

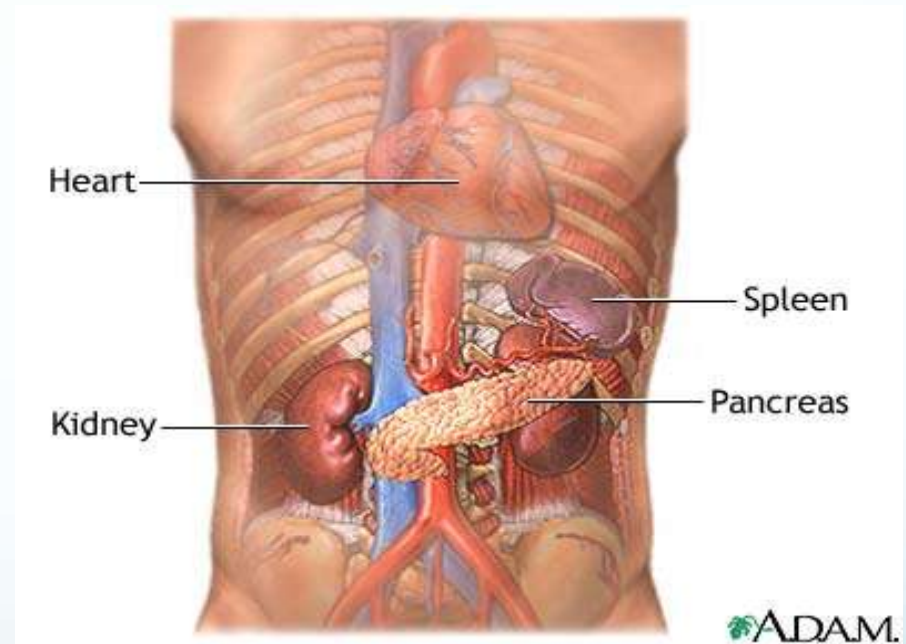
# Diabetes



# How glucose gets into your body

# The Pancreas

- A long, flat gland in your abdomen that helps your body digest food
- It also makes Insulin
- Insulin helps transport glucose into the cells of the body



# What is Diabetes?

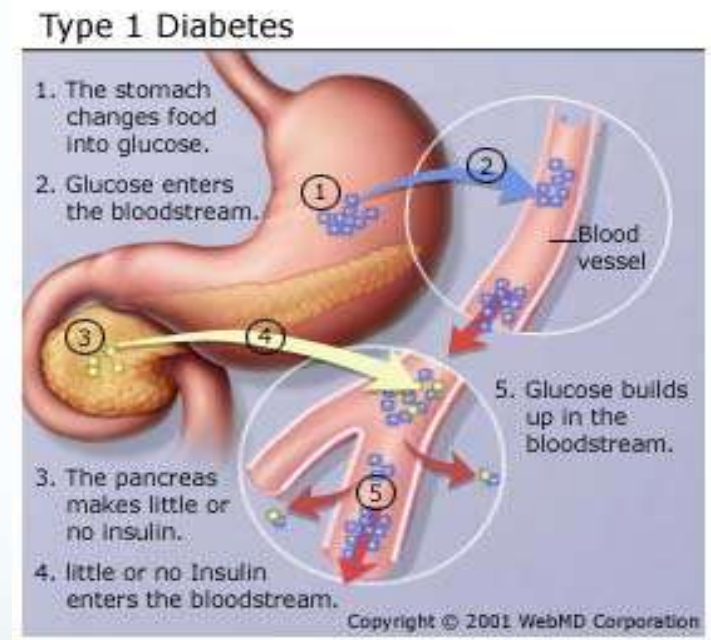
- Diabetes is a disease that affects how the body uses glucose
- Glucose is a sugar that is the body's main source of fuel
- There are two different types of Diabetes

# Type 1 and 2 Diabetes

- The glucose can not get into the cells like it normally does, so blood sugar levels get too high.
- Excess sugar in the blood can make people very sick if they do not get treatment for it.

# Type 1 Diabetes

- The pancreas can not make insulin, so the glucose can not get into your cells
- Autoimmune disease
- The body destroys cells in the pancreas that makes insulin



# Type 2 Diabetes

- The insulin in your body does not work like it should
- Body makes insulin but most cells do not use insulin properly
- Insulin resistance
- Slowly, the pancreas stops making insulin.

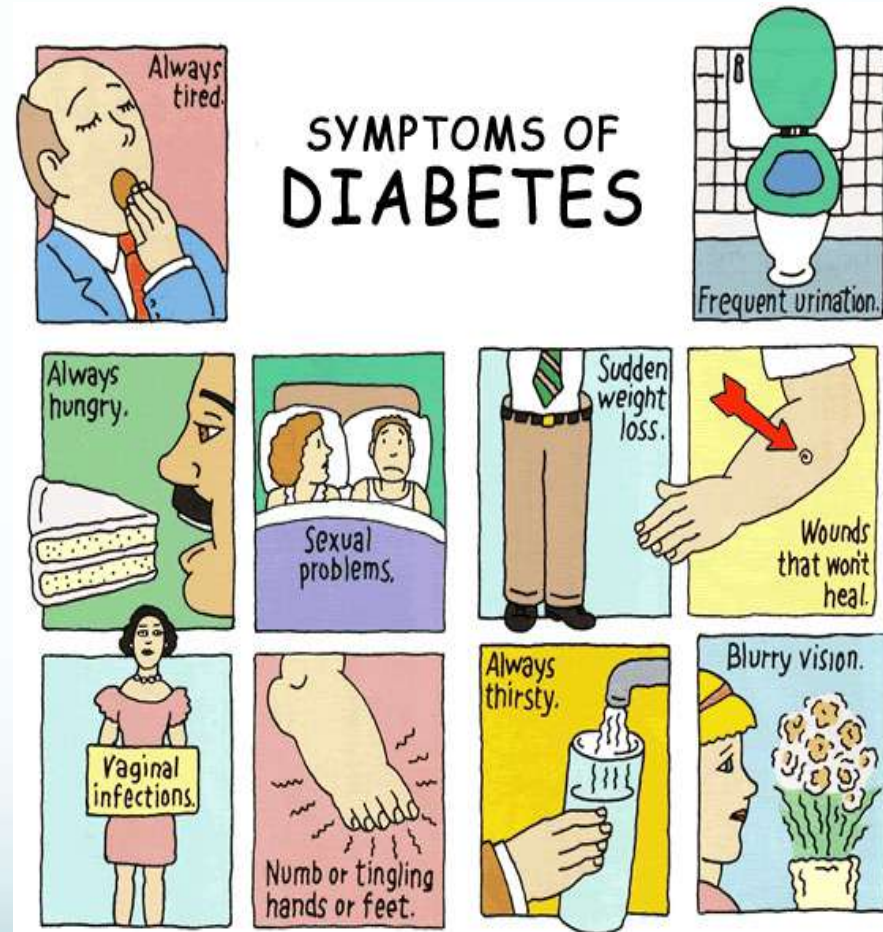
# Blood Glucose Levels

- Normal Fasting (Before you eat breakfast)
  - Blood glucose less than 100
- Normal After Eating (2 hours after eating)
  - Blood glucose less than 140
- Hemoglobin A1C less than or equal to 6.5%



# Symptoms of Diabetes

- Frequent urination (Polyuria)
- Excessive thirst (Polydipsia)
- Excessive hunger (Polyphagia)
- Fatigue, tingling or numbness in hands, slow healing wounds and recurrent infections



If you have any of these symptoms, see your doctor. For more information about diabetes call Eli Lilly and Company at 1-800-545-5979 or Boehringer Mannheim Corporation at 1-800-858-8072.

Provided as an educational service by Eli Lilly and Company and Boehringer Mannheim Corporation



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# SÍNTOMAS DE LA DIABETES



Orina frecuente y abundante



Pérdida de peso



Sed excesiva



Falta de energía



Hambre constante



Cambios de ánimo

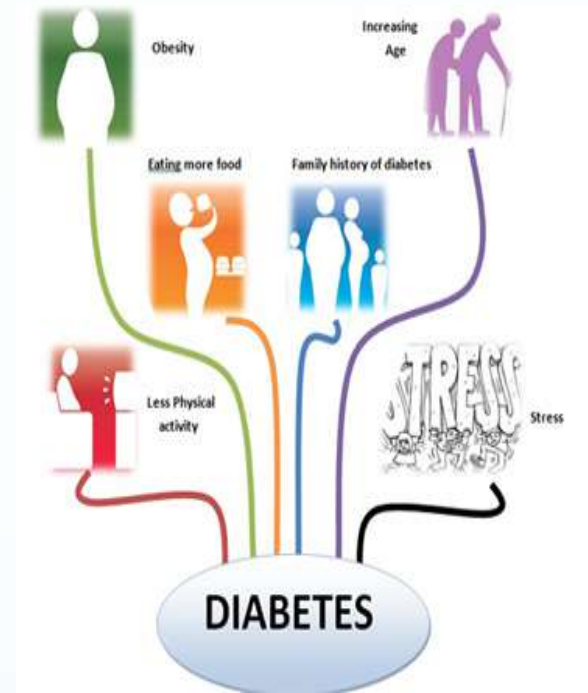


Visión borrosa

*No todos los síntomas pueden presentarse, algunas veces pasan desapercibidos*

# Type 2 Diabetes Risk Factors

- Being overweight
- Not exercising regularly
- Family History
- Eating too much fat and sugar
- Hypertension
- Ethnic groups at high risk—Asian Americans, Native Americans, Latinos, Blacks, Pacific Islanders



# Type 2 Diabetes Prevention

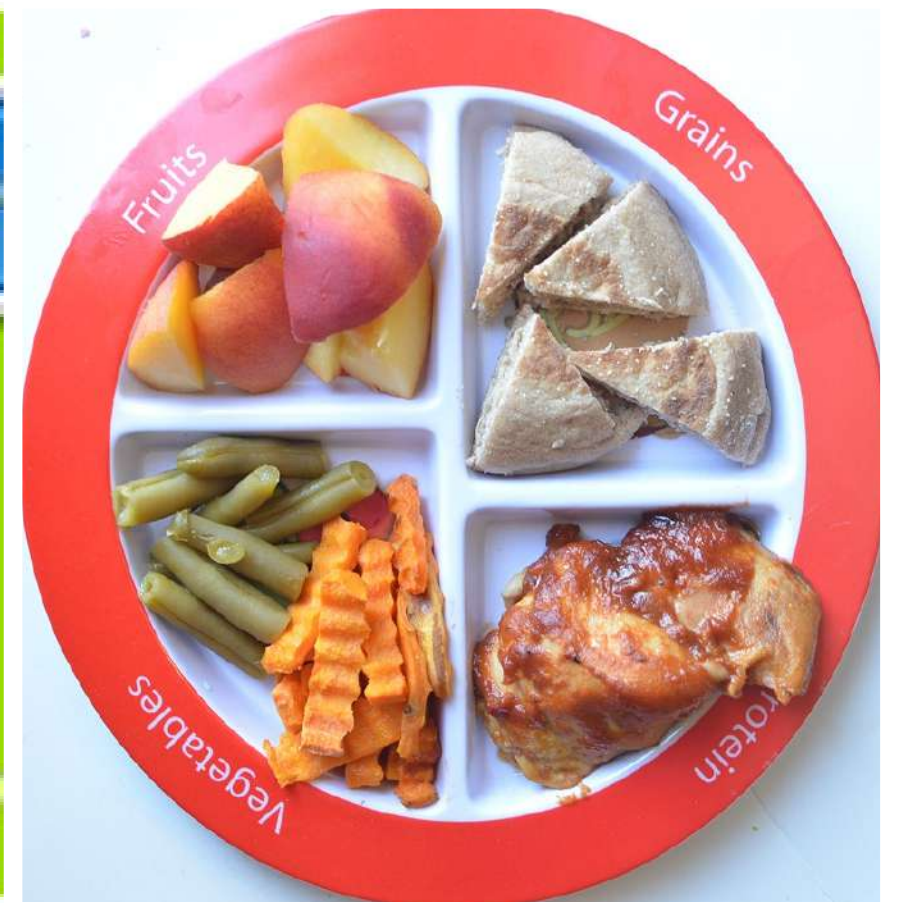
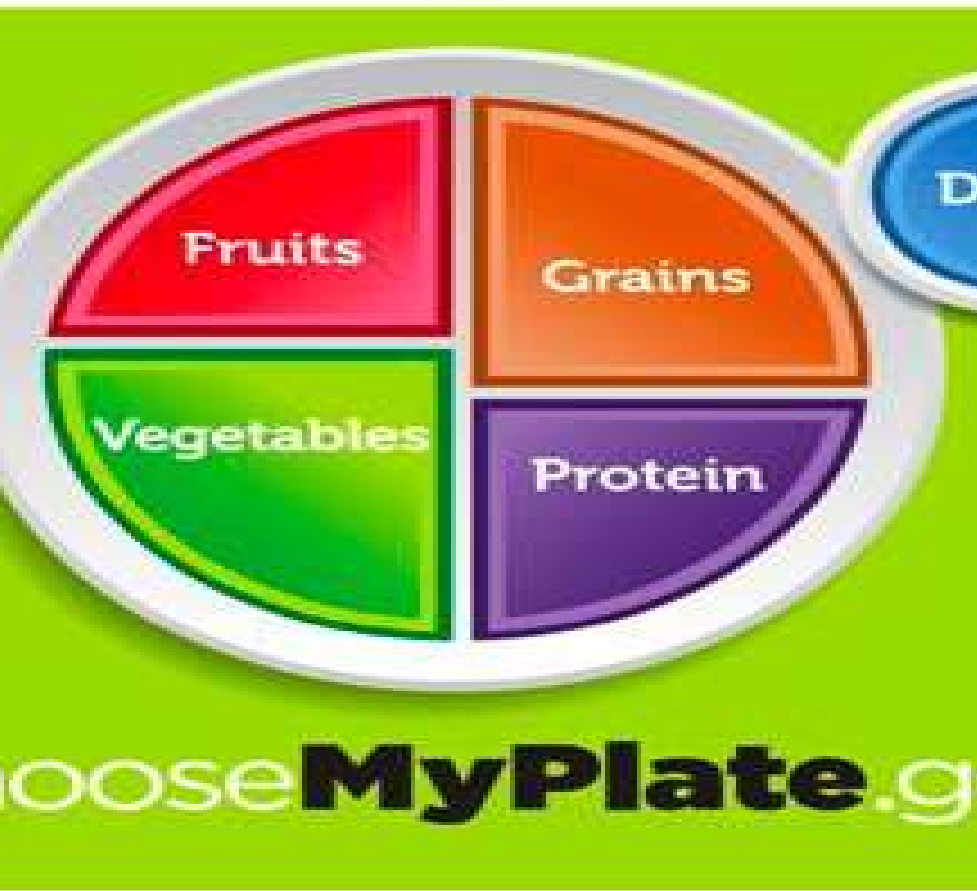
- Try to eat foods that are low in fat
- Limit fast foods and sugary sodas
- Staying active



# Dietary Management

- Carbohydrate 45-65% total daily calories
- Protein-15-20% total daily calories
- Fats—less than 30% total calories, saturated fats only 10% of total calories
- Fiber—lowers cholesterol; *soluble*—legumes, oats, fruits *Insoluble*—whole grain breads, cereals and some vegetables. Both increase satiety. Slowing absorption time seems to lower glycemic index.
- Consistent, well-balanced small meals several times

# Dietary Management



# Dietary Management

## Your Daily MyPlate

**BREAKFAST**



**SNACK**



**LUNCH**



**SNACK**



**DINNER**



# Exercise and Diabetes

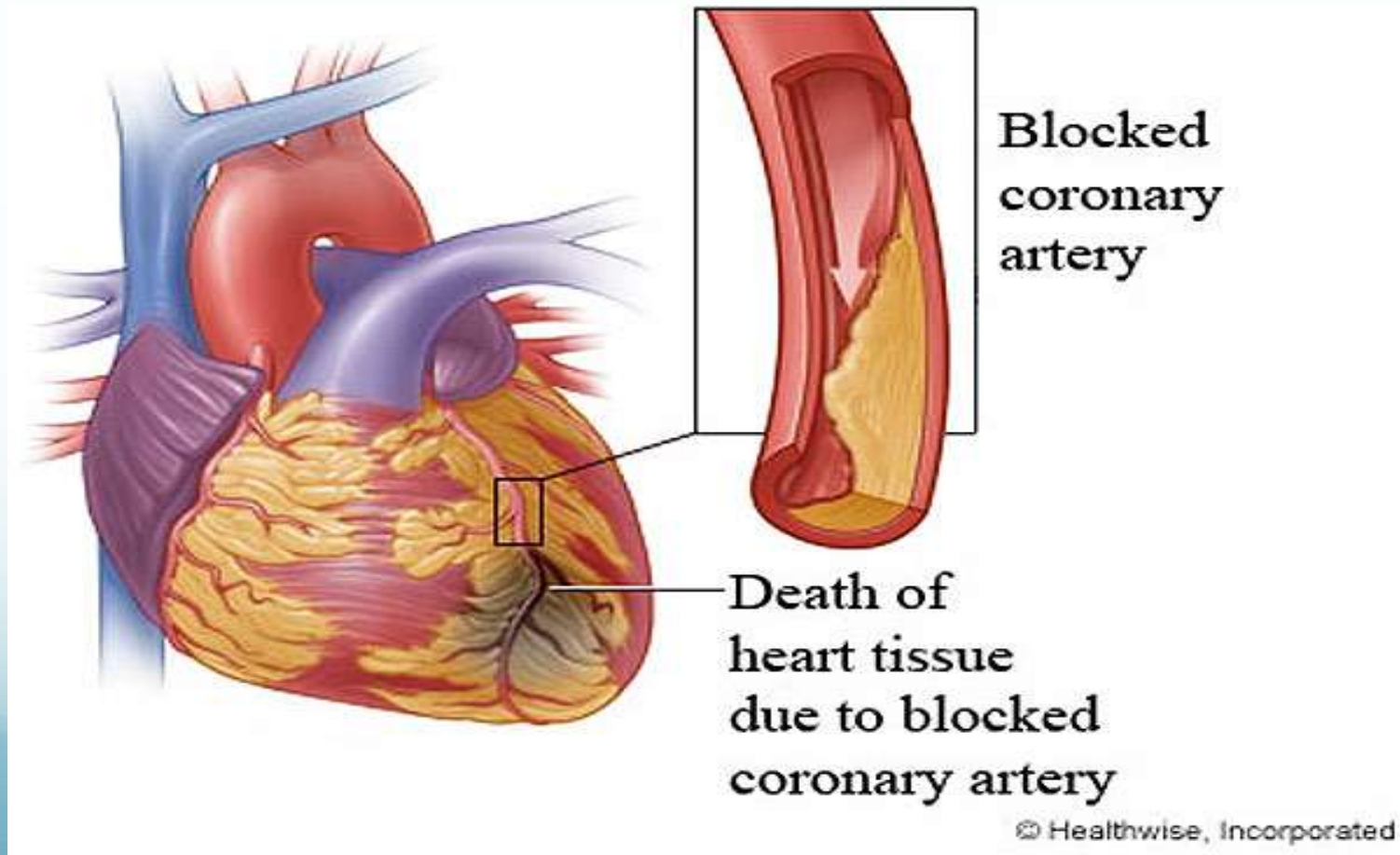
- Exercise increases uptake of glucose by muscles and improves utilization





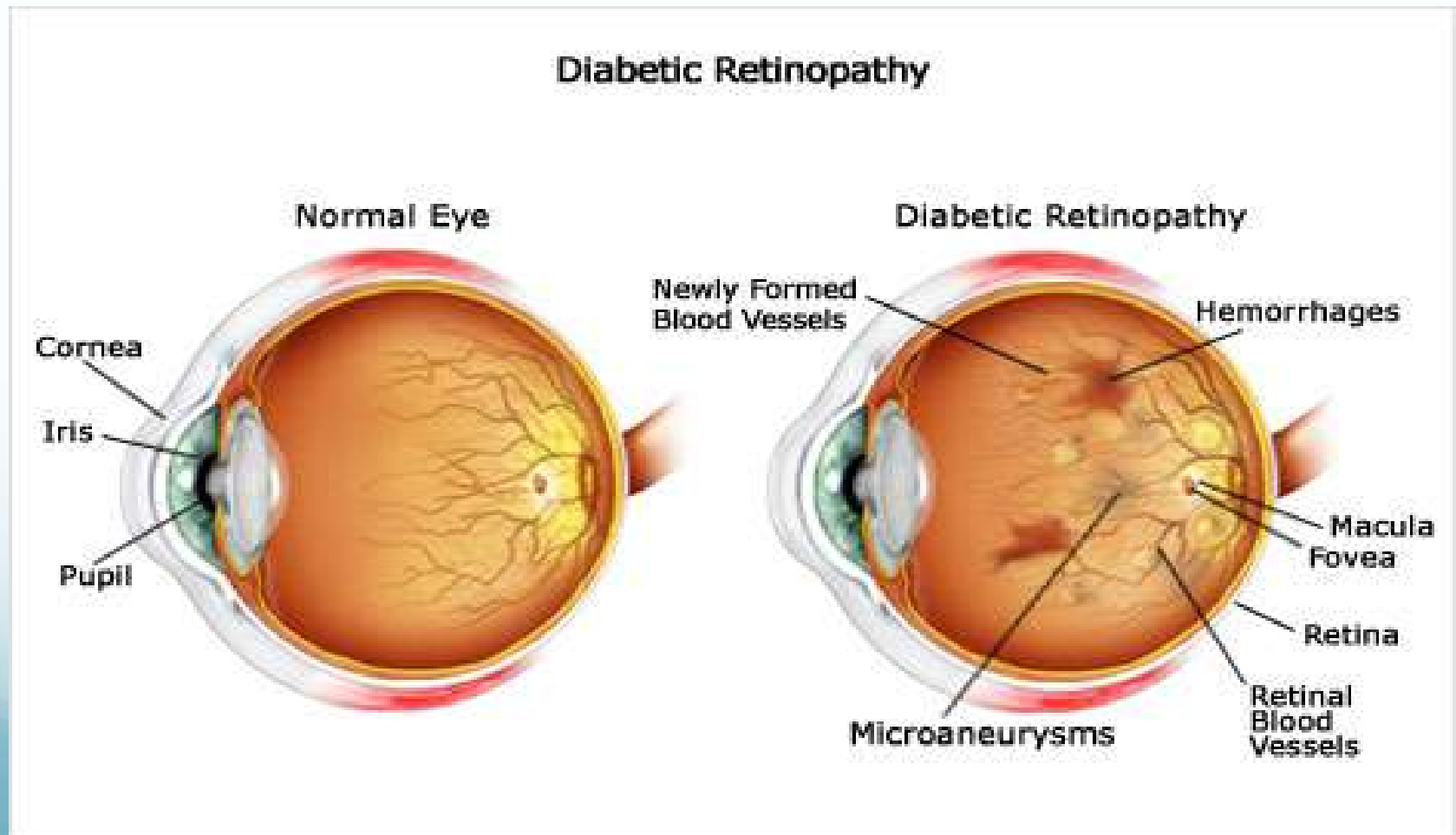
# Complications of Diabetes

- Heart Disease



# Complications of Diabetes

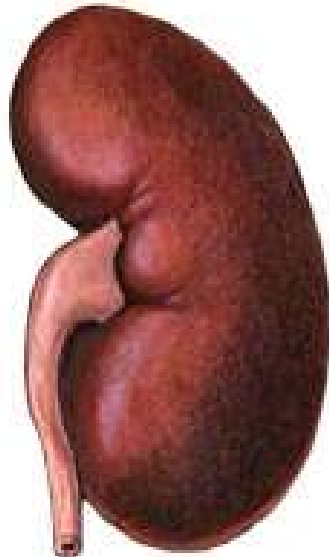
- Blindness



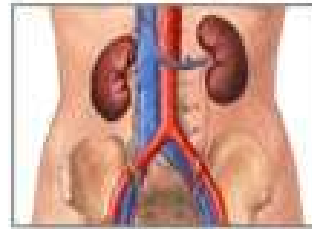
# Complications of Diabetes

- Kidney Damage

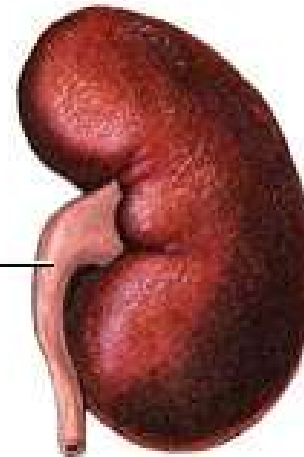
Normal kidney



- healthy function
- proper size
- low urine protein



Kidney disease



Ureter

- granular surface
- decreased function
- smaller size
- high urine protein

# Complications of Diabetes

- Nerve Damage



# ARE YOU AT RISK FOR TYPE 2 DIABETES?



## Diabetes Risk Test

- 1** How old are you?  
 Less than 40 years (0 points)  
 40—49 years (1 point)  
 50—59 years (2 points)  
 60 years or older (3 points)
- 2** Are you a man or a woman?  
 Man (1 point)      Woman (0 points)
- 3** If you are a woman, have you ever been diagnosed with gestational diabetes?  
 Yes (1 point)      No (0 points)
- 4** Do you have a mother, father, sister, or brother with diabetes?  
 Yes (1 point)      No (0 points)
- 5** Have you ever been diagnosed with high blood pressure?  
 Yes (1 point)      No (0 points)
- 6** Are you physically active?  
 Yes (0 points)      No (1 point)
- 7** What is your weight status?  
 (see chart at right)

Write your score in the box.

↓


Add up your score.

↓

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)
	You weigh less than the amount in the left column (0 points)		

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009. Original algorithm was validated without gestational diabetes as part of the model.

### If you scored 5 or higher:

You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

**For more information, visit us at [www.diabetes.org](http://www.diabetes.org) or call 1-800-DIABETES**

Visit us on Facebook  
[Facebook.com/AmericanDiabetesAssociation](https://www.facebook.com/AmericanDiabetesAssociation)



### Lower Your Risk

The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life.

If you are at high risk, your first step is to see your doctor to see if additional testing is needed.

Visit [diabetes.org](http://diabetes.org) or call 1-800-DIABETES for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

# Resources

- American Diabetes Association
  - <http://www.diabetes.org/>
  
- KidsHealth
  - <http://kidshealth.org/parent/growth/>