Periosteum

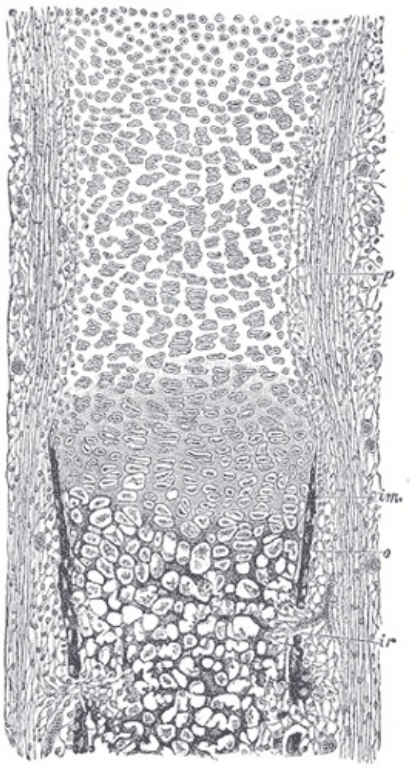
Periosteum is a dense fibrous membrane of uneven thickness. It covers bone tissue over the entire surface with the exception of the ends covered with cartilage and joints with muscles/ligaments or joint capsules. In most places, it can be peeled off for preparation. The periosteum is firmly attached only in the area suture bones of the skull and again at the attachments of muscles and ligaments, which send bundles of collagen fibers to the bone and periosteum.

The periosteum contains osteoblasts, which play a key role in the regeneration of bone tissue. Even a tissue transplant, or periosteum left *in situ* after bone removal, retains the capacity for osteogenesis. Conversely, the elimination of the periosteum deprives the bone of a large part of its blood supply and causes gradual atrophy of the tissue.

Similar to the periosteum on the outer surface of the bone, a layer of endosteum is formed on its inner surface (including trabeculae spongiosa).

The periosteum consists of two layers:

- *Fibrous* layer (superficial) – longitudinally arranged dense bundles of fibers
- *Cambial layer* (deep) – less regularly arranged thinner tissue, contains blood vessels penetrating **Volkmann's canals** into the bone, creates Sharpey's fibers penetrating the bone tissue and fixing the periosteum to the bone.



Histological section of bone showing, among other things, the periosteum layer

Links

related articles

- Ligament
- Bone
- Microscopic structure of bone tissue

References

- ČIHÁK, Radomír – DRUGA, Rastislav – GRIM, Miloš. *Anatomy.* 2. edition. Prague : Grada Publishing, 2001. 497 pp. vol. 1. ISBN 80-7169-970-5.