

Nail Cosmetics

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Nail cosmetics and procedures generate more than \$6 billion annually in the United States alone and considerably more worldwide.¹ Beautification of the nail unit remains a major industry, which should certainly continue to be the case. Attractive nail units (nail plates, cuticles, and surrounding perionychium [proximal and lateral nail folds]) bring pleasure to women and now men too.

There are many different aspects of nail care, including manicures, pedicures, sculptures, nail gels, jewelry, and nail mending kits, as well as scores of helpful but on occasion potentially harmful nail instruments that are used daily (Table 1). From the first use of nail polish more than 3000 years ago in the Far East to present day applications, the nail unit has garnered approximately 300 million services performed by 400,000 nail technicians in more than 160,000 nail salons in the United States alone in the 21st century.² Therefore, it behooves us, as dermatologists, to be alert to our responsibility to make our patients aware of adverse effects and industry abuses that could arise in this huge arena. It is important to educate consumers, caregivers, and nail technicians to the possible injurious aspects of this wonderfully satisfying industry.

Patient Advice for Healthy Nail Care

The following tips should be relayed by dermatologists to patients for healthier nail care practices:

1. Nails are not screwdrivers, scrapers, or staple removers; do not use them as such.
2. Chemicals, detergents, excess moisture, and trauma are harmful to nails. Avoid them when possible.
3. Wear gloves for household chores, gardening, and mechanical manipulations.
4. Avoid overaggressive nail technicians; remember, the cuticle protects the nail matrix, which when injured results in a damaged and/or weakened nail plate and could even cause permanent scarring.
5. Purchase a set of your own instruments, especially if you visit the nail salon regularly.

Table 1.

Aggressive Nail Instruments

Cuticle nippers, pushers
Nail nippers, cutters, scissors
Coarse buffing and scraping
Hangnail trimmers
Nail drillers
Acetone soaks for gel nail removal

6. Use caution with extra long nails; they may easily result in substantial injury to the nail unit and its components.

It also is important for dermatologists to advise their patients about the following concerns regarding nail salons and spas: (1) check the facility to be sure it is licensed; (2) all metal instruments should be sterilized after each use; (3) files should be disposable and preferably the nail polish should be the individual's own; (4) pedicure baths should be washed and all suction screens cleaned between nail clients; (5) it is prudent to check product labels to ensure they are intact and ingredients are undiluted; and (6) be aware that hepatitis B carriers may be high among nail technicians and that *carriers are asymptomatic*.³

Some other concerns include sensitivity reactions due to primary irritants or eczematous allergic contact dermatitis secondary to specific allergens, as listed in Table 2.

Conclusion

Nail polish is protective; it retards dehydration. Nail cosmetics and accoutrements are fine, but patients should look out for hidden dangers and abuses. It is especially important to remind patients to consult their dermatologist expeditiously for any persistent nonhealing nail abnormalities.

Nails may be sites for melanoma, squamous cell carcinoma, and psoriasis, as well as a host of other medical conditions such as bacterial, viral, and fungal infections. In addition, the nail unit may undergo changes in a wide range of potentially serious systemic diseases

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Table 2.

Possible Causes of Sensitivity Reactions

Primary Irritants

Acetone/acetates: polish, gel removers
 Alcohol and other solvents
 KOH, NaOH: cuticle softeners
 Toluene (may cause fatigue, headache, dizziness)

Allergens

Acrylics (monomers): sculptures, glues, mending kits
 Colorants, pigments (photoallergic reactions)
 Formaldehyde (thermoplastic resin)
 Nickel (metal beads)

Other

Dehydrating agents: solvents, acetone (brittle nail syndrome)
 Dibutyl phthalate (plasticizer)(birth defects in animals have been observed)
 Eye irritants (nail technicians are particularly susceptible)
 Inhalants (nail technicians are particularly susceptible)
 UV exposure: bonding, gel nails (actinic effects and possible skin cancers)

Abbreviations: KOH, potassium hydroxide; NaOH, sodium hydroxide.

and may even be the first manifestation thereof. Nails are an integral part of any complete dermatologic and/or physical/medical examination.

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QUICK POLL QUESTION

Do you warn your patients who visit nail salons about the risk for hepatitis B infection?

- Yes
- No

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