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Unit Overview & Description

This unit will provide students information about the nail its information, manicure and pedicure

Duration: Total Hours: 40 (20 Theory & 20 Practical)

Knowledge and Skill Outcomes

1. Understand structure of nail, knowledge of nail diseases and disorders
2. Knowledge of material in manicure and pedicure
3. Different types of manicure
4. Different types of pedicure
5. Contra indications of manicure and pedicure
6. Knowledge of foot bath

Resource Materials

1. Beauty Therapy: The Foundation Level II, 2e by Lorraine Nordmann
2. Professional Beauty Therapy Level III, 2e by Lorraine Nordmann
3. Milady's Standard Cosmetology, ISBN:978-1-5625-3880-2
4. Reagents/ Prentice-Hall Textbook of Cosmetology by Mary Healy
5. Milady's Standard Nail Technology, 5th edition
6. Manicure, Pedicure and Advanced Nail Techniques by Elaine Almond

Learning Outcomes: Unit 3

Unit	Manicure & Pedicure	Outcomes
3.0	Structure of Nail	- Identify the Nail Structure and Nail growth - Identify various tips of nail care , finger and toe nail care
3.1	Nail Malformation	- Identify the Problems of nails - Differentiate between the Nail disorders and nail diseases - Identify the Nutrition and supplies for nails
3.2	Manicure and its Benefits	- Identify the Benefits of Manicure - Identify Do's and don'ts for manicure - Identify Material and Supplies - Procedure of manicure - Identify the Types of manicure
3.3	Pedicure	- Identify the Pedicure & its benefits - Differentiate between the types of Pedicure
3.4	Hygiene and Sterilization	Identify various methods of Sterilization and Sanitation
3.5	Foot Bath	Identify the procedure of Foot Bath

Assessment Plan (For the Teachers)

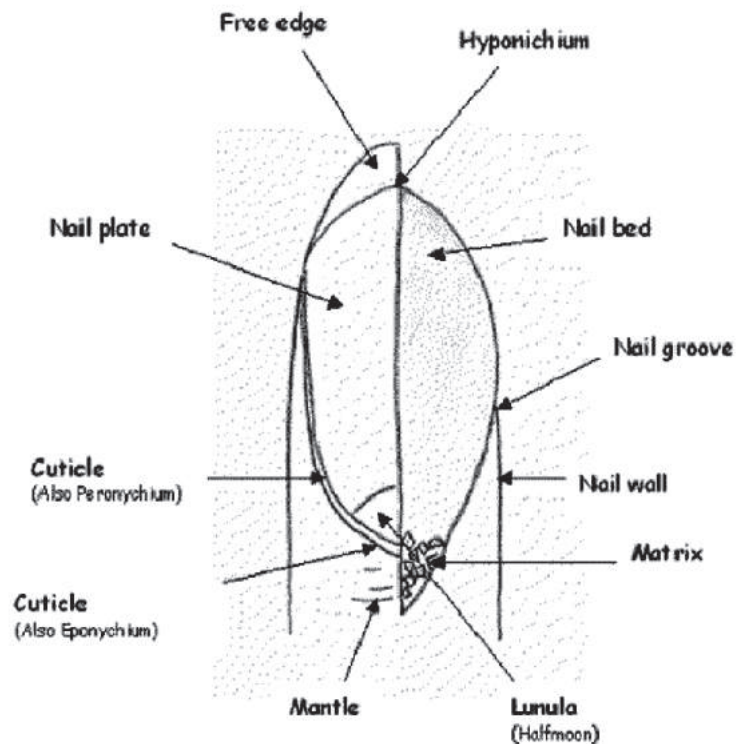
Unit	Topic	Assessment Method	Time Plan	Remarks
3.0	Structure of the nail	Exercise: Question & Answer Audio Visual Aids		
3.1	Nail malformation	Exercise: Question & Answer Audio Visual Aids		
3.2	Manicure and its Benefits	Exercise: Question & Answer Audio Visual Aids; Practical demonstration by the learner		
3.3	Pedicure	Exercise: Question & Answer Audio Visual Aids Practical demonstration by the learner		
3.4	Hygiene and Sterilization	Exercise: Question & Answer Audio Visual Aids Practical demonstration by the learner		
3.5	Foot Bath	Exercise: Question & Answer Audio Visual Aids		

Manicure & Pedicure

3.0 STRUCTURE OF NAIL

Nail: The technical term for the natural nail is onyx. The main function of the nail is to protect the finger tips and toes, to enhance the appearance, to increase the sensitivity and to feel and touch.

The Nail Wall: Also known as vallum unguis is the cutaneous fold overlapping the sides and proximal end of the nail. These nail grooves or channels on either side of the nail plate protect the side of the nail plate as it grows.



Matrix: The matrix is part of the nail bed that rests beneath the nail and contains nerves, lymph and blood vessels. The matrix is responsible for the producing cells that become the nail plate. The width and thickness of the nail plate is determined by the size, length, and thickness of the matrix. If the matrix is damaged the nail will grow deformed.

Lunula: (HALFMOON) Meeting point for the matrix and nail bed. The lunula can be seen as the largest in the thumb and often is not present in the little finger. This is the softest part of the nail plate and is therefore can easily get damaged.

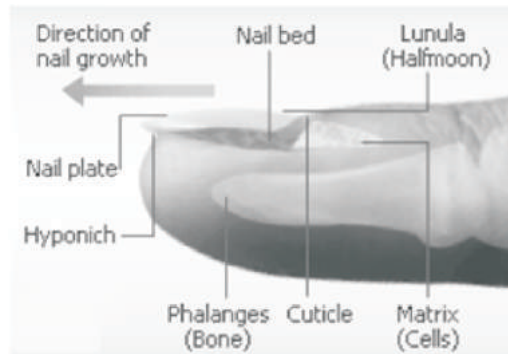
The Nail Plate: is made of translucent keratin protein. The word nail often refers to this part only. Due to its translucency it allows the color of blood supply of the dermis to show through.

Nail Bed: It is the skin beneath the nail plate. During old age, the plate thins and these grooves become more visible. The function of the nail bed is to act as a support for the nail plate.

The Free Edge: It is the part of the nail that extends from the end of the nail bed outwards. The free edge is shaped during manicure and pedicure services.

Nail Growth

In humans, the nail of the index finger grows faster than that of the little finger; and fingernails grow up to four times faster than toenails.



In humans, nails grow at an average rate of 3 mm (0.12 in) a month (as they are a form of hair). Fingernails require three to six months to regrow completely, and toenails require 12 to 18 months. Actual growth rate is dependent upon age, sex, season, exercise level, diet, and hereditary factors. Nails grow faster in the summer than in any other season.

Nail Growth and Affecting Factors

Several things can affect the growth of your nails:

- Age
- Diet
- Ill Health

The average growth of the nail can take between 5-6 months to grow from the matrix to the free edge. In smaller children the growth is rapid (6-8 weeks). Normal adults growth can be between (0.5-1.2) mm a week. The nail plate growth slows on average 25% - 33% over a normal lifetime.

Although the nail will grow quicker:

- In younger people rather than older people
- During pregnancy
- In the summer than in the winter
- On the hands rather than the feet.

A new nail will always grow if the nail is lost or injured, but if the matrix is damaged the nail will grow back deformed.

- Fingernails grow an average of only 0.1 millimeter (mm) each day, whereas toenails grow 1 mm per month. Individual nail growth rates depend on age, time of year, activity level, and heredity.
- Nails grow faster on fingers especially on your dominant hand than toes.
- Women's nails grow more slowly than men's, except possibly during pregnancy.
- Nails grow more rapidly in summer than in winter.
- Nail growth is affected by disease, nutrition, medications, trauma, chronic illness, fever, and the aging process.

Review Questions:**Fill in the Blanks:-**

1. Technical name of nail is _____
2. The part that extends outward from the nail bed is known as _____
3. _____ is the meeting point for the matrix and nail bed.
4. Nail plate is made up of translucent _____ protein.

Nail Care

- Nail problems constitutes for about 10 percent of all dermatological conditions.
- Nail problems usually increase throughout life and affect a high number of senior citizens.
- Symptoms that could signal nail problems include color or shape changes, swelling of the skin around the nails, thinning or thickening of the nails, bleeding or discharge, and pain.
- Nails often reflect our general state of health. Changes in the nail, such as discoloration or thickening, can signal health problems, including liver and kidney diseases, heart and lung conditions, anemia and diabetes.
- Fungal infections cause about half of all nail disorders. They are more common in toenails because the toes often are confined to a warm, moist, weight-bearing environment within your shoes.
- Although rare, melanomas can grow under the nail. Such melanomas may be mistaken for an injury, so you should consult a dermatologist if a dark-colored streak appears within the nail plate, if the nail discoloration does not gradually improve, or if the size of the streak increases over time.
- Other common nail problems include:
 - White spots that appear after an injury to the nail.
 - Vertical lines, known as splinter hemorrhages, under nail injury or certain drugs or diseases.
 - Bacterial infections, which are most often due to nail biting, finger sucking, or frequent exposure to water.
 - Ingrown toenails, which are caused by improper digestive problems, or tight shoes.

Nail Health

Nails can dry out, just like skin. They can also peel, break, and instance, can be caused or exacerbated by dirty socks, specific exercise, tight footwear, and walking unprotected in an unclean environment.

Foods that are particularly good for nail health include:

Name of the Nutrient	Description	Diagrams
Protein		
Chicken Wings	Contains collagen which is good for healthy nails & skin	

Soy Bean Product	Contains essential amino acids and minerals (calcium, protein, potassium & magnesium). Soy bean products are very low in calories, and because they are so nutritious, they can be a replacement for beef products. Soy beans work in a way that is similar to female hormones, so they help in reducing the discomfort of periods.	
Eggs	Contains all essential amino acids and is a source of many vitamins and minerals (Vitamin A, D & E)	

Vitamins

Grapefruit	Contains Vitamin E which smoothes blood and prevents the nails and skin from drying out	
Strawberries/Kiwi fruit/Oranges	Contains Vitamin C which encourages collagen production. This has an anti-oxidant effect which helps slow down the ageing process	

Minerals

Seaweed	Contains magnesium and helps promote good nail and hair growth	
Seafood (sardines & oysters)	Contains zinc which has an antioxidant effect which slows down the aging process.	
Liver & Tuna	Contains iron which helps bring oxygen into the body system, making the system function better.	

Water

It's also important to drink plenty of water to hydrate the skin, ideally try to drink 2 Liters per day. This will make sure the cuticle does not become dry and flakey

Acupuncture

Acupuncture may help to enhance immune function, normalize digestion, and address disease conditions.

Massage

Massage can help stimulate circulation, which aids the transport of nutrients to the nail bed.

Hydrotherapy

Alternating hot and cold foot baths can be used to bring blood and immune cells to infected nails. Patients with vascular disease or any other type of compromised circulation or peripheral neuropathy should not do hydrotherapy without their doctor's supervision.

Finger Nail Care

Following points may be noted to take proper and good care of fingernails:

- By regularly pushing up the cuticles with an orange stick, more of the nail plate will be visible, which will ultimately make your nails look longer
- By filing your nails correctly, instead of using nail clippers, your nails will strengthen and can be easily formed into a shape that you desire.
- It is very important to keep your nails clean by washing them regularly, especially after doing outdoor activities.
- Wear gloves when gardening or washing dishes to protect your nails from bacteria as well as helping prevent your hands from drying out by harmful detergents and sunlight.
- When removing nail polish with cotton wool, try to avoid rubbing too hard, as this will put too much pressure on the nails.
- Try not to use your nails as a tool to perform other tasks as this often leads to nails splitting and tearing.
- Apply hand cream as often as you can, eg. each time after washing your hands.

Toe Nail Care

- Scrub your heels once a week using a body scrub to prevent hard skin building up. If the skin gets too hard and dry and has a white color, you can use a Pedi Rasp in the shower.
- It is very important to keep your toe nails clean by washing them well when showering.
- Apply foot cream or rich body cream after showering, especially on the heels.
- Avoid walking bare feet as this can encourage bacteria growth as well as causing your heels to become hard and start cracking.
- By regularly pushing up the cuticles with an orange stick, more of the nail plate will be visible, which will ultimately make your toe nails look longer.
- By filing your nails correctly, your nails will strengthen and can be formed into an even square shape.
- When removing nail polish with cotton wool, try to avoid rubbing too hard, as this will put too much pressure on the toe nails and may effect nail growth.

Review Questions:

- (i) Name three food items in each category that are particularly good for nail health:-
a) Protein b) Minerals c) Vitamins
- (ii) List any 05 points of finger nail care.
- (iii) List any 05 points of toe nail care.

3.1 NAIL MALFORMATION (Nail Disorder & Diseases)

If disease or damage occurs in the matrix, the shape or thickness of the nail plate can change. Usually this is the condition in which a person sheds a nail. Nails are not shed automatically or periodically in the way that hairs are shed. Often after a disease, injury, or infection that has affected the nail's growth, the natural nail will return to its healthy growth as long as the matrix is healthy and undamaged. It could take up to four to six months for replacement of a natural fingernail. Toenails take about nine months to one year to be fully replaced.

NAIL DISORDERS Nail disorders are caused by infections, skin diseases, benign or malignant tumors, or certain system wide diseases. There are several types of nail disorders. A fungal infection is the most common, usually affecting the toenails.

- a. **Blue nails** Blue nails are characterized by a blue discoloration of the lunulae. In general blue nail moons are an indication for circulatory problems (cold weather may be a part of the cause), or a lack of oxygen due to smoking and/or obesity.
- b. **Bruised Nail:** Also known as subungual hematoma is common, and can be due to a number of different reasons. Nails bruise because blood vessels in the skin underneath the nail either burst due to pressure from an injury or chronic stress on the nail, or are severed by a cut in the skin underneath the nail. Injuries to the nail include a heavy object dropping on it, kicking a hard object, or getting the toe wedged in a door or other similar moving object. Sources of chronic stress include poorly fitting shoes. As blood pools under the nail plate, regardless of the cause, it will turn the color of the nail blue, purple, or eventually black.
- c. **Corrugation:** Distorted looking nails with ridges are referred to as corrugated nails. Distorted nails which have a thickened yellowish tinge may suggest a fungus infection, psoriasis, vitamin deficiency or hardening of the arteries.
- d. **Hang nail / agnail:** A hangnail or agnail is a small, torn piece of skin next to a fingernail or toenail. Hangnails are usually caused by dry skin or (in the case of fingernails) nail biting, and may be prevented with proper miniaturization of the skin. Hangnail is not an actual part of the nail. It is dead, dried skin, not nail, the latter being mostly made up of keratin, a tough fibrous protein.
- e. **Hypertrophy / thickening of nails:** Also known as Onychauxis is a health condition marked by a thickening of the nails. It is observed both in nails of the fingers and the toes. The disease is more common in older people than young ones.

The most obvious symptom of Onychauxis is an abnormal thickening of the nail plate in the finger or toe. The thick nails become quite difficult to trim uniformly and safely. Left untreated the nail may also become discolored and may turn white, black, yellow or red.

Hypertrophy in nails may be caused by several reasons:

- Diabetes
- Impaired Circulation
- Psoriasis

- Trauma
- Infection
- Heredity

f. Onychophagy & Nail Biting: Is the medical term for nails that have been bitten enough to become deformed. This condition can be greatly improved by regular manicures or artificial nails. Because nail biting is so common, it's easy to dismiss it as just a bad habit instead of the nail disorder. Onychophagy is a sub-group of OCD (obsessive-compulsive disorder). Some patients with chronic onychophagy bite their toenails, fingernails, and the skin surrounding their nails until they bleed. Others bite and pick until they have literally removed an entire nail. Onychophagy can begin because of severe stress, tension, or anxiety.

Nail Biting, avoidance techniques

- Keep your nails trimmed and filed.
- Have a manicure regularly or use nail polish.
- Try stress-management techniques
- Try substituting another activity, such as drawing or writing
- Wear gloves, adhesive bandages, or colored stickers whenever possible
- Snap a rubber band on the inside of your wrist

NAIL DISEASES: Nail diseases are distinct from diseases of the skin. Although nails are a skin appendage, they have their own signs and symptoms which may relate to other medical conditions. Nail conditions that show signs of infection or inflammation require medical assistance. Deformity or disease of the nails may be referred to as onychosis.

- Nail fungus:** Onychomycosis (also known as "dermatophyticonychomycosis," "ringworm of the nail," means fungal infection of the nail.
- Onychia:** Onychia is an inflammation of the nail folds (surrounding tissue of the nail plate) of the nail with formation of pus and shedding of the nail.
- Paronychia:** Paronychia is a particular type of infection that affects the soft tissues in the folds of nails in the fingers or toes. A Paronychia infection of the nail fold can result in redness and inflammation in the region. It can be quite painful.

Review Questions:

- Name three common nail disorders.
- List three nail diseases with their symptoms.
- If the client is suffering from any nail disease should the manicure / pedicure services be given to her in the salon? Explain.

3.2 MANICURE AND ITS BENEFITS

Manicure is derived from the latin words **manus**, meaning hand and **cura**, meaning care. A manicure is a cosmetic beauty treatment for the fingernails and hands performed at home or in a nail salon. A manicure treatment is not only a treatment for the natural nails, but also for the hands. A manicure consists of filing, shaping of the free edge, treatments, massage of the hand and the application of polish. There are also manicure services that are specialties for the hands and feet. It keeps the nails smooth, the skin soft, improves the appearance of the hands and keeps the cuticles attractive and most importantly the nails healthy.

Benefits of Manicure

The main purpose of the treatment is to improve the look and feel of your hands and fingernails. Another purpose is to clean, strengthen, shape, make attractive and sometimes even dress your nails. The other benefits associated with treatment include

- It improves the health and texture of your hands and fingernails
- It helps in preventing hang - nail formation
- It may help in treating sore or broken skin if present around the nails
- It helps in preventing nail damages like fragile tips, cuts or splits
- Massage that often accompanies manicure helps in improving the health of the skin by increasing blood circulation
- By improving the health of the skin, it discourages the wrinkling of the skin on hands.

MANICURE Do's and Don'ts

DO's:

- Wear gloves to protect your nails from detergents and chemicals, e.g. washing up, also do not forget the cold outside and then there is the gardening and the housework!
- Apply hand cream after putting your hands in water, also as extra treat for them at night apply a good moisturizing cream.
- Use an alcohol free enamel remover, as this will prevent moisture loss from the nail plate and stop your nails drying out.
- Always use a base coat to protect the nail plate from discolouration, when applying coloured enamel to your nails.
- Apply hardeners to strengthens weak nails, but not too often, and be careful not to get it on your skin around the nail (Nail wall).
- Have regular manicures to maintain your nails.
- When filing your nails always file the nail from the outside in on both sides along your free edge to stop splitting, at a 45% angle. (Just think of them like wood, if you go against the grain, this will cause splitting)



DON'Ts

- Use your nails as tools, e.g. tightening things with your nails etc. This will cause them to break, become weak and splitting.
- Never use a metal files, as it will cause flaking nails.
- Paint coloured enamel straight on to the nail plate, this will discolour your nails.

MATERIAL & SUPPLIES

Trolley Setting for Manicure

Bowl of warm water or fingerbath

- **Nail clippers** - These look very much like the cuticle nippers only larger, they are designed to cut the toenails straight and not at an angle. They are very sharp and should always be kept clean like your other implements used. Cut straight across the nail, not too short always leave a small free edge. Never cut them short, as this will cause in growing nails, which are very painful and can become infected. Straight scissors can also be used, but not the kitchen ones.



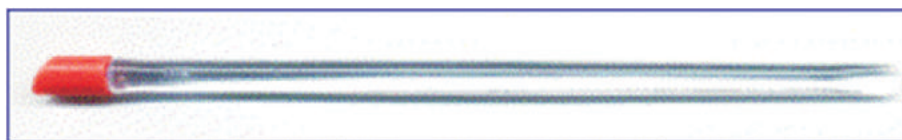
- **Cuticle knife and clippers**- The cuticle knife is very sharp and you can easily damage your nail plate if not used correctly. Always use wet and at a 45-degree angle, as flat as possible against the nail plate.



- **Nail file/Emery Boards** - To smooth off the free edges and shape the nail. When using an emery board remember that the darker side (Course side) is used to file your toenails and the paler side (finer side) is used for your fingernails. Always file at a 45-degree angle from the outside in on both sides. Don't use metal files, as these will cause your nails to flake



- **Cuticle pusher/Hoof stick** often made from metal or orange wood. Used to push back the cuticles. Your hoof stick should always be wet so not to scratch or damage your nail plate in any way.



- **Buffing paste** - Buffing paste has a gritty consistency it is used along with a buffer to smooth out irregularities on the nail plate and give a shine if enameling is not required.



- **Nail Scissors**



- **Buffer** - A buffer normally has a handle and a convex pad that is covered by leather, which is replaceable after worn; it is used along with buffing paste. Use only in one direction. Don't do anymore than (12-15) strokes, as this will cause a build up of heat and cause drying.



- **Orange Stick** - If you didn't want to use cotton buds, get your orange stick and a small piece of cotton wool, place your orange stick over the cotton wool and tightly wrap around. Please remember to use a clean tip with every application into your pot. Your orange stick is also used at the end of your manicure/pedicure to clean around the nails by dipping it in your enamel remover and rubbing carefully over the enamel to be removed. You can also use it to clean under your nails if you are using a clear enamel.



Supplies:

- Cuticle remover
- Massage lotion/cream
- Nail polish Base coat polish & ridge filler polish
- Color varnish
- Top coat or sealant
- Nail bindi stick-on jewels
- Nail polish remover or nail polish remover wipes

- Hand cream
- Sanitizing spray/towels
- Cotton balls/pads
- Hand towels

PREPARATION OF CLIENT & PROCEDURE

Ensure the client is warm & comfortable

- Lighting must be efficient to avoid eye strain & to allow the treatment to be performed competently.
- Ask the client to remove all jewelry from the area to be treated, to prevent jewelry being damaged by creams and to avoid obstruction during the massage.
- Place jewelry in a tissue-lined bowl where client can see it.
- Ensure that client is seated at the correct height and close enough to the manicurist.
- When the client is comfortably seated, wash your hands in front of the client.
- Consult the client record card & commence with the treatment.

Manicure Procedure:

Always remember to keep your tools clean; if they are left dirty they may harbor germs and cause infections.

- Begin by cleaning the hands and remove any old enamel that the client may have on her nails with the cotton wool and enamel remover.
- Decide on what shape you would like to give on client's nails, cut them if needed, then use emery board to file them.
- Take a cotton bud and remove a very small amount of buffing paste from the pot and smear on the top of the nail. With the buffer, buff the nails.
- With another cotton bud, remove a small amount of cuticle cream and apply to the cuticle of each nail.
- Massage this in, in circular movements.
- Soak the hands in warm soapy water containing an anti-bacterial liquid soap.
- Dry your hands carefully pushing back the cuticles with the towel. Put a tipped orange stick into cuticle remover and wipe over each cuticle. Dip your hoof stick in the disinfectant and carefully push back your cuticles in movement described.
- Wet your cuticle knife to carefully lift the cuticle from the nail plate.
- Cuticle nippers to remove excess cuticle.
- Re-soak the hands then pat dry. It is important to remove cuticle remover from the hands after application. Dry and apply a good moisturizer all over the hand and arm up to the elbow, as this is a place everyone tends to forget. Give massage manipulations.
- Clean the nails with cotton wool and enamel remover again to remove any oil from the moisturizer that is left on the nail plate.



Disinfect the hands



Soak the hands in warm soapy water



Push the cuticles



Apply cream and massage the hands

- Now comes the fun part, apply base coat and wait for it to dry.
Pick coloured enamel or frosted enamel and paint on, wait for the enamel to dry and apply the topcoat to coloured enamels. If client does not wish to paint the nails then just quickly go over them again with the buffer for a lovely shine.
- One last thing, use orange stick and enamel remover to remove all traces of enamel left on the skin to make a really neat job.

MASSAGE TYPES FOR MANICURE

Three main types of massage movements are described below

- **Effleurage:** These movements always begin and end the massage sequence; they are soothing, relaxing and stroking movements, performed in upward-movements
- **Petrissage:** These are finger and palmer kneading movements, which are both relaxing and soothing to muscles. Slight pressure is applied with each movement, assisting the return of blood and lymph to the heart
- **Rotations:** These are circular movements, applied to joints to aid joint mobility

TYPES OF MANICURE

Regular manicure: It involves soaking your hands in warm water and pushing back cuticles followed by trimming and filing of nails. A lotion massage is done and nail paint is applied.

French manicure: It is a rage nowadays and is quite popular amongst all ages. It involves all the steps of a regular manicure which are soaking, trimming and filing of nails, massaging, moisturizing followed by nail paint. French manicure is differentiated by regular manicure due to a different way of application of nail paint. A clear or sheer pink nail polish is applied on the nail base followed by white nail paint on the tips of nails.

Spa manicure: A regular manicure is followed by a hydrating mask or an aromatic salt rub for your hands which is very relaxing.

Paraffin manicure: It involves use of paraffin wax in a regular manicure process. This manicure works great for dehydrated hands or overworked hands. Warm paraffin wax is massaged into your nails or your hands are dipped into warm wax. It makes your hands soft and is extremely relaxing.

Hot stone manicure: Special stones which insulate heat are used to massage your hands followed by steps of a regular manicure.

Luxury manicure: A regular manicure with some extra pampering of warm wax massage with mittens to keep hands soft and hydrated.

Brazilian Manicure: This is a natural nail treatment method that includes no use of chemicals, creams or water. Specially lined gloves are used to soften and moisturize your hand. This treatment helps to grow and strengthen your nails

European Manicure: European manicures are highly soothing and can provide fantastic results. During a European manicure, the hands are soaked in a relaxing blend of water and herbs. The nails are then professionally shaped. Several coats of polish are then applied to the nails with the color of your choice. In some spas, a calming hand massage is provided.

Hot Oil Manicure: A hot oil manicure, also referred to as a hot manicure, is a relaxing manicure type performed commonly in a spa setting. The manicurist warms up oil and then uses it to massage the hands, nails, and cuticles. The oil is then washed off with a damp towel and a complete manicure is performed.

CONTRA INDICATIONS OF MANICURE

- **Tinea Unguium** - ringworm of the hand
- **Scabies**
 - a) Caused by a female itch mite, which burrows into the epidermis where she lays her eggs
 - b) Characterized by tiny red papules & irregular lines on the skin.
- **Verruca Vulgaris**
 - Common warts due to a viral infection are highly contagious
- **Bruising**
- **New Scar Tissue**
- **Undiagnosed lumps and bumps**
- **Skin disorders** - such as eczema, psoriasis or dermatitis; only when these are at their worst.
- **Erythema:** Reddening of skin due to dilation of blood vessels, a reaction to external stimulus or infection apply cold compress. Although this can be a beneficial condition if not an infection.
- **Allergy To Nail Enamel:** Redness around area also places that have been touched. Watery eyes, itchy skin, rash remove enamel, apply cold compress to areas touched also eyes. Tell client if condition doesn't improve within 24 hours consult G.P.
- **Excessive Perspiration:** Could have excessive perspiration from being allergic to a product remove product if possible, apply cold compress, offer a drink of cold water, open a window.
- **Allergy To Oil:** Rinse with water, apply cold compress and advise to consult G.P if condition does not ease within 24 hours.
- **Onycholysis** - An increased white area growing from the free edge. Caused by trauma to the free edge, allergies to drugs or nail products, and psoriasis.
- **Onychatrophia** - Small nails, separated from the nail bed. Nails lack lustre. Caused by injury to the matrix, and ill health.
- **Eggshell Nails** - Thin nails, very curved under free edge. Caused by poor diet, ill health, reaction to medications, and nervous disorders. Regular manicures are vital to this type of client in order to improve the nail condition. A good diet should also be advised.
- **Bitten free edge** - Broken skin around cuticle and sidewalls. Bitten nails. Caused by biting of the free edge and the nail below where the free edge joins the finger. Client should be advised to have weekly regular manicures to improve nail condition. Clients with very bitten nails are extremely hard to perform extensions on.

Review Questions:

- (i) List the benefits of manicure?
- (ii) List the tools and supplies used in manicure?
- (iii) Name few contra-indications of Manicure?
- (iv) Paraffin wax manicure is recommended for which type of skin condition?

3.3 PEDICURE

The word Pedicure is derived from the Latin word **pedis** meaning foot and **cura** meaning care. It is a way to improve the appearance of the feet and the nails. It provides a similar service to a manicure. The word pedicure refers to superficial cosmetic treatment of the feet and toenails. A pedicure can help prevent nail diseases and nail disorders. Pedicures are done for cosmetic, therapeutic and medical purposes. They're extremely popular throughout the world, primarily among women. Pedicures are not just limited to nails; usually dead skin cells on the bottom of feet are rubbed off using a rough stone called a pumice stone. Additionally, leg care below the knee became a common and now expected service included in pedicures. Leg care includes depilation via either shaving or waxing followed by granular exfoliation, application of moisturizing creams, and a brief leg massage.

Benefits of Pedicure

- The health benefits are simply much more than what appears as a mere beauty treatment.
- The procedure is a potent means of exfoliation which essentially helps getting rid of the dead skin cells without causing any harm to the skin.
- The gentle massage with stones, especially the pumice stone, relieves tension in the muscles and reduces adamant muscle pain around the calves and ankles.
- The procedure further improves blood circulation which essentially keeps away most of damages and medical conditions away.
- Foot massaging certain areas may send the signals to the rest of the body and may consequently relieve the subsequent muscle tensions. This action further helps in bettering the health of the overall body.
- In many pedicures, the relieving effect may be simply more than just physical. As per experts, many scents and perfumes used in the process proves beneficial for rectifying circulation problems, improves the mood and enhances memory. For example, the scent of vanilla relaxes the nerves, the smell of sugar literally excites the body and the scent of lime when sniffed invigorates the brain.

Precautions for Pedicure

Pedicure should be cautiously performed if a client has one of the following conditions

- Fever
- Broken bones
- Inflamed areas
- Skin problems rash. Inflammation, lesions, frail skin and extreme discolorations
- High Blood Pressure
- Uncontrolled diabetes
- Infectious diseases
- Cancer
- Severe Osteoporosis
- Varicose veins
- Unstable hypertension
- Uncontrolled Diabetes with PAD or Neuropathy
- Neuropathy
- PAD (Peripheral Artery Disease)

- Warts
- Deep Vein Thrombosis
- Gout
- Ingrown nails

CONTRA-INDICATIONS OF PEDICURE

- Broken bones
- Ring worm
- Nail fungus
- Paronychia (whitlow)
- Recent scar tissue
- Impetigo
- Warts
- Scabies or itch mites
- Severe nail separation (onycholysis)
- Severe eczema
- Severe psoriasis
- Severe bruising
- Undiagnosed lumps and swellings
- Athletes foot
- Verrucae
- Diabetes - Permission from GP required

MATERIALS & SUPPLIES

Tools Required

- **Emery board (nail file)** - To smooth off the free edges and shape the nail. When using an emery board remember that the darker side (Course side) is used to file your toenails and the paler side (finer side) is used for your fingernails. Always file at a 45-degree angle from the outside in on both sides. Never use the seesaw movement as this could damage your matrix causing deformed nails to grow. For a pedicure always file the nail straight across to prevent ingrowing nails. Don't use metal files, as these will cause your nails to flake



- **Nail cutter**
- **Cuticle cutter** - These look very much like the cuticle nippers only larger, they are designed to cut the toenails straight and not at an angle. They are very sharp and should always be kept clean like your other

implements used. Cut straight across the nail, not too short always leave a small free edge. Never cut them short, as this will cause ingrowing nails, which are very painful and can become infected.



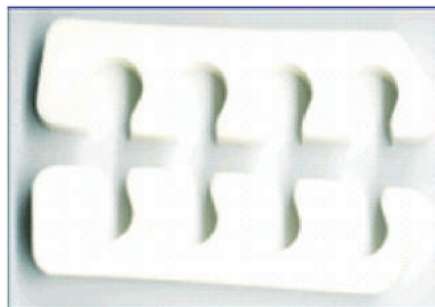
- **Cuticle pusher**
- **Nail brush**
- **Orange stick-** Orange stick is used at the end of your manicure/pedicure to clean around the nails by dipping it in your enamel remover and rubbing carefully over the enamel to be removed. You can also use it to clean under your nails if you are using a clear enamel



- **Pumice stone**
- **Foot scrapper**
- Two basins large enough for foot bath
- **RASP** - Is used to remove hard skin from the feet. Also used is an exfoliant or a callus file, even a pumice stone. Only ever file the hard skin in one direction carefully (7-8) strokes, if you remove too much hard skin at once this will make the foot sore



- **Toe Dividers** - You can use toe dividers, which are placed between the toes, or you can use cotton wool this is used to separate the toes making sure that each toe doesn't knock the other when drying, it also makes it easier to apply the enamel.



Materials Required

- Acetone
- Liquid soap or shampoo
- Luke warm water
- Antiseptic lotion
- Oil or cream
- Nail polish
- Foot powder
- Hydrogen peroxide

PREPARATION OF CLIENT & PROCEDURE

Following are the key steps in client preparation for the procedure

- Advise the client to remove footwear for consultation
- Discuss and agree on the services that are acceptable to meet the client's needs
- Remove any existing nail polish, restoring nails to natural condition
- Clean the treatment area to identify the condition of nails and skin
- Establish and record the condition of clients' nail and skin
- Recognize contra indications and take necessary actions
- Prepare the work area for client to meet legal, hygiene and treatment requirements



Disinfect the feet

PEDICURE PROCEDURE:

Always remember to keep your implements clean: if they are left dirty they may harbor germs and cause infections.

Preparation

- Before we begin, make sure you are properly prepared. Disinfect all hard surfaces, then wash your hands with soap and water and sanitize them with an instant hand sanitizer
- Make certain your rolling cart is fully stocked with a disinfection tray, Spa Pedicure products, other pedicuring products, implements, tools, towels and polishing products
- All pedicure clients should have filled out the consultation form (client profile) covering medical history and other important information. Remember, you must proceed with caution if a client is diabetic, calling the client's physician for clearance if



Filing of Nails

you have any doubts, and never perform a pedicure in an extreme situation, such as open sores or infections of the foot or leg.

- Plan on the service taking around an hour to complete. This includes a six to seven minute massage per leg. When you do the service in the salon, complete each step on all five toes before going on to the next step.

Preparing the Bath

- Fill the foot bath with warm water -- this means under 37°C, or a comfortable temperature. Add the water to agitate as it fills to create light foam in the bath.
- Let your client get settled in the chair with shoes, socks or nylons removed. You may provide a robe if the client so desires
- Submerge both the client's feet in the warm water, adding more water if necessary to adjust the temperature to the client's comfort
- Soak the clients feet for 5 minutes in the bath to take full advantage of the softening effects of Rice Bran and Vitamin E Oils. As they soak, remove your instruments from the disinfection unit and lay them on a clean, sanitized towel.



Remove old Nail Paint

Exfoliation

- Begin by placing a clean, sanitized terry towel in your lap, and remove one foot from the water. Pat the foot dry and remove the enamel from the toenails.
- Gently massage for 2 to 3 minutes, concentrating on areas of extreme dryness, then rinse and pat dry.
- Wrap the foot in a clean towel
- Unwrap the first foot and run the Callus Smoother over all calluses to reduce and smooth. Use a circular motion to reduce calluses inlayers until the skin is pink and pliable. Rinse the foot and towel dry.
- Do not return the foot to the bath as you use the Callus Smoother on the other foot. when both feet are clean, exfoliated, and dry, you are ready to proceed to the next portion of the service.



Soak feet in warm Soapy water

Pedicure Toenails

- Gently push back and remove non-living (true) cuticle from around the proximal and lateral nail folds, staying away from the eponychium.
- With your thumb and index fingers, gently pull back the lateral folds of soft tissue to see where the toenail trimmer might be required. Use a curette or a small 'spoon' tool as an extension of your fingers to feel along the lateral nail edge.



Push the cuticles

- Trim the corner of the big toenail at a 45° angle. Using firm 'balance-point' positioning and holding the toenail trimmer like scissors - between thumb and middle finger, leaving the index finger free for balance - slide the tip of the trimmer under the corner at a 45° angle, so you can see the trimmer on the other side of the nail. This will assure that you don't cut soft tissue. Squeeze lightly before cutting, then cut to remove the entire corner. Make sure you don't leave a hook or spike behind on the lateral nail edge.
- Guide a curette, small spoon tool or orangewood stick along the lateral nail edge in the direction of nail growth. Do this on both sides of the nail to remove non-living tissue and debris.
- After all five toenails have been pedicured, rinse the foot in the bath and pat dry.



Wipe the Feet

Moisturize

- Cover the entire foot up to the top of the ankle, leaving no bare spots. Then wrap it in a clean, dry terry towel and let this foot rest while you work on the other foot.
- Pedicure the second foot in the same manner as the first.
- Cover the second foot with moisturizer, wrap it in a clean, dry terry towel and let this foot rest while you return to the first foot.
- Place the pedicure tools back into the disinfection unit.
- Unwrap the first foot and completely rinse the entire masque from the foot, using a soft brush or cloth if needed. Pat dry.

Massage

Foot massage during a pedicure stimulates blood flow and is relaxing to the client. The below techniques provide directions for massage of the left foot



Give Massage manipulation

- **Relaxer Movement to the Joints of the Foot:** Rest client's foot on footrest or stool. Grip the leg above the ankle with your left hand. This will support the client's leg and foot. Use your right hand to hold left foot just beneath toes and rotate foot in circular motion
- **Thumb Compression - friction movement:** Make a fist with your fingers, keeping your thumb out. Apply firm pressure with your thumb and move your fist up the heel towards the ball of the foot. Work from the left side of foot and back down the right side towards the heel. As you massage over the bottom of the foot, check for any nodules or bumps. If you find one, be very gentle because area may be tender
- **Metatarsal Scissors (a petrissage massage movement, kneading):** Place your fingers on top of foot along the metatarsal bones with your thumb underneath the foot. Knead up and down along each bone by raising your thumb and lower fingers to apply pressure
- **Effleurage on Top of Foot:** Place both thumbs on top of foot at instep. Move your thumbs in circular movements in opposite directions down the center of the top of the foot. Continue this movement to the toes. Keep one hand in contact with foot or leg, slide one hand at a time back firmly to instep and rotate back down to toes
- **Effleurage on Heel (bottom of foot):** Use the same thumb movement that you did in the massage technique above. Start at the base of the toes and move from the ball of the foot to the heel, rotating your thumbs in opposite directions. Slide hands back to the top of the foot
- **Effleurage Movement on Toes:** Start with the little toe, using thumb on top and index finger on bottom of foot. Hold each toe and rotate with the thumb. Start at base of toe and work towards the end of the toes
- **Twist Compression (a friction movement, deep rubbing):** Place left hand on top of foot and make a fist with your right hand. Your left hand will apply pressure while your right hand twists around the bottom of the foot
- **Effleurage on Instep:** Place fingers at ball of foot. Move fingers in circular movements in opposite directions. Massage to end of each toe, gently squeezing the tip of each toe
- **Percussion or Tapotement Movement:** Use fingertips to perform percussion or tapotement movements to lightly tap over the entire foot to reduce blood circulation and complete massage
- **Effleurage** a French word meaning "to skim" or "to touch lightly on", is a series of massage strokes used in Swedish massage to warm up the muscle before deep tissue work using petrissage.
- **Petrissage** from French pétrir, "to knead" are massage movements with applied pressure which are deep and compress the underlying muscles. Kneading, wringing, skin rolling and pick-up-and-squeeze are the petrissage movements. They are all performed with the padded palmar surface of the hand, the surface of the finger and also the thumbs.

TYPES OF PEDICURE

Regular pedicure: A simple foot treatment which involves foot soaking, scrubbing, clipping of nails along with shaping them, massaging foot and calf muscles, moisturizing followed with nail paint. The regular pedicure consists of soaking feet in a warm tub of smelly salts and scrubbing with a pumice stone or foot file. This removes the dead skin around the front and back of the foot. The toes are clipped, filed and cleaned, then set out to dry so polish adheres to the nail. While toes nails dry, apply a moisturizer to the foot and calf and massage the leg. Lastly, the toes are painted.

Spa pedicure: The spa pedicure is an upgrade to the regular pedicure because of a few extra steps during the process. Spa pedicures receive all the basics of the regular pedicure. In addition to a few extra minutes and a

slightly higher price, the spa pedicure typically involves a paraffin wax, mud mask or salt scrub. Dip feet into a paraffin wax and allow the wax to cool completely before simply peeling it off and revealing smooth skin. A mud mask is similar to a face mask, but for the feet; it helps to remove dead skin and relax sore feet. Salt or sugar scrubs are another exfoliation and moisture-enhancing technique.

Paraffin pedicure: Paraffin that is used for salon treatments is actually an alkaline (opposite of acidic) substance that contains hydrating factors for the skin. It comes in a very viscous and waxy form which is applied all over the skin on the feet and the hands (palm and back of hands). One's hands and feet are then wrapped with for the moisture to seep through the skin. Paraffin manicure and pedicures also include regular nail cleaning and shaping.

Stone pedicure: Stone pedicures help relax and work out sore muscles, aches and pains in the feet and calves. The pedicure includes the amenities from the regular pedicure. In addition; warm to hot stones are used to rub down the foot to help loosen tight muscles. Depending on the salon, patrons may receive a foot rub with essential oil, then place their feet onto a smooth stone, or the professional may rub down the foot and calves with the stones and essential oil.

French pedicure: A regular pedicure which ends with the “French” style of nail paint characterized by white nail polish at the nail tips with a sheer pink colour on the nail base.

Mini pedicure: The mini pedicure is fast, quick and inexpensive. Because of the term "mini," the pedicure does not contain the massage or exfoliation to the feet. Unknowingly, women usually give themselves mini pedicures at home because the mini pedicure is simply removing the polish, filing the nails and re-polishing the toes.

Salt pedicure: The pedicure is carried out by the scrub of at least (20-30) pieces of salted rocks found in the river bed. The pedicure basically employs the means of salt and rock to scrub the skin, instead of an exfoliating or scrubbing cream. In the first step, as usual, the feet are soaked into warm water for (15-20) minutes. The feet and legs are then cleaned with salted rocks for the removal of accumulated dirt.

Fish pedicure: Last but not the least is the fish pedicure which is gaining immense popularity day by day for its miraculous effects. In the procedure, tiny fishes are used to nibble away the accumulation of dirt and dead skin cells from your precious feet. The pedicure is known for its amazing feel good factor. As per doctors, fish pedicure has been found to bring about excellent relief from medical conditions like eczema and psoriasis.

Polishing

- Begin by placing toe separators or decorative cording between all 10 toes. You may also use rolled or folded tissues, which can be disposed of after a single use
- Cleanse, sanitize and dehydrate the toenails of both feet
- Then scrub the toenails, making sure all oil and residue is completely removed. Temporarily dehydrate the nail plate and leave behind pathogen fighters to help prevent infections of the nail plate
- Apply one thin coat of basecoat and allow to dry
- Apply one thin coat of enamel and allow to dry
- Apply a second thin coat of enamel and allow to dry
- Seal and protect with one coat of top coat
- Finish the polish application with a thin coat of polish drier
- Complete the procedure by placing slippers on the clients feet. Allow enough time for the polish to completely 'harden' or 'cure' before the client replaces their shoes, socks or stockings.

Review Questions:

- (i) List the benefits of Pedicure?
- (ii) Name few contra-indications of Pedicure?
- (iii) List the tools and supplies used in pedicure?
- (iv) Why fish pedicure is becoming popular?

3.4 HYGIENE AND STERILIZATION

Sterilization is a term referring to any process that eliminates (removes) or kills all forms of microbial life, including transmissible agents (such as fungi, bacteria, viruses, spore forms, etc.) present on a surface, contained in a fluid, in medication, or in a compound such as biological culture media. Sterilization can be achieved by applying the proper combinations of heat, chemicals, irradiation, high pressure, and filtration.

All your tools must be washed in warm soapy water, then rinsed and then dried thoroughly before sterilizing them. This removes any debris and prevents contamination of the sterilizing method.

Few techniques for sterilizing of tools are

- **Autoclave:** High pressure steaming at a minimum of 121 degrees celsius for 15 minutes. The autoclave method is suitable for stainless steel and glass tools
- **Ultraviolet:** Used mainly to store already sterilized equipment. The UV method is only effective on the surfaces it touches, so the tools will need to be turned over
- **Glass Bead:** Glass beads are heated to 190 degrees celsius to 300 degrees celsius. They are kept at this temperature for 30 - 60 minutes before use. Suitable only for very small items such as tweezers and cuticle pushers.
- **Chemical Sterilizers:** The most common chemical sterilizer is Barbicide. The tools are totally immersed in a solution of Barbicide or another chemical and water. Always follow the instructions to the letter. The chemicals are extremely strong and can cause harm to the skin, so be careful when handling them. Also always dry the tools well when removed from the solution.

Disinfectant

Disinfectants are substances that are applied to non-living objects to destroy microorganisms that are living on the objects. Disinfection does not necessarily kill all microorganisms, especially resistant bacteria spores; it is less effective than sterilization, which is an extreme physical and/or chemical process that kills all types of life. Disinfectants are different from other antimicrobial agents such as antibiotics, which destroy microorganisms within the body, and antiseptics, which destroy microorganisms on living tissue. Disinfectants are also different from biocides the latter are intended to destroy all forms of life, not just microorganisms. Disinfectants work by destroying the cell wall of microbes or interfering with the metabolism.

Suggested methods of hygiene and sterilization for specific tools for Manicure & Pedicure

- **Beautician**
 - Hand wash with soap
 - Wear gloves for manicure and pedicure
 - Clean uniform
 - Keep nails short and filed

- Hand sanitizer at the start of every treatment
- Hair tied back
- No jewellery

- **Client**

- Jewellery to be removed for area being treated, hands or feet as the case may be
- Hand sanitizing
- Foot soaking
- Hands and feet to be checked for contra-indications

- **Trolley**

- Always disinfect with surgical spirit at the end of the working day.
- Always cover with couch roll.

- **Nail File**

- Re-usable on clean hands but not indefinitely
- Disposable when finished with

- **Orange Stick**

- Disposable or re-usable when covered with cotton wool, but not indefinitely

- **Hoof Stick**

- If plastic, chemical sterilization
- If wooden, same as Orange stick

Any sterilization method is fine for the following

- Cuticle Nipper
- Nail Brush
- Cuticle Knife

Chemical sterilizing, e.g. Barbicide for the following

- Pedicure Callous File
- Manicure Bowl

Chemical and Ultraviolet methods (to be disinfected between clients with surgical spirit)

- Foot Bath
- Scissors

Autoclave, Ultraviolet, chemical and glass bead methods

- Toe Separators

Disposable, or wipe with surgical spirit between clients

- Nail Clippers

Review Questions:

Name the sterilizing method for the following:-

- (i) Cuticle Nipper, Nail brush _____.
- (ii) Scissors, foot bath _____.
- (iii) Orange woodstick, nail filter _____.
- (iv) Tweezers and Cuticle pusher _____.

3.5 FOOT BATH

When the feet are in hot water, the blood which is congesting distant parts of the body is brought to the dilated vessels in the feet and legs. Congestion of the brain, lungs, abdominal and pelvic organs can be relieved in this manner.

A hot foot bath is a local immersion bath covering the feet and ankles at temperatures ranging from 43°C- 46°C.

Hot foot baths increase blood flow through the feet and entire skin surface, relieving congestion in internal organs and brain. This type of bath also elevates the body temperature, relaxing tense muscles and increasing white blood cell activity.

Benefits of foot bath- Foot bath treatment can help with the following health problems:

- Cold feet
- Colds, chest congestion, flu, coughs, pelvic inflammatory disease
- Headache
- Pelvic cramps
- Hemorrhoids and prostate problems
- Pain anywhere in the body from toothache to backache

Contra indications of foot bath

- Harmful in buerger's disease
- Insulin-dependent diabetes patients
- Arteriosclerosis
- Any condition where circulation in the feet and legs is poor, such as severe vascular disease of the feet and legs, or a loss of sensation in the feet or legs

Equipment for foot bath

- Five-gallon foot tub or container
- Thermometer to test that the water is between 43°C- 46°C
- Sheet and blanket
- Heavy towel and washcloth for cold compress
- Material for protection of the bed, if needed
- Pitcher or dipper to add hot water
- Pitcher of ice water

Important Considerations for foot bath

- Do not use hot foot bath on patients with diabetes or peripheral vascular disease unless the temperature is low; maximum 39°C. Not recommended for frostbite except where the temperature is not above 103° F
- Be careful to not burn the patient when adding hot water
- Use cold compress to head when oral temperature exceeds 100° F (38°C), or when patient begins sweating

Procedure of foot bath

- Explain procedure to the patient
- Have room warm and free of drafts
- Assemble the materials
- Protect the bedding, if needed
- Drape the two blankets over a chair or spread on a bed
- Fill bucket with water 43°C- 46°C high enough to cover ankles
- Assist patient in undressing and wrap in sheet
- Wrap towel around patient's neck to catch sweat and prevent escape of body heat
- Assist patient to place feet in tub. Reassure patient by putting your hands in the water first
- Wrap the blankets one at a time around the patient, enclosing the tub to allow heat to build up
- Add hot water as patient can tolerate it, up to 49°C
- Continue treatment for 5-30 minutes as needed, keeping a cold compress on the patient's head
- Raise feet out of tub, pour ice water over the feet, dry feet, legs and thighs, dress in bed clothes
- Put thick, warm socks on the patient, allowing them to rest in bed for at least 30 minutes, drinking lots of water.



SUMMARY

Study of nail is very important for a cosmetologist. Nail is the appendage of the skin and it is made of hard protein called keratin. If the structure of nail is healthy it will continue to grow. Some factors are important for the nail growth, they are age, diet, health etc. Following are beneficial for health of the nail, they are protein, vitamins, minerals and adequate water. If damage occurs in the matrix, the shape or the thickness of the nail plate can change. There are several conditions associated to the nail health they are called nail malformations and nail diseases. Some nail disorders are, blue nails, bruised nails, corrugation, hang nails and hypertrophy, nail biting. Some nail diseases are nail fungus, onychia, paronychia etc. nutritional deficiency can be supplemented by multi vitamin, grape food seed extract, omega 3 fatty acids, pro-biotic supplements and herbs.

The best treatment for nail is manicure, hand and arm massage will be used to complete any nail service. There are several benefits of manicure, it helps in preventing diseases and disorders of the nail, it improves the health and texture of the nails and hand. By improving the health of the skin, it discourages the wrinkling of skin of hands. There are different types of massage movements which are included in manicure. There are different types of manicure like regular, French, spa, paraffin, hot oil, hot stone manicure etc. Pedicure is the care of feet, there are different types of pedicure like regular, spa paraffin, french, mini and fish pedicure. Foot bath is beneficial in congestion of the brain, lung, pelvic and abdominal organs.

EXERCISE QUESTIONS

Theory Questions

- Q1. Illustrate in detail the structure of nail?
- Q2. Write in short the factors nail growth & health depends upon?
- Q3. What do you mean by nail malformation? Write in detail the diseases and disorders of the nail?
- Q4. What are the contra-indications of manicure?
- Q5. Define pedicure and its benefits?
- Q6. What are the contra-indications of pedicure?
- Q7. What are the hygiene and sterilization methods to be used for pedicure/ manicure?
- Q8. What is a footbath, explain?

Practical Questions

- Q1. Demonstrate the complete procedure of manicure?
- Q2. Demonstrate complete procedure of pedicure?
- Q3. Demonstrate complete procedure of oil manicure?
- Q.4 Demonstrate complete procedure of paraffin wax treatment for cracked heels?
- Q.5 Demonstrate Foot spa on client's skin?