

## INFLUENCES OF CLIMATE.

By J. H. O'Donnell, M.D., Consulting Physician to Winnipeg General Hospital.

Although comparatively easy for us to understand what one means when referring to the climate of a certain country, nevertheless, when an attempt is made to define it, we find ourselves engulfed in a sea of impossibilities. For the most part to be specific, it may be said that climate is made up of those influences expressed through latitude and altitude, temperature, barometric pressure, the relation of large bodies of water, contour of the earth's surface in any given area, the amount of moisture in the atmosphere, and to some extent modified by the vegetation, as well as the composition of the earth's surface.

We are to remember that seasons modify temperature to an enormous degree; while, therefore, the temperature must vary through an immense range from one season to another, there is a slight element of consistency or regularity following the development or cycle of the seasons, the average of such variations constituting the normal.

Aside from mere altitude, mountains and hilly districts affect climate by altering and lessening winds, by diminishing surface evaporation of water; probably, also, by the presence of large quantities of vegetation and the slowness with which the seasons manifest a change.

The question of the effect of climate on health is still a matter of very warm dispute. Does a man adapt himself to a climate?

The question must of necessity, for the present, at least, remain sub judice. In the first place, it is impossible to remove a man from a temperate to a tropical (or the reverse), for example, and not demand that his food be changed, his habits modified, and his occupation more or less altered. It would seem that man rapidly adapts himself to changes in temperature, provided the change be one sufficiently gradual to permit a modification of habits and food. Changes in humidity are not so readily borne as are those of temperature, and the same is true of barometric pressure. For this reason, if for no

other, the sick should not be allowed to travel over routes where constant change in altitude occurs. Climate is an important matter in the therapy of disease.

As a general rule, it may be considered that acclimatization is possible; indeed, probable, in the sense that the body accommodates itself to the change in temperature, change in diet, habits and environment.

It would, therefore, appear that that temperature or that climate to which an individual has been longest accustomed is, taken all in all, the best for the individual under most circumstances. If there be individual objection to the climatologic surroundings, he may move, but an entire change is to be recommended only by the attending physician conversant with the location and patient.

Many erroneous observations have been made with regard to phthisis, based upon its absence from certain areas, the fact being that it is absent merely because the area has not been affected by tubercular cases, and hardly because the atmosphere and the climate is not suitable for the development of the disease.

In certain districts in North Carolina (and other places, too,) tuberculosis among the inhabitants was long unknown; as a result of this fact, patients sought these areas under the impression that what would prevent a disease (for that was the way the facts were viewed), would be sure to cure it. The disease is no longer unknown among the inhabitants, and the benefit, probably, derived by the patients would be equally sure to have followed a sojourn elsewhere, provided the atmosphere had been equally clear from impurities, more especially those resulting from the inroads of civilization.

The integral elements of which the complex entity, climate, is composed seems to afford more noxious features than does the whole, thus, heat and moisture increase the filth diseases, and to a certain extent heat and dry atmosphere, particularly the latter, lessen the liability.

Sudden changes of temperature, more