

CHAPTER

10 Nail Disorders and Diseases

Chapter Outline

Why Study Nail Disorders and Diseases?

Nail Disorders

Nail Diseases

Learning Objectives

After completing this chapter, you will be able to:

- ✓ **LO1** List and describe the various disorders and irregularities of nails.
- ✓ **LO2** 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.

Beau's lines
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bruised nails
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discolored nails
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eggshell nails
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hangnail (agnail)
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leukonychia spots (white spots)
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melanonychia
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nail disorder
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nail psoriasis
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onychia
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onychocryptosis (ingrown nails)
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onychomadesis
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onychomycosis
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onychophagy (bitten nails)
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onychorrhexis
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pincer nail (trumpet nail)
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plicatured nail (folded nail)
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pseudomonas aeruginosa
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ridges
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splinter hemorrhages
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tinea pedis
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To give clients professional and responsible service and care, you need to learn about the structure and growth of the nail, as you did in Chapter 9, Nail Structure and Growth. Now, you must learn about the disorders and diseases of nails so that you will 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. Certain health conditions may first be revealed by a change in the nails, a visible disorder, or poor nail growth. Some conditions are easily treated in the salon—hangnails, for instance, or bruised nail beds that need camouflage—but some are infectious and cannot be treated by salon professionals. Carefully studying this chapter will vastly improve your knowledge and expertise in caring for nails.

Why Study Nail Disorders and Diseases?

Cosmetologists should study and have a thorough understanding of nail disorders and diseases because:

- You must be able to identify any condition on a client's nails that should not be treated in the salon and which may be treated in the salon.
- You must be able to identify infectious conditions that may be present so that you can take the appropriate steps to protect yourself and your clients from the spread of disease.
- You may be in a position to recognize conditions that may signal mild to serious health problems that warrant the attention of a doctor.

Nail Disorders

As you now know, a normal, healthy nail is firm but flexible. The surface is shiny, smooth, and unspotted with no wavy ridges, pits, or splits. A healthy nail also is whitish and translucent in appearance, with the pinkish color of the nail bed showing through. In some races, the nail bed may have more yellow tones. A **nail disorder** is a condition caused by injury or disease of the nail unit. Most, if not all, of your clients have experienced a common nail disorder at some time in their lives. A cosmetologist should recognize normal and abnormal nail conditions, understand what to do, and be able to help a client with a nail disorder 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 condition or 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 to determine the type of treatment that is required.

Bruised nails are a condition in which a blood clot forms under the nail plate, causing a dark purplish spot. These discolorations are usually due to small injuries to the nail bed. The dried blood absorbs into the nail bed epithelium tissue on the underside of the nail plate and grows out with it. Treat this injured nail gently and advise your clients to be more careful with their nails if they want to avoid this problem in the future. Advise them to treat their nails like jewels and not tools! This condition can usually be covered with nail polish or camouflaged with an opaque nail enhancement.

Eggshell nails are noticeably thin, white nail plates that are more flexible than normal. Eggshell nails are normally weaker and can curve over the free edge (**Figures 10–1a** and **10–1b**). The condition is usually caused by improper diet, hereditary factors, internal disease, or medication. Be very careful when manicuring these nails because they are fragile and can break easily. Use the fine side of an abrasive board (240 grit or higher) to file them gently, but only if needed. It is best not to file a nail plate of this type. A thin protective overlay of enhancement product can be helpful, but do not extend these nails beyond the free edge.

Beau's lines are visible depressions running across the width of the natural nail plate (**Figure 10–2**). They usually result from major illness or injury that has traumatized the body, such as pneumonia, adverse drug reaction, surgery, heart failure, massive injury, or a long-lasting high fever. Beau's lines occur because the matrix slows down in producing nail cells for an extended period of time, say a week or a month. This causes the nail plate to grow thinner for a period of time. The nail plate thickness usually returns to normal after the illness or condition is resolved.

Hangnail, also known as **agnail**, is a condition in which the living skin around the nail plate splits and tears (**Figure 10–3**). Dry skin or small cuts can result in hangnails. If there is no sign of infection or an open wound, advise the client that proper nail care, such as hot oil manicures, will aid in correcting the condition. Also, never cut the living skin around the natural nail plate, even if it is dry and rough looking. Other than to carefully remove the thin layer of dead cuticle tissue on the nail plate, you should not cut skin anywhere on the hands or feet. Hangnails can be carefully trimmed, as long as the living skin is not cut or torn in the process. It is against state board regulations to intentionally cut or tear the client's skin and can lead to serious infections for which you and the salon may be legally liable. If not properly cared

did you know?

Clients cannot sign a waiver or verbally give a cosmetologist permission to disobey state or federal rules and regulations.



▲ **Figure 10–1a**
Eggshell nail, front view.



▲ **Figure 10–1b**
Eggshell nail, end view.



▲ **Figure 10–2**
Beau's lines.



▲ **Figure 10–3**
Hangnail.



▲ Figure 10-4
Leukonychia spots.



▲ Figure 10-5
Melanonychia.



▲ Figure 10-6
Bitten nails.



▲ Figure 10-7
Onychorrhexis.

for, a hangnail can become infected. Clients with symptoms of infections in their fingers should be referred to a physician. Signs of infection are redness, pain, swelling, or pus.

Leukonychia spots (loo-koh-NIK-ee-ah SPATS), also known as **white spots**, are whitish discolorations of the nails, usually caused by minor injury to the nail matrix. They are not a symptom of any vitamin or mineral deficiency. It is a myth that these result from calcium or zinc deficiency. They appear frequently in the nails but do not indicate disease. As the nail continues to grow, the white spots eventually disappear (Figure 10-4).

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, 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 people of color, but could be indicative of a disease condition in Caucasians (Figure 10-5).

Discolored nails are nails that turn a variety of colors, which may indicate surface staining, a systemic disorder, or poor blood circulation. Although quite common, a discolored nail may be caused by several factors, such as: surface stains from nail polish, foods, dyes, or smoking. A discolored nail could also be caused by an internal discoloration of the nail plate due to biological, medical, or even pharmaceutical reasons.

Onychophagy (ahn-ih-koh-FAY-jee), also known as **bitten nails**, is the result of a habit of chewing the nail or the hardened, damaged skin surrounding the nail plate (Figure 10-6). Advise clients that frequent manicures and care of the hardened eponychium can often help them overcome this habit, at the same time 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. However, the bitten, damaged skin should not be treated by a cosmetologist. If the skin is broken or infected, no services can be provided until the area is healed.

Onychorrhexis (ahn-ih-koh-REK-sis) refers to split or brittle nails that 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, aggressive filing techniques, or heredity. Nail services can be performed only if the nail is not split, exposing the nail bed. Nail enhancement product should never be applied if the nail bed is exposed. This condition may be corrected by softening the nails with a conditioning treatment and discontinuing the use of harsh detergents, cleaners, or improper filing (Figure 10-7). These nail plates often lack sufficient moisture, so twice-daily treatments with a high quality, penetrating nail oil can be very beneficial. Nail hardeners should always be avoided on brittle nails, since these products will increase brittleness.

Plicatured nail (plik-a-CHOORD NAYL), also known as **folded nail**, is a type of highly curved nail plate usually caused by injury to the matrix, but it may be inherited. This condition often leads to ingrown nails (**Figure 10–8**).

Nail pterygium (teh-RIJ-ee-um) is an abnormal condition that occurs when the 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 nail enhancement products (**Figure 10–9**). The terms *cuticle* and *pterygium* do not designate the same thing, and they should never be used interchangeably. Nail pterygium is abnormal and is caused by damage to the eponychium or hyponychium.

Do not treat nail pterygium and never push the extension of skin back with an instrument. Doing so will cause more injury to the tissues and will make the condition worse. The gentle massage of conditioning oils or creams into the affected area may be beneficial. If this condition becomes irritated, painful, or shows signs of infection, recommend that the client see a physician for examination and proper treatment.

Ridges are vertical lines running down the length of the natural nail plate that are caused by uneven growth of the nails, usually the result of normal aging. Older clients are more likely to have these ridges, and unless the ridges become very deep and weaken the nail plate, they are perfectly normal. When manicuring a client with this condition, carefully buff the nail plate to minimize the appearance of these ridges. This helps to remove or minimize the ridges, but great care must be taken not to overly thin the nail plate, which could lead to nail plate weakness and additional damage. Ridge filler is less damaging to the natural nail plate and can be used with colored polish to give a smooth appearance while keeping the nail plate strong and healthy.

Splinter hemorrhages are caused by physical trauma or injury to the nail bed that damages the capillaries and allows small amounts of blood flow. As a result, the blood stains the bed epithelium tissue that forms rails to guide the nail plate along the nail bed during growth. This blood oxidizes and turns brown or black, giving the appearance of a small splinter underneath the nail plate. Splinter hemorrhages will always be positioned lengthwise in the direction of growth (pointing toward the front and back of the nail plate) because this is how the bed epithelium rails grow. Splinter hemorrhages are normal and usually associated with some type of hard impact or other physical trauma to the fingernail or toenail.

Increased Curvature Nails

Nail plates with a deep or sharp curvature at the free edge have this shape because of the matrix; the greater the curvature of the matrix, the greater the curvature of the free edge. Increased curvature can range from mild to severe pinching of the soft tissue at the free edge. In some cases, the free edge pinches the sidewalls into a deep curve. This is known as **pincer nail**, also known as **trumpet nail**. The nail can also curl in on itself (**Figure 10–10**), may be deformed only on



▲ **Figure 10–8**
Plicatured nail.



▲ **Figure 10–9**
Nail pterygium.



▲ **Figure 10–10**
Pincer or trumpet nail.



▲ **Figure 10–11**
Pseudomonas aeruginosa.

CAUTION

Nail infection caused by bacteria and fungi can be avoided by following state board guidelines for proper cleaning and disinfection. Do not omit any of the cleaning and disinfection procedures when performing a nail enhancement 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 reexamine your cleaning, disinfection, preparation, and application techniques. Completely disinfect all metal and reusable implements, throw away single-use nail files, wash linens or replace with disposable towels, and thoroughly clean and disinfect the table surface before and after the procedure (Figure 10–12).

▶ **Figure 10–12**
Always practice strict rules regarding cleaning and disinfecting when working with nails.



one sidewall, or the edges of the nail plate may curl around to form the shape of a trumpet or sharp cone at the free edge. In each of these cases, the natural nail plate should be carefully trimmed and filed. Extreme or unusual cases should be referred to a qualified medical doctor or podiatrist. A brief summary of nail disorders is found in **Table 10–1**.

Nail Infections

As you learned in Chapter 5, Infection Control: Principles and Practices, fungi are parasites that may cause infections of the feet and hands. Nail fungi are of concern to the salon because they are contagious and can be transmitted through contaminated implements. Fungi can spread from nail to nail on the client's feet, but it is much less likely that these pathogens will cause fingernail infections. Fungi infections prefer to grow in conditions where the skin is warm, moist, and dark, that is, on feet inside shoes. It is extremely unlikely that a cosmetologist could become infected from a client, but it is possible to transmit fungal infections from one client's foot or toe to another client.

With proper cleaning and disinfection practices the transmission of fungal infections can be easily avoided. Clients with suspected nail fungal infection must be referred to a physician.

It Is Not a Mold!

In the past, discolorations of the nail plate (especially those between the plate and nail enhancements) were incorrectly referred to as *molds*. This term should not be used when referring to infections of the fingernails or toenails. The discoloration is usually a bacterial infection such as ***Pseudomonas aeruginosa***, one of several common bacteria that can cause a nail infection, or *Staphylococcus aureus*. These naturally occurring skin bacteria can grow rapidly to cause an infection if conditions are correct for growth (Figure 10–11). Bacterial infections are more likely the cause of infection on the hands, but also can be found on the feet. Bacteria do not need the same growing conditions as fungal organisms, and can thrive on fingernails just as easily as they can on the feet. Infection can be caused by the use of implements that are contaminated with large numbers of these bacteria. These infections are not a result of moisture trapped between the natural

nail and nail enhancements. This is a myth! Water does not cause infections. Infections are caused by large numbers of bacteria or fungal organisms on a surface. This is why proper cleaning and preparation of the natural nail plate, as well as cleaning and disinfection of implements, are so important. If these pathogens are not present, infections cannot occur. A typical

OVERVIEW OF NAIL DISORDERS

DISORDER	SIGNS OR SYMPTOMS
BEAU'S LINES	Visible depressions running across the width of the natural nail plate; usually a result of major illness or injury that has traumatized the body
BRUISED NAILS	Dark purplish spots, usually due to physical injury
DISCOLORED NAILS	Nails turn a variety of colors; may indicate surface staining, a systemic disorder, or poor blood circulation
EGGSHELL NAILS	Noticeably thin, white plate, more flexible than normal and can curve over the free edge; usually caused by improper diet, hereditary factors, internal disease, or medication
HANGNAIL	Living skin around the nail plate (often the eponychium) becomes split or torn
LEUKONYCHIA SPOTS	Also known as <i>white spots</i> ; whitish discolorations of the nail; usually caused by minor injury to the nail matrix; not related to the body's health or vitamin deficiencies
MELANONYCHIA	Darkening of the fingernails or toenails; may be seen as a black band within the nail plate, extending from the base to the free edge
NAIL PSORIASIS	Nail surface pitting, roughness, onycholysis, and bed discolorations
NAIL PTERYGIUM	Abnormal stretching of skin around the nail plate; usually caused by serious injury, such as burns, or an adverse skin reaction to chemical nail enhancement products or an allergic skin reaction
ONYCHOPHAGY	Also known as <i>bitten nails</i> ; chewed nails or chewed hardened skin surrounding the nail plate
ONYCHORRHEXIS	Split or brittle nails that have a series of lengthwise ridges giving a rough appearance to the surface of the nail plate
PINGER NAIL	Also known as <i>trumpet nail</i> ; increased crosswise curvature throughout the nail plate caused by an increased curvature of the matrix; the edges of the nail plate may curl around to form the shape of a trumpet or sharp cone at the free edge
PLICATED NAIL	Also known as <i>folded nail</i> ; a type of highly curved nail plate, usually caused by injury to the matrix, but it may be inherited
RIDGES	Vertical lines running the length of the natural nail plate that are caused by uneven growth of the nails, usually the result of normal aging
SPLINTER HEMORRHAGES	Physical trauma or injury to the nail bed that damages the capillaries and allows small amount of blood flow

Table 10-1 Overview of Nail Disorders.



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. Clients with these symptoms should be immediately referred to a physician for treatment. It is illegal for a cosmetologist to diagnose or treat a nail infection. Do not remove the nail enhancement unless directed to do so by the client's treating physician.

You should never provide any type of nail services to clients with a nail bacterial or fungal infection. **LO1**

Nail Diseases

There are several nail diseases that you may come across. A brief overview of nail diseases is found in **Table 10–2**. Any nail disease that shows signs of infection or inflammation (redness, pain, swelling, or pus) should not be diagnosed or treated in the salon. Medical examination is required for all nail diseases and any treatments will be determined by the physician.

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

OVERVIEW OF NAIL DISEASES

DISEASE	SIGNS OR SYMPTOMS
ONYCHIA	Inflammation of the nail matrix, followed by shedding of the nail
ONYCHOLYSIS	Lifting of the nail plate from the nail bed, without shedding, usually beginning at the free edge and continuing toward the luna area
ONYCHOMADESIS	Separation and falling off of a nail plate from the nail bed; can affect fingernails and toenails
NAIL PSORIASIS	Tiny pits or severe roughness on the surface of the nail plate
ONYCHOMYCOSIS	Fungal infection of the natural nail plate
PARONYCHIA	Bacterial inflammation of the tissues around the nail plate causing pus, swelling, and redness, usually in the skin fold adjacent to 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 PEDIS	Red, itchy rash on the skin on the bottom of feet and/or between the toes, usually between the fourth or fifth toe

Table 10–2 Overview of Nail Diseases.

ACTivity

Go to a library or use the Internet to research the term *scope of practice* for medical doctors, dermatologists, and podiatrists. You should be familiar with what these professionals do, as well as the strict limitations placed on cosmetologists' *scope of practice* so that you'll better understand what you cannot do.

skin by frequent exposure to soaps, solvents, and many other types of substances. A 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 and obtain the Material Safety Data Sheet (MSDS).

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.

Onychosis (ahn-ih-KOH-sis) is any deformity or disease of the natural nail.

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 cleaned and disinfected. Improperly cleaned and disinfected nail implements can cause this and other diseases if an accidental injury occurs.

Onychocryptosis (ahn-ih-koh-krip-TOH-sis), also known as **ingrown nails**, can affect either the fingers or toes (**Figure 10-13**). In this condition, the nail grows into the sides of the living 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 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. However, if there is any redness, pain, swelling, or irritation, you may not provide any services. Cosmetologists are not allowed to service 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 10-14**). 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 on natural



© Courtesy of Godfrey F. Mix, DPM, Sacramento, CA.

▲ **Figure 10-13**
Onychocryptosis.



© Courtesy of Robert Baron, MD (France).

▲ **Figure 10-14**
Onycholysis.



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▲ **Figure 10-15**
Onycholysis caused by trauma.



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▲ **Figure 10-16**
Onychomadesis.



© Courtesy of Robert Baron, MD (France).

▲ **Figure 10-17**
Nail psoriasis.

nails when they are filed too aggressively, on nail enhancements when they are improperly removed, or on toenails when clients wear shoes without sufficient room for the toes. If there is no indication of an infection or open sores, a basic manicure or pedicure 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 10-15**).

Onychomadesis (ahn-ih-koh-muh-DEE-sis) is the separation and falling off of a nail plate from the nail bed. It can affect fingernails and toenails (**Figure 10-16**). 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 (NAYL suh-RY-uh-sis) is a noninfectious condition that affects the surface of the natural nail plate causing 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 has been filed with a coarse abrasive, can cause a ragged free edge, or can cause both (**Figure 10-17**). People with skin psoriasis often experience this nail disorder. Neither skin nor nail psoriasis are infectious diseases. Nail psoriasis can also affect the nail bed, causing it to develop yellowish to reddish spots underneath the nail plate, called *salmon patches*. Onycholysis is also much more prevalent in people with nail psoriasis. When all of these symptoms are present on the nail unit at the same time, nail psoriasis becomes a likely cause of the client's problem nails, and they should be referred to a physician for diagnoses and treatment, if needed.

Paronychia (payr-uh-NIK-ee-uh) is a bacterial inflammation of the tissues surrounding the nail (**Figure 10-18**). Redness, pus, and swelling are usually seen in the skin fold adjacent to the nail plate.

Individuals who work with their hands in water, such as dishwashers and bartenders, or who must wash their hands continually, such as health-care workers and food processors, are more susceptible because their hands are often very dry or chapped from excessive exposure to water, detergents, and harsh soaps. This makes them much more likely to develop infections.



▲ Figure 10-18
Chronic paronychia.



▲ Figure 10-19
Paronychia.



▲ Figure 10-20
Pyogenic granuloma.

Toenails, because they spend a lot of time in a warm, moist environment, are often more susceptible to paronychia infections as well (Figure 10-19). Use moisturizing hand lotions to keep skin healthy, and keep feet clean and dry.

Pyogenic granuloma (py-oh-JEN-ik gran-yoo-LOH-muh) is a severe inflammation of the nail in which a lump of red tissue grows up from the nail bed to the nail plate (Figure 10-20).

Tinea pedis (TIN-ee-uh PED-us) is the medical term for fungal infections of the feet. These infections can occur on the bottoms of the feet and often appear as a red itchy rash in the spaces between the toes, most often between the fourth and fifth toe. There is sometimes a small degree of scaling of the skin. Clients with this condition should be advised to wash their feet every day and dry them completely. This will make it difficult for the infection to live or grow. Advise clients to wear cotton socks and change them at least twice per day. They should also avoid wearing the same pair of shoes each day, since shoes can take up to twenty-four hours to completely dry. Over-the-counter antifungal powders can help keep feet dry and may help speed healing (Figure 10-21).

Onychomycosis (ahn-ih-koh-my-KOH-sis) is a fungal infection of the natural nail plate (Figure 10-22). A common form is whitish patches that can be scraped off the surface of the nail. Another common form of this infection shows long whitish or pale yellowish streaks within the nail plate. A third common form causes the free edge of the nail to crumble and may even affect the entire plate. These types of infection often invade the free edge of the nail and spread toward the matrix. **LO2**

did you know?

To learn more about the natural nail and understand more about infections, diseases, and disorders, be sure to read *Nail Structure and Product Chemistry*, second edition, by Douglas Schoon. (Published by Milady, a part of Cengage Learning.)



▲ Figure 10-21
Tinea pedis.



▲ Figure 10-22
Onychomycosis.

Review Questions

1. In what situation should a nail service not be performed?
2. Name at least eight nail disorders and describe their appearance.
3. What conditions do fungal organisms favor for growth?
4. If a client develops a nail infection, can a cosmetologist offer treatment advice for these conditions? Why?
5. What is the most effective way to avoid transferring infections among your clients?
6. What is *pseudomonas aeruginosa*? Why is it important to learn about it?
7. Name two common causes of onycholysis.
8. Should a cosmetologist treat an ingrown toenail if there is no sign of pus or discharge? Why?

Chapter Glossary

Beau's lines	Visible depressions running across the width of the natural nail plate; usually a result of major illness or injury that has traumatized the body.
bruised nails	Condition in which a blood clot forms under the nail plate, causing a dark purplish spot. These discolorations are usually due to small injuries to the nail bed.
discolored nails	Nails turn a variety of colors; may indicate surface staining, a systemic disorder, or poor blood circulation.
eggshell nails	Noticeably thin, white nail plates that are more flexible than normal and can curve over the free edge.
hangnail	Also known as <i>agnail</i> ; a condition in which the living tissue surrounding the nail plate splits or tears.
leukonychia spots	Also known as <i>white spots</i> ; whitish discolorations of the nails, usually caused by injury to the matrix area; not related to the body's health or vitamin deficiencies.
melanonychia	Darkening of the fingernails or toenails; may be seen as a black band within the nail plate, extending from the base to the free edge.
nail disorder	Condition caused by an injury or disease of the nail unit.
nail psoriasis	A noninfectious condition that affects the surface of the natural nail plate causing tiny pits or severe roughness on the surface of the nail plate.
nail pterygium	Abnormal condition that occurs when the skin is stretched by the nail plate; usually caused by serious injury, such as burns, or an adverse skin reaction to chemical nail enhancement products.
onychia	Inflammation of the nail matrix, followed by shedding of the natural nail.
onychocryptosis	Also known as <i>ingrown nails</i> ; nail grows into the sides of the tissue around the nail.
onycholysis	Lifting of the nail plate from the nail bed without shedding, usually beginning at the free edge and continuing toward the lunula area.
onychomadesis	The separation and falling off of a nail plate from the nail bed; affects fingernails and toenails.

Chapter Glossary

onychomycosis	Fungal infection of the natural nail plate.
onychophagy	Also known as <i>bitten nails</i> ; result of a habit of chewing the nail or chewing the hardened skin surrounding the nail plate.
onychorrhexis	Split or brittle nails that have a series of lengthwise ridges giving a rough appearance to the surface of the nail plate.
onychosis	Any deformity or disease of the natural nails.
paronychia	Bacterial inflammation of the tissues surrounding the nail causing pus, swelling, and redness, usually in the skin fold adjacent to the nail plate.
pincer nail	Also known as <i>trumpet nail</i> ; increased crosswise curvature throughout the nail plate caused by an increased curvature of the matrix. The edges of the nail plate may curl around to form the shape of a trumpet or sharp cone at the free edge.
plicatured nail	Also known as <i>folded nail</i> ; a type of highly curved nail usually caused by injury to the matrix, but may be inherited.
Pseudomonas aeruginosa	One of several common bacteria that can cause nail infection.
pyogenic granuloma	Severe inflammation of the nail in which a lump of red tissue grows up from the nail bed to the nail plate.
ridges	Vertical lines running through the length of the natural nail plate that are caused by uneven growth of the nails, usually the result of normal aging.
splinter hemorrhages	Hemorrhages caused by trauma or injury to the nail bed that damage the capillaries and allow small amounts of blood flow.
tinea pedis	Medical term for fungal infections of the feet; red, itchy rash of the skin on the bottom of the feet and/or in between the toes, usually found between the fourth and fifth toe.