



Featured Chemist: Dr. Helen Free
Bayer HealthCare, Diagnostics Division, Elkhart, IN

In honor of National Chemistry Week, and celebrating health and wellness, I got to travel all the way to Indiana to meet Dr. Helen Free! Dr. Free works for Bayer HealthCare, Diagnostics Division, Self-Testing Segment. I had no idea what self-testing meant, but I was really looking forward to finding out!

Dr. Free is an inventor! She has been a chemist for over 60 years. In those years she has invented many products used by doctors' offices and hospitals to test urine and blood for diseases. Self-testing, or testing yourself, is very important for people who have diseases. People with diabetes or kidney problems depend on these tests to let them know how their organs are working.

Two of the self-tests at Bayer are Clinistix and Multistix. Clinistix let you know how much glucose (sugar) is in your urine! The Multistix strips test for ten different things in your urine including glucose, protein, blood, and other physical characteristics. The scientific name for the chemical compounds you are testing for is "analytes."

One other test she showed me was called "Breeze." It was a small tear-drop shaped instrument that takes a drop of blood and tests it for glucose. It times the test by itself and tells you the amount of glucose in the blood when the test is done!



Dr. Free and I read a book that she uses when visiting schools.

Dr. Free used to work in a laboratory, but now has an office and computer. She spends a lot of her time talking to children in schools. She wants to let them know what the signs of diabetes are: being hungry all the time but losing weight, being thirsty

all of the time and going to the bathroom often. She tells children about what we can do to prevent diabetes and other bad medical conditions. We must eat healthy foods to keep us from getting overweight, or "obese" as doctors say. We must also exercise by playing active games instead of watching too much TV. Type 2 diabetes used to be found mostly in adults, but is becoming more common in children and young adults because of the increase in obesity in our age group. Dr. Free told me a story about when she gave a talk on the "signs of diabetes" to a girls' science camp. A little girl from the camp told her mother that she had the signs of diabetes. She had remembered the signs from the talk and because of this, her mother took her to the doctor. The doctor tested her blood sugar and found out that it was indeed very high. The little girl helped to diagnose her diabetes just from listening to Dr. Free's talk!





Dr. Free and I use a digital glucometer.

Before I left, I asked Dr. Free what made her want to go into science. She said she originally wanted to be an English teacher but changed to chemistry while in college because it was “fun and exciting.” She has made such significant contributions to our field and has even been inducted into the National Inventors Hall of Fame. Her decision to become a chemist has helped millions of people and I’m proud that she’s an outstanding member and volunteer of the American Chemical Society. If you have any questions about my visit, you can write to me at meg@acs.org.



Dr. Free shows me how a urinalysis test strip is read.

Personal Profile: Dr. Helen Free

What is your favorite food?
Japanese food

What is your favorite color?
Red

When is your birthday?
February 20

What is your favorite pastime?
Traveling to other countries.
I have been to more than
31 different countries.

How big is your family?

I have a wonderful large family and we often have family reunions. I have 6 children, 3 stepchildren, 15 grandchildren and 3 great-grandchildren!

Were you interested in science when you were growing up?

Yes, I was interested in all school subjects when I was growing up. I always asked WHY did this happen, WHAT causes this, or HOW else could you do that?

What do you like about your job?

All the different things I get to do. The joy of figuring out how to solve problems in the lab and how to design experiments to answer specific questions that would help people who had different diseases.

