

WELCOME BACK TO CLASS



Good evening, ladies and gentlemen.

Welcome back to class.

Today, we will be discussing the course Water Safety and Hygiene (WASH) I hope we are all settled.

Let's get started with our class.

https://youtu.be/wM_l6CqA68o

Kindly click on the link to watch this video



Introduction to Water Safety and Hygiene

Water is essential for life, but when it is not handled safely, it can quickly become a source of disease. Hygiene practices are equally important because they protect people from germs and infections. This module introduces learners to the meaning of water safety and hygiene, explains why they are vital for health, and highlights common water-related illnesses and how they spread.

Meaning of Water Safety and Hygiene

Water safety refers to practices that make sure the water we drink, cook with, or use for washing is clean and safe. It includes how water is collected, stored, treated, and protected from contamination. For example, drawing water with a clean container, keeping storage covered, and boiling water before drinking, are all part of water safety.

Hygiene means the personal and community practices that keep people and their environment clean. It includes handwashing, bathing, cleaning homes, and safe handling of food and utensils. Hygiene protects people from germs that can cause sickness and helps communities stay healthy.

Together, water safety and hygiene are simple, but powerful tools to protect families and entire communities from preventable diseases.

Why Safe Water and Hygiene Are Important for Health

Safe water and hygiene are important because they prevent sickness and save lives. When water is dirty or not handled properly, it can carry harmful germs. These germs may cause diarrhea, typhoid, or cholera. Without proper hygiene, germs from hands or the environment can spread quickly from one person to another, especially in schools and crowded communities.

For example, a child who does not wash hands after using the toilet, may carry germs to food, and other children who eat that food can fall sick. Similarly, water stored in an open container can attract flies or get contaminated by dust, making it unsafe for drinking.

In Nigeria and in many countries around the world, communities that have access to safe drinking water and good hygiene facilities, report fewer illnesses and better school attendance. Healthy children miss fewer school days, parents save money on hospital bills, and families enjoy better quality of life.

Common Water-Related Illnesses and How They Spread

Unsafe water and poor hygiene are major causes of disease. Some of the most common illnesses linked to water are:

Diarrhea – This is one of the leading illnesses caused by drinking dirty water or eating contaminated food. Germs spread quickly, especially among children.

Cholera – A serious disease that spreads when water or food is contaminated with human waste. It can cause severe dehydration and even death if untreated.

Typhoid – Caused by bacteria spread through contaminated food and water. It often results from poor sanitation and improper hygiene practices.

Dysentery – An infection that causes severe diarrhea, often linked to poor hand hygiene and dirty drinking water.

Worm infections – Children may get these from playing in dirty water, walking barefoot, or drinking contaminated water.

These illnesses often spread when human waste is not properly disposed of, when hands are not washed after using the toilet, or when water is not stored safely.



Safe Water Collection and Storage

Water may look clean to the eye, but still carry harmful germs. How water is collected, stored, and handled determines whether it remains safe for drinking and household use. This module explains safe collection from different water sources, the correct cleaning and use of containers, and how to prevent contamination during storage. These practices are critical in reducing the spread of waterborne diseases and promoting healthier lives.

How to Collect Water Safely from Wells, Taps, and Streams

Water collection is the first step in ensuring safety. Poor collection methods can expose clean water to contamination even before it reaches the home.

From Wells: Use a clean bucket or container attached to a rope that is stored properly, not left lying on the ground. The rope and container should not be shared with animals or used for other purposes. It is safer to use hand pumps or covered wells, as open wells are easily contaminated by dust, insects, or runoff. In Nigeria, many rural communities rely on wells, and ensuring they are properly covered reduces the risk of cholera outbreaks.

From Taps: Water from taps is often safer, but it can still be contaminated by unclean containers. When fetching from taps, ensure the mouth of the container does not touch the tap opening to avoid spreading germs. In crowded areas where people queue for water, each person should handle their containers carefully to prevent cross-contamination.

From Streams or Rivers: Streams are more prone to contamination, because they are open sources. Water should be collected upstream where it flows more cleanly, away from places where people wash clothes, bathe, or animals drink. Collecting from stagnant pools should be avoided. Where possible, this water should always be treated before use.

Proper Cleaning and Use of Water Containers

The container used for fetching and storing water plays a key role in keeping it safe. Even if water is clean at the source, dirty containers can make it unsafe.

Containers should be washed regularly with soap and clean water.

Wide-mouthed buckets or open basins are not ideal for storage because they allow dust, flies, and hands to contaminate the water. Instead, narrow-mouthed containers with covers are safer.

Water scooping should be done with a clean cup or small container that is kept separately, not with hands or shared utensils.

In schools, children can be taught to use bottles or cups with lids to reduce the spread of germs when drinking.

For example, in Nigerian households, it is common to use clay pots or plastic drums. These should always be covered with lids to avoid exposure to flies and insects. Internationally, in places like India or Kenya, many families use narrow-mouthed jerrycans for storage, which helps reduce contamination.

Kindly click on the link below to watch this video on Introduction to Water Safety and Hygiene

<https://youtu.be/pwyTuPDAm64>



Protecting Water from Contamination During Storage

Even when collected in clean containers, water can become unsafe if stored carelessly. Protecting stored water is one of the most effective ways to prevent diseases like diarrhea and typhoid.

- ✓ Always keep water containers covered tightly to stop dust, insects, or animals from entering.
- ✓ Store water off the ground where children and animals cannot easily reach it.
- ✓ Do not dip hands into the water; instead, pour out water or use a designated clean cup.

- ✓ Separate drinking water from water used for washing or cleaning to avoid mixing and contamination.
- ✓ If water is stored for a long time, it should be boiled or treated before drinking.

In Nigerian urban areas, many households store water in large tanks due to irregular supply. These tanks must be cleaned regularly to remove algae and dirt. Internationally, in refugee camps or emergency settings, aid agencies often provide covered containers with taps at the bottom, which prevent hands or cups from touching the water directly.

Safe water begins not only at the source but also in how it is collected, stored, and handled. Collecting from clean points, using properly maintained containers, and protecting stored water from contamination are simple but powerful practices. Families, schools, and communities that adopt these measures significantly reduce the spread of diseases and improve overall health. In the next module, we will learn about basic water treatment methods that further ensure water remains safe for drinking and household use.

Kindly click on the link below to watch this video on Safe Water Collection and Storage

<https://youtu.be/nS7PvJfsSrU>

Kindly click on the link below to watch this video on Basic Water Treatment Methods

<https://youtu.be/Uw-IF8WHQFc>



Basic Water Treatment Methods

Even when water looks clean, it may still contain harmful germs and invisible impurities that can make people sick. Many communities depend on water from wells, streams, or tanks, which are often not safe for drinking without treatment. This module introduces learners to simple but effective methods of making water safe: boiling, filtering, and chemical treatment. Each method is explained in detail, with practical applications that can be used at home, in schools, and in communities.

Boiling Water to Make It Safe

Boiling is one of the oldest and most effective methods of water treatment. Heating water until it reaches a rolling boil (when large bubbles rise to the surface) kills most bacteria, viruses, and parasites that cause diseases such as cholera, typhoid, and dysentery.

How to Do It: Water should be boiled for at least 3 to 5 minutes to ensure harmful germs are destroyed. After boiling, it should be allowed to cool in a clean, covered container to prevent recontamination.

Advantages: Boiling requires no special equipment other than a pot and a source of heat, making it accessible to most households. It is reliable and effective for families, especially during outbreaks of waterborne diseases.

Challenges: Boiling may not remove dirt, chemicals, or bad taste from water. In rural Nigerian villages, families often rely on firewood for cooking, which can make frequent boiling expensive and time-consuming. However, during emergencies such as floods, boiling becomes a life-saving practice. Internationally, in countries like Nepal, boiling is a common method during disaster relief when water supply systems are disrupted.

Using Simple Filters or Cloth to Remove Dirt

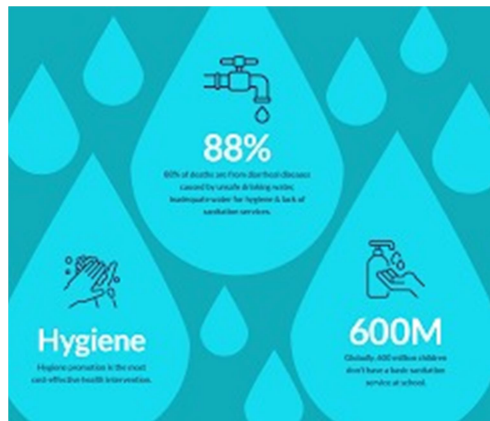
Water may contain visible impurities like sand, leaves, or insects. Filtering removes these physical particles and improves the appearance and taste of water. While filtering alone does not make water fully safe for drinking, it is an important step before boiling or chemical treatment.

Cloth Filtration: A clean cotton cloth can be folded several times and placed over the mouth of a container to strain water collected from streams or open wells. This reduces dirt and debris. In Bangladesh, this method is widely used in rural areas to reduce cholera-causing germs carried by plankton.

Sand or Ceramic Filters: Low-cost filters made from sand, gravel, or clay are also used in many parts of the world, including Nigeria. These filters trap dirt and some harmful organisms.

Advantages: Filtration improves clarity and taste, making water more acceptable for drinking. It also reduces the burden on other treatment methods like boiling or chlorine.

Challenges: Filtration does not kill germs completely. Therefore, filtered water should still be boiled or treated with chlorine before drinking to ensure full safety.



Introduction to Chlorine and Other Safe Treatment Options

Chemical treatment is another effective way to make water safe. Chlorine is one of the most commonly used chemicals for water purification worldwide. It is widely used in city water systems, but it can also be applied in households.

How Chlorine Works: Chlorine kills most bacteria and viruses in water. It is available in liquid form (such as bleach solutions) or as chlorine tablets, which are especially useful in emergencies or rural communities.

How to Use It: A small, measured amount of chlorine is added to water and left for 30 minutes before drinking. Too much chlorine can cause an unpleasant taste, so it is important to use the right dosage as recommended.

Advantages: Chlorine is simple, cheap, and highly effective in protecting against diseases. It also provides some lasting protection because it continues to kill germs in the water for several hours.

Other Options: In some communities, lime, iodine, or solar disinfection (placing water bottles in the sun for several hours) are used as alternatives when chlorine is not available. In Nigeria, humanitarian organizations often distribute chlorine tablets during cholera outbreaks to help families purify water quickly.

Challenges: Chlorine may not remove dirt or bad smell from water, and some people dislike its taste. It also requires careful handling to avoid misuse.

Water treatment is a critical step in ensuring safe drinking water. Boiling destroys harmful germs, filtration improves clarity and reduces dirt, and chlorine provides effective chemical protection. Each

method has strengths and limitations, but when combined; such as filtering water before boiling or adding chlorine; communities can achieve a higher level of safety. Families, schools, and community groups that practice these methods reduce the risks of waterborne diseases and safeguard public health. The next module will focus on hygiene practices that go hand in hand with water safety to maintain healthy living environments.

Hygiene Practices for Healthy Living

Hygiene is one of the simplest yet most powerful ways to protect health. Even when water is made safe through collection and treatment, diseases can still spread if people do not maintain proper hygiene practices in daily life. Cleanliness is not just about appearance; it is about breaking the chain of infection and keeping families, schools, and communities healthy. This module explores three important aspects of hygiene: handwashing at critical times, maintaining clean cooking areas and utensils, and practicing personal hygiene for both children and adults.

Handwashing at Critical Times

Handwashing with soap and clean water is considered one of the most effective ways to prevent illness. Many germs are spread through hands because they come into contact with food, mouths, and other people. Washing hands properly removes these germs and stops them from spreading.

The most important times for handwashing include:

Before eating or feeding a child. Food can easily carry germs from dirty hands into the body. Washing hands before meals protects both children and adults.

- ✓ After using the toilet. Human waste contains harmful germs that can cause diarrhea, cholera, and typhoid. If hands are not washed after toilet use, these germs spread to food, water, and other people.
- ✓ Before preparing food. A caregiver or parent who prepares food without washing hands risks contaminating meals for the whole family.

After handling waste or cleaning. Tasks such as sweeping, cleaning toilets, or touching garbage bring the hands into contact with dirt and germs, which must be washed off immediately.

For example, in many Nigerian schools, children are taught to wash their hands with soap before eating snacks or lunch, reducing the spread of diarrhea. Internationally, countries like Kenya and Bangladesh have large handwashing campaigns where schools set up “tippy taps” (simple handwashing devices using containers and soap) to encourage regular hygiene.

Keeping Utensils, Cooking Areas, and Surroundings Clean

Clean kitchens and utensils are central to good health. Even if food and water are safe, dirty plates, cups, or cooking tools can reintroduce germs into meals.

Utensils: Plates, cups, and spoons should be washed with soap and clean water after every use. Storing them upside down on clean surfaces prevents dust and flies from settling on them.

Cooking Areas: Kitchens and cooking corners should be swept regularly, and surfaces used for food preparation should be kept free from dirt and waste. Leaving food scraps or dirty dishes attracts flies, cockroaches, and rodents, which carry disease.

Surroundings: A clean home and school environment prevents water stagnation, which often attracts mosquitoes. Garbage should be collected and disposed of properly to stop pests from breeding.

In Nigerian households, it is common for families to use shared cooking spaces. Keeping these areas clean ensures that germs do not spread among neighbors. In rural India, families often dry their utensils in direct sunlight, which acts as a natural disinfectant. These practices, though simple, make a huge difference in reducing foodborne illnesses.



Personal Hygiene Practices for Children and Adults

Personal hygiene refers to the daily routines that keep individuals clean and healthy. These practices must begin early in childhood and continue throughout life.

For Children: Teaching children to bathe regularly, brush their teeth twice daily, and wear clean clothes is essential. Children should also be encouraged to cut their fingernails short, as dirt and germs often hide under long nails. In Nigerian schools, teachers often conduct hygiene inspections where children are checked for clean uniforms and trimmed nails, instilling lifelong habits.

For Adults: Adults should serve as role models in practicing hygiene. Bathing daily, brushing teeth, washing hair, and wearing clean clothes not only promote health but also set an example for younger ones. Women and girls should be guided on menstrual hygiene, including the safe use and disposal of sanitary materials.

Special Focus: In areas where water is scarce, families should prioritize critical hygiene practices such as handwashing, face washing, and cleaning cooking utensils. Even limited water can be used wisely for hygiene when it is prioritized.

Internationally, in countries like Japan, personal hygiene is deeply integrated into daily life, with children taught to brush teeth after meals in schools. This level of attention to hygiene greatly reduces the spread of infections and supports overall well-being.

Hygiene practices are the foundation of a healthy community. Handwashing at critical times stops the spread of diseases. Clean utensils, cooking areas, and surroundings protect food and water from contamination. Personal hygiene for children and adults ensures that healthy habits are passed from one generation to the next. By practicing these simple but important routines, families and communities can dramatically reduce waterborne and hygiene-related illnesses. Good hygiene does not require wealth; it requires commitment, awareness, and consistency in everyday life.



Community Action and Awareness

Safe water and good hygiene are not just individual responsibilities; they are collective responsibilities. Families, schools, and communities all play important roles in spreading and maintaining healthy practices. While a single household may adopt safe water habits, the effort becomes more powerful when an entire community practices them together. This module highlights how families and schools can promote safe practices, how community groups can drive hygiene campaigns, and how simple teaching methods can spread awareness effectively.

Role of Families and Schools in Promoting Safe Practices

Families are the first place where children learn habits that last a lifetime. Parents and caregivers shape how children treat water, how they keep themselves clean, and how they respond to health risks. Families that practice safe water collection, cover their storage containers, and wash hands at critical times send a strong message to children that cleanliness is essential.

Schools extend this foundation by reinforcing what children learn at home. Teachers can create routines such as morning handwashing before class, supervised cleaning of eating areas, and classroom

discussions on hygiene. In many Nigerian schools, handwashing stations are now being placed at entrances to encourage students to wash their hands before eating or after using the toilet. Internationally, schools in countries like Uganda and Nepal have student health clubs that lead hygiene songs and dramas to make the lessons fun and memorable.

When families and schools work together, children grow up with consistent messages about the importance of safe water and hygiene. This consistency helps in building lifelong habits that protect health.

Involving Community Groups in Hygiene Campaigns

Communities are powerful in creating change because people are more likely to adopt new behaviors when they see their neighbors doing the same. Community groups, religious institutions, youth associations, and women's cooperatives are often trusted voices that can lead hygiene campaigns.

For instance, in Nigerian villages, community leaders may gather households to discuss the dangers of cholera and demonstrate how to treat water with chlorine. Faith leaders can integrate messages about cleanliness and health into their sermons, making hygiene a moral and spiritual responsibility as well. Youth groups can organize street plays, music, or sports events to share water safety messages in an engaging way.

Internationally, community-driven campaigns have been highly successful in South Asia, where women's groups lead household visits to teach proper handwashing and safe storage. These grassroots efforts ensure that information reaches every corner of the community, including families that may not have access to formal health education.



Simple Ways to Teach Others About Water Safety and Hygiene

Teaching others does not always require advanced training or complicated tools. Simple, practical approaches often make the biggest impact, especially in rural or underserved communities.

Demonstrations: Showing people how to wash hands correctly or how to cover water containers is more effective than only talking about it.

Storytelling: Sharing real stories of how unsafe water led to illness in a family, can make people understand the risks better than statistics alone.

Songs and Rhymes: In schools, hygiene songs and rhymes are memorable and encourage children to repeat what they learn at home.

Visual Aids: Posters with clear pictures, colorful murals, or chalkboard drawings in public spaces can remind people of hygiene practices.

Peer Teaching: Children teaching parents, or community health volunteers teaching neighbors, spreads the message widely and creates a sense of shared responsibility.

For example, in Nigeria, health workers sometimes use village markets to demonstrate handwashing, because markets are busy and attract large crowds. In Kenya, school children are trained as hygiene ambassadors who remind their peers about proper practices. These simple methods make learning accessible and practical for all.

Community action and awareness are the backbone of sustainable water safety and hygiene. Families set the example, schools reinforce the message, and communities create collective responsibility. By involving trusted groups and using simple, engaging teaching methods, safe practices can reach every household. When everyone works together—parents, teachers, leaders, and children—the cycle of waterborne diseases is broken, and communities move toward healthier, stronger futures.

Kindly click on the link below to watch this video on Community Action and Awareness

<https://youtu.be/JTC76HWJYLQ>



1. What are two effective ways to teach others about water safety and hygiene?
2. How can peer teaching help spread awareness about hygiene practices?
3. Why are demonstrations more effective than just talking about hygiene practices?