



March's Topic: Type 2 Diabetes

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HEALTHCARE CLINIC HOURS:

Monday-Wednesday, Friday

8:00 a.m. to 5:00 p.m.

Thursday

9:00 a.m. to 5:00 p.m.

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Type 2 Diabetes

Type 2 Diabetes is a chronic condition that hinders the body from using carbohydrates as an effective energy source, thereby resulting in higher than normal blood sugar levels. It is characterized by an inability of the body to use insulin effectively, also known as **insulin resistance**, and is the most common form of diabetes. There is no cure for type 2 diabetes but the condition can be managed with lifestyle changes and medications.

The Impact of Type 2 Diabetes

- In 2015, diabetes was the 7th leading cause of death in the U.S.
 - Cause of death: 79,535 deaths
 - Contribution to death: 252,806 deaths.
- 1.5 million new cases of diabetes diagnosed in the U.S. each year.
- Diabetes cost more than \$245 billion yearly in the U.S.

Symptoms

The symptoms of type 2 diabetes develop over time, and many people can have the disease for years without showing any symptoms. The most common symptoms are increased thirst, frequent urination, increased hunger, unexplained weight loss, and fatigue.



Risk Factors

There are certain risk factors that make it more likely that you will be diagnosed with diabetes, including:

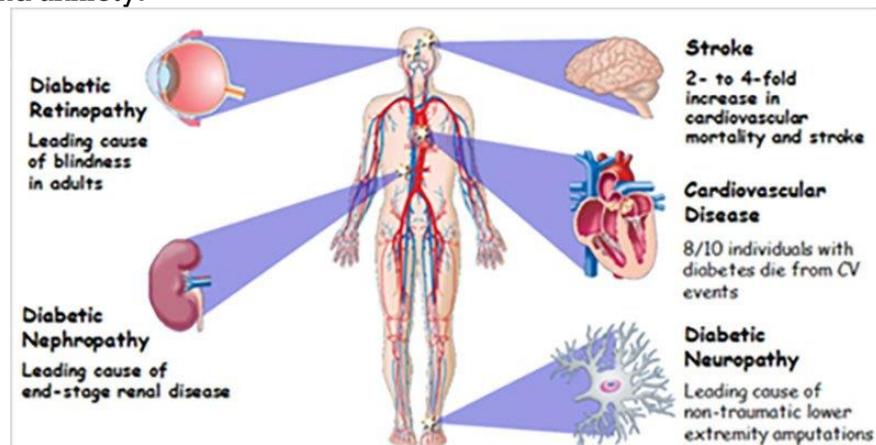
- Family history (parents and/or siblings with diabetes)
- Obesity
- Physical inactivity/ sedentary lifestyle
- Age greater than 45 years
- High blood pressure
- History of heart disease
- Race/Ethnicity (Native Americans, African Americans, Hispanics, Asian Americans and Pacific Islanders).
- High levels of triglycerides
- History of diabetes during pregnancy (*gestational diabetes*)
- History of polycystic ovary syndrome (PCOS)
- Giving birth to a child weighing over 9 lbs.

Diagnosis

- **Hemoglobin A1C** is a medical test that measures your average blood sugar over the past three months that is reported as a percentage. An A1C result of 6.5% or higher is indicative of diabetes.
- A **fasting blood sugar** (8 hours without food or drink) greater than 126 mg/dL is indicative of diabetes.
- A **random blood sugar** greater than 200 mg/dL plus symptoms is indicative of diabetes.
- An **oral glucose tolerance test** may also be used for diagnosis. For this test a fasting blood sample is drawn and compared to a blood sugar taken 2 hours after the patient ingests 75 grams of sugar. A result of 200 mg/dL or greater is indicative of diabetes.

Complications

- **Heart Disease:** untreated diabetes causes damage to blood vessels and the heart.
- **Nerve Damage:** uncontrolled diabetes can lead to tingling and numbness in your extremities.
- **Kidney damage:** uncontrolled diabetes can lead to reduced kidney function and possible kidney failure.
- **Eye Damage:** uncontrolled diabetes can cause damage to the retina and eventual blindness.
- **Hypoglycemia:** low blood sugar can occur from skipping meals, exercising, or medications. Symptoms include shakiness, sweating, and anxiety.



Picture source: <https://www.globalstemgen.com>

Lifestyle Management

- Weight loss of greater than 5% of body weight has been shown to help maintain blood sugar control.
- Get physically active!
 - Children and adolescents should engage in 60 minutes per day of moderate intensity exercise.
 - Adults should engage in 150 mins of moderate intensity exercise during the week.
- Limit sodium intake to less than 2,300 mg per day.
- Quit smoking.
- Limit alcohol consumption to 1 drink per day for women and 2 drinks per day for men.



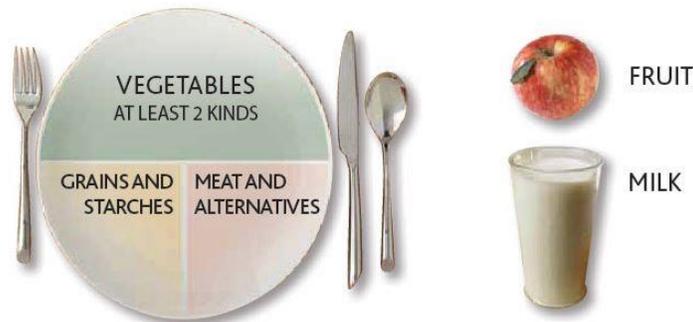
Know Your Diabetes ABCs Talk to your healthy care team about how to manage your A1C, blood pressure, and cholesterol. This will help lower your chances of having a heart attack, a stroke, or other diabetes problems.



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Idaho Plate Method

The Idaho Plate Method is a way to practice portion control during meals. A 9-inch plate is divided into fourths, and food is placed as shown below. Be sure to leave a space between your foods to ensure you are not getting too big of a portion size.



Picture Source: <http://www.diabetesgps.ca/en/just-the-basics/healthy-eating>.

Carbohydrate Counting

Carbohydrates are an important part of a healthy meal plan. Watching portion sizes and getting the most from healthy sources of carbs is important. You can use “carb counting” at each meal (and snacks) as a way to keep your blood sugar within your target range. You can work with your registered dietician or healthcare provider to decide how many carbs are right for you.

1 carb choice = 15 grams (g) of carbs		
	Most WOMEN Need	Most MEN Need
Each Meal	3 to 4 carb choices = 45 to 60 g of carbs	4 to 5 carb choices = 60 to 75 g of carbs
Snacks (if needed)	1 carb choice = 15 g of carbs	1 to 2 carb choices = 15 to 30 g of carbs

Chart source: http://www.lillydiabetes.com/assets/pdf/44236_eldups_pls-us-0175_carb_qd_web_rt2_clean.pdf

Common Medications used to treat Type 2 Diabetes

Medication Class	Examples	How do they work?	What do I need to know about this medication?
Biguanide	Metformin (Glucophage®)	Decreases amount of glucose made by the liver and increases cell sensitivity to insulin	<ul style="list-style-type: none"> ▪ Considered the first go-to option for Type 2 diabetes treatment ▪ Can cause stomach upset; need to take with food ▪ Has beneficial cardiovascular (heart) effects ▪ Associated with B12 deficiency ▪ Available in combination with many other diabetes medications
Sulfonylureas	Glimepiride (Amaryl®) Glipizide (Glucotrol®)	Increases the amount of insulin made in the pancreas and causes the pancreas to release more insulin	<ul style="list-style-type: none"> ▪ Commonly associated with low blood sugar (hypoglycemia) ▪ Can cause weight gain
SGLT-2 Inhibitors ("flozins")	Canagliflozin (Invokana®) Dapagliflozin (Farxiga®) Empagliflozin (Jardiance®)	Stop the kidneys from reabsorbing glucose, allowing it to be passed in the urine	<ul style="list-style-type: none"> ▪ Commonly associated with yeast and urinary tract infections ▪ Can cause low blood pressure and dizziness ▪ Associated with weight loss ▪ Jardiance® has been shown to have heart benefits ▪ People with a history of amputation(s) should not use Invokana®
Thiazolidinidone (TZD)	Pioglitazone (Actos®)	Increases cell sensitivity to insulin	<ul style="list-style-type: none"> ▪ Can improve cholesterol levels ▪ Can cause swelling, avoid if you have heart failure ▪ Has an increased risk of bone fractures and bladder cancer
DPP-4 Inhibitors ("gliptins")	Linagliptin (Tradjenta®) Saxagliptin (Onglyza®) Sitagliptin (Januvia®)	Increases the release of insulin from the pancreas, decreases the amount of glucose made by the liver, and slows the movement of food through the stomach, making you feel fuller.	<ul style="list-style-type: none"> ▪ Neutral effects on body weight ▪ If you have kidney issues, you may need a lower dosage ▪ Has been associated with pancreatitis ▪ Should be used cautiously if you have heart failure ▪ Has been associated with increased joint pain
GLP-1 Agonists	Dulaglutide (Trulicity®) Exenatide (Byetta®) Liraglutide (Victoza®) Lixisenatide (Adlyxin®)	Increases the release of insulin from the pancreas, decreases the amount of glucose made by the liver, and slows the movement of food through the stomach, making you feel fuller.	<ul style="list-style-type: none"> ▪ Non-insulin injectable medication ▪ Can cause stomach upset (nausea, diarrhea) ▪ Associated with weight loss ▪ Associated with pancreatitis and gallbladder disease ▪ Avoid if you have a personal or family history of thyroid cancer ▪ If you have kidney issues you may need a lower dose ▪ Victoza® has been shown to have heart benefits ▪ Unopened products should be stored in the refrigerator; once opened it can be stored at room temperature; check the package insert to determine how long it is good for once opened
Insulin	Rapid-Acting Humalog®, NovoLog® Regular Humulin-R®, Novolin-R® Long-Acting Lantus®, Levemir® Ultra-Long-Acting Tresiba®	Replaces your body's natural insulin when it is either absent or deficient. Insulin allows the cells to take in glucose in the blood, reducing the blood sugar levels.	<ul style="list-style-type: none"> ▪ Commonly associated with low blood sugar and weight gain ▪ Rapid-acting and regular insulins are used for meal time control ▪ Injection sites should be rotated to prevent tissue damage and absorption issues ▪ Available in vials and pens ▪ Unopened pen devices should be stored in the refrigerator; once opened it can be stored at room temperature; check manufacturer information to determine how long it is good for once opened ▪ Vials need to be stored in the refrigerator ▪ Dispose of needles and syringes in a proper sharps container ▪ Afrezza® is an inhalable insulin product



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Please let us know how we are doing by filling out a survey at the following link:

https://auburn.qualtrics.com/SE/?SID=SV_3DXRXyUp8KC7Lzn

**CALL FOR AN
APPOINTMENT
TODAY!**

(334) 263-8470

References

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State Wellness Center

**101 S. Union Street
Montgomery, AL 36104**

All active employees, covered spouses of active employees, non-Medicare retirees and covered non-Medicare spouses of retirees that use the State Employees' Health Insurance Plan (Group 13000) as their primary insurance plan are eligible for a wellness premium discount. Each wellness plan year is November 1 through October 31.

SEIB and Local Government employees along with SEIB retirees are able to use the State Wellness Center Pharmacy. The pharmacy offers various over the counter products at discounted prices and a **free medication delivery service**. Delivery can be provided to the patients located in Montgomery. Please designate which site you would like your medication delivered to, and if it is to your residence someone must be available at the home to receive the delivery.

State Wellness Center Healthcare Clinic

The SEIB clinic has a quality healthcare **TEAM** that includes nurse practitioners, an ambulatory care pharmacist, a physician, and nurses who work closely together to take care of your health and wellness needs.

Services Include:

- Treat minor illnesses
- Provide health education & monitoring
- Check health progress between appointments
- Share information with your physician
- Monitor efficacy & safety of every medication
- Evaluate out of pocket medication expense
- Smoking cessation & weight loss services
- Diabetes education program
- Immunizations & injectable medications
- Develop a personalized medication plan
- Monitor control of chronic illnesses
- Medication check-ups
- Medication therapy management

Are you interested in learning more about Diabetes and Diabetes Management?

Please stop by or call the State Wellness center to register for our Diabetes and You Educational session on Wednesday, March 28th from 2 to 4 pm.