

Donovan Fights Diabetes

Football star Donovan McNabb explains how people with diabetes count carbohydrates to lead normal lives.

Donovan McNabb, quarterback for the Philadelphia Eagles, doesn't just fight to win on the football field. He created the Donovan McNabb Foundation to fight *diabetes*, a disease that affects about 21 million children and adults in the United States, including his dad, Sam. "People will be educated, as well as aware enough to get tested and learn more," Donovan told *MATH*. November is National Diabetes Awareness Month, so with Donovan's help, let's make ourselves a little more aware.

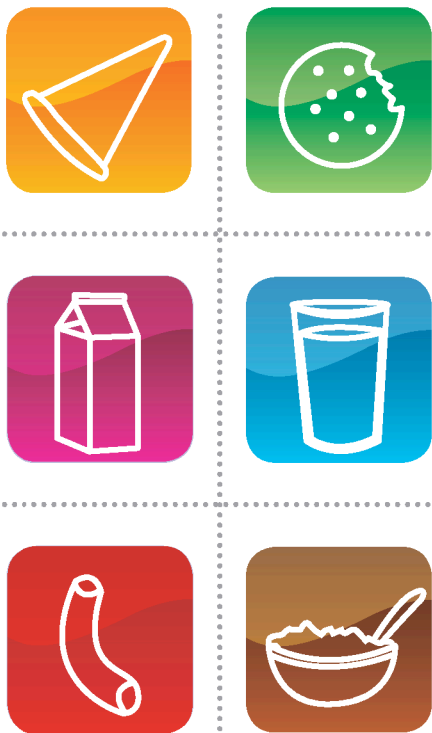
In the U.S., 13,000 kids a year are diagnosed with Type 1 diabetes, a lifelong disease that can't be caught or spread. People with Type 1 diabetes (called diabetics) make little or no *insulin*, a chemical in our bodies that helps turn sugar into energy. Diabetics have to take insulin (usually by injection)



Donovan (center) with his brother, mom, and dad

before every meal to replace what their bodies don't make. They calculate the right amount of insulin to take by adding up all the carbohydrates in the food they eat.

This doesn't mean diabetics can't lead active, healthy lives though! "A perfect example is Adam Morrison [star player for the NBA's Charlotte Bobcats]," McNabb told us. "He monitors what he eats and takes his



insulin shot before each game." Join McNabb's team in the fight against diabetes by answering our questions.

—by Sarah Klein

WHAT TO DO

Read "Inside Info on Insulin" on page 5. Use that information and the food chart to answer the questions.

INSIDE INFO ON INSULIN

The amount of insulin people with diabetes need depends on the meal they are eating, but also on their height, weight, how much they exercise, and other factors. One person might need 1 unit of insulin for every 10 grams of carbohydrates consumed, while someone else might need 1 unit of insulin for every 25 grams of carbohydrates. A doctor helps determine the insulin-to-carbohydrate ratio.

- In our questions:
- ✓ Using the provided food chart, add up the total grams of carbohydrates in each meal.
 - ✓ Divide the total grams of carbohydrates by the number of carbohydrate grams in the person's insulin-to-carbohydrates ratio.
 - ✓ This is the number of units of insulin the person with diabetes would take before that meal.

FOOD	GRAMS OF CARBOHYDRATES
Cheese pizza (1 slice)	20
Macaroni & cheese	29
Chocolate chip cookie	10
Banana	27
Grilled cheese sandwich	50
Nonfat milk (1 cup)	12
Popcorn (1 cup)	5
Chicken nuggets (5)	13
Cereal (1 cup)	24
Pink lemonade (1 cup)	26

1 Ross, who needs 1 unit of insulin for every 10 grams of carbohydrates, has 2 slices of cheese pizza.

a. Find the total number of grams of carbohydrates in the 2 slices of pizza:

b. Divide by the grams of carbohydrates in Ross's insulin-to-carbohydrates ratio:

That's the correct number of units of insulin Ross would take before his meal.

2 Christine needs 1 unit of insulin for every 20 grams of carbohydrates. Before having a grilled cheese sandwich, how many units of insulin should she take?

3 For breakfast, Jen—who needs 1 unit of insulin for every 15 grams of carbohydrates—wants a cup of cereal with a cup of nonfat milk and a banana. How many units of insulin should she take?

4 How many units of insulin should Jen take before eating 5 chicken nuggets and a cup of popcorn?

5 Miguel, who needs 1 unit of insulin for every 25 grams of carbohydrates, had macaroni & cheese and a cup of pink lemonade for dinner. For dessert, he had some chocolate chip cookies. Before eating, he correctly took 3 units of insulin. How many cookies did Miguel eat?

AL TELEMANS/SPORTS ILLUSTRATED