

been remotely connected with the death of the late Duke of Albany. The pigments of which this layer is the seat vary from the intense black of the African negro to the white of the Albino, and are constantly affected by the varying shades and degrees of sun and light, bronzed by the heat of the sun, bleached by the deficiency of light.

The inner, or true skin, is by far the most important of the three. It is highly organized, and endowed with life and sensation in the greatest state of activity. It is, in fact, the greatest seat of sensation and touch, as well as the vehicle of perspiration, the equable promotion of which is such an all-important factor in the preservation of health, consequently of strength. It is composed of fibro-cellular texture, closely united to the underlying cellular membrane in which the fat is deposited, and is full of cells or cavities, large on the fatty parts of the body, and smallest on the forehead, back of the hand, etc., where there is no fat and where the skin is thinnest. It is intersected by minute nerve filaments and blood vessels in countless numbers, which, passing through to its outer surface, form points or papillæ, best seen on the surface of the tongue, on the tips of the fingers and palm of the hand. These are so numerous as almost to constitute, and are inseparable from, the true skin itself. The general redness of the skin in blushing shows this—or, still better, the puncture of even the finest needle, which invariably draws blood, and causes pain.

We have now seen that every layer possesses more or less complexity of structure according to the functions it has to perform. The cuticle, with the hairs and nails defending the soft parts beneath from external friction and injury, and if unaccustomed exercise, as rowing, or digging, or even walking, is carried too far, the tender parts below get irritated and inflamed, and blisters are formed, the nerve filaments becoming extremely tender and painful, and also by preventing the too rapid evaporation of the perspiration, keeps the skin from becoming too hot and dry. The chief use of the mucous coat is also in protecting the true skin beneath, and its darkness in the negro minimizes the danger of sunstroke from the higher radiating power of black as compared with that of lighter substances. On coming to the true skin, however, we find that there are four great functions which it performs in the state of health, first, and chiefly, it acts as an exhalant of waste matter from the body; secondly, as a joint regulator of the animal heat; thirdly, as an agent of absorption; and, fourthly, as the seat of touch and sensation.