Hello, and welcome to the Island Drug podcast. This is Chris. On July eighth the FDA issued a safety warning regarding the off-label use of quinine, sold under the brand name Qualaquin, for the treatment of nighttime leg cramps. This week we’ll be examining nighttime leg cramps, some possible solutions for them and the problems associated with using Qualaquin to treat them.

Nocturnal leg cramps are painful muscle spasms that commonly disrupt sleep. Approximately one third of people over the age of 60 experience them. Usually they involve the calf muscle. Their cause is sometimes unclear, but some may be due to dehydration or an electrolyte imbalance (low sodium or potassium, etc). Several prescription medications can also trigger nocturnal cramps, including medications that lower blood pressure. Some researchers have suggested that the problem is more common to those with a sedentary lifestyle; however, muscle fatigue is another potential trigger. Sometimes nocturnal leg cramps are a symptom of a more serious disease like diabetes, Parkinson’s disease, or kidney failure. If cramping is a chronic problem for you it is worth mentioning to your doctor.

Here are some things you can do to help prevent nocturnal leg cramps:

- Drink fluids to avoid dehydration
- Supplement with minerals if you are deficient (magnesium, potassium, calcium, and sodium)
- Wear comfortable shoes during the day
- Stretch prior to getting into bed
- Untuck the bed sheets
A somewhat bizarre treatment is to place a bar or Ivory soap under the bed sheets. There’s no supporting science here, but I’ve heard several people, including doctors, claim that it has worked for them. Unfortunately for many people these simple measures don’t provide relief and doctor might prescribe Qualaquin (quinine) as a treatment.

Quinine has been used for hundreds of years to combat malaria. Europeans used quinine tonic as an anti-malarial during colonialism. Frequently gin was added to help take the edge off – this is origin of the gin and tonic cocktail. Today small amounts of quinine are still used to flavor tonic water.

In addition to its anti-malarial properties, quinine is a muscle relaxant. A few rather questionable studies have shown it to be somewhat effective in the treatment of nocturnal leg cramps, and for many years quinine was available over-the-counter as Legatrin which was marketed for leg cramps. In 1994 the FDA ordered Legatrin pulled from the market due to safety concerns. However, today quinine remains available as a prescription drug, marketed under the brand name Qualaquin, and is FDA approved for the treatment of malaria. While the medication is not approved for the treatment of nocturnal leg cramps, it is commonly prescribed for that purpose.

Quinine can cause serious life-threatening blood-related reactions. It can impede the body’s ability to produce platelets, which can lead to uncontrollable bleeding. Quinine may also lead to permanent kidney damage and trigger serious heart problems. It is the FDA’s position that these risks are acceptable when the drug is used to treat malaria, which can be life threatening, but not when used for nocturnal leg cramps.

Unfortunately, alternative treatments have not been well studied. A small collection of medications including verapamil, gabapentin, carisoprodol, and vitamin E can be used. These medications are all approved for other uses. There safety profiles are much better than that of quinine; however, no one has designed or carried out a good study to determine their efficacy for nocturnal leg cramps.

Thanks for tuning in to this weeks podcast. If you have any questions about quinine or nocturnal leg cramps, please don’t hesitate to stop by Island Drug to talk with one of our pharmacists.

References
1. Guay DR. Are there alternatives to the use of quinine to treat nocturnal leg cramps? Consult Pharm. 2008 Feb;23(2):141-56.
2. FDA [Homepage on Internet]. Silver Spring (MD): FDA Warns of Risks with Unapproved Use of Malaria Drug Qualaquin. [updated July 8, 2010; cited July 12, 2010]. Available at: www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm218383.htm