

thousand times more valuable than that of smell, a fact that is made much more significant by a knowledge of the victims of nasal incompetence. The chief preparation which the incoming air requires for respiration is warming and moistening. It is because of this efficient preparation of the nose that man is able to breathe with comfort from the equator to the pole. The mouth is capable of performing this function to a very limited degree, and that only in a fairly equable temperature. In the nose this warming and moistening is ensured by the arrangement of the nasal interior and the nature of the mucous membrane lining it. Divided by the nasal septum into two lateral chambers, the nose presents two parallel passages, the outer walls of which are so folded and corrugated that the air, whilst it has a perfectly free passage to the pharynx behind, is retarded in its journey so that it may be warmed to the requisite temperature by the spongy, blood-containing tissue covering the folds. The nasal mucous membrane, meanwhile, pours out a watery secretion which saturates the inspired air with moisture. According to the atmospheric conditions outside the body—warm or cold, dry or moist—so are these arrangements modified, the amount of blood in the nasal tissues being augmented or reduced, the watery secretion becoming copious or almost absent. The nose is thus able to meet the rapid changes of a variable climate.

A third important fact to remember is that the whole nasal mucous membrane is covered with tiny cilia, small hair-like processes which, in the healthy nose, are in continual active movement, passing along, like policemen on duty, the thin layer of secretion which covers the lining of the nose, together with any micro-organisms or small foreign bodies that may be present. The action of these cilia is of very great importance, as will be seen later.

A cold in the head is simply an acute catarrhal inflammation of the nasal mucous membrane. When often repeated this inflammation may easily become chronic, leading to various forms of nasal obstruction, all more or less uncomfortable to the sufferer. In some persons recurrent nasal catarrh appears to be established with remarkable ease. Such individuals will almost always be found to have some nasal abnormality.

The pathology of a simple cold must be considered as still undecided. A study of the correspondence which recently appeared upon the subject in a leading medical journal helps one to form no definite conclusions, and might give excuse for caustic lay comment. Investi-

gations into the bacteriology of the healthy nose do not afford much help, chiefly because their results vary with the methods employed by the investigators. There are, however, two very clear points to be deduced from these investigations: (1) In the upper and back part of the normal nose very few micro-organisms are to be found which can be made to grow upon the nutrient media ordinarily employed by bacteriologists, and (2) The watery discharge which is one of the chief characteristics of a violent cold in the head teems with micro-organisms.

It is almost a matter of common knowledge that there are two distinct ways of "catching cold." In one case the condition can be traced to a definite, well-marked infection, in the other it follows upon exposure to some chill. The former is familiar to everyone as the "cold which runs through the house." In the same category must be placed the colds that attack people on their return to town from a holiday, especially if the holiday has been spent in purer air than that usually lived in. The Astronomers who spend three months on duty in the Observatory on Ben Nevis are regularly attacked by such a cold on their return from their mountain home to social life. Another most instructive object lesson upon the infective nature of this form of cold was afforded by the recent Antarctic Expedition under Captain Scott. Every officer and man enjoyed perfect freedom from cold until a bale of fresh clothes brought from England was opened upon Antarctic shores. Then a cold appeared which went right through the ship. This recovered from, no further colds appeared until the wardroom carpet was beaten, when acute nasal catarrh again attacked every soul on board.

Such colds as these can only be explained by the virulence of a micro-organism upon an unprotected person. The question naturally arises: How is the comparative immunity enjoyed by most persons to be explained? The answer lies in the probability that they are protected by daily small inoculations of whatever micro-organism is responsible for colds. It is quite possible that the normal nose is itself the seat of such inoculations, the activity of its cilia, and the integrity of its well-balanced blood supply preventing the micro-organisms from obtaining sufficient hold to cause an acute inflammation. Consequently in purer air—the pure mountain air of Ben Nevis, for example—there is a want of protective material, and this, combined with the enormously greater percentage of micro-organisms in the atmosphere of a populous

[previous page](#)

[next page](#)