

The danger of disease from flies and lice.

Contributors

British Museum (Natural History)
London School of Hygiene and Tropical Medicine

Publication/Creation

London : Trustees of the British Museum, 1915.

Persistent URL

<https://wellcomecollection.org/works/hw34fyag>

Provider

London School of Hygiene and Tropical Medicine

License and attribution

This material has been provided by This material has been provided by London School of Hygiene & Tropical Medicine Library & Archives Service. The original may be consulted at London School of Hygiene & Tropical Medicine Library & Archives Service. where the originals may be consulted. Conditions of use: it is possible this item is protected by copyright and/or related rights. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s).



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



THE DANGER OF DISEASE

FROM

FLIES AND LICE.

AT a time like the present, when there is a danger of the introduction into this country of epidemic diseases from abroad, and when every precaution possible should be taken to prevent their spread, it is of the greatest importance to know that the germs of many of those diseases are carried and spread by insects. Sometimes they are carried by the insect and deposited on the food or in the liquids we swallow; sometimes they are introduced directly through the bite of the insect into the blood of the person bitten. Several insects, including the house-fly and the mosquito and other kinds of biting and blood-sucking flies, as well as the louse and other species of vermin, are either known or strongly suspected to be important agents in the dissemination of disease.

THE HOUSE-FLY AS A DANGER TO HEALTH.

It has been clearly proved that the common house-flies, although they neither bite nor suck blood, are quite capable of conveying the germs of Typhoid, Cholera, and Infantile Diarrhœa; and there can be no reasonable doubt that they are largely responsible for the spread of those diseases. Their power for evil in this respect is greatly due to their indiscriminate habits of feeding.

Habits of the Fly.—The house-fly lives not only within the house, feeding on meat, sugar, milk, and other food intended for human consumption, but spends much of its time out of doors visiting filth of every description. Coming straight from the dung-heap, garbage-pit, dust-bin or earth-closet, it may enter a house, and alight, perhaps, on the bread or meat, or fall into the jam-pot or milk-jug. It is liable always to carry with it some of the disease-germs with which it may have come in contact. These may adhere to its feet, legs, wings, or other parts of its body, or they may pass into its intestine or crop, from which later they may be ejected in its excrement, or by vomiting from its crop—a habit to which the fly is prone.

Its Life-History.—As with most other insects, there are four distinct stages in the life of the fly: (1) the egg; (2) the larva or maggot; (3) the pupa; and (4) the perfect insect. The

eggs are laid—several hundreds by each female during her lifetime—in decaying and fermenting refuse, such as horse-dung, human ordure, house-refuse, etc., and in this, or in the soil in the immediate vicinity, the insects live until they appear as fully developed flies. The maggots are whitish, footless, and when full grown about half an inch long. In from five or six days to two or three weeks after hatching from the egg the maggot turns into a dark brown, barrel-shaped pupa, from which in a week or so the fly emerges. House-flies usually begin to appear in early summer, and soon multiply to such an extent that by the end of July, if the weather be hot and other conditions favourable, they become a regular plague. They enter houses, especially kitchens and dining-rooms, to obtain food and shelter, and though they probably do not as a rule fly far, it has been proved that when no houses are near they can fly a full mile in search of them.

Remedial and Preventive Measures.—In view of the great risk incurred from the presence of house-flies in the house, every effort should be made to reduce their numbers. This can be done to a limited extent by the use of sticky fly-papers and tapes, or by means of traps and fly-poisons. A dish of sweetened milk, to which formalin has been added at the rate of about a teaspoonful to half a pint, forms an attractive fly-poison, which should be left in the room overnight, all other liquids having been removed or well covered up. Pyrethrum powder, either shaken from a muslin bag so as to fill the air with fine dust, or burnt in a tin vessel over a candle flame, is very destructive to flies. It is obvious, however, that all such measures will be of little use so long as the flies are left undisturbed in their breeding and resting places out of doors. The greatest safeguard against flies is to take care that no stable-manure, house-refuse, or other kind of dirt is allowed to accumulate outside the house or in its immediate neighbourhood, and to this end the following precautions should generally be observed :—

- (1) All deposits of stable-manure or house-refuse should be removed *at least once a week* (twice a week in very warm weather) to as great a distance as possible from dwelling-places.
- (2) Where its frequent removal is impracticable, house-refuse should be burnt, or should be placed in a pit, sprayed with a 5 per cent. solution of cresol in water at the rate of a gallon to the square yard, and covered over well with earth.

To prevent contamination by flies, care should be taken to protect all food, especially cooked meat, milk, and sugar, by covering it whenever possible with wire gauze or muslin. Where there are infected persons, such as consumptives or typhoid patients, extreme caution should be observed to prevent the flies having access to their sputa or excreta.

THE LOUSE AND ITS RELATION TO DISEASE.

It has for some time been suspected, and is now definitely known, that Typhus—the disease which has lately ravaged Serbia—is conveyed by lice. Typhus—not to be confounded with Typhoid (or Enteric) fever—is always a dangerous, and often a fatal, illness, which may occur wherever human beings are commonly infested with lice. Other diseases also are disseminated by lice, while their mere presence on the person in large numbers is of itself sufficient to cause sleeplessness and nervous debility. Every effort, therefore, should be made to eradicate these vermin, which are not only harmful to the individual, but also a source of serious danger to the community, especially in the poorer quarters of our towns and villages, and among school-children.

The Head Louse and the Clothes Louse (or Body Louse)—small wingless insects, which prick the skin and suck the blood—spend their whole time upon the human body and cannot live for any length of time apart from it. The Head Louse lives among the hairs of the head, and often on other parts of the body, and the Clothes Louse, as a rule, is confined to the underclothing, and to that part of it which is next the skin.

How to Deal with Lice.—The best preventive against lice is strict personal cleanliness. But as lice pass direct from person to person, people of a cleanly habit are liable to infection through contact with verminous persons in crowds, in railway carriages, in schools and unclean homes, in hotels and lodging-houses.

As a safeguard, the following rules should be observed:—

- (1) Where vermin are likely to occur, vigilance should be exercised in watching for the first sign of their presence by frequent searches of the person and underclothing. The clothes can be dusted with a powder consisting of naphthalene, mixed with 2 per cent. iodoform and 2 per cent. creosote.
- (2) For the Head Louse a fine comb sold for the purpose is useful, both for the detection of vermin and the removal of the lice and their “nits” (or eggs), the latter being fastened to the hairs by a sticky substance.

For the Clothes Louse the inner side of underclothing should be examined, especially along the seams and in folds and other lurking places. The "nits" are fastened to strands in the cloth.

As soon as the presence of lice is detected steps should be taken as follows:—

- (a) In the case of the Head Louse, the hair should be cut short in men and boys, and in girls should be worn plaited; it should be sponged with a 2 per cent. solution of carbolic or with a tablespoonful of malt vinegar in a cup of warm water. Paraffin mixed with an equal quantity of olive oil is a good remedy; and benzine or petrol may also be used, but owing to their inflammability these substances must be used with the greatest care, and not near any fire or light.
- (b) In the case of the Clothes Louse, the underclothing should be removed regularly every night, and changed as frequently as possible. Discarded clothing should be immersed in *boiling hot* water, and a mixture of soft soap or vaseline with petrol (1 part in 4) rubbed in. Another useful soap for the same purpose can be made up as follows:

Soft soap	2 oz.
Water...	6½ pints.
Jeyes' fluid	1 teaspoonful.

Larger quantities should be made in proportion. This soap lather may also be effectively applied to the skin as a lotion, and if necessary be allowed to dry on. Hot baths should frequently be taken.

For fuller information on the subject of this leaflet consult the following:—

- (1) "The House-fly as a Danger to Health." By E. E. AUSTEN. Economic Series. No. 1. Published by the Trustees of the British Museum. Price 1d.
- (2) "The Louse and its Relation to Disease." By BRUCE F. CUMMINGS. Economic Series. No. 2. Published by the Trustees of the British Museum. Price 1d.

PUBLISHED BY THE TRUSTEES OF THE BRITISH MUSEUM.
SOLD AT THE NATURAL HISTORY MUSEUM, CROMWELL ROAD, LONDON, S.W.

Price 1d. for 6 copies; 1s. for 100.

September, 1915.