## Dr. Marlene's NATURAL HEALTH CONNECTIONS



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# The Link Between Diabetes and Alzheimer's Disease

Eating the right food, at the right time, can protect you against both diseases and help to reverse damage that's already done.

Alzheimer's disease is one of today's biggest fears. Will it strike you or someone you care about?

If you pay attention to popular media, it seems as though we're powerless. Efforts to beat Alzheimer's focus on fundraising to find a cure, but none is expected soon. And many support groups and organizations are struggling to help caregivers, who become overwhelmed by their task.

It certainly looks like a hopeless situation. But it isn't. Unfortunately, the most important discoveries get little or no media mention and take 17 years, on average, to become routine practice in medicine. So, I wanted to share some with you.

As never before, we can take simple steps to reduce the odds of getting both diabetes and Alzheimer's. Where either of these has started to develop, the same approach will reverse at least some damage and improve health.

#### What's Really Happening?

Alzheimer's is so closely linked to type 2 diabetes that it's being called "type 3 diabetes." If the numbers are making your head spin, let me clear things up.

For years, diabetes has been classified into two types. Type 1 is an autoimmune disease that used to be called "juvenile diabetes," because it's usually diagnosed in children and young adults. In this situation, the pancreas can't make insulin. Only about 5 percent of people with diabetes have type 1, and there's no known cure.

Type 2 diabetes was once called "adult onset diabetes," because it almost always struck older people. Now, it's more common among younger generations because of poor diets and less physical activity. About 95 percent of Americans with diabetes suffer from type 2.2 Many

could reverse or improve their condition, if they knew how.

Alzheimer's is now being called type 3 diabetes because it shares an underlying mechanism with type 2. But type 3 affects the brain. To make sense of this, it helps to understand how both types work.

#### Diabetes can more than double your risk for Alzheimer's

Ohara, T., et al. "Glucose tolerance status and risk of dementia in the community: the Hisayama Study." Neurology. 77.12 (2011): 1126-1134.

#### The Type 2 Diabetes **Mechanism**

When we eat sugar and carbohydrates, our digestive system breaks them down into glucose, a form of sugar in the blood. The glucose triggers production of insulin in the pancreas. Insulin gets glucose into cells, where it's turned into energy. Diabetes starts to develop when the process goes haywire.

Starch is turned into sugar in the human body, so carbohydrates and sugar have the same effect. Both raise levels of glucose in the blood and trigger release of insulin. When I say "carbohydrates," I'm referring to both starchy and sugary foods and drinks.

When we eat a small amount of carbohydrates, a small amount of insulin is released. Eating more carbohydrates triggers release of more insulin. We're physically designed to keep these two things balanced, but today's diets throw a wrench in the works.

If we habitually eat large amounts of carbohydrates, our body anticipates the need for large quantities of insulin. Unfortunately, it can go overboard and produce too much. The excess insulin drives levels of blood glucose too low, and then energy sags, and we crave more starchy and sugary foods. We eat those foods, and the cycle repeats itself, over and over. Each time insulin soars, it

promotes fat storage, especially in the belly.

The situation gets worse as the rollercoaster continues. The cells become resistant to insulin and absorb less glucose. As a result, levels of glucose in the blood become elevated. This condition. called insulin resistance, starts us on a path to diabetes and increases risk for heart disease.

Gradually, glucose levels range higher and higher because the pancreas can't produce enough insulin. When levels rise above normal, that's prediabetes, and when they get high enough, it's diabetes. At the point where diabetes is diagnosed, it's estimated that 50 percent of the pancreatic cells that make insulin are dead from exhaustion.3

#### Type 3 Diabetes in the Brain

We use between 22 and 25 percent of our energy to support brain function. To make energy, brain cells must respond to insulin and absorb glucose, but eating too many carbohydrates will

#### Alzheimer's and Dementia: The Same or Different?

Dementia isn't a disease but a catch-all word for a loss of mental abilities. Older people with dementia used to be called "senile." Alzheimer's is a specific disease whose hallmarks are plaques and tangles in the brain.

Signs of dementia can include memory problems, difficulty focusing and controlling attention, disorientation, trouble communicating, and the inability to think and reason normally.

Dementia can be caused

by strokes, Parkinson's disease, Huntington's disease, and other conditions, including:

- low thyroid hormone
- infections such as Lyme disease
- hearing loss
- side effects of medications
- deficiencies of vitamins B1 or B12
- sleep deprivation
- toxins

When toxins cause dementia. the person has usually had a lot of exposure, often to a toxic metal. For example, someone whose hobby is

making leaded glass lamps can be exposed to a lot of lead.

These types of dementia can be resolved by finding and treating the source. Country singer Kris Kristofferson, now in his 80s, was debilitated and misdiagnosed with Alzheimer's for years. Then a doctor discovered he was suffering from Lyme disease. Once it was treated, Kristofferson miraculously regained his faculties and has been able to perform again.

eventually make them insulinresistant. When this happens, the brain is starved of energy.

Glucose, the fuel, is there, but the brain cells can't access it. We might feel mentally drained or even light-headed. In extreme cases, some people become confused and disoriented. Eating will make us feel better for a while, but then the pattern repeats. We eat more, but the brain never gets full.

Studies have been looking at Alzheimer's as a type of diabetes for over a decade.4 It seems that insulin resistance in the brain causes physical changes in brain matter and may contribute to formation of the plaques and tangles that signify Alzheimer's.

One researcher said: "...the Alzheimer brain runs short of energy and begins to digest itself."5 While it isn't clear if that's literally true, the research does show that lack of glucose in brain cells may be a very early<sup>6</sup> and possibly reversible sign of Alzheimer's.

#### **Age Matters**

The older you are, the higher your risk for diabetes and Alzheimer's.

#### **Americans with diabetes:**

Ages	
18-44	4%
45-64	17%
65+	25.2%

Adults ages 65 or older with prediabetes:

Nearly 1 in 2

National Diabetes Statistics Report, 2017. Centers for Disease Control and Prevention (CDC).

In my practice, I've seen this mechanism at work for years. Many of my patients have normalized their blood sugar through changes in diet and have experienced a new lease on life, mentally and physically. But the diabetes-Alzheimer's link is not well known in treatment today.

The good news is that it's getting more recognition. At the National Institutes of Health, researchers recently looked at autopsies of people with and without Alzheimer's. They found that elevated glucose in the brain is directly linked to signs and severity of Alzheimer's. And, increases in levels of blood glucose start decades before a problem develops in the brain.<sup>7</sup>

#### The Natural Solution

Exercise is a very effective way to control blood glucose. Unfortunately, the amount of exercise that's necessary is unrealistic for most people. There's a saying I stand by: You can't outrun your fork.

Diet is the practical entry point and will give you energy to become more physically active. Regular exercise is also essential. (For the most effective type, see "Exercise Snacks," page 7.)

It isn't terribly difficult to eat in a way that improves your metabolism, prevents or helps reverse diabetes, and reduces the odds of Alzheimer's. However, we've been given so much false information that it may take a bit of getting used to.

#### The Challenges

In a nutshell, most of us need to eat fewer starchy foods and less

sugar. Before you roll your eyes and think, "Sure, I've heard that before," or protest, "But I only eat healthy carbohydrates," I'll be a bit more specific. I'm not suggesting any low-carb, fad diet.

It's very easy to eat more carbohydrates and sugar than our bodies can handle. These ingredients are everywhere—in chips, pretzels, nutrition bars, smoothies, flavored yogurts, cereals, and every type of baked food, from cookies and pizza to burger buns and taco shells.

#### Dr. Marlene's NATURAL HEALTH CONNECTIONS

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#### **Natural Health Connections**

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Primal Health, LP 710 Century Parkway, Allen, TX 75013 Even protein is challenging. Fish and chicken get encased in starchy batter and then stuffed into a big bun. "Healthy" sandwiches are made of a giant roll stuffed with some meat, cheese, and maybe a little lettuce or other vegetables.

Sugar is added to 74 percent of packaged foods, including many that don't taste sweet. And it can take many forms, such as high fructose corn syrup or maltodextrin. Pasta sauces, salad dressings, breads and buns, soups, and canned or frozen entrees and side dishes are some of the places where it hides.

#### **No Fad Diets**

Many of my patients have tried various diets before they see me. They may have had some success, but it wasn't lasting. They kept gaining weight, often needed medications to control high blood pressure or blood glucose, and felt far from their best.

I know that the only way anyone can stick with a certain way of eating is if they like it, so I've never suggested a regimented diet. But I've boiled down a lot of nutrition science and experience into a few simple rules that have produced lasting results.

My patients aren't the only ones who have benefited. Many people who read my book, the *Smart Sugar Solution*, have never talked to me but dramatically improved their health.

When Larry read the book, he had had type 2 diabetes for 15 years. He was taking three diabetic medications and injecting insulin five times per day. His A1C, the blood test that shows blood glucose levels over the past few months, was still in a very high range: 10.7. (Below 5.7 is considered normal; diabetes begins above 6.5. The in-between level is prediabetes.)

Within six months of starting to follow my recommendations (which I'm about to share with you), Larry's A1C dropped to 5.7. He lost 22 pounds, no longer needed to inject insulin, and was taking less than half the other medications. Naturally, he felt much better.

#### What's the Catch?

There are some rules. Before I get into specifics, I want to answer a question I'm often asked. Do you have to follow my rules for the rest of your life? No, but you will develop new eating habits. Exactly what those are depends on your taste buds and the way you live.

Think of it this way: If you don't

take care of your car and it breaks down, it needs to be repaired. Once that's done, you need to maintain it to prevent future breakdowns.

Use my rules to get your blood sugar under control. Then, you'll have a healthier metabolism and a new understanding of how food affects you. You can experiment to see which additional foods your body can tolerate, in what quantities, and how often—while keeping yourself in shape.

How do you tell when your "car" is repaired? You may lose weight, notice your clothes fit better, or need a smaller size. Weight gain plays a big part in type 2 diabetes, and losing a little reverses the process. Although thin people can develop type 2 diabetes, most of those with the disease are overweight or obese (very overweight). The rises in obesity and diabetes go hand in hand.

You should have more energy

#### **Carbs to Count**

Keep a daily total of carbohydrates only from the foods on this list.

#### From these foods:

- Limit your daily total to 60 grams of carbs
- Eat no more than 30 grams of carbs in one meal or snack

## Grain-based foods, such as:

- Bread
- Crackers
- Chips

- Cereal, including granola
- Bran
- Breakfast bars
- Granola bars
- Energy bars
- Oatmeal
- Pasta
- Rice

## Drinks with natural or added sugar, such as:

- Fruit juices
- Milk
- Soda
- Alcoholic beverages

#### **Dessert including:**

- Candy
- Baked goods
- Pastries
- Cookies
- Cakes

#### **Grocery Items:**

- Fruit
- Beans
- Potatoes, all varieties, including sweet potatoes and yams
- Corn, including popcorn

There's no need to count carbohydrates in other foods.

and feel better. If you're monitoring blood glucose, the level should improve. If your blood pressure is elevated, it may drop. One way or another, you'll know.

#### Rule #1: 60 Grams

Various diets have counted grams of carbohydrates and, as a result, banned entire categories of food. I'm not a believer in this type of approach. You can eat anything to a point.

My recommendation is to count carbohydrates only in certain foods (see Carbs to Count), because these are the main sources of excess carbs. And eat no more than 60 grams of carbs per day from those foods. As for other vegetables, eat as many as you like.

One caution: Ignore "net carbs." They're listed on many "low-carb" packaged foods and can mislead you. The theory is that if a food also contains fiber, some of the carbs don't matter, so the "net"

carb value is lower than the total carbs. It doesn't work that way. Carbs are carbs, and these types of foods will lead you astray.

#### Rule #2: Eat Often

Eat every three hours or before you're hungry, to prevent sugar cravings, energy sags, and brain drain. Your levels of blood glucose and energy will be stable, and you won't experience hunger that makes you overeat. As your system gets healthier, you can eat less often.

#### Rule #3: Eat Enough Fat

Don't eat "low-fat" foods, as they are typically high in sugar and/or starch, and the lack of fat leads to cravings. Eat some fat with every meal and snack. For example, dip vegetables in a salad dressing for a snack, or add a spoonful of peanut butter.

Good sources of fat include coconut oil, butter, avocado, olive oil, lard, and the skin on chicken.

Try to avoid processed vegetable oils, which are inflammatory. Unfortunately, most restaurants use these types of oils.

#### **Other Food Tips**

Eat plenty of leafy greens and other vegetables that aren't on the "Carbs to Count" list. Nuts are fine but steer clear of giant portions. I don't give a limit for fish, seafood, and meat, but it's possible to eat too much. It's best to vary protein sources, including shrimp, oysters, eggs, different fish, all parts of chicken, and organ meats like liver. And, try some meatless meals.

When considering a restaurant, try to get a sense of the types of ingredients it uses and what's in different menu items. As of May 7, 2018, restaurants with 20 or more locations must disclose nutritional information. Many smaller ones make a point of using fresh ingredients and healthy fats. All in all, it's getting easier to know what's in our food, and to make smart choices.

#### **About Dr. Marlene**

Dr. Marlene Merritt's passion for natural medicine is fueled by her drive to help others, and her own experience of overcoming a debilitating heart condition, diagnosed at the age of 20. A competitive cross-country cyclist at the time, she suddenly began experiencing severe chest pains. Forced to quit the sport, she suffered from extreme fatigue and constant pain for another 15 years, despite doing everything that conventional,

Western medical doctors told her to do. And then, the tide turned. A physician trained in naturopathic healing

recommended a whole-food vitamin E supplement. A week after starting the supplement regimen, her energy began to return, and the pain began to disappear.

Dr. Marlene is a Doctor of Oriental Medicine, has a Master's in Nutrition, and is an Applied Clinical Nutritionist. She is Board Certified in Bariatric Counseling, and certified in the Bredesen MEND Protocol, TM a ground-breaking method of reversing Alzheimer's disease. She sees patients at the Merritt Wellness Centers in Austin, Texas, and Santa Fe, New Mexico, trains health practitioners nationwide, and is the author of the Smart Blood Sugar Solution and the Blood Pressure Solution.

<sup>&</sup>lt;sup>1</sup> de la Monte, S., et al. "Alzheimer's disease is type 3 diabetes—evidence reviewed." Journal of Diabetes Science and Technology. 2008 Nov; 2(6): 1101–1113.

<sup>&</sup>lt;sup>2</sup> Centers for Disease Control and Prevention. Type 2 Diabetes. www.cdc.gov/diabetes/basics/type2.html. Accessed April 4, 2018.

<sup>&</sup>lt;sup>3</sup> Marrif, H.I., et al. "Pancreatic Beta Cell Mass Death." Frontiers in Phamacology. 2016; 7: 83.

<sup>&</sup>lt;sup>4</sup> Steen, E., et al. "Impaired insulin and insulin-like growth factor expression and signaling mechanisms in Alzheimer's disease: is this type 3 diabetes?" Journal of Alzheimer's Disease. 2005;7:63-80.

<sup>&</sup>lt;sup>5</sup> Mamelak, M. "Sporadic Alzheimer's disease: the starving brain." Journal of Alzheimer's Disease. 2012;31(3):459-474.

<sup>&</sup>lt;sup>6</sup> Cunnane, S., et al. "Brain fuel metabolism, aging, and Alzheimer' disease." Nutrition. 2011;27(1):3-20.

<sup>&</sup>lt;sup>7</sup> An, Y., et al. "Evidence for brain glucose dysregulation in Alzheimer's disease." Alzheimer's & Dementia: The Journal of the Alzheimer's Association. 2018 Mar;14(3):318-329.

## **Chia Seeds: Surprising Source** of Healthy Fat



To many people, chia evokes memories of Chia Pets, those cute clay figurines that sprout a green plant covering and were once advertised frequently on TV. It's still the same plant, but now it's popular for a different reason as a nutritious food.

Chia seeds are known for their healthy fat, especially alpha-linolenic acid, a type of essential omega-3 fat<sup>1</sup> that is antiinflammatory. Most diets don't contain enough of it. The seeds are also a good source of fiber and some protein, and contain a variety of essential minerals and vitamins.

In packaged foods, chia seeds are found in some snack foods, cereals, bars, baked goods, and bottled smoothies. But if you buy plain chia seeds, there are some interesting ways to eat them.

#### **Did You Know?**

Chia means "strong" in the ancient Mayan language. The Mayans believed that chia seeds, eaten by warriors for energy, had supernatural powers.

#### The Unique Chia Quality

When mixed with liquid, chia seeds absorb a lot of moisture, expand, and become gelatinous in about 15 minutes. Chia gels can be made in assorted flavors, as

puddings for healthier versions of desserts, or in savory versions to thicken sauces and other foods. The seeds don't have any flavor of their own, so they're very versatile.

It isn't a good idea to eat the dry seeds by themselves. They will draw moisture from the digestive tract and can cause bloating or other digestive discomfort.

#### **Basic Chia Gel Recipe**

A plain gel makes a nutritious, natural thickener for smoothies. gravies, sauces, soups, dressings, and dips, and can be used as an egg replacement in baking. Using more seeds will produce a denser gel. You can experiment to find your favorite consistency.

#### Ingredients:

1 cup water

1-1¾ tablespoons chia seeds

#### How to make it:

- 1. In a sealable container or jar, whisk water and seeds together
- 2. Let the mixture sit for about 5 minutes
- 3. Whisk again and let it sit for another 10–15 minutes
- 4. Keep container sealed in the fridge for up to a week

If the seeds are mixed with a flavored liquid instead of water, the gel takes on that flavor. Mixing seeds with broth to thicken soups

or stews will add flavor as well as texture. For desserts, make the gel with coconut milk or almond milk.

#### **Chia Pudding Recipe**

Try this as a healthy alternative to sugary puddings or, when chilled, instead of ice cream.

#### Ingredients:

1 cup cool almond or coconut milk Vanilla bean or extract, to taste Cinnamon to taste 1¾ tablespoons chia seeds Optional: berries, other fruit, or chocolate shavings for topping

#### How to make it:

- 1. Combine almond milk, vanilla, and cinnamon and whisk
- 2. Add chia seeds and whisk
- 3. Let the mixture sit for about 5 minutes and whisk again
- 4. Let it sit for another 10-15 minutes
- 5. Optional: top with berries or chocolate shavings

Eat the pudding right away or chill it in the fridge for a cold treat.

#### **Chia Seed Nutrition Facts**

An ounce of chia seeds. roughly 2 tablespoons, contains:

**Protein:** ..... 4.69 grams **Fat:** ...... 8.71 grams Carbohydrates: 11.94 grams **Fiber:** ..... 9.9 grams **Calories:** ..... 138

United States Department of Agriculture. National Nutrient Database for Standard Reference Legacy Release.

Parker, J., et al. "Therapeutic Perspectives on Chia Seed and Its Oil: A Review." Planta Medica. 2018 Mar 13. doi: 10.1055/a-0586-4711. [Epub ahead of print]

## **Exercise Snacks Before Meals**



There are many ways to exercise, from golf and tennis to yoga and weightlifting. They're all good. And then there are "exercise snacks."1

The phrase was coined by researchers who discovered this among people with insulin resistance: Compared to walking for 30 minutes once a day, much shorter but more intense spurts

of exercise, 30 minutes before meals, is a more effective way to improve blood glucose, reducing the risk for diabetes, heart disease, and dementia.

Here's how you can work harder, for less time, and get better results:

#### Do this 30 minutes before breakfast, lunch, and dinner.

- · Warm up by walking around and stretching a bit.
- For 1 minute, walk fast, jog, run, or do some other movement that gets your heart pumping, to a point where it's too difficult to carry on a conversation. Walking uphill on a treadmill, cycling on a stationary bike, or fast walking

- or jogging in place, with arms swinging, are other options.
- Walk around at a slow pace until your heart rate returns to normal, or close to it.
- Repeat the cycle 5 more times, for a total of 6 bouts of heartpumping movement.
- Walk around and gently stretch to cool down.

When you're doing the intense 1-minute spurt, go at a pace that gets your heart pumping. This is different for each person. For one person, it could mean running at 5 miles per hour, and for another, it could mean brisk walking.

If you forget to do the routine before a meal, do it afterward. However, wait until the food has settled in your stomach, to avoid discomfort.

## The Cure for Sitting

TVs, computers, phones, endless home entertainment, and all the other conveniences of modern living keep us glued to a couch or chair for too much of our lives so much so that sitting has become hazardous enough to be called "the new smoking." It decreases circulation and can double the risk of blood clots in women's lungs. However, a recent study for the American Council on Exercise found simple ways to not only reduce harmful effects of sitting but also to enhance our health.2

Getting up for 5 minutes every hour, or for 10 minutes every

2 hours, produced impressive benefits. After 8 weeks:

- HDL ("good") cholesterol increased by 18-21%
- **Triglycerides** dropped by 23-24%
- **Blood glucose** dropped by 6-8%

The higher numbers are for hourly 5-minute breaks. However, 5-minute breaks every 2 hours didn't produce significant benefits.

These types of breaks aren't intended to replace more structured or demanding exercise. Rather, they complement longer bouts of activity.

Here are some things to do during breaks from sitting:

- Get up and stretch
- Walk around while talking on the phone
- Do household chores
- Walk the dog
- Walk up and down stairs

Make a habbit of short breaks and your health will soon impove.

<sup>&</sup>lt;sup>1</sup> Francois, M.E., et al. "'Exercise Snacks' before Meals: A Novel Strategy to Improve Glycaemic Control in Individuals with Insulin Resistance." Diabetologia. 2014 Jul;57(7):1437-45.

<sup>&</sup>lt;sup>2</sup> Keeling, S.M., et al. "What Is the Optimal FIT to Reduce Sedentary Behavior to Improve Cardiometabolic Health?" ACE Certified, Dec 2017.

## How to Save Money on Organic Fruits and Vegetables

Conventionally grown fruits and vegetables are the top sources of pesticides in our bodies.<sup>1</sup> Many studies have found that organic versions not only reduce our exposure to toxins but also provide more nutrients.2

Without toxic pesticides, plants have to work harder to protect themselves against bugs, and in the process they produce more antioxidants. These antioxidants protect us against heart disease, brain disorders, and some cancers.

Government subsidies often drive down the prices of conventionally grown food, but organic farmers don't get the same financial support. That's one reason why organic produce often costs more, but there are some ways to save money. Buying what's in



season, directly from farmers or at farmers' markets, is one option. Another is to buy organic versions of fruits and vegetables with the highest pesticide levels, and buy conventional versions of others.

#### **Make Smart Organic Choices**

Thousands of produce samples around the country are tested for pesticide residues by the USDA. To turn the results into useful information for consumers, the non-profit Environmental Working Group analyzes results and, each spring, ranks which fruits and vegetables contain the most and least pesticides. Here are the latest rankings for 2018:

#### **Dirty Dozen: Buy Organic**

These are most important to buy organic because they contain the most pesticide residues:

- 1. Strawberries
- 8. Pears
- 2. Spinach
- 9. Tomatoes
- 3. Nectarines
- 10. Celery
- 4. Apples
- 11. Potatoes
- 5. Grapes

- 12. Sweet Bell
- 6. Peaches
- Peppers
- 7. Cherries

#### Clean 15

These have the lowest levels of pesticides:

- 1. Avocados
- 9. Mangoes
- 2. Sweet corn
- 10. Eggplants
- 3. Pineapples
- 11. Honeydews
- 4. Cabbages
- 12. Kiwis
- 5. Onions
- 13. Cantaloupes
- 6. Sweet peas
- 14. Cauliflower
- 7. Papayas
- 15. Broccoli
- Asparagus

For more information about pesticides in produce, visit the Environmental Working Group at www.ewg.org/foodnews.

## 1 in 100 Cancer Discoveries

When scientists around the world announce discoveries that could improve cancer treatment, only 1 in 100 makes it into a product that gets used in the healthcare system. Researchers at Queen's University Belfast, in Ireland, calculated the numbers and are working to translate more discoveries into better medical care. In the United

States, the approval process prevents many new treatments from being used.

## Hearing Problems Can Double **Accidents**

Accidental injury is a leading cause of death and disability, and hearing loss increases the risk. In fact, people who say they have a lot of trouble hearing are twice as likely to be injured in an accident at work or during leisure activity, according to a recent study by Harvard Medical School and the University of California Irvine.<sup>3</sup>

Hearing aids can solve the problem, but many people are reluctant to even get checked out for one. The thought of walking around with an unsightly gadget attached to their ears is, not surprisingly, unappealing and, quite possibly, embarrassing. But it doesn't have to be that way. Many

hearing aids today are high-tech and invisible.

Hearing loss interferes with the ability to communicate with others, can cause stress in relationships, and leads to isolation and loneliness. And that, in turn, raises the risk for memory loss and dementia.

#### Smartphones Can Drain Your Brain

If you use a smartphone, keeping it close by can cause "brain drain," a term coined at The University of Texas at Austin.<sup>4</sup> Researchers gave mental tests to 800 people, with their phones nearby or in another room, and found that the closer the phone, the worse the concentration and test performance. Even when the phones were in silent mode, they had the same effect. There was no brain drain when phones were not in sight or within easy reach.

### **Amazing Heart Facts**

The human heart beats about 101,000 times each day, which adds up to about 3 billion beats in a lifetime. It pumps about a million barrels of blood during a person's life. No wonder we need to care for it.

## Don't "Go Under" for Hip Surgery

Hip replacement surgery can be done with or without general anesthesia. Now, two separate studies have found that there is less danger of complications when anesthesia numbs only the lower body and the patient stays awake, with or without some sedation.

One study, at the University of Toronto in Canada,6 compared 833 pairs of similar patients. When only the lower body was numbed with a spinal injection, patients were less likely to experience mental confusion after surgery, die within three months, or develop blood clots in their lungs. And, they required shorter hospital stays.

A Korean study,<sup>7</sup> with more than 96,000 patients, drew similar conclusions. Results of both studies were presented at the 2018 World Congress on Regional Anesthesia & Pain Medicine in New York City.

General anesthesia after age 40 increases risk for Alzheimer's disease, and risk is much greater with more than one incident of anesthesia. Whenever possible, it's best to avoid it and use alternatives.

## Coffee Fights the Bulge

On average, we gain about a pound a year between the ages of 25 and 55. A diet high in carbohydrates and a lack of exercise contribute to a slowdown of metabolism as we age. Although it isn't a substitute for a healthy lifestyle, coffee can help reverse the process.

Researchers at Florida Atlantic University,<sup>5</sup> in Boca Raton,



estimate that coffee speeds up metabolism by 5 to 7 percent, and can help to compensate for the age-related slowdown. Coffee also perks up energy, making it easier to be more active. And, more than 200 natural compounds in the brew help control inflammation and levels of blood glucose.

Due to the combination of coffee effects, those who regularly drink a few cups a day tend to live longer. People who are sensitive to caffeine can benefit from decaf versions. But beware: Adding lots of cream and sugar can negate the benefits.

<sup>&</sup>lt;sup>1</sup> Mie, A., et al. "Human health implications of organic food and organic agriculture: a comprehensive review." Environmental Health. 2017 Oct 27;16(1):111.

<sup>&</sup>lt;sup>2</sup> Bananski, M., et al. "Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses." British Journal of Nutrition. 2014 Sep 14;112(5):794-811.

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 $<sup>^{\</sup>rm 4}$  Ward, A.F., et al. "Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity." Journal of the Association for Consumer Research. 2017 2:2, 140-154.

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Q: I've read a lot about the benefits of intermittent fasting, but you recommend eating every three hours. I'm confused. Which one is better? — William J.

**A:** The short answer is, it all depends on how healthy your metabolism is. Intermittent fasting means going without food for longer periods than usual. It could be as simple as skipping a meal or not eating between dinnertime one day and breakfast or lunch the next day. Or it could mean not eating for an entire day, once or twice a week, or once every two weeks. All of these can be very beneficial, but the key word is "can." It isn't a one-size-fits-all proposition.

I've found that most people who get tired or feel mentally drained during the day, or routinely crave sweet or starchy foods, generally don't do well with intermittent fasting. It can make them feel more tired, irritable, and fuzzy-headed, and it sometimes leads to blurry vision.

In those situations, a history of eating too many carbohydrates for years has created a vicious cycle where your body can't fully use carbohydrates as fuel, feels starved, and constantly craves more. The adrenal glands also become depleted.

Eating every three hours and limiting the quantity of carbohydrates can break that cycle. As metabolism improves, it isn't necessary to eat as often, and

once your system is functioning properly, intermittent fasting can produce added benefits. It can teach your body to burn more fat, preserve muscle, and use carbohydrates more efficiently.

In short, different approaches work best in different situations. If you don't have the problem I described, intermittent fasting may be right for you.

**Q:** I have a sweet tooth but know I need to eat less sugar. Should I replace sugar with a healthier sweetener like honey, agave, or coconut sugar, or a zero-calorie **sweetener?** - *Jeannette* R.

**A:** Most sweeteners, natural or artificial. will perpetuate the vicious cycle of sweet cravings, even if

they contain nutrients or have few or no calories. The sensation of sweetness in our taste buds tells our body that sugar is on its way, and usually triggers a sugar response. And, artificial sweeteners are toxic. Aspartame can cause brain lesions, and sucralose, which contains chlorine, can cause stomach upset.

With honey, the problem is quantity. We used to fight bees for it, so it was scarce; but now, we just reach for a jar and overindulge. Coconut sugar contains trace amounts of nutrients, but the sugar effect outweighs the potential value.

Agave syrup is especially problematic. The agave plant does contain a beneficial fiber, but the syrup is 90 percent fructose, a form of sugar that exacerbates insulin

resistance and diabetes.

Online, people with legitimate credentials touting the benefits of natural sweeteners, which are often inflated. Or, they quote studies that are questionable or were done only on rodents.

I've looked at the science and, more to the point, I've seen what works with living, breathing people in their day-to-day lives. These are practical options that don't trigger problems with blood sugar:

**Stevia:** It has no calories and is widely available, in packets of powder and, a favorite of many of my patients, in flavored liquid products. If you don't like the taste of pure stevia, I recommend trying the flavored liquids.

Monk fruit: Used for centuries in China to treat constipation, coughs, and diabetes, it's known as the "longevity fruit." It has almost no calories, and for some it's the tastiest option.

#### Do you have a question for Dr. Marlene?

Send your health-related questions to drmarlene@naturalhealthcon nections.com. Please include your first name and the initial of your last name. Although she cannot answer each question directly, Dr. Merritt will select a few in each newsletter and will address other questions and concerns in articles in future issues. Answers are intended for educational purposes only and should not be viewed as medical advice.