# My Care Team Information

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Name</th>
<th>Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care Provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Advocate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wellness Coordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription Refill Line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After hour line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiologist (heart doctor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Podiatrist (foot doctor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmologist (eye doctor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nephrologist (kidney doctor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dentist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Contact</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Created for use at Neighborhood Family Practice (2014)*
## Appointment Frequency

<table>
<thead>
<tr>
<th>Service</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Sugar</td>
<td>Ask your provider</td>
</tr>
<tr>
<td>Hemoglobin A1c</td>
<td>Every 3 to 6 months (ask your provider)</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>At least at every office visit (ask your provider if they would like you to check more often)</td>
</tr>
<tr>
<td>Cholesterol Check (LDL)</td>
<td>1 time per year</td>
</tr>
<tr>
<td>Urine Albumin (Protein)</td>
<td>1 time per year</td>
</tr>
<tr>
<td>Dental Cleaning/Exam</td>
<td>Every 6 months</td>
</tr>
<tr>
<td>Eye Exam</td>
<td>1 time per year</td>
</tr>
<tr>
<td>Foot Exam</td>
<td>Ask your provider to check your feet at least 1 time per year</td>
</tr>
</tbody>
</table>

## Visit Summary and Results

### A1C:

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Last Value</th>
<th>My Goal</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cholesterol - LDL:

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Last Value</th>
<th>My Goal</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;100 mg/dL</td>
</tr>
</tbody>
</table>

### Kidney Test – Microalbumin (Protein):

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Last Value</th>
<th>Goal</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;30 mg/24h</td>
<td></td>
</tr>
</tbody>
</table>

### Dental Exam:

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Results</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Eye Exam:

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Results</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Foot Exam:

<table>
<thead>
<tr>
<th>Last Appointment</th>
<th>Results</th>
<th>Next Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I should check my blood sugar ...
Diabetes Education Pathway Program
by Neighborhood Family Practice

This program consists of a series of 7 modules of education by the nurse, wellness coordinator, and/or pharmacist. Please remember to schedule your appointment prior to leaving Neighborhood Family Practice.

<table>
<thead>
<tr>
<th></th>
<th>Appointment Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td></td>
</tr>
<tr>
<td>Lesson 2</td>
<td></td>
</tr>
<tr>
<td>Lesson 3</td>
<td></td>
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<tr>
<td>Lesson 4</td>
<td></td>
</tr>
<tr>
<td>Lesson 5</td>
<td></td>
</tr>
<tr>
<td>Lesson 6</td>
<td></td>
</tr>
<tr>
<td>Lesson 7</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ________________________________________________________________

You successfully completed the program on ____________
Diabetes Visit Checklist

You and your healthcare provider are a team in managing your diabetes. The tips below can help you plan for your next visit.

Before every visit

• Write down any problems you have had with your diabetes.

• Write down any concerns you want to talk with your provider about.

• Bring a list of your medicines. Include any over-the-counter medicines, vitamins, herbs, and supplements you take

• Bring your blood sugar diary

Before I leave my healthcare provider’s office

I will:

☐ Ask if I should make any changes in my diabetes care
☐ Ask if I am due for any tests
☐ Make sure I know how to take care of my diabetes when I am sick
☐ Ask questions if there is something that I do not understand
☐ Schedule my next provider visit
☐ Other: ____________________________________________________________

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Myths about Diabetes

"Diabetes is a one-way street to bad health problems."
Fact: It is possible to go in the other direction! If you follow your diabetes care plan, it is possible to delay or prevent problems from diabetes.

"It's your own fault that you have diabetes."
Fact: Diabetes is not caused by any one thing and isn't anyone's fault. Your eating and activity choices can play a role (good or bad) in the control of your blood sugar, but no one knows what causes diabetes.

"If you are overweight or obese, you will eventually develop type 2 diabetes"
Fact: Being overweight or obese is definitely a risk factor that may increase your chances of becoming diabetic, but it is only one of many such as your family history, ethnicity, and age. Many overweight people never develop type 2 diabetes, while some people with type 2 diabetes weigh a healthy amount or are only slightly overweight. As we said above, no one knows what actually causes diabetes.

"If you have type 2 diabetes and your doctor says you need to start using insulin, it means you're failing to take care of your diabetes properly or your diabetes is getting really bad."
Fact: This isn't always the case. Everyone with type 1 diabetes must take insulin. And for most people with type 2 diabetes, it is a progressive disease. Oral medicine in the form of pills may work at first to keep your blood sugar at a healthy level, but over time your body can produce less and less of its own insulin. Since the pills work to help your pancreas release more insulin, of which there is now less available, you must take some insulin as medicine to make up for it.

"You can catch diabetes from someone else."
Fact: No. Although we don't know why some people get diabetes, we do know that it is not contagious. It can't be spread from person to person.

"People with diabetes are more likely to get colds and other common illnesses."
Fact: However, there is an increased risk of getting other infections such as skin or feet infections and mouth or vaginal yeast infections. Additionally, slower healing cuts may lead to increased risk for infection. But if you do get a cold, it is important to closely check your blood sugar because it can be very unpredictable. Often this is from not eating or drinking normally when you are sick but can also be caused by the illness itself.

"People with diabetes should eat only special diabetic foods."
Fact: A healthy meal plan for someone with diabetes isn't really different from a healthy diet for anyone. It should be low in fat, moderate in sugars and salts, and based on whole grains, fruits, and vegetables. For the most part, foods advertised as "special for diabetics" offer no real special benefit.
Lesson 1
What is diabetes?

“I have diabetes. What does that mean?”
Diabetes means that the sugar (glucose) levels in your blood are too high. To understand diabetes, you must first know what happens when you eat.

What is glucose?
Your body turns the food you eat into sugar, also called glucose. Your blood carries this sugar to all the cells in your body. Your body uses the sugar for energy.

What is insulin?
Insulin is made by the pancreas. Insulin helps sugar get into your body’s cells where it can be used for energy.

Hormones, sugar, and your cells
When you eat some foods, mostly carbohydrates, they are broken down into sugar (also known as glucose). This sugar travels in your blood to all your body's cells where it provides energy. It is the job of insulin, a tiny hormone made by your pancreas, to help move the sugar from your bloodstream into the cells. Think of insulin as the key that unlocks your cell so sugar can enter.

What goes wrong in type 1 diabetes?

In type 1 diabetes, your pancreas produces little or no insulin so there is no way for the sugar in the blood to enter the cell. In other words, the cell has no key. Because the sugar can't leave the bloodstream, there quickly becomes too much of it. This condition is known as hyperglycemia (high blood sugar). Individuals with type 1 diabetes must replace the keys to their cells by taking insulin injections.

What goes wrong in type 2 diabetes?

In type 2 diabetes, the pancreas may be producing too little insulin or the body may be preventing the insulin from working properly. This results in too much sugar in the bloodstream. There are several ways to fix this, including changing the way your body responds to insulin (changing the lock) or replacing the key (taking insulin injections).

Changes that occur in your body because of type 2 diabetes

People with type 2 diabetes may need to change their treatment over time from oral pills to insulin injections. This is because of the progressive nature of type 2 diabetes. Usually by the time someone is diagnosed with type 2 diabetes, over half of the specialized insulin-producing cells in their pancreas have stopped working. As time progresses, more and more of these cells stop working until you have no more left, meaning you have no more natural insulin. It is around this time your doctor will usually start to prescribe insulin injection treatments.

---

“Will I have diabetes type 2 for the rest of my life?”

Currently there is no cure for diabetes. But there are ways to help manage it:

- Eat right
- Reach and stay at your goal weight
- Keep blood sugar in a healthy range
- Stay active
- Take your medicine as directed

Risk Factors for Type 2 Diabetes

No one knows what causes diabetes. However, we do know that certain things, called risk factors, can increase your chances of getting type 2 diabetes. These risk factors can be sorted into things that you can change through your behavior and things that cannot be changed.

<table>
<thead>
<tr>
<th>Risk Factors that can be managed</th>
<th>Risk Factors that cannot be managed</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Physical inactivity</td>
<td>- Being over 45 years of age</td>
</tr>
<tr>
<td>- Overweight</td>
<td>- Family history of diabetes</td>
</tr>
<tr>
<td>- Unhealthy diet</td>
<td>- Being a member of certain ethnic groups (for example, African American or Hispanic)</td>
</tr>
<tr>
<td>- High blood pressure</td>
<td>- Having had diabetes during a pregnancy, or giving birth to a baby who weighed more than 9 pounds</td>
</tr>
<tr>
<td>- Poor nutrition during pregnancy</td>
<td></td>
</tr>
</tbody>
</table>

Hypoglycemia

If you have diabetes, you can get low blood sugar (hypoglycemia), too. There are several things that may cause hypoglycemia such as diet, medications.
Hyperglycemia (High Blood Glucose)

Causes: Too much food, too little insulin or diabetes pills, illness, or stress.
Onset: Often starts slowly.

Some Symptoms:
- Extreme thirst
- Need to urinate often
- Dry skin
- Hungry
- Blurry vision
- Drowsy
- Slow healing wounds

HIGH BLOOD GLUCOSE MAY LEAD TO A MEDICAL EMERGENCY IF NOT TREATED.

What Can You Do?

Check blood glucose
If your blood glucose levels are higher than your goal for three days and you don't know why, call your healthcare provider.

For more information, call the Novo Nordisk Tip Line at 1-800-260-3730 or visit us online at ChangingDiabetes-us.com.

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Hypoglycemia (Low Blood Glucose)

Some Symptoms:

- Shaky
- Fast heartbeat
- Sweating
- Dizzy
- Anxious
- Hungry
- Blurry vision
- Weakness or fatigue
- Headache
- Irritable

Causes: Too little food or skipping a meal; too much insulin or diabetes pills; more active than usual.
Onset: Often sudden.

What Can You

CHECK your blood glucose, right away. If you can't check, treat anyway.

TREAT by eating 3 to 4 glucose tablets or 3 to 5 hard candies you can chew quickly (such as peppermints), or by drinking 4-ounces of fruit juice, or 1/2 can of regular soda pop.

CHECK your blood glucose again after 15 minutes. If it is still low, treat again. If symptoms don’t stop, call your healthcare provider.

For more information, call the Novo Nordisk Tip Line at 1-800-260-3730 or visit us online at ChangingDiabetes-us.com.

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Concept developed by Rhonda Rogers, RN, BSN, CDE

Lesson 2
Measure Your Blood Sugar at Home

Blood Sugar Diary
One of the most important tools to control your diabetes is checking your blood sugar levels and writing them down in a blood sugar diary.

What is a blood sugar diary? It is a record of:
- Your blood sugars (also known as blood glucose) at different times during the day
- Medication you have taken during the day
- What you ate during the day

Blood sugar level is the amount of sugar in a given amount of blood. It is measured in mg of sugar/dL of blood. Over time, this will give you a better idea of what foods and activities cause your blood sugar to drop too low or rise too high. Be sure to share your blood sugar diary with your health care team so they can adjust your treatment plan if it is needed.

Who should check their blood sugar?
Ask your doctor about checking your blood sugar for more information. The following people may benefit from keeping a blood sugar diary and checking their blood sugar:
- Taking insulin & oral medications
- Pregnant
- Having a hard time controlling your blood sugar
- Have low blood sugar levels (including those who have low blood sugar without the usual warning signs)

How often should I check my blood sugar?
It varies from patient to patient and the type of medications being used. In general,

<table>
<thead>
<tr>
<th>Types of medications</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (tablets, capsules)</td>
<td>Test daily</td>
</tr>
<tr>
<td>Insulin therapy</td>
<td>Test daily to four times a day</td>
</tr>
</tbody>
</table>

How do I check my blood sugar/glucose level?
This is a great question for you to ask your care team to make sure you are doing it right. But these simple steps will allow you to check your blood sugar level.
1. Wash your hands or wipe your finger with an alcohol swab
2. Next, put a test strip into your meter
3. Prick the side of your finger with your lancing device
4. Squeeze your finger to get a drop of blood
5. Touch & hold the edge of the test strip to the drop of blood, and wait for your results
6. Your blood glucose/sugar level will appear on the meter’s display.
That’s it! You have just checked your blood sugar level and now can write it down in your blood sugar diary. You may be asking yourself, “Well, what do I want my blood sugar level to be?” It is important to ask your care team what your personal blood sugar level ranges are because they can vary from person to person. In general, blood sugar levels are:

<table>
<thead>
<tr>
<th>Blood sugar levels</th>
<th>Goal for diabetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasting (or before a meal)</td>
<td>70-130 mg/dL</td>
</tr>
<tr>
<td>Post-prandial (1-2 hours after a meal)</td>
<td>70- 180 mg/dL</td>
</tr>
</tbody>
</table>

You and your care team should find a blood sugar goal.

**What goes in the blood sugar diary?**

Now that you have checked your blood sugar it is time to write it down in your blood sugar diary.

- Medications you are taking that day
- Time of meal & what you ate
- Blood sugar level reading (before & after meal)
- How you are feeling that day
- Any important notes about activity or stress level

**Here are a few ways to record your blood sugar diary:**

- Write it down with a pen or pencil in this book
Lesson 3
Diabetes Care I

Hemoglobin A1c (or A1c)
Another test used by your doctor to check your blood sugar is called the A1c. This test is done at the doctor’s office, and like blood sugar testing, it also uses a small blood sample from your finger. But unlike blood sugar testing, which tells you what your blood sugar is at a specific moment in time, your A1c can give you an idea of what your average blood sugar is over a longer period of time - about three months. Some of the sugar in your bloodstream gets stuck to your red blood cells. When your blood sugar is higher on average, more sugar will stick, and your A1c will be higher as a result.

<table>
<thead>
<tr>
<th>A1c</th>
<th>Goal for diabetics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>less than 7%</td>
</tr>
</tbody>
</table>

Your doctor may measure your A1c every 3 to 6 months depending on your progress and goals.

High Blood Pressure
Although diabetes does not cause high blood pressure, they are often present together. High blood pressure or hypertension can lead to many complications such as heart disease, kidney disease and even stroke. Blood pressure measures the amount of force that is put on your heart every time it pumps blood throughout your body. If blood pressure is too high, then over time the heart begins to weaken and cannot pump as well. That is why it is important to monitor and control your blood pressure.

Prevention
- Blood pressure is greatly affected by your diet. By decreasing the amount of salt (sodium) that you eat, you can positively affect your blood pressure
- Weight loss
- Reduce stress and anxiety where you are able to

Symptoms
- Unfortunately, there are not many symptoms associated with high blood pressure. It is often referred to as the “silent killer” since it often goes undetected for so long.
- However, some symptoms may include:
  - Severe headache
  - Nausea or vomiting
  - Confusion
  - Vision changes

How to Track your Blood Pressure
- Ask your diabetes care team what your personal goal is
  - Average blood pressure goal for most people with diabetes:
    - Less than 140/80 mm Hg
- Ask your diabetes care team about getting a blood pressure monitor at home
  - Test your blood pressure throughout the day and record your results in a diary if necessary
For help using the monitor ask anyone in your diabetes care team
  - With proper help it can be a very effective and easy way to monitor your blood pressure without having to go to the office

- If your blood pressure is too high you may need to change your plan of treatment to include some of the following:
  - Weight loss
  - Decreasing amount of salt (sodium) in your diet
  - Changing your physical activity plan (amount, how often, etc.)
  - Adjusting blood pressure medication

- Key questions to ask your care team during visits to ensure you are managing your blood pressure:
  - When was the last time my blood sugar was checked?
  - What was my last blood pressure reading?
  - How can you help me reach my blood pressure goal?
  - When should I have my blood pressure checked? (How often?)

**Cholesterol and Triglycerides**

There are different types of fat and cholesterol circulating in your bloodstream – these are collectively known as lipids. When certain lipid levels are high, they can cause damage to your heart and blood vessels. Therefore, it is important to keep lipid levels in a healthy range when you have diabetes to prevent heart disease. Lipids are checked using a blood test at your doctor’s office.

There are four main categories of lipids:

- **TC (total cholesterol)**
  - What it is: cholesterol is a waxy fatty substance in your tissues that is important for a variety of functions. Your liver produces all of the cholesterol your body needs. You also get cholesterol from foods such as meat, poultry, eggs, and dairy products. Total cholesterol represents triglycerides, LDL, and HDL combined.
  - Goal: less than **200 mg/dL**

- **LDL (low-density lipoprotein) – “bad” cholesterol**
  - What it is: LDL is known as the “bad” cholesterol because it is the type that is deposited in blood vessel walls, causing atherosclerosis, or hardening of the arteries. It is associated with heart disease.
  - Goals: less than **100 mg/dL**, or less than **70 mg/dL** if you have heart disease

- **HDL (high-density lipoprotein) – “good” cholesterol**
  - What it is: HDL is known as the “good” cholesterol because it picks up bad cholesterol from blood vessels and other locations, and carries it back to the liver for disposal – it is like a garbage can for bad cholesterol. Therefore, higher levels of HDL are better.
  - Goals: greater than **40 mg/dL** in men, or greater than **50 mg/dL** in women

- **TG (triglycerides)**
  - What it is: triglycerides are blood fats that circulate throughout the bloodstream along with cholesterol. Your body gets triglycerides from food (especially meats and plant oils) and also makes triglycerides on its own. As with cholesterol, you need just the right amount of triglycerides. High triglyceride levels are associated with high blood sugars.
  - Goal: less than **150 mg/dL**
If you are not meeting your goals, you and your care team may decide it is time to make some changes including: weight loss, change in eating plan, change activity plan, and possibly using cholesterol-lowering medication.

**Questions to ask your care team**
- What were the results of my blood cholesterol and blood fat test?
- What do my results mean?
- What should I do to help me reach my goals?

Keeping a blood cholesterol and blood fat diary will help you track your progress over time.

**Review:**
Keep in mind that the goals and the frequency to test may vary from patient to patient. In general,

<table>
<thead>
<tr>
<th></th>
<th>Goal for diabetics</th>
<th>When to test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1c</strong></td>
<td>Less than 7%</td>
<td>Every 3 to 6 months</td>
</tr>
<tr>
<td><strong>Blood Pressure</strong></td>
<td>Less than 140/80 mm Hg</td>
<td>At each office visit</td>
</tr>
<tr>
<td><strong>Total Cholesterol</strong></td>
<td>Less than 200 mg/dL</td>
<td>Yearly</td>
</tr>
<tr>
<td><strong>LDL (bad cholesterol)</strong></td>
<td>Less than 100 mg/dL, Less than 70 mg/dL if you have heart disease</td>
<td>Yearly</td>
</tr>
<tr>
<td><strong>HDL (good cholesterol)</strong></td>
<td>Greater than 40 mg/dL in men, Greater than 50 mg/dL in women</td>
<td>Yearly</td>
</tr>
<tr>
<td><strong>TG (triglycerides)</strong></td>
<td>Less than 150 mg/dL</td>
<td>Yearly</td>
</tr>
</tbody>
</table>
Lesson 4
Kidney Care and Complications

Your kidneys are incredible organs that are made up of millions of tiny blood vessels and serve to remove waste products from your blood. Diabetes can damage your kidneys causing them to lose their ability to filter out waste products, which results in kidney disease. High amounts of blood sugar makes the kidneys work too hard and eventually they begin to leak and useful protein is lost in your urine.

Factors that Influence Kidney Disease:
- Genetics
- Blood Sugar Control
- Blood Pressure

Symptoms of Kidney Disease:
- Fluid buildup (Swelling)
- Loss of sleep
- Poor Appetite
- Upset stomach
- Weakness
- Difficulty concentrating

Kidney Disease Prevention:
Keep your blood sugar in your target range.
Lower your blood pressure by:
- Eating less salt
- Losing weight
- Avoiding alcohol and tobacco
- Getting regular exercise
- Low protein diet

However, never start a low protein diet without discussing it with your diabetes care team first!

Once a year your kidneys should be checked by your care team
- A urine test will show how your kidneys are functioning by looking at the amount of protein found. *

In normally functioning kidneys there should be no protein found in the urine.
- Do not be afraid to ask questions about when the last time your kidneys were checked, what your results were and what they meant, and if there is anything you can do to help protect your kidneys.

When all of these preventative methods fail, your diabetes care team and primary care doctor may prescribe you medication to lower your blood pressure. There are many kinds of blood pressure drugs, but some are not good for patients with diabetes. Most doctors prescribe drugs called ACE inhibitors for people with diabetes.

Information found from American Diabetes Association
Someone along the way may have told you that diabetes can cause blindness, and while people with diabetes do have a higher risk of becoming blind than people who do not have diabetes, most patients only experience minor eye complications. **With a yearly, dilated eye exam, minor eye complications can stay minor!** Don’t be afraid to ask about eye exam frequency, your results and what your results mean. During a dilated eye exam, your pupil (the black center) is expanded with eye drops, so that your doctor can see the inside of your eye. If your doctor regularly checks the inside of your eye, he or she will be able to catch problems quicker.

Some eye complications people with diabetes are more likely to develop:

- **Glaucoma** occurs when pressure builds up in the eye. Due to this pressure, blood vessels that carry blood to the retina and optic nerve are pinched, and vision is slowly lost.
  - The longer someone has diabetes, the greater chance there is that glaucoma can develop.
  - Treatment for glaucoma ranges from drugs to reduce pressure in the eye to surgery.

- **Cataracts** are characterized when the lens of the eye becomes cloudy instead of clear, and blocks light from entering the eye.
  - Many people without diabetes are also diagnosed with cataracts, but people with diabetes develop this condition at a younger age and it gets worse faster.
  - People with cataracts need to wear sunglasses more often and glare-control lenses for glasses. Some patients may need to get their lens removed if it greatly interferes with their vision. In this case, patients will need surgery to get a new, transplanted lens.
Retinopathy is a general term for all retinal disorders.

- The retina is located at the back of the eye. It records and converts the images that your eye sees into electrical signals for your brain to process.
- Damage to your retina occurs long before you start to experience symptoms. This is why it is important to see your eye doctor yearly for an exam.
- You should discuss diagnosis and treatments for retinopathy with your diabetes care team.
- There are many factors that increase your risk of retinopathy:
  - Blood sugar control
  - Blood pressure levels
  - How long you have had diabetes
  - Genes

Information found from American Diabetes Association
(www.diabetes.org/living-with-diabetes/complications/eye-complications)
Foot Care and Complications
People diagnosed with diabetes can develop a variety of foot problems. Most foot problems arise as a result of nerve damage, also known as neuropathy. Diabetic neuropathy (nerve damage) can result in the loss of feeling in your feet and can decrease your ability to feel pain, heat, or cold. When you lose feeling, you may not be able to feel a foot injury, such as a blister, stone in your shoe, or many other everyday occurrences. You might not feel this injury until the skin breaks down and gets infected.

Skin Changes on your Feet
Diabetes can cause the skin on your feet to become very dry, peel, and crack. This is because the nerves that control oil and moisture in your foot are damaged. To keep the skin on your feet healthy, you must:
- Dry your feet completely and moisturize with a thin layer of petroleum jelly, unscented body/foot cream, or other moisturizing products after bathing.
- Be careful not to put oils or creams between your toes, as this additional moisture can cause infection.
- Do not soak your feet, as this can dry out your skin further.

Calluses
Calluses can occur more often and become larger and thicker on the feet of people diagnosed with diabetes. If calluses are not trimmed, they can become very thick and turn into ulcers (open sores). In order to care for calluses:
- See your health care provider to cut your calluses. Do not try to remove calluses or corns with chemicals.
- Use a pumice stone in the shower or bath to keep calluses under control. Be sure to moisturize after using pumice stone.

Foot Ulcers
People with diabetes are more likely to have foot ulcers (open sores) develop on the ball of the foot or the bottom of the big toe. These ulcers may not hurt, but it is still important for your diabetes care team to examine. Foot ulcers left untreated can lead to infection. Your diabetes care team may:
- Take X-rays of your foot to make sure the bone is not infected
- Clean out any dead or infected tissue
- Provide you with a prescription for antibiotics to treat the infection

It is important to avoid walking on an ulcer, as it can make the infection go deeper into your foot. After an ulcer is treated, you should treat your foot carefully as scar tissue can break down easily. You may need to wear special shoes to prevent the ulcer from returning.

Poor Circulation
Diabetes can cause the blood vessels of your foot and leg to narrow and stiffen, and therefore the blood is not able to reach those areas as effectively. Smoking, high blood pressure and high cholesterol can cause this to progress even faster. Your feet may feel cold, but because of the neuropathy you may burn your feet when trying to warm them. Wearing warm socks is the best solution. Exercise is good for poor circulation. It encourages blood flow in your legs and feet. Make sure to wear comfortable shoes and check for blisters and ulcers after.
Summary of Important Foot Care
For People with Diabetes:

- Wash your feet daily with lukewarm water and soap.
- Wear clean, soft, and dry socks that fit you well.
- Dry your feet well, especially between your toes.
- Keep your feet warm and dry. If possible, wear special, padded socks and always wear shoes that fit well.
- Keep your skin soft with a moisturizing lotion, but be careful not to put it between your toes.
- Never walk barefoot indoors or outdoors.
- Use an emery board to gently shape your toenails straight across. Do not use scissors or nail clippers.
- Examine your shoes everyday for cracks, nails, or anything that could hurt your feet.

Check your feet for blisters, cuts, sores, redness, and swelling. Contact your diabetes care team right away if you see something wrong. If you are unable to check your feet at home, let your provider know so they can take special precautions.

Take off your shoes and socks at every provider visit and have your feet checked. Have a comprehensive (in depth) foot exam should occur at least once a year.

Information found from American Diabetes Association
(www.diabetes.org/living-with-diabetes/complications/foot-complications)
“Foot Care for People with Diabetes” (ChangingDiabetes-us.com; Novo Nordisk Inc. 6/2006)
Dental Care and Complications
When you have diabetes, high blood sugar can take a toll on your entire body — including your teeth and gums. But the good news is that you can prevent these complications by having good oral hygiene and visiting your dentist regularly for checkups. Whether you have type 1 diabetes or type 2 diabetes, managing your blood sugar level is key. The higher your blood sugar level, the higher your risk of:

- **Tooth decay (cavities).** Your mouth naturally contains many types of bacteria. When starches and sugars in food and beverages interact with these bacteria, a sticky film known as plaque forms on your teeth. The acids in plaque attack the hard, outer surface of your teeth (enamel). This can lead to cavities. The higher your blood sugar level, the greater the supply of sugars and starches — and the more acid wearing away at your teeth.

- **Early gum disease (gingivitis).** Diabetes reduces your ability to fight bacteria. If you do not remove plaque with regular brushing and flossing, it will harden under your gum line into a substance called tartar (calculus). The longer plaque and tartar remain on your teeth, the more they irritate the gingiva — the part of your gum around the base of your teeth. In time, your gums become swollen and bleed easily. This is gingivitis.

- **Advanced gum disease (periodontitis).** Left untreated, gingivitis can lead to a more serious infection called periodontitis, which destroys the soft tissue and bone that support your teeth. Eventually, periodontitis causes your gums to pull away from your teeth and your teeth to loosen and even fall out. Periodontitis tends to be more severe among people who have diabetes because diabetes lowers the ability to resist infection and slows healing. An infection such as periodontitis may also cause your blood sugar level to rise, which makes your diabetes more difficult to control. Preventing and treating periodontitis can help improve blood sugar control.
To help prevent damage to your teeth and gums, take diabetes and dental care seriously:

- **Make a commitment to managing your diabetes.** Monitor your blood sugar level, and follow your doctor’s instructions for keeping your blood sugar level within your target range. The better you control your blood sugar level, the less likely you are to develop gingivitis and other dental problems.

- **Brush your teeth at least twice a day.** Brush in the morning, at night and, ideally, after meals and snacks. Use a soft-bristled toothbrush and toothpaste that contains fluoride. Avoid vigorous or harsh scrubbing, which can irritate your gums. Consider using an electric toothbrush, especially if you have arthritis or other problems that make it difficult to brush well.

- **Floss your teeth at least once a day.** Flossing helps remove plaque between your teeth and under your gum line. If you have trouble getting floss through your teeth, use the waxed variety. If it’s hard to manipulate the floss, use a floss holder.

- **Schedule regular dental cleanings.** Visit your dentist at least twice a year (every 6 months) for professional cleanings.

- **Make sure your dentist knows you have diabetes.** Every time you visit your dentist, remind him or her that you have diabetes. Make sure your dentist has contact information for your doctor who helps you manage your diabetes.

- **Look for early signs of gum disease.** Report any signs of gum disease — including redness, swelling and bleeding gums — to your dentist. Also mention any other signs and symptoms, such as dry mouth, loose teeth or mouth pain.

- **Don’t smoke.** Smoking increases the risk of serious diabetes complications, including gum disease. If you smoke, ask your doctor about options to help you quit.

Managing diabetes is a lifelong commitment, and that includes proper dental care. Your efforts will be rewarded with a lifetime of healthy teeth and gums!

*Information found from the Mayo Clinic website:*


**Review:**
Keep in mind that the goals and the frequency to test may vary from patient to patient. In general,

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Screening</th>
</tr>
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<tr>
<td>Serum creatinine-kidneys</td>
<td>Yearly</td>
</tr>
<tr>
<td>Spot urine (microalbumin)-kidneys</td>
<td></td>
</tr>
<tr>
<td>Eye exam</td>
<td>Yearly</td>
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<tr>
<td><strong>Foot care by patient</strong></td>
<td>Daily</td>
</tr>
<tr>
<td><strong>Comprehensive foot exam by provider</strong></td>
<td>Yearly</td>
</tr>
<tr>
<td>Dental care</td>
<td>Daily</td>
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</table>
Lesson 5
Lifestyle Modifications

Your Diabetes Meal Plan
You have heard for years how important it is to eat healthy meals, but it is even more important for people with diabetes. In order to manage your diabetes effectively and safely, you will need to:

- Eat healthy meals and snacks at regular times during the day
- Match how much food you eat with your activity level
- Learn how to count carbohydrates with the help of your diabetes care team

You will not necessarily need to banish certain foods from your diet, but you will need to limit the amount you eat and how often you eat some of these foods.

Your meal plan should include:
- A wide variety of foods so that you get the necessary nutrients (the healthy parts of food)
- Many of your favorite foods so that you can enjoy the food you are eating
- An easy to follow schedule
- A weekly grocery list so that you plan your shopping trips

The goals of your meal plan are to help you:
- Keep your blood sugar within your goal range
- Manage your weight
- Manage your blood cholesterol and blood fat levels
- Manage your blood pressure

A Guide to Healthy Eating
The American Diabetes Association (ADA) recommends you:

- Choose fruits, vegetables, whole grains, legumes, and low-fat milk more often than sugary foods
- Eat fiber-rich foods
- Keep saturated fats to less than 7% of total daily calories
- Eat at least 2 servings of non-fried fish per week
- Limit trans fats
- Restrict cholesterol intake to less than 200 mg/day
- Reduce sodium (salt) intake to about 1,500 mg/day or less

“Your care team can give you resources for you take the guesswork out of meal planning”

“When I was first diagnosed with diabetes, I was morbidly obese and I did not know anything about diabetes. With the support from my primary care team, I started eating healthier and lost weight. My team provided me with the resources and education I needed to be successful at managing my condition. My diabetes is now controlled and become healthier” – Tina R, Cleveland

Making changes to your diet may take some time. The benefits of healthy eating are well worth the work! Here are some steps to help:

- Start Small. Make one or two changes in your meal plan. Once that change feels normal, add another change.
- **Get Support.** Your meal plan is a healthy way for *anyone* to eat. Get your family and friends to join you in your meal plan.

**Know your Nutrients and Keep Track of your Carbs**
Food provides your body with the nutrients it needs to stay healthy. Each different type of food has a specific job to do in your body.

**Carbohydrates ("Carbs")** are the main kind of food that raises your blood sugar levels. This is very important for people with diabetes to remember, because how many carbohydrates you eat will impact your blood sugar levels.
- Sugary foods, which is one type of carbohydrate, will begin to raise your blood sugar very soon after you eat them.
- Starchy foods will take longer for the body to change into sugar, but will eventually be changed completely into sugar
- Fiber, the third type of carbohydrates, is part of vegetables, fruits, nuts, beans, and whole grains. Fiber helps prevent constipation and diarrhea. It also helps you feel full after eating and may lower your cholesterol levels

**Fats** come in different kinds and should make up the rest of your meal plan
- Monounsaturated fat include fats such as canola and olive oil
- Polyunsaturated fats are found in corn and safflower oils
- Saturated fat is usually solid at room temperature and is found mostly in animal products, such as butter and meat, but also in tropical oils such as coconut and palm kernel oil.

Less than 7% of your total daily calories should come from saturated fat.

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<table>
<thead>
<tr>
<th>Carbohydrates</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugary foods</td>
<td>Juice, honey, table sugar</td>
</tr>
<tr>
<td>Starchy foods</td>
<td>Potatoes, peas, corns, dried beans/peas</td>
</tr>
<tr>
<td>Fiber</td>
<td>Grains, cereals, skins and seeds from fruits and vegetables, brown rice</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fats</th>
<th>Examples</th>
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<tr>
<td>Saturated fat</td>
<td>Butter, meat</td>
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<td></td>
<td>Coconut, palm kernel oil</td>
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<thead>
<tr>
<th>Protein</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>Proteins</td>
<td>Meat, poultry, fish, dairy products, eggs</td>
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</table>
**Diabetes Superfoods**
As with all foods, you will need to work these diabetes superfoods into your individualized meal plan in appropriate portions. These superfoods are a great place to start when planning out your meal plan:

- Citrus Fruit (grapefruit [avoid with some cholesterol medications], oranges, lemons, limes)
- Berries (blueberries, strawberries, blackberries)
- Tomatoes
- Dark Green Leafy Vegetables (spinach, collards, kale)
- Fish High in Omega-3 Fatty Acids (salmon)
- Nuts (walnuts, flax seed, almonds)
- Fat-free Milk and Yogurt
- Whole Grains (unsweetened oatmeal, whole wheat bread)
- Sweet Potatoes
- Beans (kidney, pinto, navy, black beans)

Some of these diabetes superfoods can be tough on your budget depending on where you live and what time of year. Lower cost options are always fruits and vegetables in season, frozen vegetables, and fish.

Cornerstones4care.com booklet of information*

**Physical Activity Plan**
Being physically active is important to your health and blood sugar control. Even a small increase in activity can make a big difference. Being active can help:
- Lower your blood sugar
- Reduce your need for many diabetes medications
- Help your body use insulin better
- Improve the health of your heart
- Manage your weight
- Strengthen your muscles and bones
- Give you more energy
- Relieve stress
- Improve how you look and feel

**Before you start your activity plan, follow these steps:**
**Step 1: Talk with your doctor**
Make sure to talk to your diabetes care team before you start a physical activity plan, so that they can help you develop a plan to work with your meal plan and diabetes medicine.

**Step 2: Choose your activity**
Choose an activity that you enjoy! Exercising does not have to mean going to a gym, just about anything that includes moving is excellent! Here are some examples to get you started:
- Walking
- Jogging
- Bicycling
- Swimming
- Dancing
Step 3: Set a goal
It has been proven that if you write down what you want to achieve, you are more likely to reach that goal! The American Diabetes Association recommends being active for at least 150 minutes a week, spread out over at least 3 days. Discuss this with your diabetes care team in order to figure out a plan that is best for you!

Staying safe while being active
It is important to stay active once you are diagnosed with diabetes. Here are some helpful tips:
- Be sure to check your blood sugar before and after you are active
- Bring a fast-acting carbohydrate snack with you in case your blood sugar drops too low
- Don’t exercise if you aren’t feeling well
- Wear a medical identification bracelet or necklace
- Protect your feet! Check the inside of your shoes and socks for anything that might injure your feet. Wear comfortable shoes and socks. Be sure to examine your feet after exercise and notify your diabetes care team if anything looks damaged.

Information found in Cornerstones4care.com Information booklet
Lesson 6
Medication Management:

How is Diabetes managed?
When you are first diagnosed with diabetes, your care team will work with you to make a personalized diabetes care plan. Your plan will be made specifically for you, trying to match your likes and dislikes and your blood sugar goals.

Typical diabetes care plans include:
- A plan to help you know when and how to check your blood sugar
- Your personal blood sugar goals
- Other health goals (such as managing your weight and blood pressure)
- Screenings and responsibilities such as such as eye test, foot care, dental care
- A meal plan
- A physical activity plan
- When and how to take your diabetes medication
- Healthy ways to deal with stress
- A plan for regular health checkups
- As a part of your diabetes care plan, be sure to keep track of your ABC’s:
  - A1C levels (this will be a part of your blood sugar test)
  - Blood pressure
  - Cholesterol levels

Medications for Type 2 Diabetes
Sometimes dealing with stress properly, eating right, and exercising regularly are not enough to manage your blood sugar levels. In this case, your care team recommends you start to take medicine to help manage your diabetes.

Diabetes pills (OADs)
These orally taken pills are also called oral antidiabetic drugs or OADs for short. Although there are many different kinds of OADs, all of them work their best when you also follow a meal plan and regularly exercise. Different OADs work in different ways, including the following:
- Some pills help the body release more insulin
- Some pills lower the amount of sugar the liver releases
- Some pills make insulin work better in muscle and fat
- Some pills slow down the process that turns food into sugar
- Some pills prevent the breakdown of a hormone called GLP-1, which does many things to help control blood sugar

These drugs are often taken together so they can work together to lower blood sugar levels. They do not work for everyone however, and in some cases they may stop working as your diabetes progresses and the specialized insulin producing cells in your pancreas stop working. This is not because you failed to control your diabetes, but simply means that your body has changed and needs a different type of treatment.
**Injectable diabetes medicines**

Some medicines cannot be delivered to you or just work better when not in pill form. These are injectable diabetes medications. Some of these are non-insulin injectable medicines, and some are insulin. It is important to remember that while the idea of injectable medication is worrisome, the needles used today are very small and almost pain-free. These injectable medications can be taken from a vial and syringe or from a convenient pre-filled pen.

Non-insulin injectable medicines work in one or more of the following ways:

- By acting on the GLP-1 hormone, which works in many ways to help control blood sugar, including helping your pancreas release insulin
- By acting like the hormone amylin, which naturally works with insulin to help manage blood sugar levels
- By slowing the movement of food from your stomach so sugar enters your blood more slowly

**Insulin**

There are many different insulin medications available to people with type 1 and type 2 diabetes. You and your care team can work together to find the right medicine for you.

If you have been told that you could benefit from insulin but have delayed starting it, you are not alone. Many people worry about injecting themselves. They wonder if insulin has side effects. They wonder if taking insulin will interfere with their lives. However, people with type 2 diabetes who start insulin often find that it greatly improves their lives.