sport but also the number of traumatic injuries. The likelihood that this disorder could be the result of only one traumatic brain injury is unclear and speculative only.

Duerson had had several failed businesses, a recent divorce and had lost some influential people in his life and from the outside looking in may have been a candidate to commit suicide. According to newspaper reports, his friends felt he was in good spirits and had plenty to live for. In one of his many suicide notes, Duerson mentioned his financial and family problems as well as his blurry vision, seeing stars and his inability to spell simple words – all seemingly symptoms of CTE. His estranged wife mentioned noticing his ongoing memory problems and her family's concern that Duerson had CTE. Unfortunately, it took his suicide to find out.



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## **Brain Teaser**

Take the following 4 letter words and split them in half. Add 3 letters in the middle to form a new 7 letter word. Take the 3 letter additions from the 2 paired 4 letter words, and unscramble them to find a new 6 letter word.

back	bits
acts	cage
dean	earn



## May: Multiple Sclerosis Month

# The Global Impact of Multiple Sclerosis

In 2008, the Multiple Sclerosis Internation Federation commissioned a study to evaluate the economic impact of Multiple Sclerosis (MS) worldwide. The study found that the cost of MS was considerable in all countries. The average annual cost per person with MS was \$41334 in 2007 and more then \$1.2 million US over a lifetime. The loss of employment, or early retirement, is the largest single factor contributing to this cost.

"Multiple sclerosis is an unpredictable, often disabling disease of the central nervous system which is composed the brain and spinal cord. The disease attacks the myelin which is a protective covering wrapped around the nerves of the central nervous system." From: the MS Society of Canada

The study divided the costs into three categories – direct, indirect, and intangible.

#### **Direct Costs**

The direct costs are those costs incurred by the individual or society as a direct result of the disease. Examples of the direct costs include such things as medical visits, installing wheelchair ramps or other ergonomic devices, and care giver costs. It was estimated that direct costs accounted for 26% to 87% of the total cost.

"Canadians have one of the highest rates of MS in the world."

#### **Indirect Costs**

Indirect costs are those costs that are related to MS but cannot be directly attributed to the disease. The main indirect cost is the loss of work. It is the most costly contributor to the overall costs of MS and includes both short and long term absence, decreased working hours, changing the type of work to something less physically and emotionally demanding (usually at lower pay) and early retirement. The indirect costs are estimated to account for 13% to 74% of the total cost of

"MS is the most common neurological disease affecting young adults in Canada." From: the MS Society of Canada

# The Funny Bone

The room was full of pregnant women with their partners. The class was in full swing.

The instructor was teaching the women how to breathe properly and was telling the men how to give the necessary assurance to their partners at this stage of the pregnancy.

She said, "Ladies, remember that exercise is good for you. Walking is especially beneficial. It strengthens the pelvic muscles and will make delivery that much easier. Just take several stops and stay on a soft surface like grass or a path."

She looked at the men in the room, "And gentlemen, remember - you're in this together - it wouldn't hurt you to go walking with her."

The room suddenly got very quiet as the men absorbed this information.

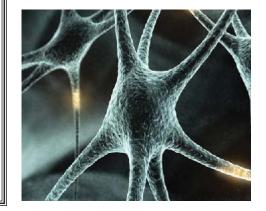
Then a man at the back of the room slowly raised his hand.

"Yes?" said the teacher.

"I was just wondering. Is it all right if she carries a golf bag while we walk?"

#### **Intangible Costs**

The intangible costs are those costs that are difficult to measure and include such things as the changes to the quality of life of not only the individual but the family as well. The various studies looking at the intangible costs showed that the impacts of physical functioning were greater than the social and mental functioning but the latter were significant as well. It was suggested that the employers make changes to make the workplace more accessible for those with physical disabilities such as those affecting MS.



## June: No Tobacco Month

# **Boston University Brain Donation**

The Center for the Study of ■ Traumatic Encephalopathy (CSTE), founded in 2008, is a joint venture between the Boston University School of Medicine and the Sports Legacy Institute. The Sports Legacy Institute was founded in 2007 by former football player and professional wrestler Christopher Nowinski and prominent concussion researcher Dr. Robert Cantu. Its mission is "to advance the study, treatment and prevention of the effects of brain trauma in athletes and other at-risk groups".

The CSTE asks for the donation of brain and spinal cord tissue from former athletes after their death that is studied by the centers neuropathologists to better understand the cause, progression and characteristics of the disease. Chronic traumatic encephalopathy has been identified in many prominent former athletes including hockey players Bob Probert, and Reggie Fleming, Football players Andre Waters, and Tom McHale, and professional wrestler Chris Benoit. Pro football players Sean Morey of the Arizona Cardinals, Baltimore Raven centre Matt Birk and Seattle Seahawks linebacker Lofa Tatupu are the first current players to join the brain donation registery along with 150 other former athletes.

For more information on the CSTE see: <a href="www.bu.edu/cste">www.bu.edu/cste</a> or the Sports Legacy Institute: sportslegacy.org.



### World No Tobacco Day

World No Tobacco Day is officially May 31 but the World Health Organization would surely like to make it everyday. The WHO reports that the world wide death toll due to tobacco is more than 5 million – an average of one person every six seconds – and could rise to more than eight million by 2030.

More than half of the world's 1 billion smokers will eventually die of a tobacco related disease. Tobacco accounts for one in ten adult deaths and is one of the biggest public health threats faced by the world today. More than 80% of the aforementioned 1 billion smokers live in low and middle income

countries. Tobacco users who die prematurely create a financial burden by depriving their families of income. They also raise the cost of health care and subsequently hinder economic development.

Along with all of the direct death and disease caused by tobacco and the illness and death created by second hand smoke, there is also another disease that affects children in poorer nations. Children from poorer families that are employed in the tobacco farming industry in order to provide family income, are vulnerable to "green tobacco sickness". Green tobacco sickness is caused by the nicotine absorbed through the skin from handling the wet tobacco leaves.

Smoking has been implicated in not only cancer, cardiovascular disease and various lung disorders including emphysema but also low back pain and lack of bone union following fracture.



## Mental Environmenta



A s long as dishwashers have been around there has been a debate about the energy efficiency versus hand washing. A University of Bonn study asked 113 people from seven European nations to hand wash 12 complete, soiled, table settings and compared them to two energy-efficient dishwashers. The hand washers on average used 103 Litres of water and 2.5 kW hours of water heating versus 15 Litres of water and between 1 and 2 kW hours depending on the wash cycle. It was also noted that 50% of hand washers "did not achieve an acceptable level of cleanliness".

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## **Nutrition Corner**

## Magnesium - An Essential Nutrient

Agnesium is an essential mineral for human nutrition and has several important functions in the body. Magnesium plays a role in the contraction and relaxation of muscles, the function of certain enzymes (enzymes help control biochemical reactions in the body in order to regulate living organisms), the production and transport of energy and specifically the production of proteins.

Magnesium is a mineral that we need to ingest through our diet or through supplementation. Good sources of magnesium include dark, green, leafy vegetables, fruits or vegetables (bananas, dried apricots and avocados), nuts (almonds and cashews), peas and beans, soy products, and whole grains.

Magnesium has been studied extensively for its use in treating various conditions including eclampsia, preeclampsia, arrhythmia, asthma, Type II diabetes, hearing loss, acute myocardial infarction, cardiac arrest, migraine headache, athletic performance and muscle spasm to name a few. Magnesium has shown some positive results for the treatment of muscle fasciculation (twitching) but has limited evidence in enhancing athletic performance.

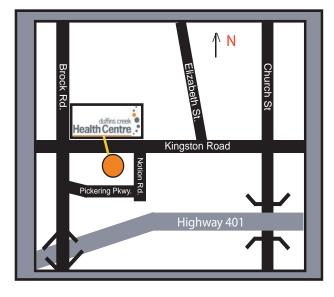
The recommended daily requirements of magnesium for adult females is 310-320 mg, pregnant females 350-400 mg, and adult males 400-420 mg.

#### **Brain Teaser Answer**

barrack bisects rra + sec = racers

accents cartage cen + rta = trance

deadpan easternadp + ste = pasted



### **Services**

Chiropractic
Massage Therapy
Acupuncture
Kinesiology
Sports Specialists
Soft Tissue Therapy
Naturopathic Medicine
Diagnostic Imaging Services



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