

# Lifestyles and Brain Health

## Information to common health questions

- Ever wonder if you are living a “healthy” lifestyle?
- Did you know the way you eat and live can significantly affect not only your physical health but also your mental health?
- Ever wonder what to eat, and how much?
- What supplements and minerals are vital in my diet?
- How many calories do I really burn on that elliptical?
- Ever wonder what your brain could actually look like after abusing drugs, alcohol, and other toxic substances?
- How does eating and living healthy affect my brain?

## What should I eat?



Perhaps the most important question regarding your health is your diet. Not “diet” as in eating to lose weight, but diet in the sense of one’s food intake. Diets are not universal, they should be catered to the individual. Factors such as age, weight, height, gender, and daily physical activity level should be taken into account when you determined your diet. There are many free resources online that can aid in determining the right diet for you. Mypyramid.gov, is a great place to find a healthy meal plan, designed just for you. Try it out at,

<http://www.mypyramid.gov/mypyramid/index.aspx>

## Why should I eat healthy?

- 1) According to a report in 2009 by the Trust for America's Health, nearly two-thirds of adults Americans are now either overweight or obese, a trend that has increased significantly over the last 20 years and has been declared a national epidemic by the Surgeon General.
- 2) Heart disease related to obesity is the number one preventable disease in America
- 3) Increases energy: The healthier your diet, the more energy you will have.
- 4) Fight off disease: The immune system is built and maintained from the food you eat. A diet of processed and convenience food not only lacks nutrients, it draws from the body's reserves for digestion and metabolism. This depletes vitamins, minerals and antioxidants necessary to ward off disease and fight infection.
- 5) Feel and look great: Having a balanced diet will provide the fuel and nutrients to help your brain work most effectively such as improving your mood, increasing your focus and motivation. The food you eat is what builds your body. Your skin, hair, and tissues are all built from what you eat. Healthily skin requires vitamins, minerals, antioxidants and essential fatty acids, as does healthy hair.
- 6) Loose or maintain healthy weight: Eating a micronutrient-rich diet helps your body digest food efficiently and metabolize stored energy, aiding in burning off excess pounds.



# Exercise



Research has overwhelmingly demonstrated the importance of exercise on physical health, but exercise is just as important to one's psychological health as well.

## What is recommended?

\*High intensity cardio exercise 45-60 min at least 3-5 days a week

The amount of exercise that your body can handle at first will vary. Depending on your age and current health you may be able to handle more or less than what is recommended. For help determining a workout plan, The Center for Disease Control and Prevention has a pretty slick website that can help cater a workout plan for you.

<http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html>

## How does exercise affect the brain?

- Release of endorphins (opioid agonists)
- Increased levels of serotonin, norepinephrine, and dopamine
- On study demonstrated that 90 minutes of running doubled brain serotonin levels
- One can gain confidence, improve self image, achieving exercise goals, sense of accomplishment, self esteem boost
- Distraction from thoughts
- Reduces anxiety
- Provides increased social interaction, working out a gym or health club, running club, ect.

Ever wonder how many calories you are really burning on that bike? Do you know what your bodies resting caloric expenditure is? The following links can be helpful in calculating how many calories different activities burn relative to gender, weight, height, and age.

## Caloric Expenditure Calculators

Good for finding out how many calories a single activity burns

<http://www.hsc.edu/fitness/calculators/calories.html>

Good for finding your caloric expenditure for the whole day, including resting caloric expenditure

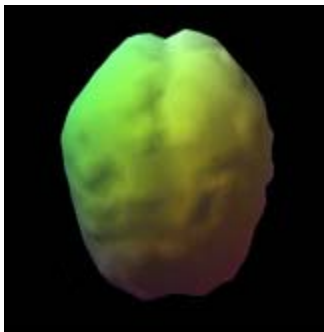
<http://www.stevenscreek.com/goodies/calories.shtml>

## What a healthy or unhealthy brains looks like

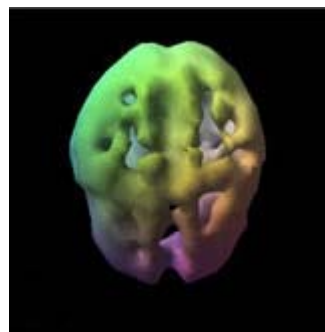
With brain scans we can directly see the health of the brain. One type of brain scanner is the SPECT (*Single photon emission computed tomography*). It maps the brain by looking at blood flow. A healthy brain has uniform blood flow to all regions of the brain. A less than perfect brain might have spots or “holes” where blood doesn’t reach which can be due to damage or death of cells in that area resulting in underperformance.

\*Notice how these substances can result in damage to the brain similar to a stroke patient in the last slide.

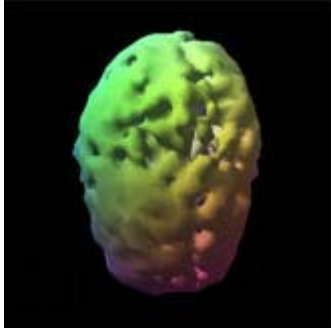
A healthy brain by SPECT



An Alcoholic



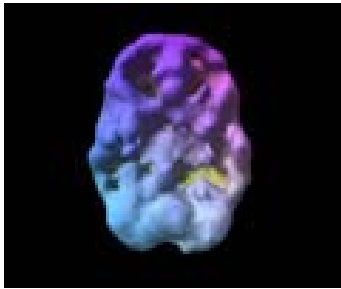
Toxic Work Environment



Heroin Addict



Caffeine and Nicotine Addict



Left Frontal Stroke

