

Elementary Anatomy, AS APPLIED TO NURSING.

By BEDFORD FENWICK, M.D., M.R.C.P.,
Physician to The Hospital for Women.

LECTURE II.

(Continued from page 156.)

WE have now to consider the constitution and uses of the membrane which invests the outer and inner surfaces of the whole body. Externally, it consists of that tough tissue which we call the skin or integument, and which we find, on dissection, comprises two distinct layers, a superficial one, which is constantly being shed in the form of powdery scales, and which is termed the *epidermis*, and a deeper layer, the *dermis*, which is dense and fibrous; the former is quite insensitive, and if wounded does not bleed, but the dermis is very tender and bleeds freely if cut across. The skin, with these two divisions, passes all over the external surface of the body, but at the margins of the various apertures it becomes replaced by a tissue which is called *mucous membrane*. This is much redder and more sensitive, because it is more freely supplied with blood vessels and nerves than the skin itself; it therefore bleeds more readily, and is much more subject to the influence of external agencies than the thicker, denser external skin. It keeps continually moist by exuding a more or less tenacious fluid, which is called *mucus*; and it lines all the internal cavities, such, for example, as the alimentary canal, and the windpipe, into which the apertures of the body open. But it is important to remember that although there appears to be such a difference between the outer and the inner skin, they are not only continuous one with the other, but are fundamentally identical; the mucous membrane consisting, just as we saw the skin consisted, of a deeper fibrous layer containing blood vessels and nerves, and a superficial thin, insensible, and bloodless layer, which is called, in this case, the *epithelium*. So every part of the body may be said to be contained between the walls of a double bag formed by the epidermis outside and the epithelium inside. The dermis and the deeper layer of the mucous membrane are made up of what is called areolar fibres or *connective tissue*, because it is the medium by which all the different parts of the body are held together. When boiled, this material yields gelatine, and it is, perhaps, the most abundant tissue in the human body, because it completely and thoroughly permeates every part of the body, so that if every other tissue could be dissected away a complete model of all the organs would be left composed of connective tissue. It varies very greatly in character, sometimes being very soft

and tender as in mucous membrane; in others, as in the tendons of muscles and ligaments of joints, being dense, hard and strong. The only other point concerning the skin and mucous membrane to which I would direct your attention at this moment, is that, throughout, both are perforated by multitudes of small openings, microscopic in size and which are the openings of glands, the absolute importance of which in health and disease we shall hereafter see when discussing the elements of physiology. It will make our comprehension of diseases of the mucous membranes more simple and easy, if we remember this close connection between the external and the internal skin, because then it will be easily understood how a chill to the skin can cause irritation throughout its continuity, and so bring about congestion of blood in the mucous membrane of the deeper tissues; and how, in various internal skin diseases, the most obscure symptoms are explained by more or less analagous conditions affecting the internal lining of the body; and how, again, the most rapid method of relief to inflamed mucous membranes can be obtained by counter irritation, or increased action of the outer skin. For example, in bronchitis, where the mucous membrane of the lungs is inflamed, the greatest relief is often afforded by making the skin freely perspire, or by reddening the skin by means of stimulating liniments. This exemplifies a rule which practically holds good throughout the body.

In the next place, when it is remembered that the internal skin is thinner and more sensitive than the external, it is easy to understand why bleeding occurs so much more easily from the mucous membrane, than it does from the skin; for example, a blow of comparatively little force upon the nose will cause no manifest injury to the outer skin, but may be followed by profuse bleeding from the mucous membrane of the nasal cavity. While we are on this subject, it is important to recollect that the natural method of cure of hæmorrhage from the nose, or what is medically called *epistaxis*, is to diminish, so far as possible, the congestion of the mucous membrane; consequently, an old-fashioned and very successful treatment even in those extreme cases which seem to baffle ordinary measures, consists in placing the feet and legs of the patient in hot water, to which a handful of mustard has been added, and keeping them there until the skin has been thoroughly reddened; before which time, in all probability, the hæmorrhage from the nose will have ceased. In ordinary cases, of course, merely placing the patient flat upon his back or face with a cold wet cloth over the bridge of the nose, is sufficient to check the bleeding.

For further information respecting the action and diseases of the skin and mucous membranes, I must refer you to lectures upon physiology and medical nursing. We pass on now to consider the anatomy

[previous page](#)

[next page](#)