

Experienced with Infants, Children, Pregnant Women and Families

**Dr. CYNTHIA HORNER**

**CHIROPRACTOR**

**(864) 458-8082**

www.drcynthiahorner.com  
11-D Barkingham Lane, Greenville, SC 29607

ADDRESS SERVICE REQUESTED

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PERMIT NO. 12



## Nature's Child

### Young Athletes and Head/ Neck Injuries

I am often asked by parents should they be concerned about the hits to the head their children receive in football, soccer, and some martial arts. Surprisingly high school and college football players receive as many as 1,600 blows to the head in a season. How hard they are hit does matter but not as much as how many times they are hit. It has been found that many small hits to the front and side of the head causes more brain damage than one large blow because the brain and surrounding tissue does not have time to heal and get strong before the next impact.

Researchers have found a buildup of a cell killing protein called tau in the brains and spinal cords of athletes who experienced mild to moderate brain trauma, even those who died of unrelated causes, during autopsies. In the near future they hope to be able to detect this protein in the living to monitor the effects that blows to the head have on the brain.

The outcome of minor head injuries is only starting to be studied and understood. Modern helmets for football players and protective headgear for boxers and kick boxers is improving, reducing the severity of impact for young athletes.



# WHOLE BODY WELLNESS

is at the Heart of Chiropractic.

Complimentary Issue

WINTER 2014

**In This Issue . . .**

*How Stress Effects Your Learning, Memory and Immune Function*

*Motivation to Exercise*

*What is the Flu?*

*Nature's Child- Head and Neck Injuries*

**SMART TALK FOR SMART PEOPLE**

## How Stress Effects Your Learning, Memory and Immune Function

**A little stress motivates  
More stress complicates  
A lot of stress deteriorates**

Let's be clear on what we're calling stress. The word stress comes from the word distress. Not all stress is the same as you will see, it comes in different strengths. All stress causes specific responses in your body.

- Your pulse and blood pressure goes up.
- Cortisol and adrenaline are produced and pumped into your bloodstream.
- It creates a desire to escape or avoid.
- A feeling of loss of control or not in control is felt and the more the feeling of loss of control the more severe the stressor.

A little bit of stress motivates because your brain wakes up and is paying attention. Your brain knows you are experiencing something that is needed for survival. If an event scares or stresses you;

your memory  
learning  
immune function

all increase ..... at first.

Remembering or recalling is one part of learning. Remembering and recalling stressful events is necessary to survive. Also when

you first encounter stress your immune system kicks into high gear and works better.

### Memory and Learning

Memory is such an important part of survival that you're set up with an elaborate and complex memory system. The part of your brain that responds to events with emotion is tied into the part of your brain that remembers. The emotion and memory parts of your brain are deep inside the center of your head. Again emotion and memory work together. When you experience a stressful event your emotional brain secretes a chemical that stimulates your pituitary gland. Your pituitary gland then secretes another chemical that enters your bloodstream. This chemical triggers your adrenal glands. Adrenal glands are like a part of your brain that fell off and landed on your kidneys. Although they lie far from your brain adrenals work hand-in-hand with your brain. When the adrenals are stimulated they dump cortisol into the bloodstream. The part of your brain that has a big response to cortisol is the memory part of your brain. The part of your brain involved in remembering is much like two slices of cantaloupe covered in push-pins. The push-pins are receptors sensitive to cortisol. When you first experience a

stressor, short bursts of cortisol will enhance memory and learning. But a constant barrage of cortisol has a destructive effect on your memory center. Luckily your body has a way to protect itself from too much cortisol in the memory centers. When you move your body, yes I mean exercise, you produce a type of brain fertilizer called brain derived neurotropic factor that protects the memory center from cortisol. But if you persist on being stressed the fertilizer can be overwhelmed and rendered useless, then your memory deteriorates.

### Immune Function

Like with memory a little stress improves or enhances your immune function, elevating white blood cells and other immune fighters, especially those that are in your first line of defense-your skin, mouth, nose and eyes. Long-term stress decreases the body's ability to make white blood cells and antibodies. Adrenaline and other stress hormones give your body a burst of life surviving responses then they become exhausted and work less than normal.

Long-term stress can also cause your immune system to be on such high alert it targets tissue and substances in your body that are not harmful, like your own tissue and some foods that you eat.

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In conclusion:

- A little stress enhances your memory and immune function.
- Continued stress makes your body work harder to combat it by producing a protective agent called brain derived neurotropic factor.
- Continuous stress overwhelms memory centers rendering the neurotropic factor useless then deteriorates the memory cells in your brain.
- Long term stress can cause your immune system to attack things that are not necessarily bad for you such as food and your own tissue.

In our world we cannot completely avoid stress but we can make ourselves go to a stress free place to relax and let go. Being aware of your stress levels and making the effort to get away from them even if only for short periods of time will help keep your brain and body healthier.

## Motivation to Exercise

If you give a rat a running wheel and it decides not to use it, are genes to blame? And if so, what does that tell us about why many people skip or avoid exercise?

Recently a study was done on rats to determine whether exercise motivation is genetic.

These were the conclusions:

The study found that “Animals or people that are overweight or ill, or who have poor muscle quality or tone or other physiological impediments to activity, tend to be sedentary. If moving is difficult, you don’t do it.” But when unhealthy, fat rats were bred with other unhealthy fat rats, generations later there was really no significant difference in their offspring’s motivation to exercise. In other words, “differences in physique were not driving differences in exercise behavior.” So the researchers began to examine the other primary determinant of exercise behavior: psychology. How closely rats’ emotions echo our own, if at all, is hard to know. But the runners in this experiment did seem to enjoy running, while rats in the other group appeared to want to avoid it.

And it was here that genetics entered. The scientists compared the activity of thousands of genes in a specific portion of the brain that controls **reward behavior**, or the **motivation to do things because they’re enjoyable**. They found dozens of genes that differed between the two groups. The rats’ decision to run or not to run, in other words, was being driven, at least in part, by the genetics of motivation.

The scientists found thousands of genes in the part of the brain that controls motivation and there were dozens of genetic differences between the ‘healthy running’ and ‘not so healthy sedentary’ rats. So the conclusion is that **our exercise motivation probably does have a genetic component**. But before you ramble off the excuse that

you are genetically wired for laziness and therefore can’t help being a couch potato, you should know this:

**Epigenetics** is the science of how our beliefs (what we think) and our environment can actually change our biology.

So here are 5 ways to get you motivated to exercise:

**1. Set a Fun Goal** – To lose weight, walk so many miles in a week, walk a little then run a little, increasing the running portion every week.

**2. Use Exercise To Go Places** If you make exercise a part of something you need to get done, exercise motivation seems easier somehow.

**3. Have A Routine** Schedule in some kind of regular routine. Meeting with a friend or friends, working with a trainer all force you into a routine.

**4. Join Something** If you are a go it alone kind of person then stop that! If you are overweight, know this: People who get support are proven to lose three times more weight than people going it alone! Join a sports team that is social and fun as well as exercise.

**5. Create A Regular Walking Destination** Choose a familiar route that is enjoyable and walk it at a really good pace, with good arm swing, every week. Having a destination vs. random walking, makes it easier to motivate yourself to do it regularly.



Like muscles; your brain grows with movement and withers with inactivity.

## What is the Flu?

The flu is influenza, it is a respiratory disease caused by an influenza virus. Because viruses mutate to survive there are several variations of flu viruses. Unfortunately the media has created fear and hysteria as people listen to news reports throughout their day discussing more about the projections than actual cases of this virus.

What is the flu vaccination?

The flu shot is an inactive vaccine (containing killed virus) that is administered with a needle usually in the arm or by nasal spray called FluMist.

Other common ingredients are:

Ethylene glycol	antifreeze
Phenol	also known as carbolic acid a disinfectant & dye
Formaldehyde	a toxic preservative
Aluminum	a heavy metal that is harmful to the nervous system and brain. Used as a preservative.
Thimersol	ethyl-mercury also harmful to the nervous system and brain. Used as a preservative.
Squalene	an oil used to turbo charge vaccines.
Neomycin & Streptomycin	antibiotics.

Ethylene glycol and formaldehyde, phenol, aluminum and mercury are never helpful in achieving wellness but on the contrary are toxins to the body no matter how small the amount. The population that is most harmed by these toxins is infants, whether through direct injection or through a pregnant mother.

An **adjuvant** is added to a vaccine to enhance the immune response. It causes the immune system to overreact to the organism and the result is less vaccine needed to get the immune response desired. **Squalene**, the adjuvant used in the flu vaccine, is an oil the body recognizes if it enters through the digestive tract but is targeted as a foreign invader if it enters directly through the bloodstream. There has been a link to squalene used in vaccines and autoimmune diseases. It is known that the body attacks all squalene in the body once it has been entered directly into the bloodstream creating an un-natural immune response to it.

## What you can do while the body is healing

Support the immune system

- Breast feed
- Chiropractic care
- Beta Glucans
- Echinacea
- Astragalus
- Black elderberry
- Vitamin C
- Zinc

Create a poor environment for germs

- Probiotics
- Colloidal silver
- Olive leaf
- Garlic
- Oil of Oregano

To feel better and help heal

- Homeopathy
- Herbs:
  - Goldenseal (soothes mucus membranes)
  - Ginger (antihistamine) (nausea tamer)
  - Mullin (expectorant)
  - Tiger balm (decongestant)
- Herb baths
- Proteolytic enzymes (decreases mucus & inflammation)



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