

# Thick skin

## Layers

### Epidermis

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

- pp. basale: cubic to cylindrical basophilic elements in a single layer that sit on the lamina basalis. The only intercellular connections are **desmosomes**
- pp. spinosum: cubic polygonal elements with cytoplasmic protrusions. We find tonofibrils in them,
- str. granulosum: basophilic layer with keratohyalin 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 collectively called **str. germinativum** (germinal layer).

### Dermis

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

- pp. reticulare: dense connective tissue,
- pp. papillare: thin ligament.
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### 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 they are surrounded by myoepithelial cells).

## Links

### Related Articles

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

### References

- MUDR. EIS, Václav – MUDR. JELÍNEK, Štěpán – MUDR. STARLING, Martin. *Histopathological atlas* [online]. ©2006. [cit. 15.04.2010]. <<http://histologie.lf3.cuni.cz/histologie/atlas/index.htm>>.
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