Strong in Body and Spirit Healthy Choices
Lesson One: Diabetes Overview

Table of Contents

Reasons People get Diabetes .................................................................................................................................................................................. 3
Four Types of Diabetes ....................................................................................................................................................................................... 3
What Happens to the Sugar? ................................................................................................................................................................................. 4
What are the Signs and Symptoms of Diabetes? ........................................................................................................................................ 4
Who is at Risk for Diabetes? ........................................................................................................................................................................... 4
What is Metabolic Syndrome? ......................................................................................................................................................................... 4
What Can We do About Diabetes? .................................................................................................................................................................. 5
Diabetes and Feelings ..................................................................................................................................................................................... 5
What Can I Do About Stress? ........................................................................................................................................................................ 5
Coping with Stress .................................................................................................................................................................................................................................. 6
Changing the Way We Think about and React to Stress ........................................................................................................................................ 6
Exercise Tips to Reduce Stress .................................................................................................................................................................... 7
Physical Activity, Stress and Blood Glucose ............................................................................................................................................... 8
Nutrition, Stress and Blood Glucose ............................................................................................................................................................ 8
Depression and Diabetes .................................................................................................................................................................................. 8
How Can Depression Affect Me? ........................................................................................................................................................................ 8
Signs of Depression ......................................................................................................................................................................................... 9
Dealing with Depression .............................................................................................................................................................................. 9
Conclusion ................................................................................................................................................................................................................................. 9
Prayer ................................................................................................................................................................................................................................. 9
Other Resources .................................................................................................................................................................................................................. 10
Objectives .................................................................................................................................................................................................................... 11
Program Evaluation .............................................................................................................................................................................................................. 11
Diabetes: Epidemic! OR Opportunity for Change! ........................................................................................................................................ 13
WHAT is United Tribes Technical College doing to HELP? ...................................................................................................................................... 13
Healthy Fasting Blood Sugar Level = 80 to 110 .................................................................................................................................................. 13
“4” Types of Diabetes – “too much sugar in the blood!” ............................................................................................................................................ 14
Resources .................................................................................................................................................................................................................. 14
Reasons People get Diabetes

Diabetes has become a serious problem for many people in the United States. The reason why so many people have diabetes is not well known. Some of the things that can lead to diabetes include:

- Eating foods high in fat and sugar,
- Not getting enough physical activity,
- Being overweight or obese, and
- A family history of diabetes.

The Eagle saw that Native people hunted or grew their own food, and that they walked every day. Today he sees his Native people buy food at stores and in restaurants, drive cars and watch TV instead of walking. He sees that we eat many foods that are high in fat and sugar, and that we do not eat enough whole grains or fruits and vegetables. The Eagle also sees us eating too much food.

Four Types of Diabetes

Type 1 Diabetes

About 10% of people with diabetes have Type 1 diabetes. People need the hormone insulin, every day. Insulin is made by the pancreas. The pancreas is an organ located near the stomach. The pancreas of persons with Type 1 diabetes has stopped working so they need daily insulin injections. Insulin cannot be taken in a pill form. Type 1 diabetes is generally diagnosed in young people.

Type 2 Diabetes

Over 85% of people with diabetes have Type 2 diabetes. When a person eats food, any food, not just sweet foods, the body changes the food into sugar (also called glucose). Diabetes is a disease of too much sugar in the blood. When we eat food, any kind of food, our digestive system breaks the food down to glucose (sugar). Our bodies (especially the brain, red blood cells, and muscles) need glucose as fuel to give us energy so that we can do everything we have to do.

Persons with Type 2 diabetes can control the disease by eating smarter and moving more. Sometimes they take medication by mouth to help the cells open and accept the glucose. Type 2 diabetes is a progressive disease and if persons live long enough they will eventually advance to using insulin.

Gestational Diabetes

During pregnancy, at about 22 weeks, women are screened for blood sugar level, using a blood test two hours after consuming a high sugar drink. The woman is screened to see if her body uses the sugar as energy and the blood sugar drops to within normal range within 2 hours. If it does not fall into normal level, she is diagnosed as having Gestational diabetes. She receives education about testing her blood sugar daily, eating smarter and moving more. This lifestyle pattern means mom maintains normal blood sugar levels throughout the pregnancy. If the blood sugar is not maintained, baby lives in a high-sugar world and is at risk of being born with a very high weight and needs extra medical care after birth. Baby is at risk for developing Type 2 diabetes early in life. Moms who experience gestational diabetes are at risk of developing Type 2 diabetes within a short time after delivery, also.
Pre-Diabetes

Persons who have a fasting blood sugar level over 100 but below the 130 range are diagnosed as having Pre-diabetes. This elevated blood sugar level is an opportunity for people to implement better food and activity choices into their lifestyle. Many of these people are diagnosed with Type 2 diabetes eventually. Controlling the number to within normal range can delay the diagnosis and the complications for a long period of time. The good news is moving more and eating smarter and especially losing a small amount of weight (as little as 7% of total body weight) can reduce blood sugar levels from the pre-diabetes range into the healthy range. This is why there is so much emphasis on healthy lifestyle choices, and why the Eagle is so concerned. But, the Eagle is encouraged, because the Eagle knows moving more and eating smarter ALL PEOPLE live long, strong, healthy lives.

What Happens to the Sugar?

For people who do not have diabetes, the insulin that is made by their body helps move the glucose (sugar) into their cells, and the glucose then gets turned into energy, kind of like putting gasoline into your car to make it run. For people with diabetes, the body does not make enough insulin (there is not enough gasoline in the car to make it run), OR the body has a hard time using the insulin it makes (the gasoline isn’t able to power the car the way it should).

People who are overweight or who do not get enough physical activity have a harder time using their body’s insulin. This is called insulin resistance. The glucose can’t get into the cells so it stays in the blood. This causes the amount of glucose (sugar) to stay high in their blood. They then have high blood glucose. We call this diabetes. Diabetes is a condition in which the body is not able to use energy from food the way it should.

Our bodies try to get rid of the glucose (sugar). The kidneys make extra urine to help filter some of the glucose into the urine. So, when blood glucose is high, some people will go to the bathroom more often. By going to the bathroom more, our body loses a lot of water. This is why you are extra thirsty when blood glucose is high. You may also feel very tired because the cells in your body can’t get enough glucose for energy.

What are the Signs and Symptoms of Diabetes?

Some signs and symptoms of diabetes are:

- Having to go to the bathroom a lot – especially at night
- Being very thirsty
- Feeling very tired much of the time
- Having blurry vision from time to time
- Losing weight without trying in a short amount of time
- Having sores that are slow to heal
- Getting infections, such as yeast infections (for women), more often
- Not being able to feel things with our feet as well as we used to, such as pebbles and other sharp things we may step on; or when shoes start rubbing parts of our feet until we get a blister.

Sometimes a person may not know they have diabetes because they won’t have any signs or symptoms. This is why it is important to know if you, or someone you know, are at risk for developing diabetes.

Who is at Risk for Diabetes?

While diabetes occurs in people of all ages and races, some groups have a higher risk of developing diabetes than others. Being Native American, African American, Latino, Pacific Islander or an older person increases a person’s chance for diabetes.

What is Metabolic Syndrome?

Also, people with metabolic syndrome are at risk for diabetes. Metabolic syndrome is a condition that increases a person’s chance of developing heart disease, stroke, or diabetes. A person is diagnosed with metabolic syndrome if he or she has three or more of the following:

- Blood pressure of 130/85 mmHg or higher
- Waistline of 40 inches or more for men and 35 inches or more for women
- Fasting blood glucose level higher than 100 mg/dL
- HDL cholesterol lower than 40 mg/dl (men) or lower than 50 mg/d (women)
- Triglyceride level above 150 mg/dL
What Can We do About Diabetes?

While there is no cure for diabetes, the Eagle would like you to know that there is good news for people with diabetes! The good news is that by keeping your blood glucose as close to normal as possible you can help prevent or delay some diabetes problems such as eye disease, kidney disease, and nerve damage. These affect the blood flow and feelings in your fingers and feet or your eyes. Keeping blood glucose at a healthy level is a balance between 3 things:

• What a person eats and drinks
• How much physical activity a person does, and
• The medicines a person takes for his/her diabetes.

All three things are important habits to staying healthy. Habits are things you do on a regular basis. Some people will have habits that help them keep their blood glucose near normal. Other people will want to work on changing their habits to get their blood glucose closer to normal. Habits are never easy to change. You may not be able to change them overnight, but you CAN make changes in your life!

The Eagle is happy to see Native people returning to the ways of moving more and eating smarter. Recent studies have shown that people with pre-diabetes or with Type 2 diabetes can lower their blood glucose levels, blood pressure, and levels of fat in the blood by losing a little weight, increasing physical activity, and eating more healthy foods. These people show that it is worth the effort to make changes.

You will be learning a lot about eating smarter, the importance of moving more, and about managing diabetes throughout this curriculum called “Strong in Body and Spirit - Healthy Choices.”

Diabetes and Feelings

Once you are aware of what is causing you to feel stressed and how your mind and body react to stress, you will be better able to find healthy and satisfying ways to decrease it.

Good News!

We can lower stress. A recent study showed that people with Type 2 diabetes who did stress-lowering activities could reduce their average blood glucose levels.

What Can I Do About Stress?

Everyone handles stress in their own way. Some ways of coping can give you even more problems, though they may seem to help at the time. Poor food choice, smoking, alcohol, drugs, or not taking care of a problem are not helpful ways to cope with stress. There are positive ways to cope with stress. These can help you to feel in control, informed, and supported by other people.

• Talk to a friend
• Join a support group
• Look positively at change
• Realize that it is OK to cry
• Take a walk in the sunshine
• Become more physically active
• Don’t try to do everything for everyone
• Plan your day and set goals you can meet
• Remind yourself of your accomplishments
• Learn about diabetes so you can feel more in charge
• Ask your family or others to support your diabetes care efforts
• Write a list of questions or worries, talk these over with someone
Many people find that physical activity, such as walking, helps them to reduce feelings of stress.

- Look back on crisis as a learning opportunity. This will help you respond better to similar problems in the future.
- Be in the present. Don’t waste energy worrying about the past or the future. Keep your mind positively set on the present.
- Try to do something you enjoy every day. Pick an activity or hobby you’ve always wanted to try and plan it into your daily activities.
- Take care of yourself properly with adequate sleep and nutritious food.
- Avoid stressful situations when possible. If you can’t avoid the stressful situation, try to plan ahead how you will handle the stress.
- Accept what you cannot change and take action to change things you have control over.
- You are not the only one. Feeling stressed happens to everyone.

The Eagle wants you to learn healthy ways to cope with stress. Knowing how to cope with stress can help improve your blood glucose levels and your overall health. It is helpful to have several ways to handle different kinds of stress. Changing the way we react to stressful events, deep breathing exercises, guided imagery, muscle relaxation, physical activity, and healthy eating are ways we can cope with feelings of stress.

Coping with Stress

Let’s talk about each of these coping methods. Whether you’re aware of it or not, you probably talk to yourself silently every day. This mental conversation is called self-talk. Unfortunately, we often criticize ourselves during these mental conversations. These negative conversations can also add to our stress – it is our self-talk that helps determine how we will respond to any situation.

Every time you hear a negative message play in your mind, erase it and record a new positive one in its place. For example, instead of saying, “I’ll never be able to exercise every day,” try saying, “I’ll set a small goal at first and do my best to increase the number of days I exercise every week.”

Changing the Way We Think About and React to Stress

Let’s practice by recording a new message for this thought: “I don’t have time for physical activity.” How could we change the way we think about this? One way to replace this thought would be to say, “I can find ways to include physical activity into my everyday activities by parking farther away and walking a little extra, and by taking the stairs instead of the elevator.

Breathing to reduce stress

The hardest part of using breathing exercises to lower stress is making them a habit. Many times you may say to yourself, “I can’t stop what I’m doing now. There isn’t time.” But the truth is, once you start to feel stress in your neck, your shoulders, or your lower back, it is time to take a breather. Your body is trying to tell you that it needs more oxygen. Breathing exercises to lower stress can be done at home, in your car, at work, and anywhere you have a few minutes for yourself.

The Cleansing Breath

1. Get comfortable in a chair or car seat.
2. Exhale all of the air out of your body.
3. Breathe in deeply until your lungs are full, and then breathe out through your nose slowly.
4. When your lungs are really full, pull your stomach muscles in and breathe out through your nose.
5. Let your stomach muscles relax as the air comes back in through your nose.
6. Fill your lungs again and pull your stomach muscles in as you breathe out slowly through your nose again.
7. Do this in-out breathing pattern four to six times.

Guided imagery to reduce stress

Since ancient times, storytellers have used words to paint pictures in the minds of their listeners. In guided imagery, words and music are used to take the listener on an inner journey to lower stress. Guided imagery can be used to lower tension, anxiety, and stress.
**Let's try a sample of guided imagery.**

While sitting in your chair, close your eyes and imagine that you are a feather floating in the air. You float slowly back and forth. You become more and more relaxed as you drift down toward the soft ground. You finally glide to the ground, gently and softly touching down. As you’re lying there, all stress has left your body, and you feel totally and completely relaxed.

If you are stressed, try this imagery when you go for a walk: Imagine that your stress has turned to liquid. It is running out of your body through your feet. With each step, you leave a colored footprint on the ground that is your stress. As you continue to walk, the footprints become lighter in color. Finally there is no color at all. Any stress that you felt when you started walking should have left your body.

**Exercise Tips to Reduce Stress**

**Muscle relaxation to reduce stress**

Many times when we are stressed, our muscles become tense. Muscle relaxation helps to relax your whole body from head to toe by first tensing, then relaxing different groups of muscles. After some practice, you can do muscle relaxation exercises in just minutes.

Muscle Relaxation is helpful because you may notice sooner than you do now when your muscles are tense. When you feel your muscles are tense, you can use muscle relaxation to relax your muscles. By using muscle relaxation sooner, you might prevent a headache or other body aches.

Usually the best times to practice muscle relaxation is either in the morning before breakfast or in the evening before dinner - never right after you eat! Try to practice in a quiet place and wear loose, comfortable clothing. Try doing the muscle relaxation movements once a day at first. After some practice, you will be able to do all of the muscle groups in about 10 minutes. You will also be able to relax the muscles that tense up during the day.

If you have a history of serious injuries, muscle spasms, or back problems, you should talk to your doctor to make sure that it is okay to do muscle relaxation exercises. Here are some ways to practice muscle relaxation:

1. Sit up straight in a chair with both feet flat on the ground.
2. For the right hand and arm – make a fist and bend your right arm like you are showing someone your muscle (the muscle must feel very tight). Hold the tension about 5 seconds, then let go quickly and relax for about 30 seconds. **Repeat one more time.**
3. Left hand and arm – make a fist and bend your left arm like you are showing someone your muscle (the muscle must feel very tight). Hold the tension about 5 seconds, then let go quickly and relax for about 30 seconds. **Repeat one more time.**
4. Face – close your eyes, lift your eyebrows, clench your teeth, and pull back the corners of your mouth. Hold about 5 seconds, then let go quickly and relax for about 30 seconds. **Repeat one more time.**
5. Shoulders and neck – Pull your shoulders up and press your head back against them (do not bend your neck). Hold about 5 seconds, then let go quickly and relax for about 30 seconds. **Repeat one more time.**
6. Chest and back – Breathe in deeply and hold your breath while you press your shoulders together at the back at the same time. Hold for 5 seconds and relax your shoulders and breathe normally. **Repeat one more time.**
7. Stomach – Pull in your stomach at the same time you breathe in and fill your lungs with air. Hold for 5 seconds. Let the air out and relax your stomach. **Repeat one more time.**
8. Right leg – Pull up your right heel keeping the front part of your foot (ball of your foot) on the ground. Press your leg forward and down at the same time. Hold for 5 seconds and relax. **Repeat one more time.**
9. Left leg – Pull up your left heel keeping the front part of your foot on the ground. Press your leg forward and down at the same time. Hold for 5 seconds and relax. **Repeat one more time.**
Physical Activity, Stress and Blood Glucose

Physical activity is one of the best ways to reduce stress and get blood glucose closer to normal. It’s important to choose something that you like to do and will be able to do most days of the week. It helps to set small goals to slowly build up to doing an activity for at least 30 minutes a day. Walking is a great way to get started.

Physical activity can make you feel great right away. Also, when people exercise, they do not worry because they are resting the nerve cells in the brain that worry. Physical activity gives those cells time to renew so that they can function normally the next time they are needed. We discuss the details of physical activity and how to incorporate it into your daily life in the topic, “Moving More” of Strong in Body and Spirit: Healthy Choices curriculum.

Nutrition, Stress and Blood Glucose

People who are stressed sometimes eat foods high in sugar because they think it will help them feel less stressed. This sugar causes their blood glucose to go up and down wildly. This may make them feel worse than they did before they ate the sugary foods.

If you find yourself reaching for some food high in sugar when you are stressed or bored – STOP! – now ask yourself, “Is there something else I could do, or eat, to reduce my stress?” Going for a walk or talking to a friend might be a better choice. Eating more nutritious foods can help bring blood glucose closer to normal so that you are better able to cope with stressful events. Be realistic in your pursuit of balance. Some days you will be able to handle stress better than on other days.

The goal is progress, not perfection!

Remember:
1. Stress and depression can affect your blood glucose
2. There are many ways to lower stress

If you are feeling stressed: Choose one of the stress lowering activities we learned today and practice it:
1. Talk to a friend or family member
2. Or call your doctor if you need to

Depression and Diabetes

Depression is not usually recognized as a problem caused by diabetes, but it can be a common and dangerous problem if it is not treated. Depression occurs more often in people with chronic diseases than healthier people.

Serious depression is a medical problem. A person that is depressed may not have the energy or the motivation to keep their blood glucose near normal. Depression can also lead to other conditions, such as headache, loss of sex drive, heart disease, and skin diseases.

How Can Depression Affect Me?

What is depression?

Depression is a mental state that leads to feelings of hopelessness and sadness. A depressive illness (called “clinical” depression) is different from a depressed mood because it lasts much longer. Depression can become a problem if it is not treated. We have all felt ‘depressed’ about the death of a loved one, arguments with a loved one, or loss of a job – sometimes we feel ‘down’ for no reason at all. Many times, people with depression don’t realize that they are depressed. Some people may believe that it is their diabetes causing them to feel the way they do, instead of depression. For example, high blood glucose can cause a person to feel tired and weak, but so can depression. Many times a person with depression has a hard time keeping their blood glucose near normal.
Signs of Depression

Am I depressed?

The Eagle wants you to have the courage and strength to recognize the signs and symptoms of depression so that you can begin to deal with it.

Our bodies and minds try to tell us things, but we don’t always understand what they are trying to say. This is why it is important to know the signs and symptoms of depression.

Some signs and symptoms a person with depression might have are:

- Low energy level
- Unusual weight loss or weight gain
- Feelings of guilt or feeling worthless
- Depressed mood for most of everyday for two weeks or longer
- Not as much pleasure in normal activities
- Difficulty sleeping or a need to sleep more
- Having a hard time making decisions or concentrating

A person with depression may also feel:

- Down
- Blue
- Weepy
- Useless
- Hopeless
- Helpless
- Angry

We have all felt this way at one time or another. But a person with depression will feel this way almost every day for a few weeks or longer.

Dealing with Depression

Many people do not like to talk to others about how they feel. Some people may think that they can handle things by themselves. However, talking to a friend or a family member may help you feel better.

Talking to your medical provider can help determine if your diabetes is causing you to feel bad or if it is depression. Treatment with counseling or medicine prescribed by your doctor can help you feel better, and you’ll be able to manage your diabetes better.

Conclusion

The Eagle has given you wisdom today to help give you the strength and courage to handle your feelings and life’s stresses. Use this wisdom to help guide you through each and every day.

Prayer

Great Spirit, Thank you for the gift of wisdom that you have given us this day. Ma this wisdom give us the strength and the courage as we learn to use it wisely so that each day can be lived to its fullest. Amen
OTHER RESOURCES


Academy of Nutrition and Dietetics – [www.eatright.org](http://www.eatright.org)

Local Tribal Diabetes Program

- [http://www.standingrock.org/tribalPrograms/](http://www.standingrock.org/tribalPrograms/)
- [https://www.facebook.com/TurtleMountainDiabetesPrevention](https://www.facebook.com/TurtleMountainDiabetesPrevention)

State Department of Health


United Tribes Technical College – [http://landgrant.uttc.edu/resources/](http://landgrant.uttc.edu/resources/)
Objectives:

Lesson 1: Diabetes Overview

The learner will:

- Be able to list the four types of diabetes
- Be able to identify the signs and symptoms of diabetes
- Understand the connection between stress and depression and chronic disease
- Be able to recognize feelings in regards to chronic disease diagnosis

Program Evaluation

Title of Workshop Strong in Body and Spirit - Healthy Choices/ Lesson 1: Diabetes Overview

Presenter(s) ___________________________ Date ___________________________

On a scale of 1 to 5, with 1 being the least confident and 5 the most confident, please circle one per question:

<table>
<thead>
<tr>
<th>Not Confident</th>
<th>Very Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Please rate how confident you feel listing the four types of diabetes

1 2 3 4 5

Please rate how confident you are to identify the signs and symptoms of diabetes

1 2 3 4 5

Please rate how confident you feel in understanding the connection of stress and depression to diabetes.

1 2 3 4 5

Please rate how confident you are to recognize the feelings associated to chronic disease

1 2 3 4 5

Comments

What did you like about today’s lesson?

________________________________________________________________________

________________________________________________________________________

Thank you! Your feedback is very important to us.
Diabetes: Epidemic! OR Opportunity for Change!

What Is Diabetes?

Diabetes is a disease where glucose (sugar) levels in the blood are higher than they should be. Glucose is the sugar in the blood made from all the foods we eat. Glucose is used as energy when it enters the cells. Insulin acts as the key to open the cells letting the sugar enter the cell for use. Insulin is a hormone made by the pancreas which is located near the stomach. When people have diabetes, their body either doesn’t make enough insulin or cannot use the insulin as the key to open the cells. Both of these problems cause the glucose (sugar) to build up in the blood and is measured as “high blood sugar”.

Facts:

- Young Native American’s are NINE times more likely to be diagnosed with Type 2 diabetes.
- In the last 20 years, diagnosis in Native American youth has increased 110 percent (3.24 to 6.81 per 1,000).
- Aberdeen Area Indian Health Service ranks second for numbers of persons with Type 2 diabetes.
- People of indigenous ancestry have diabetes at twice the rate of people of European ancestry (16.1 percent to 7.1 percent).
- Kidney failure and death rate due to diabetes is also nearly twice as high for indigenous people.
- Diabetes is related to obesity and obesity is caused by poor food choice and lack of activity.

WHAT is United Tribes Technical College doing to HELP?

- UTTC Wellness Center offers FREE blood sugar screening. KNOW YOUR NUMBERS!
- UTTC Land Grant Extension Nutrition Educators are trained in the American Diabetes Association’s Diabetes Prevention Program (DPP), Watch for class schedules.
- UTTC Land Grant Extension Agroecology Educators offer opportunity to grow some of your own healthy food. Watch for community gardening and food preservation announcements.
- UTTC Land Grant offers Individualized Medical Nutrition Therapy (MNT = diet counseling), for all types of diabetes from a Licensed Registered Dietitian (LRD), FREE.
- UTTC Nutrition and Foodservice Department offers a 3-credit class titled Mother Earth, Food Sovereignty and Health which includes, Strong in Body and Spirit, diabetes education lessons. The course is a potential elective course offering personal wellness.

Healthy Fasting Blood Sugar Level = 80 to 110

The prevalence of obesity in Tribal Nations has increased dramatically over the past 30 years. Although indigenous people are from many different Tribes and genetic backgrounds, all tribes throughout the U.S. have suffered adverse effects from the high prevalence of obesity (Story et al, 2000)). Overall, studies demonstrate that obesity begins early for native children and also is a significant problem for the adult population (IHS, 2001). Many chronic diseases such as Type 2 diabetes, heart disease, stroke, arthritis, and breathing problems are associated with the increasing prevalence of obesity in Native Americans (DHHS, 2001, Story et al, 1999).
Type 1 diabetes
(about 10% of diagnosed diabetes cases)
- body’s immune system destroys pancreatic beta cells – a hormone, insulin, that regulates blood glucose is no longer made
- must have insulin delivered by injection or a pump for a lifetime
- approximately 5 percent of diagnosis are in adults, remainder are children
- no known way to prevent Type 1 diabetes
- lifelong blood sugar monitoring is required to determine food and activity levels

Type 2 diabetes
(over 80% of diagnosed cases)
- usually begins after poor food choice and lack of body movement leads to obesity
- disease may be controlled when people eat smarter and move more
- may require medication by mouth to help the cells open and accept the glucose energy
- often called insulin resistance, meaning cells still produce insulin but do not use it properly – so glucose or energy stays in the blood
- is a progressive disease so the need for insulin rises and the pancreas gradually loses its ability to produce

Gestational diabetes
- a form of glucose intolerance diagnosed during pregnancy
- when mom’s blood sugar is controlled, baby and mom remain healthy
- if mom does not control her blood sugar, baby may be born with high birth weight and perhaps elevated blood sugar
- disappears in mom’s body after delivery, but frequently returns as Type 2 diabetes,
- if food and activity choice is not healthy

Pre- diabetes
- diagnosed with fasting blood sugar level over 110 but below the 130 range
- is an opportunity for people to implement better food and activity choices into their daily life
- controlling the number to within normal range can delay the diagnosis and the complications for a long period of time
- Good news! moving more and eating smarter and especially losing a small amount of weight (as little as 7% of total body weight) can help high blood sugar range go back to healthy range

RESOURCES

American Diabetes Association
www.diabetes.org

Academy of Nutrition and Dietetics
www.eatright.org

Local Tribal Diabetes Program
http://www.standingrock.org/tribalPrograms/
http://www.ihs.gov/greatplains/healthcarefacilities/spiritlake/
https://www.facebook.com/
TurtleMountainDiabetesPrevention
http://www.swo-nsn.gov/HealthandFitness.aspx

State Department of Health

NDSU State Extension Program
http://www.ag.ndsu.edu/extension/

Learn About Diabetes.
www.diabetes.about.com

The National Diabetes Education Program.
www.ndep.gov

United Tribes Technical College
http://landgrant.uttc.edu/resources/