

Journeys through EXPAND

Providing Affordable Fitness, Leisure and Cultural Arts Programs for
Adults with Mild Traumatic Brain Injury and other similar
Neurological Conditions.



Winter 2016 Issue 35



Nutrition and the Brain—by Samantha Larghe, EXPAND Intern

Have you ever considered how nutrition affects your brain? The brain is only 2% of your body mass but uses 20% of the body's energy! New studies in the past few years have come to show that nutrition and what you put into your body can greatly affect memory, cognition, concentration, and mental alertness. A study done in 2011 on US service men and women with severe brain injuries showed that an infusion on calories and protein within 24 hours of the injury and continuous for two weeks after, greatly improved recovery and reduced inflammation of the brain. Studying long term affects and further research on hospital protocols are in the near future. (McMillen)

For those whose injury occurred long ago, or if you are just looking to improve brain functioning, there are lots of different things you can eat to help improve your intellectual side. A deficiency in certain nutrients and chemicals can disrupt the brains functioning and ability to think clearly. Omega-3 fatty acids may be one of the most beneficial nutrients for those with a MTBI, due to all the benefits it offers. Omega-3's nourish the cell membranes and strengthen the connection between brain cells. You can find omega-3's in fish like salmon and herring, seeds like chia seeds, nuts like walnuts, and greens like broccoli and spinach. Herbs are also very beneficial by boosting many functions in the brain. They can improve memory, increase concentration, enhance mental ability, raise mental alertness, and even increase attention span. Herbs can also help other parts of the body with healing antioxidants and improving blood circulation. The main chemical in Rosemary oil (1,8 cineole) is strongly linked to brain performance with speed and accuracy. Ginkgo biloba, which is cultivated all over the world but only grows wild in China, is known for improving memory, concentration, and blood flow. Finally, peppermint is wonderful for energizing the mind and mood. Peppermint candy contains peppermint oil and sugar, which are both vital stimulants that energize the brain. If you aren't into the candy then peppermint oil, tea, or even just the leaves can all be beneficial to the brain.

Offered by the City of Boulder Parks and Recreation Department
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Nutrition and the Brain—Continued

Please note that herbs and foods may interact with medications you normally take that result in serious side reactions. It is always a good practice to tell your doctor or health practitioner what you are taking so that they can advise you of possible complications.

Finally we have the most important thing your brain requires...water!! Our bodies are composed of 70% water, and when you forget to drink enough your brain will suffer. A lack of water can cause problems with focus and memory, as well as sleep issues and depression. The amount of water a person needs to drink per day greatly depends on the individual, though the most popular rule is called the 8x8 rule, which states that one should drink eight 8-ounce glasses of water a day. Below is a formula to calculate how much water your body requires everyday.

1.) **Your weight:** The first step to knowing how much water to drink everyday is to know your weight. The amount of water a person should drink varies on their weight, which makes sense because the more someone weighs the more water they need to drink. A two hundred pound man and 100 pound woman require different amounts of water every day.

2.) **Multiply by 2/3:** Next you want to multiple your weight by $\frac{2}{3}$ (or 67%) to determine how much water to drink daily. For example, if you weighed 175 pounds you would multiple that by $\frac{2}{3}$ and learn you should be drinking about 117 ounces of water every day.

3.) **Activity Level:** Finally you will want to adjust that number based on how often you work out, since you are expelling water when you sweat. You should add 12 ounces of water to your daily total for every 30 minutes that you work out. So if you work out for 45 minutes daily, you would add 18 ounces of water to your daily intake.

Citation:

<http://www.brain-guide.org/nutrition.html>

<http://www.slenderkitchen.com/article/how-to-calculate-how-much-water-you-should-drink-a-day>

<http://www.webmd.com/brain/news/20110420/nutrition-may-help-treat-traumatic-brain-injury>

Cory's Favorite Gluten Free Soup Recipe

This is a great soup to make on those cold winter days or if you feel like you are coming down with a cold. This recipe calls for ginger which can help bolster your body's immune system to combat the common cold. ENJOY!

Ingredients

- 6 ounces dried flat rice noodles
- 3 1/2 cups low sodium chicken broth
- 2-inch piece peeled fresh ginger cut into 1/4 inch thick rounds
- 1 (13.5 ounce) can unsweetened coconut milk
- 3/4 pound boneless, skinless chicken breast thinly sliced
- 6 tablespoons lime juice
- 3 tablespoons fish sauce
- 2 teaspoons light-brown sugar
- 1 jalapeno, thinly sliced

Directions

1. Soak rice noodles according to package instructions; drain.
2. In a large pot, bring broth and ginger to a boil over high. Reduce heat to medium, cover, and simmer 10 minutes.
3. Add coconut milk to broth and return to a simmer. Add chicken and simmer until chicken is cooked through, about 3 minutes. Stir in lime juice, fish sauce, brown sugar, jalapeno, and 1/2 cup cilantro; cook 1 minute. Stir in noodles and serve immediately, topped with 1/4 cup cilantro.

