

naturally be a quickening response to the sudden stimulation of cold, that is, of the water, which meets the surface of the body as the plunge is taken. The stimulus to the peripheral sensory nervous system is such that it quickly contracts the adjacent capillaries and sends the blood speeding to the larger vessels and internal organs. The systemic vigour and reserve forces return it again to the surface of the body, accompanied by the resiliency and invigoration which emphasise the pleasurable sensations so gratifying to the bather.

If, after dressing from such a bath, a genial glow suffuses itself over the sensitive surface of the body and is succeeded by a pleasing warmth internally, accompanied by a refreshed and invigorated feeling, it is evidence and proof of the salutary influences; but if instead there follow a chilliness, languor, headache, irresistible depression and disposition to drowsiness, or any of these, it should be reckoned as important evidence that the bath has not contributed in any material way to the advantage or improvement of the person's health, and that, if persisted in under similar or like conditions, the result will in time prove injurious.

Dr. Marvel dwells upon the dangers incident to a prolonged exposure in the ocean or on the sand in wet clothing, and also to the too frequent daily indulgence of either, and urges the advantages of a short exposure or immersion, say ten, fifteen, or twenty minutes, and never exceeding thirty minutes; the necessity of prompt and positive reaction after the bath; the maintaining of a good physical condition, and giving to bathers, according to their particular need, such specific instruction as will best avert harmful or serious disturbances. When the normal body temperature is exposed to that of an active body of water, or currents of air 10, 20, 30, or 40 degrees lower than itself, the tendency is to the equalisation of the temperature of the bodies in contact, and the greater the motion of these bodies the more rapid the transfer, and the more rapid the receipt and loss to the bodies involved; hence, prolonged contact largely reduces the former, while it adds but little to the latter. The body during this large dissipation of heat becomes so enfeebled that its economic forces are temporarily inhibited, and in some instances seriously deranged.

The practice of promenading on the beach, he says, in the scant and poorly protecting garments so fashionable of recent years after an immersion from, say, three-quarters to an hour in the surf, is unmistakably harmful and

equally inexcusable, and should have the denunciation of every physician as well as others engaged in the upbuilding and maintenance of good health; and there is little less to be said in favour of the practice of lying on the sand and frequently returning to the water, which practice so changes the temperature of the body as to invite lowering of resistance, and thus rapidly insures progressive debility.

The cold sea bath combines the stimulating influences of the brine bath at a low temperature with the effect of a stimulating hydrotherapeutic procedure. They are admirable for rapid reaction and prompt functional stimulation, and are indicated in those weakened conditions where normal metabolism is inhibited, or where perverted nutrition exists. Such conditions are present usually in all functional disturbances of long standing, types of which are neurotic dyspepsias, the functional anæmias and neuralgias, neurasthenia, and some cutaneous diseases, as eczema in the subacute and chronic forms, pityriasis, urticaria, &c.

Sea bathing is contra-indicated in those cases in which the arterial elasticity for any reason has been changed or lost, as in arteriosclerosis and capillary fibroses; also where the peripheral vessels have ceased to respond to reflex stimuli, or in any case or condition in which the stimulation of the bath would be likely to favour or to produce internal hæmorrhage (particularly in the aged, in whom we have realised or suspected fragile arteries), and for those with organic heart disease, recent rheumatism, cholelithiasis, acute gastro-intestinal or febrile diseases, or any disease whatsoever in which the normal resistance has been so reduced as to make it necessary to protect and guard the patient's forces.

Miscarriage may be caused by bathing when the sea is particularly rough. Sea bathing is also prejudicial to health during the menstrual period. It is worthy of note that otitis media frequently follows bathing in a rough sea, as well as frequent and prolonged exposure in the water.

SCURVY.

An interesting theory in relation to this disease, advanced by Dr. Coplans, is that it is not due to causes associated with food, but is an infection conveyed primarily through the mouth. He bases his arguments on the unequal distribution of scurvy among bodies of men in the Transvaal, whose diet was practically identical.

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