

Title: Antibiotic-Associated Diarrhea: Causes and Treatments

Author: Erin M. Scanlon MS4

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Abstract: Almost all antibiotics can cause diarrhea, but the risk is especially high with the medications used to treat ear infections and colds. Diarrhea caused by antibiotics can occur even up to two months after using the medications. Recent studies have suggested that probiotics, which are healthy live bacteria, can help prevent antibiotic-associated diarrhea in young children being treated for ear infections or colds.

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Antibiotic Associated Diarrhea: Causes and Treatments

Erin Scanlon MS4

University of Minnesota Primary Care Clerkship Patient Education Tool

What is Antibiotic-Associated Diarrhea?

This is diarrhea that develops in a person who is taking or has recently taken antibiotics. One of the most common causes of antibiotic-associated diarrhea is a bacterium called *C. difficile*.



What is *C. difficile*?

This is a bacterium that is normally found in the gut of healthy people along with millions of other bacteria.

Many of these bacteria protect the body from infection. Taking these antibiotics can kill the “good bacteria” and allow the “bad bacteria”, like *C. difficile* to multiply and cause diarrhea.



What are the treatments of Antibiotic-Associated Diarrhea?

The most important step is to stop taking the antibiotic that caused the diarrhea to develop. A healthcare provider might choose another antibiotic that will stop growth of the bad bacteria, *C. difficile*. A medication that can be taken by mouth, called Flagyl can be used to treat people that are infected with *C. difficile*. Another medication, like Vancomycin can be used instead of Flagyl.



What are the symptoms of Antibiotic-Associated Diarrhea?

- Watery diarrhea (more than 3 times a day)
- Cramping or pain in the belly
- Dehydration
- Decreased appetite
- Low grade fever

Do these medications have any side effects?

It is important to take the dose of antibiotic to treat the *C. difficile* infection on time and to finish the whole course of antibiotics. Flagyl can cause nausea and a metallic taste in the mouth. It is important not to drink alcohol while taking Flagyl. Vancomycin can cause nausea, a bitter taste in the mouth, and vomiting.

What are probiotics and are they useful?

Probiotics are “healthy” organisms like bacteria and yeast that can be taken by mouth. Some studies have found that probiotics can shorten the length of time that a person could have diarrhea related to an antibiotic. Well-known probiotics include Lactobacilli, and the yeast *Saccharomyces boulardii*. It is thought that these work to restore gut bacteria to its normal self.



Are probiotics safe?

These are generally safe, and there have been few case reports of serious illness or death. These rare cases have occurred in people that have a weak immune system or are extremely sick.



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Is *C. difficile* contagious?

It is uncommon for people who are not taking antibiotics to become infected with *C. difficile*. However, a person could potentially spread the bacteria for as long as the diarrhea remains. Hand washing is an effective way to stop the spread of *C. difficile*.

What are the supportive treatments for diarrhea?

If you have diarrhea, it is very easy to become dehydrated. To avoid this, it is important to drink fluids that contain water, salt, and sugar. A person who is peeing less often, and has urine that is dark yellow may be dehydrated and should drink more fluids. There is no particular food that is best for someone with diarrhea, but crackers, bananas, soups and cereals can be helpful