

Infection risks from work with sewage

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Work with sewage, including untreated (raw) sewage, sludge, effluent water, grit, septic tank waste and biosolids, can expose workers to infection risks.

On this page:

Work with sewage

Workers should consult a doctor if they become sick and tell the doctor about their work. Risks include:

Gastroenteritis

Germs in sewage can cause gastroenteritis ('gastro') with symptoms of nausea, vomiting and diarrhoea.

Skin infections

Germs in sewage can cause skin infections if they get into a cut, abrasion or other break in the skin.

Hepatitis A

The incidence of hepatitis A is low but those who work with untreated sewage may be at increased risk if the disease is circulating in the community. It is preventable by vaccination.

Leptospirosis

Leptospirosis is caused by bacteria that are shed in the urine of infected animals, particularly rodents, cattle and pigs. Infection can occur if the bacteria get into a cut or other broken skin or into the eyes, mouth and nose. Leptospirosis can cause an influenza-like illness which can progress to severe disease.

Other hazards

Sewage can expose workers to:

- non-infectious biological substances such as endotoxins, which are released by naturally occurring bacteria when they die. If inhaled, these substances can cause irritation and sensitisation (allergy) with respiratory and gastrointestinal symptoms

- hazardous chemicals, including the production of gases which can result in oxygen deficiency and a combustible atmosphere.

Who is at risk?

- Wastewater treatment plant workers, laboratory workers and contractors.
- Workers who inspect, maintain, repair or replace sewer systems and septic tanks.
- Plumbers.
- Workers who transport sewage waste.
- Workers who apply biosolids to the land or irrigate using effluent.

Managing the risk

Eliminating exposure is the most effective way to protect workers, however this may not always be possible. Where the risk cannot be eliminated, it must be minimised.

Minimise contact with sewage

For example:

- use remote-controlled robotic cameras to inspect sewer pipelines
- install barriers and screens to contain sewage
- minimise the time spent in areas where sewage is being agitated or disturbed
- use ventilation controls to manage sewage aerosols and biosolid dust
- if using heavy equipment to apply biosolids, fit the cabin with air conditioning and maintain filters and seals.

Vaccination

Workers who have regular contact with untreated sewage should be vaccinated against hepatitis A and have current tetanus vaccination. A combined hepatitis A and hepatitis B vaccine is available for workers who have regular contact with sewage debris such as used needles and syringes.

Keep the workplace clean

- Clean contaminated surfaces, equipment and tools using clean water and detergent.
- Disinfect heavily contaminated surfaces and equipment after cleaning. Disinfectants require a minimum contact time to be effective. They may not work properly in the presence of organic matter such as sewage, and so it is important to properly clean surfaces before applying a disinfectant. Alternatively, use a product that is both a detergent and a disinfectant.
- Keep clean and dirty equipment separate to prevent cross contamination.
- Avoid cleaning methods that disperse aerosols, such as high-pressure washing and compressed air.

- Control pests such as rodents and insects.

Personal hygiene practices

Workers should adopt personal hygiene practices.

- Wash hands thoroughly with soap and water before eating, drinking and smoking, after contact with sewage and contaminated equipment, and after removing personal protective equipment (PPE).
- If using a waterless hand sanitiser make sure it contains an alcohol content of at least 60 per cent. Use only on visibly clean hands and wash your hands with soap and water at the first opportunity.
- Avoid touching your face with contaminated hands or gloves and do not eat, drink or smoke when working with sewage.
- Check your skin before starting work and cover any cuts and other broken skin with a clean, dry dressing. If you sustain a wound at work, clean and cover it straight away.
- If untreated sewage gets on your skin or in your eyes, nose or mouth, wash the area thoroughly.
- Wash or shower after you have finished work.

Workers must be provided with adequate washing facilities (PDF, 0.57 MB). This should include clean running water, soap and paper towel or an air hand dryer. Field workers should be provided with portable hand washing facilities. Use handwashing signage to remind workers to wash their hands. Workers who have significant contact with sewage should have access to showers and change rooms. Workers must also be provided with first aid facilities, clean eating facilities and drinking water.

Information, instruction, training and supervision

Provide workers with information about:

- health risks from contact with sewage
- safe work procedures
- occupational vaccinations
- selection and use of PPE
- hand washing practices.

Personal protective equipment

PPE can include protective clothing, gloves, safety eyewear and protective footwear. A properly fitted (PDF, 0.86 MB) particulate respirator (e.g. disposable P2 respirator or higher) should be worn if workers are exposed to sewage aerosols and biosolid dust. Other types of respirators may be required if there is exposure to hazardous chemicals or oxygen deficiency.

More information

Contact Workplace Health and Safety Queensland on 1300 362 128 for information on managing infectious diseases at work. If a person is infected with an infectious disease at work, this must be notified to Workplace Health and Safety Queensland.

Contact Queensland Health on 13HEALTH (13 43 25 84) for information on infectious diseases. Seek advice from your general practitioner or local public health unit if you have concerns about possible exposure to infectious diseases from work with sewage.