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5 time Pro-Bowler out with a Torn Triceps Muscle

In a December 7, 2008 game between the Washington Redskins and the Baltimore Ravens, the Redskins 5 time Pro Bowl left tackle Chris Samuels' season was done with a torn right triceps. He will require surgery to repair the injured muscle and will hopefully return to the NFL next season.

Your triceps muscle, or more correctly the triceps brachii muscle, is the large muscle on the back of the upper arm and extends or straightens the elbow. This muscle is used in any pushing type motion (like a push up or punch).

Partial or complete tears of the triceps muscle is a rare injury in the general population. One study looked at 1019 tendon ruptures and only 9 of those was of the triceps tendon (<1%). Another study done in 2004 looked at the incidence in the National Football league over a 6 year period and found 11 complete and 10 partial ruptures of the triceps in 19 players. Two players had ruptures in both arms at separate times.

Risk factors for tearing a tendon include anabolic steroid use, local steroid injection, renal dialysis, lupus and hyperparathyroidism. Five of the players had had local corticosteroid injections (for inflammation) for presumed bursitis at the elbow. Corticosteroids are known to weaken the tendon making it more susceptible to tearing. Although all of the athletes denied the use of anabolic steroids – well I will let you be the judge of that one!!! Another risk factor might be the position played – of the 19 athletes injured 15 of them were linemen, 3 were linebackers and one was a tight end.

The triceps most often tears off of the ulna bone that forms the tip of your elbow. It most often occurs when the player is trying to block an opponent with a straight elbow and the elbow is suddenly bent. This mechanism accounted for 17 of the 21 injuries while the other 4 were due to a direct blow or fall.

Although not a common injury, football players seem more susceptible to a tear of the triceps. In the NFL study, all of the complete tears required surgery in order to return to play while 6 of the partial tears were able to be rehabbed and braced while playing with 4 of those healing without having to undergo surgery. All of the remaining partial tears had to have surgery to repair the torn muscle.

IN THIS ISSUE

BRAIN TEASERS

At the recent Shoot for a Million qualifier, four lucky candidates took part to see who would go on to Ottawa to try and shoot 15 pucks into the net for $1 million. The ages of the contestants were 14, 17, 20 and 22. As it happens the person who came last was the oldest, whereas Mats was three years older than the person who came second. Nik was neither the oldest nor the youngest and Alexei finished ahead of the 17 year old, but didn't win. Darcy was also unlucky this time and didn't win either. Can you determine who finished where and how old they are?

January: Alzheimer's Month

Alzheimer's disease is a progressive, degenerative disease that destroys vital brain cells. It most often occurs in people that are over the age of 65, but can affect adults at an earlier age. Approximately, 1 in 13 Canadians over the age of 65 has Alzheimer's disease or a related dementia.

Researchers have found that several changes occur in the brain of people with Alzheimer's disease. MRI studies show the brain cells shrink or disappear, and are replaced by dense, irregularly-shaped spots, or plaques. Another indicator of the disease is thread-like tangles within existing brain cells. These tangles eventually choke healthy brain cells.

Currently, the cause of Alzheimer's is not known. In a recent study, the herpes simplex virus type 1 (HSV1) combined with a genetic mutation of one of our genes (which is already known to increase susceptibility) is implicated as a possible causal role in the development of Alzheimer's disease. The herpes simplex virus type 1 is the same virus that causes cold sores, genital warts, keratitis (an inflammation of the cornea of the eye), and herpes simplex encephalitis, a form of herpes induced brain swelling that can be fatal. When HSV1 affects the brain, it occurs in a similar area to that affected by Alzheimer's. Those that survive this type of encephalitis show memory loss as a long term effect – the hallmark of Alzheimer's disease. HSV1 is a very common virus thought to affect almost 90% of the adult population. It also has the ability to stay inactive for long periods of time and then reactivating when the hosts immune system is compromised (think of the increase in cold sores in those under stress). Our immune system begins to decline considerably in the elderly at which point the HSV1 would take advantage – a possible reason why Alzheimer's disease typically only affects the older adult.

Up until recently, the incidence of HSV1 in the brain has been difficult to determine. With some new technology, it has been found in normal aged brains as well as Alzheimer patients while being typically absent in young people's brains. This suggests again that the virus moves to the brain as our immune systems decline. Although the incidence of Alzheimer's disease is increasing, the numbers do not reach the 90% level - the infection rate of HSV1. This suggests that some genetic factor may play a role (the genetic mutation) as previously mentioned. Similarly, not everyone with HSV1 gets cold sores (only 20-40%) – interestingly those with the genetic mutation are also more prone to getting cold sores. This also gives credence to the genetic-environmental argument that has been suggested in Alzheimer's disease.

Although it has not been conclusively proven, more and more evidence suggests that the herpes simplex virus may be involved in Alzheimer's disease. This gives hope to researchers looking to prevent and/or cure this scourge of a disease.

10 Warning Signs of Alzheimer's Disease

1. Memory loss that affects day to day functions.

2. Difficulty performing familiar tasks.

3. Problems with language.

4. Disorientation of time and space.

5. Poor or decreased judgment.

6. Problems with abstract thinking.

7. Misplacing things.

8. Changes in mood and behaviour.

9. Change in personality.

10. Loss of initiative.

The Funny Bone

A little girl was talking to her teacher about whales.

The teacher said it was physically impossible for a whale to swallow a human because even though it was a very large mammal its throat was very small.

The little girl stated that Jonah was swallowed by a whale.

Irritated, the teacher reiterated that a whale could not swallow a human; it was physically impossible.

The little girl said, 'When I get to heaven I will ask Jonah'.

The teacher asked, 'What if Jonah went to hell?'

The little girl replied, 'Then you ask him'.

Athlete's Heart or Hypertrophic Cardiomyopathy?

The Heart and Stroke Foundation defines cardiomyopathy as a disease of the heart muscle – a disease that damages the muscle tone of the heart and its ability to pump blood to the rest of your body. There are several types of cardiomyopathy that cover a wide range of causes.

One of the types is hypertrophic cardiomyopathy (HCM) – hypertrophic meaning an increase in thickness of the heart muscle. The increased thickness makes it hard for the heart to pump blood. If the thickening occurs between the two lower chambers (ventricles) then there can be a blockage in blood flow causing shortness of breath with exercise, fainting, dizziness or sudden death. (**Note: the heart has 4 chambers – 2 atria and 2 ventricles, the left ventricle contracts to push blood to the whole body**). In Anglo-American countries, hypertrophic cardiomyopathy is responsible for up to 35% of sudden cardiac death in otherwise healthy athletes. Some notable athlete deaths include Alexei Cherepanov (although some controversy exists with respect to his cause of death), NCAA basketball player Hank Gathers of Loyola-Marymount University, and Len Bias of the Boston Celtics. Hypertrophic cardiomyopathy is the most common genetic disorder of the cardiovascular system occurring in 1:500 people.

There are some who argue that all athletes should be screened for HCM in order to prevent sudden cardiac death in those that have the disorder. Others argue that it would not be very cost effective for the very rare amount of times it is actually found in elite athletes. That study argues that most athletes with HCM are unable to meet the demands physical demands imposed on regular athletes and a "self-screening" actually results in fewer athletes with HCM going to the next (elite) level.

The difficulty comes in distinguishing HCM from the normal, non-life threatening condition known as athlete's heart. Athlete's heart is a change in the thickness of the heart walls due to adaptations associated with exercise. Interestingly, most of us think that this only occurs with endurance training (biking, running …) but it can also occur in strength athletes. There are different adaptations of the heart in endurance and strength athletes. In endurance athlete's, the left ventricular wall thickness increases with a corresponding increase in the internal chamber diameter – think of a balloon that increases in the thickness of the rubber and also the amount of air that can go in. Strength athletes, on the other hand, increase the size of the wall thickness but not the internal chamber size – thicker rubber, same amount of air. This second situation makes it even more difficult to distinguish athlete's heart from HCM.

Athlete's heart or hypertrophic cardiomyopathy? The wrong answer to this question may increase the risk of sudden death for one athlete or wrongfully suspend the promising career of another. Could careful and costly screening have saved Alexei Cherepanov? These questions remain but hopefully with new research/screening procedures we may be able to answer them.

Blood Pressure

Your doctor will tell you your blood pressure is 120 over 80 (120/80 is normal) or some variation. These two numbers represent your systolic (top number) and diastolic pressure (lower number) in millimeters of mercury (mmHg). Blood pressure represents the pressure or force of the blood pushing out against the walls of your arteries – systolic is the pressure when your heart contracts and the pressure is the highest and diastolic is the pressure when the heart relaxes between beats.

Mental Environmental

Environmental Candles: Many candles are made of paraffin wax – a sludgy waste product of the petroleum industry – which release toxic benzene and toluene into the air when burned. Even worse are those with a metal-core wick which releases toxic levels of lead after burning for 2 hours. Look for vegetable wax candles made from hydrogenated soy, palm and coconut oils or those made from beeswax – the most natural wax. Also look for those with paper, cotton or hemp wicks – a safe alternative to those lead lined metal cores.

from www.greenlivingonline.com

Nutrition Corner

Soft Drink Consumption and the Effect on Bone Mineral Density

A recent study in the American Journal of Clinical Nutrition looked at the relationship between long term consumption of soft drinks – both caffeinated and non-caffeinated – and bone density in adolescents. It is estimated that 90% of total bone mineral content is made before the age of 17 in girls. As a result, prevention of osteoporosis needs to begin in childhood.

The consumption of soft drinks has long thought to contribute to a decrease in bone density and an increase in fractures in girls. The reason for this negative relationship is unclear but some feel it may be the replacement of milk by soft drinks in the adolescent diet, the high acidity of the soft drinks, the caffeine content or it may be due to the unhealthy, sedentary lifestyle and poor dietary habits of the group consuming more soft drinks.

The study, done in the UK, found that there was a negative effect on bone density in both boys and girls with the consumption of 120-250 grams/day of both caffeinated and non-caffeinated soft drinks. In the US, by contrast, the consumption is on average 425 g/day. This negative association may lead to more osteoporosis in the future and as a result more fractures.

Brain Teaser Answers

#	Name	Age
1	Nik	20
2	Alexei	14
3	Mats	17
4	Darcy	22

Services

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