

draughts or air convection currents. The channels of reception are normally the nose and throat, and there is evidence that infection can be received through the eyes. Only a brief exposure appears to be necessary in order to contract infection.

It is manifest that the closer the contact, the more readily will transmission of infection occur; hence the paramount importance of avoiding overcrowding and thronging of every sort, whether in places of public resort, public conveyances, factories, camps, dwelling-rooms or dormitories. Special danger of spread of secondary infections, with consequent increase in the number of severe cases, is incurred when many persons are aggregated in the same sleeping quarters, with insufficient space between head and head.

Infection can also be carried to the mouth by hands which have been soiled by secretions from the nose or throat of an infected person; for example, by a soiled pocket handkerchief. The evidence available makes it appear probable that, in everyday life, acute and temporary overcrowding in trains, trams, omnibuses and places of entertainment is a more important factor in the spread of epidemic influenza than is overcrowding in the home. No regular increase of the attack rate with increase of the number of persons per room in urban tenements has been proved.

Incubation.

The sum of available evidence favours the belief that the period of incubation is about 48 hours, or even somewhat less.

Measures of Personal Protection.

The dangers of influenza are gravely increased by the complications, and much can be done to avoid or to mitigate these. Such complications may develop without previous signs of severe illness.

Carefulness does undoubtedly decrease, and carelessness increase, both sickness and death; it is important, therefore, that the public should have a clear idea of such practicable measures of personal protection as are available against infection. The individual must be taught to realise and acquiesce in his duty to the community.

Ventilation.—Well-ventilated airy rooms promote physical well-being, and to that extent, at any rate, are inimical to infection. Fresh air dilutes and dissipates the infective material. Draughts are due to unskilful ventilation, and are harmful; chilling of the body surface should be avoided.

Nutrition.—Good nourishing food is desirable. A memorandum issued in 1919 by the Royal College of Physicians states that "alcoholic excess invites disaster; within the limits of moderation each person will be wise to maintain unaltered whatever habit experience has proved to be most agreeable to his own health." Cod-liver oil is often a valuable supplement to the dietary.

Gargles for the throat.—Throat gargling night and morning, or more frequently during an epidemic, has been recommended as a preventive measure, though its importance should not be over-rated. It may be employed with special advantage on returning home after exposure to infection in a crowd or close contact with an infected person. Various antiseptics have been recommended for this purpose, but probably the most effective, as well as the most popular, is thymol in one or other of its combinations. A simple and agreeable mouth wash for ordinary use is made by adding a full tablespoonful of compound glycerine of thymol to a tumbler of warm water. A cheaper form of gargle, and probably as effective, is made by adding permanganate of potash to a tumbler of warm water, enough to give the liquid a pink colour (1 part of permanganate in 5,000).

Face Masks.—On present knowledge the public is not advised to make use of face masks during a period of influenza prevalence. By hindering the free circulation of air through the nasal passages they cause turgescence and œdema of the mucous membrane and probably induce greater liability to attack by any germs which may be present. Temporary use of masks by those in attendance on the sick may, however, be occasionally desirable.

Protection by Vaccines.—The chief dangers of influenza lie in its complications. Until the causal organism of influenza has been isolated with certainty and cultivated, we cannot hope to prepare a vaccine which can be guaranteed to ward off an attack of the disease, but there is presumptive evidence that something can be done by the use of vaccines of suitable composition to lessen the risk of the attack being complicated by secondary infections. For example, there is still doubt as to the aetiological significance of the bacillus isolated and described by Pfeiffer. It may or may not prove to be the essential infecting agent. There is no question, however, as to its almost constant association with influenza and of its being a factor of primary importance in the production of the fatal sequelæ. Of the other secondary invaders, the pneumococcus and streptococcus are the most important. . . .

Precautions when Attacked.

Continuing at work after the first symptoms appear is bad for the patient, and may be dangerous to others. Workers obviously ill should at once be sent or taken home. Where influenza is prevalent, no person should in any way be penalised for staying away from work, bona fide, for even a slight attack of influenza or any form of feverish cold. On the contrary, he should be expected and required so to do.

At the first feeling of illness or rise of temperature the patient should *go to bed, keep warm, and seek medical treatment.* The doctor, if called in immediately at onset, is afforded the opportunity of giving advice or treatment which may in many cases ward off the more dangerous complications. Relapses and complications are much less likely to occur if the patient goes to bed at once and remains there till all fever has gone for two or three days; much harm may be done by getting about too early. Chill and over-exertion during convalescence are fruitful of evil consequences.

The early stages of an attack are the most infectious, but infection may persist throughout the illness, and isolation should be maintained at least till the temperature is normal. If the patient cannot occupy a separate room, the head of the bed should, if possible, be screened off from the rest of the apartment.

The virus of influenza is easily destroyed, and extensive measures of disinfection are not called for. Expectoration should be received when possible in a suitable receptacle in which is a solution of chloride of lime or other disinfectant. Discarded handkerchiefs should be immediately placed in disinfectant or, if of paper, burnt.

The liability of the immediate attendants to infection may be materially diminished by avoiding inhalation of the patient's breath, and particularly when he is coughing, sneezing or talking. A handkerchief or other screen should be held before the mouth, and the head turned aside during coughing and sneezing. The risk of conveyance of infection by the fingers must be constantly guarded against, and the hands should be washed at once after contact with the patient or with mucus from the nose or throat.

Each case should be treated under the direction of the medical attendant. . . . The patient's recovery should be fully established before he returns to work.

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