13 November 2011 | voaspecialenglish.com

What It Takes to Become a Druggist


AP
Pharmacist Mark Doyle at McLanahan's Drug Store in Centre Hall, Pennsylvania

(You can download an MP3 of this story at voaspecialenglish.com)

VOICE ONE: This is SCIENCE IN THE NEWS in VOA Special English. I'm Bob Doughty.

SHIRLEY GRIFFITH: And I'm Shirley Griffith. Today, we tell about a study that explores how we feel about future events. We also answer a question from Vietnam about pharmacists in the United States.

(MUSIC)

BOB DOUGHTY: In a popular song, Bobby McFerrin sings, "Don't worry. Be happy." Since childhood we have been told, "See the glass as half full, rather than half empty." And to "look on the bright side" and be hopeful, be optimistic.

SHIRLEY GRIFFITH: But what about people who advise us not to "look at the world through rose-colored glasses?" They say we should be more realistic in what we expect to get out of life.

BOB DOUGHTY: A new study suggests that the way we feel about the future is controlled deep within our brains, and is not something we can easily change.

Tali Sharot of University College, London asked test subjects to think about both good and bad things that happen to people every day. Then the subjects were asked to estimate the chances of that event happening to them.

They considered negative events like learning they had cancer, or hearing that their car had been stolen. Or that their computers were broken and they had lost valuable information.

Ms. Sharot used an imaging machine to examine the brains of subjects while they thought about unpleasant things.

SHIRLEY GRIFFITH: Then the volunteers were told the actual chances of a certain event happening. They were told to think again about their expectations.

The test showed that, in general, people are more optimistic than they should be. The test also showed that people usually think that really bad things happen to other people, not to themselves.

The volunteers thought this way even after they were told the real chances of a certain event. Even after learning those real chances or percentages, they ignored the negative.

Psychologists call this the "optimism bias." And it can be both a good and a bad thing.

BOB DOUGHTY: Ms. Sharot and her research partners reported their findings in the publication "Nature Neuroscience." The researchers say that being optimistic can be good for our physical health.

If we look on the bright side, they say we are likely to feel less stress or tension, and less chance of developing depression. However, the researchers also note that being too optimistic can cause problems.

For example, they say that ignoring the negative and thinking more about the positive may have led to the worldwide economic problems of two thousand eight.

SHIRLEY GRIFFITH: Here's an example: Suppose a person estimates that she has a thirty percent chance of getting cancer. She estimates that three people out of ten will get the disease. If she is told that the true chances of getting sick are only twenty percent, she is likely to lower the estimate for her chances of getting cancer.

But things are different when she is told that she guessed too low, and the chances of her getting cancer are forty percent. Then she will raise her idea of her own chances. But she will raise her estimate by only a small amount.

Now she might think that her chances are about thirty-two percent. But she would not estimate the real average of forty percent.

The study results show that people usually accept good news but reject bad news. They reject the bad news even when they are told the truth.

It seems we think we are above average when dealing with good things. And we think we are below average in suffering bad things that might happen to us.

BOB DOUGHTY: The machine used to examine the test subjects' brains is called an fMRI, or functional magnetic resonance imaging scanner. When the people thought good thoughts about their future, activity in the frontal lobes, or areas, of their brains increased.

But when the volunteers thought about negative things, there was no increased activity in these frontal lobe brain areas. Scientists believe this means the human brain naturally ignores the chances for negative future events. But they do not yet know why this happens.

SHIRLEY GRIFFITH: So, as Bobby McFerrin advises:

"Don't worry. Be happy"

(MUSIC)

Remember that the "optimism bias" can cause problems.

(MUSIC)

BOB DOUGHTY: A listener in Vietnam wrote to thank us for the recent program about how to become a doctor in the United States. Kim Anh Nguyen was wondering if we also could explain the process of becoming a pharmacist.

We suspect the abilities needed for a career in pharmacy are about the same worldwide. They include excellent skills in science and mathematics, and the ability to communicate and work well with people.

The United States Bureau of Labor Statistics also suggests that a pharmacist needs to have good feet! Many pharmacists stand all day at work.

SHIRLEY GRIFFITH: There were almost two hundred seventy thousand pharmacists in the United States in two thousand eight. That is the most recent year for which numbers are available.

In some parts of the country, the average yearly pay for a pharmacist was almost one hundred thousand dollars. Many pharmacists work forty hours a week. But some have longer workdays. And some jobs require working at night or on weekends and holidays.

BOB DOUGHTY: A pharmacist in America is often called a druggist. Many druggists work in community pharmacies or food stores. They provide patients with prescription medicines from their doctors. Pharmacists guide patients in how to take these drugs.

Many pharmacists advise people about general health issues, like diet or exercise. Pharmacists help patients guard against dangerous drug reactions by keeping records of the drugs ordered for them by several doctors.

Pharmacists in hospitals prepare medicines and advise doctors on the choice and effects of drugs. They also plan and watch over patients' drug regimens -- the systematic plans for how medicine is to be administered.

Druggists who own or operate pharmacies may sell other, non-medicinal products. They also may offer employment to and supervise other workers in the store.

Other pharmacists do research in pharmacology colleges. Some work for drug or insurance companies.

(MUSIC)

SHIRLEY GRIFFITH: A man or woman who wants to be a pharmacist needs at least six years of study on the college and college-graduate level. Some pharmacists study for eight or more years.

People who want a career as a pharmacist need to plan ahead. It is a good idea to study science in high school. Colleges and universities that have pharmacy schools require college courses in science.

Most people seeking to enter pharmacy schools attend two years or more of college. During that time they take classes in subjects including natural sciences, mathematics and biology. They also study social science and humanities like languages, history and philosophy.

BOB DOUGHTY: Someone who gains admission and completes pharmacy school earns a doctor's degree in pharmacy, called a Pharm. D. But even after the study program is completed, people cannot work as pharmacists until they take examinations to receive a license or permit.

The Department of Labor says all fifty states and Guam, Puerto Rico and the American Virgin Islands require this document.

SHIRLEY GRIFFITH: Letitia Deas is a pharmacist in the state of Maryland. Ms. Deas works about sixty hours a week. She has a job with a pharmacy at a Safeway food store in the city of Bethesda. She also works at Holy Cross Hospital in nearby Silver Spring, Maryland.

Ms. Deas says she waited longer to choose a pharmacy career than many people do. She attended four years of college at the University of Maryland, where she received a degree in chemistry.

LETITIA DEAS: "And that was some time ago, because I do have some age on me. And then I went to pharmacy school."

But about nine or ten years passed between college and her studies at the University of Maryland School of Pharmacy. During those years she worked in her grandfather's store. But she decided that she wanted a different career.

LETITIA DEAS: "And, quite frankly, it was a decision that I did not want to continue working in my family business."

Ms. Deas said she was interested in a medical career. She considered studying to be a doctor. But she was already thirty-one years old when she was thinking about it.

LETITIA DEAS: "And I was thinking well I don't quite want to do medical school because I would just be getting established right about now, with the education that it needed. So pharmacy was my next interest."

Today she notes changes in the pharmacy profession. For example, she says knowledge of vaccines has been added to more traditional requirements. And, Letitia Deas expresses satisfaction in her career.

LETITIA DEAS: "I love my job."

(MUSIC)

BOB DOUGHTY: This SCIENCE IN THE NEWS was written by Jim Tedder and Jerilyn Watson. Our producer was June Simms. I'm Bob Doughty.

SHIRLEY GRIFFITH: And I'm Shirley Griffith. Join us again next week for more news about science in Special English on the Voice of America.