What is DIABETES?
What is diabetes?

Diabetes is a defect in the body’s ability to convert glucose (sugar) to energy. Glucose is the main source of fuel for our body. When food is digested it is changed into fats, protein, or carbohydrates. Foods that affect blood sugars are called carbohydrates. Carbohydrates, when digested, change to glucose. Examples of some carbohydrates are: bread, rice, pasta, potatoes, corn, fruit, and milk products. Individuals with diabetes should eat carbohydrates but must do so in moderation.

Glucose is then transferred to the blood and is used by the cells for energy. In order for glucose to be transferred from the blood into the cells, the hormone - insulin is needed. Insulin is produced by the beta cells in the pancreas (the organ that produces insulin).

In individuals with diabetes, this process is impaired. Diabetes develops when the pancreas fails to produce sufficient quantities of insulin – Type 1 diabetes or the insulin produced is defective and cannot move glucose into the cells – Type 2 diabetes. Either insulin is not produced in sufficient quantities or the insulin produced is defective and cannot move the glucose into the cells.

There are two main types of diabetes:

**Type 1 diabetes** occurs most frequently in children and young adults, although it can occur at any age. Type 1 diabetes accounts for 5-10% of all diabetes in the United States. There does appear to be a genetic component to Type 1 diabetes, but the cause has yet to be identified.

**Type 2 diabetes** is much more common and accounts for 90-95% of all diabetes. Type 2 diabetes primarily affects adults, however recently Type 2 has begun developing in children. There is a strong correlation between Type 2 diabetes, physical inactivity and obesity.

<table>
<thead>
<tr>
<th></th>
<th>NORMAL</th>
<th>DIABETES</th>
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</thead>
<tbody>
<tr>
<td>Fasting blood sugar</td>
<td>80-99 mg/dl</td>
<td>126 mg/dl and above</td>
</tr>
<tr>
<td>Random blood sugar</td>
<td>80-139 mg/dl</td>
<td>200 mg/dl and above</td>
</tr>
<tr>
<td>2 hour glucose tolerance test</td>
<td>80-139 mg/dl</td>
<td>200 mg/dl and above</td>
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</tbody>
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What are the symptoms of diabetes?

If you have more than one of these symptoms you may want to ask your doctor to test your blood sugar.

- Blurred vision
- Unusual thirst
- Slow-healing cuts
- Unexplained tiredness
- Erectile dysfunction
- Frequent urination
- Rapid weight loss (Type 1 diabetes)
- Numbness or tingling in hands or feet

Symptoms may occur rapidly with Type 1 diabetes; however, with Type 2 diabetes the onset is more insidious and may not be noticed.
How is diabetes diagnosed?

The diagnosis of diabetes is made by a simple blood test measuring your blood glucose level. Usually these tests are repeated on a subsequent day to confirm the diagnosis. A diagnosis of diabetes is a frightening and bewildering experience because there is so much information to take in and the diagnosis may come as a shock. People with Type 2 diabetes may hear their condition described as “mild,” but Type 2 diabetes is not a “mild” medical condition. Both forms and all stages of diabetes are serious, with many possible complications, including eye, heart, kidney, and nerve damage.

If you are diagnosed with diabetes, what should you do?

- Request a referral to a certified diabetes educator and/or a dietitian.
- Obtain a prescription for a glucometer and testing supplies.
- Begin to make lifestyle changes.
  - Begin an exercise program
  - Make healthy food choices
  - Increase your fiber intake
  - Decrease portion size
  - Limit your intake of concentrated sweets
  - Test your blood sugar at varying times of the day

Get informed. If you have diabetes, there are many things you can do to help yourself. Medication is only one aspect of your care; maintaining a healthy weight, increasing your physical activity, eating healthy foods, testing your blood sugars, taking your medications as prescribed, attending diabetes education programs, and consulting with your health professional to keep your blood sugar in control will help you control your diabetes and stay well. The amount of self-management you can achieve will affect the quality of life you lead.

What is the treatment for diabetes?

As yet, there is no “cure” for either type of diabetes, although there are many ways of keeping diabetes under control. Diabetes treatments are designed to help the body to control the sugar levels in the blood. Studies have shown that good control of blood sugar is the key to avoiding diabetic complications.

- Type 1 diabetes requires insulin. Injected insulin replaces the insulin missing in the body. You will need to learn how to balance your insulin with your food intake and your physical activity. It is important that you work with a diabetes educator and are under the care of a diabetes team, who can assist you in managing your diabetes.
- Type 2 diabetes treatment will vary dependent on your blood sugar levels. Many patients are counseled to change their lifestyle and lose weight. It is important to work with a diabetes educator and dietitian. Treatment begins with changing certain food choices and beginning an exercise program. Diabetes is a progressive disease, and the treatment may change over time, requiring oral medication; if you are already taking medication, you may need an increased dose or multiple medications, and eventually, you may need to start on insulin. To find a diabetes educator contact the American Association of Diabetes Educators at 800-832-6874, or on the web: www.diabeteseducator.org.

See your doctor every three months until your blood sugar is in control, once it’s under control, your numbers and medication regimen should be reviewed every six months.
What is good control?

The A1C test provides you and your doctor with an assessment of the overall control of your diabetes. In simple terms, this test measures the sugar coating on red blood cells. The life of a red blood cell is three months, so this test should be done every three to six months to assess your blood sugar control. Your daily blood sugar results will also provide you with helpful information on the impact of foods, physical activity, and medications. Together these tests should help you manage your diabetes.

Although you may not feel sick, high blood sugar levels are damaging blood vessels and your organs. Complications of diabetes are preventable if you keep your blood sugar as close to normal as possible. The goal is an A1C level between 6.5% -7%.

It is important to take care of your self. Be sure you work with your doctor

Yearly:

• Complete physical exam, foot exam, creatinine, cholesterol, triglycerides, and urine microalbumin tests.
• You may have an electrocardiogram and/or a stress test
• Dilated eye exam by an ophthalmologist.
• Referral to a diabetes educator or nutritionist
• Referral to a smoking cessation program.

Every 3-6 months:

• A1C
• A dental exam.

Each Doctor visit:

• Weight and blood pressure
• Review all medications and supplements
• Review lifestyle changes, physical activity, how you are coping with your diabetes at home and at work.
• Discuss changes that may be necessary in the future.
• Review problems: vision, numbness, tingling in your hands or feet, low blood sugar reactions, digestive problems, and sexual problems.