

mainly by the dilations or contractions of the blood vessels at the surfaces, and the cooling of greater or less quantities of blood by contact with the atmosphere. When for any reason the cooling influence of the atmosphere is excluded, like the close wrapping of a rubber garment about the body, a rapid rise in surface temperature is at once observable, the heat produced within being retained at the surface of the body owing to the contraction of the capillaries; this process being analogous to what, in animals having a vascular system, is known as the first stages of inflammation or stasis, when the arterial system is pouring more blood into the parts than the capillaries in their contracted condition are able to convey through the tissues, and so when the mouth is to a greater or less extent covered with a non-conducting substance, the heat conveyed to the surface is not radiated, a too rapid shedding of the epithelial cells is at once established, and congestion, inflammation, and not infrequently suppuration, quickly follows.

Cast-off and decomposed or decomposing epithelial cells are in themselves irritating if permitted to remain long in contact with healthy tissue. With the surfaces of the mouth exposed, they are quickly floated away in the saliva in the act of mastication, or by the employment of some one or more of the hygienic apparatus in such general use. But with the membrane covered with an artificial denture, retained by atmospheric pressure so closely as to exclude the saliva, they must remain an irritating substance upon the mucous surfaces. Very frequent and very thorough brushing of the plate and mouth would seem necessary to protect the membrane from the morbid influences of these decomposed cells. When the air is entirely exhausted from beneath the plate—which is seldom done—there is a pressure upon the outer surface of about fifteen pounds to the square inch, the same as upon the body in a relative sea-level atmosphere. Of course there is an outward pressure in the body which, in a normally exposed condition, equalizes this pressure from without, and physiological function is maintained without impairment.

But let the antagonism between the outward and inward pressure be removed, as in a sudden change from a normal to high altitude, and pathological conditions are at once established, as bleeding from the nose, sweating blood from the finger ends, and other unpleasant and sometimes alarming symptoms clearly indicate.

It sometimes happens that the pressure of a plate in the mouth has the effect of destroying this antagonism, and the greatest care should always be taken when constructing and inserting them to see that pressure is equally distributed, so that the bearing shall be upon as large a surface as possible, ever remembering that the continued pressure or sucking necessary to hold the denture to the