

Manicure and Pedicure Basics

A **manicure** is a cosmetic beauty treatment for the fingernails and hands enjoyed by both sexes.

A manicure can treat just the hands, just the nails, or both.

A standard manicure usually includes filing and shaping of the nails and the application of polish. Some specialty manicures, such as the French Manicure, may also be offered. Treatments for hands usually include soaking in a softening substance and application of hand lotion. A similar treatment performed on the feet is called a



pedicure. The word "manicure" comes from the Latin *manus*, meaning "hand," and *cura* meaning "care".

Various services for nails can be provided- for example as the application of artificial nails such as nail tips, acrylics and artificial nail gels. A manicurist can also apply treatments to real nails, such as filing, polishing, and painting. Fancier manicures include painting pictures or designs on the nails or applying small decals or imitation jewels.

In many areas, manicurists are regulated and must be licensed. Because the skin is being handled and sometimes trimmed, and because there is a risk of infection when tools are used on multiple people, proper sanitation is critically important.

A **pedicure** is a way to improve the appearance of the feet and their nails. It basically is a manicure for the feet. The word pedicure comes from the Latin words *pes*, which means foot,

and *cura*, which means care. It also means the care of the feet and toenails. A pedicure can be helpful because it can prevent nail diseases and nail disorders.

The history of pedicures dates back to ancient Egypt. A carving of a pharaoh's official was noted as representing pedicures and manicures.



General Manicure/Pedicure Knowledge:

Tools

Towels

Cotton balls

Toenail clippers

Lotion

Cuticle cream

Cuticle pusher

Orangewood sticks

Acetone

Antibacterial soap

Foot bath

White block buffer

Things You Need To Know

Structure of the nail

Composition of cosmetics used in a pedicure

Give effective pedicure

Care for clients' problems or concerns

Distinguishing between nail disorders that can or can't be treated

Sanitation and disinfectant procedures

The difference between nail diseases and nail disorders

Nail Cosmetics

Base coat

Cuticle creams

Cuticle oil

Cuticle remover

Dry nail polish



Liquid nail polish

Nail bleach

Nail conditioner

Nail dryer

Polish thinner

Polish remover

Parts

Filing



Cuticle nipping - clipping excess cuticle around nail.

Cleansing the nails - wash nails in finger bath with warm, soapy water.

Buffing - shaping of the nails.

Polishing the nails

Anatomy:

Fingernails and toenails, which are made of protein and are a form of modified hair, are composed of:

- The nail matrix or the root of the nail - this is the growing part of the nail still under the skin at the nail's proximal end.
- The eponychium or cuticle, which is the fold of skin at the proximal end of the nail.
- The paronychia, which is the fold of skin on the sides of the nail.
- The hyponychium, which is the attachment between the skin of the finger or toe and the distal end of the nail.
- The nail plate, which is what we think of when we say nail- the hard and translucent portion, composed of keratin.
- The nail bed, which is the adherent connective tissue that underlies the nail.
- The lunula, which is the crescent shaped whitish area of the nail bed.

Nails grow at an average rate of 0.1 mm/day (1 cm every 100 days). Fingernails require 3 to 6 months to regrow completely. Toenails require 12 to 18 months. Actual growth rate is dependent upon age, season, exercise level, and hereditary factors.

This growth record can show the history of recent health and physiological imbalances, and has been used as a diagnostic tool since ancient times. Major illness will cause a deep horizontal groove to form in the nails.



Discoloration, thinning, thickening, brittleness, splitting, grooves, Mee's lines, small white spots, receded lunula, clubbing (convex), flatness or spooning (concave) can indicate illness in other areas of the body, nutrient deficiencies, drug reaction or poisoning, or merely local injury. Nails can also become thickened (onychogryphosis), loosened

(onycholysis), infected with fungus (onychomycosis) or degenerative; for further information see nail diseases.

There are two purposes of human fingernails. Firstly, they help protect the sensitive skin underneath the nail. They also serve to help us grip and scratch. If you were to tape over your fingernails and try to carry on with your normal day, you would find it difficult if not impossible, to grip many things.

Nails can dry out, just like skin. A manicure or pedicure is a health and cosmetic procedure to groom, trim, paint the nails and manage callouses. It is accomplished with various tools such as cuticle scissors, nail scissors, nail clippers, and nail files. Toe infections can come from dirty socks, certain types of aggressive exercise, walking barefoot and exposing your feet in a moldy environment.

Many people bite their nails. It can be habitual and is often used to relieve stress. Biting one's nails can indicate internal tension or stress.

However, biting the nails can result in the transportation of germs that are buried under the surface of the nail into the mouth. In fact, nail salons use tools that potentially affect a human in a similar way. Regarding nail tools such as files, *"If they're used on different people, these tools may spread nail fungi, staph bacteria or viruses,"* warns Rick Lopes, a spokesperson for the *California Board of Barbering and Cosmetology*. In fact, over 100 bacterial skin infections in the year 2000 were traced to footbaths in nail salons. Thus, you can see that many pathogens have the ability to live beneath a nail, and because of this biting the nails can potentially cause health issues.

To paint the nails, nail lacquer (also known as nail polish or fingernail polish) is manually applied and allowed to dry.

In the late 20th century, artificial nails for women became widely popular. The artificial nail is not a replacement, but an extension for natural nails. There are two main approaches to creating artificial nails—*tips* and *forms*.

Tips are made of lightweight plastic plates that are "nail" shaped. They are glued on the end of the natural nail and are blended into the existing natural nail using an emory board. Forms are fit over the nail and then an artificial nail is molded out of acrylic and the form is removed and then properly shaped and buffed to a shine. There are several popular techniques that can be used to create longer, more perfect looking nail enhancements. One popular material is acryl—a mixture of powder and ethymethacrylate that hardens in 30–40 seconds after application. Acryl can be removed in 20 minutes using a variety of solvents. Another material, gel, hardens under ultraviolet light and can be longer lasting, but more expensive. It can only be removed by cutting it off.

A popular alternative to acrylic or gel preparations are Fiberglass or Silk wraps. These are done by cutting pieces of actual fiberglass or silk fabric to fit on the surface of the nail or tip and then it is sealed



down with a resin or glue. These are a possible alternative for those who are allergic to chemicals used in the acrylic or gel process. Other materials can be used, as well as combinations of them. There are also temporary, cheaper flexible tips that can be quickly glued at home without help from a professional. Acrylic nail powders are available in a variety of

colours and can use "special effects" such as contours, sparkles and the very popular "French" (pink and white appearance).

In 2003 the first ink nail printer *NailJet Pro* was released. It allowed individuals to print custom hi-resolution colour images on their nails. In some parts of Asia, similar but larger nail-art printers have been set up near bookstores and other popular destinations of young people. They work much like picture-taking booths.

These fashion trends are not without risks, as residues of acrylic resins have been known to lead to redness, swelling, pain and even severe allergic reactions. The nail can separate from the nail bed, and if the nail root becomes damaged, the replacement can be permanently deformed. As well, nail glue is poisonous if accidentally swallowed, and most nail polishes and removers contain toxic formaldehyde or acetone.

In some Asian cultures men may also grow long fingernails, or only the nail on the little finger, to show that they do not do much manual labor, but instead work in an office setting.

Some guitar players, notably classical and fingerstyle players, will purposely grow long nails on the hand they use to pluck the strings. Their longer nails serve as small, easily-maneuverable guitar picks. Care thereof becomes a daily ritual and a mark of pride. Though this attention may seem effeminate, it is a mark of the dedication that accompanies the serious musician.

Shridhar Chillal holds the world record for the longest fingernails. They haven't been cut since 1958, and in 2005 they measured 7.21 meters (about 150 cm per nail). (Source: Guinness WR)

Manicure and Pedicure Glossary

The following are excerpts from an alphabetical glossary for manicures and pedicures courtesy of Hooked on Nails (www.hooked-on-nails.com):

Adhesives are chemicals that bond two surfaces together such as glue or other natural or synthetic substances such as ethyl methacrylate (EMA).

An *Allergen* is any sensitizer that produces an adverse physiological allergic reaction, including sneezing, coughing, rash, or other irritation.



An *Acrylic* is a polymerized coating for the nails. Today's acrylic monomers (liquid) are made with Ethyl Methacrylate (EMA) due to its inherent flexibility. Acrylic polymers (powder) contain approximately 70% EMA, and 30% MMA (Methyl Methacrylate). The combination of these chemicals creates an enhancement that mimics the flexibility and strength of the natural nail.

Bacteria are single cell living organisms that lack a cell nucleus, some of which cause diseases. Bacteria usually live off of other organisms and are the most abundant forms of life on Earth.

Balance Point Positioning refers to stabilizing your working hand on your other hand for control.

Brittleness refers to how likely something is to break under force.

Chemicals are substances that are not light or electrical, but chemically, based.

Contamination involves the process by which a foreign substance is introduced to a system, thereby adversely affecting its properties.

Co-polymer is a polymer composed of two or more different types of monomers.

Monomers are individual, reactive chemical units which may be linked together to form a polymer.

Polymer is a natural or synthetic substance made of many simple compounds linked together, creating a dense and complex super molecule.

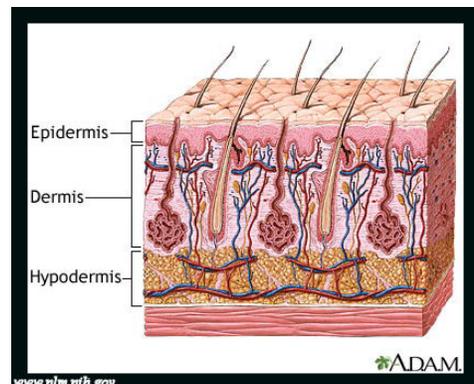
Polymerization is the process by which polymers are formed.

Crystallization is an undesirable process where liquid freezes to form crystals in the nail.

Cuticle is the thickened layer of skin surrounding fingernails and toenails. The function is to protect the area between the nail and epidermis from exposure to harmful microorganisms.

De-lamination is a lifting of an enhancement from the natural nail plate that occurs when acrylic nails are improperly adhered to the natural nail surface.

Dermis is the layer of skin beneath the epidermis that consists of connective tissue and cushions the body from stress and strain. It is the layer of skin where nail growth begins.



Epidermis is the top layer of skin that serves as a protective layer attached to the dermis.

Hyponychium is the part of the epidermis found under the nail.

Disinfectants are antimicrobial agents (i.e., chemicals) that are applied to non-living objects to destroy microorganisms, the process of which is known as disinfection.

Distal Edge of Plate is the farthest edge (i.e., free edge) of the nail plate that extends past the finger.

Ethyl Methacrylate (EMA) is the most widely used adhesive for acrylic nails. It is considered a safe, albeit more expensive, alternative to methyl methacrylate (MMA).

Methyl Methacrylate (MMA) is a powerful adhesive prohibited by many state cosmetology boards because it can cause severe damage to the nails. MMA is so powerful it can rip the nail from the nail plate if pressure is applied to the adhered artificial nail. It has also been reported to cause allergic reactions, fungal infections, and a host of more serious health problems.

Etching involves the process of filing down the nail surface often using physical or chemical methods.

The *Eponychium* is the extension of the proximal nail fold at the base of the nail body.

Flash Point refers to the temperature at which a substance will ignite.

Flexibility is the ability of a substance to bend.

Free Radicals are molecules that can cause chemical reactions when in an excited state due to having an unpaired electron in its chemical makeup.

Fumes include smoke or other gases which can be an irritant if inhaled.

A *Fungus* (plural *fungi*) is a microscopic living organism similar to plants but incapable of producing its own food. Fungus can be a contaminant that causes illness.

Gel is a type of acrylic nail created by stringing together long strands of monomers.

Hardness refers to how easy it is to scratch or damage a surface.

Hazardous Ingredient is any substance that can have an adverse effect on an individual's health.

Hydroxyl Ethyl Methacrylate (HEMA) is a monomer that adheres to protein, making it an ideal additive for nail adhesive. It is an irritant but is not considered acutely toxic in low doses.

The *Lateral Nail Fold* is the soft tissue surrounding the sides of the natural nail.

Lunula is the lighter colored area at the base of the nail, which looks like a half moon. The lunula has a primary role in defining the structure of the free edge of the distal nail plate.

Material Safety Data Sheet (MSDS) is a chemical information sheet published by the manufacturer of the chemical that contains ingredients, potential health hazards, and safety precautions regarding proper use of the chemical. The federal government (OSHA) requires that all salons maintain full MSDS's for all products used or stored on the premises that contain potentially



hazardous chemicals.

OSHA refers to the federal agency, Occupational Safety and Health Administration.

Matrix is the base of the nail bed that contains nerves and blood vessels and facilitates much of a nail's growth.

Mildew is a white or grayish coating formed by fungi on surfaces.

Mix Ratio refers to the correct amounts of each substance used as compared to one another when placed in combination.

Nail Bed is the skin that the nail plate sits upon and is rich with blood vessels that supply nutrients to the nail.

The *Nail Plate*, the hardest layer of the nail, is comprised primarily of keratin and protects the tip of the finger.

The *Nail Root* is the base of the nail that is located under the skin and originates in the matrix.

Pathogens are biological particles or microorganisms (e.g., viruses and bacteria) that cause illness or disease in their hosts.

Prep is any substance composed of other chemicals that is used to disinfect the nails prior to treatment.

Primer is an adhesive made of methacrylic acid that helps bond the natural nail to the acrylic nail, as one end of the primer molecule is attracted to chemical substances in the natural nail, and

the other end is attracted to substances in the artificial nail. Primers can sometimes cause skin irritation.

The *Proximal Nail Fold* is the attached end of the nail that seals off and protects the matrix.

Pterygium is a condition in which the typical inward folding skin around the nail is damaged, often by trauma, and begins growing improperly.

Sanitation involves reducing pathogens or other contaminants on a given surface.

Sensitization is an allergic reaction that tends to cause an individual to become more susceptible and have a more severe reaction to a substance with prolonged exposure. The substance that causes the worsening of this allergic reaction over time is called a *Sensitizer*.



Sterilization refers to process of destroying all living organisms on a given surface.

Strength is a substance's ability to withstand force.

Vapors are byproducts of liquids as they become gases.

Ventilation refers to replacing stale or contaminated air with fresh air.

Viscosity is the density of a liquid, specifically its ability to move over or through a given surface.

Tips for Maintaining Healthy Nails

The following are some tips for maintaining healthy natural nails if you have artificial nails.

The Do's of Maintaining Healthy Nails with Artificial Nails:

- Do apply one artificial nail as a test for sensitivity to see if an adverse reaction develops (within a couple of days) before applying the rest.
- Do save the ingredient list for your doctor in case you have an allergic reaction or other injury.
- Do read the directions for do-it-yourself nails before applying them, and follow the directions carefully.
- Do treat artificial nails with care. Try not to bump or knock them. Find new ways to do ordinary tasks, like using a pencil to dial or depress the numbers on the phone.
- Do keep nail glues and other poisonous substances out of the reach of children.



The Don'ts of Maintaining Healthy Nails with Artificial Nails:

- Don't apply an artificial nail if the natural nail or skin around it is infected or irritated. Let the infection heal first.
- Don't use household glues for nail repairs. Use only products intended for nail use, and follow directions.

- Don't wear artificial nails for longer than three months at a time. Remove them for one month to give nails a rest.

How common are nail infections?

According to dermatologists, nail infections (e.g., caused by bacteria, fungi, or viruses), are quite common among those with artificial nails. Nail infections caused by bacteria and fungi frequently result from a lifting of the artificial nail from the nail plate (often due to trauma) leaving room for water and dirt to enter. When lifted nails are re-glued without proper cleansing, trapped bacteria and fungi can begin to grow and eventually spread into the natural nail. A fungal infection can also take hold when an acrylic nail is left in place too long (i.e., three months or more) and moisture accumulates and stagnates under the artificial nail. In addition, chances for infection are increased if the opening between the natural and artificial nail is not properly “filled” as the natural nail grows.

Unsanitary nail implements may also aid in transmitting infection when the same implements are used on multiple clients without disinfection. Unsanitary salon implements can be especially dangerous when contact is made with broken or cut skin around the nail. This is why dermatologists recommend leaving cuticles intact during manicure and pedicure procedures.

Symptoms of a nail infection may include:

- Pain, redness, itching, and pus in or around the nail area.



- Yellow-green, green, and green-black discolorations of the nail (signs of a *Pseudomonas* bacterial infection).
- A blue-green discoloration of the nail (sign of a fungal infection).

If an infection occurs while wearing artificial nails, they should be removed immediately and the area cleaned thoroughly with soap and water. If symptoms persist or the infection appears to be spreading, the person should consult a licensed physician, who may prescribe a topical or oral anti-infective medicine. Artificial nails should not be re-applied until the infection is gone.

There are currently no approved over-the-counter (OTC) products specifically designed to treat fungal nail infections. The FDA's review of OTC anti-fungals found that fungal nail infections respond poorly to these topical therapies in part due to the thickness of the nails. In 1993, the FDA ruled that any OTC product that purports to treat fungal infections of the nail must be approved by the FDA in order to market. Despite the FDA's ruling, some companies continue to market and sell nail products with antifungal claims, and the FDA has warned these companies it might take legal action if they don't stop selling the products.