



# NAIL CARE



# 5

PART

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# 24

# NAIL DISEASES CHAPTER & DISORDERS

## chapter outline

Nail Disorders

Nail Diseases

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## Learning Objectives

After completing this chapter, you will be able to:

- List and describe the various disorders and irregularities of nails.
- Recognize diseases of the nails that should not be treated in the salon.

## Key Terms

Page number indicates where in the chapter the term is used.

<i>Beau's lines</i> pg. 645	<i>nail psoriasis</i> pg. 651	<i>onychophagy</i> pg. 646	<i>pyogenic granuloma</i> pg. 650
<i>bruised nails</i> pg. 644	<i>nail pterygium</i> pg. 646	<i>onychophosis</i> pg. 650	<i>ridges</i> pg. 645
<i>corrugations</i> pg. 648	<i>onychauxis (hypertrophy)</i> pg. 648	<i>onychoptosis</i> pg. 650	<i>tile-shaped nails</i> pg. 648
<i>eggshell nails</i> pg. 645	<i>onychchia</i> pg. 650	<i>onychorrhexis</i> pg. 646	<i>tinea pedis</i> pg. 652
<i>furrows</i> pg. 648	<i>onychocryptosis</i> pg. 650	<i>onychosis</i> pg. 650	<i>tinea (ringworm)</i> pg. 650
<i>hangnail or agnail</i> pg. 645	<i>onychogryposis</i> pg. 650	<i>paronychia</i> pg. 650	<i>tinea unguium</i> pg. 650
<i>infected finger</i> pg. 648	<i>onycholysis</i> pg. 650	<i>plicatured nail</i> pg. 646	<i>trumpet nails (pincer nails)</i> pg. 648
<i>leukonychia spots</i> pg. 646	<i>onychomadesis</i> pg. 651	<i>Pseudomonas aeruginosa</i> pg. 647	
<i>melanonychia</i> pg. 646	<i>onychomycosis</i> pg. 652	<i>pterygium</i> pg. 648	
<i>nail disorder</i> pg. 644			



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o give clients professional and responsible service and care, you need to know when it is safe to work on a client. Nails are an interesting and surprising part of the human body. They are small mirrors of the general health of the entire body. You must be able to recognize conditions you may encounter while servicing clients. Many of these conditions are easily treated in the salon—hangnails, for instance, or bruising—but others are infectious and should not be treated by salon professionals. A select few may even signal serious health problems that warrant the attention of a doctor. Carefully studying this chapter will vastly improve your expertise in caring for nails. It will also help ensure that you are protecting your clients, rather than promoting the spread of disease.

A normal healthy nail is firm and flexible, and should be shiny and slightly pink in color, with more yellow tones in some races. Its surface should be smooth and unspotted, without any pits or splits. Certain health problems in the body can show up in the nails as visible disorders or poor nail growth.

## NAIL DISORDERS

A **nail disorder** is a condition caused by injury or disease. Most, if not all, of your clients have experienced one or more types of common nail disorder at some time in their lives. The technician should recognize normal and abnormal nail conditions, and understand what to do. You may be able to help your clients with nail disorders in one of two ways.

- You can tell clients that they may have a disorder and refer them to a physician, if required.
- You can cosmetically improve certain nail plate conditions if the problem is cosmetic and not a medical disorder.

It is your professional responsibility and a requirement of your license to know which option to choose. A client whose nail or skin is infected, inflamed, broken, or swollen should not receive services. Instead, the client should be referred to a physician, if you feel that is an appropriate recommendation, based on the condition.

**Bruised nails** are a condition in which a blood clot forms under the nail plate, forming a dark purplish spot. These discolorations are usually





Figure 24-4 Leukonychia spots.



Figure 24-5 Melanonychia.



Figure 24-6 Onychophagy.



Figure 24-7 Onychorrhexis.

**Leukonychia spots** (loo-koh-NIK-ee-ah), or white spots, are a whitish discoloration of the nails, usually caused by injury to the nail matrix. They are not a symptom of any vitamin or mineral deficiency. Instead, they are results of minor damage to the matrix. It is a myth that these result from calcium or zinc deficiency (Figure 24-4). They appear frequently in the nails but do not indicate disease. As the nail continues to grow, the white spots eventually disappear.

**Melanonychia** (mel-uh-nuh-NIK-ee-uh) is darkening of the fingernails or toenails. It may be seen as a black band within the nail plate, extending from the base to the free edge. In some cases, it may affect the entire nail plate. A localized area of increased pigment cells (melanocytes), usually within the matrix bed, is responsible for this condition. As matrix cells form the nail plate, melanin is laid down within the plate by the melanocytes. This is a fairly common occurrence and considered normal in African Americans, but could be indicative of a disease condition in Caucasians (Figure 24-5).

**Onychophagy** (ahn-ih-koh-FAY-jee), or bitten nails, is the result of a habit that prompts the individual to chew the nail or the hardened, damaged skin surrounding the nail plate (Figure 24-6). Advise the client that frequent manicures and care of the hardened eponychium can often help to overcome this habit, while improving the health and appearance of the hands. Sometimes, the application of nail enhancements can beautify deformed nails and discourage the client from biting the nails.

**Onychorrhexis** (ahn-ih-koh-REK-sis) refers to split or brittle nails that also have a series of lengthwise ridges giving a rough appearance to the surface of the nail plate. This condition is usually caused by injury to the matrix, excessive use of cuticle removers, harsh cleaning agents, nail polish removers, aggressive filing techniques, or hereditary causes. Nail services can be performed only if the nail is not split and exposing the nail bed. This condition may be corrected by softening the nails with a conditioning treatment, that is, hot oil manicures, and discontinuing the use of harsh detergents, cleaners, polish removers, or improper filing (Figure 24-7). These nail plates often lack sufficient moisture, so twice daily treatments with a high-quality, penetrating nail oil can be very beneficial.

**Plicatured nail** (plik-a-CHOORD) figuratively means “folded nail” (Figure 24-8), and is a type of highly curved nail plate often caused by injury to the matrix, but may be inherited. This condition often leads to ingrown nails.

**Nail pterygium** (teh-RIJ-ee-um) is an abnormal condition that occurs when skin is stretched by the nail plate. This disorder is usually caused by serious injury, such as burns or an adverse skin reaction to chemical products (Figure 24-9). The terms “cuticle” and “pterygium” are not the same thing, and they should never be used interchangeably. Nail pterygium is abnormal, that is, it denotes damage to the eponychium or hyponychium.



<b>DISORDER</b>	<b>Signs or Symptoms</b>
<b>Blue nails (discolored nails)</b>	Nails turn variety of colors; may indicate systemic disorder
<b>Bruised nails</b>	Dark purplish spots; usually due to injury
<b>Corrugations</b>	Wavy ridges caused by uneven nail growth; usually result of illness or injury
<b>Eggshell nails</b>	Noticeably thin white nail plate that is more flexible than normal; may be caused by diet, illness, or medication
<b>Furrows</b>	Depressions in the nail that run either lengthwise or across the nail; result from illness or injury, stress, or pregnancy
<b>Hangnail (Agnail)</b>	The cuticle splits around the nail
<b>Infected finger</b>	Redness, pain, swelling, or pus; refer to physician
<b>Leukonychia (white spots)</b>	Whitish discoloration of the nails; usually caused by injury to the base of the nail
<b>Melanonychia</b>	Darkening of the fingernails or toenails
<b>Onychatrophia</b>	Atrophy or wasting away of the nail; caused by injury or disease
<b>Onychauxis (hypertrophy)</b>	Overgrowth in thickness of the nail; caused by local infection, internal imbalance, or may be hereditary
<b>Onychophagy</b>	Bitten nails
<b>Onychorrhexis</b>	Abnormal brittleness with striation (lines) of the nail plate
<b>Plicatured nails</b>	Folded nails
<b>Pterygium</b>	Forward growth of the cuticle
<b>Tile-shaped nails</b>	Increased crosswise curvature throughout the nail plate
<b>Trumpet nails (pincer nails)</b>	Edges of the nail plate curl around to form the shape of a trumpet or cone around the free edge

Table 24-1 Overview of Nail Disorders



organisms on a surface. This is why proper cleansing and preparation of the natural nail plate, as well as sanitation and disinfection of implements, are so important. If these pathogens are not present, infections cannot occur. A typical bacterial infection on the nail plate can be identified in the early stages as a yellow-green spot that becomes darker in its advanced stages. The color usually changes from yellow to green to brown to black.

You should not provide nail services for a client who has a nail fungal or bacterial infection.

## NAIL DISEASES

There are several nail diseases that you may come across. A brief summary of nail diseases is found in Table 24-2. Any nail disease that shows signs of infection or inflammation (redness, pain, swelling, or pus) should not be treated in the salon. Medical treatment is required for all nail diseases.

A person's occupation can cause a variety of nail infections. For instance, infections develop more readily in people who regularly place their hands in harsh cleaning solutions. Natural oils are removed from the skin by frequent exposure to soaps, solvents, and many other types of substances. The cosmetologist's hands are exposed daily to professional products. These products should be used according to manufacturer's instructions to ensure that they are being used correctly and safely. If those instructions or warnings tell you to avoid skin contact, you should take heed and follow such advice. If the manufacturer recommends that you wear gloves, make sure that you do so to protect your skin. Contact the product manufacturer if you are not sure how to use the product safely. Product manufacturers can always provide you with additional information and guidance. Call them whenever you have any questions related to safe handling and proper use.



**Figure 24-12** Always practice strict sanitation when working with the nails.



### CAUTION

Infection by bacteria and fungi can be easily avoided by following state regulatory agency guidelines for proper sanitation and disinfection. Do not take shortcuts or omit any of the sanitation and disinfection procedures when performing an artificial nail service. Do not perform nail services for clients who are suspected of having an infection of any kind on their nails. If you repeatedly encounter nail infections on your clients' nails, you should re-examine your sanitation, disinfection, preparation, and application techniques. Completely disinfect all metal and reusable implements, wash linens or replace with disposable towels, and thoroughly clean the table surface before and after the procedure (Figure 24-12).



DISEASE	Signs or Symptoms
Onychia	Inflammation of the matrix with pus and shedding of the nail
Onychocryptosis	Ingrown nails
Onychogryposis	Thickening and increased curvature of the nail
Onycholysis	Loosening of the nail without shedding
Onychomadesis	Separation and falling off of a nail from the nail bed
Onychophosis	Growth of horny epithelium in the nail bed
Onychoptosis	Periodic shedding of one or more nail
Paronychia (felon)	Bacterial inflammation of the tissues around the nail; pus, thickening, and brownish discoloration of the nail plate
Pyogenic granuloma	Severe inflammation of the nail in which a lump of red tissue grows up from the nail bed to the nail plate
Tinea (ringworm)	Reddened patches of small blisters; slight or severe itching
Tinea pedis (ringworm of foot or athlete's foot)	Deep, itchy, colorless blisters
Tinea unguium (onychomycosis or ringworm of the nails)	Whitish patches on the nail that can be scraped off or long yellowish streaks within the nail substance

Table 24-2 Overview of Nail Diseases

**Onychosis** (ahn-ih-KOH-sis) is the term used for any deformity or disease of the nails.

**Onychia** (uh-NIK-ee-uh) is an inflammation of the nail matrix followed by shedding of the natural nail plate. Any break in the skin surrounding the nail plate can allow pathogens to infect the matrix. Be careful to avoid injuring sensitive tissue, and make sure that all implements are properly sanitized and disinfected. Improperly sanitized and disinfected nail implements can cause this and other diseases, if an accidental injury occurs.



**Onychocryptosis** (ahn-ih-koh-krip-TOH-sis), or ingrown nails, can affect fingers as well as toes (Figure 24-13). In this condition, the nail grows into the sides of the tissue around the nail. The movements of walking can press the soft tissues up against the nail plate, contributing to the problem. If the tissue around the nail plate is not infected, or if the nail is not deeply imbedded in the flesh, you can carefully trim the corner of the nail in a curved shape to relieve the pressure on the nail groove. You may not work on infected or deeply ingrown nails. Refer the client to a physician.

**Onycholysis** (ahn-ih-KAHL-ih-sis) is the lifting of the nail plate from the bed without shedding, usually beginning at the free edge and continuing toward the lunula area (Figure 24-14). This is usually the result of physical injury, trauma, or allergic reaction of the nail bed, and less often related to a health disorder. It often occurs when the natural nails are filed too aggressively or artificial nails are improperly removed. If there is no indication of an infection or open sores, a basic pedicure or manicure may be given. The nail plate should be short to avoid further injury, and the area underneath the nail plate should be kept clean and dry. If the trauma that caused the onycholysis is removed, the area will begin to slowly heal itself. Eventually, the nail plate will grow off the free edge and the hyponychium will reform the seal that provides a natural barrier against infection (Figure 24-15).

**Onychomadesis** (ahn-ih-koh-muh-DEE-sis) is the separation and falling off of a nail plate from the bed. It can affect fingernails and toenails (Figure 24-16). In most cases, the cause can be traced to a localized infection, injuries to the matrix, or a severe systemic illness. Drastic medical procedures such as chemotherapy may also be the cause.

Whatever the reason, once the problem is resolved, a new nail plate will eventually grow again. If onychomadesis is present, do not apply enhancements to the nail plate. If there is no indication of an infection or open sores, a basic manicure or pedicure service may be given.

**Nail psoriasis** often causes tiny pits or severe roughness on the surface of the nail plate. Sometimes these pits occur randomly, and sometimes they appear in evenly spaced rows. Nail psoriasis can also cause the surface of the plate to look like it had been filed with a coarse abrasive, or may create a ragged free edge or all of the above (Figure 24-17). People with



Figure 24-13 Onychocryptosis.

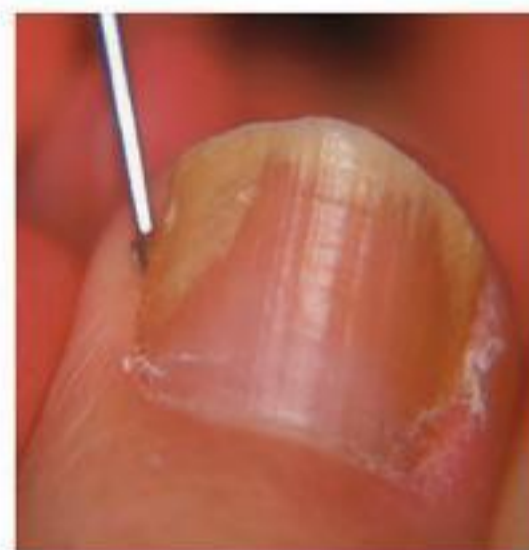


Figure 24-14 Onycholysis.



Figure 24-15 Onycholysis caused by trauma.



Figure 24-16 Onychomadesis.



Figure 24-17 Nail psoriasis.

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## Learning Objectives

After completing this chapter, you will be able to:

- Identify the four types of nail implements and/or tools required to perform a manicure.
- Demonstrate the safe and correct handling of nail implements and tools.
- Exhibit proper setup of a manicuring table.
- Demonstrate the necessary three-part procedure requirements for nail services.
- Identify the five basic nail shapes.
- Perform a basic and conditioning oil manicure incorporating all safety, sanitation, and disinfection requirements.
- Demonstrate the correct technique for the application of nail polish.
- Perform the five basic nail polish applications.
- Perform the hand and arm massage movements associated with manicuring.
- Perform a paraffin-wax hand treatment.
- Display all sanitation, disinfection, and safety requirements essential to nail and hand care services.
- Define and understand aromatherapy.
- Identify carrier oils and understand their use.
- Understand how aromatherapy can be incorporated into a service.

## Key Terms

Page number indicates where in the chapter the term is used.

*aromatherapy*  
pg. 692

*bevel*  
pg. 659

*chamois buffer*  
pg. 661

*dimethyl urea hardeners*  
pg. 666

*effleurage*  
pg. 690

*essential oils*  
pg. 692

*formaldehyde hardeners*  
pg. 665

*mild abrasive*  
pg. 664

*oval nail*  
pg. 668

*petrissage kneading movement*  
pg. 691

*pledgets*  
pg. 663

*pointed nail*  
pg. 668

*protein hardener*  
pg. 665

*pumice powder*  
pg. 664

*reinforcing-fiber hardeners*  
pg. 665

*round nail*  
pg. 668

*square nail*  
pg. 668

*squoval nail*  
pg. 668





**Figure 25-1** Fingerbowl filled with warm water and liquid soap, with nail brush.



**Figure 25-2** Disinfection container.

### FINGERBOWL

A fingerbowl is specifically designed for soaking the client's fingers in warm water with liquid soap or moisturizing soak product added. A fingerbowl can be made from materials such as plastic, metal, or glass, and should be durable and easy to sanitize after use on each client (Figure 25-1).

### DISINFECTION CONTAINER

A disinfection container is a receptacle with a cover that is large enough to hold a liquid disinfectant solution in which the implements requiring disinfection can be completely immersed. Complete immersion is an important requirement. Even the handles of all the implements must be completely submerged. Containers that do not allow the entire implement, including handles, to be submerged are not adequate or acceptable for professional salons. Total immersion of the implements during disinfection is a requirement of the federal Environmental Protection Agency (EPA). Disinfectant containers come in a number of shapes, sizes, and materials. They must have a lid, which is used to keep the disinfectant solution from becoming contaminated when not in use. Some containers are equipped with a tray—lifting the tray by a handle removes implements from the solution, without contamination of the solution or implements. After removing the implements from the disinfectant container, they should be rinsed and/or air dried in accordance with the manufacturer's instructions. It is important to remember that disinfectants must never be allowed to come in contact with the skin. If your disinfectant container does not have a lift tray, always remove the implements using tongs or tweezers. Never allow your fingers to come in contact with disinfectant solution, as this contaminates the solution and damages the skin. Never place any used implements into the disinfectant container until they have been properly cleaned. Implements cannot be disinfected unless they are first properly sanitized. Remember, cleaning is the most important step, and it must occur before disinfection begins (Figure 25-2).

### CLIENT'S ARM CUSHION

An 8-inch by 12-inch cushion for this purpose, specially made for manicuring, can be used. A towel that is folded to cushion size may also be used. Of course, a fresh clean towel must be used for each appointment.

### WIPE CONTAINER

This container holds clean absorbent cotton or lint-free wipes.

### SUPPLY TRAY

The tray holds cosmetics such as polishes, polish removers, and creams. It should be durable, balanced, and easy to clean.

### ULTRAVIOLET OR ELECTRIC NAIL POLISH DRYER

A nail polish dryer is an optional item designed to shorten the time necessary for the client's nail polish to dry. Electric dryers have heaters that blow warm air onto the nail plates to speed evaporation of solvents from nail polishes, causing them to harden more quickly. Ultraviolet or other light bulb type nail polish dryers also create warm air to speed drying and work in the same fashion as electric dryers.



## IMPLEMENTS

Implements are tools used to perform your services. In general, all implements must be properly cleaned and disinfected prior to use on another client. Some are considered disposable, and therefore must be thrown away after a single use.

### WOODEN PUSHER

Use the wooden pusher to remove cuticle tissue from the nail plate or to clean under the free edge. Hold the stick as you would a pencil. *If you drop a wooden pusher on the floor, it must be discarded.* It is a disposable implement, and not intended for reuse. You may also use a wooden pusher to apply cosmetics by wrapping a small piece of cotton around the end (Figure 25-3). *The cotton on your wooden pusher must be changed after each use.*

### METAL PUSHER

The metal pusher, incorrectly called a cuticle pusher, is actually used to push back the eponychium, but can also be used to gently scrape cuticle tissue from the natural nail plate. Hold the metal pusher the way you hold a pencil. The spoon end is used to loosen and push back the eponychium. If you have rough or sharp edges on your pusher, use an abrasive file to dull them. This prevents digging into the nail plate or damaging the protective barrier created by the eponychium and cuticle. These devices must be properly sanitized and disinfected before use on a client. Also, use them with great care. If used improperly, they can damage the nail unit and lead to infections of the matrix or tissue surrounding the nail plate (Figure 25-4).

### ABRASIVE NAIL FILES AND BUFFERS

Abrasive nail files and buffers are available in many different types and grits, such as firm, rigid, supporting cores to padded and very flexible cores, and grits ranging from less than 180 to over 240 per centimeter. A rule of thumb is the lower the grit, the larger the abrasive particles on the board and the more aggressive its action. Therefore, lower-grit boards (less than 180 grit) are relatively aggressive and will quickly reduce the thickness of any surface. Lower-grit boards also produce deeper and more visible scratches on the surface than do higher-grit boards. Therefore, lower-grit boards must be used with greater care, since they can cause more damage. Medium-grit abrasives (180 to 240 grit or higher) are used to smooth and refine surfaces. Fine-grit abrasives are in the category of 240 and higher grits. They are designed for buffing, polishing, and removing very fine scratches. Abrasive boards and buffers typically have one, two, or three different grit surfaces, depending on type and style. Coarse grit should not be used directly on the surface of the natural nail since it can create excessive thinning and damage. Coarse-grit abrasives must be used with great care, since they may create serious damage to the nail unit, if not used correctly. It is best to stick with medium- or fine-grit abrasives while performing a manicure.

To **bevel** the nail, hold the board at a 45-degree angle and file, using gentle pressure, on the top or underside of the nail.



Figure 25-3 Wooden pusher.



Figure 25-4 Metal pusher.





**Figure 25-5** Abrasive nail file.



**Figure 25-6** Four-way abrasive block.

Many abrasive boards and buffers can be sanitized and disinfected. Check with the manufacturer to see if the abrasive of your choice can be disinfected. All abrasives must be cleaned and disinfected before reuse on another client. Abrasives that cannot survive the sanitizing and disinfection process without being damaged or rendered ineffective are considered disposable and must be discarded after use on a single client.

It is never a good idea to store abrasives or other implements in a plastic bag or other sealed container. Airtight storage containers can promote bacterial growth. These containers create the perfect environment for pathogens to grow and multiply before your client's next appointment. Always store your clean and disinfected abrasives in a clean, unsealed container that will protect them from contamination by dust and other debris, while still allowing air to circulate freely (Figures 25-5 and 25-6).

### NIPPER

A nipper is used to carefully trim away tags of dead skin. Never use the nipper to cut, rip, or tear any living tissue. Never use the nipper to trim or cut away the proximal nail fold (eponychium). To use the nippers, hold them in the palm of your hand with the blades facing the eponychium. Place your thumb on one handle and three fingers on the other handle, with your index finger on the screw to help guide the blade. They are multi-use tools that must be properly cleaned and disinfected before use on every client. It is wise to have several sets available so that you have a clean and disinfected pair ready for clients while the others are being processed (Figure 25-7).

### TWEEZERS

Tweezers can be used for a wide range of uses, including lifting small bits of debris from the nail plate or removing implements from disinfectant solutions. Tweezers are multi-use tools that must be properly cleaned and disinfected since they may come in contact with a client's skin or nails.

## Here's a TIP

Cutting the proximal nail fold is what creates the hardened tissue that clients do not like. When this living tissue is cut, the body reacts by creating hardened skin. To help soften this hardened tissue, recommend that the client use daily applications of a penetrating nail oil and perform weekly conditioning oil treatments as a part of your regular services. After about a month, clients will see that this hardened tissue disappears, revealing the healthy pink tissue underneath.



### NAIL BRUSH

A nail brush is used to clean fingernails and to remove dust and debris with warm soapy water. Hold the nail brush with the bristles turned down and away from you. Place your thumb on the handle side of the brush that is facing you, and place your fingers on the other side. These brushes must be properly sanitized and disinfected before use on a client. The safest way to do this is to have a basket or container of nail brushes that are clean and disinfected near the sink. After each client uses a clean nail brush to scrub their nails, it must be placed in a separate storage container. Used nail brushes can be kept in a disinfectant container in the bathroom after clients scrub their nails. At the end of the day, remove all of the brushes and clean and disinfect them correctly. Allow the nail brushes to air dry on a clean towel.

### CHAMOIS BUFFER

The **chamois** (SHAM-ee) **buffer** is used to add shine to the nail and to smooth out wavy ridges on nails. Be guided by your instructor on how to hold the chamois buffer. Check with your instructor to determine whether chamois buffers are allowed by your state regulations (Figures 25-8 and 25-9).

### THREE-WAY BUFFER

A new abrasive technology is a buffer that replaces the chamois and creates a beautiful shine on actual nail plates or artificial nails. These buffers do not require the use of dry buffing powders and produce an equally high shine with much less effort and mess.

### NAIL CLIPPERS

Nail clippers are used to shorten the nail plate. If your client's nail plates extend very far past the free edge, clipping them short will save filing time. They are multi-use, so they must be properly sanitized and disinfected before use on every client.

### SANITATION AND DISINFECTION FOR IMPLEMENTS AND TOOLS

It is a good idea to have at least two complete sets of implements and abrasives ready and waiting, so that you will always have a completely clean and disinfected set for each client, with no waiting between appointments. If you have only one set of implements, remember that it takes approximately 20 minutes to properly clean and disinfect implements after each use. An overview of sanitation and disinfection of implements and tools follows. (For a more complete discussion, see Chapter 5.)

1. **Wash with warm water.** Thoroughly wash all implements/tools by scrubbing with liquid soap and warm water, and then rinse away all traces of soap with warm running water. All visible debris must be removed before proceeding to the next step.
2. **Fully immerse.** All non-disposable multi-use tools or implements must be completely and fully immersed in a disinfection container that is filled with an appropriate disinfectant solution which is approved by your state board regulations and properly prepared



Figure 25-7 Nippers.



Figure 25-8 Holding a nail buffer.



Figure 25-9 Alternative way to hold a nail buffer.



according to the manufacturer's instructions. Follow the disinfectant manufacturer's instructions for the required disinfection time.

3. **Rinse and dry.** Rinse the implements (if required), and then air dry or dry with a clean towel when you remove them from the disinfection container.
4. **Store properly.** Store clean and disinfected tools or implements in a clean container and sanitary manner. Never store them in sealed containers or plastic bags. One appropriate method is to wrap them in a clean dry towel that has been taped or tied closed to prevent re-contamination of the implements via dust or other debris. Your instructor may be able to provide you with other valuable ideas and suggestions for storing implements that meet these guidelines. Remember, never allow your fingers to come into contact with a disinfectant solution.

### MATERIALS

Some materials and supplies that are used during a manicure are designed to be disposable and must be replaced for each client. These items are considered to be “non-disinfectable.”

#### DISPOSABLE TOWELS OR TERRY CLOTH TOWELS

A fresh, clean terry cloth towel or a disposable towel is used to cover the client's armrest cushion before each manicure. Another fresh towel must be used to dry the client's hands after soaking in the fingerbowl. Other terry cloth or lint-free disposable towels are used to wipe spills that may occur around the fingerbowl. Fresh towels are an example of materials that can be properly cleaned, but do not require the disinfection procedures necessary to ensure the safety of implements or abrasives.

#### BRUSHES AND APPLICATORS

Any brush or applicator that comes into contact with client's nails or skin, must be properly sanitized and disinfected before use on another client. If they cannot be properly cleaned and disinfected, they must be disposed of after a single use. Check with the manufacturer if you are unsure whether a brush or applicator can be properly sanitized and disinfected. One exception to this rule would be brushes used in products that are not capable of becoming contaminated with bacteria, such as alcohol, nail polish, artificial nail monomers or ultraviolet gels, nail primers, dehydrators, and bleaches, among others. Since these products cannot harbor pathogen growth, and are therefore considered to be “self-disinfecting,” these brushes do not need to be sanitized and disinfected between each use. However, a brush used to apply penetrating nail oil to the nail plate would be considered unsanitary, since these products can become contaminated with bacteria if the brush is placed back into the product.

#### COTTON BALLS, PADS, OR PLEDGETS

Lint-free, plastic-back fiber or cotton pads are often used to remove nail polish. These are preferred over cotton balls since the plastic backing protects nail professionals' fingertips from overexposure to drying solvents and other chemicals.



acetate. Once the solvents evaporate, a solid film is left behind to secure the color to the nail plate. The “drying time” is largely determined by the amount and type of solvents used, as well as the temperature of the salon and the client’s hands. In general, products with a thicker viscosity will contain fewer solvents and appear to dry more quickly. Thinner viscosity products contain more solvents and are slower drying. However, products that dry more quickly will often harden in the container more quickly as well. To avoid wasting products and prevent this from occurring, always keep the caps of nail polish bottles tightly sealed. This is your best defense against preventing premature evaporation of solvents. *Care must be taken not to get nail bleach on skin because it can cause skin dryness and irritation.*

### BASE COAT

The base coat creates a colorless layer on the natural nail that improves adhesion of polish. Base coats also prevent polish from imparting a yellowish staining or other discoloration to the natural nail plate. These products usually rely on resins which act as an anchor for polish. Like nail polishes, base coats contain solvents designed to evaporate. After evaporation a sticky, adhesion promoting film is left behind on the surface of the nail plate. Base coats are also important to use on artificial nails, since they will help prevent surface staining from polishes.

### NAIL HARDENER

Nail hardeners are used to either improve the surface hardness or durability of weak or thin nail plates. They can also prevent splitting or peeling of the nail plate. Several basic types of nail hardener are described below.

**Protein hardener** is a combination of clear polish and protein, such as collagen. These provide a clear, hard coating on the surface of the nail, but do not change or affect the natural nail plate itself. Collagen and protein are very large molecules and cannot absorb into the nail plate.

**Reinforcing-fiber hardeners** contain fibers such as nylon, but also cannot absorb into the nail plate. Therefore, the protection they provide comes from the coating itself. These products can be used on any type of natural nail.

**Formaldehyde hardeners** contain up to 5 percent formaldehyde, but typically they are between  $\frac{3}{4}$  and 1% formaldehyde. Formaldehyde creates bridges or cross-links between the keratin strands that make up the natural nail, thereby making the plate much stiffer and more resistant to bending. These products are useful for thin and weak nail plates, but should never be applied to plates that are already very hard, rigid, and/or brittle. Formaldehyde hardeners can make brittle nails become so rigid that they may split and shatter. Also, formaldehyde hardeners must be kept off the skin because they can cause adverse skin reactions. If signs of excessive brittleness or splitting, discoloration of the nail bed, development of pterygium, or other adverse skin reactions occur, discontinue use. Once clients have achieved the desired effects with this type of hardener, they should discontinue use until the nails begin to grow out again. In other words, use as needed until clients reach the desired goal and then discontinue use until the product is needed again.



### CAUTION

All base coats and top coats, as well as nail polishes, are highly flammable.

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# PROCEDURE

25-1

## BASIC TABLE SETUP

- 1. Clean table.** Clean manicure table and drawer with an appropriate or approved disinfectant cleaner.
- 2. Prepare arm cushion.** Wrap your client's arm cushion with a clean terry cloth or disposable towel. Place the cushion in the middle of the table so that it extends toward the client and the end of the towel extends in your direction.
- 3. Fill disinfectant container.** Ensure that your disinfection container is filled with clean disinfectant solution at least 20 minutes before your first manicure of the day. Use any disinfectant solution approved by your state board regulations, but make sure that you use it *exactly* as directed by the manufacturer. Also make sure that you change the disinfectant every day or whenever it becomes cloudy or visibly contaminated with debris. Nothing bothers a client or inspector more than seeing implements taken from a disinfectant jar filled with a cloudy, "dirty-looking" liquid. Put yourself in your client's shoes and put your best foot forward. If you are going to practice sanitation and disinfection, do it right. Do not just go through the motions!  
  
Put all disinfectable implements into the disinfection container, but only after they have been thoroughly washed and all visible debris has been removed. Place the disinfection container to your right if you are right-handed, or to your left if you are left-handed.
- 4. Place products.** Place the professional products that you will use during the service (except polish) on the right side of the table behind your disinfection container (if left-handed, place on left).
- 5. Place abrasives.** Place the abrasives and buffers of your choice on the table to your right (if left-handed, to your left).
- 6. Place fingerbowl.** Place the fingerbowl and brush in the middle or to the left of the table, toward the client. The fingerbowl should not be moved from side to side of the manicure table. It should stay where you place it for the duration of your manicure.
- 7. Prepare for waste disposal.** Tape or clip a plastic bag to the right side of table (if left-handed, tape to left side), if a metal trash receptacle with a self-closing lid is not available. This is used for depositing used materials during your manicure. These bags *must* be emptied after each client departs to prevent product vapors from escaping into the salon air.
- 8. Place polishes.** Place polishes to the left (if left-handed, place on right).
- 9. Prepare drawer.** The drawer can be used to store the following items for immediate use: extra cotton or cotton balls in their original container or in a fresh plastic bag, abrasives, buffers, nail polish dryer, and other supplies. Never place used materials in your drawer. Only completely sanitized and disinfected implements stored in an unsealed container (to protect them from dust and recontamination) and extra materials or professional product should be placed in the drawer. Your drawer should always be organized and clean (Figure 25-10).



**Figure 25-10** Basic table setup. Your instructor's table setup may vary from this one, and is equally correct.



## BASIC MANICURE

### THREE-PART PROCEDURE

It is easy to keep track of what you are doing if you break your procedures down into three individual parts. These three parts are pre-service, actual service performed, and post-service/recommendations.

#### 1. Pre-service

- Complete pre-service sanitation according to Procedure 25-3.
- Greet your client with a smile (Figure 25-12).
- Have client remove jewelry and place it in a safe, secure place.
- Have your client wash and dry her or his hands using a liquid soap and clean terry cloth or disposable towel.
- The client should already have filled out the information on the consultation form. At this stage, you can use this information to perform a client consultation and fill out the client service form. These forms are used to record responses from clients and record your observations before and after the service. Before beginning, always check the nails and skin area to make sure that they are healthy and that the service you are providing is appropriate. If there is a reason that the service cannot be performed, explain the reason to the client, and when appropriate suggest that he or she seek medical attention. All of this information should then be recorded on the client service form. If there are no potential issues observed, continue with the service.

#### 2. Actual service performed

- *During* the actual manicure, talk with your clients about the products that you are using, and suggest the products available for purchase to maintain their nails and skin care between appointments.
- *Before* the polish application, ask your client to replace jewelry, locate necessary keys, pay for the service and retail products, and put on any outer clothing such as a sweater or jacket. By suggesting that your client complete these steps ahead of the polish application, chances of smudging the polish once the application is completed decreases.

#### 3. Post-service

- Complete post-service procedure according to Procedure 25-4.

### HANDLING BLOOD DURING A MANICURE

On occasion, a client can be cut and blood is drawn. It could happen from careless use of a nipper or abrasive file. When this occurs, the first thing you must consider is your own safety and that of your client. Using proper sanitation and disinfection techniques is a sure way to guarantee safety. Should you accidentally cut a client, do not panic. Instead, follow the steps in Procedure 25-2.



**Figure 25-12** Greet your client with a smile.



# PROCEDURE

25-3

## PRE-SERVICE SANITATION

Before your service begins you must perform the steps below. This procedure applies to both salon implements and multi-use tools.

- 1. Wash implements (sanitize).** Rinse all implements with cool or warm running water, and then thoroughly wash them with soap and warm water. Brush grooved items if necessary, and open hinges (Figure 25-13).
- 2. Rinse implements in water.** Rinse away all traces of soap with cool or warm running water. The presence of soap in most disinfectants can cause them to become inactive. Soap is most easily rinsed off in warm, but not hot water. Hotter water will not work any better and can be damaging to hands. Dry thoroughly with a clean or disposable towel. Your implements are now properly sanitized and ready for disinfection (Figure 25-14).
- 3. Immerse implements.** It is extremely important that your implements be completely clean before placing them into the disinfectant solution. If you do not, your disinfectant may become contaminated and rendered ineffective. Immerse implements in an appropriate disinfection container holding an EPA-registered disinfectant for the required time (usually 10 minutes). If it is cloudy, the solution has been contaminated and must be replaced. Make sure to avoid skin contact with all disinfectants by using tongs or rubber gloves (Figure 25-15).
- 4. Wash hands with liquid soap.** Thoroughly wash your hands with liquid soap, rinse, and dry with a clean fabric or disposable towel. Liquid soaps are far more sanitary than bar soaps and are required by law in most states. A soap dish can also breed bacteria (Figure 25-16).
- 5. Rinse and dry implements.** Remove implements from disinfectant solution with tongs or while wearing rubber gloves, rinse well in water, and wipe dry with a clean fabric or disposable towel to prevent rust (Figure 25-17).



Figure 25-13 Wash implements.



Figure 25-14 Rinse implements in clear water.



Figure 25-15 Immerse implements in disinfectant.



Figure 25-16 Wash hands with a liquid soap.



# PROCEDURE

25-4

## PERFORMING A BASIC MANICURE

Begin working with the hand that is *not* the client's favored hand. The favored hand will need to soak longer, because it is used more often. In brief, if the client is left-handed, begin with the right hand; if the client is right-handed, begin with the left hand.

During the manicure, talk with your client about the products and procedures you are using. Suggest additional products that the client will need to maintain the manicure between salon visits. These products might include nail or skin treatments, polish, lotion, top coats, and so on. **Note:** This procedure is written for a right-handed client.

- 1. Remove polish.** Begin with your client's left hand, little finger. Saturate cotton ball or plastic-backed cotton pad with polish remover. Hold saturated cotton on nail while you silently count to 10. The old polish will now remove easily from the nail plate with a stroking motion toward the free edge. If all polish is not removed, repeat this step until all traces of polish are gone. It may be necessary to put cotton around the tip of a wooden pusher and use it to clean polish away from the nail fold area. Repeat this procedure on each finger (Figure 25-24).



Figure 25-24 Remove polish.

### Here's a TIP

Roll a piece of cotton between your hands before you use it. This keeps loose cotton fibers from sticking to the nail or finger. An alternative way to remove nail polish is to moisten small pieces of cotton, called *pledgets* (PLEJ-ets), with nail polish remover and put them on all the nails at the same time.



Repeat application if nails are extremely yellow. You may need to bleach certain clients' nails several times, as all of the yellow stain or discoloration may not fade after a single service. You should plan to repeat the procedure when the client receives the next manicure. Surface stains are removed more easily than those that travel deep into the nail plate. Yellow discoloration that goes deep into the nail plate will never be completely removed by nail bleaches. These products work best for surface stains (e.g., tobacco).

12. **Buff with a high-shine buffer.** Use a high-shine buffer to smooth out surface scratches and give the natural nail a brilliant shine (Figures 25-34 and 25-35).
13. **Apply nail oil.** Use a cotton-tipped wooden pusher, cotton swab, or an eyedropper to apply nail oil to each nail plate. Start with the little finger, left hand, and massage oil into the nail plate and surrounding skin using a circular motion (Figure 25-36).
14. **Bevel nails.** To bevel (BEH-vel) the underside of the free edge, hold a medium-grit abrasive board at a 45-degree angle, and file with an upward stroke. This removes any rough edges or cuticle particles. A fine-grit abrasive board or buffer may also be used (Figure 25-37).
15. **Apply lotion and massage.** Applying hand lotion is the finishing touch for any manicure, but should be done before you apply the polish, since it may interfere with proper adhesion. You can use the lotion to massage your client's hands and arms. (Follow the steps for hand and arm massage in Procedures 25-10 and 25-11.)
16. **Remove traces of oil.** You must remove all traces of lotion or oil from the nail plate before proceeding, or the polish will not adhere as well. Use a small piece of cotton saturated with alcohol or polish remover, and scrub the nail plate clean as if you were removing a stubborn red nail polish. Do not forget to clean under the free edge of the nail plate to remove any remaining massage lotion. The cleaner you get the nail plate, the better the polish will adhere to the nail plate.
17. **Choose a color.** If your client is undecided about the color of the nail polish, help the client to choose one. Suggest a shade that complements the skin tone. If the manicure and polish are for a special occasion, pick a color that matches the client's clothing or the holiday season. Generally, darker shades are appropriate for fall and winter, and lighter shades are better for spring and summer. Always have a wide variety of nail polish colors available. Before applying polish, you may ask your client to pay for the service, put on any jewelry, sweater, or jacket, and get out car keys. This will avoid smudges to the freshly applied polish.



Figure 25-34 Buff nails.

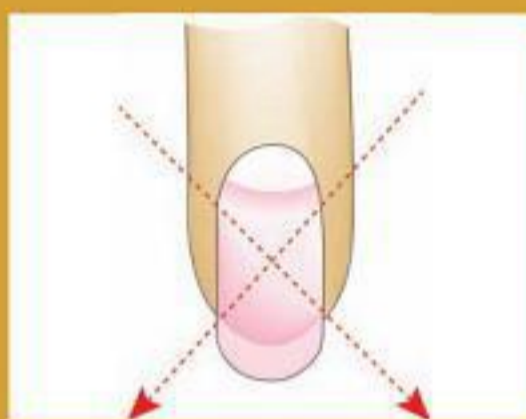


Figure 25-35 Buff nail in an "X" pattern with downward strokes.



Figure 25-36 Apply cuticle oil.



Figure 25-37 Bevel nail.



**18. Apply polish.** The greatest success in applying nail polish is best achieved by using four coats. The first, the base coat, is followed by two coats of polish color and one application of top coat to give a protective seal. The techniques are the same for applying all polishes, base coats, or top coats. Never shake your polish bottles. Shaking will cause air bubbles to form and make the polish application rough and appear irregular. Gently roll the polish bottles between your palms to thoroughly mix.

When applying, remove the brush from the bottle and wipe it on the inside of the neck of the bottle to remove excess polish. You should have a bead of polish on the end of the brush. There should be enough polish on the brush to add one layer of polish to the nail plate without having to dip the brush back into the polish bottle, unless the nail plate is unusually long. Hold the brush at approximately a 30- to 35-degree angle. Place it 1/16 inch away from the cuticle area, starting in the center of the nail. Brush toward the free edge of the nail. Use the same technique for the entire nail. If you go back and dab at any spots that you missed, the polish might appear uneven on the nail.

When applying the colored polish, if you miss a small area on your client's nail you can cover this area before you apply the second coat, but definitely practice covering the entire nail each time, especially near the cuticle area to avoid a shadow of the polish. In addition to the finished nail appearance, the purpose of using multiple layers of product when applying polish is to provide the best longevity and durability of the service. By building layer upon layer, you will improve adhesion and staying power. It is not necessary to apply heavy coatings. Instead, use thin even coats. This will create maximum smoothness and minimum drying time. On completion of the polish application, the polish should appear smooth and even on the nails.

## Here's a TIP

Excessive downward pressure or low-grit abrasives can generate excessive heat on the nail bed. This can lead to a friction burn that could result in onycholysis and possible infection. If your client is feeling heat or a sharp burning sensation as you file, you should lighten the downward pressure and/or use a less aggressive (higher-grit) abrasive. The client should not feel burning sensations on their nail beds as you file.

## Here's a TIP

When applying an iridescent or frosted polish, it is imperative to make sure that the strokes are parallel to the sidewalls of the nail.



# PROCEDURE

25-5

## POST-SERVICE PROCEDURES

The steps below should be followed after any nail service.

1. **Schedule next appointment.** Set up date, time, and services for your client's next appointment. Write the information on your business card and give it to the client.
2. **Advise client.** Advise client about proper home maintenance for their service. For example, if they have long nails or nail extensions, advise them to take care when opening doors or file cabinet drawers. If the service was a pedicure, advise them of the importance of wearing properly fitted and comfortable shoes.
3. **Promote product sales.** Depending on the service provided, there may be a number of retail products that you should recommend for the client to take home. This is the time to do so.
4. **Clean work area.** Clean your work area and properly dispose of all used materials.
5. **Disinfect implements.**
6. **Record service information.** Record service information, observations, and product recommendations on the client service form.

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**Figure 25-38** Five polish options: half moon or lunula, slimline or free walls, hairline tip, free edge, or full coverage.

### FIVE TYPES OF POLISH APPLICATION

Once you have mastered the techniques necessary to apply polish correctly and expertly, you can focus on creating the following five types of polish applications (Figure 25-38).

**Full coverage.** Entire nail plate is polished.

**Free edge.** The free edge of the nail is unpolished. This helps to prevent polish from chipping.

**Hairline tip.** The nail plate is polished and  $\frac{1}{16}$ -inch is removed from the free edge. This prevents polish from chipping.

**Slim-line or free walls.** Leave  $\frac{1}{16}$ -inch margin on each side of nail plate. This makes a wide nail appear narrow.

**Half-moon or lunula.** A half-moon shape, the lunula, at the base of the nail is unpolished.

Polishing is very important. It is the last step in a perfect manicure and the last thing your client sees between visits. When your client looks at his or her nails polished perfectly, they will admire them, and you for doing a great job (Figure 25-39).

## FRENCH AND AMERICAN MANICURES



**Figure 25-39** Finished manicure.

French polish applications, as well as American polish applications, are very popular and often requested in the salon. These polish techniques create nails that appear clean and can have a natural appearance. They provide a good base for endless service designs that can be enhanced with the use of hand-painted art, air-brushing, rhinestones, pearls, or stripping tape. The French manicure usually has a dramatic white on the free edge of the nail, where the American manicure calls for a more subtle white. Perform the basic manicuring procedures up to the polish application then begin Procedure 25-6.

### Here's a TIP

If you smudge a finished nail, apply polish remover with the polish brush to the smudge before you put more polish on the area.



# PROCEDURE

## 25-6

### PERFORMING FRENCH AND AMERICAN MANICURES

- 1. Apply base coat.** Apply a base coat to the nail. The base coat can be applied under the free edge as well. If the nail has pitting, striations, or ridges, use a ridge-filling base coat to mask these imperfections and provide a smooth surface for the polish. Ridge-filling base coats contain an opaque colorant that fills in and hides these minor surface defects.
- 2. Apply white polish.** Apply white polish to the free edge by starting at one side (usually left side of nail) and sweeping across toward the center of the free edge on a diagonal line. Repeat this on the right side of the nail. This will form a "V" shape. Some clients like this look. If not, fill the open top of the "V," so that you have an even line across the free edge. White may be applied under the free edge. Allow the white polish to dry (Figures 25-40 to 25-42).
- 3. Apply translucent polish.** Apply a sheer white, pink, natural, or peach color polish from the base to the free edge. Be careful not to get any on the eponychium. Most clients will prefer a pink shade, but choose the color according to skin tone and client preference. This is an important and valuable service that you can provide to your clients and they will love you for it.
- 4. Apply top coat.** Apply a top coat over the entire nail plate and under the free edge (if applicable to situation) (Figure 25-43).



Figure 25-40 Apply white polish on free edge from the left side of the nail to the center.

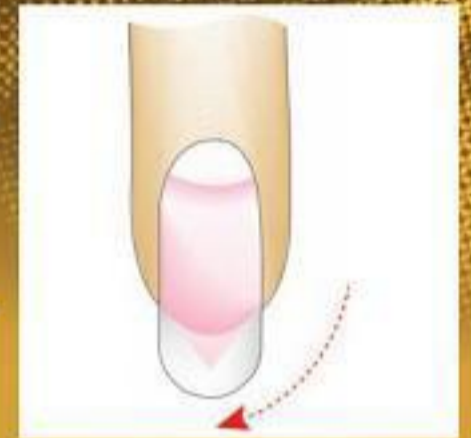


Figure 25-41 Apply white polish on free edge from the right side of the nail to the center.

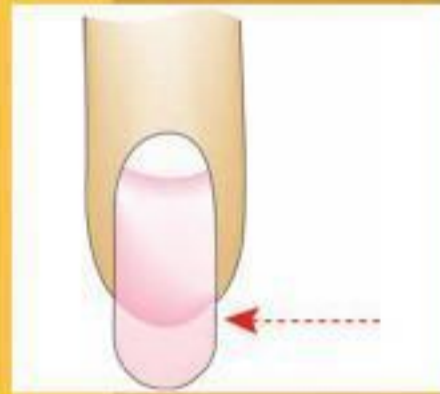


Figure 25-42 Fill in "V" with white polish.



Figure 25-43 Finished French manicure

### Here's a TIP

Buy an artist color wheel and learn about the theory of color. You can use what you learn to help clients select complementary colors that match their skin tone. Color theory is fun and easy to learn, and this knowledge will benefit you in many ways, including with cosmetics and fashions.



## CONDITIONING OIL MANICURE

A conditioning oil manicure is recommended for clients who have ridged and brittle nails or dry skin around the nail plate. It improves the hand and nail plate condition and leaves the skin soft. Warm oil treatments are extremely beneficial to clients who are hard on their nails, such as nail biting and or activities resulting in plates that split, shatter, or become brittle or overly rigid (See Procedure 25-7).

## PERFORMING A MAN'S MANICURE



**Figure 25-46** Greet client with a handshake.

Men are becoming increasingly aware of the importance of having well-groomed nails and hands. Consequently, many seek services offered by a professional nail professional. A man's manicure is executed using the same procedures as described previously for the basic manicure or the conditioning oil treatment. Follow each of the steps but *omit the colored polish*; replace this step with either clear polish or buffing the nails with a high-shine abrasive buffer. Upon arrival, greet the client with a handshake and escort him to your station (Figure 25-46). Next, consult with the client to determine the type of service that he is requesting, and then complete the client information form. Evaluate the client's current nail condition to determine what products are needed (Figure 25-47).

Begin the service by removing old polish if present from a previous manicure, and shaping the nails. The most common and requested shape for men's nails is round, but always ask whether he has a preference. Next, wash and dry the nails and hands, and carefully apply cuticle remover, following standard procedure. Most men will need a little more work done on their cuticle areas and eponychium than women. If the client prefers, the manicure procedure can be shortened at this point by buffing the nails with an abrasive buffer to add shine (Figure 25-48).



**Figure 25-47** Evaluate client's nails.



**Figure 25-48** Buff nails with an abrasive buffer.



# PROCEDURE

25-7

## PERFORMING A CONDITIONING OIL MANICURE

1. **Perform pre-service sanitation and table setup.**
2. **Begin manicure.** Begin working with the hand that is not the client's favored hand. It is important to remember that during the procedure you should talk with your client about the professional products you recommend for them to use between salon visits.
3. **Remove old polish.**
4. **Shape nails.** Shape the nails on the hand that is not the client's favored hand.
5. **Apply oil.** Apply a penetrating, conditioning nail oil with a cotton swab or eye dropper, and massage it into nail plate and surrounding skin. Explain the benefits of this step to your clients and tell them that daily use of the professional product that you recommend will be greatly beneficial and will preserve the manicure until the next salon visit.
6. **Apply lotion.** Apply hand lotion to your hand and spread it over the client's hand, arm, and elbow. This will give you enough lotion for the massage.
7. **Proceed with hand and arm massage.** Follow the steps for hand and arm massage described in Procedures 25-10 and 25-11.
8. **Remove cuticle tissue from nail plate.** Use a wooden pusher covered with cotton or a metal pusher to gently push back the eponychium.
9. **Remove tags of dead skin.** Use nippers to trim away any tags and dead skin. Take great care not to rip or tear living tissue as this could increase the risk of infection. Let the client rest the hand on a clean terry cloth or disposable towel.
10. **Repeat on other hand.** Proceed with Steps 7 through 9, and distribute lotion on each hand after these steps.
11. **Remove excess lotion.** If necessary, take a warm terry cloth towel and wipe off excess lotion, or have client wash hands.
12. **Remove oil.** Remove all traces of oil and lotion from the surface of the nail plate. Saturate cotton in alcohol or polish remover and vigorously wipe off oil and lotion from nail plates. This is an important step, so perform it well. This step removes only oils remaining on the surface; beneficial oils that absorbed into the nail plate during your treatment are not removed.



# PROCEDURE

25-9

## PARAFFIN WAX TREATMENT DURING MANICURE

The process presented in Procedure 25-9 occurs during a manicure.

Be guided by your instructor for the amount of time the hands should be left in the paraffin wax.

1. Perform pre-service sanitation and table setup.
2. Remove old polish and shape the nails to the desired shape. If any repairs are needed, complete the procedures for necessary repairs before proceeding with the manicure.
3. Apply moisturizer to client's hands and gently massage into skin.
4. Complete Steps 4 to 12 in Procedure 25-8.
5. Proceed with the manicuring procedure.



# PROCEDURE

## 25-10

### HAND MASSAGE

**1. Relaxer movement.** This is a form of massage known as “joint movement.” At the beginning of the hand massage, the client has already received hand lotion or cream. Place the client’s elbow on a cushion covered with a clean towel. With one hand, brace the client’s arm.

With your other hand, hold the client’s wrist and bend it back and forth slowly, 5 to 10 times, until you feel that the client has relaxed (Figure 25-58).

**2. Joint movement on fingers.** Bring the client’s arm down, brace the arm with the left hand, and with your right hand start with the little finger, holding it at the base of the nail. Gently rotate fingers to form circles. Work toward the thumb, about three to five times on each finger (Figure 25-59).

**3. Circular movement in palm.** This is **effleurage** (EF-loo-rahzh)—light stroking that relaxes and soothes. Place the client’s elbow on the cushion and, with your thumbs in the client’s palm, rotate in a circular movement in opposite directions (Figure 25-60).

**4. Circular movement on wrist.** Hold the client’s hand with both of your hands, placing your thumbs on top of client’s hand, and your fingers below the hand. Move your thumbs in a circular movement in opposite directions from the client’s wrist to the knuckle on back of the client’s hand. Move up and down, three to five times. The last time that you rotate up, wring the client’s wrist by bracing your hands around the wrist and gently twisting in opposite directions. This is a form of friction massage movement that is a deep rubbing action and very stimulating (Figure 25-61).

**5. Circular movement on back of hand and fingers.** Now rotate down the back of the client’s hand using your thumbs. Rotate down the little finger and the client’s thumb, and gently squeeze off at the tips of client’s fingers. Go back and rotate down the ring finger and index finger, gently squeezing off. Now do the middle finger and squeeze off at the tip.



Figure 25-58 Relaxer movement.



Figure 25-59 Joint movement on fingers.



Figure 25-60 Circular movement or effleurage.



Figure 25-61 Circular movement on wrist.

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## SPA MANICURE

Spa manicures are fast becoming a much-requested and desired salon service, but they are more advanced than basic manicures. Professionals who advance their education and knowledge necessary for implementing this service may find this area to be very lucrative, as well as more beneficial to your clients. Spa manicures encompass not only extensive knowledge of nail care but skin care as well. They are known for their pampering, distinctive results, and skin-care-based methods. All spa manicures should include a relaxing massage and some form of exfoliation for not only polishing and smoothing, but also for enhancing penetration of your professional products.

Spa manicures usually come with unique and distinctive names that describe the treatment with imagination and flair. For example, “The Rose Garden Rejuvenation Manicure” incorporates the use of rose oils and rose petals for ambience. The “Alpha Hydroxy Acid Manicure” incorporates the use of an alpha hydroxy acid-based product for exfoliation and skin rejuvenation.

Additional techniques that may be incorporated into a spa manicure consist of aromatic paraffin dips; aromatherapy; aromatic hand and arm massages with specifically recommended oils and lotions; hand masks; and warm, moist towel applications. When performing any advanced procedures which include any oils or cosmetics, always check with your client regarding preferences and allergies.

## AROMATHERAPY

The practice of **aromatherapy** involves the use of **essential oils** that are extracted via various forms of distillation from seeds, bark, roots, leaves, wood, and/or resin. Each part produces a different aroma. For instance, Scotch pine needles, resin, and wood each yield a different aroma. The time of day that the plant was harvested also changes the aroma. The use of essential oils is limitless. Tables 25-1 to 25-4 are provided to assist you in the use of essential oils as a cosmetology practitioner.



ESSENTIAL OILS	DESCRIPTION
Lavender	Herbaceous (having the characteristics of an herb), overall first-aid oil, antiviral and antibacterial, boosts immunity, antidepressant, anti-inflammatory, relaxant, balance, and antispasmodic
Chamomile	Fruity, anti-inflammatory, digestive, relaxant, PMS, soothes frayed nerves, migraine, stamina, and antidepressant
Marjoram	Herbaceous, antispasmodic, anti-inflammatory, headaches, comfort, menstrual cramps, and antiseptic
Rosemary	Camphoraceous (from the wood or bark of the camphor tree), stimulating to circulation, relieves pain, and decongestant
Tea tree	Camphoraceous, antifungal, and antibacterial
Cypress	Coniferous (mostly from evergreen trees with cones, such as pine) astringent, stimulating to circulation, and antiseptic
Peppermint	Minty, digestive, clears sinuses, antiseptic, energy, decongestant, and stimulant
Eucalyptus	Camphoraceous, decongestant, antiviral, antibacterial, and stimulant
Bergamot	Citrus aroma, antidepressant, antiviral, antibacterial, water retention, and anti-inflammatory
Geranium	Floral, balancing to mind and body, tranquility, antifungal, and anti-inflammatory

Table 25-1 Ten Basic Essential Oils

CARRIER OILS	DESCRIPTION
Sweet almond oil	An excellent lubricant that is softening to the skin; a medium- to light-weight multipurpose massage or skin oil
Sunflower seed oil	Highly lubricating and softening, medium- to light-weight oil, and highly resistant to degradation from oxygen and light
Apricot oil	Especially for prematurely aged, dry skin; a light-weight massage oil
Avocado oil	Recommended for dull and dehydrated skin, a medium- to heavy-weight oil
Grapeseed oil	A very popular, light-weight massage oil with a fine texture and little odor
Joboba oil	A natural oil that resembles the structure of skin's sebum, giving it excellent penetration and moisturizing properties; also an excellent carrier oil
Olive oil	An excellent natural oil that contains squalene, a component of skin sebum

Table 25-2 Carrier Oils



**DESIRED  
RESULTS****RECIPES FOR MANICURES AND PEDICURES**

<b>Nail strengthening</b>	20 drops lemon, 15 drops carrot oil, 13 drops grapeseed oil, 13 drops rosemary, 13 drops avocado oil. Blend together and keep in light-sensitive bottle. Use on client after nails have been polished by adding one drop around cuticle and allowing it to absorb into the matrix.
<b>Cuticle softener</b>	15 drops carrot oil, 12 drops peppermint, 12 drops eucalyptus, 2 oz jojoba oil. Blend together and keep in light-sensitive bottle. Use one drop on each nail and massage well into the cuticle.
<b>Age deterrent (spot reduction)</b>	15 drops lemon, 10 drops lime, 5 drops rosemary, 5 drops lavender, 1 drop spearmint, 1 oz grape-seed oil. Blend together and keep in light-sensitive bottle. Use 2 to 3 drops on back of hands, not on nails. Gently massage back of hand for 3 to 4 minutes to see fading of discoloration within 4 to 5 treatments.
<b>Decadent manicure</b>	¼ cup heavy cream, 10 drops of pure or blended essential oil of your choice, 1 bowl of fragrant salts for aroma only, a few candles, spa music in background. Light candles and prepare aromatics. Place hands in heavy cream and essential oils and let soak for 5 to 10 minutes. Proceed with normal manicure. Wipe off nails before applying polish.
<b>Dry and cracked heels on feet</b>	10 drops rose, 5 drops chamomile, 5 drops geranium, 5 drops pettigraine oil. Blend ingredients and keep in light-sensitive bottle. Add 8 to 10 drops to the pedicure water before adding anything else. Soak feet for 10 minutes. Proceed with pedicure. Before massage, add 3 to 4 drops on each heel and massage until completely penetrated.
<b>Swollen feet</b>	15 drops lavender, 15 drops chamomile, 15 drops rosemary, 15 drops fennel, 4 oz jojoba oil. Blend ingredients and keep in light-sensitive bottle. Use about 25 to 30 drops as a massage oil for a thorough massage. Have client elevate feet for 10 to 15 minutes above the heart.
<b>Decadent pedicure</b>	1 to 2 cups heavy cream, 25 drops of pure or blended essential oil of your choice or 3 fragrant salt crystals in the pedicure bath, 1 bowl of fragrant salts for aroma only (or candle if permitted), spa background music. Light candles and/or prepare aromatics. Place feet in heavy cream mixture and let soak for 5 to 50 minutes. Proceed with normal pedicure. Wipe off toes before applying polish.

**Table 25-4** Recipes for Manicures and Pedicures

## REVIEW QUESTIONS

1. List the four types of nail implements or tools used in manicuring.
2. Describe the procedures for sanitizing and disinfecting implements.
3. Briefly describe the procedures for handling blood in a salon.
4. Describe the procedure for a basic manicure table setup.
5. List two types of polish remover.
6. Why is having a material safety data sheet for all the products used in a salon important?
7. List the five basic nail shapes.
8. What special factors should be considered when selecting the nail shape?
9. List and discuss the three-part procedure sequence required in manicuring.
10. Describe the correct procedures for polish application.
11. What is the purpose of a conditioning oil treatment?
12. Discuss the basic differences between a female manicure and a male manicure.
13. What are the benefits of a paraffin wax treatment?
14. List the suggested procedures for performing a paraffin wax treatment.
15. Name five hand and arm massage techniques.
16. What is aromatherapy?
17. How are essential oils used?
18. List five basic essential oils and their uses.



# CHAPTER GLOSSARY

<i>aromatherapy</i>	Use of aromatic fragrances to induce relaxation; therapy through aroma.
<i>bevel</i>	To slope the free edge of the nail surface to smooth any rough edges.
<i>chamois buffer</i>	Implement that holds a disposable chamois cloth that is used to add shine to the nail and to smooth out wavy ridges on nails.
<i>dimethyl urea hardeners</i>	Hardeners that use dimethyl urea (DMU) and add crosslinks to the natural nail plate but do not cause adverse skin reactions.
<i>effleurage</i>	Light, continuous-stroking massage movement applied with fingers and palms in a slow and rhythmic manner.
<i>essential oils</i>	Oils used in aromatherapy that are extracted via diverse forms of distillation from seeds, bark, roots, leaves, woods, and resin.
<i>formaldehyde hardeners</i>	Contain up to 5 percent formaldehyde and create bridges or cross-links between the keratin strands that make up the natural nail, making the plate much stiffer and more resistant to bending.
<i>mild abrasive</i>	Substances used for smoothing nails and skin (e.g., pumice).
<i>oval nail</i>	Nail shape that is similar to squoval with even more rounded corners. This shape is attractive for most women's hands.
<i>petrissage kneading movement</i>	Kneading movement in massage performed by lifting, squeezing, and pressing the tissue.
<i>pledgets</i>	Small, fiber-free cotton squares often used by nail professionals to remove polish.
<i>pointed nail</i>	Nail shape suited to thin hands with narrow nail beds. The shape is tapered and somewhat longer than usual.
<i>protein hardener</i>	A combination of clear polish and protein, such as collagen, that provide a clear hard coating on the surface of the nail.
<i>pumice powder</i>	White or grayish powdered abrasive derived from volcanic rock, used for smoothing and polishing.
<i>reinforcing-fiber hardeners</i>	Contain fibers such as nylon, and protect the nail by coating the natural nail.
<i>round nail</i>	Nail shape that is slightly tapered and extends just a bit past the tip of the finger. This natural looking shape is common for male clients.
<i>square nail</i>	Nail shape that is completely straight across with no rounding at the edges. The length of the nail can vary.
<i>squoval nail</i>	Nail shape with a square free edge that is rounded off and extends just slightly past the tip of the finger.



## Learning Objectives

After completing this chapter, you will be able to:

- Identify the equipment and materials needed for a pedicure and explain.
- List the steps in the pedicure pre-service procedure.
- Demonstrate the proper procedures and precautions for a pedicure.
- Describe the proper technique to use in filing toenails.
- Describe the proper technique for trimming the nails.
- Demonstrate your ability to perform foot massage properly.
- Understand proper cleaning and disinfecting of pedicure equipment.

## Key Terms

Page number indicates where in the chapter the term is used.

*abrasive nail file*  
pg. 701

*abrasive scrubs*  
pg. 714

*callus softeners*  
pg. 715

*curette*  
pg. 700

*cuticle removers*  
pg. 714

*exfoliating scrubs*  
pg. 719

*foot files or paddles*  
pg. 701

*foot lotion, oil, or cream*  
pg. 699

*foot soaks*  
pg. 713

*friction movement*  
pg. 712

*hand movements*  
pg. 705

*liquid soap*  
pg. 699

*masques*  
pg. 715

*massage oils*  
pg. 714

*massage preparations*  
pg. 714

*nail rasp*  
pg. 700

*nippers*  
pg. 701

*paraffin baths*  
pg. 715

*pedicure*  
pg. 699

*pedicure slippers*  
pg. 700

*tapotement*  
pg. 705

*toe separators*  
pg. 699

*toenail clippers*  
pg. 700



T

he information in this chapter will show you the pedicuring skills you need to care for clients' feet, toes, and toenails. A **pedicure** includes trimming, shaping, exfoliating skin and polishing toenails as well as foot massage. Pedicures are a standard service performed by cosmetologists. They are a basic part of good foot care and hygiene. They are particularly important for clients who are joggers, dancers, cosmetologists, or anyone who spends a lot of time standing on their feet. Once the client experiences the comfort, relaxation, and value of a good pedicure they will return for more. In short, pedicure services are for just about everyone, but different clients will have different needs. For example, not all clients will want or need a full pedicure service.

Some clients only need a professional nail trimming. Do not limit yourself. Tailor your pedicure service to meet the needs of your entire clientele. Talk to your clients about getting monthly pedicures to ensure healthy happy feet, as they are in constant use and need routine maintenance. Proper foot care through pedicuring improves both personal appearance and basic foot comfort.



**Figure 26-1** Pedicure station including client's chair, footrest, and pedicuring stool.



**Figure 26-2** Supplies needed for pedicure.

## PEDICURE TOOLS

### PEDICURE SUPPLIES

You will need the following supplies in addition to your standard manicure setup to perform pedicures (Figures 26-1 and 26-2).

- **Toe separators.** Foam rubber toe separators or cotton are used to keep toes apart while polishing the nails.
- **Liquid soap.** Liquid soap for pedicuring contains a mild detergent for cleansing the feet.
- **Foot lotion, oil, or cream.** Lotions, oils, and creams are an important part of the service and are used to condition and moisturize feet. They are also used for performing a foot massage.

## Here's a TIP

When making an appointment for a pedicure, suggest that your client wear open-toed shoes or sandals so that polish will not smear, and caution clients not to shave their legs within 24 hours before the pedicure. In the pedicure area, post a sign cautioning clients about shaving their legs. Tiny microscopic abrasions from shaving increase the risk of stinging, irritation, or infection.



The nail rasp, like the curette, is mainly used along the side wall of the nail plate on the great toenail. The lesser toenails do not usually require filing along their sidewalls. Removing sharp edges along the nail plate edge reduces the possibility of the nail plate digging into the soft tissues and creating an ingrown nail. As you become proficient in the use of this file you will find it to be an invaluable and time-saving instrument. Properly used, it will add the professional finishing touch required in the care of toenails.

### ABRASIVE NAIL FILES

To file the free edge of the toenails and, in some cases, to thin them, an **abrasive nail file** is an excellent instrument (Figure 26-8). For some toenails, coarse-grit abrasives are needed, but for most, a medium grit will work best. Abrasive files are made of many types of abrasive materials, including aluminum oxide, diamond chips, and nickel. Nickel and diamond abrasive files do not fill up with nail debris as quickly as other types during use.

### FOOT FILES (PADDLES)

**Foot files** or **paddles** are larger than those designed for fingernails and toenails. These large sanding files are designed to reduce dry, flaky skin and smooth foot calluses. They come in many different grits and shapes (Figure 26-9). Foot files must be properly cleaned and disinfected between each use or disposed of after a single use, if the manufacturer has not designed them to be disinfectable. In general, if an abrasive file cannot survive proper cleaning and disinfection procedures without being rendered unusable, it must be considered disposable. Foot paddles with disposable and replaceable abrasive surfaces are also available.

### NIPPERS

**Nippers** can be used to remove dead tags of skin, but take great care to avoid cutting, tearing, or ripping living tissue. Avoid using nippers on clients who are diabetic since the risk of infection from accidental injury is great. Also, avoid using nippers on clients with psoriasis since injury to the toenail unit can create new psoriasis lesions where the damage occurs.

### PEDICURE EQUIPMENT

This section is focused on equipment necessary to provide pedicure services. As with implements, high-quality, comfortable, and easy-to-use equipment will be cost effective, and also will help to promote your services. If you are uncomfortable and awkward while performing your services, you may end up injuring your back, neck, arms, wrists, or shoulders. In addition, if you are relaxed, then your client will relax and enjoy the pedicure.

### PEDICURE CARTS

These carts are a useful way to keep your supplies organized (Figure 26-10). Pedicure carts are available in many different designs and from many manufacturers. The carts have drawers and shelves for organized storage of implements and pedicure products. Some of these units even



**Figure 26-8** Close-up of an abrasive nail file.



**Figure 26-9** Abrasive foot paddle.



**Figure 26-10** A portable pedicure cart has a place for the foot bath, storage area for supplies, and an adjustable footrest.



The actual pedicure procedure can be divided into five basic steps: the soak, nail care, skin care, massage, and nail polishing. Each of these steps is distinct from the other. Depending on client needs, some steps may not be necessary. For example, some clients may only need nail care. This will take less time than a more complete treatment. If you have a great massage technique, clients may want only the soak and a massage to relieve tension and stress after a day's work. Others may want the full treatment, since they are there to be pampered. Remember to be innovative and creative when it comes to your pedicure services.

During the pedicure procedure, talk with your client about the products that are needed to maintain the service between salon visits. You might recommend polish, top coat, and foot lotion or cream.

### PEDICURE POST-SERVICE

The steps in Procedure 26-3 should be followed after every pedicure service.

### DISINFECTING FOOT SPAS

Foot spas should be cleaned and disinfected after every service and at the end of the working day. In addition, extra cleaning and disinfecting are recommended on a biweekly schedule. Post-client, daily, and biweekly steps are presented in Procedure 26-4.

## FOOT MASSAGE

**Massage** is defined in medical dictionaries as “a method of manipulation of the body by rubbing, pinching, kneading, tapping, etc.” The art of massage has probably been around since the beginning of time. Most of us enjoy being touched, and the art of massage takes touching to a higher, even therapeutic level. Foot massage during a pedicure stimulates blood flow and is relaxing to the client.

The following basic forms of **hand movements** are utilized in therapeutic massage:

- Light or hard stroking movements called **effleurage**
- Compression movements called **petrissage**, which include kneading, squeezing, and friction
- In percussion or **tapotement** (tah-POT-mynt), sides of hands strike skin in rapid succession

Effleurage relaxes muscles, and improves circulation to the small, surface blood vessels. Petrissage helps to increase movement by stretching muscles and tendons. Tapotement is also a technique for improving circulation.

There are a number of massage styles and techniques. No matter what technique you use, perfect it so that it becomes second nature to you.



### CAUTION

Be sure the floor around the pedicure area is dry because wet floors are slippery. You or your clients can fall. When water is spilled, wipe it up immediately. The same holds true for slippery oils, lotions, or creams. You must always be on guard to ensure your client's safety. That's your job as a salon professional!

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# PROCEDURE

## 26-2

### PERFORMING A BASIC PEDICURE

1. **Remove shoes and socks.** Ask your client to remove shoes, socks, and hose, and roll pant legs to the knees.
2. **Soak feet.** Put client's feet in soap bath for 5 minutes to soften and clean the feet before you begin the pedicure (Figure 26-17).
3. **Dry feet thoroughly.** Make sure you dry between the toes. Ask client to place both feet on the towel you have placed on the floor (Figure 26-18).
4. **Remove existing polish.** Remove polish from the little toe on left foot working towards the big toe. Repeat with the right foot (Figure 26-19).
5. **Clip nails.** Carefully clip the toenails of the left foot so that they are even with the end of the toe (Figure 26-20). Do not clip nails too short. Take care not to break the hyponychium, an important part of the seal that protects the toenail unit from infection.



**Figure 26-17** Soak feet for 5 minutes to soften and cleanse skin.



**Figure 26-18** Dry feet thoroughly.



**Figure 26-19** Remove existing polish.



**Figure 26-20** Carefully clip toenails.

Here's  
a  
**TIP**

Add a few drops of aromatherapy oil to the foot bath to excite the client's senses and enhance the overall experience.

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# PROCEDURE

26-4

## DISINFECTING FOOT SPAS

### AFTER EVERY CLIENT

1. **Drain and remove.** Drain all water and remove all foreign matter (contaminants) from the foot spa.
2. **Clean surfaces.** Clean the surfaces and walls of the foot spa with soap or detergent and rinse with clean, clear water.
3. **Disinfect.** Disinfect with a regulatory oversight agency-approved disinfectant and according to the manufacturer's instructions.
4. **Rinse and dry.** Rinse and wipe dry with a clean towel.

### PROCEDURE AT THE END OF WORKING DAY

1. **Remove and clean screen.** Remove the screen and clean all debris trapped behind the screen of the foot spa.
2. **Wash screen.** Wash the screen and inlet with soap or detergent and clean, clear water. Then totally immerse in regulatory oversight agency approved-disinfectant, according to the manufacturer's instructions.
3. **Flush system.** Flush the system with low-sudsing soap and warm water for 10 minutes. Then rinse, drain, and let air-dry.

### BIWEEKLY PROCEDURE

1. **Follow the daily procedure, and fill the spa with bleach solution.** After following the recommended daily cleaning procedure described above, fill the foot spa tub (5 gallons) with water and 4 teaspoons of 5% bleach solution.
2. **Circulate solution.** Circulate the solution through the foot spa system for 10 minutes.
3. **Soak in solution.** Let the solution sit overnight (at least 6 to 10 hours).
4. **Drain and flush.** The following morning, in advance of the first customer, drain and flush the system.



### CAUTION

Never place client's feet in water that contains a disinfectant. This can cause injury to client's skin!





Figure 26-36 Effleurage on instep.

use a high-quality product and start your pedicure service on a positive note.

*Beware of misleading product claims.* There is no additive or soak that is added to the water during a pedicure that kills pathogens and replaces your obligation to clean and disinfect the foot spa after the pedicure. Any chemical that is strong enough to kill pathogens is not safe for contact with skin. Disinfectants must **never** be placed in the foot bath with the client's feet.

**Abrasive scrubs** are used to help remove and smooth dry flaky skin and calluses. They are usually creams or lotions that contain an abrasive powder as the exfoliating agent. These are used to remove dry, flaky skin and leave it feeling smoother and more moisturized. Avoid excessive use of abrasive scrubs since they can damage the client's skin. Abrasive scrubs can also remove the living skin from the hands of the cosmetologist, if the product is used many times during a short period of time. If hands become sore from repeated services, consider finding a gentler product or wearing gloves while using the abrasive scrub.

Sea sand, ground apricot kernels, pumice, quartz crystals, and plastic beads are all exfoliating agents found in pedicure scrubs. Essential aroma oils, beneficial extracts, and moisturizers that help to condition the skin, may also be found in scrub preparations.

**Massage preparations** consist of oils, creams, and lotions used to lubricate, moisturize, and invigorate the skin. They allow the hands of the cosmetologist to glide soothingly over the skin during the massage part of the pedicure. They also help to promote a general feeling of relaxation and well-being in the client. Most quality **massage oils** are a blend of therapeutic oils, which help promote skin health.

Aromatherapy oils may also be incorporated for their relaxing and calming effects. Tea tree oil is often included for its antiseptic properties, as well as its medicinal fragrance. Cosmetologists, like some massage therapists, may wish to formulate their own massage oil. Some massage therapy supply stores have base massage oils to which different essential oils can be added. A number of massage oils can be formulated in this manner to match individual client needs, and thus give a customized quality to the pedicure. Preparing only small quantities of these blends (i.e., the amount required for the service) is recommended because formulating larger amounts of these oils must be done under very clean (hygienic) conditions or the blends could become contaminated with bacteria and rapidly spoil.

**Cuticle removers** are designed to soften cuticles for removal from the nail plate. These products are highly alkaline and corrosive substances that are capable of dissolving cuticles or other tissues within a very short period of time. Since these products are so fast acting, they must not be left on the nail plate for any longer than recommended by the product manufacturer, usually 1 to 2 minutes. If left on longer than recommended, serious damage can occur to the nail plate and/or surrounding skin. Improper use can also result in dryness and splits in the eponychium and side walls.



Cuticle removers must only be applied to the nail plate, and contact with living skin must be avoided. These products must be completely rinsed off after use to avoid skin irritation. If not thoroughly removed, residues on the nail plate can also cause lifting. Cosmetologists should avoid prolonged or repeated skin contact with these products, and safety eyewear should be worn to prevent accidental eye exposure. Any highly alkaline substances can be potentially dangerous if accidentally splashed in the eye or used incorrectly, so read the directions and follow them exactly.

### ADD-ON PRODUCTS

Add-ons are used to enhance and expedite the pedicure experience. Professional-strength **callus softeners** are offered to help soften and smooth calluses, especially on heels and over pressure points. These products are applied directly to the callus and allowed to soak in for a short period of time to soften the hard tissue, making them easier to remove with abrasive boards, blocks, or paddles.

These products usually contain either sodium hydroxide or lactic acid, both powerful callus-softening agents. Sodium hydroxide is highly alkaline (usually pH 12 or higher). Lactic acid is an alpha hydroxy acid; products formulated with lactic acid are acidic (usually pH 4 or less). In both cases, it is very important to read and understand the manufacturer's instructions and use the product exactly as directed.

Products containing either sodium hydroxide or lactic acid should be considered potentially hazardous to eyes, and safety glasses should be worn whenever using or pouring them. Be sure to wash your hands before touching your face or eye area. Used improperly, these types of products can cause severe burns to the client's skin and may cause irritation to the cosmetologist's hands with repeated exposure. Used correctly, they can be very safe and effective.

**Masques** are usually composed of mineral clays, moisturizing agents, skin softeners, aromatherapy oils, and beneficial extracts. They are applied to the skin and left in place for 5 minutes. These skin treatments are typically highly valued by clients.

Hot **paraffin baths** for the feet are an excellent addition to the pedicure. The paraffin bath stimulates circulation, and the deep heat helps to reduce inflammation and promote circulation to the affected joints. Apply moisturizing lotions, creams, or oils to the skin, and use the paraffin to seal them in, allowing the heat to speed penetration of beneficial ingredients.

Aromatherapy oils can also be incorporated into the paraffin bath. Clients feel pampered and the hot paraffin wax service adds to the relaxation of the pedicure experience.

Do *not* provide this service to clients with impaired foot circulation, loss of feeling, or other diabetic-related problems. The hot wax may cause burns or skin breakdown in these situations.





## CAUTION

Hot wax services should not be provided to clients with poor circulation or to diabetic clients without a doctor's release.



## BUSINESS TIP: SERVICE FOR THE ELDERLY

The elderly also need care and maintenance for their feet on a year-round basis. A substantial proportion of the elderly population cannot reach their feet and need help in their foot care maintenance. It is estimated that 40 million Americans suffer from some form of arthritis. Many of them cannot reach their feet or cannot squeeze the nail nippers. They need proper foot care that a good cosmetologist can provide. Cosmetologists who offer pedicure services for this segment of the population will be doing these individuals a great favor, and will find plenty of willing clients in need of their services.

Other items necessary for the best-ever pedicure could include the following:

- Pedicure slippers—Disposable paper or foam slippers are needed for those clients who have not worn open-toed shoes.
- Pedicure sandals—Sandals with toe separators incorporated in their design can be purchased by clients and brought in every time they have a pedicure.

## FULL-SERVICE PEDICURE

The full-service pedicure presented in Procedure 26-5 includes a variety of “extras” and add-ins that were not part of the basic pedicure described previously.

## Here's a TIP

Be sure to wipe excess oil or lotion from the bottom of the client's foot before putting on slippers to prevent them from slipping and falling.

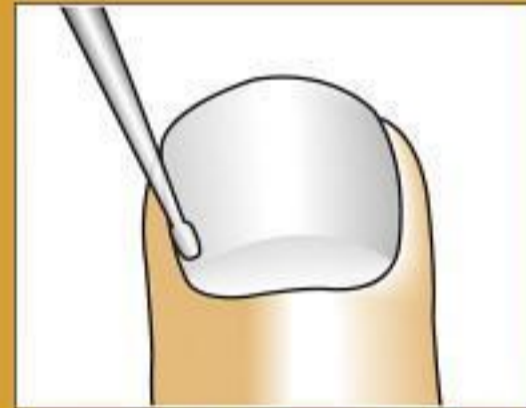


# PROCEDURE

26-5

## THE FULL-SERVICE PEDICURE

- 1. The soak.** This service starts the procedure. It is important to soften and prepare the skin for what is to follow. The water must not exceed 104°F; use a thermometer to ensure that it is the proper temperature. Place the soaking product into the water according to the manufacturer's recommendation. Allow the client to soak for approximately 5 minutes to clean the foot and soften the skin. You have time during this part of the service to make sure everything you will need for the rest of the pedicure is in its proper place. Then you will not have to search for a needed item in the middle of the pedicure process, which looks very unprofessional to your clients.
- 2. Nail care.** Remove one foot from the bath and dry it with a towel.
  - (a) Remove polish.** Remove any existing nail polish from the toenails.
  - (b) Apply cuticle remover.** At this point apply cuticle remover and/or callus softeners where needed. Applying the remover at this point will give the product time to work while you care for the nails.
  - (c) Use curette.** Next, the curette is used to gently push the soft tissue folds away from the walls of the lateral nail plate (Figure 26-37). This allows you to visually inspect the nail plate so that it can be trimmed without injuring the client. If there is extra buildup of debris between the nail plate and surrounding tissue, gently remove it with the curette. To use this instrument, place the rounded side of the spoon toward the wall of living skin. A gentle scooping motion is then used along the nail plate to remove any loose debris. A gentle pressure is all that is necessary to accomplish the removal of the built-up debris. The pressure of this debris is quite uncomfortable if left in place. You may need to repeat this scooping motion several times to adequately remove enough of the loose debris. Take care not to overdo it. *Do not* use this instrument to dig into the soft tissues along the nail fold. These living tissues are delicate and are easily injured. Any debris attached to the soft tissue that is not easily removed in the manner described must be removed by a medical doctor or podiatrist. If the tissue is inflamed, such as an ingrown toenail, refer the client to a qualified medical doctor or podiatrist.



**Figure 26-37** The curette is used to gently push the soft tissue away from the nail plate.



# CHAPTER GLOSSARY

<i>liquid soap</i>	Used in pedicuring, contains a mild detergent for cleansing the feet.
<i>masques</i>	Usually composed of mineral clays, moisturizing agents, skin softeners, aromatherapy oils, and beneficial extracts.
<i>massage oils</i>	Blend of oils used to lubricate, moisturize, and invigorate the skin during a massage.
<i>massage preparations</i>	Oils, creams, and lotions used to lubricate, moisturize, and invigorate the skin.
<i>nail rasp</i>	Metal file with an edge that can file the nail plate in only one direction.
<i>nippers</i>	Instrument used for manicures and pedicures to trim tags of dead skin.
<i>paraffin baths</i>	Used to stimulate circulation and to reduce inflammation and promote circulation to the affected joints.
<i>pedicure</i>	Standard service performed by cosmetologists that includes care and massage of feet and trimming, shaping, and polishing toenails.
<i>pedicure slippers</i>	Disposable paper or foam slippers are needed for those clients who have not worn open-toed shoes.
<i>tapotement</i>	Massage movement using a short, quick hacking, slapping, or tapping technique.
<i>toe separators</i>	Foam rubber toe separators or cotton are used to keep toes apart while polishing the nails.
<i>toenail clippers</i>	Professional instruments with curved or straight jaws used for cutting toenails.



One of the most popular services that a cosmetologist can offer clients is the opportunity to wear beautifully cared for nails in almost an endless variety of length and strength. In many cases, this is accomplished by the use of a **nail tip**, a plastic, pre-molded nail shaped from a tough polymer made from acrylonitrile butadiene styrene (**ABS**) or tenite acetate. Nail tips are adhered to the natural nail to add extra length and to serve as support for a nail enhancement product. Tips are combined with another service, such as a fabric wrap, overlay, or sculptured nail extensions. Nail tips are not long-wearing and can break easily without reinforcement, which is called an **overlay**. Overlays are acrylic (methacrylate) liquid and powder, wraps, or UV gels applied over a tip for added strength. These tips serve as a support for nail enhancement products. Sculpting a nail requires more technical skill, so nail tips were created to serve as a “canvas” to create beautiful nails. In this chapter, you will learn the correct way to apply nail tips.

## NAIL TIPS

This section begins with a list of supplies required for nail tip application. Procedures for nail tip application pre-service, nail tip application, post-service nail tip application, and removing nail tips follow.

### SUPPLIES FOR NAIL TIPS

In addition to the materials on your basic manicuring table, you will need the supplies listed below for nail tip application (Figure 27-1).

**Abrasive board.** Rough surface that is used to shape or smooth the nail and remove surface shine. They come in many shapes, sizes, and colors.

**Buffer block.** Lightweight rectangular block that is abrasive and used to buff nails.

**Nail tip adhesive.** The bonding agent used to secure the nail tip to the natural nail. These adhesives are made from cyanoacrylate monomer. Adhesives can be purchased in either tubes or brush-on containers and are available in several viscosities. Viscosity refers to the thickness of the adhesive. For instance, “gelled” adhesives are the thickest, and require more time to dry than fast-setting adhesives that set up in about 5 seconds. These adhesives usually come in a tube with a pointed applicator tip, a one-drop applicator, or as a brush-on. Use care when opening



Figure 27-1 Supplies needed for tip application.





**Figure 27-2** Tip with full well, tip with half well, and well-less tip.

adhesive containers—always point the opening away from your face and not in the direction of your client. Cosmetologists should always protect their eyes when using and handling nail tip adhesives. Even the smallest amount of glue in the eyes may cause serious injury. Cosmetologists should always wear safety eyewear when using and handling nail tip adhesives.

**Nail tips.** Many tips have a shallow depression called a “well” that serves as the point of contact with the nail plate. The position stop is the point where the free edge of the nail meets the tip where it is adhered to the nail. Nail tip types include partial well, full well, and well-less (no well at all) (Figure 27-2). The nail tip should never cover more than one-third of the natural nail plate. Nail tips are available in many sizes, colors, and shapes so that it is easier to fit each client with precisely the right size and shape tip. Tips can be purchased in containers of 100 to 500, as well as in various individual refill sizes. With a wide assortment, it is easier to fit each client with precisely the right size and shape of tip.

#### NAIL TIP APPLICATION PRE-SERVICE

Before application of any type of nail tip, prepare yourself and your client with the steps in Procedure 27-1.

#### NAIL TIP APPLICATION

During the application, Procedure 27-2, discuss products such as polish, top coat, and hand lotion or cream that will help your client maintain the service between salon visits.

#### NAIL TIP APPLICATION POST-SERVICE

See Procedure 27-3.

#### NAIL TIP REMOVAL

Sometimes one or more tips have to be removed due to improper application. Tips that have adhered to the nail plate can cause damage if removed improperly, so be careful. Use a tip remover or acetone when performing Procedure 27-4.

## NAIL WRAPS

**Nail wraps** are types of nail enhancements made by using a nail-size piece of cloth or paper bonded to the top of the nail plate with **wrap resin**. The heart of a nail wrap system, the wrap resin is what gives these systems their unique properties. Nail wrap systems can be used to lengthen the natural nail, but are most often used as coatings or “overlays” on the natural nail plate and on nail tips. Wrap resins are made from cyanoacrylate monomers, and are closely related to chemicals used to create other types of artificial nail enhancements. Nail wraps are used to



6. **Apply nail dehydrator/cleanser.** Use a cotton-tipped wooden pusher or spray to apply nail dehydrator/cleanser to nails. This step can help improve adhesion, especially on clients with naturally oily skin. Begin with the little finger on the left hand (Figure 27-5).
7. **Apply adhesive.** Place enough adhesive on the nail plate to cover the area where the tip will be placed, or apply the adhesive to well of tip. Do not apply too much—less is more when it comes to nail tip adhesives! Do not let adhesive run onto the skin. Apply adhesive from the middle of the nail plate to free edge (Figure 27-6).
8. **Slide on tips.** Remember the *stop, rock, and hold procedure*. Find the stop against the free edge at a 45-degree angle. Rock the tip on slowly. Hold the tip in place for 5 to 10 seconds until the adhesive has hardened (Figure 27-7). You may also apply the adhesive to the well area of the tip. This may ensure that there are fewer air bubbles trapped in the adhesive. This technique also works on well-less tips, followed by positioning on the nail plate and holding it in place for 5 to 10 seconds until the adhesive hardens.
9. **Trim nail tip.** Trim the nail tip to desired length using a **tip cutter** or large nail clippers. Cut from one side to the other. Do not use fingernail or toenail clippers. Cutting the tip with these types of clippers will weaken the tip and cause it to crack (Figure 27-8).
10. **Finish blending tip.** Your pre-blended tips will still need additional blending to make them match with the surface of the natural nail plate. Take great care because this step can cause damage to the natural nail plate, if done improperly. Use a medium- to fine-grit block buffer file (180 grit or higher) to



Figure 27-5 Apply nail dehydrator.



Figure 27-6 Apply adhesive.



Figure 27-7 Slide on tips.



Figure 27-8 Trim nail tip.



### CAUTION

If you accidentally touch or contaminate the freshly prepped natural nail, you must clean it again and reapply nail dehydrator.



# PROCEDURE

27-3

## NAIL TIP APPLICATION POST-SERVICE

1. **Make another appointment.** Schedule another appointment with your client to return in 2 or 3 weeks to have the nails manicured and rebalanced, and possibly for a pedicure as well.
2. **Recommend take-home products.** Suggest professional products that you believe your client would benefit from, such as polish, top coat, and hand lotions, among others. These are valuable maintenance tools for clients to have at home and they will appreciate your professional recommendation.
3. **Clean up around your table.** Take the time to restore the basic setup of your table, re-stock supplies, and make sure that all caps are tight.
4. **Discard used materials.** Place all used materials in the trash receptacle.
5. **Clean your table, and then sanitize and disinfect implements and multiuse tools, such as abrasive implements.** Perform complete pre-service sanitation and disinfection procedures. Implements need to be cleaned and disinfected before they can be used on the next client, and this procedure will take about 20 minutes.

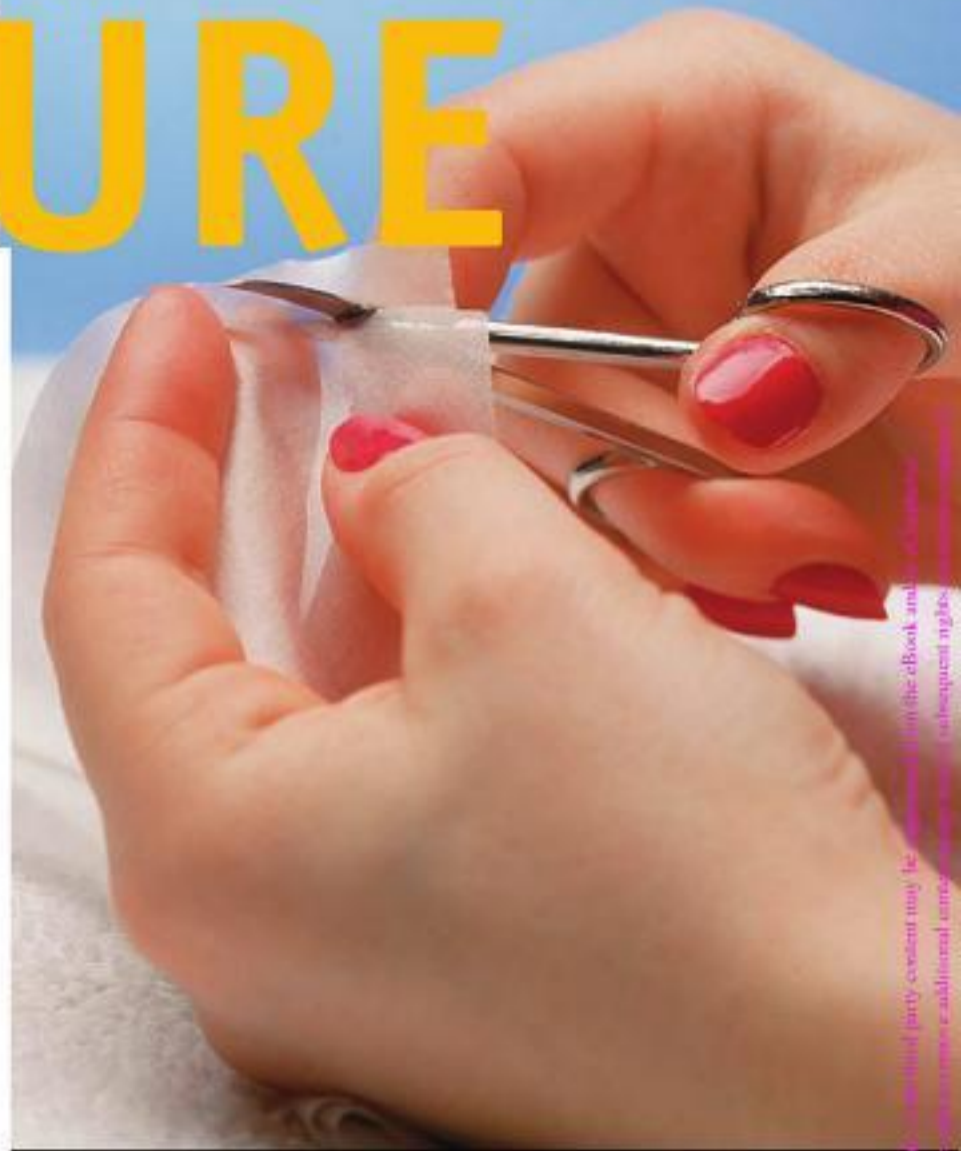


# PROCEDURE

27-6

## NAIL WRAP APPLICATION

- 1. Remove existing polish.** Begin with the client's little finger on the left hand. Saturate a cotton ball or plastic-backed pad with polish remover. If client is already wearing fabric wrap nails, use nonacetone remover to avoid damaging them. Hold saturated cotton on the nail while you silently count to 10. Wipe away the existing polish from the nail plate with a stroking motion towards the free edge. If all polish is not removed, repeat this step until traces of polish are gone. It may be necessary to put cotton around the tip of a new wooden pusher and use it to clean polish away from the sidewall and cuticle areas. Repeat this procedure on each finger of both hands.
- 2. Clean nails.** Dip nails in a fingerbowl filled with warm water and liquid soap. Then use a nail brush to clean nails over the fingerbowl. Rinse nails briefly in clear water or have the client wash at the sink. If the client's natural nails are thin or weak, it is recommended that you do not soak the nails in water before you apply a nail wrap. Natural nails are porous and absorb water, which can reduce the longevity of a fabric wrap service.
- 3. Push back the eponychium and remove cuticle tissue from plate.** Use the same cotton-tipped wooden pusher, with new cotton applied to the tip, to gently push back eponychium. Use a light touch because the eponychium has not been soaked in water and will be less flexible. Use a wooden pusher stick or a curette to gently remove the cuticle tissue from the nail plate.
- 4. Remove the oily shine.** Lightly buff the nail plate with a medium-fine abrasive (240 grit) to remove shine caused by the oil found on the natural nail plate. Do not use a coarse file, and be careful not to apply very much pressure. Remove only the oily shine and avoid removing layers from the natural nail plate. Nail wraps can be performed over natural nails or over a set of nail tips. If you are using nail tips, you should use your abrasive to shape the free edges of the natural nails to match the shape of the nail tip to the stop point.
- 5. Apply nail dehydrator.** Spray or wipe a nail dehydrator onto the nail plate. The dehydrator will remove moisture from the surface, and thus will help improve adhesion. Wiping the dehydrator with a plastic-backed cotton pad on the nail plate has the added benefit of removing any remaining natural oil, even on clients with oily skin.



### CAUTION

Do not use the same wooden pusher stick on more than one client. They are not disinfectable and are considered single-use items.



6. **Apply nail tips if desired.**
7. **Cut fabric.** Cut fabric to the approximate width and shape of the nail plate or nail tip. Be careful to keep the dust and oils from your fingers from contaminating the adhesive-backed fabric. This could prevent the fabric from adhering to the nail (Figure 27-13).
8. **Apply fabric adhesive.** If you are using a non-adhesive-backed fabric, you will need to apply a drop of adhesive to the center of the nail. Remember to keep adhesive off the skin. Besides potentially damaging your client's skin, this could cause the wrap to lift or separate from the nail plate (Figure 27-14).
9. **Apply fabric.** Gently fit fabric over the nail plate,  $\frac{1}{16}$  inch away from the side wall or eponychium. Press to smooth it onto the nail plate, using a small piece of thick plastic (Figure 27-15).
10. **Trim fabric.** Use small scissors to trim fabric  $\frac{1}{16}$  inch away from side walls and free edge. Trimming fabric slightly smaller than the nail plate prevents fabric from lifting and separating from the nail plate (Figure 27-16).



Figure 27-13 Cut fabric.



Figure 27-14 Apply fabric adhesive if using non-adhesive-backed fabric.



Figure 27-15 Apply fabric.



Figure 27-16 Trim fabric.

## Here's a TIP

Using a 6-inch  $\times$  4-inch piece of flexible plastic sheet to press fabric onto the nail plate will prevent the transfer of oil and debris from your fingers. Wrap resin will not easily penetrate fibers that are contaminated with oil, and those strands become visible in the clear coating. Thus, it is best not to touch them more than you must. Changing to an unused portion of the plastic for each finger is necessary.



11. **Apply wrap resin.** Draw a thin-coat of wrap resin down the center of the nail using the extender tip to apply. Do not touch the skin. The adhesive will penetrate the fabric and adhere to the nail surface (Figure 27-17). Use the plastic again to make sure that the resin is evenly distributed and there are no bubbles or areas of bare fabric.
12. **Apply wrap resin accelerator.** Spray, brush, or drop on wrap resin accelerator designed for the wrap resin of your choice. Use according to wrap resin manufacturer's instructions. Keep wrap resin accelerator off the skin to prevent overexposure to the product (Figure 27-18).
13. **Apply second coat of wrap resin.** Apply and spread wrap resin with extender tip. Seal free edge with wrap resin by running the extender tip on the edge of the nail tip to prevent lifting.
14. **Apply second coat of wrap resin accelerator.**
15. **Shape and refine nails.** Use medium-fine abrasive (240 grit) to shape and refine the wrap nail.
16. **Buff wrap nail.** Apply nail oil and buff to a high shine with fine (350 grit or higher) buffer. Use the buffer to smooth out rough areas in the fabric. Do not buff excessively or for too long. Overbuffing can wear through the wrap and weaken it (Figure 27-19).
17. **Remove traces of oil.** Send your client to thoroughly wash at the sink with a nail brush, liquid soap, and warm running water, to remove not only oils, but any dust or other contaminants.
18. **Apply polish** (Figure 27-20).



Figure 27-17 Apply adhesive.



Figure 27-18 Apply wrap resin accelerator.



Figure 27-19 Buff tip.



Figure 27-20 Finished fabric wraps.



# PROCEDURE

27-8

## TWO-WEEK FABRIC WRAP MAINTENANCE

1. Complete nail wrap pre-service.
2. Remove existing polish. Use a nonacetone polish remover to avoid damaging nail wraps.
3. Clean natural nails.
4. Push back eponychium and carefully remove cuticle tissue from the nail plate.
5. Lightly file the nail plate to remove oily shine.
6. Apply nail dehydrator.
7. Apply wrap resin to new nail growth area. Brush on or apply a small amount of wrap resin to the area of new nail growth. Spread the resin with the extender tip, taking care to avoid touching the skin.
8. Apply wrap resin accelerator. Follow the manufacturer's instructions.
9. Apply wrap resin to entire nail plate. Apply a second coat of wrap resin to the entire nail plate to strengthen and reseal the nail wrap.
10. Apply wrap resin accelerator.
11. Shape and refine nail wrap. Use medium-fine abrasive over the surface of the nail wrap to remove any high spots and/or other imperfections.
12. Buff nail wraps. Apply nail oil and buff to a high shine with a fine buffer (350 grit or higher).
13. Apply hand lotion and massage hand and arm.
14. Remove traces of oil. Use a small piece of cotton or plastic-backed cotton pad to remove all traces of oil from the nail so that polish will adhere.
15. Apply polish.
16. Complete nail wrap post-service.



# PROCEDURE

27-9

## FOUR-WEEK FABRIC WRAP MAINTENANCE

1. Complete nail wrap pre-service.
2. Remove existing polish. Use a nonacetone polish remover to avoid damaging wraps.
3. Clean nails. Use a nail brush, liquid soap, and warm running water.
4. Push back the eponychium and gently remove the cuticle.
5. Buff nail to remove shine. Lightly buff the nail plates with a medium-fine (240-grit) abrasive to remove the shine created by natural oil, and to remove any small pieces of fabric that may have lifted since the last service. Buff the end of the wrap until smooth, without scratching or damaging the natural nail plate. Carefully refine the nail until there is no obvious line of demarcation between new growth and fabric wrap. Avoid damaging the natural nail with the abrasive. Do not file into the natural nail surface.
6. Apply nail dehydrator. Apply nail dehydrator to nails with a cotton-tipped wooden pusher, cotton pad with a plastic backing, brush, or spray. Begin with the little finger on the left hand and work toward the thumb. Repeat on the right hand.
7. Cut fabric. Cut a piece of fabric large enough to cover the new growth area and slightly overlap the old wrap fabric.
8. Apply wrap resin to regrowth area. Apply a small amount of wrap resin to the fill area. Spread throughout the new growth area with the extender tip or fill in the area with brush-on adhesive. Avoid touching the skin (Figure 27-21).
9. Apply fabric. Gently fit fabric over new growth area and smooth (Figure 27-22).



Figure 27-21 Apply wrap resin to regrowth area.



Figure 27-22 Apply fabric.



## NO-LIGHT GELS

A **no-light gel** is a thicker-viscosity cyanoacrylate monomer. This gel-like material can be applied with a brush like nail polish, or with the bottle itself to spread a thin coat of product onto the entire nail plate. The gels are called “no-light” because they do not require a UV light to harden them as do UV-gel products. To harden no-light gels, a small amount of activator is dispensed atop the enhancement. The activator can be brushed or sprayed on the surface to cause the product to cure. The following procedure is designed to show how no-light gels are applied. For actual application, you will need to follow the manufacturer’s instructions.

### SUPPLIES

In addition to the materials in your basic manicuring setup, you will need the following items: no-light gel and manufacturer-recommended activator, buffer block, nail tips, and adhesive.

### NO-LIGHT GEL APPLICATION

Procedure 27-11 is designed to show how no-light gels are applied. For actual application, you will need to follow the manufacturer’s instructions.

### NO-LIGHT GELS AND FIBERGLASS/SILK FABRIC

No-light gels can also be used with fiberglass or silk fabrics. Layering no-light gel and fiberglass or silk in a sandwich effect can create a durable nail enhancement. The fabric is used between the first and second coat of no-light gel.

1. **Pre-cut fiberglass or silk sections in no greater than ¼-inch wide and ½-inch long strips.** Adjust and trim length of strips accordingly to size of the client’s nail plates. Avoid excess overhanging material.
2. **Place a section of fiberglass or silk material diagonally across wet no-light gel.** Use a wooden pusher to carefully position it in place. Place the first strip from the upper left corner to lower right corner of the nail, slightly above the stress area. Position the second strip from the upper right corner to the lower left corner of the nail, forming an “X.”
3. **Activate and follow with the second coat of gel.** Activate and finish as you would according to the no-light gel application procedure.



# PROCEDURE

27-11

## NO-LIGHT GEL APPLICATION

1. **Complete no-light gel application pre-service.**
2. **Remove existing polish.** Begin with your client's left hand, little finger, and work toward the thumb. Then repeat on the right hand.
3. **Clean finger nails.** Ask the client to dip nails in a fingerbowl filled with liquid soap. Then use a nail brush to clean nails over fingerbowl. Rinse thoroughly in clean water to remove soapy residues that can lead to lifting.
4. **Push back eponychium and carefully remove cuticle from the nail plate.** Use a cotton-tipped wooden or metal pusher to gently push back the eponychium, and then apply cuticle remover. Use as directed by the manufacturer, and carefully remove cuticle tissue from the nail plate.
5. **Remove oily shine from natural nail surface.** Lightly buff nail plate with medium-fine (240-grit) abrasive to remove the natural oil that causes the shine on the surface of the nail plate.
6. **Apply nail tips if desired.** If your client requires nail tips, apply them according to the procedure described earlier in this chapter.
7. **Apply nail dehydrator.** Apply nail dehydrator to nails with cotton-tipped wooden pusher, cotton pad with plastic backing, brush, or spray. Begin with the little finger on the left hand and work toward the thumb.
8. **Apply no-light gel.** Following the manufacturer's instructions, use brush to paint on gel or use the bottle to spread a thin coat of gel onto the entire nail. Apply gel to the five nails of one hand, leaving a tiny free margin between the product and skin to avoid lifting.
9. **Cure no-light gel with activator.** Following the instructions of the no-light gel product manufacturer, spray or brush no-light gel activator onto the enhancement.
10. **Repeat Steps 7, 8, and 9 on the right hand.**
11. **Apply second coat of no-light gel, if required.** With no-light gels, a second application of gel may not be necessary. Follow your manufacturer's directions for correct application.
12. **Shape and refine nails.** Shape and refine the entire surface of the nail with a medium-fine abrasive (240 grit). Use a light touch to remove any imperfections.
13. **Buff nail.** Buff nail with a fine buffer (350 grit or higher) to shine. If polish is not to be worn, a high shine buffer can be used.
14. **Apply nail oil.** Rub nail oil into surrounding skin and nail surface.
15. **Apply hand cream and massage hand and arm.**
16. **Clean nail enhancements.** Ask client to dip nails in a fingerbowl filled with liquid soap. Then use a nail brush to clean nails over fingerbowl. Rinse with water and dry thoroughly with a clean disposable towel.
17. **Apply nail polish.**
18. **Complete post-service.**



# 28

# CHAPTER (METHACRYLATE) NAILS

## chapter outline

- "Liquid and Powder" Nail Enhancements
- Acrylic (Methacrylate) Nail Enhancements Using Forms
- Maintenance and Removal of Acrylic (Methacrylate) Nail Enhancements
- Odorless Acrylic (Methacrylate) Products
- Colored Acrylic (Methacrylate) Powders



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The initiator that is added to the polymer powder is called benzoyl peroxide (BPO). It is the same ingredient used in over-the-counter acne medicine, except that it has a different purpose in nail enhancement products. BPO is used to start the chain reaction that leads to curing (hardening) of the nail enhancement. There is much less BPO in nail powders than in acne treatments. Diverse nail enhancement products often use different amounts of BPO, since the polymer powders are designed to work specifically with a certain monomer liquid. Some monomer liquids require more BPO to properly cure than others. This is why it is very important to use the polymer powder that was designed for use with the monomer liquid that you are using. Using the wrong powder can create nail enhancements that are not properly cured and may lead to service breakdown or could increase the risk of your clients developing a skin irritation or sensitivity. To learn more about how these products work and how to troubleshoot problems, see *Nail Structure and Product Chemistry*, second edition, by Douglas Schoon (Thomson Delmar Learning, 2005).

## ACRYLIC (METHACRYLATE) NAIL ENHANCEMENTS USING FORMS

Today's acrylic (methacrylate) polymer powders come in many colors, including variations of basic pink, white, clear, and natural. These colors can be used alone or blended to create everything from customized shades of pink to match or enhance the color of your client's nail beds to bold primaries or pastels that can be used to create a wide range of designs and patterns. With these powders you can create unique colors or designs that can be locked permanently in the artificial nail. They offer a wonderful way to customize your services or to express your artistry and creativity.

Acrylic (methacrylate) overlays and nail enhancements can be created with a single color powder, if the client wears nail polish all the time. Or they can be created by using a pink or natural colored powder over the nail bed or a natural or soft white powder to replicate a natural-nail free edge. A stark white powder can be used to create the French manicure look. The finished nail enhancement can be polished with nail polish or buffed to a high-gloss shine for a more natural look. These types of services are extremely versatile and highly durable, which partially explains their great popularity.

### SUPPLIES FOR ACRYLIC (METHACRYLATE) NAIL ENHANCEMENTS

**Acrylic (methacrylate) nail enhancements** are created by combining acrylic (methacrylate) monomer liquid with polymer powder. In addition to the supplies in your basic manicuring setup, you will need the items listed below (Figure 28-1).



**Figure 28-1** Materials needed for application of acrylic (methacrylate) nail enhancements.



- **Acrylic (methacrylate) monomer liquid.** The monomer liquid will be combined with acrylic (methacrylate) polymer powder to form the sculptured nail. The amount of monomer liquid and polymer powder used to create a bead is called the **mix ratio**. A bead mix ratio can be best described as “dry,” “medium,” or “wet.” If equal amounts of liquid and powder are used to create the bead, it is called a “dry bead.” If twice as much liquid as powder is found in the bead, it is called a “wet bead.” Halfway between these two is a “medium” bead, which consists of 50 percent more liquid than powder. In general, medium beads are the ideal mix ratio for working with monomer liquids and polymer powders. Mix ratio typically ensures proper set and maximum durability of the nail enhancement. For instance, if too much or too little flour is added when making cookies, the cookies will be dry and crumbly (too much) or too soft and gooey (too little). The same holds true for monomer liquids and polymer powders. If too much powder is picked up in the bead, the enhancement will cure incorrectly and may lead to brittleness and/or discoloration. If too little powder is used, the nail enhancement can become weak, and the risk of clients developing skin irritation and sensitivity may increase.

## Here's a TIP

Manufacturers' instructions for using these products may differ slightly from the general guidelines presented below. You should always use products in accordance with the manufacturer's instructions.

- **Acrylic (methacrylate) polymer powder.** Polymer powder in white, clear, natural, pink, and many other colors is available. The color(s) you choose will depend on the nail enhancement method you are using.
- **Nail dehydrator.** Apply liberally to natural nail plate only and avoid skin contact. Nail dehydrators remove surface moisture and tiny amounts of oil left on the natural nail plate, both of which can block adhesion. This step is a great way to help prevent lifting of the artificial nail enhancements.
- **Nail primer.** Many kinds of nail primers are available today. Acid-based primer (methacrylic acid) was once widely used to enhance the adhesion of enhancements to the natural nail. Since this type of nail primer is corrosive to the skin and potentially dangerous to eyes, “acid free” and “nonacid” primers were developed and are in wide use today. These alternatives work as well as or better than acid-based nail

## Here's a TIP

Hand sanitizers do not clean the hands. They cannot remove dirt or debris from hands. They only kill some of the bacteria on skin, not all of it. But, they do give clients peace of mind. Clients like to see cosmetologists using hand sanitizers and many clients prefer to use them as well. Keep a high-quality, professional hand sanitizer at your station and offer some to your clients. Let them see you using it, and they will have a greater degree of confidence in the cleanliness of your services. But do not let them replace hand washing—there is no replacement for that.



- **Nail tips.** These are pre-formed nail extensions made from ABS or tenite acetate plastic, and are available in a wide variety of shapes, styles, and colors, such as natural, white, and clear (see Chapter 27 for more information and instructions).
- **Nail adhesive.** There are many types of nail adhesives used for securing nail tips to the natural nails, but they are all based on cyanoacrylate monomers. Each type uses different, customized additives to enhance set times, strength, and other properties. It is chiefly the special additives that a manufacturer chooses that make these adhesives different from each other.

Choose a small size (4 to 6 grams maximum) because these adhesives have a short shelf life and can expire within 6 months after the date of purchase, depending on usage and storage conditions. To obtain the maximum shelf life, be sure to close the cap securely, set upright, and store out of direct sunlight and at room temperature between 60° to 85°F. If you do not, the nail adhesive may harden in the tube and will have to be discarded.

- **Dappen dish.** The monomer liquid and polymer powder are each poured into a special holder called a dappen dish. These dishes must have narrow openings to minimize evaporation of the monomer into the air. Do not use open-mouth jars or other containers with large openings. These will dramatically increase evaporation of your liquid and can allow the product to be contaminated with dust and other debris. Your dappen dish must be covered with a tightly fitting lid when not in use. Each time the brush is dipped into the dappen dish, the remaining monomer is contaminated with small amounts of polymer powder. So *never* pour the unused portion of monomer back into the original container. Empty the monomer from your dappen dish after the service and wipe it clean with a disposable towel. Avoid skin contact with monomer during this process to avoid skin irritation or sensitivity. Wipe clean with acetone, if necessary, before storing in a dust-free location.
- **Nail brush.** The best brush for use with these types of procedures is composed of sable hair. Synthetic and less expensive brushes do not pick up enough monomer liquid or do not release the liquid properly. Choose the brush shape and size with which you feel the most comfortable. Avoid overly large brushes, since they can hold excessive amounts of liquid that may dilute the enhancement product and lead to service breakdown. They also increase the risk of accidentally touching the client's skin with liquid monomer and may increase the risk of developing skin irritation or sensitivities.
- **Safety eyewear.** Safety eyewear should be used to protect eyes from flying objects or accidental splashes. There are many types and styles to choose from. You can get more information by searching the Internet, or contacting a local optometrist, who can also help you with both nonprescription and prescription safety eyewear.
- **Dust masks and protective gloves.** Dust masks are designed to be worn over the nose and mouth to prevent inhalation of excessive



amounts of dusts. They provide no protection from vapors. Both disposable and multiuse varieties of protective gloves can be purchased. Many types of materials are used to make these gloves. For many nail salon-related applications, gloves made of “nitrile” polymer work best.

## ACRYLIC (METHACRYLATE) NAIL ENHANCEMENTS PRE-SERVICE

Before application of any type of acrylic (methacrylate) nail enhancement, prepare yourself and your client with the steps below.

1. **Complete the pre-service sanitation and disinfection procedure, described in Chapter 25.**
2. **Set up your standard manicuring table.** Add the additional supplies needed to perform this service to your table. Always have enough supplies to prevent running out while performing the service.
3. **Greet the client and direct her to wash her hands with liquid soap and warm running water.** Be sure to dry hands thoroughly with a clean disposable towel.
4. **Perform a client consultation, using a client consultation form to record responses and observations.** Check for nail disorders to determine if it is safe and appropriate to perform a service on this client. If the client must not receive a service, explain your reasons and refer her to a doctor, if necessary. Record any skin or nail disorders, allergies, and so on. Make notes concerning the client’s nail habits—for instance, is the client a nail biter, does the client pick at her own nails, or does she do heavy lifting in her daily routine? Also make brief notations about the performance of the client’s enhancements, if she is wearing them. Record specific information about the service, such as acrylic (methacrylate) overlay with polish or pink and white acrylic (methacrylate) nail with glossy top coat, and make a note of the client’s choice in polish color.

You are now ready to begin Procedure 28-1.



If you are using multiuse forms, slide the form into place making sure the free edge is over the form and that it fits snugly. Be careful not to cut into the hyponychium under the free edge. Tighten the form around the finger by squeezing lightly (Figure 28-5).

- 6. Apply nail primer.** Apply nail primer by touching the brush tip to the edge of the bottle's neck to release the excess primer back into the bottle. Using a light dotting action, dab the brush tip to the prepared natural nail only. The primer leaves a residue molecule behind. The open-ended molecule connects with the acrylic (methacrylate) molecules to form a better bond to each other. Always follow the manufacturer's directions.

Allow nail primer to dry thoroughly. Never apply nail enhancement product over wet nail primer, since this can cause product discoloration and service breakdown. Avoid overuse of nail primers (Figures 28-6 and 28-7).

- 7. Prepare monomer liquid and polymer powder.** Pour acrylic (methacrylate) liquid and powder into separate dappen dishes. If you are using the two-color method, you will need three dappen dishes—one for the white tip powder; one for the clear, natural, or pink powder; and one for the acrylic (methacrylate) monomer liquid. (Throughout this chapter, pink and white acrylic [methacrylate] powders are used for the two-color method. Your client may select the one-color method or may pick a clear or natural powder, or when you are in the salon you can offer a custom-blended pink shade to match the client's skin tones.)
- 8. Dip brush in monomer liquid.** Dip brush fully in the monomer liquid and wipe on the edge of the container to remove the excess (Figure 28-8).
- 9. Form product bead.** Dip the tip of the same brush into the acrylic (methacrylate) polymer powder and rotate slightly. You will pick up a bead of product—and it should have a medium consistency, not runny or wet—that is large enough for shaping

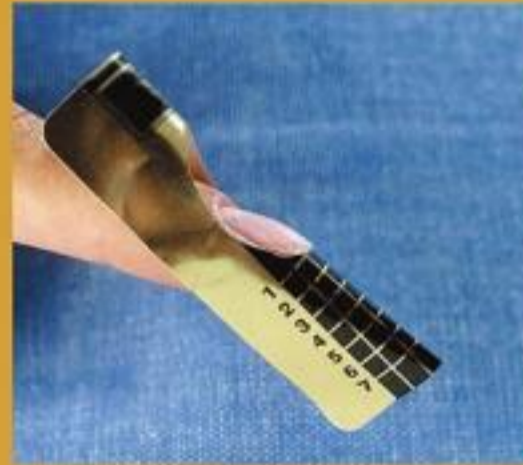


Figure 28-5 Position nail form.



Figure 28-6 Always wear safety glasses when applying acid-based nail primer.



Figure 28-7 Carefully dot on acid-based primer. Allow to spread. Avoid overuse.



Figure 28-8 Dip brush into monomer liquid.



the entire free-edge extension. If this is too large a bead to properly shape, using two smaller beads may be easier. If you are using the two-color acrylic (methacrylate) method, use the white powder at this point (Figure 28-9).

10. **Place bead of product.** Place the bead on the nail form at the point where the free edge joins the nail form (Figures 28-10 and 28-11).
11. **Shape free edge.** Use the middle portion of your sable brush to press and smooth the product to shape the enhancement in the free edge area. Do not “paint” the enhancement product onto the nail. Pressing and smoothing produces a more natural-looking nail. Keep side wall lines parallel, and avoid widening the tip beyond the natural width of the nail plate. If you are using the two-color nail enhancement method, create a natural-looking shape with the white powder to produce the French manicure look (Figures 28-12 and 28-13).



Figure 28-9 Form a bead of product.

## Here's a TIP

Do not touch primed area of the nail with your brush until you apply enhancement product on the area. The enhancement may become discolored where wet nail primer touches the product, and this can also lead to lifting.

12. **Place second bead of product.** Pick up a second bead of product of medium consistency and place it on the natural nail below the last bead and next to the free edge line in the center of nail.
13. **Shape second bead of product.** Press and smooth product toward the side walls, making sure that the product is very thin around all the edges



Figure 28-10 The center line and free edge of the nail.



Figure 28-11 Place bead of product on nail form.



Figure 28-12 Shape white bead(s) into a natural looking “smile line.”



Figure 28-13 Press product bead flat, keeping brush flat to nail, and then smooth it into shape.



nail with long sweeping strokes to further shape and perfect the enhancement surface. Thin the product near the base of all nail plates, free edges, and side walls (Figure 28-17).

**18. Buff nail enhancements.** Buff the enhancement with a fine-grit buffer (350 grit or higher) until entire surface is smooth (Figures 28-18 to 28-21); use a high-shine buffer if polish is not to be worn.

**19. Apply nail oil.** Use a cotton-tipped wooden pusher or an eyedropper to apply nail oil to the skin surrounding the nail plate, and massage briefly to speed penetration (Figure 28-22).

**20. Apply hand cream and massage hand and arm.**

**21. Clean nail enhancements.** Ask client to wash with soap and use a nail brush to clean her nail enhancements. Thoroughly rinse with water to remove all soap residues that may cause lifting. Dry thoroughly with a clean disposable towel. If your client selected the two-color method, her acrylic (methacrylate) nail enhancements are finished.

**22. Apply nail polish.** If your client selected one-color acrylic (methacrylate) nail enhancements, apply the selected nail polish (Figure 28-23).



**Figure 28-17** Apply smaller beads of product near the base of the nail plate and leave a tiny free margin between the product and the skin.



**Figure 28-18** File the two side walls evenly and parallel with each other.



**Figure 28-19** Smooth and thin.



**Figure 28-20** Shape and contour.



**Figure 28-21** Buff entire surface with a fine-grit buffer (350 grit or higher), and then a high-shine buffer if desired.



**Figure 28-22** Apply nail oil.



**Figure 28-23** Finished nail enhancements.



## F Y I

Avoid wiping your brush too rapidly or hard against a table towel. This can press hairs against the sharp edge of the metal ferrule that holds the hairs in place and cut them off.

## ACRYLIC (METHACRYLATE) NAIL POST-SERVICE

1. **Make another appointment.** Schedule another appointment with your client for maintaining her nail enhancements. A rebalance will be necessary in 2 or 3 weeks, depending on how quickly the nails grow. Encourage your client to return for a basic manicure between rebalance appointments if the acrylic (methacrylate) nail enhancements are polished.
2. **Take-home product recommendations.** Suggest professional products that you believe your client would benefit from, such as polish, top coat, and hand lotions. These are valuable maintenance tools for clients, and they will appreciate your professional recommendation.
3. **Clean up around your table.** Take the time to restore the basic setup of your table, restock supplies, and make sure all caps are tight.
4. **Clean brush.** Clean brush according to the manufacturer's instructions. Never pull out bristles of the brush because you may loosen the remaining bristles. Clip one stray hair if necessary, but never trim bristles because you may ruin the accuracy of the brush. Do not allow the brush to sit in acetone or brush cleaner. Generally, it is better to clean the brush in monomer liquid. Brush cleaners and acetone can dry out the hairs and make them brittle. Never immerse any application brush into any liquid disinfecting solution—this can cause product contamination and lead to service breakdown.
5. **Store acrylic products.** Store acrylic powders in covered containers. Store all primers and acrylic liquids in a cool, dark area. Do not store products near heat.
6. **Discard used materials.** Never save used monomer liquid that has been removed from the original container. Use on one client only. To dispose of small amounts of leftover monomer, carefully pour it into a highly absorbent paper towel and then place it in a plastic bag. Avoid skin contact with the liquid monomer and never pour the monomer directly into the plastic bag! Should skin contact occur, wash hands with liquid soap and water. After all used materials have been collected, seal them in a plastic bag and discard it in a closed waste receptacle. It is important to remove items soiled with enhancement product from your manicuring station after each client. This will help maintain the quality of your salon's air. Dispose of these items according to local rules and regulations.
7. **Clean your table, and then clean and disinfect implements and multiuse tools, such as abrasives and implements.** Perform complete pre-service sanitation and disinfection procedures. Implements need to be cleaned and disinfected before they can be used on the next client, and this procedure will take about 20 minutes. See Procedure 28-2.



**9. Prepare acrylic (methacrylate) liquid and powder.**

Pour monomer liquid and polymer powder into separate small dappen dishes. If you are using the two-color system, you will need three dappen dishes—one for the white tip powder, one for the pink powder, and one for the monomer liquid.

**10. Dip brush into monomer liquid.** Dip brush fully into the monomer liquid and wipe on the edge of the container to remove the excess.

**11. Form product bead.** Dip the tip of the same brush into the acrylic (methacrylate) polymer powder and rotate slightly. You will pick up a bead of product, and it should have a medium consistency, not runny or wet, that is large enough for shaping the entire free-edge extension. If it is too large to properly shape, two smaller beads may be easier. If you are using the two-color acrylic method, use the white powder at this point.

**12. Place bead of product on free edge.** Place product bead on the free edge of the tip or natural nail (Figure 28-25).

**13. Shape free edge.** Use the middle portion of your sable brush to press and smooth the product to shape the enhancement's free edge. Do not "paint" the product onto the nail. Pressing and smoothing produce a more natural-looking nail. Keep side wall lines parallel, and avoid widening the tip beyond the natural width of the nail plate. If you are using the two-color method, create a natural-looking shape with the white powder to produce the French manicure look (Figure 28-26).

**14. Place second bead of acrylic on free edge.** Use medium consistency and place it on the nail plate below the first bead and next to the free edge line in the center of the nail (Figure 28-27).

**15. Shape second bead of product.** Press and smooth product to side walls, making sure that the product is very thin around all edges. Leave a tiny free margin between the product placement and skin. Avoid placing the product too close to the skin, or the product may lift away from the nail plate, and may



**Figure 28-25** Place bead of product on free edge.



**Figure 28-26** Press and smooth the bead over stress zone.



**Figure 28-27** Place second bead of product on nail plate.



18. **Buff nail enhancement.** Buff the nail enhancement with fine-grit buffer (350 grit or higher) until the entire surface is smooth (Figure 28-33), or use a high-shine buffer if nail with polish is to be worn.
19. **Apply nail oil.** Rub nail oil into the surrounding skin and nail enhancement, and massage briefly to speed penetration.
20. **Apply hand cream and massage hand and arm.**
21. **Clean nail enhancements.** Ask client to dip nail enhancements in a fingerbowl filled with liquid soap and water. Then use nail brush to clean nails over fingerbowl. Thoroughly rinse with clean water to remove soap residues that may cause lifting. Dry thoroughly with a clean disposable towel. If your client selected the two-color method, the nail enhancements are finished.
22. **Apply nail polish.** Polish one-color nail enhancements (Figure 28-34).
23. **Complete acrylic (methacrylate) enhancement post-service procedure described on page 762.**



Figure 28-33 Buff nail enhancement.



Figure 28-34 Finished artificial nail enhancements.



### CAUTION

Check your nail primer daily for clarity to ensure that it does not become contaminated with nail dusts and other floating debris, which can dramatically reduce primer effectiveness. Avoid using nail primers that are visibly contaminated with floating debris.



## MAINTENANCE AND REMOVAL OF ACRYLIC (METHACRYLATE) NAIL ENHANCEMENTS

Regular maintenance helps prevent nail enhancements from lifting or cracking. If the nail enhancements are not properly maintained, they have a greater tendency to lift and break, which increases the risk of the client developing an infection and other problems. For this reason, a full and proper rebalance must be performed every 2 to 3 weeks, depending on how fast the client's nails grow. If cracks occur, they should be repaired as soon as possible for the same reason. When the client no longer wishes to wear nail enhancements (for whatever reason), they should be removed as soon as possible as well. Steps for rebalancing, crack repair, and removal are found in Procedures 28-3 through 28-5.

### REBALANCING

**Rebalancing** is a method for maintaining the beauty, durability, and longevity of artificial nail enhancements. Learning how to properly rebalance is a critical skill for you to learn, if you wish to be a successful cosmetologist. Do not let clients go too long without having a proper rebalance, or you will have many more repairs to perform when they return. Proper rebalancing is both safe and gentle to the nail unit, and will not result in injury or damage. In rebalancing, the nail is thinned down, the apex of the nail will be removed, and the entire nail enhancement is reduced in thickness. Use Procedure 28-3 for performing a rebalance.

### CRACK REPAIR

Crack repair is the addition of enhancement product to repair cracks. Advantages to performing repairs as soon as possible after cracks occur are similar to those for rebalancing. Follow Procedure 28-4 for this maintenance technique.

### REMOVAL

When the client requests nail enhancement removal this should be performed as soon as possible. Among other things, professional removal prevents natural nail bed damage. For this technique, see Procedure 28-5 on page 771.

## ODORLESS ACRYLIC (METHACRYLATE) PRODUCTS

**Odorless acrylic (methacrylate) products** have the same chemistry as all other monomer liquid and polymer powder products. But rather than use ethyl acrylic (methacrylate), these products rely on monomers that have little odor.



# PROCEDURE

28-3

## ACRYLIC (METHACRYLATE) NAIL ENHANCEMENT REBALANCE

1. Complete acrylic (methacrylate) nail enhancement application pre-service on page 756.
2. Remove existing polish.
3. **Smooth ledge between new growth and acrylic nail.** Using a medium-coarse abrasive (120 to 180 grit), carefully smooth down the ledge of the existing product until it is flush with the new growth of nail plate. Do not dig into or damage the natural nail plate with your abrasive.
4. **Refine entire nail enhancement.** Hold the medium abrasive (180 to 240 grit) flat and glide it over entire nail enhancement to reshape, refine, and thin out the free edge until the white tip appears translucent. Take care not to damage the client's skin with the abrasive.
5. **Buff nail enhancement.** Use a fine-grit buffer (350 grit or higher) to buff the product, and smoothly blend it into new growth area without damaging the natural nail plate.
6. **Blend areas of lifting.** Use a medium-abrasive (180 to 240 grit) file to smooth out any areas of product that may be lifting or forming pockets. Do not file into the natural nail plate.
7. **Clean nail enhancements.** Use a fingerbowl filled with warm water and liquid soap and a nail brush to gently wash nails. Do not soak nails. Rinse well with clean water to remove soap residues that may cause lifting.
8. **Push back eponychium and carefully remove cuticle from the nail plate.** Use a cotton-tipped wooden or metal pusher to gently push back the eponychium, and then apply cuticle remover. Use as directed by the manufacturer, and carefully remove cuticle tissue from the nail plate.
9. **Remove oily shine from natural nail surface.** Lightly buff the nail plate with medium-fine abrasive (240 grit) to remove the natural oil.
10. **Apply nail dehydrator.** Apply nail dehydrator to nails with cotton-tipped wooden or metal pusher, plastic-backed cotton pad, brush, or spray.





### **BUSINESS TIP: CELEBRATE THE HOLIDAYS**

Take advantage of gift-giving holidays such as Christmas, Chanukah, St. Valentine's Day, Secretary's Day, and Mother's Day to provide your customers with professional products that were designed for you to retail. It's easy to make lots of extra money during the holidays. Decorate festively to encourage clients to consider shopping for presents, and offer a wide range of gifts that customers can conveniently buy while they are in the salon for appointments. Try creating two or three festive packages with different product combinations and sizes, priced from \$5.00 to \$15.00. People buy these for stocking stuffers or to give them as office or church/synagogue gifts. They will thank you for making their shopping easier and for your professional product recommendations. Also, don't forget to offer gift certificates in all denominations.

Although these products are called “odorless,” they do have a slight odor. Generally, if a monomer liquid does not produce a strong enough odor that others in the salon can detect its presence, it is considered to be an “odorless product.” Those that create a slight odor in the salon are called “low odor.”

In general, odorless products must be used with a dry mix ratio (equal parts liquid and powder in bead). If used too wet, the risk of the client developing skin irritation or sensitivity will increase. This mix ratio creates a “snowy-appearing” bead on your brush. Multiple circular motions in the powder with a brush may be needed to create a bead with the proper mix ratio. Lift your brush and tap gently to remove excess powder from the product bead. Once the product bead is placed on the nail, it will slowly form into a firm glossy bead that will hold its shape until pressed and smoothed with the nail brush. Wipe your brush frequently to avoid the product sticking to the hairs. Never re-wet the brush with monomer. This will dilute the enhancement product already placed on the nail and will create the wrong mix ratio, which can lead to product discoloration, service breakdown, and increased risk of skin irritation and sensitivity. Without re-wetting your brush, use it to shape and smooth the surface to perfection.

Odorless products harden more slowly, which creates the tacky layer called the “inhibition layer.” Once the enhancement has hardened, this layer can be removed using alcohol, acetone, or a manufacturer-recommended product. It is always best to use a plastic-backed cotton pad to avoid skin contact with the inhibition layer, since repeated contact with this layer can lead to skin irritation and sensitivity. This layer can also be filed away, but avoid skin contact with these freshly filed particles.

## **COLORED ACRYLIC (METHACRYLATE) POWDERS**

Polymer powders are now available in a wide range of colors that mimic almost every shade available in nail polish. Nail artistry with acrylic (methacrylate) nails is limited only by your imagination. Some cosmetologists use colors to go beyond the traditional pink and white French manicure combinations and offer custom blended colors to their clients. They maintain recipe cards so that they can reproduce these custom blends on demand. This new technique allows cosmetologists to create customized nail enhancements that your clients cannot get from anyone else. As with all customized techniques, clients are willing to pay a few dollars more for the special service.



1. Describe the origin of acrylic nail chemistry and what makes it work.
2. List the supplies needed for nail enhancement application.
3. Describe the procedures for application of nail enhancements using forms and using tips, and as an overlay on natural nails.
4. Describe precautions that must be taken to safely apply acid-based nail primers. What must be avoided?
5. Describe how catalysts work and explain where they are found in acrylic (methacrylate) nail enhancement systems.
6. Describe how accelerators work and explain where they are found in acrylic (methacrylate) nail enhancement systems.
7. Describe how to perform a rebalance on nail enhancements using monomer liquid and polymer powder.
8. Describe the proper procedure for removing nail enhancements.
9. Explain how the application of odorless enhancement products differs from the application of traditional acrylic (methacrylate) nail products based on ethyl acrylic (methacrylate).
10. Explain why it is important to use the powder that was designed for the liquid monomer that you are using.

## CHAPTER GLOSSARY

<i>acrylic (methacrylate) monomer liquid</i>	The liquid that will be combined with acrylic (methacrylate) polymer powder to form the sculptured nail.
<i>acrylic (methacrylate) nail enhancements</i>	Created by combining acrylic (methacrylate) monomer liquid with polymer powder.
<i>acrylic (methacrylate) polymer powder</i>	Powder in white, clear, pink, and many other colors that will be combined with acrylic (methacrylate) monomer liquid to form the sculptured nail.
<i>catalyst</i>	Substance that speeds up chemical reactions between monomer liquid and polymer powder.
<i>chain reaction</i>	Process that joins monomers to create very long polymer chains; also called "polymerization reaction."
<i>dappen dish</i>	A special container used to hold the monomer liquid and polymer powder.
<i>dust masks and protective gloves</i>	Designed to be worn over the nose and mouth to prevent inhalation of excessive amounts of dusts.
<i>initiators</i>	Energized and activated by catalyst; initiators start the chain reaction.
<i>mix ratio</i>	The amount of monomer liquid and polymer powder used to create a bead.
<i>nail dehydrator</i>	Substance used to remove surface moisture and tiny amounts of oil left on the natural nail plate, both of which can block adhesion.
<i>nail forms</i>	Often made of paper/mylar coated with adhesive backs, or pre-shaped plastic or aluminum; placed under the free edge and used to extend the nail enhancements beyond the fingertip for additional length.
<i>nail primer</i>	Used to enhance the adhesion of enhancements to the natural nail.
<i>odorless acrylic (methacrylate) products</i>	Nail enhancement products that are slightly different from acrylic (methacrylate) products, and are considered "no odor" or "low odor."
<i>polymer</i>	Substance formed by combining many small molecules (monomers) into very long chain-like structures.
<i>polymerization</i>	Chemical reaction that creates polymers; also called curing or hardening.
<i>rebalancing</i>	Method for maintaining the beauty, durability, and longevity of the nail enhancement.
<i>safety eyewear</i>	Used to protect eyes from flying objects or accidental splashes.

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## Learning Objectives

After completing this chapter, you will be able to:

- Describe the chemistry and main ingredients of UV gels.
- Identify the supplies needed for UV gel application.
- Demonstrate the proper procedures for maintaining UV gel services using forms over tips and on natural nails.
- Describe the one-color and two-color methods for applying UV gels.
- Explain how to safely and correctly remove UV gels.

## Key Terms

Page number indicates where in the chapter the term is used.

*inhibition layer*  
pg. 781

*oligomer*  
pg. 776

*one-color method*  
pg. 780

*two-color method*  
pg. 780

*urethane acrylate or  
urethane methacrylate*  
pg. 776

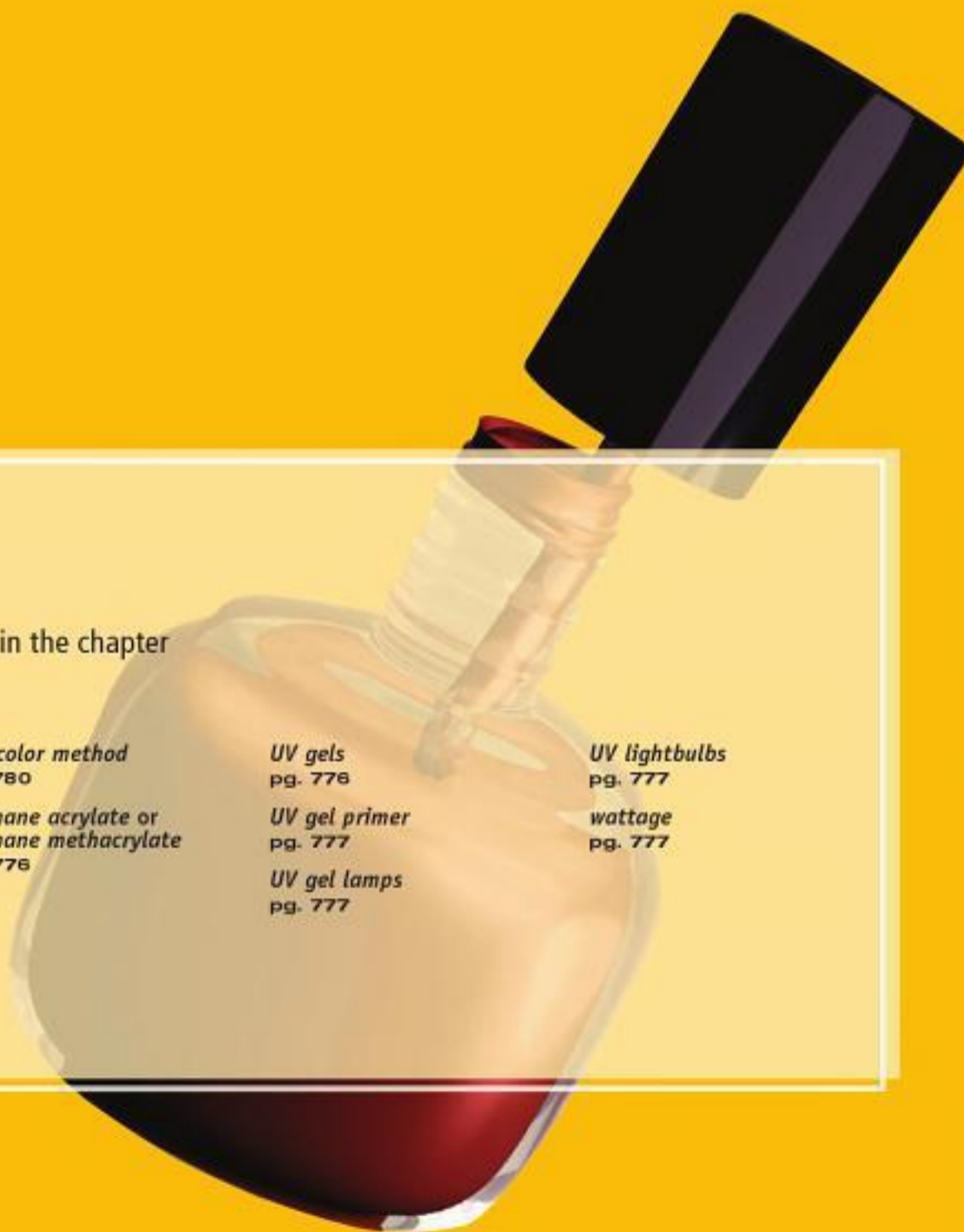
*UV gels*  
pg. 776

*UV gel primer*  
pg. 777

*UV gel lamps*  
pg. 777

*UV lightbulbs*  
pg. 777

*wattage*  
pg. 777





T

his chapter introduces **UV gels** as an alternative method for an artificial nail enhancement service. Nail enhancements based on UV curing chemistry are not traditionally thought of as being “acrylics,” but they are. Like wrap resins, adhesives, and methacrylate nail enhancements, UV gel enhancements rely on ingredients from the acrylic family. Their ingredients are part of a subcategory of this family and are called “acrylates,” whereas wrap resins are from the subcategory called “cyanoacrylates,” and monomer liquid/polymer powder nail enhancements are from the same category called “methacrylates.”

Although most UV gels are made from “acrylates,” new UV gel technologies have been recently developed that use their cousins, the “methacrylates.” Like wraps and methacrylate nail enhancements, UV gels can also contain monomers, but they rely mostly on a related form called an oligomer. Remember the terms “mono” meaning “one” and “poly” meaning “many” described in Chapter 28. Now we will add a new term, “oligo,” which means “few.” An **oligomer** is a short chain of monomers that is not long enough to be considered a polymer. Since nail enhancement monomers are liquids and polymers are solids, it is not surprising that oligomers are in between. Oligomers are often thick, gel-like, and sticky. Traditionally, UV gels rely on a special type of acrylate called a **urethane acrylate**, while newer UV gel systems use **urethane methacrylates**.

UV gels can be easy to apply, file, and maintain. They also have the advantage of having very little odor. Although they are not as durable as methacrylate nail enhancements, UV gels can create beautiful, long-lasting nail enhancements. The application process differs from other types of nail enhancements. After the nail plate is properly prepared, each layer of product applied to the natural nail, nail tip, or form requires exposure to UV light to cure or harden. The UV light required for curing comes from a special lamp designed to emit the proper type of UV light.



- **Nail adhesive.** There are many types of nail adhesives for securing pre-formed nail tips to natural nails. Select a type best suited for the work that you are doing. For example, do not purchase large-size containers, unless you can use them up fairly quickly. Even though you can usually save money by purchasing professional products in bulk amounts, nail adhesives only have a shelf life of 6 months or less, depending on your usage. One way to improve shelf life is to close the cap securely, and store at 60° to 85° Fahrenheit.
- **Abrasive files and buffers.** Select a medium abrasive (180 to 240 grit) for natural nail preparation. Choose a medium-fine abrasive (240 grit) for smoothing, and a fine buffer (350 grit or higher) for finishing. A high-shine buffer can also be used if desired, and nail polish is not to be worn.

### UV GEL APPLICATION PRE-SERVICE

1. **Complete the pre-service sanitation and disinfection procedure in Chapter 25.**
2. **Prepare your workstation with everything you need at your fingertips.** Set up your standard manicuring table. Add the additional supplies needed to perform the services to your table. Always have enough supplies to prevent running out while performing the service.
3. **Greet your client with a smile.** Then ask the client to wash hands with liquid soap and rinse with warm running water. You must also wash your hands. Both you and the client must dry hands thoroughly with a clean disposable towel.
4. **If this is your client's first appointment, a client consultation form should be prepared.** Mark the date of the service. This is important in the scheduling of future appointments. Record any skin or nail disorders and allergies, and determine if it is safe and appropriate to perform this service on the client. If the client is a nail biter or does heavy work as a daily routine, write a brief notation. Record any specific information about the service you will perform, such as UV gel overlay without polish, and if polish is preferred, record the client's color preference. This will help keep you in touch with your client's needs.
5. **If this is a return visit, perform client consultation, using the consultation form to record responses and observations.** Check for nail disorders and decide whether it is safe and appropriate to perform a service on this client. If the client cannot receive a service, explain your reasons and refer the client to a doctor, if appropriate.

### LIGHT-CURED GEL APPLICATION

After completing the pre-service steps, use Procedure 29-1 to apply light-cured gel enhancements.



# PROCEDURE

## 29-1

### LIGHT-CURED GEL APPLICATION

1. **Clean nails and remove existing polish.** Begin with your client's little finger on the left hand, and work toward the thumb. Then repeat on the right hand. Ask the client to place nails into a finger bowl with liquid soap. Then use a nail brush to clean nails over the fingerbowl. Thoroughly rinse with clean water to remove soap residues that can cause lifting.
2. **Push back eponychium and carefully remove cuticle from the nail plate.** Use a cotton-tipped wooden or metal pusher to gently push back eponychium, and then apply cuticle remover to the nail plate. Use as directed by the manufacturer, and carefully remove cuticle tissue from the nail plate.
3. **Remove oily shine from natural nail surface.** Lightly buff nail plate with medium-fine (240-grit) abrasive to remove the natural oils that cause the shine on the surface of the nail plate.
4. **Apply nail dehydrator.** Apply nail dehydrator to nails with cotton-tipped wooden pusher, plastic-backed cotton pad, brush, or spray. Begin with the little finger on the left hand and work toward the thumb (Figures 29-1 and 29-2).
5. **Apply nail tips if desired.** If your client requires nail tips, apply them according to the procedure described in Chapter 27. Be sure to shorten and shape tip prior to application of the UV gel. During the procedure, the UV gel overlaps the tip's edge to prevent lifting. During the filing process, the seal can be broken, allowing the UV gel to peel or lift. Be careful not to break this seal (Figure 29-3).



Figure 29-1 Remove oily shine from natural nail using vertical strokes.



Figure 29-2 Apply nail plate dehydrator.



Figure 29-3 Select nail tip for proper fit, and then trim and shape prior to UV gel application.



Bevel down, stroking the file at a 45-degree angle from the top center dome to free edge. Check the free edge thickness and even out imperfections with gentle strokes with the abrasive.

16. **Remove dust.** Remove dust and filings with a disinfectable nylon brush. Be sure to properly clean and disinfect these brushes between each client, as required by your state regulations. Your instructor will advise you about these requirements (Figure 29-11).
17. **Apply third UV gel (sealer or finisher UV gel).** Apply a small amount of the third UV gel (sealer or finisher UV gel). Starting from base of the nail plate, stroke toward the free edge, using polish-style strokes and covering the entire nail surface. Be sure to wrap this final layer under the natural nail's free edge to seal the coating and provide additional protection. Avoid touching the client's skin.
18. **Repeat step 11, then continue on right hand and both thumbs.**
19. **Remove the inhibition layer.** Remove this layer if required. Avoid skin contact.
20. **Apply nail oil.** Rub nail oil into surrounding skin and nail surface (Figure 29-12).
21. **Apply hand lotion and massage hand and arm.**
22. **Clean nail enhancements.** Ask the client to dip nail enhancements into a fingerbowl filled with liquid soap. Then use nail brush to clean enhancements over fingerbowl. Thoroughly rinse with water to remove soap residues that can cause polish to lift. Dry thoroughly with a clean disposable towel.
23. **Apply nail polish** (Figure 29-13).



**Figure 29-11** Remove dust and filings with a disinfectable nylon brush.



**Figure 29-12** Apply nail oil and massage into nail to speed penetration.



**Figure 29-13** Apply polish for finished look.



10. **Apply second UV gel (building UV gel).** If required, apply second UV gel over the entire nail enhancement and cure properly (Figure 29-16).
11. **Remove inhibition layer.** This layer can be removed by filing with a medium abrasive (180 and 240 grit) or with alcohol, acetone, or other suitable remover on a plastic-backed cotton pad to avoid skin contact. Avoid skin contact with the inhibition layer.
12. **Check nail contours.** Using a medium abrasive (180 to 240 grit), refine the surface contour.
13. **Remove dust.** Remove dust and filings with a disinfectable nylon brush.
14. **Apply third UV gel (sealer or finisher).** Apply a small amount of the third UV gel (sealer or finisher UV gel). Starting from the base of the nail plate, stroke toward the free edge using polish-style strokes, covering the entire nail surface. Be sure to wrap this final layer under the natural nail's free edge to seal the coating and provide additional protection. Avoid touching the client's skin underneath the free edge with UV gel.
15. **Cure UV nail.** Properly cure UV nail enhancement as recommended.
16. **Remove inhibition layer.** Remove this layer if required. Avoid skin contact.
17. **Repeat step 12.**
18. **Apply nail oil.** Rub nail oil into surrounding skin and nail surface.
19. **Apply hand lotion and massage hand and arm.**
20. **Clean nail enhancements.** Ask client to dip nails into a fingerbowl filled with liquid soap. Then use a nail brush to clean nails over the fingerbowl. Thoroughly rinse with water and dry thoroughly with a clean disposable towel.
21. **Apply nail polish if desired.**
22. **Complete UV gel application post-service.**



**Figure 29-16** Apply UV gel to entire nail without nail form.



