JOB ROLE – BEAUTY THERAPIST

Sector – Beauty & Wellness

(Qualification Pack Code: BWS/Q 0102)

Class XI

विद्यया ऽमृतमश्नुते
एन सी ई आर टी
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Unit 2: Skincare Services

Session 1: Anatomy and Physiology of the Skin

Content

Session Objectives

The students will be able to:

- Identify the structure and functions of epidermis, dermis and subcutis; and
- State the functions of the skin and cells of skin.

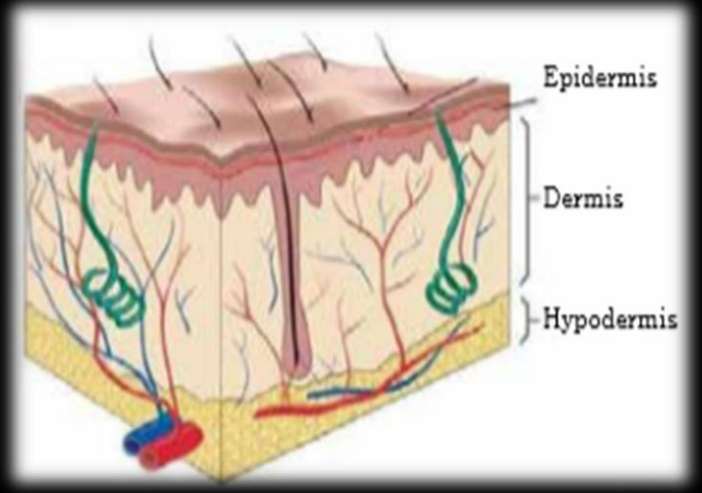
Introduction

The skin care services that are performed by the Beauty Therapist include cleansing, application of toners and skin fresheners, application of moisturisers, and bleaching. In order to provide effective skin care services, the person must have knowledge about the basic anatomy and physiology of the skin. A Beauty Therapist should be able to identify the skin type and accordingly suggest the chemicals to be used and the type of make-up to be done.

Layers of Skin

The Beauty Therapist needs to be aware of the basic anatomy and physiology of the skin in order to provide effective skincare services to clients. The skin consists of three layers

- Epidermis
- Dermis
- Hypodermis or subcutis



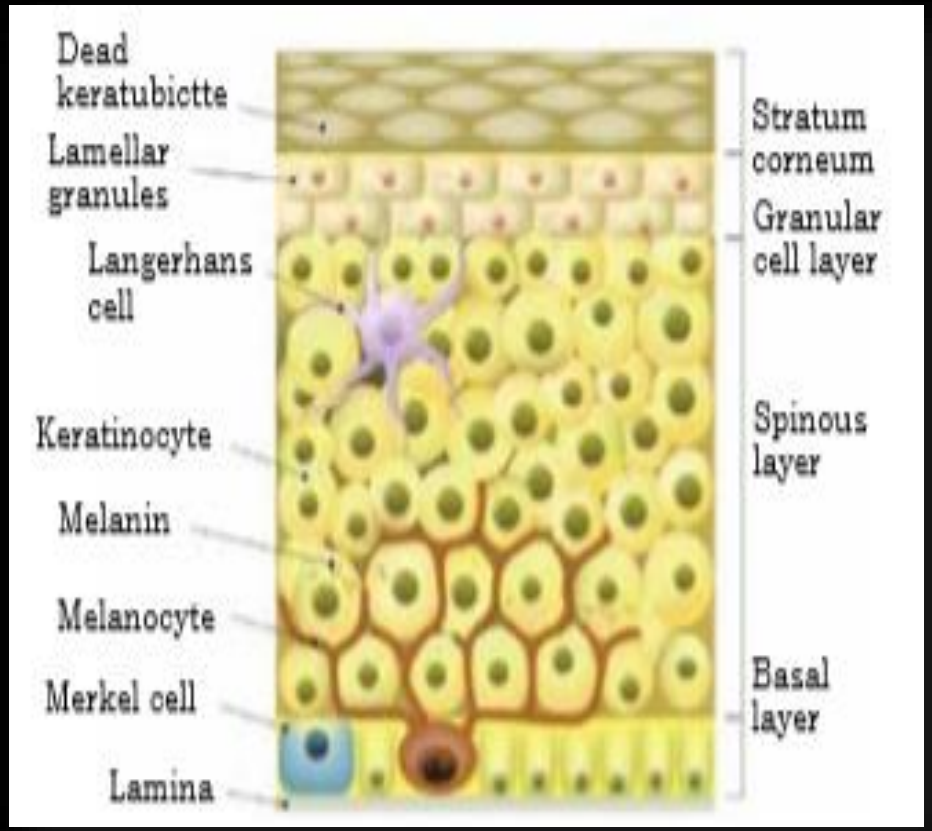
Layers of skin

Layers of Skin

Epidermis

Epidermis is the outermost or epithelial layer of the skin. It is a waterproof protective layer that covers the body and serves as a barrier to infections. The epidermis has three main type of cells. They are:

- Keratinocytes (skin cells)
- Melanocytes (pigment producing cells)
- Langerhans (immune cells)



Layers of Skin

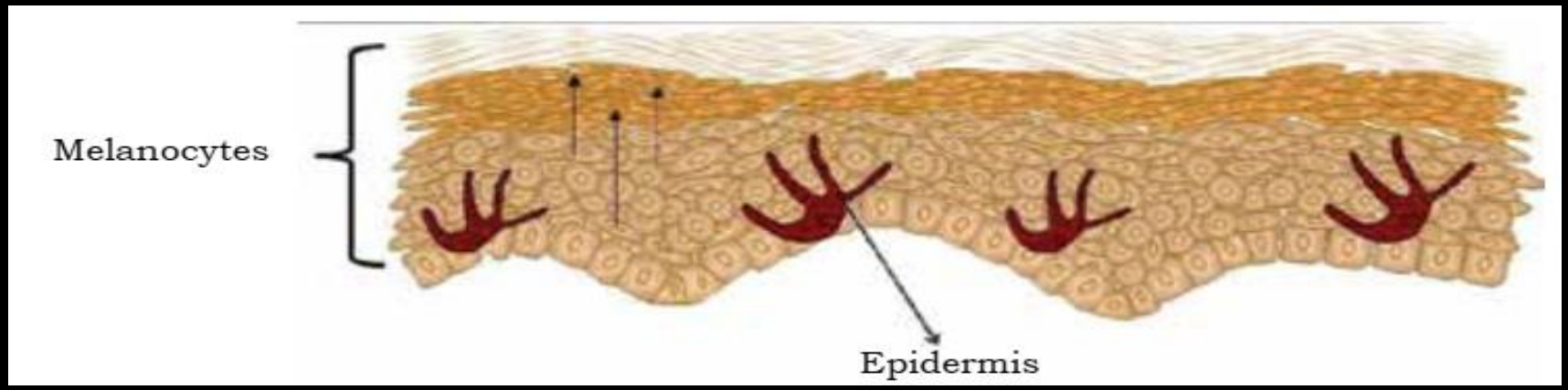
Keratinocytes

- Keratinocytes become more mature or differentiated and accumulate keratin as they move outwards. They eventually fall or rub off.
- A specialized structure lies between the epidermis and dermis. It includes various protein structures, linking the basal layer of keratinocytes to the basement membrane (hemidesmosomes) and the basement membrane to the underlying dermis (anchoring fibrils).
- The basement membrane ensures that the epidermis sticks firmly to the underlying dermis.

Layers of Skin

Melanocytes

- Melanocytes are found in the basal layer of the epidermis. These cells produce a black coloured pigment called ‘melanin’, which is responsible for skin pigmentation.
- Melanin is packaged into small parcels called ‘melanosomes’, which are then transferred to keratinocytes. Melanin protects the skin against ultraviolet rays.



Melanocytes in epidermis

Layers of Skin

Langerhans

- Langerhans are the immune cells found in the epidermis. These are responsible for helping the body identify ‘allergens’ (material foreign to the body).

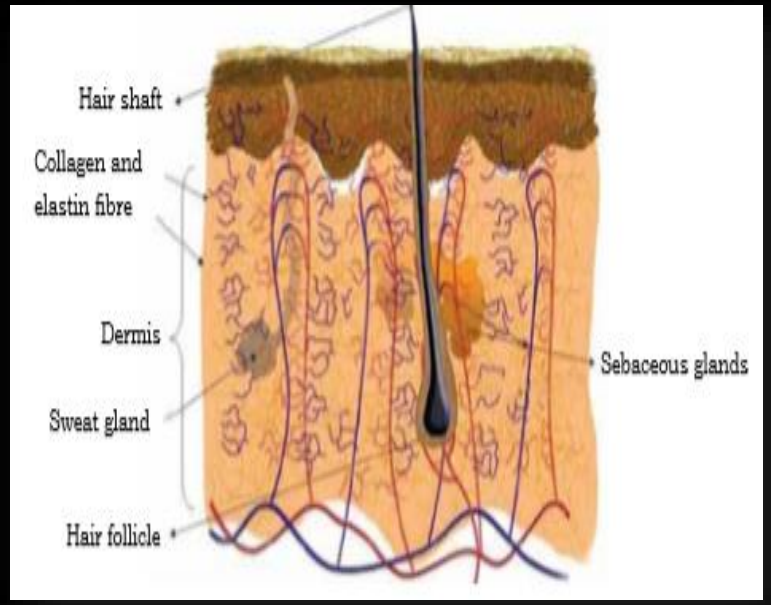
Other type of cells found in epidermis Merkel cells

- These are found in the basal layer of the epidermis.
  These are also known as ‘merkel-ranvier cells’ or ‘tactile epithelial cells’.
- These are oval-shaped mechanoreceptors necessary for light touch sensation and found in the skin of vertebrates. However, their exact role and function is not understood.

Layers of Skin

Dermis

Dermis is the fibrous connective tissue or supportive layer of the skin. It contains blood capillaries, nerve endings, sweat glands, hair follicles, and other structures. Dermis consists of collagen and elastin fibre.



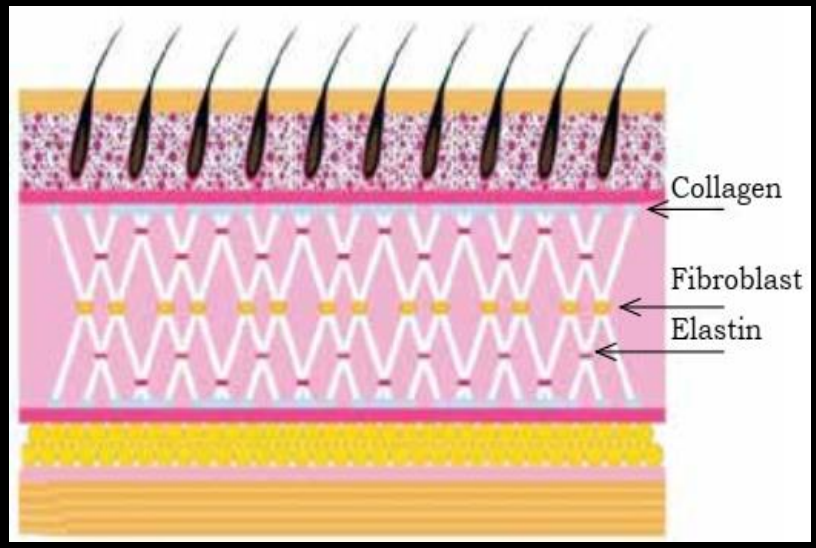
Structure of the dermis

Layers of Skin

Collagen Fibre

Collagen fibres predominate the dermis. Collagen fibre has enormous tensile strength and provides the skin with strength and thickness.

Collagen bundles are small in the upper or papillary dermis and form thicker bundles in deeper or reticular dermis.



Collagen fibre of the skin

Layers of Skin

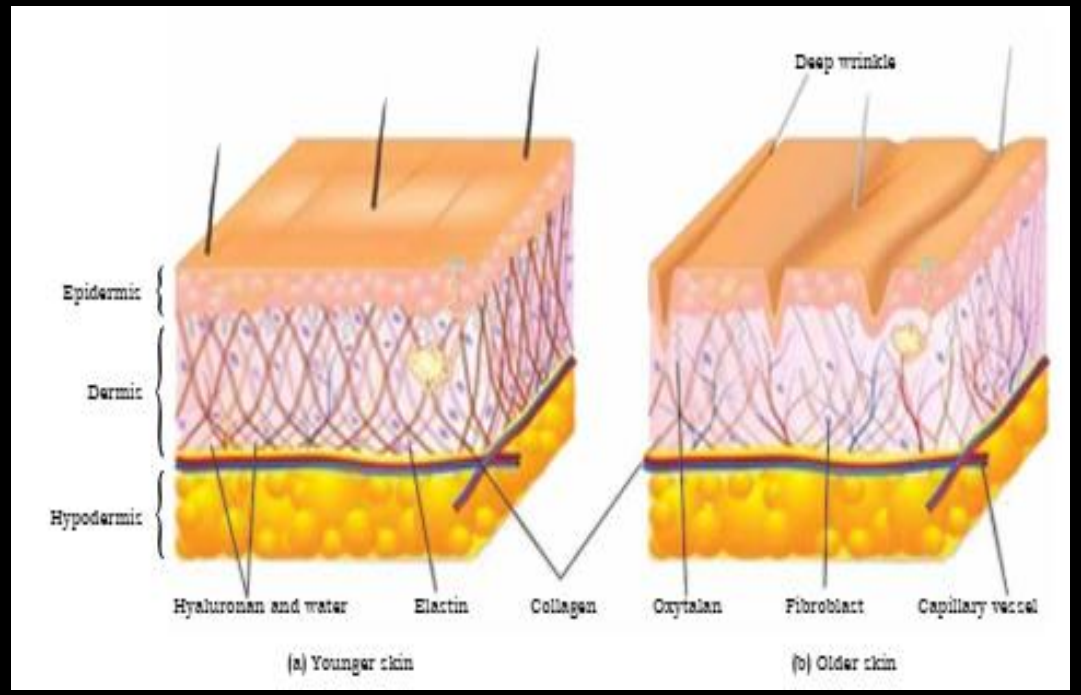
Elastin Fibre

- Elastin fibre provides elasticity and pliability to the skin. Collagen and elastin fibre are bound together by mucopolysaccharide gel, in which nutrients and wastes can diffuse into and form other tissue components.

Layers of Skin

Hypodermis or Subcutis

- Subcutis mainly consists of fat cells (adipocytes), nerves and blood vessels. The fat cells are organised into lobules, which are separated by structures called 'septae', which contain nerves, larger blood vessels, fibrous tissue and fibroblasts.
- Fibrous septae may form dimples in the skin (cellulite).



Collagen fibre in younger and older skin

Functions of the Skin

The basic functions of the skin are as follows:

- Protection
- Thermoregulation
- Hormone synthesis
- Excretion
- Immunological role
- Sensory function

Summary

In this session, you have learnt to identify the structure and functions of epidermis, dermis and sub-cutis. You have also learnt about the functions of the skin and cells of skin.

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