

### Student Handout

#### Biological Hazards

Doing repairs on sinks, toilets, and sewage lines, and laying pipe in soil can expose you to human pathogens such as bacteria and parasites. You can get an infection by breathing them into your lungs, through a cut in your skin, or by touching them and then touching your mouth or nose. Plumbers need to pay extra care and attention at all times to avoid being contaminated by biological hazards, and to clean up according to written work procedures if contamination occurs.

#### Examples of hazards

bacteria, such as E Coli, can cause short-term illnesses that can make you extremely ill and can even be deadly

tetanus

viruses, such as Hepatitis A, B, and C, can cause long-term health problems

parasites that can take months to diagnose and eradicate

#### Safety tips

Assume anything touched by sewage and soil is contaminated.

Apply barrier cream before each work session to keep human pathogens from entering your bloodstream through cracks in your skin.

Wear appropriate PPE when working with sewage, including rubber boots and gloves, overalls, and eye protection (wear goggles if a hose will be used, as safety glasses will not protect against splashing).

Do not eat or drink while working in a potentially contaminated area. Wash your hands before meals.

After working with raw sewage or soil, wash up immediately with antibacterial soap and water (preferably hot water). Do not use solvents to wash your hands, as they can cause irritation that may lead to skin infections and cancer.



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Immediately wash and disinfect any wound that comes into contact with raw sewage or soil.

Change out of work clothes before leaving the work site. If any sewage has gotten onto your clothes, change them right away. Soiled work clothes should be sealed in a plastic bag and laundered separately from other clothing. Wash your hands thoroughly after handling the clothing.

Clean up spills immediately.

All contaminated tools and materials should be contained, labeled and isolated until they can be disinfected.

When doing repairs on drains in hospitals and other public places, be aware that obstructions can be caused by "sharps" such as used syringes. If you cannot see an obstruction in a pipe, gutter or down pipe, do not feel around with your bare hands, as you could be stuck by a needle contaminated with bloodborne disease such as HIV/AIDS. If you do suffer a needlestick injury, seek medical attention immediately.

Use tongs or pliers to pick up needles or other contaminated sharp objects, and place them in a disposal container made for sharps (use a sealable glass jar or canister if there is no sharps container readily available). Contact your municipality for information on disposal.

#### Safety Alert

Your employer should ensure that you are vaccinated against tetanus and diphtheria. Vaccinations against Hepatitis A and B are also available.

