

and fractures. A stream of warm aqueous vapor relieves otalgia; a funnel should be inverted over a vessel of hot water, and the external ear-passage applied to the orifice of the funnel. Vapor baths can be impregnated with sulphur.

The Turkish bath has been described as combining many of the properties of the hot and cold bath; and it is used for lessening the pain of rheumatism, gout, and sciatica. Dr. Ringer claims the superiority of the Turkish bath in cases of the following kind: a patient complains of slight and fugitive pains; the joints, but little swelled, are merely stiff, and somewhat red and hot. The gout often affects many external and internal parts in succession; and in spite of careful diet and abundant exercise the patient may be seldom free from some evidence of gout. After a few baths the pains and swelling disappear, the joints become supple, and the general health improves. As a prophylactic against gout, I am delighted with the occasional effect of the Turkish bath.

When the regular Turkish bath is not available, a domestic modification may be substituted which is equally potent in promoting sweating. Dr. Nevins uses a form of steam bath for the treatment of acute rheumatism, and I know nothing more efficacious for the painful pyæmic complications of scarlet fever.

DRY HEAT is applicable in many ways. Natural warmth and dryness of the atmosphere relieve a host of pains in some people, and it is unfortunate that we have so often to supply these qualities in our climate by artificial means. Hot dry flannel or sand is part of the armamentarium of every nursery, and is often tried for neuralgia and spasmodic pain. Bottles of hot water may be applied to the abdomen to relieve spasmodic pain, and hot bran and hot bricks are used for a similar purpose. Dry wadding or cotton wool is a simple method for preventing or curing rheumatism by maintaining an even temperature of external parts.—*John Kent Spender's Therapeutic Means for the Relief of Pain.*

#### DIPHTHERIA.

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Perhaps the most difficult problem in medical science which remains to be solved is that which relates to the causation of zymotic disease. All are certainly agreed that each infectious disease is due to a specific poison which, by one way or another, gains access into the body of its victim; but what the nature of the entity is, and in what manner it enters and attacks the human subject, is still a mystery. I say, in what manner it enters the system of the patient is still not understood. I feel convinced that too much has been taken for granted, and accepted as fact on this point; and I am certain it will not be until this question has been satisfactorily settled that we shall arrive at correct conclusions as to the nature of the different poisons which we call contagia. It is all very well for us to assert that the disease-producing essence is inhaled by the breath, and thus gains access into, and produces its baneful effects upon, the individual. I hold that

we have no proof of this theory being correct. It was at one time thought that typhoid fever was infectious; that it was by inhaling the poison in the process of breathing the disorder was contracted. I feel that those who have had most to do with the treatment of this malady will agree with me that typhoid is not infectious in this sense. Other instances might be cited, showing that our opinions on this important subject have recently undergone considerable change. In diphtheria especially, it appears to me that our conceptions with regard to the mode ingress of the poison are very far from correct, and will not yield the fruit which we must desire to reap; viz., an effectual means of destroying the disease, and thus saving the lives of our patients. Some years ago, it struck me that, when diphtheria attacked a patient, the *modus operandi* was the following. The germs of the disease become so located on a surface which provides a favorable soil for their development and multiplication, just in the same way as the germs of typhoid select the mucous membrane of the bowels. In this disease under discussion, the locality chosen by the poisonous particles is the throat and the neighbouring mucous surfaces. Here these *materies morbi* implant themselves, becoming attached by the tenacious and viscid secretion of the tonsils, the warmth and moisture of the part favouring their further development and progress. A dense fungoid growth is the result, at first of limited extent, but gradually encroaching upon the surrounding healthy mucous membrane. The very presence of this deposit—I refrain from calling it an exudation—results in inflammation of the subjacent and surrounding tissue. We may, and often have, a diphtheritid deposit without the slightest constitutional disturbance. I have often seen diphtheria in its early stage without the general system having apparently been affected in the slightest degree; and I venture to say that diphtheria, in its incipient stage, rarely affects the general health. Moreover, if the patient be strong and robust, some time will elapse before constitutional symptoms will manifest themselves. On the other hand, if the victim be weakly and in feeble health, or if his vital energies have been laid low by breathing foul gases the disease will run a rapid, and in general a fatal course. From what has been said, it will be perceived that I conclude diphtheria to be, in its first stage, purely a local disease, exactly as a chancre, as its commencement, is syphilis in the part only, not having yet affected the general system; or, to take another example, just as vaccinia, in its primary stage, is purely a local lesion. Another example may be cited: viz., the snakebite, which, if caught in time, may have its venom limited to the part bitten. It is, therefore, in this stage of the disease that an effectual and speedy cure can be guaranteed. When, however, the disease has for some time established itself on the tonsils; poisonous matter from the film becomes absorbed, first by the lymphatics, as indicated by the hardening and enlarging of the neighbouring glands, and then the general system becomes impregnated, and it is at this time that the