



## PIC QUESTION OF THE WEEK: 7/17/06

Q: What is the preferred antibiotic for the treatment of travelers' diarrhea?

A: Travelers' diarrhea (TD) results from ingestion of contaminated food and water. High-risk areas include Mexico, Asia, the Middle East, Central and South America, and Africa. Bacteria are the most frequent (~85%) cause of TD; however, parasitic infection and viruses may also be responsible. In many cases, the pathogen cannot be isolated. The most common cause of TD worldwide is enterotoxigenic *E. coli*. Other forms of *E. coli* as well as *Campylobacter jejuni*, *Salmonella*, and *Shigella* species are also associated with this disorder. TD is characterized by acute, watery, sometimes bloody diarrhea, abdominal cramps, and rectal urgency. It may be accompanied by nausea, bloating, and fever. The disorder is typically self-limited and may last for only 3-4 days, even without treatment. The most important preventive measure against TD is the proper selection and preparation of food and beverages. Bismuth subsalicylate (BSS; Pepto-Bismol) has been shown to reduce the incidence of TD from 40% to 14% when used in travelers to Mexico. Antimicrobial agents are generally not recommended for prophylaxis of TD. Loperamide (Imodium) is typically indicated for management of mild cases of TD. Antibiotics are the primary agents suggested for the treatment of moderate to severe forms of diarrhea. First-line antibiotics for the treatment (and prevention) of TD include the fluoroquinolones ciprofloxacin and levofloxacin. Ofloxacin and norfloxacin have also been used effectively in this condition. In cases of resistance to fluoroquinolones (e.g. Thailand and India), azithromycin has proven to be effective. The usual dose of ciprofloxacin is 500 mg twice daily, while levofloxacin is generally administered as one 500 mg dose daily. Both drugs can be given for one to three days. Azithromycin can be prescribed as a single 1 g dose or 500 mg daily for three days. Although standard treatment regimens consist of three days of therapy, mild cases may respond to single doses of these drugs. A non-absorbed antimicrobial named rifaximin (Xifaxan) is labeled for the treatment of TD caused by non-invasive strains of *E. coli*. As stated earlier, good hygiene and strict adherence to proper preparation of food and drink are the major preventive measures for TD. In most cases, short courses of fluoroquinolones clear infection within a few days.

### References:

- Advice for travelers. *Treat Guidel Med Lett* 2006;4:25-34.
- CDC. Travelers' diarrhea. Health information for international travel, 2005-2006  
<http://www.cdc.gov/travel/diseases.htm#diarrhea> (accessed July 14, 2006).

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