

**GOVT.POLYTECHNIC,
BBSR
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DEPT.
SKINAND HAIR THERAPY**

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CHAPTER - 1

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SKIN DISORDERS AND ITS TECHNIQUE

/THERAPY TO DEAL WITH IT

SKIN

➤ Skin is the outermost part of our body on the basis of surface area. It's the largest organ. It acts as a cover to our body generally skin has 3 layers

1. Epidermis
2. Dermis
3. Subcutaneous layer

1. EPIDERMIS

➤ Epidermis is the outer most part of our body. It is the dead layer. It has blood supply only in the deepest layer. Epidermis is divided into 4 layers.

1. Stratum Corneum
2. Stratum Lucidum
3. Stratum Granulosum
4. Stratum Germinativum

1. STRATUM CORNEUM

The cornified layer is the surface layer of skin. The cells in this layer contain a hard substance called keratin and the entire surface is covered by a thin oil layer so this layer is tough

and nearly water proof .The cells are constantly corn away and shed .

2. STRATUM LUCIDUM

The clear layer consists of a thin layer of small cells through which light can pass.

3. STRATUM GRANULOSM

The granular layer contains cells that are nearly dead .These cells look like granules and moving towards the surface of skin.

4. STRATUM GERMINATIUM

This germinative layer lies just above dermis. In thin layer new cells are continuously formed among new cells special cells MELANOCYTES formed which determine colour people with no melanin suffer from albinism melanin protects.

2. DERMIS

It's the true skin because is contain the nerve cells ,the blood vessels , sebaceous glands, hair root sweat gland the colour pigment melanin layer dermis is the second layer of skin all the functions of the skin is done here dermis is the thicken part of skin and is divided into 2 parts

1. Papillary layer

2. Reticular layer

3. SUBCUTANOUS LAYER

It is the last layer of the skin .This layer is formed by the deposition of fat cells .This layer gives cushion to the internal organ subcutaneous layer gives a rounds structure

to the body . Amount of subcutaneous tissue more in female body in comparison with the male body the fat helps to keep the skin smooth and give energy in necessity when this layer shrink.

The whole body is covered with skin but the thickness vary in different part skin is thinnest in eyelid and thickest at palm.

FUNCTION OF SKIN

Skin is one the most important organ of our body .It performs many functions and is highly efficient.

- It cover's our internal organs.
- It gives an appropriate hold us together.
- It protects us from air, water weather dust bacterial infection, hit sun-rays and other external factors.
- It also eliminates waste matter as perspiration (sweating).
- It regulates and maintains body temperature.
- It reflects the state of our internal health and our emotion.

CATAGORIES OF SKIN PROBLEM:-

- There are several type of skin problem which can be caused by genetics conditions, allergies, irritants, or weak immune system. Skin problem can also associated with certain disease.
- Various common skin problem like acne, eczema, alopecia areata, contact dermatitis, keratosis pilaries, psoriasis, tanning or sunburn, pigmentation & wrinkles.

PROBLEM CAUSED DUE TO VARIOUS DISORDER OF OIL GLAND:-

1. ACNE: - It is one of the disorder of oil gland.

- When oily gland secretes excessive amount of sebum, the ratio of skin disorder can occurs. Acne is one of them.
- Where in ten age this problem aggravated or general we can found in teenagers as the gland become very action during this period.
- Acne is a common type of skin problem categorized by pus filled, pump or spots on the skin these are appear mainly on the face, however can also occur on the back, shoulder, chest and neck.
- The oil produce from sebaceous gland by a hair follicle which are very sensitive to hormonal changes. That's why it is a temporary condition during the teenage. This can be overcomes easily by careful or thoroughly cleaning technique and by using non- greasy cosmetic.
- During puberty, alternative in hormones level trigger the production of sebum which can clog or block the pores and hair follicle, dead skin cells obstruct the follicles and cause the formation of painful pumps.
- Human skin contains one type of bacteria called propionibacterium acne.
- People who having acne, there skin & glad d providing an environment for this bacteria to grow rapidly and formation of pus, filled pumps.

2. BLACKHEADS: - Block or clogged pores with sebum harden and forms a plug is known as blackheads.

HOW TO DEAL WITH BLACK HEADS:-

- Steaming the affected areas usually can help to clear such type of condition.

3. WHITEHEADS:-

- This results when the sebum accumulation beneath the skin surface without any dust and it appears in white color.
- This can be dealt by regular proper cleansing technique.

DISORDER ASSOCIATED WITH SWEAT GLAND:-

There are many disorders associated or caused due to sweat glands like hyperhidrosis.

- This is the condition observed by abnormal sweating.

- Normally sweat gland be very active is not whether but (in order to keep body cool).

- But few people having excessive sweating even if cool weather & when they are in rest.

ANDROSIS:-

- It is occur when sweat gland stop functioning entirely.

- This may cause fever or some other disorders.

- Should consult with the doctor because the body has lost its ability to regulate temperature.

PROXIDROSIS (BODY ODOUR):-

➤ It refers to foul smelling of perspiration.

- Perspiration itself has a little or no odour.
- The foul smell caused by bacterial action on the skin along with the perspiration.

How to deal with it:-

Good grooming habit can help to control Perspiration.

Which are - bathing, drinking, sufficient, water, wear clean pressed cloth, use of deodorant.

CRICKINGHEAT OR MILIARIARUBRA:-

- It is caused by inflammation of the skin around the sweat gland or pores.

-It usually occur in the hot weather. It appears in the form of small red pimple and is accompanied by intense itching.

- This condition is usually disappear when weather become cooler.

TREATMENT/ HOW TO DEAL:-

- Best method is to wipe out deer by help of moist tissue or use of a powder or lotion. These are all the temporary healing.

- Baking soda can works well to deal with this problem.

ECZEMA:-

- It is a very common form of skin problem associated with inflammation.

- Eczema primarily caused by genetic or environment all factor, sometime alternative of skin barrier which can make a

person more susceptible to allergies and bacterial and viral infection.

- Allergens or irritation can easily enter the skin cause inflammation & itching.

- People with eczema are easily affected by bacteria and viral infection.

- Two types of vires like herpes simplex can increase the intensity of eczema. Likewise staphylococcal infection can make the skin yellow, hard & inflammated.

TREATMENT OR HOW TO DEAL WITH IT:-

- There is no cure for eczema. This condition can be managed with medicated moisture, topical steroids creams or ointments, sometimes antibiotic, antiseptic medicine.

Note:-

The severity of eczema after decrease with age.

Causes of skin disorders

Common known causes of skin disorders include:

- bacteria trapped in skin pores and hair follicles
- fungus, parasites, or microorganisms living on the skin
- viruses
- a weakened immune system
- contact with allergens, irritants, or another person's infected skin
- genetic factors
- illnesses affecting the thyroid, immune system, kidneys, and other body systems

Numerous health conditions and lifestyle factors can also lead to the development of certain skin disorders. Some skin conditions have no known cause.

Inflammatory bowel disease

Inflammatory bowel disease is a term for a group of intestinal disorders that cause prolonged inflammation of the digestive tract. These bowel-related disorders often cause

skin problems. The drugs used to treat these diseases can cause certain skin conditions, such as:

- skin tags
- anal fissures
- stomatitis
- vaculities
- vitiligo
- allergic eczema

Diabetes

Many people with diabetes experience a skin problem as a result of their condition at some point. Some of these skin disorders only affect people with diabetes. Others occur more frequently in people with diabetes because the disease increases the risk for infection and blood circulation problems. Diabetes-related skin conditions include:

- bacterial infections, such as boils, styes, and folliculitis
- fungal infections, such as athlete's foot, ringworm, and yeast infections
- acanthosis nigricans
- diabetic blisters
- diabetic dermopathy
- digital sclerosis

Lupus

Lupus is a chronic inflammatory disease that can damage the skin, joints, or organs inside the body. Common skin problems that occur from lupus include:

- round lesions on the face and head
- thick, red, scaly lesions
- red, ring-shaped lesions on body parts exposed to sunlight
- flat rash on the face and body that looks like a sunburn
- red, purple, or black spots on fingers and toes
- sores inside the mouth and nose
- tiny red spots on the legs

Pregnancy

Pregnancy causes significant changes in hormone levels that may lead to skin problems. Preexisting skin problems may change or get worse during pregnancy. Most skin conditions that arise during pregnancy go away after the baby is born. Others require medical attention during pregnancy.

Common skin conditions caused by pregnancy include:

- stretch marks
- melasma
- pemphigoid
- pruritic urticarial papules and plaques

- eczema

Stress

Stress can cause hormonal imbalances, which may trigger or aggravate skin disorders. Stress-related skin problems include:

- eczema
- psoriasis
- acne
- rosacea
- ichthyosis
- vitiligo
- hives
- seborrheic dermatitis
- alopecia areata

Sun

The sun can cause many different skin disorders. Some are common and harmless, while others are rare or life-threatening. Knowing if the sun causes or worsens your skin disorder is important for treating it properly.

Sunlight exposure may cause or aggravate the following conditions:

- moles

- wrinkles
- sunburn
- actinic keratosis
- skin cancer, including basal cell carcinoma, squamous cell carcinoma, and melanoma
- photosensitivity

Pigmentation and its therapy:-

Preventing skin disorders:-

Certain skin disorders aren't preventable, including genetic conditions and some skin problems due to other illnesses.

However, it's possible to prevent some skin disorders.

Follow these tips to prevent infectious skin disorders:

- Wash your hands with soap and warm water frequently.
- Avoid sharing eating utensils and drinking glasses with other people.
- Avoid direct contact with the skin of other people who have an infection.
- Clean things in public spaces, such as gym equipment, before using them.
- Don't share personal items, such as blankets, hairbrushes, or swimsuits.
- Sleep for at least seven hours each night.
- Drink plenty of water.

- Avoid excessive physical or emotional stress.
- Eat a nutritious diet.
- Get vaccinated for infectious skin conditions, such as chickenpox.

Noninfectious skin disorders, such as acne and atopic dermatitis, are sometimes preventable. Prevention techniques vary depending on the condition. Here are some tips for preventing some noninfectious skin disorders:

- Wash your face with a gentle cleanser and water every day.
- Use moisturizer.
- Avoid environmental and dietary allergens.
- Avoid contact with harsh chemicals or other irritants.
- Sleep for at least seven hours each night.
- Drink plenty of water.
- Eat a healthy diet.
- Protect your skin from excessive cold, heat, and wind.

Learning about proper skin care and treatment for skin disorders can be very important for skin health. Some conditions require the attention of a doctor, while you can address others safely at home. You should learn about your symptoms or condition and talk with your doctor to determine the best treatment methods.

PIGMENTATION

Pigmentation means coloring. Skin pigmentation disorders affect the color of your skin. Your skin gets its color from a pigment called melanin. Special cells in the skin make melanin. When these cells become damaged or unhealthy, it affects melanin production. Some pigmentation disorders affect just patches of skin. Others affect your entire body.

If your body makes too much melanin, your skin gets darker. Pregnancy, Addison's disease, and sun exposure all can make your skin darker. If your body makes too little melanin, your skin gets lighter. Vitiligo is a condition that causes patches of light skin. Albinism is a genetic condition affecting a person's skin. A person with albinism may have no color, lighter than normal skin color, or patchy missing skin color. Infections, blisters and burns can also cause lighter skin.

Hyperpigmentation is caused by an increase in melanin. Melanin is the natural pigment that gives our **skin**, hair and eyes their color. A number of factors can trigger an increase in melanin production, but the main ones are sun exposure, hormonal influences, age and **skin** injuries or **inflammation**.

Treatment Options for Hyperpigmentation

- **Retinoids.**
- **Chemical peel.**
- Laser peel.
- IPL therapy.
- **Microdermabrasion.**

• **Dermabrasion.**

Pigmentation treatment at home:-

- 1 Combine equal parts apple cider vinegar and water in a container.
- 2 Apply to your dark patches and leave on two to three minutes.
- 3 Rinse using lukewarm water.
- 4 Repeat twice daily you achieve the results you desire.
- 5 **Exercise reduces** stress which is one of the causes of skin **pigmentation**. Moreover, when you **exercise**, the blood flow increases and nourishes skin cells. It also takes away waste and the free radicals which are instrumental in damaging skin cells. Thus, skin **pigmentation can be reduced** by regular **exercise**
- 6 It can also happen in areas where acne has healed. **Vitamin C** application has been shown to impede melanin production. This can **help** fade dark spots and lead to a more even-toned complexion Vitamin C helps to inhibit the enzyme tyrosinase, which helps to prevent melanin production. Plus, it significantly lightens pigmentation but does not lighten normal **skin** When the **liver** is not functioning properly, oestrogen in the system increases. This **causes** a substance named tyrosinase, an enzyme containing copper, to produce more melanin (skin **pigmentation**) **and causes** blemishes on the face or the entire body. So do the yogasana that stimulate the liver
- 7 In this category of **foods**, the best options are citrus **fruits** like oranges and lemons, **foods** with beta-carotene (orange colour) like sweet potatoes, pumpkin and carrots, and seafood rich in copper, manganese, selenium, and zinc.

8. Some **foods** contain chemical hormones that can aggravate hormone-triggered **hyperpigmentation**. Examples of **foods** that contain potentially **hyperpigmentation-causing** hormones are soy products, black beans, flaxseed and chickpeas, all of which contain estrogen. So avoid such type of food.
9. **Drink** at least 6-8 glasses of **water** helps in detoxifying the body. 3. Take coconut **water** daily. It replenishes the skin and fights **hyperpigmentation**.
10. You **can** make a **lemon** and honey pack at home for your acne marks and **pigmentation**. **Lemon** juice contains bleaching properties, which **can** help lighten the spots. It also contains Vitamin C, which is an antioxidant and **can** help brighten and lighten your skin.
11. **Coconut oil can** lighten skin and may help **reduce** the appearance of dark spots or uneven skin tone. Adding lemon juice may enhance this effect.
12. Three of the best vitamins for lightening dark spots are **vitamin C**, **vitamin B12**, and **vitamin E**. **Vitamin C** helps your skin produce more collagen while inhibiting the formation of melanin. **Vitamin B12** also promotes collagen formation while supporting the growth of new skin cells. So consume food that contain all these vitamins in adequate amount

Steps to Get Rid of Blemishes Overnight

13. Exercise. ...
14. Take a long, hot shower. ...
15. Steam your **face**. ...
16. Don't pop your **pimples**. ...
17. Eat a **skin**-healthy dinner. ...
18. Drink water, not alcohol. ...
19. Plan for a very full night's sleep. ...

20. Sleep with a humidifier or dehumidifier.
21. **Hyperpigmentation** has been one focus of topical **turmeric** studies. If you have patches of skin that are darker than the normal surrounding tissue, this is **hyperpigmentation**. One such study found that a **turmeric**-based cream reduced **hyperpigmentation** by more than 14 percent over the course of four weeks.
22. **Papaya** is a miracle ingredient that **can** clear out the scars and uneven **pigmentation** on the skin. The skin lightening properties of the fruit help in getting rid of blemishes and **pigmentation**

NOTE:-

Hyperpigmentation is a type of **blemish** that appears darker than other areas of skin. It is common and usually harmless. **Hyperpigmentation** can occur as a result of genetic factors, sun damage, or acne scarring. Freckles are a type of **hyperpigmentation** that a person can inherit the tendency to develop.

It can take **three to 24 months** for PIH to fully fade, **although** in some cases it may take longer. The length of time it takes for PIH to fade depends on how dark the **spot** is compared to the surrounding skin. The bigger the contrast between the macule and your natural skin tone, the longer it will take to fade.

ACNE & SCARS:-

Scar creams, gels, and silicone dressings

often available without a prescription, these products can be used at home to treat raised scars. They can help reduce the itch and discomfort as well as shrink, flatten, and fade raised scars.

Silicone dressings and bandages can be especially helpful. Although no one knows exactly how these work, one possibility is that silicone helps hydrate the skin. This may reduce the itch and pain as well as make the skin more flexible.

To be effective, these products must be used continuously. This can be difficult, especially for scars on the face. Many people are willing to do this because these treatments have little risk of side effects. Even so, with continuous use, some people develop itchy, irritated skin. This usually clears when the person stops using the product.

Best for: Reducing scar size and discomfort. None is likely to eliminate a raised scar.

In some cases, a doctor or dermatologist may suggest a chemical peel or microdermabrasion to help improve the appearance of scarred areas. These milder treatments can be done right in the office. For serious **scarring** from previous bouts with **acne**, several types of treatment can help: Laser resurfacing.

About Acne and scars

If acne scars bother you, safe and effective treatment is available. Treatment can diminish acne scars that cause depressions in the skin. Treatment can also safely reduce raised acne scars. Many treatments are available.

Treatments include laser treatments, minor skin surgeries, chemical peels, and fillers. A dermatologist or a dermatologic surgeon can perform these treatments in a medical office.

As we age, acne scars often become more noticeable because our skin loses collagen. The key to effective treatment is to select the best one for each scar type. For example, a patient who has some deep scars may benefit from getting a filler, which adds volume to the skin. This may be followed by laser treatments.

Before getting treatment for acne scars, it is important to clear your acne. New acne breakouts can lead to new acne scars. Having acne also means that your skin is inflamed. Inflammation reduces the effectiveness of treatment for acne scars.

To obtain the best results, a dermatologist first examines your skin. After the exam, some patients are surprised to learn that their acne scars are actually a different skin problem.

Symptoms

Depressed: Most acne scars cause depressions or pits in the skin.

Depressed scars usually form on the face. A dermatologist may refer to these scars as “atrophic” (a-troy-fix) scars or use the name of the specific depressed scar:

- Boxcar
- Icepick
- Rolling

Raised: These acne scars are more common on the back and chest. The medical term for a raised scar is “hypertrophic.”

Medical Treatment

Dermatologists use the following resurfacing procedures to treat depressed acne scars:

- Laser skin resurfacing
- Chemical peeling
- Dermabrasion
- Microdermabrasion (differs from kits bought for at-home use)

Resurfacing works well for treating acne scars that are nearly flat (not too deep). Even Dermabrasion, which removes the top layers of skin and some of the middle layers, cannot effectively treat deep acne scars.

Best for: Depressed acne scars that are not deep. Useful for contouring scar edges to make scars less noticeable. Deep scars often require skin surgery and resurfacing.

Fillers

Dermatologists use fillers to safely and effectively plump depressed acne scars. A dermatologist may fill acne scars with collagen, the patient's own fat, or another substance. Many fillers give us temporary results, which last between 6 and 18 months. Some fillers are permanent.

Both temporary and permanent fillers have unique pros and cons. If this is a treatment option for you, be sure to ask your dermatologist about the pros and cons of the recommended filler.

Best for: Treating a few depressed scars, but not ice-pick scars.

Skin tightening

this is a newer treatment and tends to be more affordable. This treatment is safe for all skin colours.

Dermatologists often use a technology called radiofrequency to tighten the skin. As the skin tightens, depressed acne scars become less noticeable.

Radiofrequency requires repeat appointments. Most patients return once a month for four months. After a radiofrequency treatment, many patients say they feel a burning sensation for about one hour and their skin has a pinkish colour for two to three days.

Radiofrequency treatments require some at-home care. For at least one week after each treatment, you will need to apply sunscreen every morning and a moisturizing cream at night. Dermatologists recommend wearing a sunscreen that offers UVA/UVB protection, an SPF of 30 or greater, and water resistance.

Best for: Depressed acne scars. Sometimes, skin tightening effectively treats deep ice pack and boxcar scars.

Collagen-induction therapy

Also known as “needling” or “micro-needling,” this treatment encourages your body to make more collagen.

To perform this procedure, a dermatologist moves a sterile, handheld needle-studded roller across the depressed acne scars. This punctures your skin. As your skin heals, it produces collagen. Nine months. Most people, however, notice gradual changes before nine months. Many patients require between three and six treatments and return every two to six weeks for a treatment.

After each treatment, you may have some swelling and possibly bruising. These side effects usually clear within four to five days.

You will need to follow a skin care plan while undergoing treatment.

Research shows that this is a safe treatment for people of all skin colours.

Best for: Widespread depressed acne scars. Not a treatment for raised acne scars, which form when the body produces too much collagen.

Electrodesiccation

This treatment uses electric probes to heat the tissue, which causes the tissue to die. This treatment may be part of a treatment plan for boxcar acne scars. Electrodesiccation by itself is not an effective treatment for acne scars.

Best for: Shaping or reducing the edges of boxcar scars.

Raised acne scars: Treatment can ease pain, diminish scars

Other treatments that a dermatologist may use to treat raised acne scars follow.

Injections

your dermatologist may recommend injecting medicine directly into the scars. This can soften and flatten raised, thick scars.

Getting the best results often requires repeat visits. These injections are usually given once every few weeks. How often you will need to return for treatment depends on the scar and

many other considerations. You may need to return once every two to six weeks for a while.

Many patients receive injections of corticosteroids. A chemotherapy medicine known as fluorouracil (5-FU) can also be effective in treating raised acne scars. Some scars respond best when injections of both 5-FU and corticosteroids are used.

Interferon, which is also used to treat cancer, can be effective. Our bodies naturally produce interferon.

If the scar does not respond (or stops responding) after you receive the 4th injection, acne scar surgery may be recommended.

Best for: Painful, raised scars

Acne scar surgery

Dermatologists perform acne scar surgery to reduce raised acne scars. This surgery can be performed in a dermatologist's office.

To obtain the best results, acne scar surgery is often followed by another treatment.

Acne scar surgery, followed by injections

after surgery, dermatologists often treat raised scars with injections of corticosteroids, 5-FU, or interferon. Combining acne scar surgery with these shots remains one of the most effective treatments for raised scars. Most patients receive injections once a month for a few months.

Acne scar surgery, followed by radiation

Studies show that radiation can prevent raised scars from returning after acne scar surgery. Due to the potential for

radiation treatments to cause problems years or decades later, some doctors do not recommend radiation treatment.

Best for: Raised scars that need stronger treatment than injections alone can provide

Laser therapy

Lasers and other light treatments can treat raised scars safely and effectively. Treatment with a pulsed dye laser (PDL) can help reduce the itch and pain, diminish colour, and flatten a raised scar. For people with lighter skin, intense pulsed light (IPL) also may be a treatment option.

Best for: All types of acne scars

Cryosurgery

this treatment freezes the scar tissue. Freezing the tissue causes it to die and gradually fall off. To improve the results, dermatologists recommend a series of cry therapy sessions and corticosteroid injections. This combination often produces better results. The main drawback is that cry therapy can cause permanent light spots to form on the treated skin.

Best for: It can effectively diminish raised scars in people who have lighter skin. However, cryosurgery is not recommended for people who have skin of colour.

Scar creams, gels, and silicone dressings

often available without a prescription, these products can be used at home to treat raised scars. They can help reduce the itch and discomfort as well as shrink, flatten, and fade raised scars.

Silicone dressings and bandages can be especially helpful. Although no one knows exactly how these work, one

possibility is that silicone helps hydrate the skin. This may reduce the itch and pain as well as make the skin more flexible.

To be effective, these products must be used continuously. This can be difficult, especially for scars on the face. Many people are willing to do this because these treatments have little risk of side effects. Even so, with continuous use, some people develop itchy, irritated skin. This usually clears when the person stops using the product.

Best for: Reducing scar size and discomfort. None is likely to eliminate a raised scar.

Decal Treatment

Self-Care

To keep your skin blemish free, dermatologists recommend continuing acne treatment. Most people can taper their treatment so that they use one product a few times per week.

A dermatologist can tell you when you can stop treating your skin.

Avoid picking, squeezing, and popping

Picking, popping, and squeezing can turn a minor breakout into a major problem—a permanent acne scar.

Practice gentle skin care

When acne flares, many people scrub their skin clean. Scrubbing your skin tends to worsen acne. The worse acne gets, the greater your chance of seeing permanent scars when the acne clears.

Balance diet - Diet with adequate amount of protein and vitamin C plays an important role to prevent acne and scars

Also it's helpful in maintain of elasticity of the skin by forming collagen.

SEBORIA & OPEN PORES:-

Large open pores on face along with excessive amount of sebum is generally food in oily skin. There are many causes behind seborrhea condition on skin:-

- Stress
- Anxiety
- Genetic sometimes
- Medication (Side effect of prolong use of medicine.)
- Dist.-rub immune system.
- It may be cause by a eat that generally found at the skin surface.
- Hormonal imbalance
- Illness
- Sometimes reaction of cosmetics (chemical present in the cosmetic)
- Food containing excessive amount of fat, oil, spices, dairy product, frozen, baked food.

SYMPTOMS:-

- I. It is none contentious scaly patches on the skin with excessive secretion of oil.
- II. Sometimes flashes like projection as we are found in scalp dandruff.

III. Sometimes looks redies projection.

SELF-CARE ROUTINE:-

- i. Regular clean-up keep the skin hygiene.
- ii. Apply any antiseptic cream, lotion free from oil. For avoiding further infection.
- iii. Avoid all types of cosmetic, make up & styling product.
- iv. Drinking sufficient amount of water 8 to 10 glasses.
- v. Adopt a diet with rich of fibers. Like fresh fruit & vegetable⁴, avoid excessive, fat, carbohydrate, oil.
- vi. Choose the appropriate product or homemade natural product for further therapy & protection.
- vii. Choose the market product which contain zinc. Because it prevent the further infection and restore the skin condition.
- viii. The cream lotion whatever applied on the skin that should have sufficient amount of zinc to prevent an infection.
- ix. Whatever product used for skin & hair that should be mild & having antifungal & anti-infection quality. So better to go for natural product that having no Sid effect.
- x. Regular exercise along with a balance diet can helps to strong the immune system & metabolism.
- xi. Do not forget to expose the sun to get sufficient amount of vitamin D. which act as a beneficial role to overcome seboric condition.

xii. Along with seboric condition of skin. The skin become cores with open pores also lots its elasticity.

xiii. So, it is very much important to maintain the elasticity of skin to overcome seboric & open pores.

xiv. Once we able to overcome the secretion of excessive sebum gradually it will close the open pores but need to follow the proper hygienic technic, cleansing, massage technique along with the median which can help to see further infection and close the open pores cold compressing & toning . Mask & pack is very much necessary to shrink the course open pores.

THERE ARE FEW EASY HOMR REMEDIES TO GET RID OF OPEN PORES:-

I. Applying of aloe Vera gel from the kitchen garden will help to hydrate skin and tighten it.

II. Apply of cider vinegar by help of cotton. Then wash-off after 20min.

III. Egg white mask every alternative days.

IV. Application diluted east.

V. Papaya mask helps a lot to overcome seboric & to close the open pores.

VI. Banana mask application of jojoba oil. Application of cucumber & tomato pack can help a lot to overcome from seboric & Open pores.

NOTE:-

Until unless you will change your lifestyle, diet it difficult to overcome seboretic & open pores.

Seborrhea & open pores are not the permanent problem. But also there is no permanent solution.

DOUBLE CHIN:-

Double chin is the deposition of fat at the chin label & below the chin. Generally it's occur due to weight gain.

- Sometimes it's due to genetic hereditary.
- Due to aging muscles & tissue become weak lost its elasticity.
- Sometimes a person who is thin may experience such condition double chin that is due to the deposit of stubborn fat & lack of exercise.
- In medical science by cosmetic surgery or by using injection this problem can be overcome. But their having a lot of precaution a processor may not work at all.
- Few simple exercise a massage can work amazingly to reduce double chin. But for that we need a proper knowledge about exercise, muscular structure & massage technique.

REMEDY FOR DOUBLE CHIN WITHOUT ANY SURGERY & INJECTION:-

- First thing you have to check the diet. Regarding amount & quality of food.

- Better to add unsaturated fat like all the vegetable oil, almond oil, grown oil etc. In etiquette amount and avoid saturated fat like ghee, butter, egg, cheese & paneer.

NOTE:-

- If you are vegetarian then carefully add cheese & paneer in your in your diet.
- Regularly follow weight loss exercise especially those exercise which having impact upon chin area. For example- All backward bending asanas, neck rotation, neck bending, simhagarjasana.
- Making various facial exercise for 5sec.
- Give a proper rhythmic, soothing massage at the neck & chin regularly from the insertion to origin of the muscles at least for about 10 min. (3-5 min daily) by using a proper medium.
- Chewing something or a sugar free chewing can also reduce double chin.
- Now a days chin straps also available which can help but not 100% it will help you at miner condition of double chin.

BLEMISHES & WRINKLES:-

- Discoloration of skin from its normal or natural color is blemishes.
- Genetic & hereditary is also a cause of blemishes. Ex- dark circle.

- Sometimes environment also influence the skin causing of blemishes.
- Wrinkles is a common sign along with age.
- Age is a common factor for wrinkles.
- Along with age skin become thinner by losing the firmness of tissues & muscles.
- Along with age the sebaceous gland also produce less amount of oil which cause wrinkles.

REMEDIES FOR BLEMISHESH & WRINKLES:-

In medical science cosmetic surgery chemical pilling & various injection can deal with both blemishes & wrinkles but along with definite side effect & there is no definite result.

HOME REMEDY & THERAPY:-

- For blemishes we can use natural product with adequate amount in proper time for example- Lemon juice act as a natural bleaching agent that can lighten the blemishes & scars.
- Various other natural ingredient having good impact to fade away blemishes like cocoa butter. Apple juice or you can use ACV, potato juice, name, tulsi, mint, papaya. Application of oatmeal mask.
- For oily skin blemishes you can use yogurt mask.
- Turmeric & honey plays an important role to reduce blemishes for all type of skin.

- Sometimes hormonal imbalance is cause for blemishes and deficiency of vitamin D. So it is very much necessary to go for regular exercise, meditation along with expose your body to sun-light for about 15-20 min or add food which having vitamin D in out diet.
- Along with drying of skin wrinkles & blemishes are along with deficiency of skin.
- So, if you analyze that it is protein deficiency the start consuming protein carbohydrate, fat in your daily diet.

NOTE:-

- Carbohydrate & fat both are energy giving food but it you are skipping these two nutrient the protein can break down & converted into energy.
- So after consuming sufficient amount of protein there is a chances of deficiency of protein. Which can cause blemishes losing elasticity of skin, pimples etc. At the surface of skin.
- So along with a balance diet consume carbohydrate ,protein, fat with regular exercise and go for a beauty therapy treatment by proper technique of massage & if required use electrical gadgets like high-frequency , galvanic, infra-red ,lamp & ozonizer.

PUFFY EYES:-

A bag like structure on eyes along with mild swelling or puffiness under the eyes is commonly known as puffy eyes.

CAUSES:-

Many causes are there

- Aging
- Hereditary
- Allergic reaction
- Retinoid fluid under the eyes
- Large amount salt in diet
- Lack of sleep
- Physical & mental trauma

It is very common along with the age, the muscles supporting eyelids become weaken along with aging and the normal fat or the tissues which supports the eye can move into the lower eyelid, which leads to appear puffiness under the eye.

Few foods can also causes for these puffy eyes Excessive amount of tomato(oxalic acid) dairy product, alcohol , excessive intake of had tea and coffee. Sometimes excessive amount carbohydrate drink may cause puffy eyes.

NOTE:-

Excessive amount of alcohol and tea, coffee cause dehydration is a common cause for under eye bag.

Likewise excessive amount of salt and few other thing can cause to retain excessive body fluid is the cause for puffy eyes.

REMEDY FOR PUFFY EYES:-

- Application of cold compression can help to reduce the puffy eyes.
- Regular application of cold cream or chilled cream can also reduce puffy eyes.
- Regular eye massage in gentle circular motion will help to stimulate the blood circulation.
- Application of tea bags. Cucumber potato is also helps to reduce puffy eyes.
- If due to aging puffy eyes are there can makes baking soda with small amount of water. Apply the paste under the eye for about 5-10 min & wipe it out with help of damp cotton or sponge.
- It makes you feel tightening around the eyes & helps to reduce puffy eyes.
- Coconut oil massage along with the finger in a small circular gentle massage is also help to reduce puffy eyes by lymphatic drainage.
- If having puffy eyes along with dark circle then we can add lemon juice with coconut oil.

NOTE:-

- A good massage technique is very much necessary to overcome any kind of issues related to facial skin.
- In medical science surgery can help to overcome these under eye bags but along with too much of precaution. But it can be overcome naturally effectively & easily.

- Natural healing process is more efficient and can easily handle. By regular massage around the eyes along with the mixture of almond oil, vitamin E, honey, lemon juice, carrot juice, potato juice, apple juice.
- Before going to bed gentle massage the mixture around the eye by help of tips of the ring finger.
- Wipe it out after 30 min by help of damp cotton or cloth.
- If you wish to leave these around the eye overnight then avoid all the juice & honey only almond oil, vitamin E and lemon juice can be apply around the eyes along with smooth gentle massage with tip of ring finger leave it around the eye overnight . In morning wash it with cold water.
- Also check your diet because sometimes puffy eyes can be overcome but dark circle remains because of lack of iron in your diet.
- Few eye exercise like blinking, tartan can helps to reduce puffy eyes by stimulating blood circulation & lymphatic drainage.
- Turmeric also a powerful antioxidants that seas inflammation and minimize under eye bags & dark circles can use it along with massage medium or can use it in a thin layer of pack around the mixture of fresh juice, vitamin E, lemon, honey.
- If you having puffy eyes due to physical & mental trauma then can follow a balance diet, balance lifestyle along with regular excessive, yoga asanas, pranayama & meditation.

COMPLEXION TREATMENT:-

What is complexion?

Complexion is defined as the skin without any blemishes, scar marks it should be smooth in color, texture & appearance may be it dark, medium & fair in color.

CAUSES FOR CHANGE IN COMPLEXION:-

The main causes for change in complexion is change in production of melanin, sebaceous gland.

1. Medication
2. Change in hormonal level.
3. Exposure to sunlight
4. Any kind of reaction especially through metal
5. Radiation

REMEDYS:-

- In medical science laser treatment helps to helps to destroy melanin which leads whitening of skin.
- Microdermabrasion can also help to whitening the skin by using whitening serum, radium.
- Chemical peeling along with oxalic acid.
- Regular use of vitamin C containing products as for massage & cosmetic along with diet can helps to clear complexion of the skin.

- Due to hormonal imbalance it is the reason for bad complexion. Do practice few yoga asana, pranayama & regular medication can help to stimulate the hormones and overcome complexion issue and give due shiny healthy skin. Diet plays an important role to overcome from complexion problem.
- So add food that contain ration (vitamin A). Bite carotid. All type of orange to yellow fruits & vegetables citrus food (vitamin C, lemon, guava, green chili), Variety of berry's, antioxidant product. Green tea which helps in detoxify body. Small amount of caffeine can reduce stress level & induces. An adequate amount of tomato (oxalic acid). Add adequate amount of raw- onion (act as very good antioxidant for body. Add adequate amount of almond, wall nuts other nuts can supply healthy fats for good functioning of the system vitamin, digestive system & immune system.
- Follow up regular cleansing routine (1. cleansing, 2. scrubbing, 3. steaming (if necessary) Massage, mask or pack, toner, cold compression).
- Along with the skin care routine can use high frequency in credit galvanic if necessary.
- It is very much necessary to have a sound sleep that can be 4 hours or 6 to 8 hours.

FACIAL WITH LYMPHATIC DRANAGE:-

The lymphatic drainage occurs by lymphatic system. Its organic system is a part of circulatory & immune system

along with large network of lymphatic vessel, organic & tissues. It carries the clear fluid called as lymph towards the heart. It has many functions especially:-

- a) It protect our body from illness.
 - b) Maintaining body fluid.
 - c) Help in absorbing digestive tract fact.
 - d) Most importantly helps in removing cellular waste matter from the body.
- The excessive amount of fluid at tissues are removed, by lymphatic system.
 - It helps in production of immune cells such as lymphocytes, monocytes & antibody produce cells called as plasma cells.
 - The lymphatic organs like bone marrow (sponge like tissues), Thymus (located above the heart just behind thoracicavity) breast bone, and lymph node (are the small bean shaped tissues, spleen, tonsils, mucus membrane).

NOTE:-

If the lymphatic system is not working properly that may be chances of swelling of the body, inflammatory disorders like cancer may occur as it affect the immune system as body may not be able be detoxify.

LYMPHATIC DRAINAGE ALONG WITH FACIAL:-

At the face & neck the lymph nodes plays an important role.

- Various lymph nodes are there on face & neck that will help in lymphatic drainage by proper massage technique and in Ayurveda known as magma points.
- By a proper massage technique we can able to stimulate lymphatic drainage and also make the cell ready to get fresh nutrients.
- It is very much necessary to keep your position proper, so that you can give adequate pressure at the particular node.
- Be careful while giving massage around the eye, ear & neck because these are the sensitive area, wrong massage & strokes may cause pain and damage of the tissue.
- A gentle, smooth, proper massage technique along with knowledge facial muscles and tissues for facial lymphatic drainage.
- Gentle and perfect pressure at the lymph node while giving facial massage can help to drain out toxins from the lymph node but wrong or deep pressure may damage the tissue around node and also may cause many problems like pain, suffocation, irritation, discoloration of skin etc.
- Along with electrical gadget & machineries it's very much important to apply adequate amount of pressure with finger tips & pads, palm and heel of palm in adequate amount & direction.
- Duration, direction, rhythm & pressure plays and important role while giving facial treatment & for lymphatic drainage.

- Few more important are there, that active the lymphatic system and to remove toxins from face & body.
- a) Regular exercise is for-most to remember.
- b) Regular massage with proper technique.
- c) Regular shower by scrubbing gently in whole body & face for 10 min (cold & hot Water shower is beneficial)
- d) Breathing exercise & pranayama are very important role for drainage(deep breathing exercise)
- e) Drinking clean water 4-5 glasses.
- f) Avoid wearing tight clothes.
- g) Adopt the food that helps in lymphatic drainage. Like green leafy vegetables, fresh fruits with low sugar, regular eating of garlic and raw onion, almonds, green tea or can go for light black tea and black coffee.

OZONE (O₃)

- ❖ Ozone therapy is very effective to treat skin problems like acne, pimples etc.
- ❖ It's also useful to erase scar marks, the no of oxygen molecule due to ozonizer can makes the skin feel rich with oxygen and could hell with itself along with applied ingredient.
- ❖ It speed up heeling procedure and few experience improve with the use ozonizer.
- ❖ Generally the impact noticed after 4 weeks of treatment/therapy like anti-aging, anti-acne treatment.

- ❖ Many skin issue like acne, wrinkles, allergy, cellulites, fatness/ extra fat are reflecting the skin surface very easily can be deal properly by use of ozonizer.
- ❖ Ozonizer also have impact of detoxification, anti-microbial, anti-viral and also increasing organism immunity.
- ❖ Proper ozonizer can also help preserving beauty and health of skin.
- ❖ It helps for the production of collagen along with sufficient with protein and vitamin C.
- ❖ Ozone theory is revolutionary remedy to treat the skin by allowing it to restore the immunity.

ULTRASONIC MACHINE

- ❖ In ultrasonic machine a high level sound wave technology is used to penetrate and stimulate the deep below surface of the skin that will promote cellular renewal, repair and growth.
- ❖ It also help is toning muscles, increases blood circulation.
- ❖ It also helps to reduce puffiness and swelling.
- ❖ It can be used all around the body, neck, arms, waist, hips, buttock, legs, and stomach and all over the body.
- ❖ Ultrasonic machine can be used for various skin problem like
 - Exfoliating dead skin cells.
 - To clean the skin by clearing acne
 - To keep face tight and delay wrinkles, fine lines
 - Reduces under eye bags, puffiness and swelling
 - Help reducing redness and scar marks on the skin

NOTE: -

- ❖ Sometimes it may cause pain, redness, swelling and discomfort during use of machine
- ❖ These are experienced due to wrong application of machine with wrong pressure, duration and intensity.
- ❖ Sometimes there may be hyper pigmentation (changing of skin colour).

CLINICAL MANAGEMENT THROUGH ELECTRICAL TREATMENT

- ❖ Electricity is applied in 2 forms –
 - Direct current (DC)
 - Alternative current (AC)
 - **Direct current (DC)** – It is a constant and even flowing current travelling in one direction.
 - **Alternative current (AC)** – It is rapid and interrupt current travelling in zig zag fashion.
- ❖ We need converter or rectifier to change the converter from one type to other.
- ❖ A converter is an apparatus used to convert DC to AC whereas rectifier is used to change AC to DC.
- ❖ Galvanic is direct current.

Galvanic current

- ❖ The galvanic current is a constant and direct current generated by a direct current.
- ❖ It possesses polarity. Chemical changes are produced when the current is passed through the tissues and fluids of the body.
- ❖ **Tests of polarity** - Polarity means having opposite poles in electric current.

- Before applying the galvanic current, the cosmetologist should know which are positive and negative poles.
- Most wall plates now have a polarity indicator.
- ❖ The effects of the positive pole on the body are just the opposite of those produced by the negative pole.

Positive pole (Anode)	Negative pole (cathode)
Acid reaction (germicidal effect)	Alkaline reaction
Soothes nerves	Irritates nerves
Decreases blood supply	Increases blood supply
Harden tissues	Soften tissues

- ❖ The positive pole may be used:
 - To make flabby skin and tissues firmer.
 - To close the pores after finishing a facial treatment.
 - To decrease reduces in mild acne.
 - To prevent inflammation after comedone treatment and electrolysis.
 - To force astringent lotions into the skin.
- ❖ The negative pole may be used for the following conditions –
 - To stimulate the circulation and nutrition of dry, pale skin and scalp.
 - To force bleaching solutions into the skin.
- ❖ **Caution** – Do not use the negative galvanic current over the skin having either broken capillaries or a pustular acne conditions.

❖ **How applied –**

- The effects of the galvanic current are experienced through the customer who is always part of electrical circuit.
- The active electrode applied by cosmetologist is connected to the particular pole whose action is desired.
- Both the active and inactive carbob (ball and cylinder) electrodes, must be tightly wrapped in moistened pledget of cotton. Example – To close the pores the ball electrode, which would be active is wrapped in cotton moistened with astringent.
- At the end of the treatment, the current is slowly reduced before breaking contact with the customer.

High frequency current

- ❖ The high frequency is characterized by a high rate of vibration.
- ❖ On chief interest to the cosmetologist is the “tesla current”, commonly known as the violet ray, used for both scalp and facial treatment.
- ❖ The primary action of this current is thermal or heat producing.
- ❖ Because of the rapid vibrations, there are no muscular contractions.
- ❖ The physiological effects are either stimulating or soothing, depending on the method of application.
- ❖ The facial electrode being flat and the scalp electrode, being rake shaped.
- ❖ As the current passes through the glass electrode, tiny violet sparks are emitted.

- ❖ All treatments given with high frequency should be started with mild current and gradually increased to required strength.
- ❖ The duration of treatments depends upon the condition to be treated. For a general facial or scalp treatment above 5 minutes should be allowed.
- ❖ **Direct surface application** - the cosmetologist holds the electrode and applies over the customer's skin. In facial treatment, the electrode is directly applied on cream.
- ❖ **Caution-** Avoid contact by customer with any metal such as chair arms, tools etc. A burn may occur at the point of contact.
 - To obtain sedative, calming and soothing effects with high frequency current, the general electrification treatment is used, or the electrode is kept in close contact with the parts treated by use of direct surface application.
 - To obtain a stimulating effect, the electrode is lifted a lightly from the parts to be treated by using it through the clothing or a towel.
 - In using high frequency with the skin and scalp lotions, never use a lotion with alcoholic content.
 - If it is desirable to use this type of lotion use the electricity first and the lotion after the application of electricity has been completed.
- ❖ **Benefits of high frequency** –
 - Stimulates circulation of blood
 - Increases glandular activity and increases metabolism

- Aids in elimination and absorption, germicidal action occurs during use.
- ❖ The tesla current may be used to treat falling hair, itchy scalp, tight scalp, essentially oily or dry skin and scalp.

Infrared lamp

Use of infrared treatment –

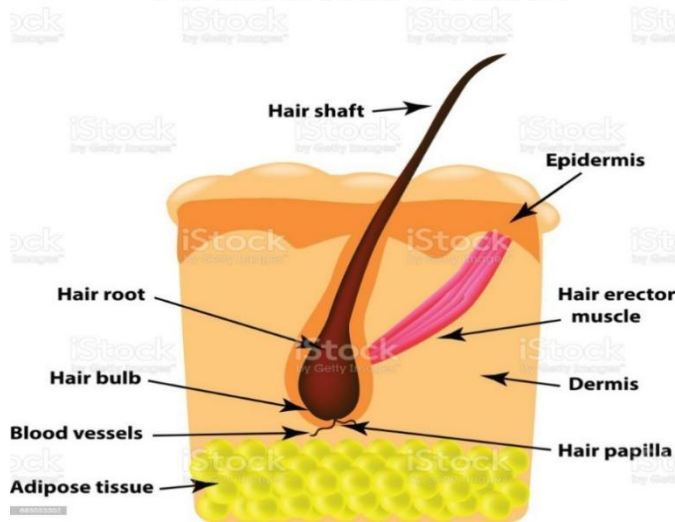
- ❖ It helps to relax skin without increasing the temperature of body
- ❖ It helps increasing blood circulation, increasing metabolism and chemical changes within the skin tissues
- ❖ Production of perspiration in the skin
- ❖ Relief in pain

CHAPTER – 2

HAIR DISORDERS AND ITS TECHNIQUE /THERAPY TO DEAL WITH IT

HAIR

HAIR STRUCTURE



- ❖ Hair is appendage of skin.
- ❖ It is a dead protein called keratin.
- ❖ It is divide into 2 principal parts: -
 - Hair root: - It is the portion of the hair structure found beneath the skin surface. This is portion of hair enclosed with in follicle
 - Hair shaft: - It is the portion of the hair structure extending above the skin surface.

Structure associated with hair root

- ❖ Structures closely associated with the hair root are hair follicle, hair bulb and hair papilla.

Structure associated with hair follicle

- ❖ Structures closely associated with the hair follicle arrector pilli, sebaceous gland.

The structure of the hair is composed of cells arranged in 3 layers:-

1. Cuticle
2. Cortex
3. Medulla

2.1 Cause for hair problem

- ❖ Hair loss, also known as alopecia or baldness, refers to a loss of hair from part of the head or body. Typically at least the head is involved.
- ❖ The severity of hair loss can vary from a small area to the entire body inflammation or scarring is not usually present.
- ❖ Hair loss in some people causes psychological distress.

- ❖ Common types include male-pattern hair loss, female-pattern hair loss, alopecia areata, and a thinning of hair known as telogen effluvium.
- ❖ The cause of male-pattern hair loss is a combination of genetics and male hormones; the cause of female pattern hair loss is unclear; the cause of alopecia areata is autoimmune; and the cause of telogen effluvium is typically a physically or psychologically stressful event.
- ❖ Telogen effluvium is very common following pregnancy.
- ❖ Less common causes of hair loss without inflammation or scarring include the pulling out of hair, certain medications including chemotherapy, HIV/AIDS, hypothyroidism, and malnutrition including iron deficiency. Causes of hair loss that occurs with scarring or inflammation include fungal infection, lupus, erythematosus, radiation therapy, and sarcoidosis. Diagnosis of hair loss is partly based on the areas affected.
- ❖ Treatment of pattern hair loss may simply involve accepting the condition, which can also include shaving one's head.
- ❖ Interventions that can be tried include the medications minoxidil (or finasteride) and hair transplant surgery.
- ❖ Alopecia areata may be treated by steroid injections in the affected area, but these need to be frequently repeated to be effective.
- ❖ Hair loss is a common problem.
- ❖ Pattern hair loss by age 50 affects about half of men and a quarter of women. About 2% of people develop alopecia areata at some point in time.

- Signs and symptoms

- Skin conditions
- Psychological

• Causes

- Pattern hair loss
- Infection
- Drugs
- Trauma
- Pregnancy
- Other causes
- Genetics

Although not completely understood, hair loss can have many causes:

Pattern hair loss

- ❖ Male pattern hair loss is believed to be due to a combination of genetics and the male hormone dihydrotestosterone.
- ❖ The cause in female pattern hair loss remains unclear.

Infection

- Dissecting cellulitis
- Fungal infections (such as tinea capitis)
- Folliculitis
- Secondary syphilis
- *Demodex folliculorum*, a microscopic mite that feeds on the sebum produced by the sebaceous glands, denies hair essential nutrients and can cause thinning. *Demodex folliculorum* is not present on every scalp and is more likely to live in an excessively oily scalp environment.

Drugs

- Temporary or permanent hair loss can be caused by several medications, including those for blood pressure problems, diabetes, heart disease and cholesterol. Any that affect the body's hormone balance can have a pronounced effect: these

include the contraceptive pill, hormone replacement therapy, steroids and acne medications.

- Some treatments used to cure mycotic infections can cause massive hair loss.
- Medications (side effects from drugs, including chemotherapy, anabolic steroids, and birth control pills)

Trauma

- Traction alopecia is most commonly found in people with ponytails or cornrows who pull on their hair with excessive force.
- In addition, rigorous brushing and heat styling, rough scalp massage can damage the cuticle, the hard outer casing of the hair. This causes individual strands to become weak and break off, reducing overall hair volume.
- Frictional alopecia is hair loss caused by rubbing of the hair or follicles, most infamously around the ankles of men from socks, where even if socks are no longer worn, the hair often will not grow back.
- Trichotillomania is the loss of hair caused by compulsive pulling and bending of the hairs. Onset of this disorder tends to begin around the onset of puberty and usually continues through adulthood. Due to the constant extraction of the hair roots, permanent hair loss can occur.
- Traumas such as childbirth, major surgery, poisoning, and severe stress may cause a hair loss condition known as telogen effluvium, in which a large number of hairs enter the resting phase at the same time, causing shedding and subsequent thinning.
- The condition also presents as a side effect of chemotherapy – while targeting dividing cancer cells, this treatment also affects hair's growth phase with the

result that almost 90% of hairs fall out soon after chemotherapy starts.

- Radiation to the scalp, as when radiotherapy is applied to the head for the treatment of certain cancers there, can cause baldness of the irradiated areas.

Pregnancy

❖ Hair loss often follows childbirth in the postpartum period without causing baldness. In this situation, the hair is actually thicker during pregnancy owing to increased circulating oestrogens. Approximately three months after giving birth (typically between 2 and 5 months), oestrogen levels drop and hair loss occurs, often particularly noticeably around the hairline and temple area. Hair typically grows back normally and treatment is not indicated. A similar situation occurs in women taking the fertility-stimulating drug clomiphene.

Other causes

- Alopecia areata is an autoimmune disorder also known as "spot baldness" that can result in hair loss ranging from just one location (*Alopecia areata monocularis*) to every hair on the entire body (*Alopecia areata universalis*). Although thought to be caused by hair follicles becoming dormant, what triggers alopecia areata is not known. In most cases the condition corrects itself, but it can also spread to the entire scalp (alopecia totalis) or to the entire body (alopecia universalis).
- Localized or diffuse hair loss may also occur in cicatricial alopecia (lupus erythematosus, lichen Plano pilaris, folliculitis decalvans, central centrifugal cicatricial alopecia, postmenopausal frontal fibrosing alopecia, etc.). Tumours and skin outgrowths also induce localized

baldness (sebaceous nevus, basal cell carcinoma, squamous cell carcinoma).

- Hypothyroidism (an under-active thyroid) and the side effects of its related medications can cause hair loss, typically frontal, which is particularly associated with thinning of the outer third of the eyebrows (also seen with syphilis). Hyperthyroidism (an over-active thyroid) can also cause hair loss, which is parietal rather than frontal.
- Temporary loss of hair can occur in areas where sebaceous cysts are present for considerable duration (normally one to several weeks).
- Congenital triangular alopecia – It is a triangular, or oval in some cases, shaped patch of hair loss in the temple area of the scalp that occurs mostly in young children. The affected area mainly contains vellus hair follicles or no hair follicles at all, but it does not expand. Its causes are unknown, and although it is a permanent condition, it does not have any other effect on the affected individuals.
- Gradual thinning of hair with age is a natural condition known as involutional alopecia. This is caused by an increasing number of hair follicles switching from the growth, or anagen, phase into a resting phase, or telogen phase, so that remaining hairs become shorter and fewer in number.
- An unhealthy scalp environment can play a significant role in hair thinning by contributing to miniaturization or causing damage. Air and water pollutants, environmental toxins, conventional styling products and excessive amounts of sebum have the potential to build up on the scalp. This debris can block hair follicles and cause their deterioration and consequent miniaturization of hair. It can also physically restrict hair growth or damage the hair cuticle, leading to hair that is weakened and easily broken off before its natural lifecycle has ended.

2.2 Categories of hair damage

- Even if you take lots of precautions — like breaks from heat-styling, using hair masks regularly, and extending time between color appointments — at a certain point, your hair may still show **signs of damage** from daily wear and tear. Some of the most unlikely hair damage culprits (think: ponytails and stressful life events) can take a serious toll.
- If you notice that your hair is lacking luster, moisture, or density, it might be time to diagnose the issue and work toward a solution. We spoke to experts for insight on each type of damage, what the common causes are, and what we can do to reverse (or at least minimize) it.

Split Ends

- You don't need a microscope to spot split ends. A few telltale signs can help point to the problem, it will tangle a lot more with split ends.
- In this case, cutting your hair is really the best advice for banishing split ends. Body suggests getting a trim at least every two months. “Think of it as just a dusting,” she explains. “It doesn’t have to be a significant haircut to make a difference.”
- Have fine hair? Then those regular appointments are even more important. Hair thickness has a lot to do with the actual size of the follicle. If the follicle is narrow than the strand is thinner and if it's a wide follicle, the strands are thicker so if your hair is fine, it will be more susceptible to damage and need a little extra TLC.

- Need a temporary solution until your next cut? Split end-mending serums that contain polymers, like Oribe Split End Seal Beautiful Color Treatment, can fill those microchips and mend any splits. (But they're still no substitute for a trim.)

Colour Damage

- Even taking a break from regular foils won't undo years of lifting and stripping away color — you just have to wait for the color or bleach to grow out to completely get rid of the damage. But there's a good way to make sure your color causes as minimal damage as possible: Find a professional who cares about the condition of your hair.
- Choose a color who puts the integrity of your hair first, Some things that make a difference are proper use of color chemicals, not using too strong of a developer for the texture of the hair being colored, and avoiding unnecessary overlap of color or bleach on previously colored hair. I often do a conditioning treatment instead of a gloss, because gloss still has peroxide in it.”
- Additionally, a thoughtful at-home color maintenance plan can help. There's a reason hairstylists recommend utilizing color-safe products. The wrong shampoo can over-lift the cuticle and cause more color fading and loss of moisture.
- For those with both colored *and* textured hair, damage can look like a double-whammy. "Bleached and over-processed hair will [reveal damage faster] than other hair types," says Los Angeles-based hairstylist Graham Nation. But curly hair will get drier quicker and more

frequently. It needs extra moisture to help curls come to life, in general.

- With that in mind, he recommends that those with more texture indulge in hair masks and deep conditioning treatments more often. Briogeo's Don't Despair, Repair Deep Conditioning Mask.

Chemical Damage

- Chemical treatments, like relaxers and perms, strip the hair which can lead to breakage. Your best defense? The goal is to first prevent further damage by adjusting the hairstyling habits that created the problem *and* implementing practices that promote hair health and nourishment to the hair fiber.

Heat Damage

- A dependence on hot tools for your daily routine can reveal itself in multiple ways. "Heat opens the cuticles, allowing the hair to dry and shape when you are blow-drying or curling your hair, "Too much can damage it, though — so using a heat protectant is necessary every time.
- Other ways to prevent heat damage, according to Emmanuel, is to use a heat setting appropriate for your hair texture, avoid applying heat on dirty hair, and try not to use heat every day.
- "A product for thermal protection would have ingredients that are either activated by heat to protect strands or can provide a protective covering around hair strands to prevent direct heat from inflicting damage," explains Wilson.

Thinning or Hair Loss

- Lots of different things can cause thinning and hair loss, including damage to the hair. Are thinning and hair loss one and the same? According to the pros, not exactly.

There are four distinct categories of hair damage. They are: -

1. Cuticle damage
2. Moisture imbalance
3. Protein loss
4. Chemical or elasticity damage

Cuticle damage

- The cuticle layer, the outer part of the hair, protects the hair.
- It is the first line of defense against all the other forms of hair damage and should be considered in all hair services.
- When the the cuticle is damaged, the hair appears dull and lacks sheen.
- It tangles easily, and has a rough texture.
- Hair with cuticle damage will wet easily which means that it absorbs liquids very fast.
- This characteristic, porosity can lead to further damage of the interior layers of the hair.
- Cuticle damage can be caused by heat, by mechanical abuse during styling and by chemical services.
- It is important that your clients understand how to care for their hair at home to prevent this damage from occurring.

- Excess heat from blow dryers, curling irons and hot rollers can weaken the cuticle layers, leading to split ends and a dry, dull appearance.
- Mechanical abuse such as brushing the hair while wet can cause extreme damage to the hair that is nearly impossible to repair.
- Chemical services, since they must penetrate the cuticle layer to alter properties of the cortex, always cause some degree of cuticle damage.

NOTE: -

- Cuticle damage is the first occur.
- It can be present with no other hair problems evident.
- It is important that you treat it right away so that no further harm can happen to the hair shaft.
- The first method of acidification, the application of a product with low pH to the hair.
- In the past, vinegar or lemon rinses were used to “super acidify” the hair after chemical services.
- Spray clean, damp hair with a citric acid or magnesium solution.
- Work the solution through the hair for few minutes and apply moisturizing cream directly over acidifier. Time according to manufacturer’s directions and rinse.
- Products with acidifying ingredients in diluted form combined with emollients to make the cuticle surface feel smooth are used to maintain the cuticle.

Moisture imbalance

- Healthy hair should have a moisture content of nine to eleven percent.
- This gives it the pliability that it needs to hold style and lubricates the interior layers of the hair so that it has bounce and body.
- Moisture imbalance can only happen if the cuticle is damaged, so it is important to consider that as well.
- There are two types of moisture problems that the hair can have; too much or too little.
- The first that of too little moisture, is more common.
- Dry hair looks and feels brittle.
- If the atmosphere is also dry, this hair will have static electricity, more commonly known as “fly-away hair”.
- Moisture loss can be caused by exposure to the elements; however, the most common cause of moisture damage is thermal styling.
- Advise your clients to avoid excess heat when drying, curling or pressing the hair.
- Dryness is also a side effect of chemical services.
- You can correct it in salon during the process, but your client should maintain the moisture level with quality products at home.
- The best method is to use a moisturizer, a special conditioner that contains humectants that carry moisture and bind it inside the hair.
- Most moisturizers also contain ingredients that protect cuticle to further damage.
- The second type of moisture damage, that of too much, is less common but occurs in humid areas and when

chemical services such as permanent waves have not been properly finished. This hair is limp and lifeless.

- It often takes a very long time to dry and does not hold a curl or style.
- If the hair is wavy or curly, it will have a tendency to frizz when dry, especially around the hairline.
- To treat excess moisture, first super acidify the hair.
- Spray clean, damp air with citric or magnesium solution.
- Work the solution through the hair for few minutes and apply a moisturizing cream directly over the acidifier.
- Time according to manufacturer's directions and rinse.

Protein loss

- The primary component of hair, accounting for 85 percent of its structure.
- Any chemical service that alters the cortex, the second layer of the hair containing its bonds, may cause protein damage.
- The bonds occur between amino acids, building blocks to protein. So any alteration of those bonds results in protein loss.
- Hair that is lacking protein will break easily.
- Natural colour will look dull and lifeless and appear lighter in spots.
- Hair colour services will fade rapidly and permanent waves will not take or hold curl.
- The primary culprit in protein loss is chemical services that are not done properly especially those that are done at home.

- Excessive exposure to the sun can rob the protein from the hair and even fluorescent lighting can cause mild protein loss.
- Hair with damage should be treated with a protein conditioner.
- Today's professional conditioners contain protein that has a small molecular weight.
- This means that the size of the ingredient is small enough to be easily and rapidly absorbed into the hair.
- Common ingredients are plant and herbal extracts and hydrolyzed animal protein.
- Liquid protein conditioners are used for fine, thin or moderately damaged hair.
- They are also incorporated into chemical services.
- Cream protein conditioners are used for seriously damaged hair and often include moisturizers as protein damage almost never occurs without moisture loss.

Chemical or elasticity damage

- Normal hair will stretch about 20 percent of its length when dry and return to its normal position.
- When elasticity damage occurs, the hydrogen and the salty bonds in the cortex have been seriously disrupted or even destroyed to such an extent that the elasticity of the hair is gone.
- The hair is extremely brittle when it is dry, breaking easily.

- When the hair is wet, it feels soft and spongy and stretches excessively without returning to its normal position. This hair has serious problems.
- Elasticity damage can also be caused by brushing the wet hair, stretching the hair beyond its limits.
- Discourage any further chemical services until the damage is corrected.

Corrective treatments

- If you are choosing a treatment to correct multiple problems, always correct elasticity damage first, then protein, then moisture and finally cuticle damage.
- This is known as the AMR method; acidifying, reconditioning, moisturizing.

Dandruff

- ❖ Dandruff is the presence of small, white scales usually appearing on the scalp and hair.
- ❖ Dandruff is also known by the medical term of pityriasis.
- ❖ Just as the skin is continually being shed and replaced, in a similar manner the uppermost layer of the scalp is being cast off all the time.
- ❖ Ordinarily, these horny scales are loose and fall off freely.
- ❖ The natural shedding of the horny scales, too infrequently removed, is often mistaken for dandruff.
- ❖ The causes of dandruff are: -
 - A direct cause of dandruff is the excessive shedding of the epithelial cells. Instead of growing to the surface and falling off, the horny scales accumulate on the scalp.

➤ Indirect or associated causes of dandruff are a sluggish condition of the scalp occasioned by poor circulation, infection, injury, lack of nerve stimulation, improper diet and uncleanliness. Contributing causes are the use of strong shampoos and insufficient rinsing of the hair after a shampoo.

❖ The two principal types of dandruff are: -

➤ Pityriasis capitis simplex – dry type

➤ Pityriasis steatoides – a greasy or waxy type

➤ In Pityriasis capitis simplex is characterized by an itchy scalp and small, white scales usually attached masses to the scalp, or scattered loose in the hair. Occasionally they are so profuse that they fall on shoulders. Dry dandruff is often result of a sluggish scalp, caused by poor circulation, lack of nerve stimulation, improper diet, emotional and glandular disturbances or uncleanliness.

▪ **Treatment** – frequent scalp treatments and mild shampoos, regular scalp massage, daily use of antiseptic scalp lotions, applications of scalp ointment and electrical treatments will correct this condition.

➤ Pityriasis steatoides (greasy or waxy type of dandruff) is scaliness of the epidermis mixed with sebum which causes it to stick to the scalp in patches. The associated itchiness causes the person to scratch the scalp. If the greasy scales are torn off, bleeding or oozing of sebum may follow. Medical treatment is advisable.

Animal parasitic infections

- ❖ Scabies (the itch) is a highly contagious, animal parasitic skin disease, due to the itch mite.
- ❖ Vesicles and pustules may form from the irritation of the parasite or from scratching the affected areas.
- ❖ Pediculosis capitis is a contagious condition caused by the head louse (animal parasite) infesting the hair of the scalp.
- ❖ As the parasites feed on the scalp, itching symptoms are felt and scratching may cause infection.
- ❖ The head louse is transmitted from one person to another by intimate contact with infested hats, combs, brushes or other personal articles.
- ❖ To kill head lice, advise customer to apply larkspur tincture or other medication to the entire head before retiring.
- ❖ The next morning, shampoo with germicidal soap.
- ❖ Repeat the treatment as necessary. Never treat in the beauty salon.

Alopecia:-

- ❖ Alopecia is the technical term for any form of loss of hair.
- ❖ The natural falling out of the hair should not be confused with alopecia.
- ❖ When hair has grown to its full length, it comes out itself and is replaced by a new hair.
- ❖ The natural shedding of the hair occurs most frequently in spring and autumn. On the other hand lost alopecia does not come back, unless special treatment is given to encourage hair growth.

- ❖ Certain hair styles are contributing factors to hair loss or baldness.
- ❖ The prolonged use of the ponytail, tight braids, tight pin curls and implements such as elastic bands, metal clips, bobby pins or hair rollers can cause the loss of hair.
- ❖ The cosmetologist can help prevented this type of alopecia by advising the customer that such abuse can possibly damage scalp and hair.
- ❖ Alopecia senilis is the form of baldness occurring in old age. This loss of hair is permanent.
- ❖ Alopecia premature is the form of baldness beginning any time before middle age by a slow thinning process due to the fact that the first hairs that fall out are replaced by regrowth of weaker ones.
- ❖ Alopecia areata is the sudden falling out of hair in round patches, or baldness in spots, sometimes caused by anemia, scarlet fever, typhoid fever or syphilis.
- ❖ Affected areas are slightly depressed, smooth and very pale, due to the decreased blood supply. Patches may be round or irregular and vary in size from $\frac{1}{2}$ inches to 2 or 3 inches in diameter. In most conditions of alopecia areata, the nervous system has been subjected to some injury.
- ❖ Since the flow of blood is influenced by the nervous system, the affected areas is poorly nourished as well.
- ❖ Alopecia may appear in a variety of different forms resulting from many abnormal condition may be improved by proper scalp treatment.

Ringworm (contagious disorders)

- ❖ Tinea is the medical term for ringworm.

- ❖ Ringworm is caused by vegetable parasites.
- ❖ All forms are contagious. Tinea is transmissible from one person to another.
- ❖ The disease is commonly passed by scales or hairs containing fungi.
- ❖ Shower baths, swimming pools and un-sanitized articles are also sources of transmission.

❖ **Symptoms –**

- Ringworm starts with a small reddened patch of little blisters.
- They spread outward and heal in the middle with scaling.
- Several such patches may be present.
- Any ringworm condition should be referred to the physician.

❖ **Types of ringworm**

- Tinea capitis (ringworm of the scalp) is a contagious, vegetable parasite disease of the hairy scalp.
- Characterized by red papules or spots at the opening of hair follicles.
- The patches spread, the hair become brittle and lifeless and breaks off, leaving a stump or falls from the enlarged open follicles
- Tinea favosa also called as favus or honey comb ringworm, is an infectious growth due to a vegetable parasite.
- It is characterized by dry, sulphur yellowish cup like crusts on the scalp called scicula which have a peculiar mousy odour.

- Scars from favus are bold patches which may be pink or white and shiny.
- It is very contagious and should be referred to a physician.