

# Sugar and Colds

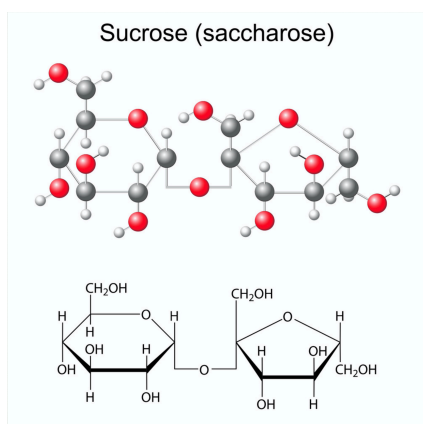
Hi, my name is Terry. . . and I am a sugar addict. As a young child, I would load up the cereal bowl with milk and sugar. When I was done eating the cereal, I would drink the remaining sugar sludge in the bottom of the bowl. It is amazing that I am even still alive! As a teenager, when I returned home after school, I would bake a cake for our dinners. But, I also thought that the icing should be “crunchy” from so much sugar.

On a beautiful September evening, while we were walking around our neighborhood, my wife twisted her ankle. She was to leave in just an hour for her microbiology class. When she realized that she would not be able to attend the class that evening, she asked me to attend with a tape recorder and a note pad. This I did for her.

That evening, the professor said something about our immune system, the nature of bacteria, and sugar that changed my eating habits.

The Bible says, “It is not good to eat much honey. . . *Proverbs 25:27 first part*), *NKJV* Honey was considered one of life’s necessities; one must not, however, eat too much.

There are two ways in which the sucrose molecule is modeled. The red cells are oxygen. The gray cells are carbon. And the small white cells are hydrogen. Notice the carbon ring, the basic

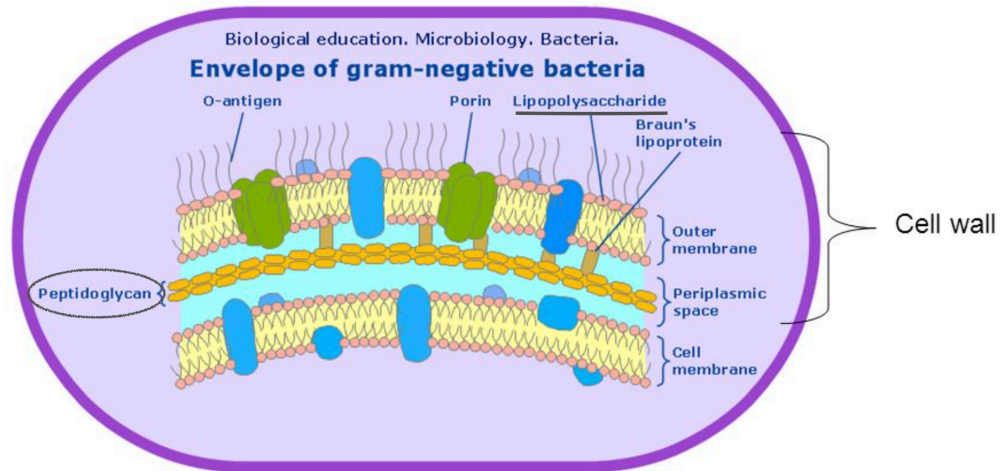


three elements, and the CH<sub>2</sub>OH “tails.” These are called “Hydroxymethyl” but they are not a complete molecule by themselves. One more hydrogen atom in the middle and it would become CH<sub>3</sub>OH or methanol—the simplest alcohol and far more toxic than ethanol (drinking alcohol).

This is what I learned when I attended my wife’s Microbiology class. Most gram positive bacteria have cell walls composed of peptidoglycan which is a polymer composed of sugars and amino acids. To the immune system, these bacteria look like and taste like “M&M’s”—metaphorically speaking.

Gram negative bacteria cells also have sugar—another form of sugar—Lipopolysaccharide—on the surface of their cells. It is composed of four to six sugar molecules. Monosaccharides are a simple sugar molecule that cannot be hydrolyzed to simpler chemical compounds.

Look closely. Do you see peptidoglycan again. There it is in the secondary layer. Two layers of sugar. Like a chocolate coated M&M!



I should note that while viruses have a protein cellular wall, they are not alive by themselves. They are parasites of other cells—including bacteria.

The primary defense against bacteria and some viruses is the white blood cell that circulates in the blood vessels of the body. It is looking for the “taste of sugar” that is the outer wall of most bacteria.

Sugar—Sucrose and/or Glucose—blind the white blood cells to the “taste” of the bacteria. The more sugar that is ingested in your diet, the less effective is your immune system to find and kill the bacteria that are making you weak and sick.

Teaspoons of Sugar Eaten at One Time by Average Adult	Number of Bacteria Destroyed by Each White Blood Cell in 30 Minutes	Percentage Decrease in Ability to Destroy Bacteria
0	14	0
6	10	-25%
12	5.5	-60%
18	2	-85%
24	1	-92%

JoAnn Rachor, “Of These You May Freely Eat”

The preceding chart illustrates the dramatic decline in the number of bacteria destroyed by white blood cells in a half hour period when an average adult eats food containing sugar.

One—just ONE—piece of apple pie is enough sugar to reduce the effectiveness of the white blood cells in their battle with bacteria by greater than 25% for more than a day. But, who can eat just one? Two pieces of apple pie is sufficient to reduce the effectiveness of the white blood cells more than 60%.

## **Hidden Sugar** **TEASPOONS OF SUGAR**

• Chocolate bar, average size	7	• Apple pie, 1/6th piece	7
• Chocolate fudge, 1½" square	4	• Pumpkin pie, 1/6th piece	5
• Marshmallow, 1 average	1.5	• Chocolate milk, 8 ounces	6
• Chewing gum, 1 stick	0.5	• Cocoa, 8 ounces	4
• Chocolate cake, 1½" square	12	• Banana split	20
• Donut, glazed	8	• Jam, 1T	3
• Brownie, 2" x 2" x 3/4"	3	• Honey, 1T	3
• Ice Cream, 1/2 cup	5–6	• Jelly, 1T	2½
• Sherbert, 1/2 cup	6–8	• Peaches, canned, 2 halves	3½

Are some of your favorite foods in this list? This is just a short list to illustrate how sugar sneaks into our diet.

In addition to honey, I imagine that I can name several “pure” forms of sugar that are currently present in your pantry or refrigerator. Granulated sugar. Confectioner’s sugar (powdered sugar). Maple syrup. Buttered syrup. Brown sugar. And others too numerous to continue.

It is my personal contention that we do not get sick in the Winter from the cold (which is why they are called “colds”), nor the dry air indoors, nor from the congregation of many people (holiday parties), nor from even overeating except for the high levels of sugar that are consumed. Halloween with mostly sugary treats. Thanksgiving with pies including pumpkin, apple, and other treats. Christmas with again sugary deserts. New Years eve and New Years day. And let’s not forget the college football bowls, the professional football playoffs and finally the Super Bowl. And, even then it is not over. For some there is still the Valentines day and the heart shaped box of chocolates and a chocolate bunny.

From the Counsels on Diet and Foods, page 196, “The free use of sugar in any form tends to clog the system, and is not unfrequently a cause of disease.”

The sugar addiction cycle is insidious in its persistence. It is especially strong if you start the day with the first dose of sugar.

1. You eat sugar
  - You like, you crave it
  - It has addictive properties
2. Blood sugar levels spike
  - Dopamine is released in the brain
  - Equals addiction

- Mass insulin secreted to drop blood sugar levels
3. Blood sugar levels fall rapidly
    - High insulin levels cause immediate fat storage
    - Body craves the lost sugar high
  4. Hunger and Cravings
    - Low blood sugar levels cause increased appetite and cravings
    - The cycle is repeated

My recommendation: Replace the processed sugar with fruit—<TAP> apples, oranges, grapes, bananas, peaches, strawberries, etcetera. Easy to digest with none of the sugar high—and lows.