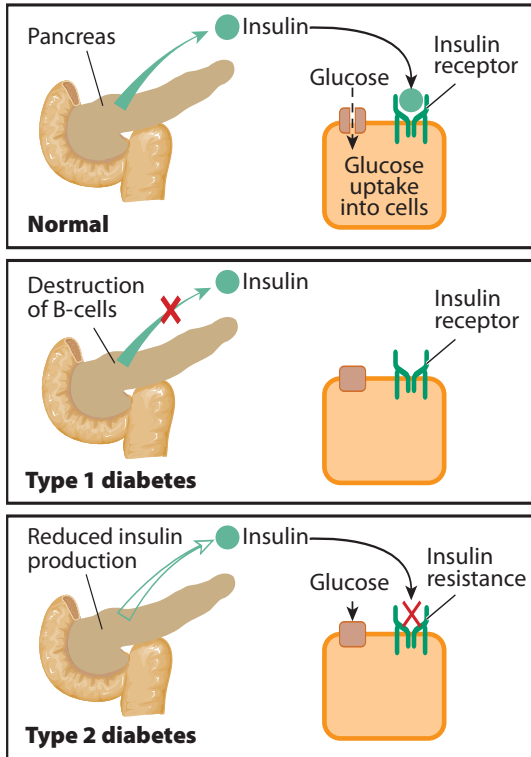


# HANDS-ON Health

Health Wave Newsletter, October 2011

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## Type 2 Diabetes

According to Francine Ratner Kaufman, M.D., past President of the American Diabetes Association, type 2 diabetes has changed from a disease of our grandparents and parents to a disease of our children. According to Kaufman, it was rare in 1992 for most pediatric centers to have patients with type 2 diabetes. By 1994, type 2 diabetes accounted for up to 16% of new cases of pediatric diabetes in urban areas, and by 1999 it accounted for 8-45% of new cases depending on geographic location.

- Each year, more than 13,000 young people are diagnosed with type 1 diabetes.
- Type 2 diabetes begins when the body develops a resistance to insulin and no longer uses the insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce sufficient amounts of insulin to regulate blood sugar.
- Health care providers are finding more and more children with type 2 diabetes, a disease usually diagnosed in adult aged 40 years or older.
- Children who develop type 2 diabetes are typically overweight or obese and have a family history of the disease. Most are American Indian, African American, Asian, or Hispanic/Latino.
- No data currently exist to determine the extent to which type 2 diabetes has emerged among U.S. children and adolescents, but researchers at CDC estimate that among new cases of childhood diabetes, the proportion of those with type 2 diabetes ranges between 8 percent and 43 percent.

**Source: National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation, May, 2011**

## Diabetes Facts

- Diabetes is one of the most common chronic diseases among children in the United States. About 150,000 young people under 18 years — or about one in every 400 to 500 — have diabetes.
- People with diabetes are at great risk of developing serious health complications over time, such as heart disease, kidney disease, blindness, and stroke.
- Type 1 diabetes develops when the body's immune system destroys pancreatic cells that make the hormone insulin that regulates blood sugar. It normally strikes children and young adults. People with type 1 diabetes must have daily insulin injections to survive.

## What is Type 2 Diabetes?

Type 2 diabetes is a serious disease. It used to be that only adults got type 2 diabetes. Now some kids and teens who are inactive and weigh too much are also getting type 2 diabetes.

Diabetes means your blood glucose, also called blood sugar, is too high. In all of us, the food we eat turns into glucose and our bodies use it for energy. When you have diabetes, your body cannot use glucose as normal, and your blood glucose rises. Young people with Type 2 Diabetes may need to take pills or insulin to help the body use the glucose in the blood for energy. If blood glucose stays too high for too long, it can damage many parts of the body such as the heart, eyes, kidneys, and nerves.

You have to have a special blood test to find out if you have type 2 diabetes. But children and teens with type 2 diabetes are often overweight or big for their age. Also, young people with type 2 diabetes often have a parent, grandparent, or other family member who has diabetes.

## Can Type 2 Diabetes Be Prevented?

Research at NIH\* has demonstrated that people at risk for type 2 diabetes can prevent or delay developing type

2 diabetes by losing a little weight. The results of the Diabetes Prevention Program (DPP) showed that weight loss through moderate diet changes and physical activity can delay and prevent type 2 diabetes. Participants in this federally funded study of 3,234 people at high risk for diabetes experienced a 5- to 7-percent weight loss. For example, a 5- to 7-percent weight loss for a 200-pound person would be 10 to 14 pounds.

Family history and overweight are strong risk factors for type 2 diabetes. DPP study participants were overweight and had higher than normal levels of blood glucose, a condition called pre-diabetes, also called impaired glucose tolerance. Both pre-diabetes and obesity are strong risk factors for type 2 diabetes. Because of the high risk for diabetes among some minority groups, about half of the DPP participants were African American, Alaska Native, American Indian, Asian American, Pacific Islander, or Hispanic/Latino.

The DPP tested two approaches to preventing diabetes: lifestyle change—a program of healthy eating and physical activity—and the diabetes drug metformin. People in the lifestyle change group exercised about 30 minutes a day 5 days a week, usually by walking, and lowered their intake of fat and calories. Those who took the diabetes drug metformin received information on physical activity and diet. A third group only received information on physical activity and diet.

The results showed that people in the lifestyle change group reduced their risk of getting type 2 diabetes by 58 percent. In the first year of the study, people lost an average of 15 pounds. Lifestyle change was even more effective in those aged 60 and older. They reduced their risk by 71 percent. People receiving metformin reduced their risk by 31 percent.

**\*NIH Publication No 09-4805; November 2008**

## Warning Signs for Diabetes:

### YOU MIGHT:

- urinate a lot,
- be very thirsty,
- feel tired,
- have thick dark skin on the neck or under the arms.

**Page 3 is geared for students so please feel free to post it in the classroom or print out for students to take home.**

## What Puts Kids At Risk For Type 2 Diabetes?

### KIDS ARE AT RISK IF THEY:

- have a mom, dad, sister or brother, or other close relative who has type 2 diabetes
- weigh too much
- do not get enough physical activity
- are American Indian, Alaska Native, African American, Asian American, Hispanic/Latino, or Pacific Islander

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# Lower Your Risk for Type 2 Diabetes

There are lots of things you can do to lower your risk. Take action now and follow these tips.

Be sure to share them with your friends and family—they work for everyone!

## STAY ACTIVE

You don't have to play a sport or go to a gym to move more. There are lots of ways to be active.

- **Start slowly.** Do not get upset if you cannot do a lot—just keep moving! Add more activity each week.
- **Aim for 60 minutes every day.** You do not have to do it all at once—20 minutes at a time, three times a day is fine. There are lots of ways to move around more. Walk, ride a bike, dance, play ball, or shoot hoops.
- **Sign up for sports and physical education classes.** Ask a grown-up or your teacher about sports or dance programs that you could join.
- **Cut your TV and video game time to less than 1 hour a day.** Be more active in your free time.
- **Use a step counter for fun.** Use it to keep track of the number of steps you take in a day. Try to increase this number every day.

Being physically active can help you:

- build muscle and use up body fat
- grow strong bones
- stay flexible
- feel good and sleep better
- focus in school
- control your weight

## EAT WELL AND GET TO A HEALTHY WEIGHT

- **Choose a variety of healthy foods each day.** If you are overweight, you need to eat less and be more active each day. Here are some ways to do it.
- **Take your time when you eat.** Wait 15 minutes before eating second helpings. It takes about that amount of time for your stomach to tell your brain that you are full.
- **Don't skip meals.** For breakfast, try a couple of slices of whole grain toast with a tablespoon of peanut butter, or a hard-boiled egg, or a piece of low-fat cheese.
- **Eat foods high in fiber** like whole grain bread, brown rice, oatmeal, lentils.
- **Eat small servings of fish, meat, poultry, and low-fat cheese.** Remove skin and all the fat you can see.
- **Have baked, broiled, or grilled food instead of fried.**
- **Pack a lunch of healthy foods.** Make a sandwich with turkey or lean beef. Use mustard or a little low-fat mayonnaise. Add fruit instead of chips.
- **Choose healthy snacks** such as a bowl of cereal with nonfat or low-fat milk or a piece of fruit.
- **Fill up your plate with salad or vegetables.** Use small amounts of margarine or salad dressing.
- **Ask if you can help plan or make family meals** sometimes to learn more about healthy eating.

### How Can You Cut Some Calories?

To lose weight, try to eat 200 to 300 calories less than usual each day. Here are some simple ways to cut calories:

- Drink water instead of soda or juice drink. You can cut up to 250 calories.
- You can cut up to 250 calories by eating a small serving of french fries, or by sharing a big one.
- Eat a piece of fresh fruit instead of a candy bar or a bag of chips, and save up to 200 calories.