

Sixth, Meteorological Influences—These are many; thermometric and barometric variations, electric and hygrometric states, altitudes, climates, etc. The augmentation of electrical tension; the marked hygrometric state; the lowering of the barometric pressure are all known to have a marked influence upon phthisical patients, often producing the final crisis, and we can easily understand how these influences, acting energetically upon the nervous system, can react upon the vaso-motor centres and so modify affected, weak or even healthy organisms, lessening phagocytosis, thus facilitating the penetration and future development of pathogenic micro-organisms. One often observes how nursing children will be affected by storms, under the influence of which they often develop symptoms of gastric fermentation, probably due to the too rapid coagulation of the milk. Cold and heat each have their specific actions upon micro-organisms as well as upon living tissue. Cold contracting the peripheral blood vessels forces the dilatation of the internal vascular system, and, added to this, some experiments of Bouchard's have proved that the globules of the blood are altered, cellular reaction interfered with, phagocytosis lessened, leaving the organism a prey to any infectious agent which may have penetrated the respiratory and digestive tracts, to speak only of these. Wurtz has, by bringing down the temperature in animals, been able to determine the passage of micro-organisms through the intestinal walls. Pasteur's classical experiment of cooling a hen (otherwise refractory) to 37 degrees C., after infecting it with anthrax, has always reproduced the disease by this lowering of temperature; Gibier, by elevating the temperature of frogs to 37 degrees C., has always been able to obtain the infection with anthrax, to which they resist at their normal temperature. Heat seems to act more energetically than cold upon epithelial surfaces; its influence upon the central nervous system is sufficient evidence to prove how its influence would modify secondarily the secretions and functions of the different organs.

Seventh, Fatigue—Plays one of the most important parts as a cause predisposing to infection.

Herzen, Arloing, Nocard and Roux have clearly demonstrated the favoring action which lactic acid exerts upon the development of microbes within the organism, and the fact that the muscles during activity secrete notable quantities