

HEALTH } A Day in the Life of a Nail Expert

In this month's column, Dr. Stern discusses the different reasons pseudomonas infections may develop on clients' nails and what to do about it if they do.



Stern

Dermatologists treat skin, hair, and nails. I am a board-certified dermatologist and I specialize in the treatment of nail disorders including inflammatory diseases of the nail, cosmetic issues related to the nail, cancers of the nail, sports-related nail injuries, and nail infections.



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When we think about nail infections, fungus is probably what first comes to mind; however, we also need to be aware of bacterial infections of the nail. *Pseudomonas*, often referred to as “greenies” in nail salons, is a common bacteria that can cause infections that range from minor to life-threatening. In those patients who have a weakened immune system, such as burn victims or newborns, *pseudomonas* can be very serious. Less worrisome infections caused by *pseudomonas* include issues such as swimmer's ear, hot tub rashes, and, of course, nail infections.


Pseudomonas aeruginosa is a rod-shaped bacteria that produces a green pigment, hence the term “greenies.” These bacteria tend to thrive in moist environments and this is why we sometimes see *pseudomonas* infections associated with artificial nails. Artificial nails can create gaps in the space between the natural nail plate and the artificial enhancement where moisture can build up and bacteria can flourish. Natural nails that are separated from the underlying nail bed (onycholysis) can also develop a *pseudomonas* infection when the bacteria takes residence in the warm, moist space between the natural nail plate and the nail bed. Longer nails are also theoretically predisposed to a greater risk for bacteria becoming entrapped on the underside of the nail where typical hand washing is not always effective for removing debris on the underside of the nail. In fact, there have been reports of *pseudomonas* infection outbreaks in hospitals where the source was traced back to nurses with long, artificial nails. It is advisable for healthcare workers to wear their nails shorter for this reason. As a physician and surgeon, you will never catch me with long talons!

Who is at risk for *pseudomonas* in the nail salon? Most commonly, *pseudomonas* affects nails that are damaged in some way. For example, a nail that is separated or a nail where the cuticle has become compromised and the surrounding nail fold has become inflamed and swollen (paronychia) are scenarios where *pseudomonas* can enter the nail unit successfully. Bacteria that is not completely removed from a nail plate prior to the application of an enhancement can cause *pseudomonas* to grow in the space between the nail plate and the enhancement. Proper hand-washing by both client and nail techs before services as well as frequent cleaning

throughout the service are essential for this reason. Although *pseudomonas* is not easily transmitted from person to person in a salon, manicuring equipment should always be properly disinfected and one-time-use items properly disposed of after each client.

Treatment of *pseudomonas* depends on the likely cause of the infection. If the cause seems to be artificial nail-related, remove the enhancement and lightly buff the dark area to remove the nail surface involvement. It is important to keep the nail clean and dry, and it would be ideal to leave product off of the nail to allow the nail to heal. Tell your client to soak the nail in clear vinegar (not balsamic!) several times daily for a couple of weeks. She should understand that it may take several months for the stain to grow out. If, after three weeks, the issue is not growing out or the green discoloration is spreading, urge your client to visit a doctor.

Pseudomonas is not typically painful. However, if your client's nail or surrounding skin is tender or there is pus, the infection is likely not exclusively from *pseudomonas* and a physician should see your client immediately. This scenario is called a mixed infection, meaning there are different types of bacteria involved and treatment will likely require draining and culturing the infection.

In contrast to enhancement-associated *pseudomonas*, if the nail is clearly damaged or lifted, then the nail needs to re-adhere or heal in order for the *pseudomonas* to be effectively treated and to prevent recurrence of the infection. For clients with nail separation, it is advisable to take a nail polish holiday in order to allow the nail to re-adhere. These clients should be following a strict irritant avoidance regimen, where they avoid exposure to polish remover and wear gloves with any wet work. If several nails are separated, your client may need to be evaluated by a physician for a prescription anti-yeast topical agent to use under the nail. 



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