

## Nail Salons: Friend or Foe?

What you don't know about nail salons can hurt your patients.

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Podiatrists in the past have had a very dim view of nail salons. Recently, nail salons have been thrust into the limelight with two reported deaths from pedicures in 2006. The first, Kimberly Jackson, a paraplegic in Fort Worth, TX was injured with a pumice stone in July of 2005 during a pedicure at Angel Nails Salon, which was complicated by an improperly disinfected whirlpool service. She died February of 2006 after seven months of wound care. She contracted MRSA and died of a heart attack secondary to the infection, according to the death certificate. The case was settled out of court in August of '06 for an undetermined sum.

In June of 2006, near Mountain View, CA, Jessica Mears, a Lupus patient, died from a pedicure she received two years ago in San Jose, CA. Two years ago, she successfully sued the Top Hair and Nails Salon of Mountain View, CA for a *Mycobacterium fortuitum* lesion she had developed from an improperly maintained whirlpool at that same nail salon in 2004. The lesion never fully healed and the family filed a wrongful death suit on August 8th, 2006.

In both cases, immuno-compromised individuals, who should have never been treated in a nail salon without prior written physician approval, were treated with substandard disinfection services. Many states have this written referral regulation in place, but with no cooperative means to implement the written directive. I include this written referral directive in my book, *Death by Pedicure*.

### An Industry Dilemma

The nail salon industry poses a definite dilemma with some of the nail technicians following proper disinfection or sterilization standards and some not. This unfortunately begs concern about how the industry should regulate itself and who regulates the industry. Most state boards are made up of nail

techs who tend to perpetuate antiquated or relaxed disinfection standards. Currently, there are no physicians who serve on the state regulatory committees. Podiatrists and other health professionals are in a position to take it upon themselves to help direct this industry with our input and monitoring of state cosmetology boards.

We have all heard disparaging comments regarding nail salons and the damage this industry can cause; but if you look objectively at this profession, you will find that:

- \* Nail tech professionals attend extensive training classes;
- \* Many nail technicians are hungry for medical knowledge and input;
- \* Nail salons are an excellent source of referrals and can complement your practice medically and surgically; and
- \* Podiatrists and nail technicians have much in common and can mutually benefit each other.

What is a Nail Technician?

The practice of cosmetology, nail technicians, and aestheticians are regulated differently by each state. State boards of cosmetology provide training curriculum, certification, scope of practice directives, sanitation guidelines and enforcement of these regulations. For example, to become a nail tech in Tennessee takes 600 hours of training. This is a typical requirement nationwide. The curriculum is generally as follows:

- \* 150 hours of instruction on disinfection, sanitation, bacteriology, anatomy, physiology, ethics, salon management, and state law;
- \* 100 hours of chemical instruction on product knowledge, ingredients and usage of materials, manicuring, pedicuring, EPA and OSHA requirements; and
- \* 350 hours of physical instruction on massage, manicuring, pedicuring, nail care, nail artistry, nail wraps, sculptured nails, nail tips, gel nails and nail safety.

Clearly, this is a substantial course that rivals or exceeds the state requirements set forth by any respective state podiatry boards for assistants to provide services in our offices.

Unfortunately, nail technician textbooks are written with misinformation regarding what medical conditions are safe for nail techs to service in the salons. Your participation in their educational process can help stop the perpetuation of bad advice such as treating warts, fungal skin and calluses with razor devices such as "credo" blades. Simple involvement by you, a local podiatrist, can help change these practices.

Those podiatrists who decide to work with the nail profession will want to learn more about the issues that are of concern to

the public about the nail industry. The following information should provide a good start.

#### Disinfection vs. Sterilization

The biggest concern in nail salons is proper equipment cleaning and sterilization. Since nail technicians are not supposed to be working in a blood field or sterile environment, the standards for keeping their instrumentation clean from bacteria, fungal and viral organisms historically have been more relaxed than those in the healthcare profession. The question is not whether disinfection works, but whether the nail techs are taking the time to do it right.

The other issue is that there is no way to ensure that it is being done correctly with proper EPA disinfectants and proper immersion times. Sterilization is easier to perform. The colored indicator sterilizer pouches ensure proper temperatures have been reached and the seal pouch attests to sterility. You cannot make or enforce those claims with disinfection.

This view has been radically changed with the two deaths in 2006. Texas is now the first state in the nation to adopt sterilization over disinfection protocols. This major evolution in the nail salon industry should pave the way in your state to approach your state cosmetology board to get this changed as well.

Iatrogenic injuries occur almost every day in nail salons just as they occur in our offices. With the advent of resistant HIV strains, Hepatitis A, B, C, bacterial spore infections, and fungal and viral organisms, the stakes have increased, and sterilization should be implemented over disinfection.

Many HIV or hepatitis clients who scratch their lesions contaminate the distal nail plate with infectious debris that can cross-contaminate nail tech instrumentation. Use of improperly cleaned nail nippers can transfer fungal and bacterial spore debris. State boards consider alcohol soaks adequate. Many health professionals and nail technicians agree that current methods of sanitation using alcohol need to be replaced by sterilization protocols that include autoclaving. Nail salon clients deserve peace of mind when they come into any nail establishment and demand the instrumentation is sterilized.

#### Instrument Cleaning

Currently, nail technicians practice their respective state-mandated sanitation protocols for cleaning their instrumentation. These regulations are basically similar from state to state and include:

- \* Brushing the instruments with soapy water;
- \* 10 minute soaking in a 70 percent alcohol or EPA registered disinfectant fluid

\* Storing the instruments in a plastic container with lid, or in some states, keeping any clean instrument under a UV sterilizer when not in use.

Alcohol used by nail technicians does not kill bacterial spores and it must be changed daily to ensure it is effective. Only gluteraldehyde will do this after 30 minutes to one hour of soaking. Imperfections in instrumentation or the collection of excessive debris from debridement of nails with pathology can render even these longer soaks inadequate.

The only other safe and faster bacterial spore elimination is provided by autoclaves. In some states, UV light boxes are allowed as the principal sterilizer method which is utterly useless to prevent most bacterial or fungal contamination in nail salon applications. New Jersey is such a state. Connecticut has no posted specific rules for nail technicians to disinfect.

Autoclaves should be an integral part of all salons to give the patrons complete assurance that they are receiving the best infection control. This sterilization move in the industry is being resisted at many levels. Some upscale salons across the country are already autoclaving, but this represents a very small percentage of salons. Disposable nail files or instrumentation and clients bringing their own nail nippers are possible alternatives to autoclaving.

Also, remember that all state cosmetology laws use sanitation for care of only normal, non-infected nails. Those nail techs who treat fungal nails without doctors' permission risk contamination by the improperly disinfected nail nippers and other instruments.

#### Whirlpools and Pedicure Jet Spa Chairs

Breaks in the skin from shaving one's legs, tinea infections, and other dermatological infections can be portals for bacteria via improperly maintained whirlpools. The problem exists with standing water in poorly designed pedicure spa chairs. PVC and flexible plastic pipes and filters that are internal to these units may also be unable to properly flush contaminated water after each client's use. The newer stainless steel pipeless whirlpool systems that have been in use by podiatrists and physical therapists for over 40 years have not been implicated and this design is just now being copied by pedicure manufacturers.

The very first bacterial outbreak (Watsonville, CA in 2000) and eventually in over 15 other states was in part caused by having a mycobacterium present in poorly-maintained jet filters and piping. A black tar-like substance that was cultured was discovered by Santa Cruz Health Department inspectors in the pipe screens of the custom water spas at the fancy nail salon.

The spa owner admitted to never having cleaned out these filters. Mycobacterium fortuitum, the principal bacterium that was

found in the Watsonville outbreak, is primarily a soil and/or waterborne bacteria found in all municipal water supplies in low concentrations. Fiberglass spa surfaces cannot be abrasively cleaned without damaging them. This is very different from stainless steel whirlpool liners that can be rigorously cleaned and sanitized between patient visits.

Whether you use whirlpool therapy in your office or not, go to my site, [Justfortoenails.com](http://Justfortoenails.com) and download a copy of the new whirlpool rules to properly care for your whirlpool. I can assure you every nail salon in the country should now be aware of proper disinfection techniques for this equipment and every podiatrist should be aware of this protocol to pass this information along to patients who get pedicure services.

#### Hair Removal

Shaving the legs with razors 24-48 hours prior to nail salon whirlpool or pedicure services should be banned. Many clients and some nail technicians using leg razors have contributed to hundreds of *Mycobacterium fortuitum* outbreaks in over 15 states since the year 2000. Shaving the legs of patrons of the nail salons prior to services created portals of entry for bacteria. Beeswax removal is a safer alternative, or other epilating electrolysis devices may be employed by licensed aestheticians.

#### Callus Cutters or "Credos" on Heels

Many nail techs and physicians familiar with the Credo razor-blade callus-trimming device consider this "potato peeler for the skin" a dangerous device. Many bloody stories have been shared in nail trade magazines and have been seen in doctors' offices across the country. The general consensus is that this device has no room in the hands of nail techs and is banned in 22 states. As a podiatrist, you should be very proactive in making sure this device is not utilized in your state. Approach your respective state boards of cosmetology or professional licensing agencies to make sure your state continues to ban these items.

#### Chemicals and Polish

Formaldehyde and toluene in nail polish have been an ongoing concern in the nail industry. California is the only state to have attempted to ban these agents from nail polish sold in that state. A ruling in favor of the nail polish industry, however, has prohibited California from enforcing this ban on nail polish companies manufacturing it outside of California. The FDA said the level of formaldehyde and toluene is so minimal that it does not constitute a threat. Basically, if a patient has a hypersensitivity reaction to formaldehyde or toluene, s/he should they choose another formulation.

Nail polishes also contain phthalates that are reported by environmental groups to cause birth defects in fetuses of mothers using nail polish during pregnancies. To date, there is no scientific data to support this concern.

Some cuticle treatment uses caustic potash, i.e., sodium hydroxide, to dissolve the dried skin fold near the epinychium that accumulates at the proximal nail plate. Nail technicians find this easier than forcing the dried skin away with probes. This agent should be used with caution. Some nail techs have used sodium hydroxide to dissolve calluses, which is not the intent of the manufacturer.

Older acid nail primers are chemicals used to etch and clean the surface of the nail plate before application of artificial nail layers. This product will cause skin burns and irritation if not applied properly.

#### MMA and EMA

The monomer methyl meth acrylate (MMA) is the bonding agent formerly used by many nail technicians to apply acrylic nails. This product has been deemed a hazardous substance by the FDA and has been the agent responsible for a large number of cases of onycholysis and dermatitis of nails due to its difficulty in removal.

MMA has been replaced by ethyl methyl acrylate (EMA) to reduce incidents of nail dermatitis and removal difficulty. Some salons, however, still use this agent illegally for tighter bonding to the nail plate at the risk of the client. There is a widespread effort by nail technicians to ban the use of this agent, but the physician-base community needs to support this ban by contacting state cosmetology boards and informing them when this substance is used.

#### Artificial Nails

EMA acrylic nails, UV gel nails and fiberglass wraps use the application of layers of bonding agents to build up aesthetic protection for the nail plate with several chemical polymers and powder acrylic mixtures. These bonding agents sometimes allow water to build up under the nail and cause what is termed in the nail industry as the "greenies," i.e., bacterial Pseudomonas infections.

Remember, the nail plate has transonychial water loss and the nail plate can be made to thin with overfilling of the natural nail. Also, artificial nails can lift and separate if applied incorrectly. Moisture can build under the nails of some users of artificial nails, which suggests why the artificial nails need to be removed periodically for optimum nail health conditions if the

natural nail is too thin or damaged. This occurs in some patients more than in others.

Removal and re-application of the artificial nails are the way nail technicians handle this problem. Trauma from the leverage and forceful removal of acrylics are a matter of concern. There are proper ways to remove acrylic nails, which may include a combination of mechanical debridement and acetone-soaked cotton wrapped in foil for 10-15 minutes of a warm heat pad or an acetone bottle warmed by a warm water bath. This produces the best and least traumatic removal, according to nail technicians familiar with this procedure. UV cured nails are activated by UV light and must be ground off since acetone does not work as well on UV polymer products.

#### Paraffin Wax

Paraffin has traditionally been used as a physical therapy modality for arthritic extremity conditions. The nail industry adapted wax paraffin to their pedicure routines for the soothing and softening effects of hot wax. There have been reports of herpes being transmitted by inappropriate use of paraffin wax.

Physical therapists have protected their patients from direct contact with the wax to prevent contamination of the wax and to prevent possible dermatitis. They accomplished this with a protective plastic bag over the extremity before the dipping and layering process. Some salons do not protect their clients from direct contact with wax, and some re-use the wax against certain state protocols. Bacteria, combined with exfoliated skin and moisturizers, can collect in wax used improperly in this manner.

#### Gloves

Podiatric medicine uses gloves to protect patients and clinicians from contamination. Phoebe Rich, MD, a dermatologist and contributing writer to Nails magazine, says that toenail fungus is contagious, but whether you contract it depends on your genetics. Some families have a genetic susceptibility to fungal infections due to an inherited blind spot in the immune system that doesn't recognize fungus and fight it off properly. If you have this susceptibility, then you are at high risk of developing fungus not only from clients but also from gyms, health clubs, and even hotel rooms. Someone with this propensity should always wear gloves. Repetitive application of strong chemicals, such as the exfoliating AHA products for calluses, requires gloves.

#### CEUs

Finally, mandatory CEUs to maintain professional certification as a nail tech, just as any professional should be required to maintain, are necessary to review and introduce new

approaches to better nail care. Make sure your state adopts CEU's for nail technicians and cosmetologists.

#### Potential Partnership with a Nail Tech

The podiatrist/nail tech relationship is not for everyone. Some podiatrists have seen many patients with problems associated with poor service by an unskilled manicurist/pedicurist. I have seen both sides of the salon industry.

Podiatrists who have elevated the profession of podiatry by practicing advanced surgical techniques may feel that working with nail salons is a setback for our image. Dissenting views always exist. If you can elevate your local nail professional to acceptable sterilization levels, the partnership with a nail salon may benefit your practice.

Nail techs can make a potential complementary addition to a podiatric office. One way to do this is to partner with a nail tech as an independent contractor. Let the nail tech see patients under your auspices who don't qualify for "medically necessary" nail care or those who want medically supervised "beautification." Many physicians have adopted aestheticians, cosmetologists, and nail technicians to their practices.

A common contract arrangement of 60/40 (60 percent nail tech/40 percent podiatrist) would be appropriate, where the podiatrist leases a room, podiatry chair, instrument and autoclave in exchange for 40 percent of the nail tech's labor. [www.beautytech.com](http://www.beautytech.com) offers a section on contracting.

A typical spa pedicure takes 45 minutes and costs \$40 to \$45, while a spa manicure takes 30 minutes without the application of acrylic nails and costs \$30 to \$35. A good nail tech can bring in \$400 a day, not including the sale of retail items. This equates to \$160 (40 percent) to the podiatrist. If a nail tech works 24 days a month, a podiatrist can realize up to \$3,200 per month from such a partnership, not including sales of additional product lines.

Remember, this is a cash business. There are no insurance reimbursements, no deductibles, no co-pays, no HMO capitations, no review committees and no waiting for your money. Every podiatric office has the necessary equipment to be an instant nail salon: podiatry chairs, whirlpools, nail nippers, cures, sterilization trays with gluteraldehyde and autoclaves. With the right approach, this arrangement can provide extra income for your practice.

#### Increase Referrals

Another way to benefit from a relationship with nail technicians is through referrals. This is accomplished in several ways - first, by educating the nail technicians in your area. Find a cosmetology school in or near your immediate zip code. This is



most likely a local college offering cosmetology courses, or a private facility. Offer to teach some advanced medical classes.

Nail technicians need and always are looking for a good podiatrist to whom to refer their clients. One 30-minute lecture once a year at a cosmetology school, large beauty salon, or nail tech seminar regarding general foot care would provide them with good information and a friendly face to whom to refer their clients.

Go by a nail salon and drop off some of your business cards offering to teach a course in recognition of common foot problems. A syllabus might include:

- \* Disinfection and sterilization and salon/practice hygiene;
- \* Infections that can happen in this industry such as MRSA and Mycobacterium;
- \* Biomechanics and orthotic use, bunions and other foot deformities;
- \* Skin and nail anatomy, foot diseases, topical meds and foot care creams;
- \* Fungal nail care and ingrown nail care;
- \* Wart, corn and callus care;
- \* Ulcer/wound care;
- \* Electric file/debridement protocols;
- \* Foot examination, neuropathy and diabetic foot care; and
- \* Practice with electric files.

Referrals between nail techs and physicians should include written permission for some of your medically stable patients to receive certain beautification treatments like massages and polish for special limited occasions. Many women will seek these services or ask your opinion of such services. The more you know about your local salons, the more you can advise your patients as to who is offering the safest services

## Conclusion

It is up to podiatrists to suggest changes in the nail industry with state cosmetology boards. You may even consider proactively serving on these boards if your state will even allow a medical professional to serve. Most importantly, the increase in potential financial rewards and/or referrals could help you enhance your patient base in this managed care-controlled climate.

Perhaps in the future, the APMA and the nail salon industry could work together to develop guidelines to assure better client/patient protection. Not all podiatrists or nail techs will welcome this association, but I personally believe this mutual association can help promote podiatry.