Sugar and Your Brain

Your brain uses more energy than any other organ in your body, and the primary source of fuel is glucose. Your body processes the carbohydrates from the food you eat and converts much of it into glucose. Your cells pull the glucose from the bloodstream and use it for fuel and energy. Natural sources of sugar and other carbohydrates, such as fruits, dairy products and grains, are a healthy choice. Sweetness in the American diet, however, is often excessive and not from natural sources.

There is a big difference between added sugar and natural sugar. Added sugar adds calories with no nutritional benefit. Sugar is added to processed foods such as donuts, candy, soda, sweet tea, fruit drinks, and condiments such as barbeque sauce and ketchup. Many people consume large amounts of added sugars and this can lead to health problems.

Excessive sugar is harmful to your brain in a number of ways. It can slow down the function of your brain, cause a loss of memory, and make it difficult to concentrate. Sugar can also affect your mood. Studies show a connection of elevated blood glucose levels with difficulty processing emotions, increased feelings of sadness and anxiety, and greater incidence of depression. In addition, elevated blood glucose levels harm blood vessels.

Taking in too much sugar can also lead to high blood pressure, inflammation, weight gain, diabetes, and fatty liver disease, and these are all linked to an increased risk for heart attack and stroke. Excess consumption of sugar, especially in beverages, can trick your body into turning off its appetite control system because liquid calories are not as satisfying as calories from solid foods. This explains why it is so easy to add more calories to your diet when consuming sugary beverages.

What about artificial sweeteners? These are typically 200 to 600 times sweeter than sugar and they stimulate your taste buds. Artificial sweeteners are more likely to make you feel hungry so you eat more throughout the day. Because of the intense
sweet taste they provide, you may find that you crave sugar even more.

So, the take home message is that sugar isn't inherently bad — actually, it is necessary. Satisfy your sweet tooth with fresh fruit rather than refined sugars.

How to Reduce Sugar

Added sugar — sugars and syrups added to foods/beverages when they are processed or prepared — is in 80 percent of the products at the grocery store. Most of us eat and drink more sugar than we realize.

Adding sugar to processed foods makes them more appealing. Sugar gives baked items flavor, texture and color. It helps preserve foods and it fuels fermentation, enabling bread to rise. Sugar also serves as a bulking agent in baked goods and ice cream, and it balances the acidity of foods containing vinegar and tomatoes.

So, how much added sugar is too much? The Dietary Guidelines for American recommend you limit added sugars to less than 10% of daily calories. If you eat about 2,000 calories a day, you should limit added sugars to about 12 teaspoons or 48 grams. To put this in perspective, a 12-ounce can of soda has about 10 teaspoons (40 grams) of sugar.

You will be surprised by products that contain high amounts of added sugar, so the best way to make informed decisions is to read labels. The Nutrition Facts label displays the total amount of all sugars (natural and added) found in a serving of the product. There is also a line for added sugars. Another option is to look at the ingredient list on the package. Ingredients are listed in descending order by weight, so if sugar is one of the first few ingredients the product is likely high in added sugars.

To reduce added sugars in your diet, start by drinking water and other beverages that don't contain sugar or artificial sugars. Add fresh fruit and herbs to your water for a bit of flavor. When you drink fruit juice, make sure it is 100% juice, and better yet, eat the fruit. Choose breakfast cereals with less sugar. Go for fresh or frozen fruit as dessert. Buy canned fruit packed in water or juice, not syrup. Choose nutrient-rich snacks like vegetables, fruits, low-fat cheese, nuts, whole grain crackers, and low-calorie yogurt instead of candy, pastries, and cookies. When you have a dessert high in sugar, share it with others. Sometimes all you need is a bite or two to satisfy a craving.

Store-bought marinara sauces are often high in sugar and salt. The best is to make your own from fresh tomatoes, or try this option that includes plenty of veggies!

Stretch and Strengthen Hip Flexors

Hip flexors are a group of muscles that allow you to lift your knees toward your chest and to bend forward from the hips. Tight hip flexors are a common problem for people who spend a lot of time in a seated position. As a result of these muscles being tight, you could also have low back pain, hip pain, and injury.

Simple hip strengthening and stretching exercises can keep these muscles from getting tight and can reduce your risk of injury and pain.

Hip Flexor Stretches

Seated Butterfly Stretch

This is a good stretch for your inner thighs, hips, and lower back. When doing this stretch, make sure you lean forward from your hips rather than rounding your lower back.

1. Sit on the floor with your back straight, soles of your feet pressed together, and your knees dropped to the sides as far as they will comfortably go.

2. Tighten your abdominal muscles. Grasp your feet and ankles and slowly lean forward, keeping your spine straight. Hold this pose for 10 to 30 seconds.

To reduce stress on your knees, move your feet away from your body. To increase the stretch, move your feet toward your body.

**Hidden Veggie Marinara Sauce**

Makes 8 Servings

**Ingredients:**
- 2 tablespoons olive oil
- ½ cup grated onion
- 2 garlic cloves, grated
- 1 large carrot, grated
- 1 medium zucchini, grated
- 1 cup mushrooms, finely chopped
- 1 28-ounce can no-salt added tomato sauce
- 2 tablespoons tomato paste
- 1 teaspoon Italian seasoning
- 1 teaspoon salt
- ½ teaspoon ground black pepper
- 1 bay leaf

**Directions:**
1. Wash hands with soap and water.
2. Hold a stick (ex. mop handle) in front of you and actively push it down into the ground. This will engage your core and help you do the stretch correctly.
3. Keep your body upright, squeeze your butt, and lean forward at the hips to feel the stretch.

Here is a demonstration of the Hip Flexor Stretch: https://www.youtube.com/watch?v=lf1XhGTBJx8

**Hip Strengthening Exercises:**

**Lunge:**
1. From a standing position, place hands on your hips and look straight ahead. Take a generous step forward with your right foot.
2. Bend your extended (right knee) and transfer your weight onto that leg. Continue to lower yourself slowly into the lunge. Your right knee should be directly above your right ankle and your left knee hovers just above the ground.
3. Step back into a standing position and repeat with your left leg.

You can also do a "walking lunge" as demonstrated here: https://www.youtube.com/watch?v=bjg4yXpXLJo&feature=youtu.be

**Straight Leg Raise:**
This move will help strengthen your knees and hip flexors.
1. Lie on your back with your palms at your side, left leg extended and right leg bent.
2. Lift your straight leg up until both knees meet and hold for 2 seconds. Slowly lower your straight leg.
3. Repeat 10 to 20 times on each side.

Demonstration of the straight leg raise: https://www.youtube.com/watch?v=qvi8aM02_GY

**Basic Hip Flexor Stretch**

1. Start in a half-kneeling position on the floor. Put a cushion or two on the floor for your knee if you have knee stiffness. The back leg is the one you are about to stretch.
2. Hold a stick (ex. mop handle) in front of you and actively push it down into the ground. This will engage your core and help you do the stretch correctly.
3. Keep your body upright, squeeze your butt, and lean forward at the hips to feel the stretch.

Here is a demonstration of the Hip Flexor Stretch: https://www.youtube.com/watch?v=lf1XhGTBJx8

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