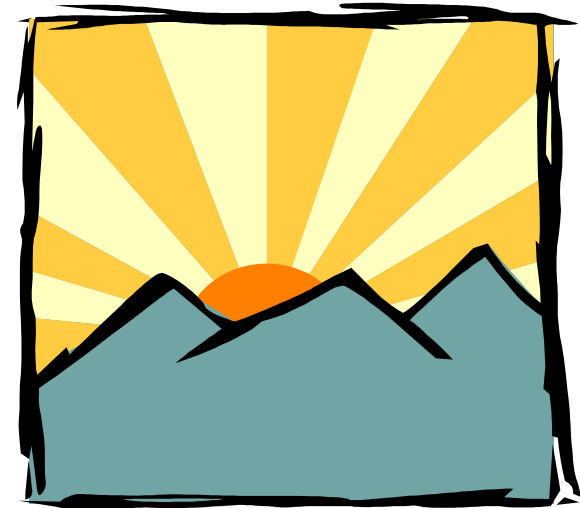


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# Am I at Risk?

Questions and Answers  
Diabetes and You



Cameron County Guide to  
Prevention and  
Control of Diabetes

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DEPARTMENT OF  
**HEALTH**

*Edward G. Rendell, Governor  
Calvin B. Johnson, M.D., M.P.H., Secretary of Health*

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### Sources

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# What is Diabetes?

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches, and other foods into the energy needed for daily activities. The exact cause of diabetes is unknown, although both genetics and environmental factors, such as obesity and lack of exercise, appear to play serious roles in the diagnosis of type 2 diabetes.

Diabetes is the sixth leading cause of death in Pennsylvania and fifth in the nation. Nearly 8% of Pennsylvanians, 660,000 adults and 4,800 children, have diabetes. It is estimated that 20.8 million (7%) Americans already have Diabetes, making Pennsylvania's rate higher than the national average. <sup>3</sup>

## Are you at risk?



# I. Risk Factors of Diabetes\*

Check each box that relates to you.

- I am age 45 or older.
- I am overweight (See Body Mass Index, pg. 9).
- I am physically inactive, or exercise less than 3 times per week.
- I have a parent, brother, or sister with diabetes.
- I am a member of a high risk ethnic population (ex.. African American, Latino, Native American, Asian American, or Pacific Islander).
- I have been diagnosed with high blood pressure, or currently have blood pressure equal to or greater than 140/90 mm/Hg.
- I have high cholesterol, or I have normal cholesterol, but my HDL (good) cholesterol is less than or equal to 35 mg/dl and/or triglycerides are equal to or greater than 150 mg/dl.
- I have been previously diagnosed with pre-diabetes.
- I have had gestational diabetes or have given birth to a baby weighing equal to or greater than 9 pounds.

\* Adapted from "Am I at Risk for Type 2 Diabetes?" NIH publication No. 02-4805 June 2002.

Centers for Disease Control and Prevention  
1-800-323-4636 or [www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)

Children's Hospital of Pittsburgh  
412-692-5171 or [www.chp.edu](http://www.chp.edu)

Children with Diabetes  
[www.childrenwithdiabetes.com](http://www.childrenwithdiabetes.com)

Diabetes Footcare  
[www.nice.org.uk/page.aspx?o=101518](http://www.nice.org.uk/page.aspx?o=101518)

Diabetes 4 Patients  
[www.diabetes4patients.com](http://www.diabetes4patients.com)

Diabetes Type II  
[www.mamashealth.com/Diabetes2.asp](http://www.mamashealth.com/Diabetes2.asp)

Diabetes Type II 2 Mellitus Diet  
[www.pulsemed.org/qnadiabetesdiet.htm](http://www.pulsemed.org/qnadiabetesdiet.htm)

Emedicine - Diabetes Mellitus  
[www.emedicine.com/EMERG/topic134.htm](http://www.emedicine.com/EMERG/topic134.htm)

Healthier US Initiative  
[www.healthierus.gov](http://www.healthierus.gov)

Help for Type 2 Diabetes  
<http://outreach.missouri.edu/hesfn/diabetes/helptype2.htm>

Juvenile Diabetes Research Foundation, Northwestern PA Chapter  
[www.jdrf.org/northwestpa](http://www.jdrf.org/northwestpa)

National Diabetes Education Program  
1-800-438-5383 or [www.ndep.nih.gov](http://www.ndep.nih.gov) and click on the Small Steps logo

National Heart, Lung, and Blood Institute  
301-592-8573 or [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

National Institute of Diabetes and Digestive and  
Kidney Diseases and National Diabetes Information  
Clearinghouse 1-800-860-8747 or [www.niddk.nih.gov](http://www.niddk.nih.gov)

Type 2 Diabetes - Conditions  
[www.diabetes.org/type-2-diabetes.jsp](http://www.diabetes.org/type-2-diabetes.jsp)

United States Department of Agriculture  
Nutrient Data Laboratory  
[www.nal.usda.gov/fnic/cgi-bin/nut\\_search.pl](http://www.nal.usda.gov/fnic/cgi-bin/nut_search.pl)

Weight Control Information Network  
[www.niddk.nih.gov/health/nutrit/win.htm](http://www.niddk.nih.gov/health/nutrit/win.htm)

## Diabetic Education Resources

### **Bradford Hospital**

Outpatient Diabetic Clinic  
Stacia Nolder  
(814) 368-4143

### **Charles Cole Memorial Hospital—Coudersport**

Private insurance has to be preauthorized.  
If insurance doesn't pay, the fee can often be waived.  
1-800-242-0416 or (814) 274-9300

### **Community Nurses of Elk/Cameron/McKean Counties**

Offer home bound education for fee-for-service  
1-800-841-9397

### **Elk Regional Hospital—Saint Marys**

Diabetic Education Department  
Ray Jablonski or Libby Herbstritt  
Referral form must be completed by Provider  
(814) 781-7500 or (814) 788-8000

Keystone Rural Health Consortia, Inc.  
(814) 486-1115

## **Diabetes Websites**

**American Association of Diabetes Educators**  
1-800-832-6874 or [www.aadenet.org](http://www.aadenet.org)

**American Diabetes Association**  
1-888-342-2383 or [www.diabetes.org](http://www.diabetes.org)

**American Dietetic Association, Heart and Stroke Information**  
1-800-877-1600 or [www.eatright.org](http://www.eatright.org)

**American Heart Association**  
1-800-242-8721 or [www.americanheart.org](http://www.americanheart.org)

**American Heart Association, Women's Health**  
1-888-694-3278 or [www.americanheart.org](http://www.americanheart.org)

## **What is the Next Step?**

The risk factors listed are meant to increase your awareness of diabetes. If you are age 45 or older and overweight, testing for diabetes and pre-diabetes is strongly recommended. If you are younger than 45 years, overweight, and checked any other items, consider your risk and discuss with your physician the need for further testing.

## **How is Diabetes Diagnosed?**

Your doctor will order a blood test to determine whether or not you have diabetes or pre-diabetes. The following tests are used to diagnose diabetes.

**Fasting Plasma Glucose Test**—measurement of glucose in the blood after you have not eaten for 8 hours.

**Random Plasma Glucose Test**—measurement of glucose in the blood taken at any time, that if elevated requires the presence of symptoms to diagnose.

**Oral Glucose Tolerance Test**—measurement of glucose in the blood taken after consumption of a drink containing 75 grams of glucose dissolved in water (100 grams are used to test for gestational diabetes).



## What is a Normal Blood Sugar Level? <sup>13</sup>

A fasting blood sugar should be ordered by your doctor and done after you have fasted for 8–10 hours.

### Results

Normal Blood Sugar	Less than 100
Pre-Diabetes	100–125
Diabetes	126 or higher on <u>two different occasions</u>

## Why Should I Try to Keep my Blood Glucose on Target? <sup>1</sup>

The closer your blood glucose stays to your target range, the more you'll lower your risk of blindness or diabetic eye disease, kidney disease, foot problems, nerve damage, tooth and gum disease, and skin problems. You may also lower your risk for heart attack or stroke.



## Cameron County Community Services

### Walking Programs:

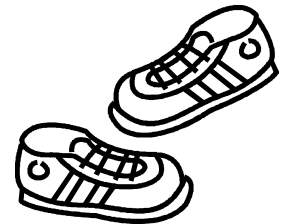
Held at Cameron County High School  
During Inclement Winter Weather  
Woodland Avenue, Emporium  
(814) 486-1115

### Walking Areas: Available throughout County

### Exercise & Physical Fitness Programs

#### Fitness Center

Sizerville Road, Emporium  
(814) 486-1321



#### Support Groups

##### Weight Watchers

Meetings are Wednesdays at  
5:30 p.m.  
Presbyterian Church, Emporium

#### Inches Away Diet Center

1406 Million Dollar Highway, Saint Mary's  
(814) 834-3467

#### Cameron County Optical Clinic

Monday 10:00 a.m.— 4:00 p.m.  
Saturday 9:00 a.m.— 12:00 p.m.

#### Transportation

ATA 1-800-912-0450  
Area Agency of Aging 1-800-672-7145 or  
(814) 776-2191  
Care and Concern (814) 546-2679 or  
(814) 546-2810

Cameron County Christian Center (814) 486-2500

## VII. Community Resources

### Diabetic Services and Supplies

- Bradford Pharmacy - (814) 362-6521
- Buchanan's- Coudersport - (814) 274-7320
- Buchanan's - Smethport - (814) 887-5375
- Cliffe's - Ridgway - (814) 773-3131
- CVS - Bradford - (814) 362-4559
- CVS - Johnsonburg - (814) 965-5338
- Eckerd Drug - Saint Mary's - (814) 834-7883
- Emporium Pharmacy - (814) 486-1110
- Medicine Shoppe - (814) 486-1119
- Medicine Shoppe - Bradford - (814) 362-6200
- Ott & McHenry - Bradford - (814) 362-3827
- Port Pharmacy - (814) 642-2871
- Rite Aid - Coudersport - (814) 274-0439
- Rite Aid - Emporium - (814) 486-2007
- Rite Aid - Kane - (814) 387-6160
- Rite Aid - Port Allegany - (814) 642-5021
- Rite Aid - Ridgway - (814) 776-1428
- Saint Mary's Pharmacy - (814) 834-3017
- Temple Pharmacy & Home Health Care - Kane -  
(814) 837-6611
- TOPS - Bradford - (814) 363-9904
- Wal-Mart - Bradford - (814) 368-4700
- Wal-Mart - Saint Mary's - (814) 781-1389

## Who Should have the Fasting Blood Sugar Test? <sup>13</sup>

- If you are age 45 or older
  - Overweight
  - Get little or no exercise
  - Family history of Diabetes
- If you are under age 45, overweight and any of the following are true:
  - Blood pressure of 140/90 or higher
  - Cholesterol higher than 200
  - Triglycerides higher than 150
  - Family history of diabetes
  - History of gestational diabetes
  - Get little or no exercise
  - In one of the ethnic groups (African American, Hispanic American, Native American Indian, Latino American) with a higher risk of developing diabetes



## II. Prevention of Diabetes

It is important to take action with pre-diabetes. Type 2 diabetes, the most common type, develops gradually over a period of 7-10 years, beginning as pre-diabetes.

Efforts to lose weight and get more exercise will make a big difference. By taking action, you can reduce your risk of developing diabetes by 50%.

Healthy life style changes can delay or prevent type 2 diabetes by 50% by simply doing the following:

- Reach and maintain a healthy weight.
- Moderate physical activity.
- Modest changes to your diet.

### What is a Healthy Weight and Why Does it Matter?

Reaching a healthy body weight will decrease your risk of developing diabetes. Healthy body weight is defined as a Body Mass Index (or BMI) range of 19-25 among individuals ages 20 years and older. Obesity is defined as a BMI of 30 or higher, which is about 30 pounds of excess weight. Excess weight places you at risk for developing many serious health problems, including diabetes. **Please refer to the BMI chart.**

If your BMI is above 25, choose sensible ways to get in shape. Avoid crash dieting and make a plan to increase your activity level. Set reasonable weight loss goals. Aim for a long-term goal of losing 5-7% of total body weight. For example, a person weighing 200 pounds would need to lose 10-15 pounds to achieve a 5-7% weight loss.

## VI. Prescription Help

### Diabetic Medication Assistance Programs

Partnership for Prescription Assistance	1-888-477-2669
<a href="http://www.pparx.com">www.pparx.com</a>	
Adult Basic Health Insurance for Pennsylvania Adults	1-800-462-2742 (1-800-GO-BASIC)
<a href="http://www.compass.state.pa.us">www.compass.state.pa.us</a>	
Children's Health Insurance Program	1-800-986-5437
<a href="http://www.chipcoverspakids.com">www.chipcoverspakids.com</a>	
Diabetics Rx America	1-800-537-4881
<a href="http://www.diabetesrxamerica.com">www.diabetesrxamerica.com</a>	
Express-Scripts RX Outreach	1-800-769-3880
Freedrugcard.us	1-866-410-4225
<a href="http://www.freedrugcard.us">www.freedrugcard.us</a>	
Free Medicine Foundation	1-573-996-0125
<a href="http://www.FreeMedicineFoundation.com">www.FreeMedicineFoundation.com</a>	
Lilly Answers	
<a href="http://www.lillyanswers.com">www.lillyanswers.com</a>	
MedCare Solutions	1-888-727-8633
<a href="http://www.medcaresolutions.com">www.medcaresolutions.com</a>	
Medicine Bridge	1-877-667-6337
<a href="http://www.medicinebridge.com">www.medicinebridge.com</a>	
Merck Prescription Assistance Program	800-506-3725
<a href="http://www.merckhelps.com/uninsured/about.html">www.merckhelps.com/uninsured/about.html</a>	
Novo Nordisk Patient Assistance	1-866-310-7549
Orange Card	1-888-672-6436
<a href="http://us.gsk.com/card">http://us.gsk.com/card</a>	
PACE	1-800-225-7223
Patient Assistant Programs	1-215-625-9609
<a href="http://www.needymeds.com">www.needymeds.com</a>	
Pfizer Helpful Answers	1-866-706-2400
<a href="http://www.pfizerhelpfulanswers.com">www.pfizerhelpfulanswers.com</a>	
Rx Savings Access Card	1-888-227-3479
<a href="http://www.rxsavingsaccess.com">www.rxsavingsaccess.com</a>	
Together Rx	1-800-865-7211
<a href="http://www.together-rx.com">www.together-rx.com</a>	



## Long-Term Complications Continued

**Nerve Damage**—Nerve damage, peripheral neuropathy, is a common problem among individuals with diabetes. There are two types of nerve damage. With the first type, you might experience tingling or numbness in your hands or feet. The second type damages the nerves that help control blood pressure. You may feel dizzy when you stand up or your heart won't speed up when you exercise. Other signs of nerve damage include dry skin, bladder and digestive problems, or sexual problems.

**Tooth Decay and Gum Disease**—Diabetes can increase the glucose in your saliva. Over time, high glucose levels can cause tooth decay and gum disease. See your dentist at least every 6 months for a checkup.

**Skin and Foot Infections**—High glucose levels increase the risk of foot and skin infections. Foot numbness, resulting from nerve damage, increases the risk of cuts and infections. Severe problems with blood circulation can lead to toe, foot, or leg amputation. Watch for signs of foot problems that include foot pain or numbness; swelling in the feet or legs; or sores that won't heal.

### **Foot Care Tips—Protect Your Feet**

- Clean feet well and often. Dry them well.
- Use lotion on outside of feet, not between toes.
- Never go barefoot.
- Wear comfortable socks and shoes.
- Inspect feet daily for bruises, cuts, or swelling.
- File toenails straight across with an emery board.
- Call your doctor if you injure your feet in any way.
- Take your shoes and socks off at every doctor's appointment for examination.



## **BMI Chart** <sup>5</sup>

To use the table, find the appropriate height in inches in the left column and move across to a given weight in pounds. The number at the top of the column is the BMI at that height and weight. Pounds have been rounded off.

BMI (kg/m <sup>2</sup> )	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Ht (in.)	Weight (lb.)													
58	91	96	100	105	110	115	119	124	129	134	138	143	167	191
59	94	99	104	109	114	119	124	128	133	138	143	148	173	198
60	97	102	107	112	118	123	128	133	138	143	148	153	179	204
61	100	106	111	116	122	127	132	137	143	148	153	158	185	211
62	104	109	115	120	126	131	136	142	147	153	158	164	191	218
63	107	113	118	124	130	135	141	146	152	158	163	169	197	225
64	110	116	122	128	134	140	145	151	157	163	169	174	204	232
65	114	120	126	132	138	144	150	156	162	168	174	180	210	240
66	118	124	130	136	142	148	155	161	167	173	179	186	216	247
67	121	127	134	140	146	153	159	166	172	178	185	191	223	255
68	125	131	138	144	151	158	164	171	177	184	190	197	230	262
69	128	135	142	149	155	162	169	176	182	189	196	203	236	270
70	132	139	146	153	160	167	174	181	188	195	202	207	243	278
71	136	143	150	157	165	172	179	186	193	200	208	215	250	286
72	140	147	154	162	169	177	184	191	199	206	213	221	258	294
73	144	151	159	166	174	182	189	197	204	212	219	227	265	302
74	148	155	163	171	179	186	194	202	210	218	225	233	272	311
75	152	160	168	176	184	192	200	208	216	224	232	240	279	319
76	156	164	172	180	189	197	205	213	221	230	238	246	287	328

## Why is Physical Activity Important for People at Risk for Developing Diabetes? <sup>1</sup>

### What physical activity can do for you:

- Lower blood glucose, blood pressure, and cholesterol
- Lower risk for heart disease, stroke, and diabetes
- Relieve stress
- Help insulin work better
- Strengthen bones, muscles, and heart
- Tone muscles
- Improve blood circulation
- Keep joints and body flexible
- Improve mental outlook

Even if you have never exercised before, you can find ways to add physical activity into your daily routine. Once physical activity is part of your routine, you will wonder how you did without it!

### If you have not been very active lately, what should you do first?

- Start with a checkup from your doctor to check your heart, blood vessels, eyes, kidneys, nervous system, and feet.
- Your doctor can recommend physical activities that will help you if you show signs of disease.

### Practical Activities to Add Throughout the Day:

- Walk instead of drive whenever possible
- Take stairs instead of elevator
- Walk when on the phone
- Work in the garden, rake leaves, wash the car
- Play with the kids
- Carry things upstairs in two trips instead of one

## Long-Term Complications <sup>15</sup>

**Cardiovascular Disease**—Cardiovascular disease is the leading cause of diabetes-related death. People with diabetes are 2-4 times more likely to develop cardiovascular disease due to: high blood pressure; lipid disorders including high LDL, or bad cholesterol; high triglycerides; and low HDL, or good cholesterol; smoking; obesity; and lack of physical activity. <sup>2</sup> Heart disease occurs earlier in people with diabetes and is more often fatal.

**High Blood Pressure**—Controlling high blood pressure in people with diabetes is especially important because high blood pressure is a major risk factor for cardiovascular disease and increases the risk for heart attack, stroke, and other complications such as retinopathy (damage to the blood vessels in the retina) and nephropathy (damage to the blood vessels in the kidneys). <sup>2</sup> High blood pressure doesn't usually have any symptoms, therefore you should have it checked regularly.

**Blindness**—Diabetes can cause damage to the tiny blood vessels that supply the retina, which is the light-sensing section of the inner eye. Glaucoma is an eye disease caused by excess pressure buildup in the eyes, which can lead to blindness.

**Kidney Disease**—People with diabetes have a higher risk of developing kidney disease. The tiny blood vessels in the kidneys that filter out waste in the blood can get blocked and leaky. Tobacco use can also reduce blood flow to the kidneys.

## V. Complications

### What are the Short-Term and Long-Term Complications of Diabetes?

#### Short-Term Complications <sup>15</sup>

##### **Hypoglycemia**—Low blood sugar levels

###### **Symptoms:**

- Nervous or irritable
- Dizzy or shaky
- Hungry
- Headache
- Sweating
- Fast heartbeat
- Blurry vision

###### **Causes:**

- Not eating or eating too little
- Taking too much insulin or diabetes medication
- Being too active without enough available energy source

###### **Treatment:**

Eat or drink fast acting carbohydrates such as:

- 3-4 glucose tablets
- 1/2 can regular soda (not diet)
- 4 oz of fruit juice
- 3-5 hard candies to quickly chew

##### **Hyperglycemia**—High blood sugar levels

###### **Symptoms:**

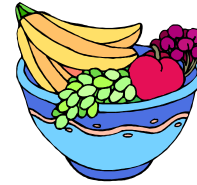
- Frequent urination
- Extreme thirst
- Dry skin/mouth
- Hunger
- Blurred vision
- Drowsiness
- Slow healing wounds

###### **Causes:**

- Not taking enough insulin or medication
- Eating more than usual
- Not exercising

###### **Treatment:**

- Follow your meal plan
- Do an activity in your exercise plan
- Take your medications as directed



## What is a Healthy Diet?

Healthy eating includes watching portion sizes and eating a wide variety of foods including vegetables, whole grains, fruits, low-fat dairy products, beans, lean meats, poultry, and fish.

Dietary Guidelines describe a healthy diet as one that:

- Focuses on fruits, vegetables, whole grains, skim milk and low-fat dairy products;
- Includes lean meats, poultry, fish, beans, eggs, and nuts;
- Low in saturated fat, trans fats, cholesterol, salt, and added sugars.





### Let's Look Inside the Food Pyramid! <sup>7</sup>

1. **Grains—Make Half Your Grains Whole Grains!**
  - Eat at least 3 ounces of whole grain bread, cereal, crackers, rice, or pasta every day
  - Look for "whole" before the grain name on the list of ingredients
2. **Vegetables—Vary Your Vegetables!**
  - Eat more dark green vegetables
  - Eat more orange vegetables
  - Eat more dry beans and peas
3. **Fruits—Focus on Fruit!**
  - Eat a Variety of Fruit!
  - Choose fresh, frozen, canned, or dried fruit
  - Go easy on fruit juices; limit to 4-6 oz a day, if any
4. **Milk—Get Your Calcium Rich Foods!**
  - Go low fat or fat free
  - If you don't or can't consume milk, choose lactose free products or other calcium sources
5. **Meat & Beans—Go Lean on Protein!**
  - Choose low fat or lean meats and poultry
  - Bake it, broil it, or grill it
  - Vary choices—with more focus on fish, beans, peas, nuts, and seeds
6. **Oils—Know Your Fats!**
  - Make most of your fat sources from fish, nuts, and vegetable oils
  - Limit solid fats like butter, stick margarine, shortening, and lard

## What Do These Tests Mean?

**Hemoglobin A1C (HbA1c) test** is a simple lab test showing the average amount of sugar in your blood over the last 2-3 months. It is one of the best ways to find out if your blood sugar level is under control.

### HbA1c Levels:

Normal	< 6%
Goal	< 7%
Action Taken	> 8%

Plasma Blood Values	Goal
Average Before Meals	90—130 mg/dl
Average After Meals	< 180 mg/dl

### Lipid and Blood Pressure

#### Lipid Profile:

Total Cholesterol < 200 mg/dL  
 LDL < 100 mg/dL  
 HDL > 40 mg/dL for Men  
 HDL > 50 mg/dL for Women  
 Triglycerides < 150 mg/dL

#### Blood Pressure:

Systolic < 130 mm Hg  
 Diastolic < 80 mm Hg

## What are the Standards of Diabetes Care?

There are at least 7 important tests for a person with diabetes. Ask your doctor about these tests.

### At Every Visit:

**Blood Pressure Check**—to help prevent heart attack and stroke.

**Foot Exam**—to keep feet healthy to prevent infection or amputation

**Weight**—to maintain a healthy weight

### At Least Twice a Year:

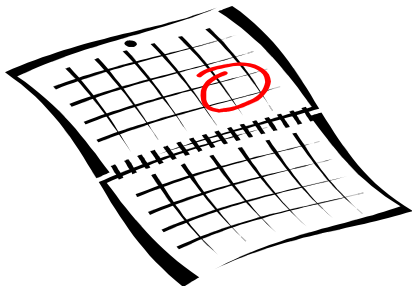
**HbA1c Blood Test**—to check sugar control over the past 2-3 months. Quarterly testing is recommended if your treatment changes or you are not meeting your goals

### Once a Year:

**Dilated Eye Exam**—to help prevent blindness

**Urine Test for Protein**—to help prevent kidney failure

**Cholesterol Panel**—to help prevent heart attack.



## III. Types of Diabetes

### What is Pre-Diabetes?

Pre-diabetes is diagnosed when an individual has a blood glucose (sugar) level that is higher than normal but not yet high enough to be diagnosed as diabetes. Pre-diabetes may also be called impaired glucose tolerance or impaired fasting glucose. An individual with pre-diabetes has a fasting blood glucose (sugar) level between 100 and 125 mg/dl. Pre-diabetes increases an individual's risk for developing type 2 diabetes and heart disease.

Pre-diabetes usually has no symptoms or warnings. Some long-term damage to the body, especially the heart and circulatory system, may already be occurring during pre-diabetes.

If you have pre-diabetes, you can reduce the risk of developing type 2 diabetes if you:

- Cut back on calories and fat
- Increase physical activity through moderate exercise such as walking, 30 minutes a day, 5 days a week.
- Lose weight, 5-7% of body weight, which is 10-15 pounds for a person that weighs 200 pounds.

It is important to do something about pre-diabetes. An individual can delay or prevent the progression of type 2 diabetes through wise choices in both diet and increased activity.

## What is Insulin Resistance?

Insulin resistance is a condition that increases your chances of developing type 2 diabetes and heart disease. When you have insulin resistance, your body has difficulty responding to insulin. Eventually, your blood glucose levels will rise above normal.

## Can Insulin Resistance be Reversed?

Insulin resistance can be reversed and lessen your chance of developing type 2 diabetes and heart disease by:

- Cutting calories
- Adding/increasing daily physical activity
- Losing weight
- Taking medications as directed

## What are the Risk Factors for Insulin Resistance?

You are more likely to have insulin resistance if you are:

- Overweight
- Physically inactive
- Over 45 years of age
- A woman with a waist measurement over 35 inches or a man with a waist measurement over 40 inches

Or have:

- A parent, brother, or sister with type 2 diabetes
- Polycystic ovary syndrome
- Blood pressure of 140/90 or higher
- HDL cholesterol levels of 35 or less
- Triglyceride levels of 150 or higher

## Vegetables—Vary Your Veggies

Vegetables are low in fat and calories, and high in vitamins, minerals, and fiber. Non-starchy vegetables are low in carbohydrates and can be eaten freely. Non-starchy veggies include dark, leafy greens like spinach or broccoli, and orange veggies like carrots and sweet potatoes.

## Fruits—Focus on Fruits

Like vegetables, fruits contain carbohydrates, vitamins, minerals, and fiber. You can have canned, dried, fresh, or frozen fruit and 100% fruit juices. Aim for 1–3 servings of fruit per day, limit juices to 4oz–6oz since it is a concentrated source of carbohydrates.

## Milk—Get Your Calcium-Rich Foods

Dairy products are sources of nutrients. Milk and yogurt are considered carbohydrates; cheese is protein; butter, cream cheese, and sour cream are fats.

## Meats and Beans—Go Lean on Protein

Meat, poultry, fish, dry beans and peas, eggs, nuts, and seeds are sources of protein, which your body needs to build and repair tissue, muscle, and bones. Protein affects blood glucose levels much less than carbohydrates. An adequate serving of protein is 3 oz., or the size of a deck of cards.

## Oils—Know Your Fats

Use oils from plants like olive and vegetable oils, which don't have any cholesterol and are usually low in saturated fats. Limit use of hydrogenated products like stick margarine and shortening. High fat meals can slow absorption of carbohydrates and keep blood sugar levels higher for 3-5 hours after a meal.

## Physical Activity—Food and Physical Activity

Balancing food, activity, and medications is the key to managing diabetes. Exercise, however, can cause hypoglycemia. Monitoring blood sugar levels before and after exercise is recommended.



## IV. Diabetes Care

### What Can I do to Develop a Foundation for Healthy Living?



While managing diabetes, you can eat the same foods as your family and friends as long as you space meals evenly throughout the day and control portion sizes.

Remember to include a balance of carbohydrates, proteins, and fats with meals, which will help you control your blood glucose levels. By monitoring your blood glucose levels often, you can fine-tune your meal planning.<sup>12</sup>

#### **GRAINS—Make Half Your Grains Whole**

Grains, such as bread, cereal, and pasta are good sources of carbohydrates. However, these foods can raise blood sugar levels. Limit these portions to 2–4 servings at a meal. A 1/3 cup of rice or pasta equals 1 serving; a sandwich equals 2 servings.

## What is Type 2 Diabetes?

Type 2 diabetes usually begins with insulin resistance, a condition in which body cells do not use insulin properly. At first, the pancreas keeps up with the added demand by producing more insulin. In time, however, the pancreas loses the ability to make enough insulin in response to meals.

Being overweight and inactive increases the chance of developing type 2 diabetes. Treatment may include taking oral medications or using insulin, making wise food choices, exercising regularly and controlling blood pressure and cholesterol.

Type 2 diabetes may be controlled through losing weight, improved nutrition, and exercise. Take steps now to lower your risk of getting diabetes.

## What is Type 1 Diabetes?

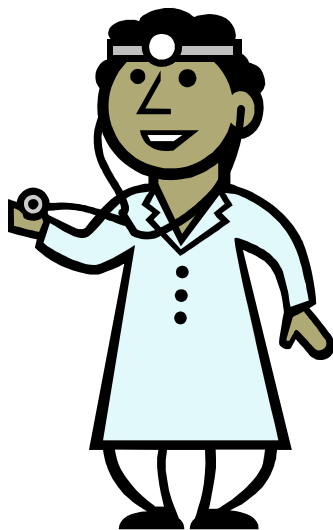
Type 1 diabetes is diagnosed when the body does not make any or enough insulin. Type 1 diabetes most often develops in children and young adults. Individuals diagnosed with type 1 diabetes need to take daily insulin injections or use an insulin pump. The causes of this type of diabetes are unknown though a viral illness or an autoimmune disease may play a role.

## What are the Symptoms of Diabetes?

One third of those who have diabetes do not know it. Sometimes no signs or symptoms are noticed. The signs and symptoms of high blood glucose are:

- Blurred vision
- Increased infections, such as yeast infections in women
- Cuts and bruises that are slow to heal
- Frequent urination
- Fatigue
- Increased hunger
- Unwanted weight loss
- Extreme thirst

If you have any of the symptoms listed above, contact your physician to discuss your concerns.



## What is Gestational Diabetes?

Gestational diabetes is a form of glucose intolerance diagnosed in some women during pregnancy. Gestational diabetes occurs more frequently among African Americans, Hispanic/Latino Americans, and American Indians. It is also more common among obese women and women with a family history of diabetes. During pregnancy, gestational diabetes requires treatment to normalize maternal blood glucose levels to avoid complications in the infant. After pregnancy, 5% to 10% of women with gestational diabetes are found to have type 2 diabetes. Women who have had gestational diabetes have a 20% to 50% chance of developing diabetes in the next 5-10 years.<sup>3</sup> Gestational diabetes affects about 4% of all pregnant women.

### How are You Diagnosed?

Gestational diabetes is first diagnosed in pregnancy. It is typically diagnosed with a blood test during the 24th to 28th week of pregnancy and generally resolves after delivery. It is controlled with a meal plan, exercise, and in some cases, insulin. Women who develop gestational diabetes are at high risk for developing type 2 diabetes later in life.

