

## ***Common myths about infections and antibiotics***

Much attention has been given to the fact that antibiotics are given too often. The reason for this concern is that the overuse of antibiotics can create resistance in the bacteria a person carries, making it much harder to treat serious infections in the future.

For that reason, the physicians in our practice are trying to avoid using antibiotics unless they are necessary. The problem is that many patients come to the office already convinced that their infection *requires* an antibiotic and so will not be satisfied unless they get one. This puts our staff in a difficult position, as we want to practice good medicine, but also strive keep our patients happy.

To help with this problem, here is a list of common misconceptions about when antibiotics are appropriate.

- **If mucous is green, it is time for antibiotics.** Almost all respiratory infections go through a stage where the mucous turns green (or darker). This is due to a large number of white blood cells, and may actually mean that your body is winning the battle against the infection.
- **When a fever starts, it is time for antibiotics.** Fever is part of the body's defense against infection. Even fevers as high as 104 can be caused by viruses (which are not killed by antibiotics).
- **Sinus pain means you need antibiotics.** Sinus pain is caused by a difference in pressure between the inside of the sinuses and the outside world. This is usually caused by thick mucous, and not necessarily mucous. Decongestants can help with this (although they may not be appropriate with certain heart conditions and hypertension), as can salt water spray in the nose. The pain is best treated with acetaminophen (Tylenol, etc), or ibuprofen (Advil, etc.).
- **“The last time I had this I needed antibiotics, so I wanted to catch it early this time.”** Most infections that *do* require antibiotics start with a virus infection and then turn into bacterial infection for which antibiotics are appropriate. To treat an infection “early” means that *you would treat it when it does not yet need antibiotics*. This is exactly what can cause resistant bacteria. If your symptoms are that of a virus, then antibiotics are a bad choice.
- **Bronchitis requires antibiotics.** While there are some cases of bacterial bronchitis, the majority of cases of bronchitis are caused by viruses. Bronchitis happens when a person has a coarse cough (loose phlegm), and does not have pneumonia (as heard by the physician on exam). Overall, bronchitis probably accounts for the biggest number of inappropriate antibiotic prescriptions.
- **“I am immune to amoxicillin.”** Amoxicillin is not the strongest antibiotic. This is *exactly* the reason we like to use it first. The goal of antibiotic therapy is to knock the bacterial infection down to the point that a patient's body can do the rest. Most of the time, the “weaker” antibiotics do the job just fine. Stronger antibiotics are used when:

- **A person is has just finished a course of “weaker” antibiotics.** In this instance, the bacteria are more likely to be resistant. This resistance only lasts for a few months.
- **A person who is physically frail.**
- **An infection that appears especially serious.**
- **“Can I have antibiotics to be on the safe side?”** Antibiotic resistance is much less safe than waiting to see if an antibiotic will be needed.
- **“Can you call in an antibiotic?”** We usually don’t call in antibiotics. The one sure exception for this is if a family member has a documented case of strep throat. The contagiousness of this is enough that it is reasonable to call it in. Sinus infections, bronchitis, and ear infections are not something we will call in antibiotics for. Please don’t ask.
- **“When I got an antibiotic last time, I got better. That means the antibiotic made me better.”** Thankfully, most illnesses get better over time. It is very possible that it would have gotten better just as fast without the antibiotic. Just because the rooster crows every morning, doesn’t mean it causes the sun to rise.

In the past, physicians were quick to offer antibiotics in many situations we now know they are not needed. This changed, not only with the emergence of resistance, but also with studies that show that they may not really help. Here are some examples:

- In one study, parents of children with obvious ear infections and fever were given ear drops to treat the pain and a prescription of an antibiotic to use if the child did not get better. 90% of the parents did not fill the antibiotic prescription.
- A recent study of patients with sinusitis and fever showed that antibiotics and prednisone were no better than placebo at treating the infection.

Much of the problem is our mindset. Even many doctors and nurses find it hard to unlearn the long-held beliefs in antibiotics (so past and even recent experiences with physicians may not reflect this new mindset). Still, the need to change is clear.

We really want to practice the best medicine on our patients. I hope that reading this will help you realize that when we are reluctant to offer antibiotics, it is really in your best interest. If we use them unnecessarily, then when you really need them, they might not work. Please help us accomplish the goal of doing what is best for you and for all of our patients.