

# Thick skin (histological specimen)

## Layers

### Epidermis

The Epidermis (skin) consists of a **stratified squamous'' epithelium with a keratinization**. It regularly runs into the dermis layer and thus creates "epidermal ridges". On the cross-section, we distinguish five layers (layer = *stratum*):

- str. basale: cubic to cylindrical basophilic elements in a single layer that sit on the lamina basalis. The only intercellular junctions are **desmosomes'**
- pp. spinosum: cubic polygonal elements with cytoplasmic protrusions. We find tonofibrils in them,
- str. granulosum: basophilic layer with keratohyaline granules (stains intensely dark purple),
- pp. lucidum: a thin translucent layer, the cells no longer have nuclei or organelles, they are filled mainly with keratin filaments,
- pp. corneum: anucleate cornified elements.

Pg. basale and str. spinosum are referred to by the common name '*str. germinativum* (germ layer).

### Dermis

The dermis (Slovak *suede*, Czech *skára*) develops from mesenchyme and consists of connective tissue that strengthens the epidermis. In some places, it runs into the epidermis and thus creates "dermal papillae". It consists of two layers:

- pp. reticulare: dense tissue,
- pp. papillare: thin ligament.

### Hypodermis

The hypodermis (subcutaneous tissue) consists of thin tissue, adipocytes, sweat glands (eccrine – simple coiled tubular glands opening onto the surface of the skin, basally surrounded by myoepithelial cells).

## Links

### Related Articles

- Physiological activity of the skin
- Histopathological changes in the skin

### References

- MUDR. EIS, Wenceslas – MUDR. JELINEK, Stephen – MUDR. STARLING, Martin. *Histopathological atlas* [online]. ©2006. [cit. 2010-04-15]. <<http://histologie.lf3.cuni.cz/histologie/atlas/index.htm>>.
- JUNQUIERA, L. Carlos – CARNEIRO, Jose. *Basics of histology*. 1. edition. Jinocany : H & H 1997, 1997. 502 pp. ISBN 80-85787-37-7.

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File:Thick Skin Type 2.jpg

Thick-type skin, stained with H&E

File:Thick type skin.jpg

Thick-type skin - detail, stained with H&E