The problem with antibiotics

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Credit: Rush University Medical Center

We've all woken up with a sore throat that progresses to a runny nose by the next day. By the third day, we have a hacking cough, a pounding headache from the sinus congestion, and even fevers with chills. We drag ourselves out of bed and go to the doctor, hoping that a pill or antibiotic can get us feeling better.

The majority of the time, however, we have one of 20 different respiratory viruses that cause the cold or flu-like symptoms. And

antibiotics cannot kill viruses. So if it's viral, the antibiotic cannot get you better.

What do antibiotics kill, then? Antibiotics, like amoxicillin or the Z-pack (azithromycin), kill bacteria. But antibiotics kill indiscriminately. Did you know our bodies are made up of 100 trillion bacteria? 99.99% of these bacteria do not cause disease—as long as a careful balance is maintained, they work the way they are supposed to work, and stay in the places they are supposed to stay.

In fact, many of these bacteria in our bodies help keep us well. They make sure our food is digested properly. They protect our bodies from the invasion of more deadly bacteria. They may even help us to control our weight, decrease our risk of diabetes, and prevent cancer.

But each time we take an antibiotic, we kill bacteria, both the good ones in our bodies and the bad ones that are making us sick. Also, each time we take an antibiotic, some of the trillions of bacteria in our bodies become resistant to the antibiotics we have taken. And these resistant bacteria reside quietly in our bodies, until one day, something tips the careful balance. Suddenly, these resistant bacteria cause life-threatening diseases with few to no treatment options left.

So what can we do to protect ourselves from the harms of antibiotics? Use them smartly. Use them only when your doctor thinks you have a bacterial infection. Use them when the benefits of an antibiotic outweigh the risk. And for sure, don't use them to treat a virus, like the common cold.

Provided by Rush University Medical Center