

Children and Type 2 Diabetes

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There was a time when diabetes was an adult problem rarely, if ever, seen in children. That has changed. In 2001, the increasing number of obese children throughout the United States led policy-makers to rank it as a critical public health threat. Since the 1970s, the obesity rate has more than doubled for preschool children (2-5 years old) and adolescents (12-19 years old). It has more than tripled for children ages 6-11 years. Currently, more than 9 million children age 6 or older are obese.

This increase in the rate of childhood obesity is directly linked to the increase in diagnoses of type 2 diabetes, which includes the following risk factors: obesity, little or no physical activity and family history (at least 75 percent of children with type 2 diabetes have a parent, sister or brother with the disease).

How to Explain Type 2 Diabetes to Parents

Lynn Hardy, ND, director of the Global Institute for Alternative Medicine, defines diabetes as a degenerative metabolic disorder that affects the way our body utilizes the food we eat. Our digestive system breaks down everything we eat into a simple sugar (glucose), which is the main source of fuel for our body. After digestion, glucose moves into our bloodstream where it can be used by the body's cells for energy. This requires the presence of insulin.

Insulin is a hormone produced by the pancreas. When we eat, the pancreas is supposed to automatically produce the right amount of insulin to move the glucose from our blood into our cells. For those suffering from diabetes, however, the pancreas either produces little or no insulin, or it ignores the presence of insulin altogether. This results in glucose building up in the blood, overflowing in the urine and passing out of the body. In so doing, the body loses its main source of fuel, despite the fact that the blood contains large amounts of glucose.

Type 2 diabetes occurs when the pancreas doesn't produce enough insulin or when the body doesn't use the insulin that was produced effectively. More than 90 percent of cases of diabetes are type 2, and children represent an increasing percentage of the diagnoses.

What Are the Risks?

As with any disease, there are risks involved in ignoring the problem. Type 2 diabetes is notoriously easy to ignore. Most children don't have symptoms when the disease is first diagnosed, but if there are symptoms, they're usually mild, including having to urinate more often, feeling a little more thirsty than normal and losing a little weight for no clear reason.

The risk of ignoring this dangerous disease is that years of poor glucose control can lead to major health complications including kidney disease, visual impairment (even blindness) and nerve damage. For children and teens with this disease, the risks are even greater. There is rising evidence that when

type 2 diabetes is acquired at an early age, it progresses aggressively, leading to early complications. Public health experts warn that children diagnosed with type 2 diabetes in their early teens may suffer from severe diabetes-related health problems such as renal failure and cardiovascular disease by the time they reach the age of 30.

What Causes Type 2 Diabetes?

The most common cause of type 2 diabetes is obesity, which has been directly linked to a sedentary lifestyle. According to Dr. Andrew Weil, "An estimated one-quarter of all cases of type 2 diabetes could be prevented with 30 minutes a day of moderate physical activity alone." Regular exercise helps control weight, stabilizes blood-sugar levels and decreases insulin resistance.

However, lack of exercise is not the only contributing factor to obesity. Diet plays a major role as well. Michael Murray, ND, and Joseph Pizerno, ND, noted in the *Encyclopedia of Natural Medicine* that even in healthy individuals, sudden significant weight gain will result in "carbohydrate intolerance, higher insulin levels and insulin insensitivity in fat and muscle tissue." They further note that progressive development of insulin resistance is believed to be the underlying factor in the development of type 2 diabetes. "Weight loss alone can correct all of these abnormalities and either significantly improves diabetes or totally resolves it."

What Are the Common Treatments?

A pediatrician will typically want to treat type 2 diabetes with a pharmaceutical. There are currently five types of drugs being used to control glucose levels, including biguanides, sulfonylureas, meglitinide, glucosidase inhibitors and thiazolidenediones.

The important thing to note here is that efficacy and safety data for these chemicals are not available for children, and none of these drugs is FDA-approved for use in children. Additionally, it's been determined that these substances are only effective in 40 percent of cases, and then for only about three months. Clearly, pharmaceuticals may not be the answer.

Dr. Michael Berger, MS, professor of medicine at Dusseldorf University in Germany, says the use of drugs has become the treatment of laziness, "both on the part of the physician and the patient." It's easier to just write a prescription and give the child a pill than to educate parents on the importance of a healthy diet and the wellness lifestyle.

What's Best?

Type 2 diabetes is a lifelong disease, but it can be controlled and, in some cases, completely reversed. The most important things to consider are the contributing factors. Obesity is the major contributor to childhood type 2 diabetes, and the cure for obesity is diet and exercise. Here are some ideas to share with parents on how to adopt a wellness lifestyle for their child.

- The lifestyle of the entire family should change. Even if there's only one child suffering from this disease, the entire family will benefit.
- Use smaller plates for meals. Smaller plates mean smaller portions, which means less caloric intake.
- Better foods. Two-thirds of the child's plate should be vegetables, while the remaining third should be a mix of fruits, proteins and whole grains.
- When in doubt, don't eat white (e.g., white potatoes, white rice, white bread).

- Avoid processed items. If it's wrapped in plastic or comes in a box, it's processed.
- Find ways to keep the child active. Just 30 minutes a day of moderate physical activity can reverse type 2 diabetes.

Note: In warmer climates, consider walking or biking around your neighborhood, going to the park, playing catch, etc. In colder climates, find a family-friendly gym, utilize an indoor swimming facility or consider going to the mall and walking nonstop.

Suggesting Supplements

Vitamin and mineral deficiencies also have proven to be contributing factors to type 2 diabetes. The most well-known, popular and effective mineral in controlling diabetes is chromium. Clinical case studies have shown that supplementing the diet with GTF (glucose tolerant factor) chromium decreases total cholesterol and triglyceride levels while increasing HDL-cholesterol levels and lean body mass, and lowering body weight.

Magnesium is an important mineral for enzyme systems and pH balance; magnesium deficiency is very common in diabetics. As a dietary supplement, magnesium may prevent some of the common complications of diabetes. Of course, this mineral should be taken with vitamin B6. Levels of vitamin B6 inside the cells of the body appear to be directly linked to the magnesium content of the cell. Basically, without vitamin B6, magnesium will not get inside the cell.

It's important to know that a diagnosis of type 2 diabetes does not guarantee a future of complications and health risks. The reality is that with moderate changes to a family's diet and exercise routine, their child can overcome this disease and live a long and healthy life.

Resources

1. Hardy L. Homeopathy Effective in Diabetes Treatment.
www.byregion.net/articles-healers/Diabetes_Alternatives.html.
2. American Diabetes Association. Type 2 diabetes in children and adolescents. March 2000;23(3):387.
3. Iannelli V. "Kids' Diabetes Alert." June 14, 2006.
4. Powell A. "Can Kids Get Type II?" Aug. 1, 2000.

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