

## Pet Peeves of a Private Practitioner—Part II: Neosporin

I am embarrassed to say that I make a lot of money every year from the use of Neosporin. It's money that I don't especially want to earn since—most of the time, at least—it's being unnecessarily spent at the doctor's office for treatment of a condition that should not have occurred. Let me explain.

Neosporin, at least the “classic” version, is an over-the-counter ointment containing three antibiotics: Neomycin, Polymyxin B, and Bacitracin. The brand is owned by Johnson & Johnson and is promoted for minor cuts and scrapes. The general consensus among patients I see in the office is that the use of this medicine “prevents infection,” “helps wounds heal faster,” and “helps prevent scarring.” Essentially none of this is true. In fact, there is scant evidence that Neosporin does much of anything. Moreover, there are excellent reasons *not* to use it.

We are human, and scarcely a day goes by that we or a member of our family does not suffer some minor skin break. It may be a paper cut, a skinned knee or a scraped knuckle incurred while fixing the lawnmower. Our natural reaction is to do “something” to relieve pain and make injuries better. We put ice packs on sprains, soak our gouty feet in Epsom salts, rub butter on burns and turpentine or WD-40 on arthritic knees. So, why not some ointment on the minor cut? The truth is none of these home remedies do much, if any, good.

Let me quote Wikipedia, whose entry on “Neosporin” sums it up nicely: “Neosporin is marketed for the prevention and fighting of infections and speeding the healing of wounds. However there is little data supporting these claims, and in clinical trials, Neosporin is not more effective than simple petroleum jelly.” Well, you say, it won't hurt to do *something*, just in case it might work. Wrong! And therein lies the problem.



The use of *any* antibacterial ointment on minor injuries is of uncertain value at best. The use of antibacterial ointment that contains Neomycin (one of the 3 antibiotics in Neosporin) presents a problem. While existing allergy or sensitivity to this drug may be fairly uncommon in the general population (1% or so, but some studies report much higher rates), many individuals develop sensitivity over a relatively short period of time when using it. Hence, it's not uncommon to see rashes develop in a week or less, especially if the ointment is used under a Band-Aid or other such dressing.

Here's a common story: Joe Doe scrapes his arm while doing yard work. Worried about infection, he slathers on Neosporin, covering the site with a plastic bandage. Being conscientious, he changes the bandage and applies more Neosporin twice daily. On day 3, the area begins to look red, so fearing infection has begun, he starts changing the bandage and using more ointment four times a day. By day 7, the area of the scrape has become red and angry-looking and is weeping fluid. He decides at that point to come to the doctor to treat the “infection” that overcame even the power of Neosporin. I walk in the exam room, glance at the affected area and say, “Oh, I see you've been using Neosporin.” The patient is taken aback. “How did you know?” he asks. “Because that is a reaction to the ointment, not an infection,” I reply. I tell him to just wash and clean the area, and maybe use a little steroid cream. Within days, he's better.

Let me tell you another true story about a patient I saw recently. She was elderly, and had decreased blood flow in her feet. She had been warned by a vascular surgeon that she was at risk for infection in the area. He told her son—a very careful and responsible individual—to keep a close watch on them. When I had seen her a month or so earlier, her feet looked fine. Then one day the son brought her to the office with terrible inflammation of both feet, so bad on the left foot that the skin had broken down to expose the raw flesh beneath. I was horrified. The son said the dreaded infection seemed to have set in despite his best efforts, and he was worried (correctly) that she might require a foot amputation. The inflammation didn't look like an infection though, so I asked if he'd been rubbing anything on his mother's feet. "Just Neosporin," he replied. "I've been using it twice daily to prevent infection." I told him to stop everything and simply wash and dry her feet daily. More than a month later the feet were almost healed, the only "therapy" being stopping the use of Neosporin.



Okay, you say, maybe those folks were not using the product correctly? To be realistic, who really follows package directions closely? But it gets worse, and for this I blame the manufacturer.

The popular trend these days is to capitalize on brand names. Take Excedrin, for example. There is regular Excedrin, Excedrin Migraine, Excedrin Back & Body, Excedrin Menstrual Complete, Excedrin Sinus, Excedrin PM, etc. The main ingredient in all of them is acetaminophen (Tylenol) plus or minus aspirin, caffeine, a decongestant or a sleep-inducing compound. What you may be taking is clear only *after* you read the fine print on the side of the package—you can't rely on the brand name alone. In my opinion, Johnson & Johnson, makers of Neosporin, have done worse: They have used the same brand name for medicine to treat totally different conditions. If you make a mistake and use the wrong "brand" of Neosporin, you can get in trouble.

The potential problems I cited above refer to the "classic" version of Neosporin, the over-the-counter, triple-antibiotic ointment. But, there are non-antibiotic preparations of "Neosporin" sold by the same company. There are "Neosporins" for lips, skin and eczema, designed to protect, moisturize and/or reduce inflammation. Potential misuse of the eczema products is especially disturbing. Eczema is a common, chronic skin rash, often of unknown cause. If you go to the drugstore, you can buy Neosporin Anti-itch Cream, containing mainly 1% hydrocortisone, a mild topical steroid. Fine, it works well when used correctly. But what happens if you use the regular Neosporin ointment on the inflamed skin? It's a quick ticket to a drug reaction, not to mention a trip to the doctor. The manufacturer will argue, no doubt, that such would be a misuse of the product. Based on my long experience in the practice of medicine, they overestimate how often people actually read the label at all. It's late at night, you've got an itchy rash, so you grab a tube of cream from the medicine cabinet and rub it on it.

Bottom line, what can you do? First, use common sense. The best treatment for minor cuts and scrapes is simple cleaning and bandaging. Use of creams, ointments, etc. is rarely of any use. Second, if you insist on using an antibiotic cream, use one that does not contain Neomycin. Several are available both with and without a prescription. Third, if the area of injury turns red, warm or painful, see a doctor right away. Following these simple directions will cut down on unnecessary medical visits.