Defying the Odds:
Phil Southerland’s Story of Living with Type 1 Diabetes and Founding Team Type 1

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To improve the health of people living with diabetes

Boehringer Ingelheim and Eli Lilly and Company are committed to researching and developing innovative treatments that make a difference for people affected by diabetes.
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EmPower, published by the American College of Endocrinology (ACE), the educational and scientific arm of the American Association of Clinical Endocrinologists (AACE), is dedicated to promoting the art and science of clinical endocrinology for the improvement of patient care and public health. Designed as an aid to patients, EmPower includes current information and opinions on subjects related to endocrine health. The information in this publication does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice may be appropriate.

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AACE is a professional medical organization with more than 6,000 members in the United States and 91 other countries. Founded in 1991, AACE is dedicated to the optimal care of patients with endocrine problems. AACE initiatives inform the public about endocrine disorders. AACE also conducts continuing education programs for clinical endocrinologists, physicians whose advanced, specialized training enables them to be experts in the care of endocrine diseases, such as diabetes, thyroid disorders, growth hormone deficiency, osteoporosis, cholesterol disorders, hypertension and obesity.

ACE is a scientific and charitable medical organization dedicated to promoting the art and science of clinical endocrinology for the improvement of patient care and public health.
Dear Reader,

Thank you for picking up this issue of EmPower Magazine, a publication from the American College of Endocrinology in conjunction with the American Association of Clinical Endocrinologists.

In this issue, you will read about cyclist Phil Southerland’s life with type 1 diabetes and the founding of Team Type 1, an initiative making an impact on people with diabetes through cycling, research and global outreach. Phil is using his diagnosis to change the landscape of cycling and diabetes in a global movement to educate people on the importance of proper management and control of the condition.

This edition also features articles on topics such as exploring ways to lower cholesterol, natural ways to lose weight, vitamin D intake, and weight gain or loss related to thyroid dysfunction.

We are also pleased to continue our partnership with the National Diabetes Education Program (NDEP) to provide special educational resources on diabetes management. In this issue, you will read about risks for developing type 2 diabetes and tips for helping to prevent the onset of this condition.

EmPower Magazine is just one of many initiatives created by the American College of Endocrinology as part of the EmPower program. Since 2003, the EmPower program has provided educational resources and tools for readers like you to live healthier lives. You can read past issues of the magazine and learn more about the program at EmpowerYourHealth.org.

We encourage you to read this issue and consider all aspects of your endocrine health. We hope that you learn something new and we always welcome your feedback! If you would like to share your story with us, simply send an e-mail to feedback@empoweryourhealth.org. We look forward to hearing from you!

Sincerely,

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It can be frustrating when someone says you can’t do something because you’re physically challenging. Often times this “can’t” spurs people to defy the odds and find a way to make it happen regardless. That was the case with Phil Southerland. At just seven months old, Phil was diagnosed with type 1 diabetes. The doctor told his mom that he probably wouldn’t live to the age of 25. But Phil had other plans for his life.

Growing up with diabetes can be a challenge for any child, but Phil learned to control his condition at a very young age, even managing his own treatment regimens. This included checking his
blood sugar multiple times a day, taking insulin and managing his diet, and especially exercising. He didn’t let diabetes stop him from doing things he loved to do, like riding his bike.

Phil’s family was always very health conscious, so he felt sheltered from the temptations of junk food during much of his childhood. But temptation got the better of Phil when he was 12, and he tried a candy bar. He immediately checked his blood sugar after eating the candy and saw that his levels were very high. Phil hadn’t been in this situation before, so he thought he’d go for a bike ride to see if exercise would help. After his ride, he checked his blood sugar again and it had decreased. Phil was impressed how the bike ride had impacted his blood sugar levels and helped his insulin work.

“I recognized how important exercise was for my diabetes management,” Phil says. “Exercise and diabetes really go hand-in-hand.”

That bike ride began a lifetime of cycling for Phil. He was an avid cyclist through college. After one event, another cyclist, Joe Eldridge, approached Phil after he noticed Phil testing his blood sugar. Joe also had type 1 diabetes and the two bonded over the role diabetes plays in their lives and sport. Consistency had always been an important part of Phil’s diabetes management. He tests his blood sugar before and after he rides to maintain control. Joe, however, struggled to keep his A1c under control. Seeing Joe’s inconsistent management of his condition was very distressing for Phil.

“I realized that my friend could die,” Phil remembers. “I knew that I had to intervene.”

So Phil decided to create a challenge; the person with the highest blood sugar would buy dinner. For several weeks, Phil was the clear winner. But the motivation was there. After three months, Joe was finally able to beat Phil in the blood sugar game, and ultimately Phil had to buy dinner. Over the next six months Joe’s A1c dropped from 11.0 to 6.4.

Phil and Joe remained friends through college. During his senior year, Phil was assigned to a class project to create a business. After raising $400, Phil and Joe started Team Type 1, a group designed by Phil and Joe to raise awareness of diabetes. Phil ordered Team Type 1 t-shirts and began selling them to raise money for diabetes awareness. He passed out business cards to spread the word about Team Type 1. Soon after, Phil and Joe participated in a race together and continued to spread the word of Team Type 1 and diabetes awareness. As more people began to hear about Team Type 1, the project took on a life of its own. Phil was defying the odds.

The next step: identify cyclists with type 1 diabetes and build a team. Phil and Joe recruited a team and the group participated in the 2005 Race Across America. Team Type 1 gained prominence for its mission and perseverance with diabetes.

Continued on page 4
The Team became very successful. They won the Race Across America event four times and hold the record for the fastest trans-continental crossing for the Race Across America. Phil’s vision has come to life and he’s embracing it. His passion for cycling and managing his diabetes has carried him through.

“Exercise is life,” Phil says.

Today, Team Type 1 has grown to become a multi-faceted athletic initiative, with seven programs and 70 athletes with type 1 diabetes who regularly race in events across the world. The Team continues to expand, adding new team members and striving toward the ultimate goal of reaching the sport’s grand stage, the Tour de France.

“Team Type 1 has become a global movement to show the world that anything is possible with good control,” Phil describes.

Phil and the Team are currently expanding the outreach of the program internationally. He frequently travels abroad to advocate for diabetes supply coverage and meet with key opinion leaders to raise awareness for diabetes control. Phil spends about 250 days a year traveling to promote diabetes management. He recently visited with leaders from the Macedonian government to promote coverage of supplies. Through Team Type 1’s efforts, the Republic of Macedonia is now providing four free test strips a day to diabetes patients in the country. This is far above what doctors anticipated from someone who was not expected to live to be 25.

“Our goal [with Team Type 1] is to get the world active,” explains Phil, now 29 years old.

When Phil’s not on the road advocating for governmental assistance in diabetes management, he’s traveling to races to cheer on the Team and watch them compete. Team Type 1 remains a successful enterprise that is growing in scope, reach and impact. Phil turned his death sentence into a drive to raise awareness about diabetes and the importance of management and control.

As if running a global sports organization wasn’t enough to keep him busy, Phil also wrote a memoir about his life with type 1 diabetes and Team Type 1 entitled Not Dead Yet. He hopes that his story will inspire others to push the boundaries.

“I think I have the best job in the world, to have the opportunity to ensure that my brothers and sisters with diabetes have the resources they need to manage their condition,” Phil reflects. “It’s a once in a lifetime opportunity.”

To learn more about Phil and Team Type 1 visit www.teamtype1.org.
You are a partner, a friend and a fighter.
And you have a chance to control your blood sugar for yourself and those who depend on you most. Reducing your blood sugar can help reduce the risk of diabetes complications such as blindness, kidney disease, nerve damage and other serious health problems.
If pills, diet and exercise aren’t enough, insulin is the most effective way to reduce your blood sugar. And today insulin comes in easy-to-use pens.

Important Safety Information About Insulin:
The most common side effect of insulin is low blood sugar. Some people may experience symptoms such as shaking, sweating, fast heartbeat, and blurred vision, while some experience no symptoms at all. That’s why it’s important to check your blood sugar often.

Talk to your doctor about whether insulin is right for you.
Learn more at UnderstandControl.com or call 1.866.766.6415.
Doctor: What about Supplements to Treat my High Cholesterol? I Like Natural!

Your doctor says that your cholesterol [ko-LESS-tuh-roll] or “lipids” are too high and need to come down. Although statins and other drugs are the backbone of lipid-lowering therapy, many people use “natural” treatments today for treating lipid problems. Some natural remedies are thought to have effects similar to statins. But there is much confusion about what can be tried!

Here is information about several popular “natural” treatments:

Garlic is a popular natural medicine that some have tried to treat high cholesterol. But, it is not clear how well garlic lowers cholesterol. Early studies that found a benefit were small and not of very good quality. More recent, larger, higher-quality studies show that garlic does not lower cholesterol much at all. A few studies suggest a small benefit but for only about six months. Also, because garlic interacts with some drugs, you should not take garlic supplements if you also take statins, oral contraceptives, blood thinners, or aspirin. In summary, you should not rely on garlic for controlling cholesterol or reducing your risk for heart attack.

Red yeast rice is popular as a natural choice for lowering cholesterol. These products are produced when red yeast acts on rice to make a chemical that lowers cholesterol. The chemical is a low-dose statin, so red yeast rice is really statin therapy at a low dose. Red yeast rice lowers cholesterol but also could share the same side effects as statins, such as muscle aches or liver problems. It is important to know that some products sold as red yeast rice do not contain the active statin ingredient and will not lower cholesterol. Red yeast rice products do not have consistent ingredients, so the amount of active drug may vary. Some trace elements in the supplement may also be harmful. Because of these reasons, red yeast rice should not be used to lower cholesterol.

Niacin is available usually in low doses (250 mg or less). Prescription niacin is used at much higher doses. Even at the higher doses (1000-2500 mg) the benefit of adding niacin when the cholesterol is well controlled with statin treatment is debated. Niacin may be good for some patients with high levels of triglycerides [try-GLIS-er-ides] and low levels of “good” cholesterol (HDL cholesterol) but there is no evidence that the low doses found in over-the-counter niacin offer any benefit. Some side effects include facial flushing, headache, itching, liver problems, and high blood sugar. “No Flush” niacin is more expensive and less effective and is not recommended. Your doctor will let you know whether prescription niacin is needed and how you can minimize facial flushing.

Plant sterols and stanols are found in several buttery spreads (Promise Activ, Smart Balance, Benecol), orange juice (Minute Maid Premium Heart Wise) and other products. They reduce the amount of cholesterol that the intestine absorbs. Using the spreads twice daily instead of butter or drinking two 8-ounce glasses of the juice that contains sterols can lower your “bad” cholesterol (LDL cholesterol) by up to 17%. If your doctor tells you that you need to lower your cholesterol, plant sterols and stanols can be useful. But, although plant stanols and sterols do lower LDL cholesterol, they probably do not reduce heart attacks or strokes.
Fish oil contains two “fatty acids,” EPA and DHA. These are also known as omega-3 fatty acids. Fish oil is very popular today. Some believe that it reduces the risk for heart disease. Taking 4-6 grams of fish oil can reduce triglycerides up to 50%. But, cholesterol does not decrease. The benefit of using EPA and DHA at 1-2 grams is less clear. The American Heart Association does recommend at least 1 gram of combined EPA and DHA daily by eating fish at least three times a week. Patients at risk for heart disease who do not eat fish three times a week should take 1 gram of EPA/DHA each day (in fish oil supplements). Taking fish oil, though, is not likely to lower the risk for heart attacks or strokes. Omega fish oil is available by prescription (Lovaza) at a high dose (840 mg EPA/DHA per capsule) only for treatment of very high triglycerides. Over-the-counter fish oil has much less EPA and DHA. So, many more capsules are needed per day to lower triglycerides. If you do take fish oil capsules, make sure that it has a United States Pharmacopeia (USP) seal. These are of higher quality and free of pesticides. Use caution if you take blood thinners or aspirin, because high-dose fish oil may increase your tendency to bleed. Keep an eye on bleeding or bruising more than normal.

Fibrous foods can help lower cholesterol. The fiber in whole grain foods (whole wheat, whole oats, corn, barley) may reduce the risk of heart disease by lowering cholesterol. Blond psyllium [SILL-i-um] and oat bran are high in fiber. Blond psyllium (10-12 grams/day) can reduce the “bad” cholesterol (LDL cholesterol) by 5% and oat bran in some patients can lower LDL cholesterol by up to 25%. The ability of fiber to lower cholesterol varies from patient to patient since it also depends on what else you are eating.

In summary, some “natural” methods of lowering cholesterol might have a role. Surely, increasing the fiber in your diet, using plant stanol or plant sterol spreads in place of butter and consuming fish three times a week is sensible and helpful for your health. But, there is no good evidence that garlic, low-dose niacin or low-dose fish oil improves cholesterol or prevents heart attacks. High-dose fish oil is helpful in lowering very high triglycerides (not cholesterol) but is not likely to reduce heart attacks or strokes. Even though it lowers cholesterol, red yeast rice is usually low-dose statin treatment in disguise with the potential for statin side effects. Red yeast rice products vary in what is in them and may even have things in them that could harm you. Some contain no active ingredient. If your doctor says your cholesterol is too high, a prescription statin drug is best, not red yeast rice.
any people fight a long battle against being overweight, from early adulthood, or pregnancy, or even starting in childhood. Sometimes people are surprised to see a pattern of weight gain begin to level off, or even reverse, such that weight control or weight loss may occur without any obvious additional effort on their part. If unexplained weight loss occurs, especially with a good appetite, it might be because of overactive thyroid, also called hyperthyroidism [hie-per-THIGH-roid-is-m] or thyrotoxicosis [thigh-ro-tox-i-KO-sis]. With hyperthyroidism, the body burns up extra food without using it for anything but for producing heat. People who may have been gaining weight before the onset of hyperthyroidism eventually begin to experience symptoms or problems that are less welcome than the loss of weight.

If your doctor diagnoses you with overactive thyroid, the first step is to learn whether it might be a temporary case, and whether it is mild. The next step is to talk with your doctor about what treatment is best. Sometimes it is best to wait it out to see whether the thyroid will return to normal on its own. The thyroid may even become underactive, after having been overactive.

However, untreated hyperthyroidism often will fail to resolve on its own. Thinning of the bones may occur if it is severe and untreated for a long time. Irregular heart rhythm, heart failure, or even death can result from a severely overactive thyroid. Sometimes people are treated with pills, especially for types of hyperthyroidism that are severe but possibly capable of future self-correction.
At other times, the treatment consists of swallowing a pill of radioactive [ray-dee-o-AK-tiv] iodine. However, radioactive iodine for overactive thyroid is one of the most common causes of underactive thyroid. Another option may be surgery.

For people who once had overactive thyroid (hyperthyroidism) and who also have been overweight, one of the most frustrating outcomes is the weight gain that may occur once the overactive thyroid has been treated. Weight gain after treatment of hyperthyroidism is related, in part, to whether there was already a tendency toward becoming overweight. It is also related to how much weight loss had occurred before treatment. Some people will entirely regain the amount of weight lost during hyperthyroidism after they are treated for overactive thyroid, and they might gain more than before the hyperthyroidism started.

When a person is recovering from hyperthyroidism, one of the special skills of the endocrinologist [en-doh-cri-NA-lo-jist] is to know when to start the patient on treatment for underactive thyroid (hypothyroidism [hie-po-THIGH-roid-is-m]). When the thyroid’s condition is changing rapidly, testing is interpreted differently than when thyroid status is stable. The risk of treating hypothyroidism too soon is that thyroid hormone replacement therapy could result in too much thyroid hormone. However, once it is known that hypothyroidism has occurred, then the patient usually requires lifelong treatment with thyroid hormone (levothyroxine [le-vo-thigh-ROX-een; [T4]). The risk of delaying treatment is that a person may gain more weight than otherwise might have occurred. Sometimes the amount of weight gain may approach or exceed 10 or 20 lbs.

What about other causes of hypothyroidism? There are temporary situations in which hypothyroidism may be mild and not require treatment. The most common cause of spontaneous permanent hypothyroidism is the gradual destruction of thyroid function by Hashimoto’s thyroiditis (from cells of the immune system that develop in the body that destroy the thyroid gland’s ability to function).

Weight gain from spontaneous, longstanding hypothyroidism may be very small compared to the weight gain sometimes seen after treatment of hyperthyroidism. Weight gain from spontaneous hypothyroidism may be 5-10 lbs. Weight gain in advanced severe hypothyroidism may contribute to obstructive sleep apnea (an inability to breathe leading to frequent awakening during sleep and daytime sleepiness). Some of the weight gain in severe cases of hypothyroidism is due to myxedema [mix-uh-DEE-muh] (excess fluid under the skin), which goes away during treatment.

Small differences in dose of thyroid hormone can make a big difference in whether your health will be the best it can be. A blood test called TSH (thyroid stimulating hormone) helps find the best thyroid dose. TSH reacts to blood levels of thyroid hormone like a thermostat. If thyroid levels are low, this test will show higher than normal levels of TSH. This test gives the right answer assuming the pituitary is working as it should. The amount of weight loss one can achieve having their severely underactive thyroid treated is modest at best.

If hypothyroidism was not present in the first place, then treatment with thyroid pills creates no advantage over allowing your thyroid to produce the needed amount of thyroid hormone.

Where does this leave the person who is being treated for underactive thyroid and still is having trouble achieving or maintaining ideal body weight, or the overweight person who is considering thyroid treatment but has been found to have normal thyroid function? Thyroid hormone should not be offered for weight loss if a person does not have a thyroid problem. Lifestyle changes may be needed to address unwanted weight gain or inability to lose weight. In other words, fewer calories and more physical activity – don’t cut corners!

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IS THIS YOU?
You’re doing everything right. You’ve decided to finally take control and to pay more attention to your diabetes. You’re checking your blood sugar often at home and at different times of the day. You’re paying close attention to your food choices and being careful on portion sizes. In fact, you’ve been doing so well you can’t wait to see your doctor to prove that your efforts have paid off!

Your glucose levels are way down but, when you do see your doctor, you’re surprised (and a little shocked) to discover that your average control is not as good as you thought it was. Your doctor checked your hemoglobin A1c and is concerned that your average blood sugar may be running too high (or too low). How can that be? Your blood sugars at home have been on target for the last several months. You and your doctor confirm your glucose meter is working properly.

What can be a possible explanation for this? It’s time to learn about some markers of blood sugar control!

HEMOGLOBIN A1C
When sugar (glucose) is higher than it should be in blood, it attaches to proteins in the body. This is used as a marker or indicator of blood sugar control.

HERE’S HOW IT WORKS:
Many different types of cells are found in blood, among them are the red blood cells. They are named “red” blood cells because they contain a protein named hemoglobin [HEE-mo-glo-bin], which gives them the color red. Hemoglobin is the protein responsible for getting oxygen to the body’s tissues.

Because glucose/sugar can easily enter the red blood cells, when blood sugar levels increase, sugar molecules enter the red blood cells and attach to hemoglobin. The higher your blood sugar, the more sugar will enter the red blood cells and will attach to the hemoglobin. Glucose attaches to hemoglobin (also called glycated [gly-kay-ted] hemoglobin).

Measuring A1c allows providers to help patients evaluate their blood sugar levels so that problems related to chronic hyperglycemia [hie-per-gly-seem-ee-ah] can be prevented.

Red blood cells live for about 120 days. So, an A1c level reflects the average blood sugar in the last 120 days, but it more closely reflects levels of the last 60 to 90 days.

The A1c value is affected by how long red blood cells have been in the body. Some conditions can result in either a lot of older red blood cells or too many young red blood cells in the body. This can affect the accuracy of the test.

Scenario 1: If red blood cells are old, they’ll be exposed to serum glucose for a longer period of time. This will allow more glucose attachment to hemoglobin, possibly increasing the A1c level. This will make it seem like your average blood sugar level is higher than it really is. It is more likely that you are deficient in iron, folate and/or vitamin B12.

When red blood cells are old and A1c values show blood sugar levels to be higher than reality, insulin regimens can be mistakenly increased. This can cause hypoglycemia. Treatments that are actually working might be readjusted by mistake, and become less effective.

Scenario 2: Other conditions shorten the life span of red blood cells. The body will then produce many young red blood cells, which might lower your A1c level. The A1c level will be low because the red blood cells won’t have been in the body long enough to have glucose attached to them. This will make it seem like your average blood sugar level is lower (better) than it really is. The more common conditions that cause this to happen are hemolytic [hee-mo-LIT-ic] anemia, sickle cell anemia, and sickle cell trait.

When red blood cells are up and A1c levels are showing that average blood sugar levels are lower
than reality, your doctor may wrongly assume that your blood sugar control is great. This could lead to lack of control of your A1c levels, which may cause health problems down the road.

People with chronic kidney disease can have falsely low or falsely high A1c values, making them tough for the doctor to interpret.

A1c is a valuable tool in medical practice and a good indicator of glycemic control that works for most people. However, one should be careful when home blood sugar levels are different from the average glucose value obtained by your doctor measuring A1c.

Other factors that can also affect A1c values are:

- How A1c is measured, and abnormal hemoglobins.

- Racial variation: African Americans, Hispanics, and Asians may have naturally higher A1c than whites.

- Medications. Common ones include:

  1) Erythropoietin [eh-RITH-ro-POH-eh-tin] (this drug causes red blood cells to be created).

  2) Iron, folate, vitamin B12 treatment. Correcting low levels of any of these will make A1c levels change.

- The National Glycohemoglobin [gly-ko-HEE-moh-glo-bin] Standardization Program (NGSP) website (www.ngsp.org) contains information about substances that interfere with A1c test results.

If you think your blood sugar is better controlled than what your A1c says, you should discuss this with your doctor. The A1c test may not be the right test for you. By reviewing your medical history, medications, etc., your doctor should be able to determine if it is the right test or not. Luckily, there are other good tests. Some of the more commonly used ones are fructosamine [fruk-toh-SAN-uh-meen] and 1,5 AG (Glycomark). No test is perfect, but by talking about your options with your doctor, you should be able to find one that works best for you!

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When children with type 1 diabetes experience the everyday fun and freedom of camp with others just like them, something incredible happens. Diabetes isn’t the focus of their day. Lilly Diabetes believes that every child should have the opportunity to go to camp, and that’s why we’ve provided insulin and a variety of carefully designed resources to diabetes summer camps for more than 10 years. We help camps care for your child’s unique, personal needs so your child can focus on what’s most important – having a summer to remember.

LillyDiabetes.com
To register for a camp near you, visit www.diabetescamps.org.
DIABETES: Are You At Risk?

Are you at risk for type 2 diabetes and don’t know it?

Did you know that some racial and ethnic groups have a greater chance of getting type 2 diabetes? If you are African American, Hispanic/Latino, American Indian, Alaska Native, Asian American, or Pacific Islander, you are more likely to get type 2 diabetes.

Other things that can increase your chances for type 2 diabetes include:

- Having a close family member with diabetes – such as a mother, father, sister, or brother
- Being overweight or obese
- Not being physically active or rarely doing any physical activity
- Being diagnosed with diabetes while you were pregnant
- Being over the age of 45.

Diabetes can cause many health problems when it’s not treated. It can lead to heart disease, blindness, kidney disease, stroke, loss of arms and legs, and even death.

Many people don’t get treatment because they don’t even know they have it. Often there are no symptoms. Ask your doctor if you should be tested for type 2 diabetes. If it’s caught early, you can get treatment to prevent or delay these health problems.

What can you do?

PREVENT TYPE 2 DIABETES

The good news is that there are small steps you can take right now to lower your chances of getting type 2 diabetes.


You can prevent or delay type 2 diabetes by losing a small amount of weight if overweight or obese. Aim to lose 5% to 7% of your current weight – that’s 10 to 14 pounds for a 200-pound person. Here are ways to do this:

- Make healthy food choices every day. Choose healthy foods and snacks for the whole family. Good foods include fresh fruit and vegetables, lean sources of protein such as fish, lean meats, chicken or turkey without the skin, dry beans and peas, low or fat-free milk and cheese products, and whole-grain breads and cereals.
- Choose water to drink and eat smaller portions.
- Be active at least 30 minutes, 5 days a week. Walk briskly, dance, or play with your children.

The Just One Step tool [YourDiabetesInfo.org/JustOneStep] from the National Diabetes Education Program (NDEP) can help you make these changes.

Just One Step can help you create a simple plan and stick to it. Think about what matters to you and your health. Think about the changes that you can make. Keep learning and trying. You can take small steps to improve your health.

LEARN MORE

NDEP has many other free resources – including videos – to help you learn about diabetes and take steps to better health. Call 1-888-693-NDEP (1-888-693-6337), TTY: 1-866-569-1162, or visit www.YourDiabetesInfo.org for more information on preventing type 2 diabetes. Ask for Your GAME PLAN to Prevent Type 2 Diabetes, a tip sheet called It’s Never Too Early to Prevent Diabetes, and a tip sheet for children at risk called Lower Your Risk for Type 2 Diabetes, in English or Spanish.

You are the key to your diabetes care. Unlock the door to your future good health.

The U.S. Department of Health and Human Services’ National Diabetes Education Program is jointly sponsored by the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC) with the support of more than 200 partner organizations.
Osteoporosis in African American Women

BY JUANITA A. ARCHER, MD AND THERESA FYNN, MD

In osteoporosis [ah-stee-oh-pore-OH-sis] the volume of bone is low and the bone structure is deteriorating. Bones become so fragile that the hips and the spine are unable to support the body in an upright position. People with osteoporosis can easily experience a broken spine, hips, ankles, wrists, other bones, and even lose their teeth, along with gum disease. In the past, when African Americans had extensive exposure to the sun and did heavy weight-lifting jobs, osteoporosis and low bone volume were rare in that group of people. But today in the United States, osteoporosis is an epidemic that occurs in children, teens, adults, and the elderly in all cultural groups. It is the most common and costly bone disease. More than 44 million Americans have the disease and it costs the health system more than $19 billion every year, excluding dental care. Yet the number of people with osteoporosis and dollars spent per year on this problem are probably higher because so many people go undiagnosed.

A high number of African Americans are not diagnosed or treated for osteoporosis because of the false belief that African Americans do not get osteoporosis. Since three out of four people with osteoporosis and low bone volume are women, the failure to diagnose and treat osteoporosis in African Americans is largely a failure to recognize, diagnose and treat African American women. Although the data are not complete, it is estimated that more than 40% of African American women have osteoporosis, low bone volume, and are at risk for fractures.

More American women die each year from hip fractures than from heart disease, stroke, breast cancer, uterine cancer, or ovarian cancer. After having a hip fracture due to osteoporosis, African American women remain sicker longer and die earlier than any other cultural group. The reasons for this remain unclear. Studies show that African American women and white women have some of the same risk factors for osteoporosis. These include
older age, postmenopausal status, prior history of broken bones and osteoporosis in immediate relatives. Risk factors common in whites include small bone size, cigarette smoking, and use of glucocorticoids (medicines used to treat asthma and inflammatory diseases). White women have smaller bone size than African American women; however, African American women also lose bone mass after age 30. This loss is accelerated after menopause.

Doctors can figure out a patient’s chance of having a hip fracture within 10 years with two tests. A bone density (BMD) scan is combined with a “Frax score,” which the doctor obtains from a simple questionnaire. African American women are not offered BMD scans and this questionnaire as often as white women. And often they are not even diagnosed with osteoporosis after being treated for broken bones! Also, for people without health insurance, the local emergency care center is often where treatment is obtained. Doctors have little time and/or not enough staff to educate the patient about their disease. For many women, lack of regular health care adds to delays and lack of attention for diagnosing osteoporosis. This lack of care may add to the reasons why the African American woman has more chance of complications and medical problems in recovering from a hip fracture.

To build bones and keep them strong, a person needs enough calcium, vitamin D and weight-bearing exercise throughout life. From childhood to the mid thirties, when bones are being built, women need at least 1000 IU of vitamin D and 1000-1200 mg of calcium daily (more during pregnancy). There are several reasons why African American women may not get these. African American women and children have low levels of vitamin D and low rates of calcium intake. Although vitamin D can be made in the skin when humans are exposed to sunlight, African Americans have dark pigment, which lessens the body’s ability to produce vitamin D in the skin. Also, the high rate of obesity in African American women may play a role in keeping vitamin D levels low and enhancing osteoporosis. That’s because obesity reduces the body’s ability to use vitamin D and limits a person’s ability to do weight-bearing exercise. Calcium intake may also be limited because the diet may have low calcium content. Starting in childhood, many African Americans have a milk product intolerance. So, during the years when they should be building their peak bone mass, they avoid milk products, which are usually the foods that are highest in calcium.

Current preferred first-line treatments for osteoporosis are bisphosphonates, drugs that prevent the bones from being thinned. However, in the United States, these drugs are not prescribed as often for African American women and, if prescribed, they may not be affordable.

In summary, osteoporosis can be prevented. In the African American woman, osteoporosis is a dangerous disease. When fractures do occur, African American women can have more medical complications and even higher risk of death, during recovery. If you are an African American woman, make sure to take charge of your health, learn what foods contain the calcium you need and learn what supplements you should take to meet calcium and vitamin D daily intake goals. Ask your doctor about what exercise is best to keep your bones as healthy as they could be and whether your bone density should be checked and how best to do that. If you have had a fracture, discuss with your doctor where you could get your bone density checked. If prescription medication is needed and your health insurance coverage is limited, ask about generic options and patient assistance options. Take your medication consistently!

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Calcium is both a mineral and a nutrient. It is important for healthy bone. Calcium is stored mostly in the skeleton. However, calcium is important for many body functions. Calcium is found in muscle, the lining of blood vessels, and body fluids. Calcium is important for bone strength, muscle action, and to allow blood vessels to contract and relax. More than 99% of the body’s calcium is found in bone, where it is stored until the body needs it.

SOURCES OF CALCIUM

Certain foods have calcium (see table 1) as do calcium supplements. Dairy products such as milk, yogurt, and cheese are rich sources of calcium and provide most of the dietary calcium consumed in the United States. Vegetables have small amounts of calcium, and all other foods have very little calcium, except fortified juices and cereals.

About 43% of adults and 70% of older women in the US take calcium. There is no one ‘best’ calcium supplement. The two most commonly used calcium supplements are calcium carbonate and calcium citrate. Calcium carbonate has more active calcium; 40% compared to 21% for calcium citrate. Thus, you can take fewer calcium pills if you take calcium carbonate. This may make it easier for you to take your pills and may also make it less expensive. Calcium carbonate comes in a more readily available chewable form; however, calcium citrate chews are also available. Constipation and bloating are more common with calcium carbonate than with calcium citrate. People with a history of calcium-containing kidney stones should ask their doctor how to take calcium safely.
GUT ABSORPTION OF CALCIUM

Not all of the calcium you take is available to the body to use. Things that affect how the intestines absorb calcium include the amount of calcium taken at any one time, the amount of vitamin D in the body, the health of the cells in the gut, and aging. Unlike calcium citrate, calcium carbonate needs stomach acid or acid food to help dissolve the tablet in the stomach so that the gut can absorb it. So to get the most benefit from the calcium carbonate pill you are taking, take it with your meals!

Vitamin D is needed for the body to absorb calcium. On average, you absorb about 25% of the calcium you consume (but only 10% when vitamin D levels in the body are low, and up to 30% when vitamin D levels are normal). Calcium is better absorbed at higher doses, but about the most that the body can absorb at

Continued on page 18

TABLE 1: Calcium content of common foods, in milligrams (mg) of elemental calcium

<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>SERVING SIZE</th>
<th>MG CALCIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk (low-fat, 2%, whole)</td>
<td>1 cup</td>
<td>300</td>
</tr>
<tr>
<td>Milk (dry powder, non-fat)</td>
<td>1/3 cup</td>
<td>280</td>
</tr>
<tr>
<td>Milk (soy)</td>
<td>1 cup</td>
<td>370</td>
</tr>
<tr>
<td>Milk (rice)</td>
<td>1 cup</td>
<td>285</td>
</tr>
<tr>
<td>Yogurt (plain, low-fat)</td>
<td>6 ounces</td>
<td>310</td>
</tr>
<tr>
<td>Yogurt (with fruit, low-fat)</td>
<td>6 ounces</td>
<td>225</td>
</tr>
<tr>
<td>Yogurt (frozen, non-fat or low-fat)</td>
<td>1/2 cup</td>
<td>100</td>
</tr>
<tr>
<td>Cheese, American</td>
<td>1 ounce</td>
<td>125</td>
</tr>
<tr>
<td>Cheese, Mozzarella (part skim milk)</td>
<td>1 ounce</td>
<td>180</td>
</tr>
<tr>
<td>Cheese, Cheddar</td>
<td>1 ounce</td>
<td>200</td>
</tr>
<tr>
<td>Cheese, Swiss</td>
<td>1 ounce</td>
<td>270</td>
</tr>
<tr>
<td>Cottage Cheese (low-fat or 2%)</td>
<td>1 cup</td>
<td>200</td>
</tr>
<tr>
<td>Pudding (prepared with skim milk)</td>
<td>1/2 cup</td>
<td>150</td>
</tr>
<tr>
<td>Ice cream (non-fat)</td>
<td>1/2 cup</td>
<td>90</td>
</tr>
<tr>
<td>Ice cream (low-fat)</td>
<td>1/2 cup</td>
<td>120</td>
</tr>
<tr>
<td>Ice cream (10% fat)</td>
<td>1/2 cup</td>
<td>150</td>
</tr>
<tr>
<td>Orange</td>
<td>1 medium</td>
<td>60</td>
</tr>
<tr>
<td>Orange Juice (calcium fortified)</td>
<td>1/2 cup</td>
<td>250</td>
</tr>
<tr>
<td>Beans (kidney)</td>
<td>1/2 cup</td>
<td>25</td>
</tr>
<tr>
<td>Beans (navy, garbanzo, great northern, white)</td>
<td>1/2 cup</td>
<td>60-80</td>
</tr>
<tr>
<td>Tofu (soybean curd with added calcium)</td>
<td>1/2 cup</td>
<td>260</td>
</tr>
<tr>
<td>Tomato soup (made with milk)</td>
<td>1/2 cup</td>
<td>160</td>
</tr>
<tr>
<td>Macaroni with cheese</td>
<td>1 cup</td>
<td>200</td>
</tr>
<tr>
<td>Pizza with cheese</td>
<td>1/6 of a 12-in pizza</td>
<td>220</td>
</tr>
<tr>
<td>Salmon (canned, with bones)</td>
<td>3 ounces</td>
<td>180</td>
</tr>
<tr>
<td>Sardines (canned, with bones)</td>
<td>4 sardines</td>
<td>180</td>
</tr>
</tbody>
</table>
any one time is about 500-600 milligrams of elemental calcium. Taking more than that in one dose may lead to kidney stones. So, try to get most of your calcium through food sources. If you are using calcium supplements, divide your intake into two or more doses during the day with meals (for calcium carbonate or citrate) or between meals (for calcium citrate only).

**DOING OF CALCIUM INTAKE**

The recommended daily allowance (RDA) of a nutrient is how much is estimated to maintain a healthy diet. In 2011 the Institute of Medicine (IOM) published an RDA for calcium and vitamin D for all age groups (see table 2). The RDA for calcium goes up during certain periods in life—during the teenage years, during pregnancy and lactation, and as we grow older.

Patients with bone loss (osteopenia [os-tee-oh-PEEN-nee-uh] or osteoporosis [os-tee-oh-puh-ROH-sis]) and people with diseases that affect the gut may need higher doses of calcium and/or vitamin D. Calcium should be used cautiously in people who have conditions that cause too much calcium in the blood, such as parathyroid [para-THIGH-roid] gland disorders. In general, calcium intake should follow IOM guidelines (table). Talk to your doctor if you think you should take more or less than stated in IOM guidelines.

### TABLE 2: Institutes of Medicine RDA for Calcium and Vitamin D

<table>
<thead>
<tr>
<th>Life Stage Group (age and gender)</th>
<th>CALCIUM</th>
<th>VITAMIN D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RDA (mg/d)</td>
<td>Upper Limit (UL) (mg/d)</td>
</tr>
<tr>
<td>0-6 mo (M+F)</td>
<td>200&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>6-12 mo (M+F)</td>
<td>260&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1500&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>1-3 yr (M+F)</td>
<td>700</td>
<td>2500</td>
</tr>
<tr>
<td>4-8 yr (M+F)</td>
<td>1000</td>
<td>2500</td>
</tr>
<tr>
<td>9-13 yr (M+F)</td>
<td>1300</td>
<td>3000</td>
</tr>
<tr>
<td>14-18 yr (M+F)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1300</td>
<td>3000</td>
</tr>
<tr>
<td>19-30 yr (M+F)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1000</td>
<td>2500</td>
</tr>
<tr>
<td>31-50 yr (M+F)</td>
<td>1000</td>
<td>2500</td>
</tr>
<tr>
<td>51-70 yr (M)</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>51-70 yr (F)</td>
<td>1200</td>
<td>2000</td>
</tr>
<tr>
<td>71+ yr (M+F)</td>
<td>1200</td>
<td>2000</td>
</tr>
</tbody>
</table>

<sup>a</sup> RDA = intake that covers needs of 97.5% of the healthy normal population.

<sup>b</sup> Reflects Adequate Intake (AI) reference value rather than RDA. RDAs have not been established for infants due to insufficient data.

<sup>c</sup> Calcium and vitamin D RDAs are the same for pregnant or lactating females in these age groups.

**BENEFIT AND SAFETY OF CALCIUM INTAKE**

The body needs calcium for skeletal growth and repair. Bone is an active tissue, and calcium is lost from the skeleton when bone formation cannot keep up with bone loss. This is especially true after menopause in women, and in older men. Adequate calcium intake may help reduce fractures by 10%. The benefit of calcium and vitamin D on bone health is much higher in persons with low vitamin D levels. There may be a protective effect of calcium and vitamin D against breast and prostate cancer, and the supplements may help reduce the risk for colon cancer. However, there isn’t enough evidence to show a true benefit of calcium and vitamin D on reducing or raising the risk of any cancer.

Although recent summaries of calcium and vitamin D studies suggest a possible link between calcium and vitamin D supplements and cardiovascular (CVD), the IOM review could not find evidence that calcium and vitamin D caused any CVD events. Until we learn more, take enough calcium to meet RDA requirements while avoiding taking too much. Be sure that the total amount of calcium from food and supplements does not exceed the RDA requirements.
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Who does not want to shed some pounds? But, it’s so difficult! It’s not rare to hear the question as to whether “something out there” could help with the weight loss. People want something “natural.” Often this means not using prescription pills or having surgery. Let me share with you the advice I share with those who come to see me.

First, if you are overweight or obese, you will have to make some changes. To lose fat weight, you have to eat fewer calories, or burn more calories, or both. And you have to sustain this over time, which is the hard part. No matter what else you do, you always have to return to this basic rule.

Weight loss can be supported in many ways. Appetite can be suppressed, more calories can be burned by stimulating metabolism, or digestion can be inhibited to decrease how many calories are absorbed by the body. All of these methods also can be combined.

So, what is out there to consider using? Well, there are many claims but much less science to support that any of these really do what they are “advertised” to do. You are your own experiment. Be careful in your choices because you do not want the risks of a supplement to outweigh any benefits. And, watch the cost! These can be expensive and hurt your personal finances.

Here are some of the products you may find in your quest for “natural” weight-loss treatments.

APPETITE SUPPRESSANTS
Anti-depressant medications that increase a substance
called serotonin [ser-o-TONE-in] in the brain can sometimes cause weight loss. St. John’s Wort and 5-HTP work the same way. 5-HTP decreases carb (sugar and starch) intake, causes early fullness, and helps weight loss in the short term. The same holds true for St. John’s Wort. However, we only have people’s reports of the effectiveness of those two agents. There is no evidence of long-term benefit in managing obesity with those agents.

Hoodia grows in the Kalahari Desert. The San Bushmen eat Hoodia to keep hunger away during long hunts. The precise way that Hoodia works is not known, but like 5-HTP and St. John’s wort, it helps make you feel full sooner. Here’s what I tell my patients: if they walk as much as a San Bushman does when he is hunting, then Hoodia will probably help the weight-loss process!

THERMOGENIC (CALORIE-BURNING) AGENTS

Wouldn’t it be nice if you could increase your metabolism [meh-TAB-o-liz-um] so you could burn more calories without having to be more physically active? That is what thermogenic agents are supposed to do. These are known as “fat-burning” agents. Have you heard of an “adrenaline [uh-DREN-uh-lin] rush”? This is what you get when you have to fight or run away. Adrenaline is a hormone and it gets your metabolism going. When you have an “adrenaline rush” your heart beats faster, you get shaky, you are more alert, and you release energy from your body stores. An “adrenaline rush” causes a thermogenic effect – it increases your body heat. Adrenaline is also called epinephrine [eh-pi-NEPH-rin]. Norepinephrine [NOR-eh-pi-NEPH-rin], which is like epinephrine, decreases appetite.

Ephedrine [eh-FEH-drin] is a thermogenic agent. It is often combined with caffeine. Ephedrine decreases the breakdown of norepinephrine at the nerve endings. Neither ephedrine nor caffeine alone does much to help weight loss. However, when combined, ephedrine and caffeine do cause weight loss.

Ephedra [eh-FEH-druh], also known as ma huang [ma hwong], was often used in the past to help people with weight loss. The ephedra plant naturally contains ephedrine, pseudoephedrine [soo-doh-eh-FEH-drin], and phenylpropanolamine [fen-ul-pro-puh-NA-la-meen], which are sold as medications. Ephedra is no longer a good option. In 2004, the US Food and Drug Administration (FDA) banned ephedra products because they were linked with serious or fatal side effects. Unfortunately, ephedra products are still around in the black market.

With ephedra gone, bitter orange is now popular. Bitter orange contains 1% to 6% synephrine [suh-NEF-reen]. Synephrine may cause weight loss because it is similar in its effects to ephedra. This means that bitter orange has the same potential for harm as ephedra. In fact, bitter orange supplements have been linked to stroke and heart damage, cardiac arrest, loss of consciousness, chest pain, and death.

Thermogenic products have chemicals that may seriously affect your health. If you have hypertension or known heart disease, stay away from them. Otherwise, make sure you are under the care of a doctor who may monitor your blood pressure and heart health.

One last word on thermogenic agents: caffeine sources include not just coffee, but also guarana [gwa-ra-NAH], cola nut, maté, and tea extract. Claims that these natural products cause significant weight loss are untrue. The very best way of increasing fat burning (thermogenesis) is to become more physically active on a regular basis.

DIGESTION INHIBITORS

Foods that contain fiber stretch the stomach and get digestion started. This causes fullness and may also cause the gut to absorb less of food. Psyllium [SILL-i-um]
seeds, barley, and guar gum are some examples of natural products tried for weight loss. High-fiber foods decrease fat being absorbed by binding fats within the gut. Upping fiber intake lowers serum cholesterol [ko-LESS-tuh-roll] and triglyceride [try-GLIS-er-ide] levels. The effects on weight loss, however, vary.

The flip side of digestion inhibitors is that they may keep your prescription medications from being properly absorbed. If you use digestion inhibitors, be sure to take your medications one hour before or two hours after taking the high-fiber product.

OTHER AGENTS THAT MAY AID WEIGHT LOSS
There are several other natural products that are marketed for weight loss. These include:

- Glucomannan [goo-ko-MAN-nen], which is extracted from the konjac [KOHN-yak] plant.
- Guggul [GOO-gul], which produces a gummy resin that is used in supplements.
- Inulin, which is a sugar that comes from chicory.
- Conjugated linoleic [lin-oh-LAY-ik] acid, which is found mainly in dairy products and beef.
- Calcium in foods, because adults and children with low calcium intake are more likely to gain weight, have a higher body mass index (BMI), and be overweight or obese, compared with people with higher calcium intake.
- 7-keto-DHEA, which comes from the hormone DHEA and may boost basal metabolism and thermogenesis. As opposed to DHEA, 7-keto-DHEA is not converted to sex hormones, so it may be safer in this form.
- Garcinia [gar-SIN-ee-uh] fruit and rind extracts, which contain up to 50% hydroxycitric [hy-drox-ee-SIH-trik] acid.
- Chromium, which is an element found in nature that people use for high cholesterol, diabetes, and obesity.
- Pyruvate [pie-ROO-vate], which taken in large amounts (22-44 grams) instead of carbs, may cause weight loss. The problem here is that pyruvate causes significant side effects in the gut, including diarrhea, bloating, and flatulence.
- “African mango” or “bush mango,” which is a tree from Africa that produces a mango-like fruit. The seeds have high fiber content and function as a bulk-forming laxative.

MAKE IT COUNT!
When it comes to supplements, there is a lot of marketing, but little science. Here is the most natural way of losing weight that I know of, and what I tell my patients to do. There is actual science behind these recommendations. Counting is the key and these tips are brought to you courtesy of the numbers “2” and “10.”

- “2”: Every hour on the hour during the waking hours of the day, get up and walk away for a minute. Then walk right back to what you were doing. These two minute walks add up to a 30-minute walk at the end of the day. When you are home at night, turn the TV on. At the beginning of every commercial break get up, and go up and down two flights of stairs. If you have the TV on two hours every night, then every night you will climb a 40-story tall building!
- “10”: Aim for 10 servings of fresh fruits or vegetables every day. One serving is the size of a measuring cup. Eat two servings with breakfast, lunch, and supper. And eat one serving mid-morning, mid-afternoon and in the evening. You choose when to have the last serving. Increasing the amount of fresh fruits and vegetables in the meal plan does indeed help you lose weight! Just make sure these are fruits that have high fiber such as berries, apples, or cantaloupe, and if you have diabetes or prediabetes, check with your doctor to see what fruits and vegetables to avoid.

These recommendations help establish the building blocks to good health, which are healthy eating and physical activity.
Around the world, breads and grain products are a staple in the diet of many cultures. Breads and grains have been adapted regionally, taking into account ethnic, racial, cultural, and religious beliefs. The form, texture, and taste of grains and breads vary based on the diversity of the culture and where it is prepared.

Barley, rye, and oats can be used alone or mixed with wheat flour. Depending on the region and culture of the area, potatoes, squash, pumpkin, lentils, beans, corn, and/or rice may be prepared as a grist (meal) and used instead of flour. The cooking methods can include baking, frying, grilling, and steaming. In addition, breads and grains can be eaten hot or cold.

Breads and grains that are from around the world can add variety to your meals. Many are good sources of fiber, too. Any additional ingredients such as toppings, sauces, herbs, spices, sweeteners, fruits, vegetables, meats, fats, oil or additional condiments, may add calories to the grain or bread product.

How do you include new kinds of breads and grains into your meal plan?

Many different breads and grains can be found in the meal-planning guide Choose Your Foods – Exchange Lists for Meal Planning. A carbohydrate (carb) choice is a unit of measurement that helps to determine the amount of carbs you are eating. One carb choice equals 15 grams of carbs. For example, one carb choice of rice equals 1/3 cup brown rice. If you eat 1 cup of brown rice, the total amount of carbs is 45 grams. Many different breads and grains are listed below.

You can also look on the food label or bulk bin for the nutrition fact panel to discover how many carbs are in the new bread or grain. Find the amount of Total Carbohydrates listed in grams. Also, look for the serving size. Remember, the portion you eat may be larger than the portion listed on the nutrition label. Measuring your portions of starchy foods every so often can help you to find out “how much” of carbs you are actually eating.

**FOOD ITEM** | **SERVING**
---|---
Chapatti, 6-inch Diameter | 1
Naan, 8 x 2 inch | 1/4
Bulgur (cooked) | 1/2 cup
Pita, 6-inch diameter | 1/2
Couscous | 1/3 cup
Grits (cooked) | 1/2 cup
Kasha | 1/2 cup
Millet (cooked) | 1/3 cup
Muesli | 1/4 cup
Polenta (cooked) | 1/3 cup
Quinoa (cooked) | 1/3 cup
Tabbouleh/Tabouli (prepared) | 1/2 cup
Cassava | 1/3 cup
Matzoh | 3/4 oz.
Tortilla (corn or flour), 6-inch diameter | 1
Plantain | 1/2 cup
Flatbread, 1-oz serving | 1

The following are examples of one (1) carb choice of starch from various cultural/ethnic foods:

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The American Association of Clinical Endocrinologists (AACE) has been hard at work developing new guidelines for a variety of conditions. These include lipid disorders, such as high cholesterol, and menopause. Here are some highlights from the guidelines and what you need to know.

- **CLINICAL PRACTICE GUIDELINES FOR THE DIAGNOSIS AND TREATMENT OF MENOPAUSE**

In December 2011, AACE issued new Medical Guidelines for Clinical Practice for the Diagnosis and Treatment of Menopause. Approximately 35 million women in the US are over 50 years of age, and a large majority will experience symptoms of estrogen deficiency which impact their quality of life. The AACE Menopause Guidelines provide the most current, evidence-based recommendations for the use of hormone replacement therapy to relieve menopausal symptoms such as hot flashes, sweating and insomnia. AACE’s Menopause Guidelines are consistent with FDA recommended indications, which support hormone replacement therapy for the treatment of moderate to severe menopausal symptoms.

- **CLINICAL PRACTICE GUIDELINES FOR THE MANAGEMENT OF LIPID CONDITIONS**

In March 2012, AACE issued new Guidelines for the Management of Dyslipidemia and Prevention of Atherosclerosis. Dyslipidemia (high cholesterol) and atherosclerosis (hardening of the arteries) are both conditions that can be complications of diabetes, obesity and other metabolic conditions. The new guidelines include expanded sections on dyslipidemia in diabetes, lipid disorders in women, dyslipidemia in children and recommendations for medical nutrition therapy and physical activity.

For more information about these guidelines, visit www.aace.com. Stay tuned!

**BEYOND THE MAGAZINE: EMPOWER ONLINE**

If you enjoy reading EmPower Magazine, be sure to check out EmPowerYourHealth.org, the one-stop-shop online for endocrine-related information and resources. EmPowerYourHealth.org provides in-depth information about endocrine conditions and how to manage them. You can download copies of the magazine and informational videos, as well as link to other EmPower programs. You can also share your story with us through the website at EmPowerYourHealth.org/share-your-story. We look forward to hearing from you!
The following are examples of one (1) carb choice and are also very good sources of fiber and plant-based protein:

<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>SERVING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans, cooked (black, butter, garbanzo, chick peas, kidney, lima, navy, pinto, white)</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Lentils, cooked (brown, green and yellow)</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Dahl (all varieties)</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Hummus (no added fat)</td>
<td>1/3 cup</td>
</tr>
<tr>
<td>Miso</td>
<td>3 Tbsp</td>
</tr>
<tr>
<td>Peas, cooked (black-eyed, split)</td>
<td>1/2 cup</td>
</tr>
</tbody>
</table>

The following are examples of bread and starchy foods that equal one (1) carb choice, as well as some additional fat:

<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>SERVING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frybread, (~10-inch diameter x 1/4-inch thick, plain)</td>
<td>1/6 piece</td>
</tr>
<tr>
<td>Chow mein noodles</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Cornbread, ~2-inch cube</td>
<td>1</td>
</tr>
</tbody>
</table>

Most people need at least six servings every day. Younger and more active people may need 9-11 servings. Give some thought to what you add to or put on these foods if you are concerned about the amount of calories and/or fat in your diet.

The following is an example of what happens to calories by the addition of jam, and then jam and butter to more typical frybread serving of the whole piece:

<table>
<thead>
<tr>
<th>FOOD ITEM</th>
<th>SERVING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frybread, (~10-inch diameter x 1/4-inch thick, plain)</td>
<td>3 Tablespoons, Jam 360 calories</td>
</tr>
<tr>
<td>Jam:</td>
<td>3 Tablespoons</td>
</tr>
<tr>
<td>Entire Piece (90 grams carbs)</td>
<td>(45 grams carbs)</td>
</tr>
<tr>
<td>360 calories</td>
<td>180 calories</td>
</tr>
<tr>
<td>Total:</td>
<td>540 calories</td>
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</tr>
<tr>
<td>360 calories</td>
<td>180 calories</td>
</tr>
<tr>
<td>Butter:</td>
<td>1 Tablespoon</td>
</tr>
<tr>
<td>Entire Piece (15 grams fat)</td>
<td>(15 grams fat)</td>
</tr>
<tr>
<td>135 calories</td>
<td>135 calories</td>
</tr>
<tr>
<td>Total:</td>
<td>675 calories</td>
</tr>
</tbody>
</table>

Resources: USDA National Nutrient Database for Standard Reference, Release 21 • American Diabetes Association • American Dietetic Association

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**LETTERS FROM READERS**

**Question:** I have a thyroid condition and I heard that there’s a new campaign with a ribbon to promote thyroid awareness. Can you provide more information?

**Answer:** Certainly! In January 2012, we launched a new campaign to promote thyroid awareness, which features a uniquely-patterned blue paisley ribbon. Many people have called and written us to learn more about how to order the blue paisley ribbon lapel pins for thyroid awareness. Even though January is Thyroid Awareness Month, we recognize the need to promote the thyroid awareness message year-round. And we’re pleased to say that these blue paisley ribbon lapel pins are available for FREE. To order your pin, visit EmPowerYourHealth.org/store or call (904) 353-7878.

**Question:** Is there a way to connect with your organization on social media?

**Answer:** Yes! The American Association of Clinical Endocrinologists (AACE) is actively involved in social media. We provide updates on new programs and topics of interest for patients every day. We also provide links to EmPower resources and articles. You can follow AACE on Twitter (@TheAACE) or like AACE on Facebook (www.facebook.com/TheAACE). You can also find AACE on YouTube to view endocrine condition-related videos and interviews. We encourage you to join the conversation!

Thank you to our readers for their feedback about EmPower Magazine and the EmPower initiative! Here are a few comments from readers like you:

- Jessica
  I just found your website and I’m so glad that I’m not alone anymore!!

- Barbara
  I saw your magazine in my Endocrinologist’s office and would love to see more of it! -Barbara

- Paula
  I picked up a copy of your magazine/publication in my doctor’s office and took it home with me. I have read it and re-read it many times and find it to be extremely helpful to me. -Paula

If you have comments, questions or would like to share your story with us, simply send an e-mail to feedback@empoweryourhealth.org.
That’s why we created Cornerstones4Care™. This FREE program gives you personalized support to help you follow the care plan your doctor prescribed. Cornerstones4Care™ is packed with tools, tips, and information about the four key parts of a diabetes care plan:

- **Healthy Eating**: Add easy-to-make, diabetes-friendly recipes to your meal plan
- **Physical Activity**: Find creative ways to get the activity you need
- **Taking Medicine**: Learn about different treatment options to discuss with your doctor
- **Diabetes Self-Management**: Stay on track with checking and recording your blood sugar

Join today at EPCooks.Cornerstones4Care.com

**BONUS!** Join today and get FREE diabetes e-books
The American College of Endocrinology (ACE) and the American Association of Clinical Endocrinologists (AACE) would like to thank Abbott Laboratories, Boehringer Ingelheim Pharmaceuticals, Inc., Lilly Diabetes, Novo Nordisk Inc., and SANOFI for their support of the EmPower initiative.