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Golden Nail Care: The Essentials **Angelica Jungbluth**

CE CREDIT: 8 HOURS

This material is provided for licensed manicurists and cosmetologists. Reading the material and practicing the steps for safe services on a mannequin or model should take 8 hours.

Learning Objectives

At the end of this course, the licensee will be able to:

- Recall characteristics of mature nails and skin
- Distinguish between health considerations that apply to the mature client
- Identify aspects of infection control that are particularly relevant to the mature client
- Recognize adaptations that can improve the salon experience for the mature client

Course Outline

I. Introduction

II. Our Nails

Purpose and Structure, The Aging Nail

III. Our Skin

Purpose and Structure, Aging Skin

IV. Health Considerations

Brittle Nails, Hammertoe, Psoriasis, Eczema, Athlete's Foot, Arthritis, Diabetes, Cancer, Parkinson's Disease, Dementia

V. Cleanliness and the Mature Client

Sanitation, Disinfection, Sterilization, Blood Spills and Universal Precautions

VI. Adapting to the Mature Client

Taking Care of Yourself

VII. Marketing to the Mature Client

VIII. Conclusion & Appendix

Introduction

The word manicure comes from the Latin “manus” (hand) and “cura” (care); pedicure, similarly, is from “pes” (foot) and “cura” (care).

Caring for and polishing the nails are processes that were embraced by several ancient cultures. In ancient Egypt (c. 3500 BC), hands were rubbed with oil and incense, and nails were stained with henna. The ancient Babylonians were coloring their nails black and green with kohl at around the same time; in fact, the world’s oldest manicure set, made from solid gold, has been attributed to this culture and dated to around 3200 BC. During the Ming Dynasty in China (1368-1644) both men and women filed and shaped their nails, then dyed them (and sometimes the fingertips as well) red and black with various combinations of rubber, wax, vegetable dyes, egg whites, and gelatin.

Leaping ahead to more modern times, painting and manicuring nails arrived in the United States in the early 1900’s, but didn’t really begin to gain traction until the 1930’s. In 1932, the newly-founded Revlon helped forward the mass production of dedicated nail polish, introducing long-lasting formula nail enamel and making it readily available in drugstores. Soon after, Max Factor’s cuticle creams and cuticle removers joined polish on the store shelves. Painted nails became increasingly common among movie stars throughout the 1930’s, and in the 1940’s, the average American woman began to paint her nails as well.

Manicuring, once considered a luxury, is now very commonplace for the well-groomed female or male client. And while all your clients will appreciate both your caring touch and your awareness of style, the mature client is particularly well-placed to do so. In order to successfully serve this expanding demographic, nail technicians should both be aware of the changes mature clients are dealing with, and take the time to understand and meet their needs.

Providing manicures and pedicures to mature clients rewards their hard-working hands and feet, and can help keep them healthy, too. You’ll be taking a close look at the hands, feet, and nails for any irregularities, noticing things like hangnails, possible infections, and indications of the presence of disease. You’ll be removing dead skin and leaving softer, cleaner, healthier skin behind. And you’ll be giving them the regular benefit of touch, which can soothe tension and decrease pain.

Our Nails

Before we look specifically at the changes that mature nails undergo, let's review nails in general.

Onyx is the technical term for the nail, whether a fingernail or a toenail. Like hair, horns, or hooves, nails are made of keratin, a strong, insoluble, translucent protein.

Purpose and Structure

Nails are more or less flattened forms of claws, and are one of the things that make humans and other primates different from most mammals. While we're not 100% sure, the theory is that primates developed broader fingertips to help them grasp smaller tree branches; once early humans began to use tools, their fingertips got even broader than other primates'. Fingernails may have specifically developed to support the broad fingertips, or may simply be a side effect of the loss of claws.

Purpose

Today, nails serve a range of biological purposes. For example, fingernails help enhance the fingers' ability to do things like dig, scratch, tear, pick, etc., while toenails may help with balance and geographical awareness. Nails also help protect the fingers and toes from injury. Finally, they act as a counterforce, enhancing the sensory input provided every time the fingers or toes touch something.

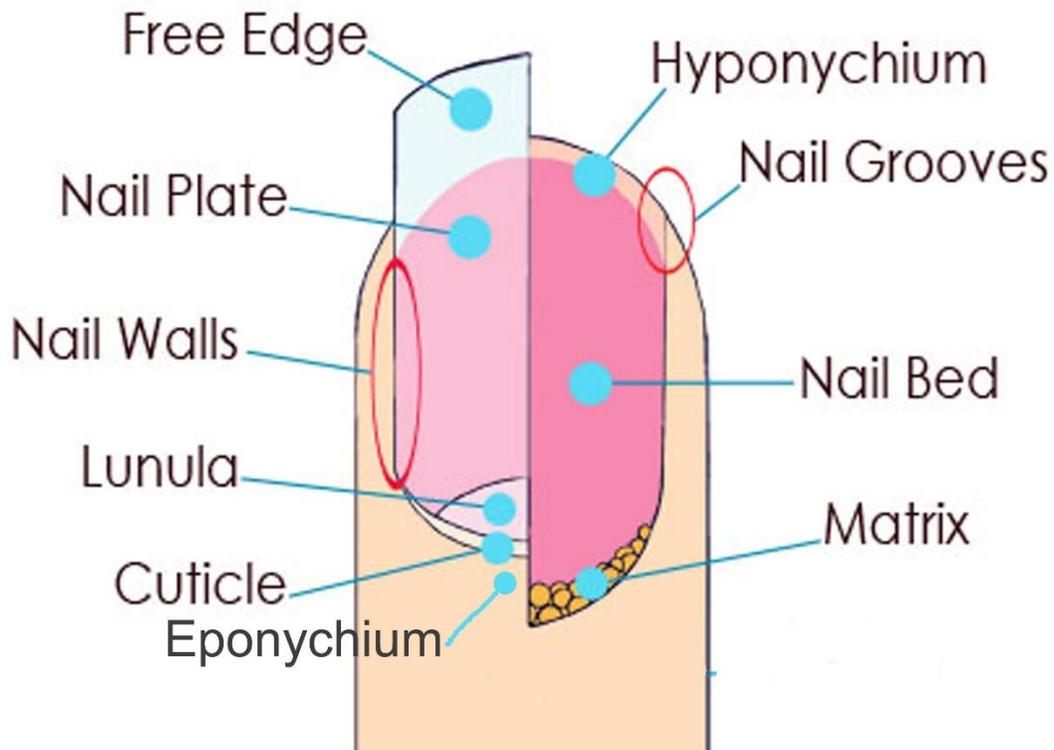
In addition, just like in the ancient world, today's fingernails and toenails make a social statement – for women certainly but increasingly for men, too. Basics like keeping the natural nails well-groomed are a factor, and we've developed all kinds of tools to cut, shape, and refine them. Enhancements – ranging from press-on nails, acrylics, or gels, to artistic expressions like painted nails of all varieties, to additional adornments like freehand art, stickers, and little rhinestones and jewelry we can glue on – help nails signal wealth, creativity, and more.

Finally, the condition of a person's nails can tell you something about their overall health. The normal healthy nail is flexible but firm, and slightly pink in color. The surface is smooth, and usually slightly curved, although it can be straight as well. Nails that vary from this description may be a warning sign of systemic disease (a disease that affects the entire body, as opposed to a single organ or body part): for example, brown stripes on the nails can mean that the person has AIDS or melanoma. Likewise, malnutrition can change the coloring of the nails, and small pits in the nails may signal the presence of the skin condition psoriasis. Interestingly, doctors and paramedics often examine a patient's fingernails, looking for signs of dehydration or shock.

Structure

In my opinion, the best way to review the nails' structure is to break it up into tiny pieces.

First, note that the bone of the fingers and toes supports and shapes both the nail matrix and nail bed: in other words, the flat or curved shape of the overall nail is determined by the shape of the underlying bone.



The mantle, also called the nail fold, is the pocket-like fold of skin at the base of the nail. It holds the matrix and protects it from damage.

The nail matrix, sometimes called the nail root, is the active tissue located in the mantle. Full of blood vessels, lymph vessels, and nerves, it creates nail growth by generating cells which harden as they move towards the nail plate. Its size and shape determine the nail's thickness; if damaged, it produces damaged and/or disordered nail.

The lunula is the whitened, half-moon shape at the base of the nail (its name comes from the Latin for "little moon"). It's the visible part of the root, and the point at which it meets the nail bed; typically the nail is slightly softer in this area. It can best be seen in the thumb, but sometimes will not be visible at all, most

likely hidden under the skin. Some say that a hidden lunula can indicate anemia, malnutrition and or depression: this theory has been disproved.

The nail bed is the skin which the nail body rests on, and slides along as it grows. It contains nerves, blood vessels, and lymph vessels, which supply continuous nourishment to the nail.

The nail plate (nail body) is the visible nail area, extending from the root to the free edge. Functioning to protect the nail bed beneath it, it's made of many layers of keratin, packed tightly together. While its top is typically smooth, its underside is grooved, helping it anchor to the nail bed. It has very little water content, and contains no nerves or blood vessels: its pink color comes from the blood vessels in the nail bed.

The free edge is the part of the nail plate that extends past the end of the finger; it's attached to the nail bed and is generally white. In other words, it's the part we file and shape to suit the client's desires. The free edge protects the fingertip and the hyponychium.

The hyponychium, or quick, is the soft tissue seal under the free edge. Its job is to protect the nail bed from infection.

The nail grooves are the tracks on either side of the nail plate that it moves on as it grows.

The nail walls, or nail folds, are the folds of skin on either side of the nail groove and below the cuticle. They protect the nail plate's edges.

Finally, the cuticle is the loose, pliable skin that surrounds and overlaps skin the nail, protecting the matrix from infection. When it's removed, the nail is exposed to damage from bacteria and fungus – particularly if it's removed with tools that haven't been disinfected properly! This is why cuticles should not be cut during a manicure. One more time for the folks in the back: cuticles should not be cut during a manicure. Pushing cuticles, and nipping residual skin, leaves nails looking perfectly healthy without risking damage.

On average, fingernails grow 3 millimeters per month in adults, so the growth of a new finger nail plate, from the root to the free edge, takes about 4-6 months. Toenails, although much harder, grow much more slowly – just 1 millimeter per month – so it takes 12-18 months to grow a toenail from root to tip. Under normal circumstances, nails grow constantly; growth slows with age and poor circulation, and can also be affected by poor nutrition or disease.

The Aging Nail

As the client ages, so does the nail, resulting in changes ranging from aesthetic to health-related.

Characteristics

Nail growth slows with age: some studies have shown differences in growth rates as early as age 25, with significant slowdowns taking place after age 40. These slower-growing nails will be exposed to environmental influences for a longer time, which can impact both their strength and appearance; likewise, any diseases or disorders that crop up will take longer to resolve. In addition, the nail plate doesn't adhere as well to the nail bed.

The nails themselves tend to thicken, possibly due to the slower rate of renewal discussed above: the trauma of extended rubbing or impact can cause increased thickness. Another cause of thick nails may be fungal infections. We'll discuss them further below.

In contrast, the nail matrix begins to thin, which can cause vertical ridges (onychorrhexis) to form along the nail; these ridges can also be caused by less-efficient circulation in the extremities. We'll discuss them further below.

The shape of the nails may change, particularly their curve. Extremely curved nails, or "clubbing," can indicate oxygen deprivation. Likewise, the nails' color can change, becoming yellowed, gray, or pale; the nails may also become more opaque. Other color changes, like blue patches or vertical brown lines, can be symptoms or underlying conditions. We'll discuss this further below.

The lunula tends to appear smaller, and may disappear altogether.

Dehydration often impacts the mature client, as the body produces and retains less oils and moisture; season variations can speed or slow this process. Dry nails may become brittle and split, peel, chip and ridge. The skin around the nails may appear dry, and even crack.

Diseases and Disorders

Let's take a closer look at some of the conditions that often affect mature clients. Remember that it is not within the scope of cosmetology to diagnose – if you are concerned that a disease may be present, you should refer your client to a medical professional like a podiatrist. Similarly, if a condition is complex and requires special instruments to resolve, a referral should be made.

We briefly discussed some color changes that can be seen in aging nails above. Others include the blue-purple patches caused by subungual hemorrhage – in other words, an injury causes blood to collect under the nail – and the dark stripes along the nails' length called longitudinal melanonychia, which are made up of melanin and appear with most frequency in people with dark skin. In some

cases, however, dark stripes can indicate the presence of skin cancer, most often when they appear on only one digit. Other color changes which may signal a serious underlying condition include blue nails, which (especially combined with clubbing) may be due to insufficient oxygen in the bloodstream; blue lunula, on the other hand, may be a sign of poisoning. If the entire nail is pale, the client may be anemic; if it's white, liver disease or diabetes may be present; half pink/half white nails suggest kidney disease. Yellow, thick nails that appear to have stopped growing (yellow nail syndrome) may signal something as simple as an infection, or something more global, like lung disease or rheumatoid arthritis. And to double back to clubbing: the presence of dramatically rounded nails, possibly in combination with swollen fingertips, can be caused by oxygen deprivation and may signal a problem with the lungs, heart, liver, stomach, or intestine.

Onychocryptosis (ingrown nails) – as the toenails thicken, the risk of ingrown toenails becomes greater; if not dealt with, this can result in pain and infection. Regular trims, performed straight across, can help resolve this condition.

Onychoschisis (brittle, splitting nails) – often age-related, as discussed above, splits can also be caused by too much wetting and drying of the nails, and may be a sign of an underlying condition like psoriasis. Soaks or moisturizers may help, as can regular trims.

Onychorrhaxis (vertical ridges) – often age-related, as discussed above, ridges can also be a sign of an underlying condition like psoriasis or nutritional deficiency. They may appear on one nail or all the nails.

Koilonychia – spoon-shaped nails. Thin nails that dip down in the middle like little spoons can be a sign of an iron deficiency.

Onycholysis – when the nail plate loosens or separates from the nail bed. This is often caused by over-aggressive cleaning under the nails. Keeping the nails cut short can help keep them clean without exacerbating this condition. It can also be caused by fungal infections or psoriasis.

Pitting – tiny dents in the nails, often described as looking like they were made with an ice pick. Pitting may be a symptom of a whole body disorder like psoriasis, dermatitis, or alopecia.

Onychomycosis – a fungal infection which accounts for about half of all nail disorders and is even more common in the mature client. It can cause the nail to thicken and discolor (usually white or yellow); the nail may also separate from the nail bed. Toenails are particularly affected.

Onychogryphosis (ram's horn nails) – when one side of the nail (usually the toenail) grows faster than the other, they may thicken, turn yellow or brown, and

curve like a ram's horn. This can cause ingrown toenails, pain, and infection. Causes range from foot trauma, to fungal infection, to other underlying conditions. It should be diagnosed and treated by a medical professional; regular trims may help to keep it in check.

Our Skin

Since you'll be examining your mature clients' hands and feet, let's also quickly review the characteristics of skin. As you know, the skin, with an area of about 20 square feet, is the body's largest organ. Together with its accessory structures (the hair and nails) it makes up the integumentary system.

Purpose and Structure

The skin has six basic functions (sensation, secretion, absorption, regulation, protection, and excretion) and three layers (the epidermis, the dermis, and the subcutaneous layer).

The epidermis is the outermost layer, and is often referred to as the cutis, cuticle, or scarfskin. It has four ("thin skin") or five ("thick skin") distinct layers (the stratum germinativum, stratum spinosum, stratum granulosum, stratum lucidum, stratum corneum). All of the layers except the deepest contain cells called keratinocytes. These cells create and hold a protein called keratin, which give the hair, nails, and skin the traits of water resistance and hardness.

The dermis is composed of two layers of connective tissue (the reticular layer and papillary layer), creating a mesh of collagen proteins, which are strong and flexible, and elastin fibers, which are soft and pliable. It helps to support the epidermis, and provides the overall structure with elasticity. Within the dermis are blood vessels, lymph vessels, and nerves, as well as hair follicles. It also holds both the sudoriferous (sweat) and sebaceous (oil) glands. The sudoriferous glands excrete waste products and assist with the regulation of body temperature. The sebaceous glands secrete sebum. Sebum and sweat, mixed, create the skin's acid mantle – a very fine film on the skin's surface that protects it from dirt and debris, minimizes drying and chapping, and helps to keep it smooth.

Below the dermis, the subcutaneous layer (or hypodermis) is made up of loose connective tissue (collagen and elastin) and adipose tissue, which stores fat, cushioning and insulating the skin as a whole. It connects the upper layers of the skin to the fascia, and contains larger blood vessels and nerves than the dermis.

Aging Skin

What changes as we age, and why?

Skin ages at different rates due to both external influences and internal factors – some of which can be modified. Exposure to extreme climates, too much sun, wind, and polluted air can all hasten the aging process. In addition, general poor health, disease, and emotional problems can contribute to the skin appearing older; likewise, extreme weight loss tends to cause loss of muscle tone and lined and sagging skin, which also gives the skin an "aged" appearance. Finally, some

medications, a poor diet, smoking, and misuse of alcohol can also affect the skin's appearance.

Overall, the connective tissue in the skin changes: collagen and elastin production both lessen with age, reducing both the skin's strength and its elasticity. Let's also revisit each layer.

In the epidermis, while the number of cell layers stays the same, the overall thickness lessens. In addition, there's a decrease in the number of melanocytes, while those that remain are larger. This leaves the skin thinner and paler/clearer, with the potential for large spots of pigment.

In the dermis, blood vessels become more fragile, increasing the chances of bleeding under the skin and bruising. The sebaceous glands produce less oil, and the sudoriferous glands produce less sweat, which can leave the skin dry and itchy, and make body temperature harder to regulate.

In the subcutaneous layer, the fat thins: the loss of padding may increase the chances of skin injury, while the loss of insulation again makes it harder to regulate body temperature.

Taken together, this means several things:

First: Mature skin is often dry. This is due to the body's natural aging process: as a person ages the body's processes slow down, and cells are not replaced as rapidly as they once were. (This can be exacerbated by simple dehydration: drinking enough water can improve the color and texture of the skin over time by ensuring cell turnaround. A simple rule of thumb is "drink half your body weight" – for example, if you weigh in at 120 pounds, you would need to drink 60 ounces of water a day.)

Second: Mature skin often lacks elasticity. As you know, you can test the elasticity of the skin simply by taking a small section of the facial skin between the thumb and forefinger and pulling gently outward. When the skin immediately returns to its previous shape, it has good elasticity; if the skin is slow to return to its previous shape, it is lacking in elasticity.

Third: Mature skin is often fragile. It's thinner, so pressure, rubbing, or pulling may cause skin tears and/or broken blood vessels. Likewise, it also heals more slowly – up 4 times, in the case of wounds.

Health Considerations

Next we're going to take a closer look at a range of maladies that may impact your mature clients, from conditions to diseases to infections. While, once again, you can't diagnose, you can and should make the appropriate referrals. As a general rule, you might suggest seeking medical advice when you notice brittle or discolored toenails, your client mentions a tingling or a burning sensation in their feet or toes, you feel that the feet are very cold or numb, you see that the feet or ankles are swollen, and/or you find blisters, very cracked skin, sores, or open wounds.

Brittle Nails

We've mentioned them briefly before, but let's dig deeper. As you know, these nails are softer and thinner than normal, visibly dry, and prone to breakage: sometimes they split at either side of the nail; sometimes they tear. Brittle nails in mature clients can be related to an ongoing health issue, such as anemia, hypothyroidism, iron deficiency, circulation problems, eczema, or psoriasis, so a visit to a doctor is highly recommended. In the absence of a specific diagnosis, brittleness may simply be caused by the increased dryness that we see in both nails and skin as it ages. Helping a client with brittle nails requires work on two fronts: in the salon, and in the home between visits.

Restoring moisture is an important step. During your appointments, be sure to apply cuticle oil, and don't cut back the cuticles – the waterproof barrier they provide between the skin and the nail will help to prevent further drying. Keep your warm water soaks short – if the nails absorb too much water, the resulting expansion and contraction can worsen the brittleness. A paraffin wax treatment can help nourish both skin and nails, allowing the creams and oils you apply to penetrate more deeply. On the home front, your client can apply cuticle oil every day as well. In addition, because being immersed in water dries out the skin, your clients should apply hand lotion after every wash. This not only makes the skin happier, it helps the nails: if the skin at or below the cuticles is dry, the underlying nail matrix is too, and the nail it grows will be prone to splitting, breaking, and cracking. Recommend that they use a rich hand cream, like Shea butter, throughout the day, paying close attention to the area around the matrix and the cuticle, and extending all the way down to the second knuckle of each finger.

Also, educate your clients on the importance of weekly or bi-weekly manicures: cleaning and shaping the nails, and treating the cuticles, is important for their health and strength. Also, make sure they know that not all mani/pedis have to end with polish! All polishes dry out the nail plate to a certain extent, and as polish ages, the drying continues. Clients with brittle nails should consider removing their polish after 5-10 days of wear, using a non-acetone remover, and leaving their nails unpainted until their next salon visit. And, if brittleness continues, they may wish to take a break from nail polish altogether.

Hammertoe

If, when looking down at your client's feet, you see a bend in the joint of the second, third, fourth, or fifth toe that causes it to curl under – as if it's hammering into the floor – that could be a sign of hammertoe. It's caused by an imbalance in the toe's tendons and muscles, which gradually creates the bend in the toe. While hammertoe is occasionally helped along by consistently wearing badly-fitting shoes, it's more likely that the primary cause is either genetic, or damage to the joint due to trauma.



Should you suspect hammertoe, recommend that your client seek a doctor's opinion – and the sooner the better. If the condition is diagnosed early, non-surgical treatment options exist, including the use of pads and medications to relieve pain, stretching, orthotics, and/or splinting. If these don't

work, or the toe is already rigid, surgery may be the only option. Also, caution your clients against self-diagnosing: while it may be tempting for them to try over-the-counter pads, a doctor will be better able to suggest which to use and which to avoid.

You may perform a pedicure as you normally would if the skin is not broken. Should sores be present, recommend a doctor visit prior to providing services.

Psoriasis

Psoriasis is a chronic condition that most commonly affects the skin, causing red, raised, flaky patches to appear. It often develops between the ages of 15-35, but can appear at any age. Plaque psoriasis, the most common, is easy to mistake for eczema: it appears as red, raised patches covered with grayish-white dead skin cells. The exact cause is still not known, but it's related to the immune system, and genetics are a factor. It is not contagious.

You may see psoriasis on the arms and hands, or legs and feet. It can impact the nails as well: up to 55% of people with skin psoriasis also experience it in the nails (while only 5% of people with nail psoriasis do not also have skin psoriasis). Signs of nail psoriasis include pitting, discoloration, crumbling, loosening, thickening, or horizontal lines. Note that fungal infections causing thickening of the nails appear in conjunction with nail psoriasis in about 1/3 of those affected –

these infections are contagious, and services should be avoided while they are active. If you're not sure what you're seeing, refer your client to a doctor.

If your client has psoriasis, remember that water pulls moisture out of the skin, which can worsen the condition. Consider reducing the amount of time you soak the hands and feet, and use gentle soaps – or eliminate the soak altogether in favor of a dry manicure or pedicure. A pumice stone can be used to gently smooth the bottoms of the feet, but more significant callus should be referred to a podiatrist. In terms of the nails themselves, treat them gently, as roughness can cause a flare-up. Recommend to your client that you keep them short so they are less likely to snag, loosen, or lift, and to reduce the amount of build-up underneath. Be careful when clipping the nails or shaping them with a file, and don't scrape the buildup out – this can cause the nails to loosen, potentially leading to infection. Leave the cuticles alone: cutting or pushing them can injure the skin, also increasing the risk of infection or flare-up. Buff them lightly, and polish as usual – unless you see signs of infection (redness, discoloration, swelling). Advise the client that any infection should be allowed to heal before polish is applied.

In general, nail enhancements should be avoided: they can increase the risk of the nails lifting and separating from the fingers, and your client may have an adverse reaction to the glue. That said, a recent study looked at people with nail plate abnormalities, including psoriasis and brittle nails, who received gel nail applications. Extra care was taken to avoid damage to the cuticle, and pre- and post-care photographs documented the service. The people who participated reported high levels of satisfaction and an absence of side effects. While more research is needed, gel nails may prove to be a suitable enhancement.

Note that people with psoriasis may also suffer from psoriatic arthritis, which we'll touch on shortly.

Eczema

Eczema, which inflames and irritates the skin and usually presents as an itchy red rash, is caused by allergens. The potential for eczema increases in the mature client, in part due to age-related skin changes like fragility and dryness as well as impaired circulation. Eczema can also be aggravated by medications. It's not contagious, but is easy to mistake for other conditions like psoriasis (also not contagious) or a fungal infection (contagious). If you're not sure what you're seeing, refer your client to a doctor.

Should a client with eczema request services, you'll need to decide together whether to proceed or reschedule: there's always the possibility that the products you use could trigger or worsen an outbreak. To reduce the risk, advise the client to hydrate the skin and cover the affected areas pre-appointment. You can help, too, by using gentle, fragrance-free products and avoiding enhancements.

Athlete's Foot

Both psoriasis and eczema are sometimes mistaken for athlete's foot – so let's take a quick look at the culprit. Athlete's foot, or tinea pedis, is a fungal infection that often begins between the toes. The symptoms include dry, flaky, scaly skin, and it often causes the feet to burn or itch. You may see it more frequently with your mature clients, for several reasons. Their immune system may be weaker in general, due to age-related changes or the existence of conditions like diabetes. In addition, the mature client may not be able to keep their feet as clean and dry as other clients, due to decreased mobility. Finally, it's easier for infectious agents to enter the body through dry, cracked skin or open sores, which also appear more often in mature clients. And regardless, be aware that you'll see more of it in the summer, because the feet are sweating more.

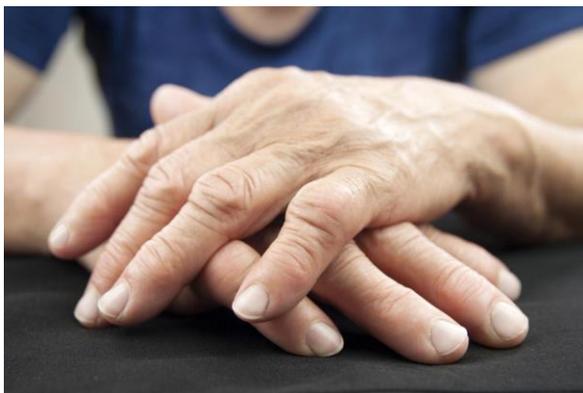


Since this condition is contagious, you need to stop services at once: the risk of spread aside, the moisture, filing, and scraping that takes place during a pedicure can worsen the condition. It is particularly important to double down on your disinfection standards, should an exposure occur – wear gloves, use a hospital-grade disinfectant, and individually disinfect all reusable implements as well. Refer the client to a

doctor for treatment.

Arthritis

Affecting more than 50 million Americans, arthritis is a joint disorder characterized by inflammation. The odds are good you've got a client who's affected by it to some degree – it impacts, women, men, and sometimes even children – and the likelihood of its occurrence increases with age.



In general, arthritis symptoms include swelling, localized pain, tenderness, stiffness and some limited range of motion. The symptoms, which may be more or less severe, can also come and go, and may progress over time. Arthritis can cause permanent joint changes, which can sometimes alter the appearance of the affected joints (knobby finger joints, for example), but can usually be seen only by X-ray.

These changes usually don't directly affect the nails, but if the hands and feet are swollen or twisted, the nails may also be altered.

There are many different kinds of arthritis. The two most common are osteoarthritis (OA) and rheumatoid arthritis (RA). OA is a joint disorder that breaks down the cartilage, which functions as a kind of cushion between bones. It's usually caused by overuse, injury, or sickness; genetics also plays a role. Affected joints are often less flexible, tender, and inflamed. RA is a systemic disorder – in other words, it impacts the whole body – in which the immune cells attack the joints, leading to fluid build-up, swelling, and redness. The cause is unknown, but genetics and hormones are likely to contribute. Another type, psoriatic arthritis (PsA), is seen in about 30% of people with psoriasis. Symptoms include swollen, sausage-like fingers and toes, reduced motion, and (as we discussed above) nail changes like pitting, crumbling, discoloration/lines, or separating.

With arthritis, the key is to help your client feel comfortable – and one of the best ways to know is to ask! Typical considerations include booking appointments later in the day, since affected joints tend to be stiffest in the morning. Find your client a comfortable chair that's easy to get in and out of, and encourage them to take their time filling out any forms. If you offer beverages, provide light, easy-to-hold cups. During services, remember that arthritic joints are sensitive – allow the client to rest their hands and feet on a comfortable surface rather than holding them.

Gentle massage may provide some relief, although inflamed joints should be avoided. Likewise, if your client is not on anticoagulants (drugs that prevent the formation of blood clots), you may consider incorporating those essential oils that are notable for reducing arthritis pain, such as chamomile, rosemary, ginger, or lemon.

Paraffin wax treatments, with their moist warmth, can be very soothing to clients with arthritis, and help increase their blood circulation. That said, the mature client may be more sensitive to heat due to their thinner skin and/or the influence of medications. Always review your clients' information sheet first to see if the heat can be tolerated, note any additional precautions that should be taken for clients with health risks, and do a patch test. And of course standard precautions like “only use equipment specifically designed for paraffin wax treatments” still apply! Avoid paraffin treatments in the presence of open wounds, rashes, burns, eczema, or swollen veins.

Diabetes

Insulin is a hormone that acts as a kind of key – it allows the cells of the body to use blood sugar, or glucose, for energy. Diabetes is a disease that affects insulin levels, which in turn means that the glucose levels in the body are too high. When the body doesn't make any insulin, that's type 1 diabetes. Type 2 – which is far more common, and the one you're most likely to see in mature clients – means that the body doesn't use insulin effectively (also called insulin resistance).

In general, if your client's diabetes is well controlled, you can proceed with services; the following adaptations will make those services safer.

Diabetes reduces sensation to the feet and increases dryness, due to poor blood circulation to the limbs. A person with diabetes may not be able to feel pain in their feet due to nerve damage (neuropathy); therefore, extra care is needed to avoid scratching or injuring the skin, as the client may not be able to provide feedback to the nail technician. Should you remove too much dead skin on the feet or too much cuticle, creating a small wound, this in turn can create entry points for bacteria and fungus, which could turn into an infection. An infection can raise blood sugar levels, which can interfere with proper healing and increase the risk of serious complications like ulcers or even amputation.

The practice of extreme hygiene is necessary in dealing with someone with diabetes. Sterilization of all tools is necessary; the footbath needs to be disinfected before every client but special attention to this for diabetics is necessary. Make sure your disinfection practices are visible to the client to reassure them. (Some medical professionals will advise patients with diabetes to bring their own implements; however, nail technicians have no way of knowing how clean those implements are. Some discussion between patient/client and nail technician is required.)

When manicuring and pedicuring the client with diabetes, use no metal tools: you risk pushing cuticles too hard, causing bleeding. Instead, apply some cuticle oil and gently push back the cuticles with a non-metal, orangewood stick. Likewise, don't scrub – gently soak the nails. Nails should not be cut too short, as this can cause ingrown toenails and lead to infection. Make sure toenail edges are not sharp; they should be rounded off with a file – but avoid rough porous files. Never use unsafe implements such as blades.

Lastly, as your client may not be able to feel the temperature of the water in the foot bath, test it before having your client insert their feet to avoid burns. It should be 90-95 F.

Cancer

When providing a service for a person undergoing chemotherapy, there are pertinent questions to be asked, among them:

- Are you currently receiving treatment?
- Are there any side effects you are experiencing in your legs or feet?
- Is there any other information I might need to know?
- Would it be ok to contact your medical doctor to ask permission to do the service?

Clients undergoing chemotherapy have a suppressed immune system, making them very susceptible to serious infections, which can be deadly. All tools used

on these clients need to be disinfected with an EPA-REGISTERED HOSPITAL DISINFECTANT in the same way a hospital sterilizes equipment before surgery. Likewise, the foot bath for the pedicure needs to be thoroughly sanitized and disinfected prior to the service.

These clients need to personally see your disinfection techniques, beginning with washing your hands prior to their service. All equipment needs to be visible to the client to assure them that it is clean and sterilized, but not left out in the open to collect any dust or other particles: sealing it in plastic or a clear hard container is ideal. If an implement cannot be sterilized, such as a nail buffer block or emery board it must be thrown away immediately after use – let the client see you do this as well. When working on this client you always need to wear gloves that are fresh from the box – again, pull them out in front of the client. (Some medical professionals will advise patients undergoing chemotherapy to bring their own implements; however, nail technicians have no way of knowing how clean those implements are. Some discussion between patient/client and nail technician is required.)

During treatment the patient can experience nail changes. The most common is a skin reaction called hyper-pigmentation, which can lead to darkening in the nails as well. There are many drugs given during chemotherapy that can cause this darkening in the nails. This condition is temporary and will eventually resolve in a few months when the nails grow out. It is not recommended to have nail polish or nail extensions (acrylics) until the nails have grown out and returned to normal, as there is the possibility of trapping bacteria between the natural nail and the artificial nail.

Other possibilities to be aware of when performing services include:

- Dryness and sensitivity of the skin
- Chemo-induced neuropathy (lack of feeling or any sensation in the feet)
- Hand/Foot syndrome (redness, tenderness, and possibly peeling of the soles)
- Bacterial or fungal infections
- Nail changes: nails that appear green or blackish could indicate an air bubble under an artificial nail where dirt or bacteria has accumulated

Discuss your findings with your client, and refer them to their doctor.

Be very careful to look for any cracks or splits in the finger or toe which could cause infection. Never cut cuticles or calluses – this could put the client at risk for infection. Electric nail drills should never be used: drills can easily go too deep and into the natural nail, putting the client at risk for infection. Cuticles can be safely pushed with an orangewood stick; dry skin can be lightly filed and/or exfoliated and moisturized. A gentle massage may be an option for some clients; be careful not to press on any bones as this may cause pain.

If you opt to finish with a polish, consider water-based nail polish or five-free polish brands (which are free of formaldehyde, toluene, dibutyl phthalate, formaldehyde resin, and camphor, five of the most toxic chemicals).

Finally, make sure to have excellent ventilation during your service. A patient undergoing chemotherapy is very sensitive to odors; even a manicure can cause nausea.

Parkinson's Disease

Parkinson's disease is a progressive nervous system disorder that affects movement. Symptoms tend to start and accumulate gradually: tremors, stiffness, and/or slowing of movement are common. The cause is unknown, but both genetics and the environment appear to play a role.

Should one of your clients have Parkinson's disease, there are no special precautions needed for manicures, pedicures, and massage. In fact, the massage in particular can reduce muscle tension and promote relaxation, and may be greatly appreciated. Do be aware that, due to disease progression, the hand or foot of a client with Parkinson's may not flex in the way you're used to; it's important to not force any movements, as this can cause injury. Also, some people with Parkinson's may have specific times of day when their dexterity and mobility are better ("on" times) or worse ("off" times), so you may wish to schedule appointments accordingly.

Dementia

Dementia is a term that describes a group of symptoms – among them decline in memory and/or thinking skills – not a disease. Alzheimer's disease is the most common form of dementia; vascular dementia, which is stroke-related, is second. Many dementias increase in severity over time.

Studies have found that dementia patients who visit salons retain more vivid memories, based in part on familiar, repeated experiences (and even scents). They also have a stronger sense of identity and dignity. And by helping them to keep their nails groomed and clean, you're keeping them healthier and helping them avoid infections, too.

In adapting to a mature client that may have dementia, the key is to keep things simple and establish a routine. If possible, seat them in a quiet area. Approach them from the front, maintain eye contact while talking, and use a calm, soothing voice. Offer them simple choices: "Here are three polishes that I think would look great on you – which would you like?" is better than telling them to pick from the polish wall. Allow them extra time with paperwork and payment, and be prepared to assist if necessary.

Understand that the client may not always be able to clearly communicate if there is a problem, so pay attention, watch for signs of agitation, and be gentle. During

services, keep a keen eye out for any signs of irritation, discolorations, swelling, or other changes that might suggest a problem with the hands or feet (or possible poorly-fitting shoes). It's a huge help if you can catch any issues while they are minor, before they progress to serious problems.

The salon experience can also be a relaxing one for people with dementia – consider adding essential oils to your soak, or playing soothing background music. Massage in particular can be an important part of the mani/pedi experience – using warm lotion and massaging the hands and feet for 3-10 minutes can reduce agitation. In fact, a pilot study during which trained massage therapists gave subjects with dementia a 5 minute massage on each foot once a day for 2 weeks resulted in reduced agitation and behavioral problems.

Cleanliness and the Mature Client

While a full review of infection control is beyond the scope of this course, it's critical that we at least touch on it. Impeccable standards are important at all times – and they're even more important with the mature client, who may be more susceptible to infection.

Consider this scenario: you're very ill, so you go to the doctor. You're brought into an exam room that looks dirty, plus there are contaminated gauze, dirty cotton, and gowns lying around. You're asked to sit on the exam table, but the disposable covering was not changed from the previous patient. How confident would you feel the doctor knew what they were doing? Do you think you would be well taken care of?

Now think about your salon. Can you say with certainty that your sanitation, disinfection, and sterilization standards are 100% perfect? Is your station set up to inspire confidence in your clients? Do they feel that their beauty and their health are in good hands with you?

As a professional in the nail industry you will be exposed to microorganisms like bacteria, viruses, and fungi, which grow and breed in damp, dark, dirty places, every day. You are working directly with the nails of clients, which may harbor microorganisms. Your hands, and the implements you use, are other places microorganisms may grow. So it's vitally important to have a working knowledge of infection control, for your own safety and that of your clients.

Sanitation

Let's start with sanitation, also simply called cleanliness – the first level of infection control. In short, it involves physically removing debris, which reduces the number of microorganisms present. It's performed on non-porous objects that come into contact with intact skin only.

In practice, this means that your nail salon should look spotless: clean surfaces are an indication of good overall salon practices. Floors, work surfaces, and fixtures should be clean, mirrors should be streak-free, waste receptacles should be emptied regularly, and no stray nail clippings should ever be visible.

Air quality is another aspect of sanitation. The air in any salon contains odors, vapors, and dust: nail products evaporate as they dry, and tiny nail particles (possibly containing chemicals from polishes or acrylics) are created by clipping and filing. Several ingredients commonly found in nail products can irritate the eyes, throat and lungs, such as:

- Formaldehyde, used in nail polish and nail hardener, can cause allergic reactions, asthma-like attacks, or difficulty breathing
- Ethyl methacrylate (EMA), the main substance in artificial fingernails, can cause allergies, asthma, or dermatitis

- Toluene, a common ingredient in nail polish and fingernail glue, can cause light-headedness, dizziness, or drowsiness.

Air quality, which is important for the health and safety of everyone in your salon, can be of particular importance to the mature client. A good ventilation system is a must: air circulation will ensure that any harmful substances in the air are diluted.

All buildings should have a ventilation system already in place, to provide fresh air and remove mold, mildew, dust, etc. This standard system is called the HVAC (Heating, Ventilating, and Air Conditioning) system. It should be maintained on a yearly basis by an HVAC specialist. To up your salon's game, consider an air purification system: the salon's air is circulated through the unit, and filters inside not only control odor, but absorb chemical vapors. Source-capture ventilation, which pulls dust and vapors away from the nail techs while they work, is another option for each station.

Also, consider your own appearance: is it neat and professional, and are you wearing a clean smock? Clothes that are stained or cloudy with nail dust send a clear message that professional cleanliness is not a priority.

Hot and cold running water should be readily available. I can't stress enough the importance of washing your hands between each client – and providing your client with a clean place to wash their hands as well. You may wish to post a copy of proper handwashing steps:

- Wet your hands with running water – either warm or cold.
- Apply liquid, bar, or powder soap to a cupped hand.
- Lather well.
- Rub your hands, palm to palm, vigorously for at least 20 seconds (need a timer? sing the Happy Birthday song twice). Remember to scrub all surfaces, including the backs of your hands, wrists, between your fingers, and under your fingernails.
- Rinse well.
- Dry your hands with a clean towel.
- Use the towel to turn off the faucet.

Alcohol-based hand sanitizers may be an alternative, depending on your state's requirements.

- Apply enough of the product to the palm of your hand to wet your hands completely.
- Rub your hands together, covering all surfaces, until your hands are dry.

All of the products you use should be covered and clearly labeled, and either dispensed with a shaker, pump, or spray, or via a disposable spatula – never double dip. Get used to setting out your disposable tools in front of each client,

so they can see that they're new, and disposing of them in front of your clients, too.

In addition to creating a clean work environment, sanitation can be a step performed before disinfection: for example, making sure there are no nail fragments on your clippers before immersing them in disinfectant.

Disinfection

Disinfection is the second level of infection control. The standard of disinfection requires the use of broad-spectrum (hospital grade) disinfectants: products that destroy or kill bacteria and a broad spectrum of viruses. What each disinfectant is proven effective against will be listed on the product's label. Note: disinfectants are toxic, so it is important to follow all manufacturer instructions in their use, and avoid spilling or inhaling them. They can also irritate the skin, so you should wash hands with soap and water after handling them, and you may wish to wear gloves when using them.

Any implement that comes in contact with a client must be either thrown away or disinfected. All implements you use as a nail technician that are not disposable must be disinfected after each use. This is especially important because some of them have the capability to cut the skin and come into contact with blood.

Disinfecting implements typically incorporates these steps:

- Preparing the disinfectant for the wet sanitizer as per manufacturer's directions
- Removing all dirt/debris from the implement
- Pre-cleaning the implement with hot water and soap
- Immersing the implement in the wet sanitizer for the manufacturer's recommended time
- Allowing the implement to dry in a clean, disinfected area
- Storing the implement in a clean, disinfected airtight container until next use

Many state regulating agencies are very specific in their rules pertaining to disinfection, so it's wise to refer to your board's website to see what steps they prescribe.

A very important area for disinfection is your pedicure spa. Foot spas are breeding grounds for fungi and bacteria that like to live in pools of water: their screens and tubes are particularly good places for bacteria to collect and grow, often forming dense layers of cells and proteins called biofilms, which can be very hard to remove. Infections of the nails, toes, or even legs – some serious enough to require antibiotics – can result. Infections from a pedicure spa can also take time to show up: weeks, or even months. So it's vitally important to make sure the foot spa is completely disinfected between each client (foot spa liners can greatly aid in ease of cleaning), as well as following all daily and weekly

cleaning standards. The Environmental Protection Agency (EPA) issued guidance along these lines: a portion of their *Cleaning and Disinfection Procedures for Foot Spa Basins in Salons* is included in the Appendix for your reference.

Many state regulating agencies are very specific in their rules pertaining to foot spas, so it's wise to refer to your board's website to see what steps they prescribe.

Remember, foot spas should not be used on clients who have skin wounds or open sores. Also, always recommend that your client not shave or wax their legs just before a pedicure, as it increases their susceptibility to infection.

Before moving on, let's revisit the difference between sanitizing and disinfection. Sanitizing reduces the presence of microorganisms, but does not kill all bacteria, viruses and fungi. In a salon setting, non-porous items that only come into contact with intact skin, like chairs, station tops, mirrors, counters, etc., should be sanitized. Disinfecting kills microorganisms as per the specific product's label specifications: broad-spectrum (hospital grade) disinfectants kill bacteria and a broad spectrum of viruses. In a salon setting, non-porous items that could come into contact with broken skin and/or blood must be disinfected, including all implements used directly on clients.

Sterilization

Sterilization is the third level of infection control. It destroys even bacterial spores, which aren't affected by disinfection or sanitization. It's used on implements that puncture the skin. In the majority of states, this level of infection control is considered "hospital level," and is not required in the salon. However, an increasing number of salons are voluntarily sterilizing implements, using an autoclave (also called a steam sterilizer).

Given that your mature clients in particular may be reassured by the presence of an autoclave, let's spend some time on them.

First, a little history: invented in 1879 by Charles Chamberland, the autoclave uses steam as a sterilizing agent. Why steam? Well, in order to destroy a cell using heat, you've got to raise its temperature high enough to break down the proteins in its cell wall. Steam transfers heat very efficiently: when it meets a cooler object, like the cell, it condenses into water and dumps the resulting energy into the cell, heating it.



The basic machine hasn't changed much since the late 19th century: the majority of updates have focused on things like keeping the user safer, or keeping track of the process better, or tweaking sterilization cycles to optimize them for specific kinds of objects. In general, an autoclave functions similarly to the pressure cooker you might have in your kitchen: the door is locked, creating a sealed chamber; steam flows

in to displace the air; once all the air is gone, the steam is pressurized to reach the sterilization temperature for a set amount of time; finally, the steam is exhausted so the door can be opened once again.

To break things down a little further, a sterilization cycle has three phases:

1. Purge: Steam begins to displace air; temperature and pressure increase slightly
2. Exposure (Sterilization): The exhaust valve closes, increasing temperature and pressure until it reaches its setpoint; temperature and pressure are then maintained for a predetermined amount of time
3. Exhaust: The exhaust valve reopens, releasing pressure and reducing temperature

Most salon autoclaves have enough space to hold a few sets of manicure tools, and are simple, three dial devices: a timer, temperature settings, and a way to switch between active and maintenance modes.



For the user's safety, a double lock prevents the door from being opened once the interior is pressurized; should the electronic controls fail, autoclaves are equipped with a safety valve through which pressure can be vented.

A more modern feature of the autoclave is autoclave pouches, which have indicators that react to heat, changing color once sterilization has been achieved.

Implements are placed in the pouches, which are then sealed and put into the autoclave. After sterilization, the pouches should remain sealed until you open one in front of your client.

Blood Spills and Universal Precautions

We should also briefly look at blood spill protocol, since particularly when you're working with the fragile skin of a mature client, an accident is a possibility. And

strange but true – mature clients are often more likely than others to harbor bloodborne pathogens.

For example, baby boomers (people born from 1945-1965) are 5 times more likely than other adults to have hepatitis C, an incurable disease that can cause liver damage, cirrhosis, and even liver cancer. And recent studies have shown that the hepatitis C virus can survive outside of the body for as many as 6 weeks, so it could easily be spread through contact. Hepatitis B, which is more common in the population as a whole, can survive outside the body for as many as 7 days. HIV and AIDS remain a risk among older populations as well: in fact, 10-15% of new HIV/AIDS cases occur in people who are 50 or older.

First, use Universal Precautions: all human blood should be treated as if it were known to be infectious.

Second, the following general rules of thumb apply.

In the case of licensee injury:

- PROTECTION – If a cut is sustained, stop the service and clean the injured area.
- APPLY antiseptic and/or liquid or spray styptic as appropriate
- DRESSING – Cover the injury with the appropriate dressing.
- COVER with finger guard or glove as appropriate.
- CLEAN client and station as appropriate.
- DOUBLE-BAG and dispose of all contaminated objects. Clean hands with antimicrobial cleanser.
- RETURN to service.

In the case of client injury:

- STOP service.
- GLOVE hands of licensee.
- CLEAN injured area as appropriate.
- APPLY antiseptic and/or liquid or spray styptic as appropriate (see NOTE).
- COVER the injury with the appropriate dressing to prevent further blood exposure.
- DOUBLE-BAG and dispose of all contaminated objects. Clean hands with antimicrobial cleanser.
- RETURN to service.

Many state regulating agencies are very specific in their rules pertaining to blood spills, so it's wise to refer to your board's website to see what steps they prescribe.

We refer to gloves above, so to clarify: in order to protect against health concerns like bloodborne pathogens, disposable gloves must be exam grade (designed for

non-surgical medical procedures). Latex gloves are the most common; in the presence of a latex allergy, nitrile gloves are an option.

Adapting to the Mature Client

There are many reasons why your mature clients are an attractive demographic: for example, unlike career clients looking for evening and weekend appointments, they often have daytime availability. In addition, the mature client is more likely to set up a standing appointment, will rarely if ever miss an appointment, and is more likely to both turn up on time AND call if running late.

Plus, they may well turn out to be your most devoted clients. We know that increased isolation often is a part of aging – it may be that your interaction with them is the first they've had in awhile! Your clients' bi-weekly – or even weekly – appointments can become a highly-anticipated social ritual.

This age group is rejecting the old notions of “old age beauty” – so you'll need to be ready to support them with modern services. At the same time, as we've seen, they're going through physical changes – so you'll need to keep those services relevant and safe.

Let's start from the second your newest mature client walks in the door. Assess your salon and your workspace through their eyes – is it clean, bright, and welcoming? Walk out from behind your station to greet them (remembering to make eye contact). Offer to hang their coat, and put their purse, bag, or other possessions in a safe place. If possible, match your pace to your client's pace – if they're not in a hurry, you shouldn't be, either. Take time to personalize the experience: offer them a drink, or some pillows for the back of their chair, and remember their answers for next time. Once you're both seated, ask them how they're doing, and chat a bit before rushing into the service – it's polite, and you may also begin to gather information that will factor into your consultation.

Your initial consultation is always important, but it's critical for the mature client. You'll want to be especially careful to gather all relevant medical information – pay particular attention to mentions of diabetes or arthritis and the presence of varicose veins, and make a note of the medications they're currently taking. This, combined with your own evaluation, will tell you a great deal about what sort of treatments you're going to be able to perform, and what adaptations you'll need to make.

Plus, nail technicians are often the first to notice a client's hand- or foot-related issues. Some issues, of course, will be aesthetic. As we've discussed, the slower rate of growth of mature nails means the environment has more time to act upon them, which may impact both strength and appearance. Subungual hematoma may take longer to fade. Other issues may indicate the presence of a medical condition – and while you can't diagnose, you can refer. Swelling or pain around the nails, for example, should be addressed by a doctor. Toenail fungus, if present, will take longer to resolve. Likewise, a small injury on the extremities that's taking unusually long to heal might indicate diabetes, or if a client's

formerly-warm extremities are now always freezing cold, a circulation issue may need to be addressed. Make the client aware of these or any other issues you notice, and advise them to speak with a physician.

Because it may be harder for the mature client to perform nail care – they may not be able to reach the toes, for instance, or have difficulty handling nail clippers – you’ll likely want to schedule an appointment specifically focused on nail care every four weeks or so. That said, depending on the condition of each client’s nails, the content of this appointment may vary: while some may be up for a mani/pedi each time, others may just need (or be able to afford) trims.

In fact, this brings up an important point – when was the last time you sat through a whole class on how a process or a product works? You’ll need to cultivate technical awareness overall, so you’re able to readily apply it to mature clients in particular. Consider gels, for example. You know that the longer the gel is on the nail, the harder it is to remove: getting a gel product off the day you apply it is much easier than doing so three weeks later. You also know that mature clients’ nails may be more brittle, break more easily, and recover more slowly. If mature clients wait three weeks to remove their gels, whether you’re soaking or scraping, you’re almost certainly damaging the nails. So, you’ll want to encourage these clients to stay within the recommended two week window for removal, to keep the nails as healthy as possible.

In general, keeping the nails short can help with issues ranging from reducing the impact of brittleness, to helping with cleanliness, to preventing ingrown toenails (as we’ve discussed, this is another issue that becomes more frequent with age). Remember to trim the toenails straight across rather than shaping them to the toe. When filing, make sure the edges of the nails are not sharp.

In the presence of onycholysis (separation of the nail from the nail bed), talk to your clients. Let them know you’re aware of the condition, and that you’ll be gentle. If any separation exists, avoid cleaning under the nail. If no separation exists, and you must clean under the nail, use an orangewood stick: keep your insertion shallow, and be very careful not to put upward pressure on the underside of the nail. Avoid using nail brushes, which cannot be adequately disinfected. And here again, a shorter nail is easier to keep clean.

Let’s not forget the skin!

The mature client faces changes to the skin as well as to the nails, and the skin on the hands and feet is no exception. As it ages, skin becomes dryer, loses elasticity, and is also more fragile and heals more slowly. Your nail work should take this into account, both for health and safety reasons (which we’ll discuss in greater detail below), and because opportunities exist to provide some additional services! Ranging from anti-aging options – like skin lightening/age spot treatments, exfoliation, and paraffin dips – to pure pampering – like gently

warmed lotions, electric mitts and booties, and even aromatherapy oils – these add-ons can be particularly appealing to mature clients.

Let's double back to dryness: as we know, skin can lose its ability to retain moisture as the years go by. I personally can attest to having extremely oily skin through my life – until around the age of 50, when I noticed that if I did not use moisturizer my skin would actually itch! If a client's skin is dry but NOT cracked, using a super-rich moisturizer cream that contains ceramides (a lipid) and hyaluronic acid (for absorption) can be helpful in creating a barrier for the skin that locks in moisture.

If cracking IS present, proceed with caution, and double down on your disinfection techniques (as we discussed previously). Even if there is no bleeding present, dry, deeply cracked skin on the hands and feet can lead to infection; if bleeding is visible, it's best to avoid mani/pedis unless your client has written clearance from their doctor. And if you know your client has type 1 or 2 diabetes, boost your caution levels even further: an infection could possibly raise their blood sugar levels, which can slow the healing process and increase the risk of more serious complications.

Even if there's no evidence of dryness, remember that mature skin can be increasingly fragile, and take care of it. For example, advise your clients not to shave their legs for a day or two prior to a pedicure appointment: shaving can cause tiny nicks, sometimes too small to be seen, which increases the chance of infection.

Calluses, caused by pressure and friction from repetitive actions, are very common in the mature client. If using callus removers to dissolve the thick scaly tissue buildup, be aware that they can cause burn problems. Know whether your client has experienced sensitivity to similar chemical in the past BEFORE applying, apply only to the callus, steer clear of the sensitive toe area, and use it only for the directed time. Bear in mind that calluses shouldn't be completely removed – this leaves the newly-exposed skin vulnerable. Finally, using a cream with salicylic acid on the feet can help to prevent calluses from returning.

Massage can help warm and relax the tissue in the feet and hands, unclenching tendons and inviting relaxation. It's also known to increase blood flow to the extremities, and as such, it can be particularly beneficial to your mature clients, who may be experiencing reduced circulation, arthritis, chronic pain, etc. This can help with balance and gait by improving your clients' proprioception (the awareness of the position and movement of the body), thereby reducing their chance of falling. In addition, massage can produce feelings of connection and caring in clients who may be feeling touch-deprived. Just 5 minutes of hand massage, for example, has been found to produce a physiological relaxation response and reduce cortisol (the stress hormone) levels.

If massage is a part of your service, use a less vigorous technique on your mature clients, and avoid deep tissue massage and petrissage massage. This is particularly important in the presence of frail skin, varicose veins, swollen/shiny skin, or discolored blue or red skin with either hot or cold temperature changes. Do not provide massage to clients with high blood pressure, a heart condition, or a history of stroke. Talk with your clients throughout the massage, and adjust your touch accordingly.

While you certainly want to encourage regular visits, you'll need to stress the importance of your clients' doing nail maintenance in between appointments. A simple Home Care Handout can be a really nice touch (in large print, of course)! Simple pointers like reminding them to moisturize the hands and feet regularly, giving them tips on how to protect their nails from environmental hazards, and encouraging them to dry their feet well and inspect them for cracking can go a long way.

Taking Care of Yourself

You work long hours making repetitive movements including filing and buffing, resting your wrists and hands on a hard table which causes muscle, joints, ligaments, nerves and tendons to strain. In addition, bending over or being in the same hunched position for long periods of time can lead to chronic aches and pains, both on and off duty. These issues can be heightened when working with mature clients. You may end up compensating physically for your clients' conditions: for example, someone with arthritis may not be able to fully extend their hands, so you'll have to reach even further over the table to accommodate them. It's vitally important to remember to take your breaks, stretch, and let your body recover.

Marketing to the Mature Client

So how can you embrace the mature market? Well, you need to make sure potential clients are aware of your services, so you need to reach out to them in the right ways.

For starters, consider clients you already have – might any of them have mature parents? These clients are certainly aware of the benefits of your services, so it's a simple step to get them thinking about how their parents could also benefit. Whether in person or by email, these promotions are particularly beneficial before particular holidays: think Mother's Day, Father's Day, Grandparent's Day, etc. A salon experience is a nice, practical present from an adult child (and might even be something that mature parent and adult child could do together!).

When going directly to the mature client, though, it can be helpful to think beyond e-marketing and take at least some of your efforts offline. Remember direct mail? Consider sending flyers – offering specific, relevant, daytime services – to local community centers, senior clubs, and retirement centers/communities. Churches and hospitals may have bulletin boards where you can post flyers as well. If representatives from any of these agencies contact you, you've got another opportunity to reach their members. Do they want to host a manicure demonstration? Have a special "event-only" discount ready to hand out to attendees. Are they planning a fundraiser? Offer them gift certificates.

You can supplement this kind of promotion with print ads – in the phone book (yes, it still exists), the local paper, the retirement community newsletter, etc. Be sure to specifically mention the services and skills you offer mature clients – and if your salon is walker/wheelchair accessible, say so.

When a new mature client books an appointment, you can reach their friends, too – word-of-mouth is still powerful! Have literature ready for them to take away; offer a two-for-one appointment if they bring a friend with them next time; give them a free gift they can show off – the sky's the limit.

Finally, don't be afraid to promote your infection control savvy! Coverage of sanitary practices in beauty and fashion magazines has become the norm: clients are more educated than ever, and aren't shy about their expectations. Let them know, ahead of time, that you're able to meet and exceed those expectations. Consider adding information about your infection control practices to your brochure, or highlight it on a sign in your front window or a tent card right at your station. Got an autoclave? Let people know! And of course, make sure your state license is displayed in a prominent place so clients can easily see it and be reassured.

Conclusion

Manicures and pedicures are essential to absolute health, particularly for the mature client: hands and feet are among the hardest-working body parts, and deserve the same attention that you would give to your face or your cardio health.

Once you've armed yourself with the knowledge of their needs, the mature client can be the perfect demographic for your salon. Providing manicures and pedicures can be both a luxury, and an investment in their quality of life, for a long time to come.



APPENDIX: Recommended Cleaning and Disinfection Procedures for Foot Spa Basins in Salons (December 2006)

NOTE: this information is provided for comparative purposes only.
Refer to your board's website for all infection control requirements.

After Each Client: (this can take place any time after the client's feet are out of the footbath, while feet are massaged, toes are painted, or other opportunities)

1. **Drain** the water from the foot spa basin or bowl and remove any visible debris.
2. **Clean** the surfaces of the foot spa with soap or detergent, rinse with clean water, and drain.
3. **After cleaning, disinfect*** the surfaces with an **EPA-registered hospital disinfectant** according to the manufacturer's directions on the label. Surfaces must remain wet with the disinfectant for **10 minutes or the time stated on the label**, which may be shorter.
 - a. **For whirlpool foot spas, air-jet basins, "pipe-less" foot spas, and other circulating spas:** It is best to disinfect by filling the basin with clean water, adding the appropriate amount of liquid disinfectant, and turning the unit on to **circulate** the disinfectant for the entire contact time.
4. After disinfection, **drain and rinse** with clean water.

Nightly:

For whirlpool foot spas, air-jet basins, "pipe-less" foot spas, and other circulating spas:

1. **Remove** the filter screen, inlet jets, and all other removable parts from the basin and clean out any debris trapped behind or in them.
2. Using a brush, **scrub** these parts with soap or disinfectant (following cleaning directions).
3. **Rinse** the removed parts with clean water and place them back into the basin apparatus.
4. **Fill** the basin with clean water and add an **EPA-registered hospital disinfectant**, following label directions. Turn the unit on and **circulate** the system with the liquid for 10 minutes, or the label-indicated time if different. (The whirlpool mechanism of the tub must be operating for the entire disinfection period so the piping and internal components that contain hidden bacteria are disinfected.)
5. **After disinfection, drain, rinse,** and air dry.

For simple basins (no circulation):

1. **Drain** the basin and remove any visible debris.
2. **Scrub** the bowl with a clean brush and soap or disinfectant (following cleaning directions). **Rinse and drain.**
3. **Disinfect** basin surfaces with and **EPA-registered hospital disinfectant**, following manufacturer’s instructions. Surfaces must remain wet with the disinfectant for 10 minutes or the contact time stated on the label.
4. **Drain** the basin, **rinse** with clean water, and let air-dry.

Important Additional Measures:

- **Follow your state guidelines and regulations:** Some states require a weekly flush of the whirlpool mechanism with bleach and that the bleach remain in contact for over eight hours. Salons should consult state cosmetology regulations to make sure they are in compliance.
- **Read all labels and instruction manuals:** Always follow label directions for disinfectant products, and consult operating manuals for foot spa basins. Care should be taken to use appropriate doses of products to prevent damage to foot spas.
- **Know the condition of your equipment:** If your whirlpool foot spa has not been regularly cleaned and disinfected, you may need to do more than just the maintenance steps listed above to remove bacterial buildup from the system. Consult the foot spa manufacturer for further information. A higher level EPA-registered disinfectant, such as those labeled “Tuberculocides,” may be used initially. Once the system has been adequately disinfected, regular maintenance with cleaning and use of a hospital disinfectant, as described in this document, may be used.

EZ DISINFECTANT	
Disinfectant -- Bactericide -- Virucide -- Fungicide For Hospital, Institutional and Home Use	
Active Ingredients:	
Compound A	15.0 %
Compound B	2.5 %
Compound C	2.5 %
Inert Ingredients	80.0 %
TOTAL	100.0 %
This product has been proven effective against the following organisms:	
<i>Staphylococcus aureus</i> <i>Salmonella enterica</i> <i>Pseudomonas aeruginosa</i> <i>Trichophyton mentagrophytes</i> HIV-1	
E.P.A. Reg. No. XXXX-XX	
Hospitals, Nursing Home Facilities, other health care establishments, schools, veterinary clinics, office buildings, retail establishments, industrial facilities	

Disinfectant Products: Label Information

The label should clearly state that the product is a hospital or medical disinfectant. It may also list the following organisms:

- Staphylococcus aureus*
- Salmonella enteric (formerly S. choleraesuis)*
- Pseudomonas aeruginosa*

The product label should clearly identify an EPA Registration Number.

The label will also specify use sites that are health care-related.

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