

Control of Enteric Infections



This section provides information and advice concerning the control of human gastrointestinal infections and the adverse effects of bacterial intestinal toxins.

The notes are principally concerned with control in the community. In hospitals, the responsibility usually rests with the infection control department. There needs to be close communication between these two groups.

General Advice

All cases of gastroenteritis or enteritis should be regarded as infectious until a microbiological cause has been excluded. A liquid stool is liable to result in contamination of hands and the environment causing the dissemination of fecal organisms. Conversely, agents causing gastroenteritis may infect without causing symptoms or be excreted for long periods of time after recovery from clinical illness. Under these circumstances, transmission is unlikely providing that good personal hygiene is practiced.

Cases in the home, when diarrhea and/or vomiting are present, should be managed using enteric precautions (outlined below). Advice should always be given to cases and carriers on personal hygiene. In schools and institutions, it is important to ensure supervision of toilet hygiene in young children and the mentally handicapped.

The recommendations made under the individual diseases for screening and for clearance specimens are only intended to assist in the control of an epidemic. It may be desirable to also examine specimens from contacts or others exposed to a suspected source for epidemiological purposes to establish the route and extent of infection. Where the treatment of patients is mentioned in the text, the comments relate only to control of an outbreak. The notes are not intended to give guidance on the clinical management of an individual case.

Persons in occupations or circumstances where there is a special risk of spreading gastrointestinal infections are identified below. Such persons should usually be excluded from work or school until they are well and have normal well-formed stools and, if necessary, appropriate clearance tests have been completed. In some situations it may be reasonable to consider the return to work of an excluded excreter who is a foodhandler or health care worker (Groups 1 and 2 below), if that person can be relied upon to practice good personal hygiene and/or they can be assigned alternate tasks which do not involve the handling of food or utensils or other risk situations.

Groups Posing a Special Risk of Spreading Infection

All cases of gastroenteritis or enteritis should be regarded as potentially infectious and should normally be excluded from work or school until the person is free of diarrhea and vomiting. It is particularly important to assess the risk of spreading infection in the four groups of persons below in whom exclusion and clearance cultures may need to be considered. The circumstances of each case, carrier or contact in these groups should be considered individually and factors such as their type of employment, provision of sanitation facilities at work, school or institution and standards of personal hygiene should be taken into account. In some cases it may be necessary to transfer a worker temporarily to duties in which she/he does not pose a special risk or to make special sanitary arrangements to reduce the risk.

Persons who are not in risk Groups 1 and 2 may return to work when the diarrhea has ceased and they feel well enough to do so.

Group 1: Food handlers whose work involves touching unwrapped food to be consumed raw or without further cooking. Food handlers who do not touch food in this way are not considered to pose a special risk.

- Group 2:** Health care, nursery or other staff who have direct contact, or contact through serving food, with highly susceptible patients or persons, in whom an intestinal infection would have particularly serious consequences.
- Group 3:** Children < 5 years attending nurseries, play groups, nursery schools, or other child care groups.
- Group 4:** Older children and adults who are unable to implement good standards of personal hygiene (e.g., the mentally ill, the handicapped, the infirm aged or those in circumstances where hygienic arrangements may be unreliable (such as temporary camps housing displaced persons)).

Persons not in these groups present a minimal risk of spreading gastrointestinal illness if they are healthy and have normal well-formed stools.

Enteric Precautions

These comprise four elements:

Handwashing: Thorough hand washing and drying is the most important factor in preventing the spread of gastrointestinal infections. This must be carried out by attendants (doctors, nurses, relatives, etc.) after handling patients, their bedding, clothing or sick room equipment, and again before preparing or serving food. Patients and attendants must always wash their hands after defecation or urination, and before meals. Towels must not be shared.

Disposal of excreta: In the home, the patient should use a flush toilet. If urinals and bed pans have to be used, the attendant should, if possible, wear disposable plastic gloves and must thoroughly wash hands after attending the patient.

Soiled clothing and bed linen should be washed in a domestic washing machine with a “hot cycle”. If the amount of soiling makes this impractical, as much fecal material as possible should be flushed away in running water, preferably into the toilet bowl. Presoaking in a household disinfectant may also be used to reduce the contamination. Diluted phenolic or hypochlorite preparations are suitable. Plastic gloves should be worn if possible and the hands must be thoroughly washed afterwards.

Disinfection: Toilet flush handles, sink taps, and washroom door handles should be cleaned at least daily, if not more frequently. Toilet seats should be wiped with diluted hypochlorite disinfectant after each use. These precautions are especially important in grade schools, nursery schools and residential institutions. Bed pans and urinals should be emptied into the toilet bowl, washed with disinfectant, and rinsed.

Education: Everyone should be instructed in personal hygiene, and in the hygiene of the preparation and serving of food. This teaching should be reinforced in those suffering from, or who are contacts of, patients with intestinal infections.

NOTE: In some remote communities it is not possible, at present, to institute appropriate enteric precautions in the home. When water supplies and sewage disposal facilities are inadequate, every effort should be made to ensure, as a basic minimum, that adequate handwashing is possible and is encouraged.

Specifically, in the home, water for drinking purposes should be stored in a covered container with a spigot dispenser. The use of a common drinking cup is to be discouraged. Water for other purposes can be kept in an uncovered receptacle but should be stored well away from the drinking water. Ladles or “dippers” should not be used at any time.