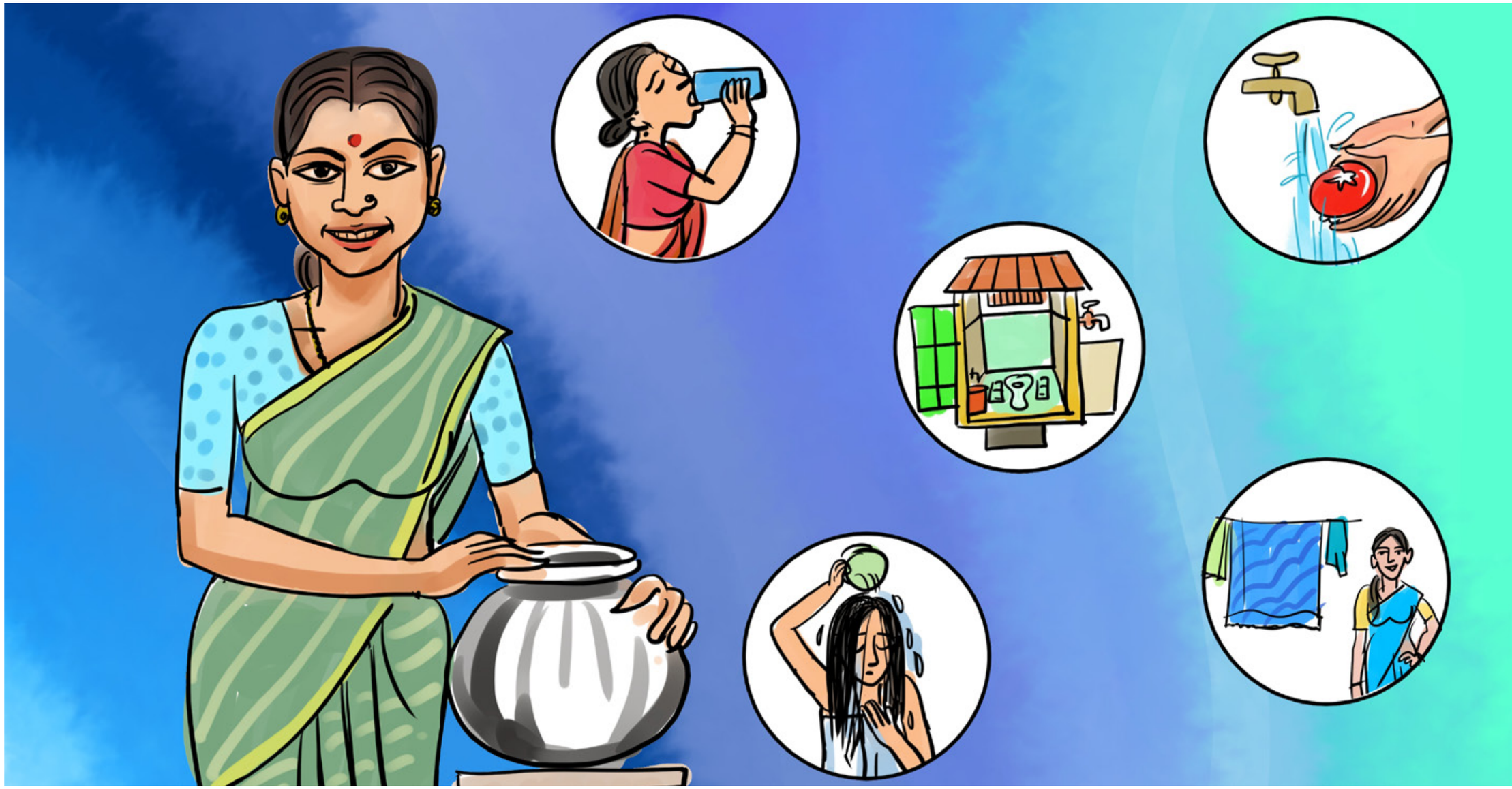


P.A.C.E.
Gap Inc.

WASH (Water, Sanitation and Hygiene)

Gap Inc. P.A.C.E. in Community Program

Introduction

Access to safe drinking water and proper sanitation are basic human rights. However, social and economic inequalities can make realizing this right challenging especially for women and girls based in developing countries. The impact is large for those confronted with lack of access to safe drinking water and sanitation, affecting their health, livelihood, education, and hence the overall economy of a country.

Access to water, sanitation and hygiene (WASH) facilities is necessary for individual, community, and environmental health. Poor water quality, sanitation facilities, and hygiene practices are major public health concerns as they impact health among men, women, and especially children, and are often the cause of diseases such as diarrhea, cholera, typhoid, hepatitis and parasitic infections spreading. These occur through vector transmission and the contamination of soil and water sources and often lead to epidemics and death. There is an urgent need to address the insufficiency of access to safe drinking water, proper sanitation facilities, and hygiene education, especially among women and girls.

In India:

- 37.7 million people are affected by waterborne diseases annually
- 1.5 million children are estimated to die of diarrhoea every year

In developing countries, women are often responsible for collecting water for their families and at times this means travelling long distances and being exposed to unsafe environments. Pregnant women face extra stress and health risks when carrying heavy water containers for long distances.

The burden of fetching drinking water from outdoor sources falls disproportionately on girls and women. Surveys from 45 developing countries show that in almost two-thirds of households without a drinking water source on the premises, it is women and girls who go to collect water. In the 12% of households where children collect water, girls are twice as likely as boys to be responsible for this chore.

Women and girls are directly affected, as evident from UNICEF's analysis that reported that without proper sanitation, girls are more likely to drop out of school and are vulnerable to attacks while seeking privacy. Women with inadequate or a complete lack of sanitation are also more likely to miss work. Without sanitation facilities, one in three women worldwide risk shame, harassment and violence, not to mention the risk of contracting a disease because they have nowhere safe to go to the toilet. Many women suppress urination or defecation due to embarrassment and shame, leading to urinary tract and pelvic infections, and intestinal problems. Also, because of this shame or embarrassment in using public toilets or practicing open defecation, women often wait until nightfall to relieve themselves, risking physical and sexual assaults. Approximately 1.25 billion women around the world face these risks.

Program designed to address these barriers related to safe water access face sustainability challenges, such as maintenance of wells and water pumps. At present, in countries like India, government schemes do not have the funds to provide complete coverage to all of the country's poor, who have little or no access to clean water.

Globally, the need for attention to WASH access and facilities is significant and is gaining the attention of public health organizations across the world. Worldwide, 2.5 billion people live without access to improved sanitation and 1.1 billion people practice open defecation. Despite significant gains, sanitation remains one of the most off-track Millennium Development Goals (MDG) all over the world to date. Poor sanitation leads to about 700,000 premature deaths annually around the world. A recent analysis shows that putting an end to the practice of open defecation can save children's lives by reducing the transmission of diseases, stunting, and under-nutrition, which are important for a child's cognitive development and future economic productivity.

- One of the reasons for a high school dropout rate among girls in India at primary level, was found to be the lack of access to toilets and safe drinking water.
- 84 out of 100 schools have drinking water facilities in India.
- 54 out of 100 schools have separate toilets for girls.
- In countries such as Eritrea, Ethiopia and Somalia, well over half of the population has to practise open defecation. Poor water and sanitation, as well as unsafe hygiene practices are the main causes of diarrhoea, one of the main child killers in the region. Each year more than 250,000 children under the age of five die from diarrhoeal diseases.
- Lack of sanitation also holds back economic growth. Poor sanitation costs billions to some countries, amounting to the equivalent of 6.3% of GDP in Bangladesh, 6.4% of GDP in India, 7.2% of GDP in Cambodia, 2.4% of GDP in Niger, and 3.9% of GDP in Pakistan annually.

The Water, Sanitation, and Hygiene (WASH) module for rural women of participating P.A.C.E. in Community program will work towards Gap Inc.'s goal that women have safe access to clean water. This module emphasizes the importance of access to safe water, safe and clean sanitation practices, and the importance of hygiene for improved health and safety for women and girls.

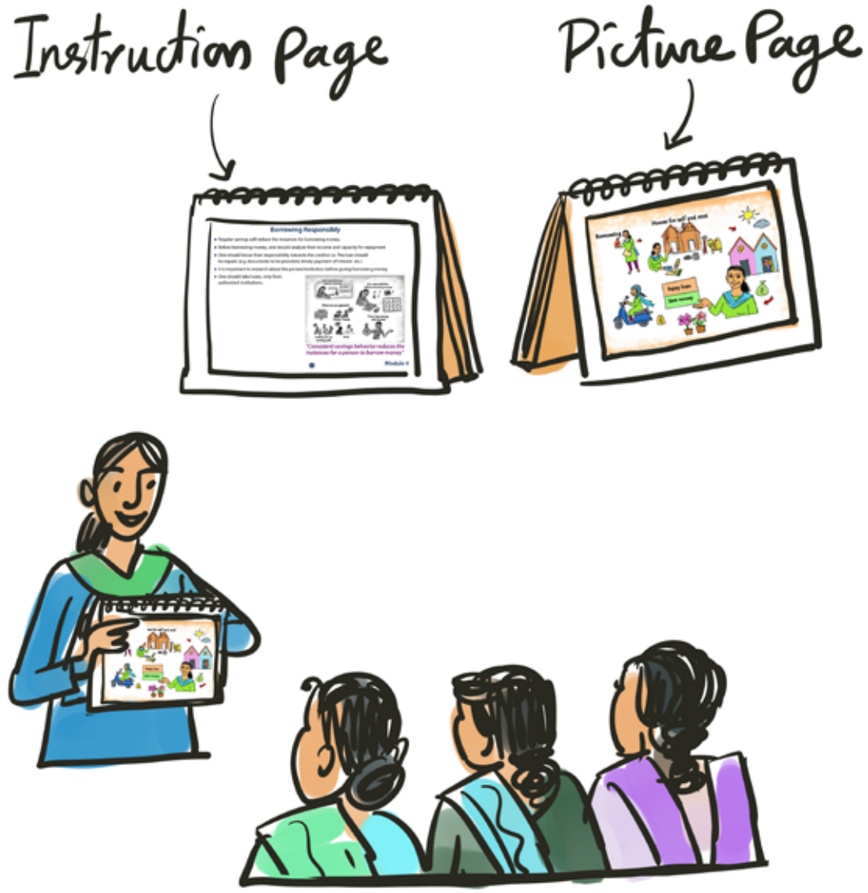
The WASH elements chosen for this module pertain to safe water access as well as the unique needs of women. These are:

- Access to potable water
- Types of diseases related to contaminated water
- Sanitation practices like proper hand washing
- Correct and safe handling of faeces
- These include messages about safety risks to women when using public toilets
- Ways to avoid those risks

The instructions on hygiene use the principles of gender equity and human rights with the aim of reducing stigma. The module will promote information on resources needed to practice good menstrual hygiene that rural women can access and then provide to their own children specially daughters, peers, and other women in the community. We believe that this will further lead to reduction of the stigma concerned with personal and menstrual hygiene among women. It is expected that by gaining information and knowledge through this module, women will be able to access clean drinking water and apply safe practices related to water, sanitation and hygiene. This knowledge and the associated practices will help them to influence the behavior of their families, neighbors, and colleagues. The module has been developed to promote participants to become agents of change – both individually and in their communities

Instructions for using this flip chart

- Use both your hands to hold the flipbook and ensure that your hands do not cover the flipbook while projecting it to the audience.
- The facilitator / peer educator should project the picture towards the audience. The information and key messages are provided at the backside of the chart.
- While discussing key points, it is advisable to use your fingers to navigate the audience through the image. This helps in garnering attention.

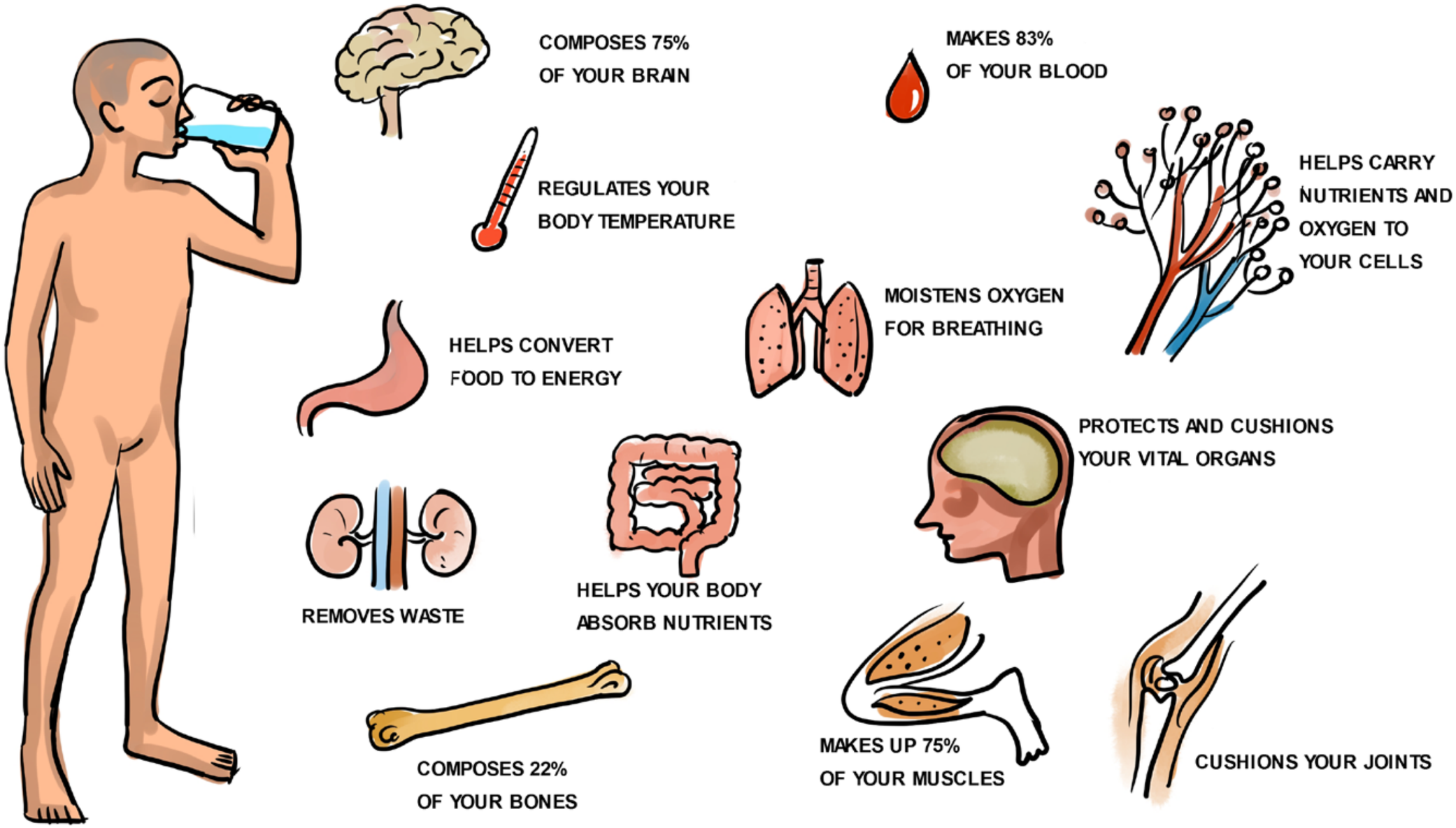


General Uses of Water

General Uses of Water

- Drinking, Bathing
- Brushing Teeth
- Washing
- Cooking
- Irrigation
- Any others?

Importance of Drinking Water



Importance of Drinking Water

The human body requires water to survive and function properly.

Water also helps regulate body temperature, and other biological activities like absorption of food and nutrients, maintenance of body fluid and electrolyte , balance and smooth functioning of muscles and joints.

Urinary system: Water is needed for the body's urinary system to fully function as well as helps to prevent kidney stones and urinary infections.

Water helps to spread nutrients (needed for good health) throughout the body and helps to carry away toxins and waste formed in the body.

Human kidneys filter out the waste products and excess fluids naturally found in the body and dispose of them through urine, via the bladder.

In order to ensure that your urinary system is functioning properly, almost 8 glasses of water (approximately 2 litres) should be consumed daily by adults.

Dehydration is when your body lacks sufficient water to function properly. Dehydration, which causes several health problems. Some results of dehydration are listed below:

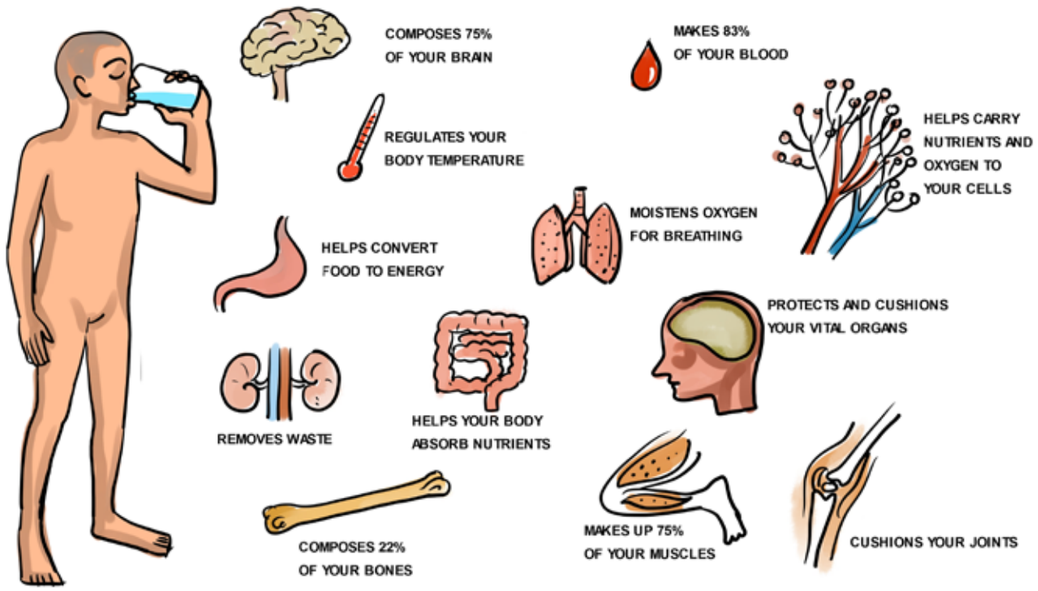
- Inability to concentrate or focus (mild dehydration)
- Memory loss or seizures (severe dehydration)
- Inability to build stamina, extreme weakness and inability to perform routine activities such as sitting, standing, walking or working
- Skin conditions
- Constipation
- Heart illness
- Cholesterol problems
- Kidney stones, kidney failure
- Shock
- Coma

Two early signs of dehydration are thirst and dark-coloured urine.

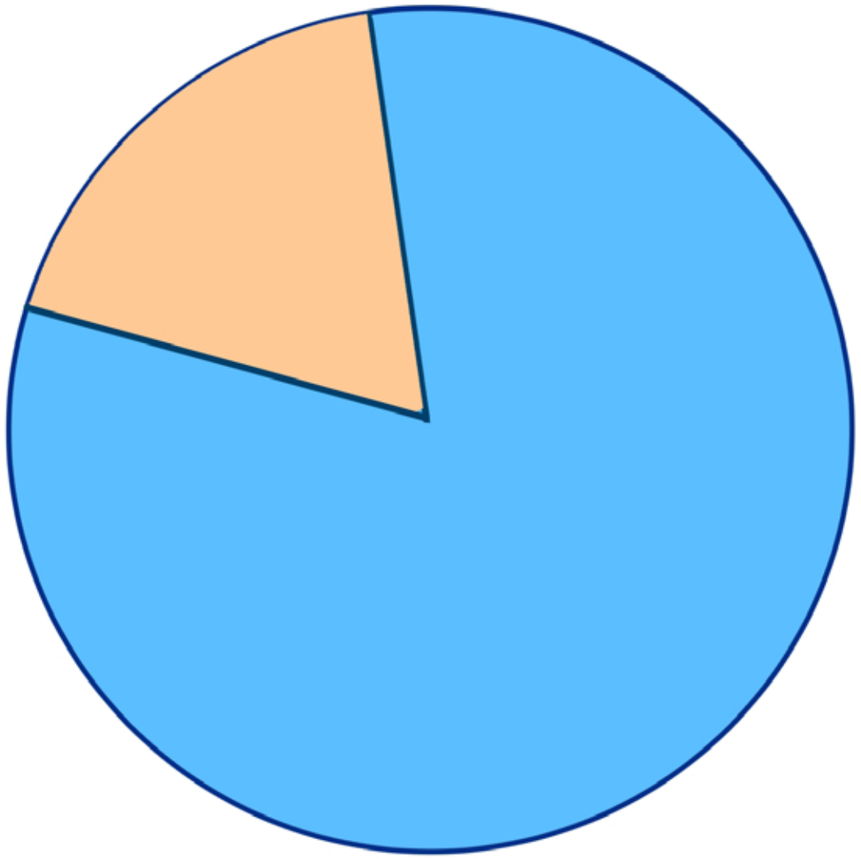
Other symptoms may include:

- Dizziness or light-headedness
- Headaches
- Tiredness
- Dry mouth, lips and eyes
- Passing small amounts of urine infrequently (less than three or four times a day)

In order to maintain a healthy body, we must drink sufficient quantities of "clean" water.



Conservation of Potable Water



72% OF EARTH'S SURFACE IS WATER

ONLY 3% IS FRESH WATER

ONLY1.2% IS AVAILABLE FOR HUMAN USE

Conservation of Potable Water

Water is a limited resource and that conserving and handling water is important.

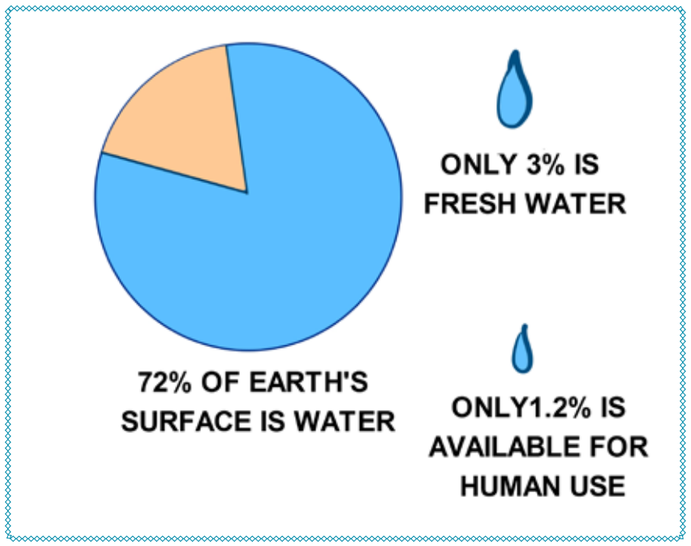
Water is a natural resource. Most of the earth's surface - about 71% - is covered with water; however, most of it (97%) is saline water held by the oceans. Although it seems like water is everywhere (rain, rivers, lakes, etc.), only a tiny fraction of fresh water is the source of drinking water for humans and other animals.

Only a small amount, 1.2% of the earth's fresh water is accessible and usable for humans' needs.

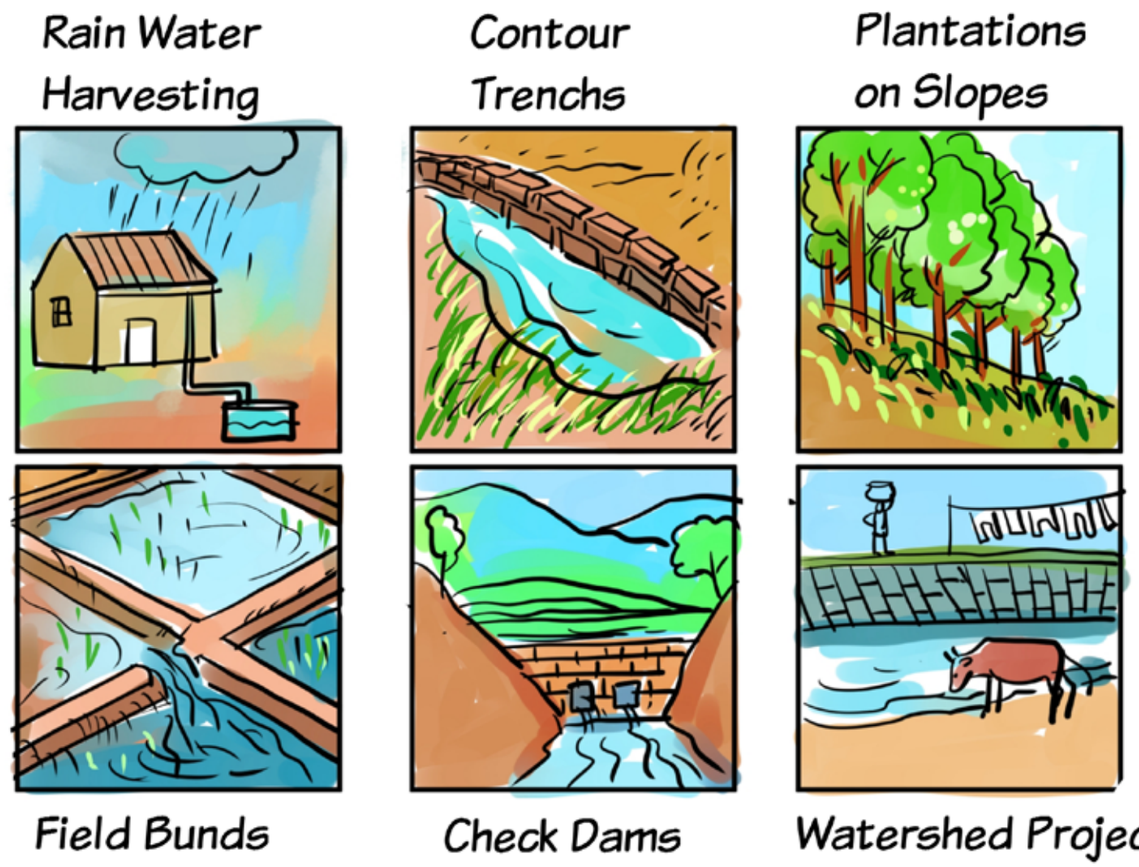
The supply of fresh water is limited, vulnerable to human abuse, like pollution, and not evenly distributed across various regions of the earth or even a country or state.

Fresh water resources around the world have been overused, polluted, fought over and squandered. For this reason it is important to do what we can as individuals and communities to take care of water sources through proper waste and rubbish disposal

In India, water supplies are limited and by 2020 India will be a "water stressed state"



Clean Water Conservation



Clean Water Conservation

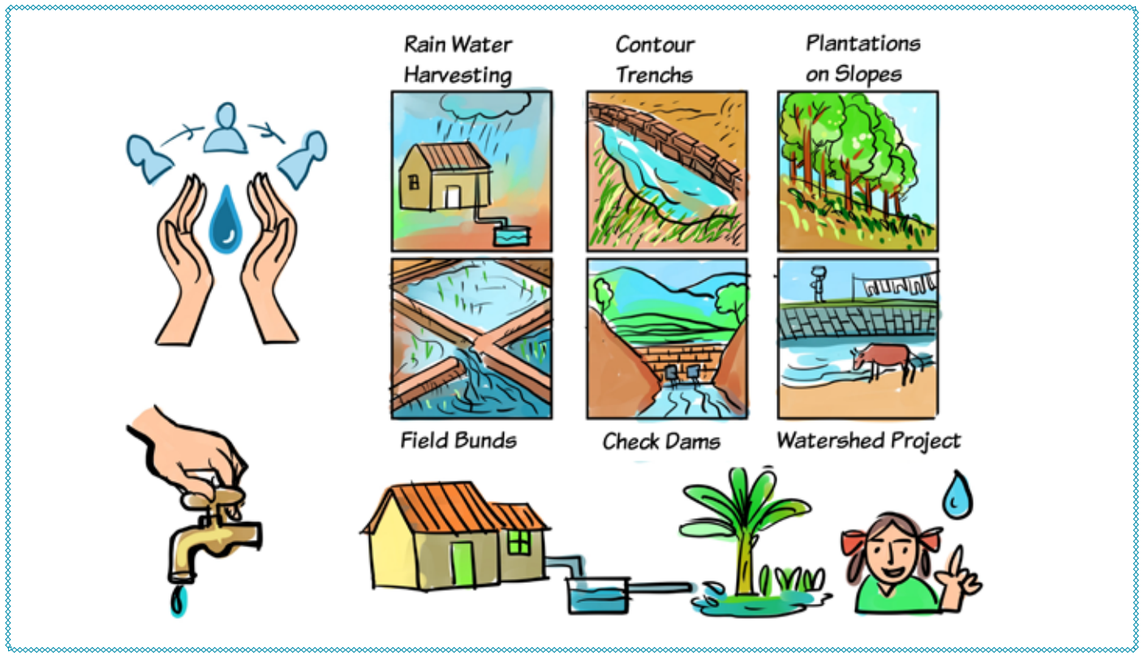
- It is our responsibility to preserve water and care for the environment, so our children and future generations have the resources they need to sustain and thrive
- Rainwater harvesting, watershed management through roof catchment, contour trenches, afforestation or planting of trees, field bunds or check dams for various household and agricultural purposes
- One way to conserve water in homes and communities is by reusing water from the kitchen and bathwater in the garden at home or in neighbourhood community gardens.
- Fresh water is a limited resource, it is our duty to preserve it and encourage our children, family, and neighbours to do the same.

Summary:

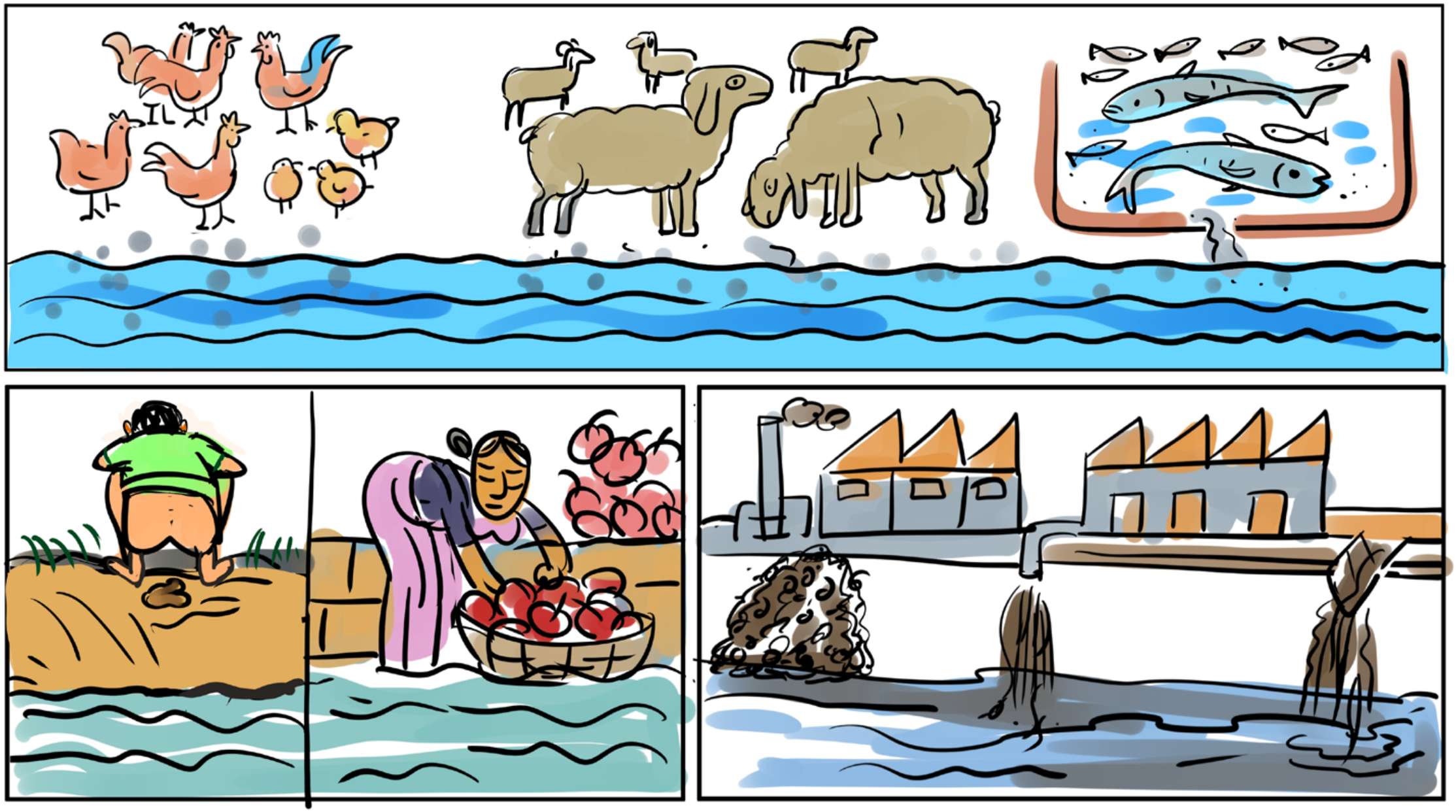
The best way to preserve water is to be conscious about our daily consumption. If we are in charge of water and the upkeep of the household, it is important for us to know how much water should be used on a daily basis, to make sure we have adequate amounts of water for our families and reduce any potential misuse or overuse of water.

There are easy steps that can be taken to conserve water.

These include simply staying conscious of water consumption for various purposes, closing taps, not wasting water unnecessarily, and reminding ourselves and others of water conservation

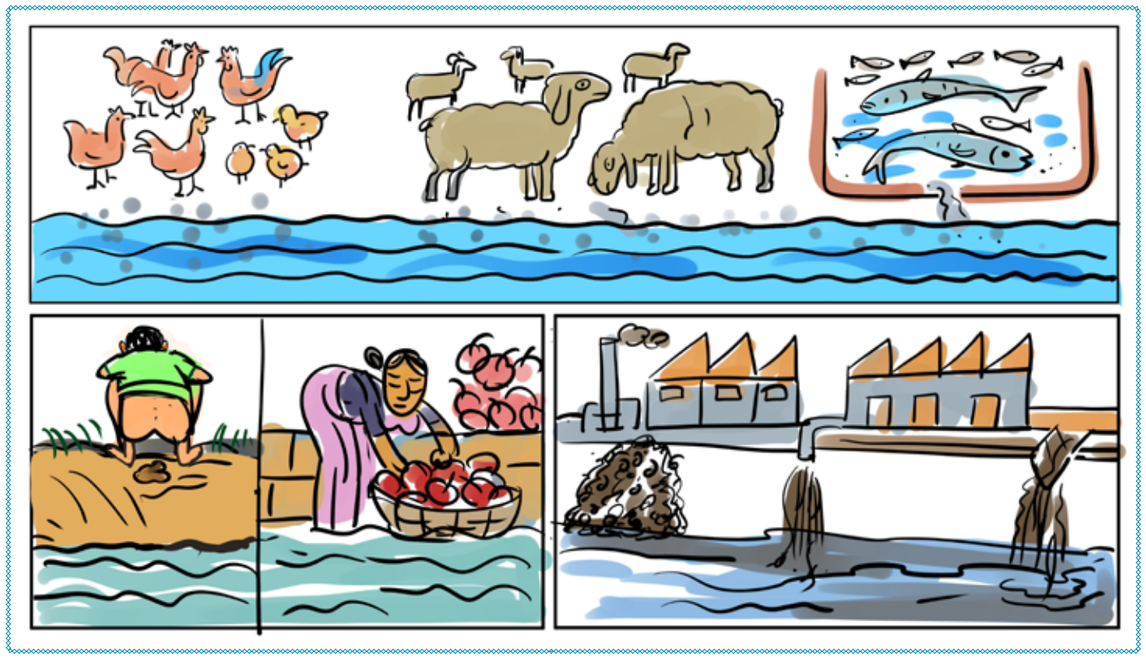


Contamination of Water

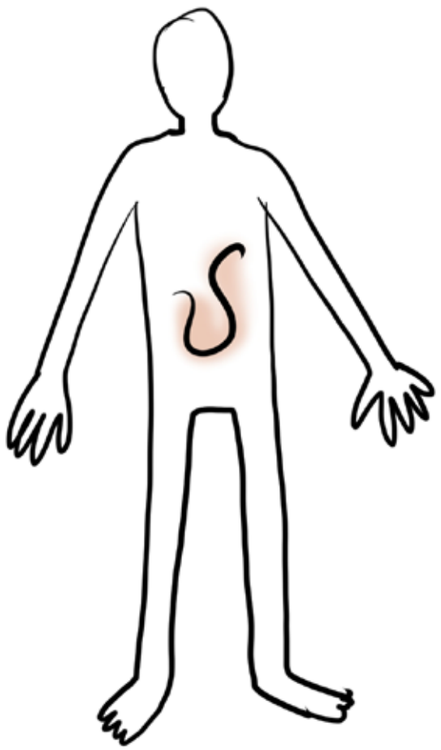


Contamination of Water

- Runoff from animal feeding areas irrigation, farms, dairy farming, fruit farms, and fish farms lead to surface and groundwater pollution
- Runoff from the farm, factories, roads, etc. carries pesticides, and toxic chemicals to surface waters
- Vegetable handling, especially washing in polluted surface waters, leads to contamination of food products
- Open defecation leads to contamination of water and soil. Runoff from septic tanks and pipes leads to surface or groundwater contamination
- Open defecation should not be practiced, especially near a water source.
- Keep water from being contaminated in the community by ensuring no waste is disposed of near water sources.
- In many places, communities have installed water plants wherever fresh water is contaminated with natural or man-made chemicals like fluoride, etc.
- Jointly investing in a water purifier with your neighbours.
- Fix up a routine (timetable) for water collection for the members of the community who have to share a common water source.
- Above all, encourage participants to utilize their assertive and effective communication skills to negotiate with their neighbours and family members to access and avail safe and clean drinking water.

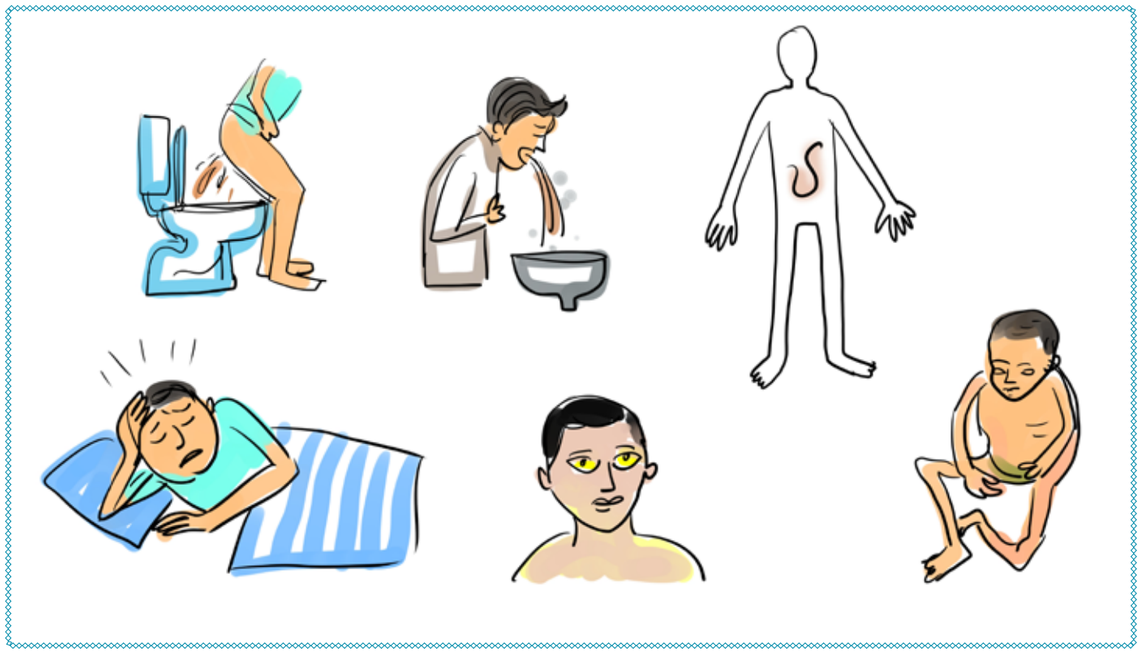


Health Risks of Consuming Contaminated Water



Health Risks of Consuming Contaminated Water

- Cholera, Typhoid, Gastro-enterities, Dysentery, Diarrhea, vomiting, Jaundice (Hapatitis A & E), Worm Infestations, Congenital malformation
- Contamination of water sources with floride, other wastes and pollution
- Eating /drinking of unhygienic food preparations
- Not knowing about the importance of clean water and health
- Not knowing how to access or produce clean water
- Using improper filters or incorrect boiling, storage



Agents of Water Contamination

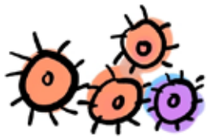
CAUSED BY MICRO ORGANISMS

PROTOZOA

PARASITES

BACTERIA

VIRUS



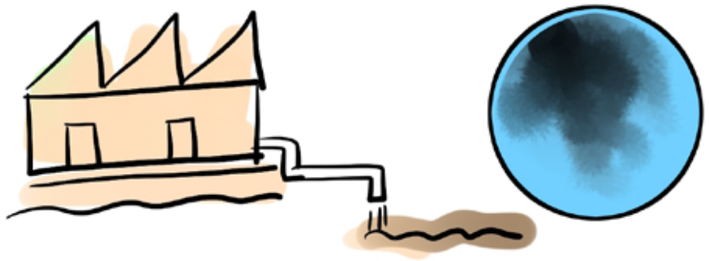
CAUSED BY CHEMICAL CONTAMINATION

FLUORIDE

NATURAL

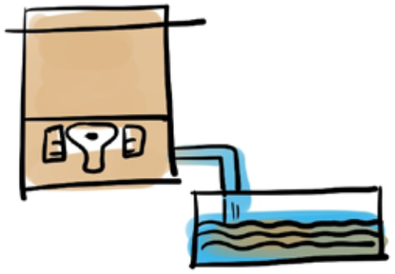
HUMAN ACTIVITY

NITRATE



FERTILIZER CONTAMINATION

SEPTIC TANK CONTAMINATION



Agents of Water Contamination

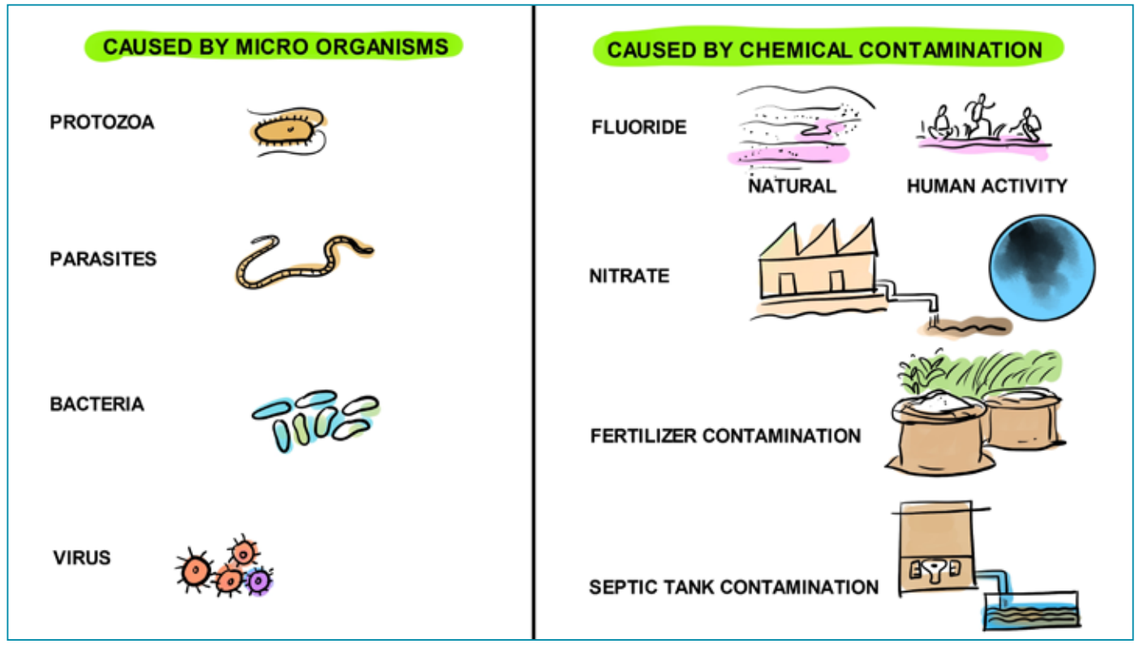
Unsafe water has many different disease causing agents that can make one sick

Such as:

- Protozoa
- Bacteria
- Viral
- Chemicals like Fluoride and Nitrates

Possible Chemical Sources:

- Nitrogen based Fertilizers
- Septic systems and leaking sewage pipes
- Manure storage areas
- Fertilizer or manure spread into fields/farms
- Compost collection
- Possible source of fluoride in water:
- Ground water contamination



Some Symptoms of Water Borne Diseases

ABDOMINAL CRAMP

DEHYDRATION

DIARRHOEA

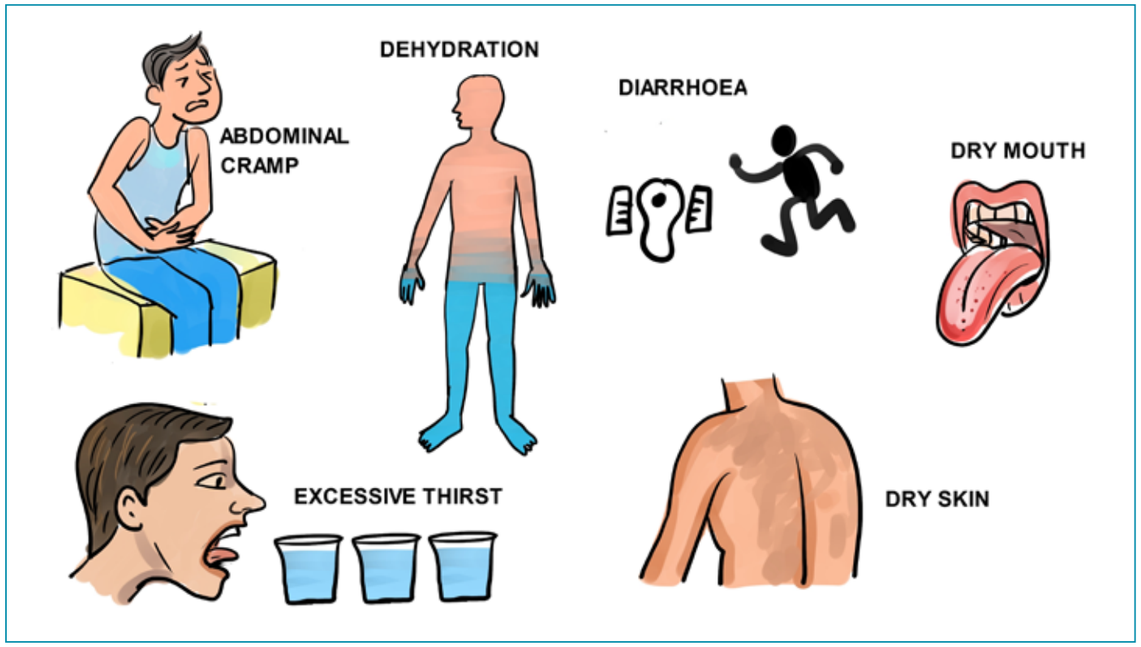
DRY MOUTH

EXCESSIVE THIRST

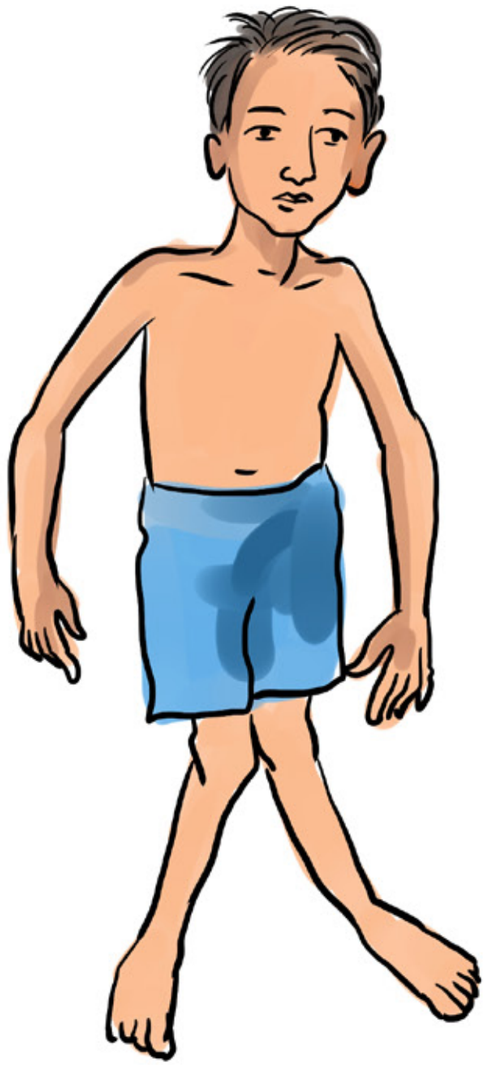
DRY SKIN

Some Symptoms of Water Borne Diseases

- Abdominal cramps
- Dehydration
- Diarrhoea
- Dry mouth
- Dry skin
- Excessive thirst

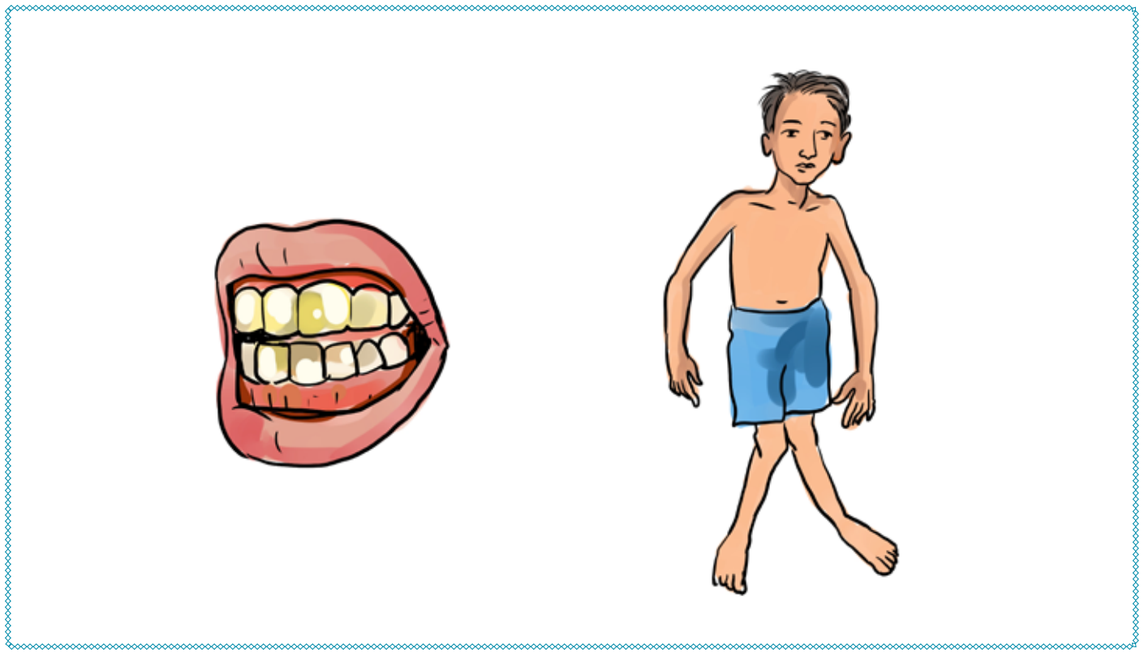


Fluoride Contamination



Fluoride Contamination

- Affects skin
- Bones
- Teeth and digestive system: Young children suffer from growth abnormalities

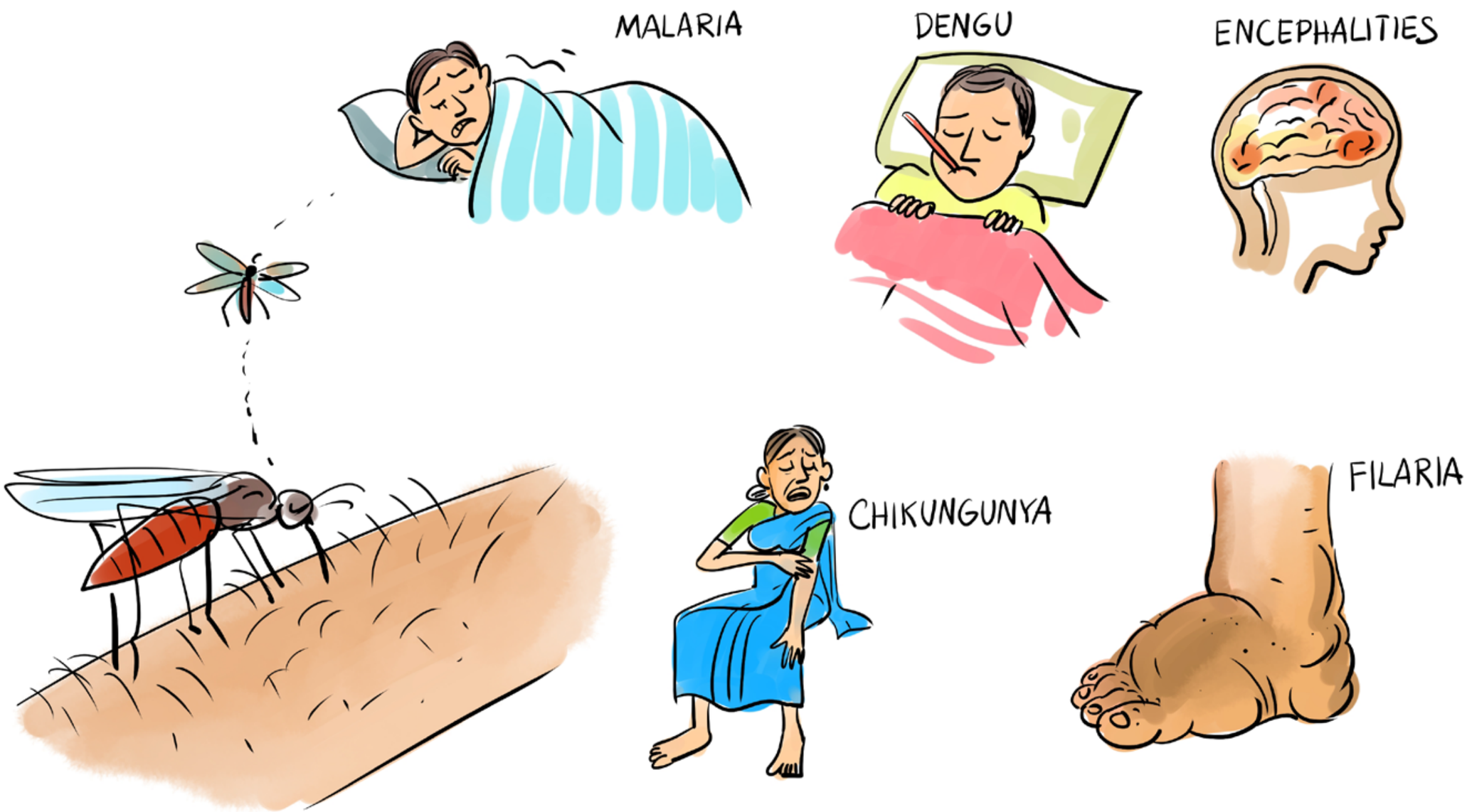


Nitrate Contamination

Nitrate Contamination

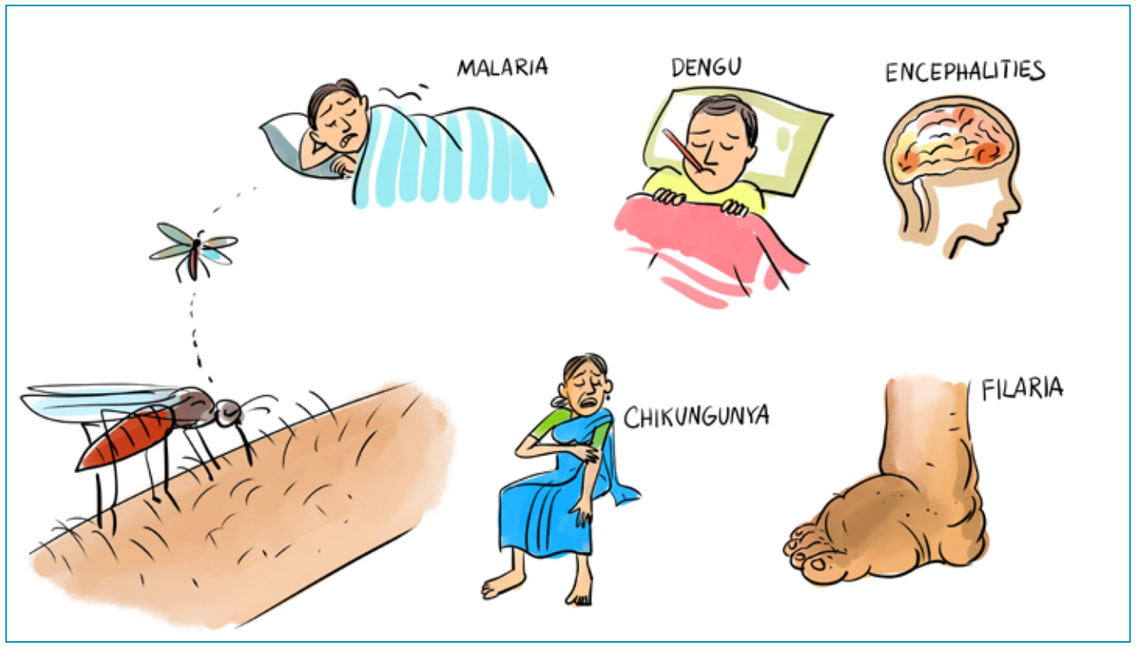
- Infants below 3 months may have blue baby syndome
- Baby food contaminated by nitrate
- Infants blood is not able to carry oxygen
- Infants develop a bluish color and need emergency medical help

Mosquito borne diseases



Mosquito borne diseases

- Malaria
- Dengue
- Chikungunya
- Filaria
- Encephalities

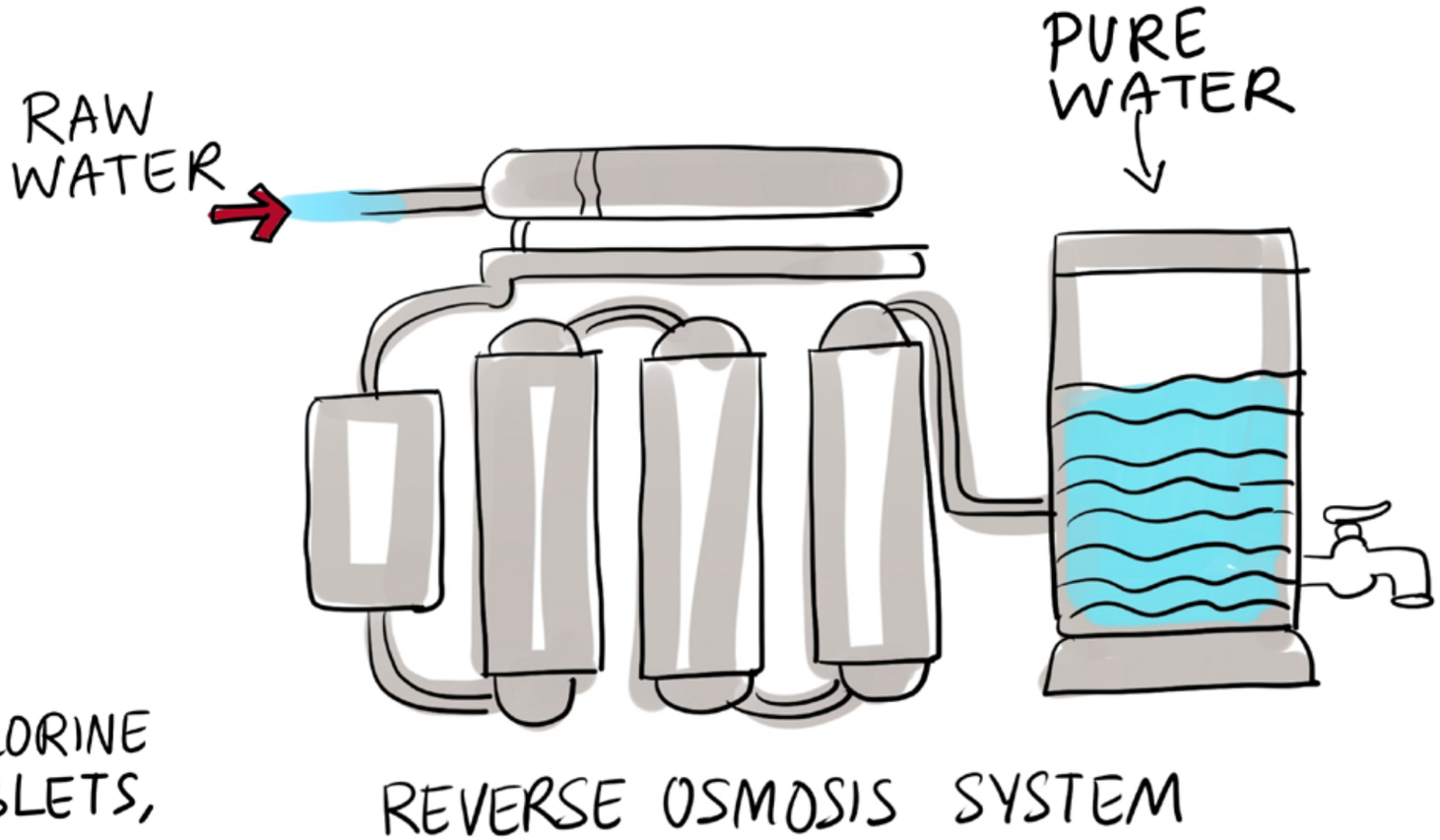


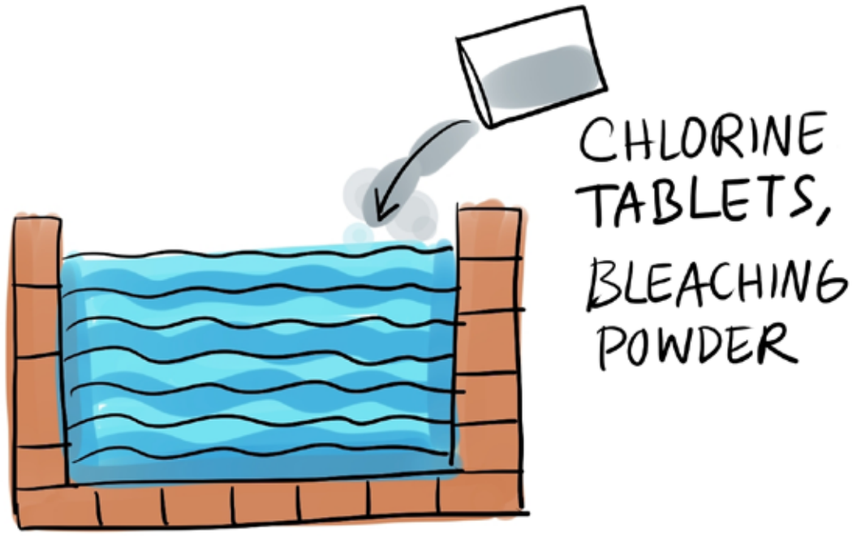
Prevention of Mosquito borne diseases

Prevention of Mosquito borne diseases

- Mosquitoes are attracted to standing water. Proper water starage, keeping water from choking or blocking areas around your house, keeping drainage system clean can prevent them.
- Covering all stored water
- Especially during monsoon seasons, full coverage cloths prevent bites, using mosquito nets
- Mosquito repellent sleeping nets, coils, lotions, plug ins and bats
- Community level awareness and prevention activities like prevent stagnation of drain and storm water and fogging

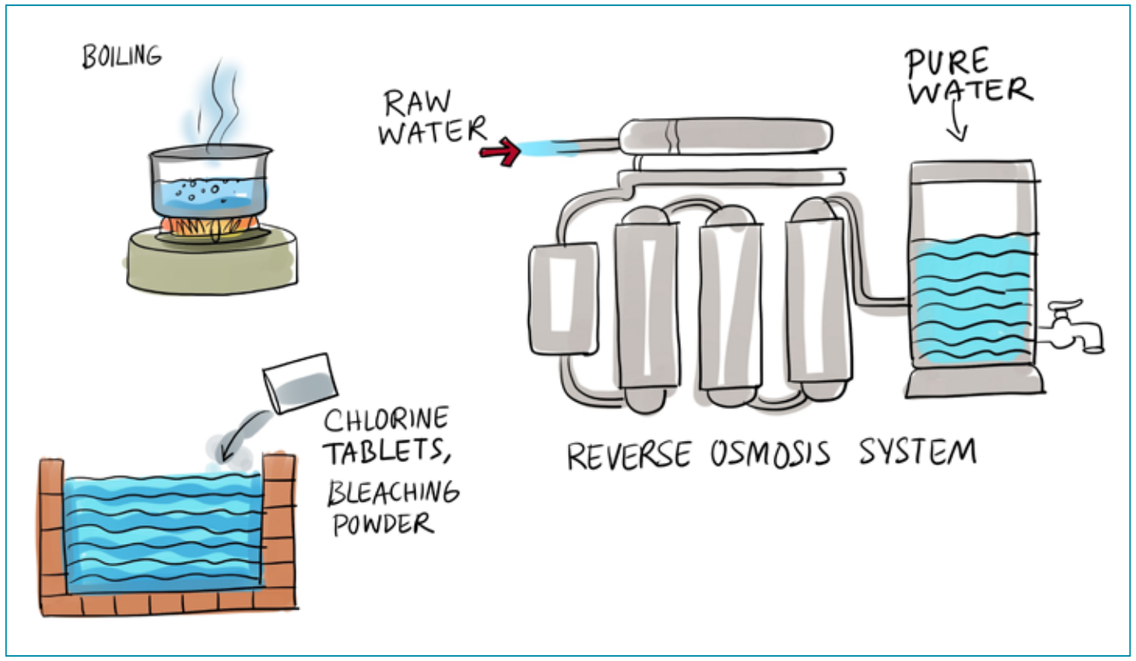
Water purification methods



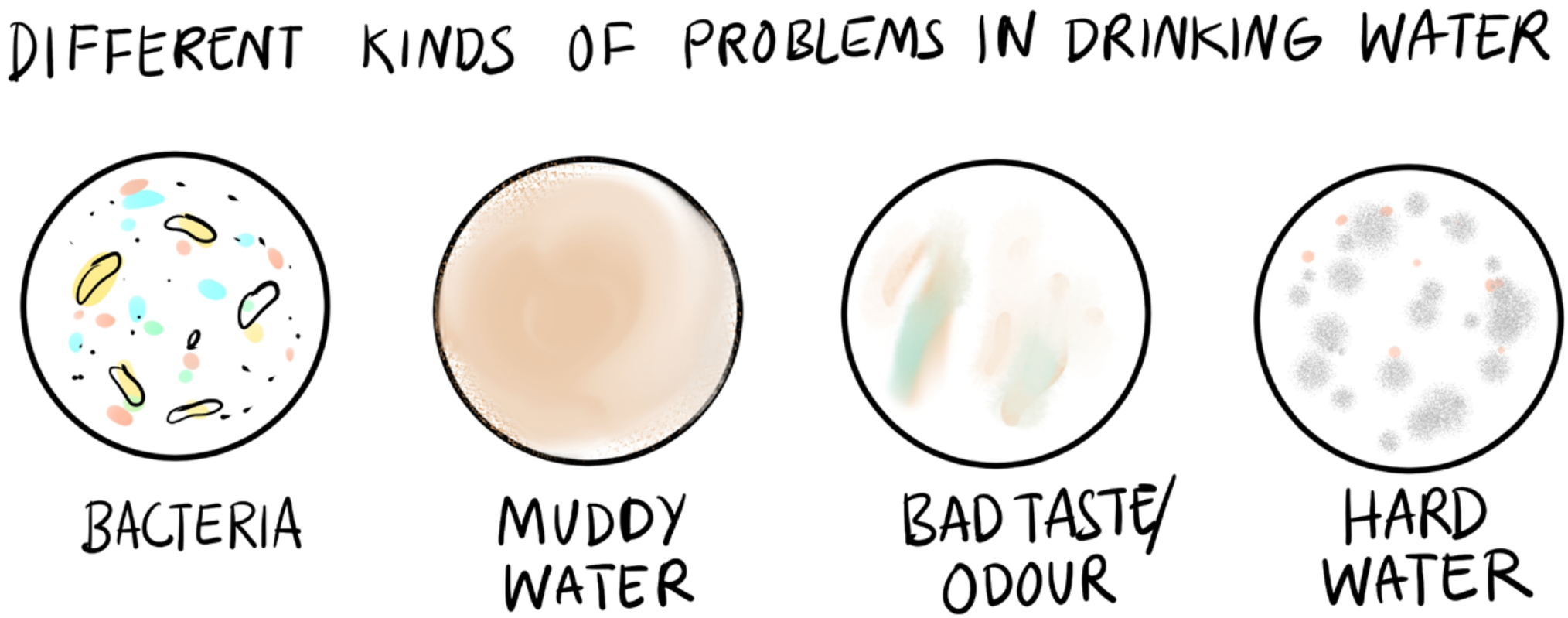


Water Purification Systems

- Three different methods for purifying water:
- Boiling - boil water for 3 minutes after the bubbles appear
- Using clorine tabletes/bleaching powder
- Purification using modern and scientific filters

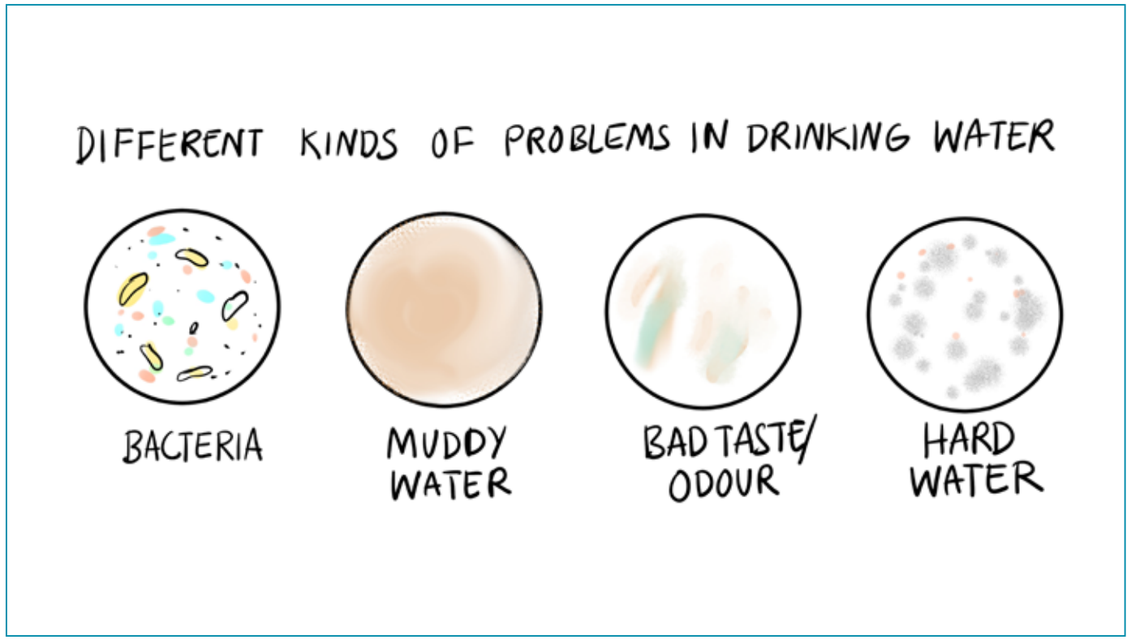


Why Water Filter

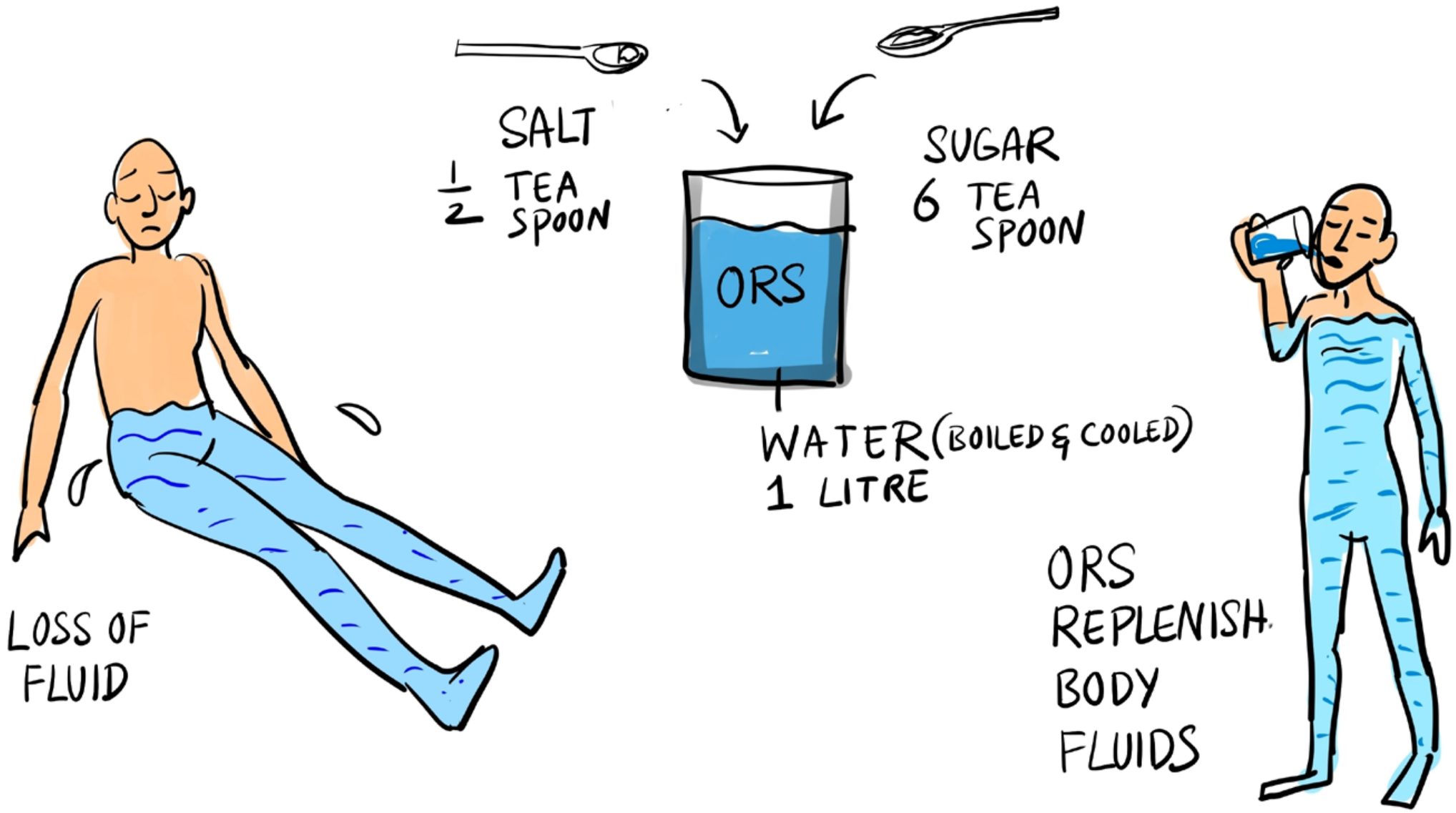


Why Water Filter

When choosing a filter system it is important to know what kind of protection it gives



Diarrhoea & Dehydration, O.R.S. - Oral Re-hydration Salt Treatment

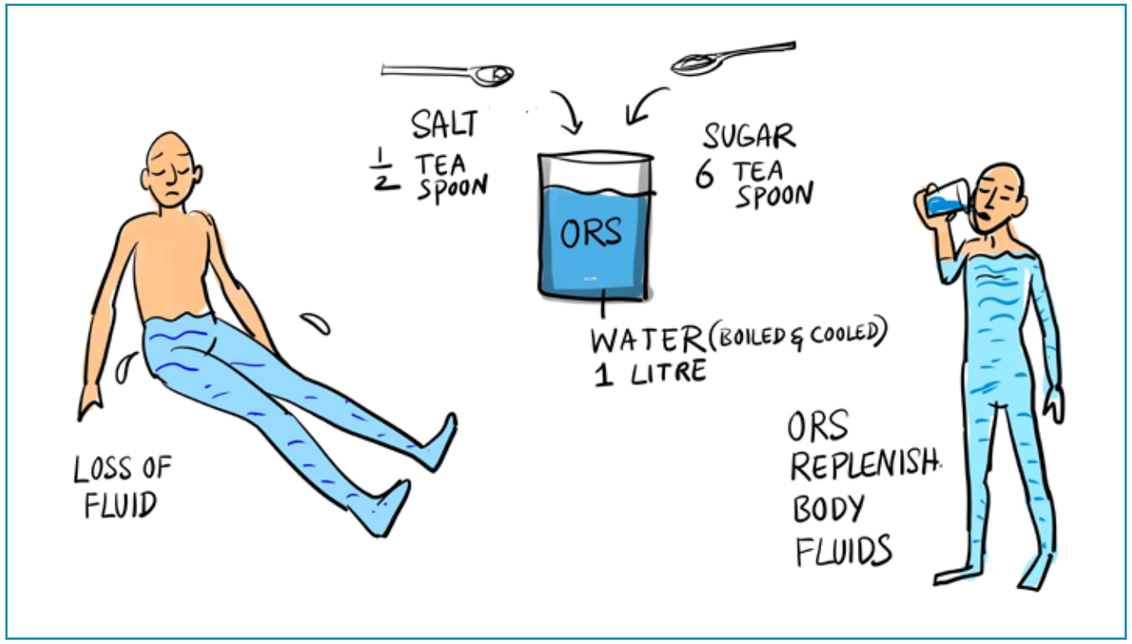


Diarrhoea & Dehydration, O.R.S. - Oral Re-hydration Salt Treatment

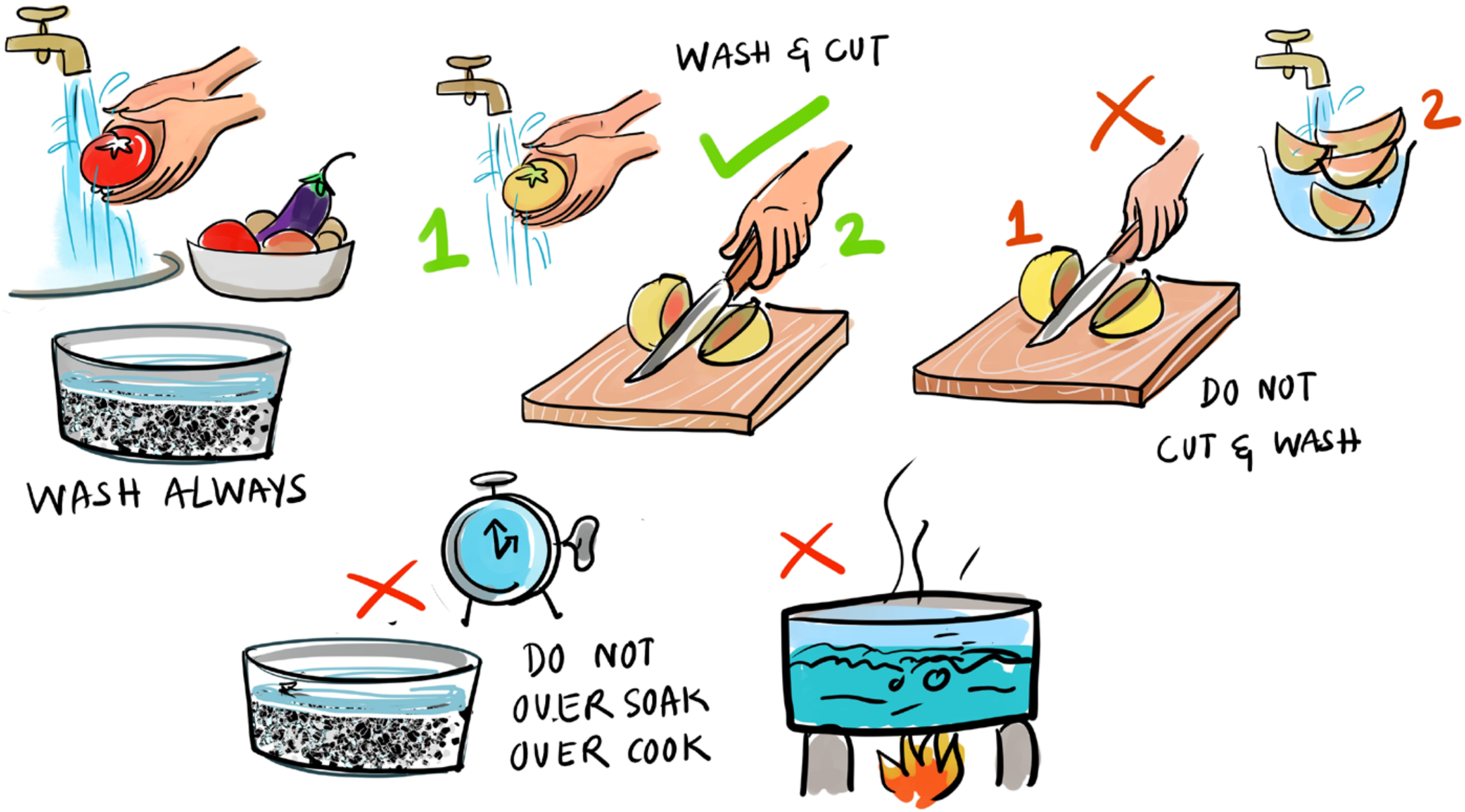
- In most cases medicines are not needed for diarrehea. In fact, some can be actually be harmful
- However, can cause eccessive loss of water in the body leading to dehydration
- Often, dehydration becomes a bigger problem than the disease itself, it can even become life threatening
- Oral reohydration salt should be taken to fight dehydration
- If symptoms of hydration are present, ORS should be given immeadiatly to children and adults

How to use?

- Mix an entire powder in the packet with 5 glasses of clean water
- At home, you can prepare ORS by mixing half teaspoon of salt with six teaspoon of sugar in litre of boiled and cooled water
- Visit your doctor if symptoms persist after taking ORS and other home remidies
- If you have any concerns about the water you have been drinking tell your doctor so they know what tests to do and treament to priscribe

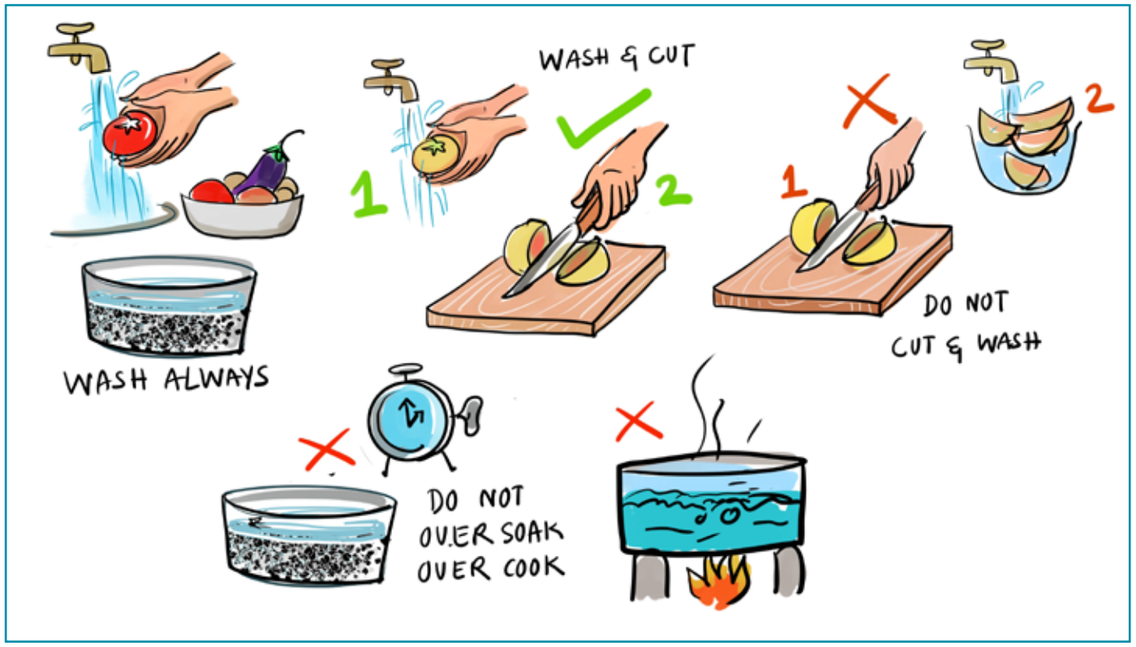


Water & Nutrition



Water & Nutrition

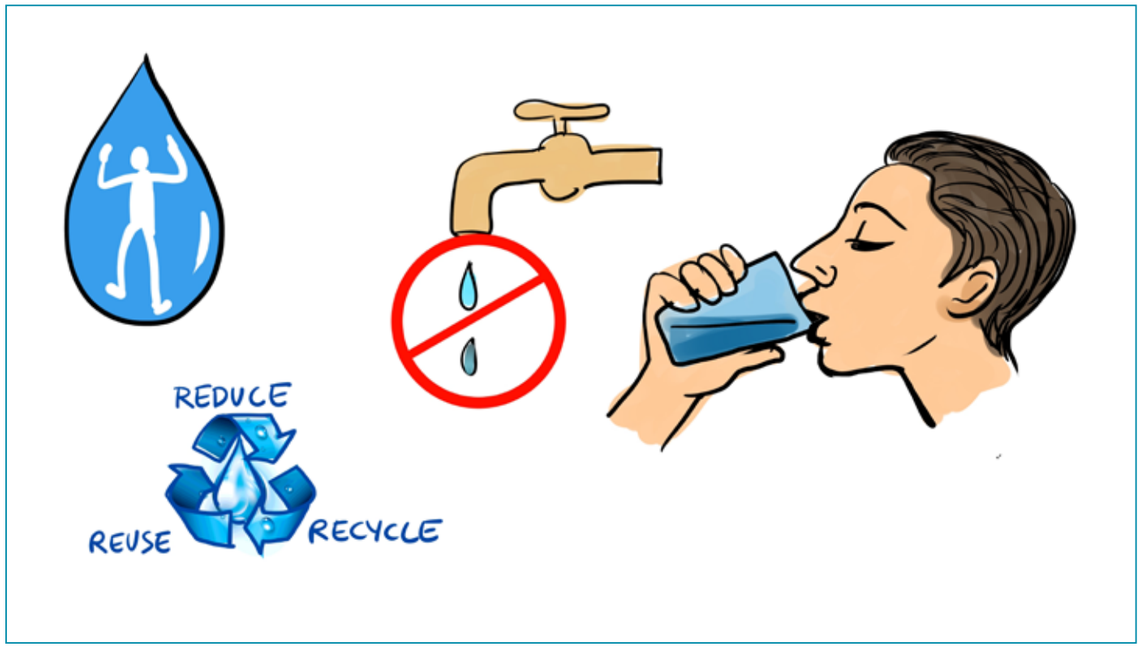
- The washing of foods and vegetables should be done with safe water, which has already been purified through filtering & boiling or chlorination. When fruits and vegetables or food grains are washed, contaminants such as pesticide residues, parasites, and dust are removed. However, certain precautions need to be taken while washing and cutting to minimise the loss of nutrients.
- Repeated washing of food grains, such as rice and pulses, results in the loss of certain minerals and vitamins.
- Vegetables and fruits should be washed thoroughly before cutting.
- Wash green leafy vegetables thoroughly. Do not wash green leafy vegetables after cutting. Wash roots and tubers carefully because they grow close to the earth and may be caked with a lot of mud.
- Cut vegetables should not be soaked in water for long, as water-soluble minerals and vitamins may get lost.
- Clean water in which food grains and vegetables have been soaked should not be discarded. Instead, use this water while cooking to prevent nutrient loss.
- Boiling food for a long time results in the loss of water-soluble vitamins. If needed, it is best to cover food with a lid to restrict evaporation.



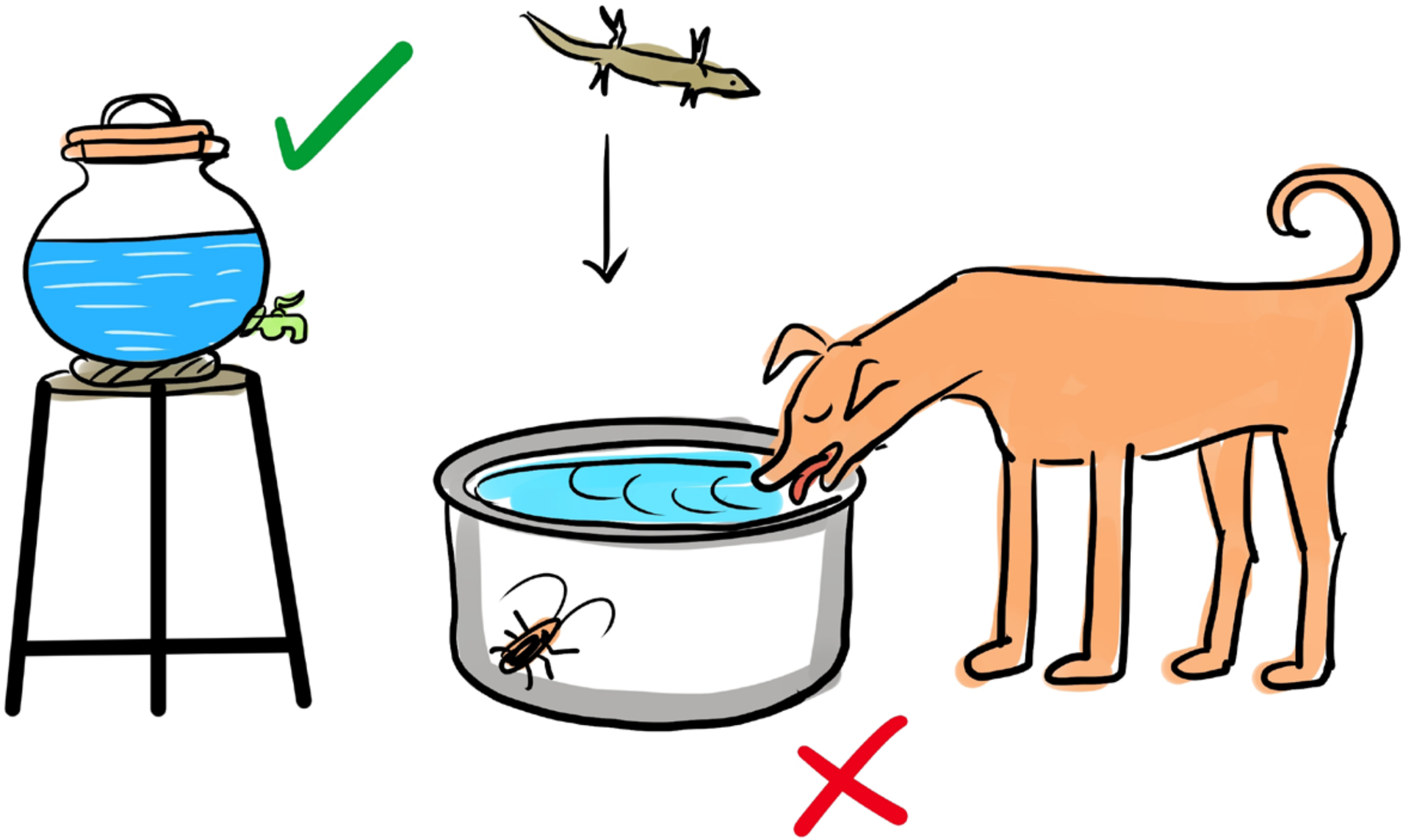
Key messages

Key messages

- Water is essential for life. We can live without food for some days but we cannot live without water.
- Reuse and recycle water for further usage instead of wasting it. For example, reuse waste water from the kitchen or bathwater for your garden.
- Be careful about water shortage when you waste water, try to repair leakages as soon as possible, store rain water for general use especially where there is a water shortage.
- We should only consume clean water that is safe. Drinking water should be free from any kind of pollutants.
- Drinking water should be filtered or boiled to kill all pathogens and make it suitable for consumption.



Water Storage and Health Risks



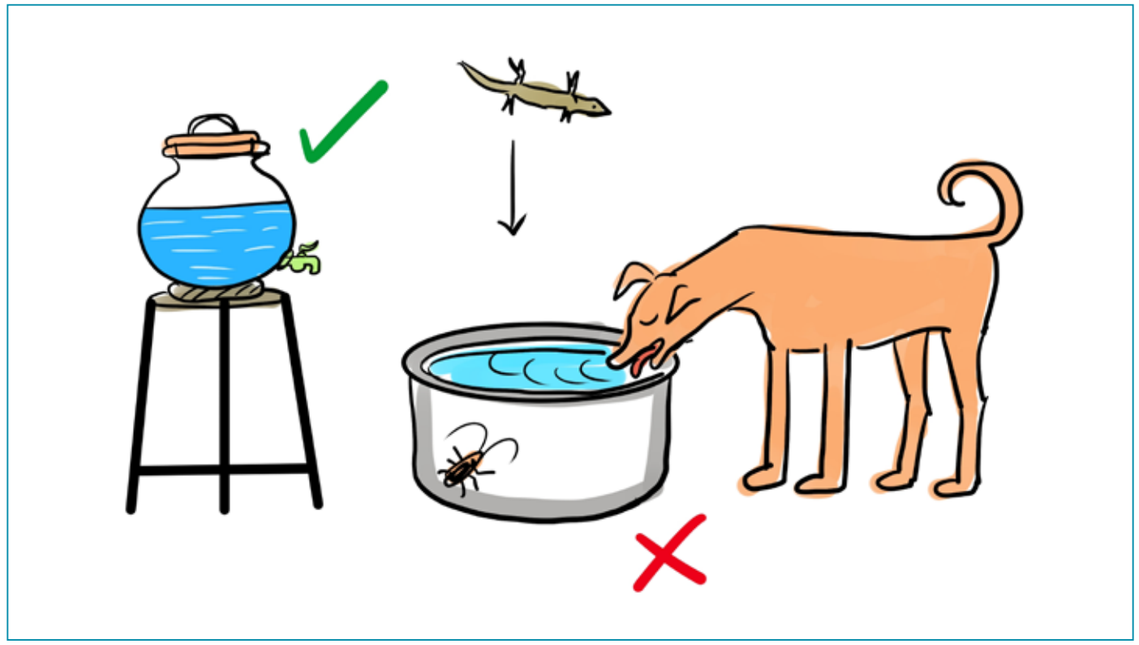
Water Storage and Health Risks

Poor storage practices and their solutions, include:

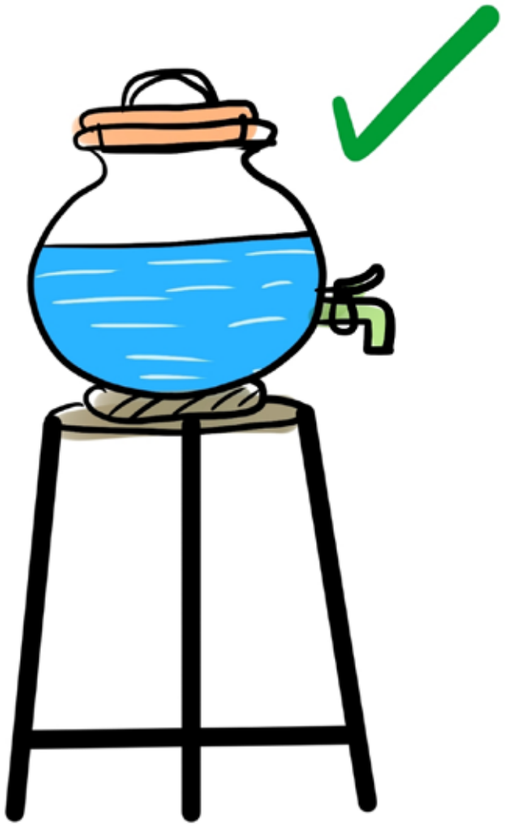
- Using vessels with leaks or cracks so that germs may enter the water. Always check vessel lids and repair or replace cracked ones.
- To avoid practices like dumping household waste, faeces (human and animal), and chemicals into drinking water sources like bore wells, rivers and water tanks, which can contaminate the water.
- Natural groundwater deposits of chemicals such as fluoride, arsenic, nitrate or flood water which generally carry particles, dissolved waste and chemicals, can also make fresh water unsuitable for drinking.
- Water contamination that lead to poor health adversely affects our day-to-day work, our earnings if we have to miss work, and our overall happiness.

The connection between improperly stored water and diseases caused by mosquitoes.

- Mosquitoes are attracted to standing water, as you probably notice around puddles.
- Leaving water uncovered may attract mosquitoes into your home and make you vulnerable to the diseases they carry.



Good Practices



WASH
REGULARLY

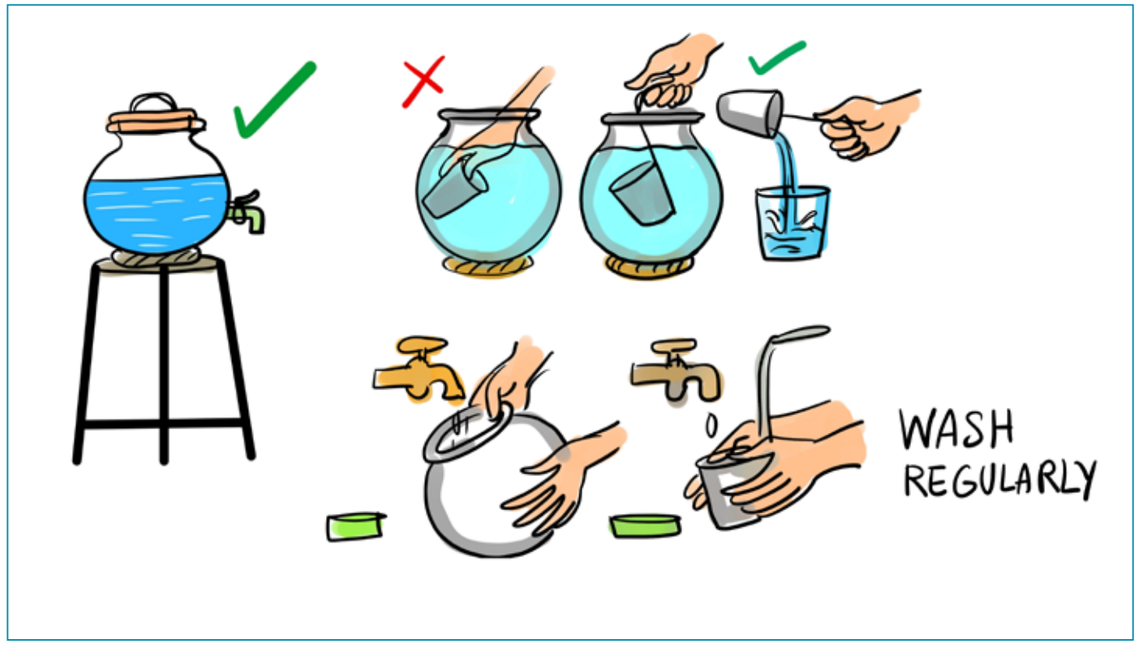
Good Practices

Good practices that one should keep in mind when storing water.

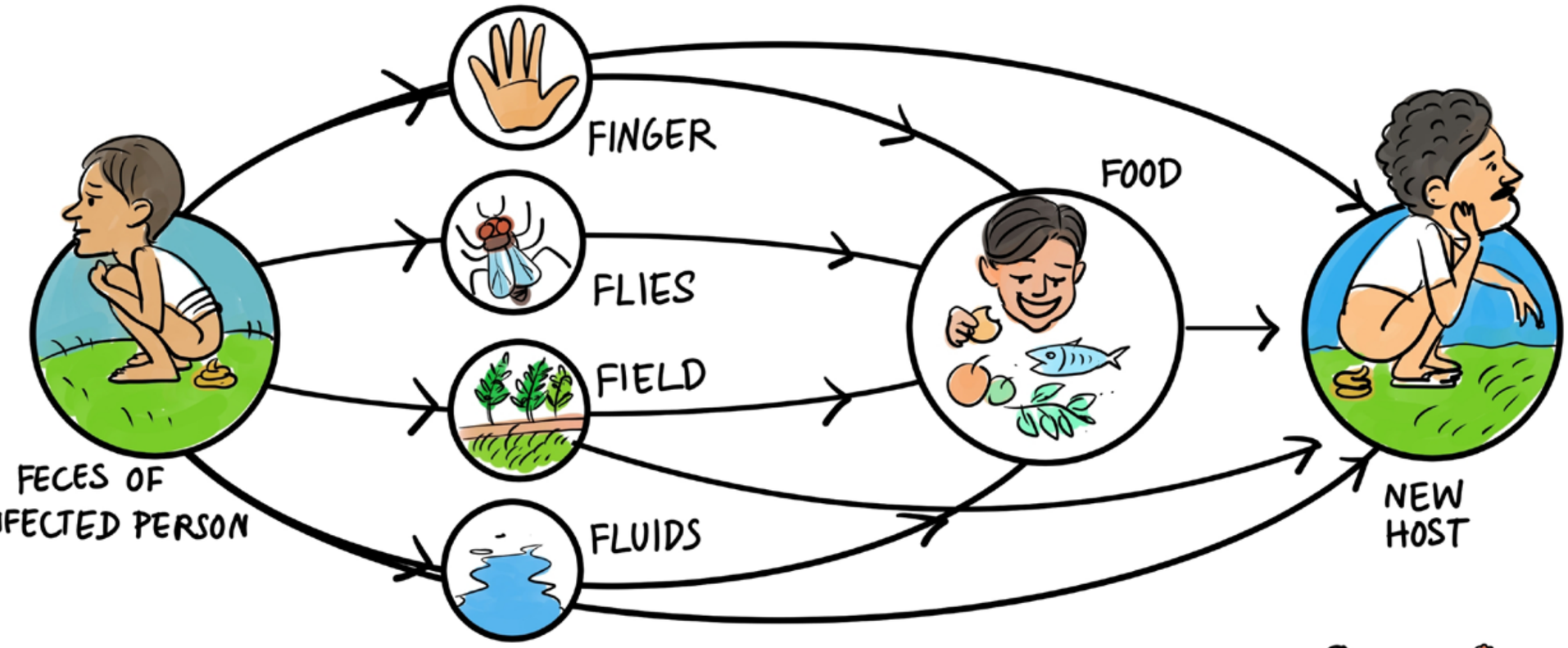
- Storing: Store water in a container that has a tight lid on it. If a well-fitted lid is not available, simply tie a clean muslin cloth on the mouth of the container and then cover it with another lid.
- Keep water vessels in a cool, dry place.
- Handling: Always take care while handling water. Never dip your hands in the container, even if you think they are clean.
- To avoid this, you should always use a clean ladle to take out water. Wash the water containers and ladle daily, to avoid any contamination.

Summary

Conclude by saying that if we practise these good tips, we are doing our part in preventing water borne illnesses and
leading healthy lives.



Sanitation at Home and Neighbhourhood



Sanitation at Home and Neighbhourhood

Diseases that spread from faecal oral transmission are:

- Diarrhoea
- Cholera
- Typhoid fever, etc.

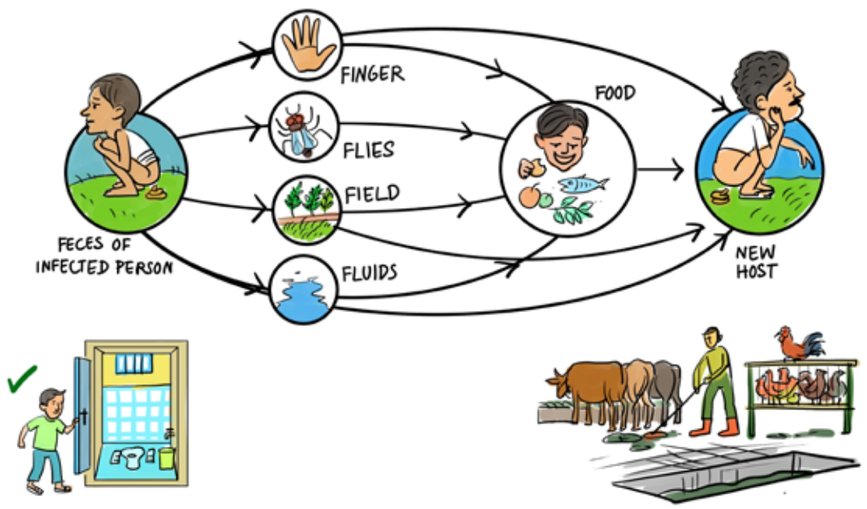
Diseases that spread from faecal oral transmission 4Fs or four routes Fluids, Fields, Flies, Fingers

Around 44 million pregnant women have sanitation-related hookworm infections that pose a considerable health burden in developing societies (UNICEF).

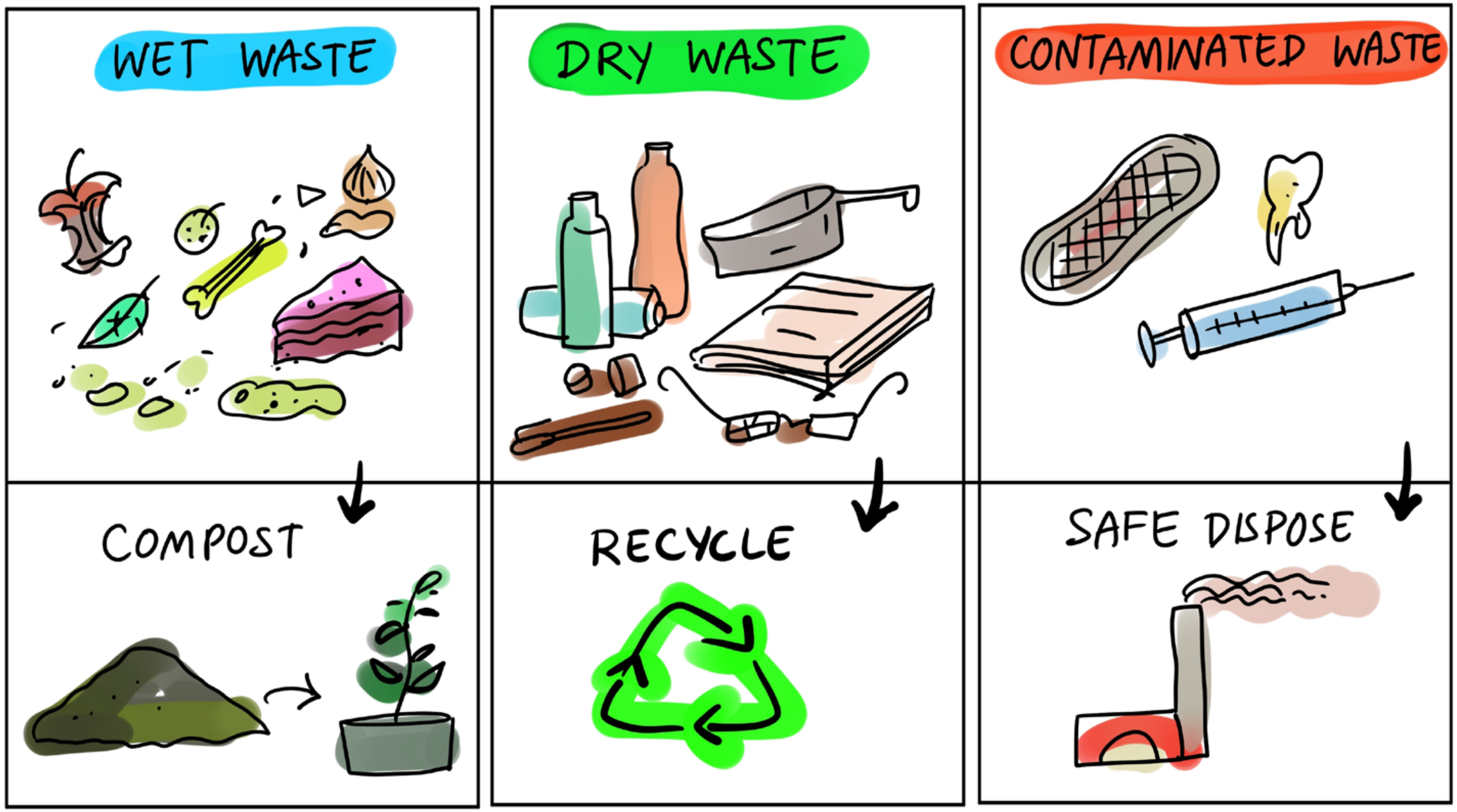
Stress the importance of clean toilets and washrooms to prevent the spread of germs and disease.

Animal and human faeces contain germs and therefore should be disposed of properly. It should not be handled with bare hands, but moved with a shovel or other tools to avoid direct contact.

Animal faeces should not be left lying in areas where children play and should be moved away from houses.



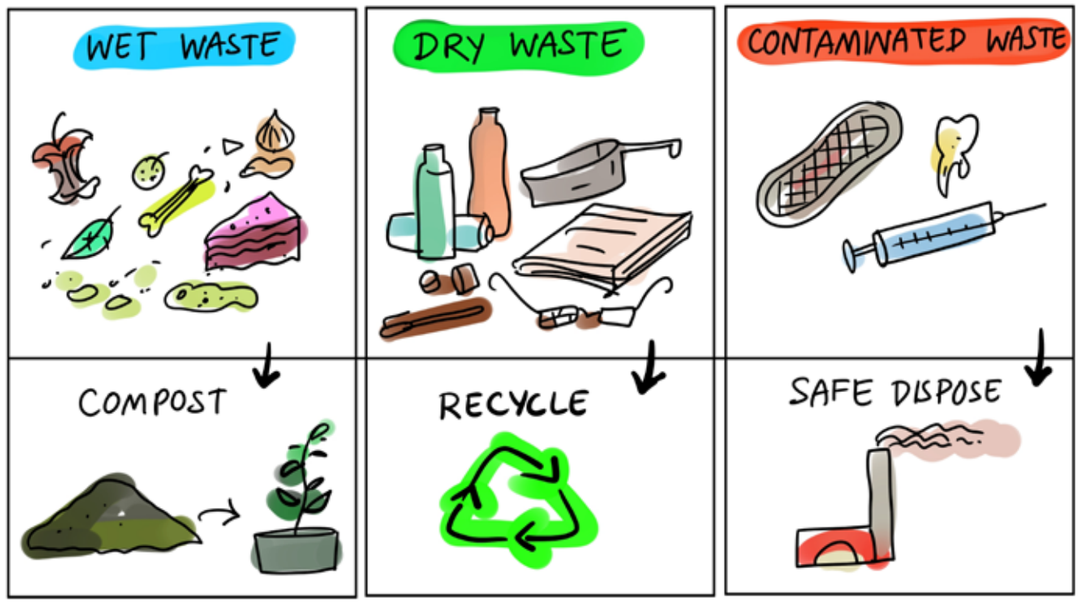
Waste segregation



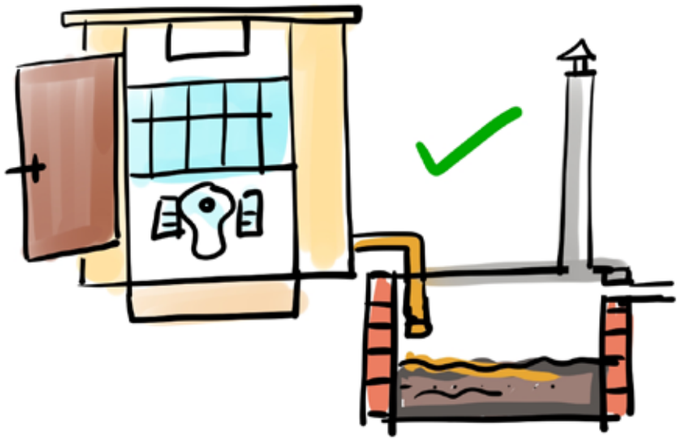
Waste segregation

Good practices for waste disposal:

- Household garbage should be collected in a garbage bin and disposed into a compost pit or community bin, if available. It should not be disposed in an open road or field.
- These bins should remain covered to avoid the spread of germs. Flies, cockroaches, rats and mice, which thrive in rubbish, can spread germs and disease to people.
- Try to separate waste into dry and wet waste.
- Reuse leftover, uncooked vegetables as manures for your kitchen garden.
- Reuse dry waste like plastic bags, paper items, etc.



Sanitation at Community



Sanitation at Community

Good practices for waste disposal:

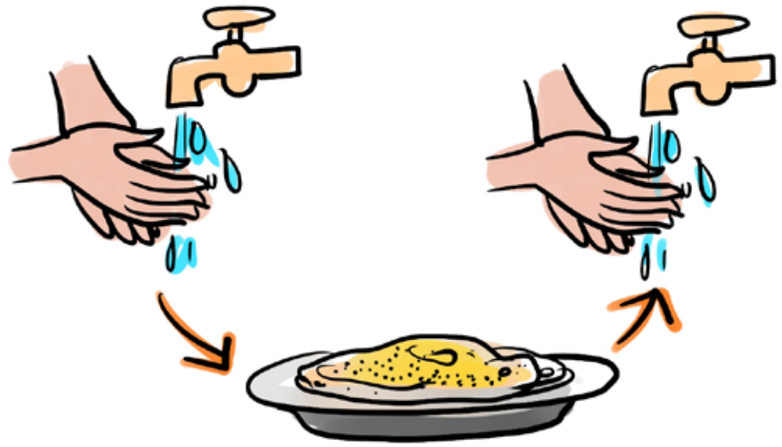
- Households and surrounding areas should be kept clean, free from faeces, refuse and waste water to help prevent disease.
- Household waste water can be disposed of safely by making a soak pit or a channel to the kitchen garden or the field.
- Prevent stagnation of water around houses and hand pumps to prevent breeding of mosquitoes and associated diseases.

Key Messages

Key Messages

- Ask participants to recap what they have learned so far.
- Ask for examples of good practices in water storage and why this is important for clean water.
- Emphasize the importance of safe disposal of waste and importance of waste segregation.
- Repeat the points related to the importance of using toilets for health and safety.
- Repeat the good practices of waste water recycling at home.
- Recall the 4F or routes and emphasise of how germs from faecal sources become harmful to humans.
- Provide the following learning task: each participant will discuss safe sanitation practices with at least two family members.

Personal Hygiene



Personal Hygiene

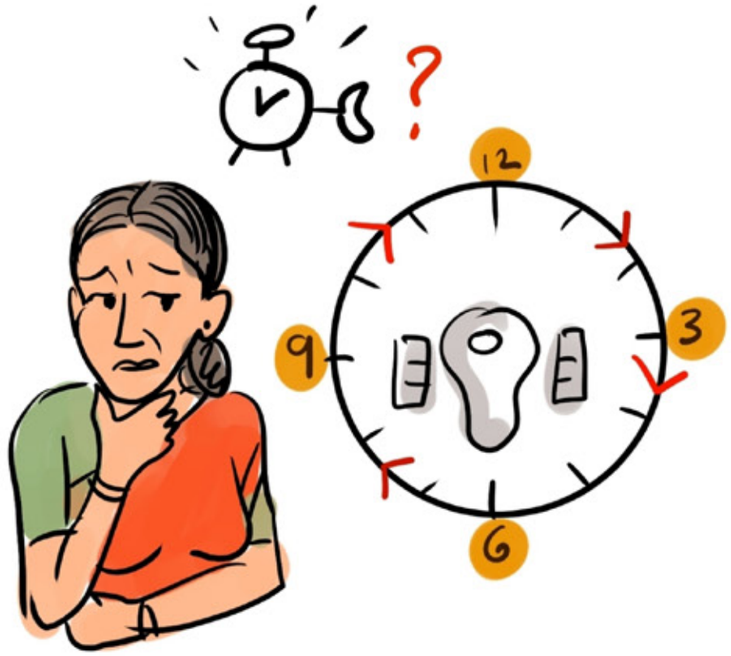
Good personal hygiene keeps germs from contaminating food, water and entering the mouth and eyes.

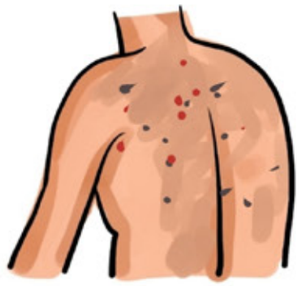
It also improves your appearance, boosting your self-confidence and giving others a better impression of you.

7-point Formula for Personal Hygiene

1. Use toilets for defecation.
2. Brush your teeth at least twice a day (before going to sleep and after waking up in the morning).
3. Wash your hands before each meal.
4. Wear clean and washed clothes.
5. Take a bath every day with clean water and soap.
6. Use footwear when going outside.
7. Advocate the importance of personal hygiene to others.

Health Problems due to Poor Hygiene





Health Problems due to Poor Hygiene

Personal Hygiene Don’ts:

1 Don’t re-use bathwater (unless for kitchen gardens, irrigation)

2 Don’t share toothbrushes

3 Don’t wear unclean clothes, especially undergarments

4 Don’t share or wear unclean clothes

5 Don’t avoid going to the toilet for long hours

Some health problems due to poor hygiene are:

Eye infection

Ear infection

Skin infection: scabies (especially among children)

Tooth decay and other dental problems

Women specific: vaginitis (vaginal infections),

White vaginal discharge

Chronic diarrhoea

Cholera

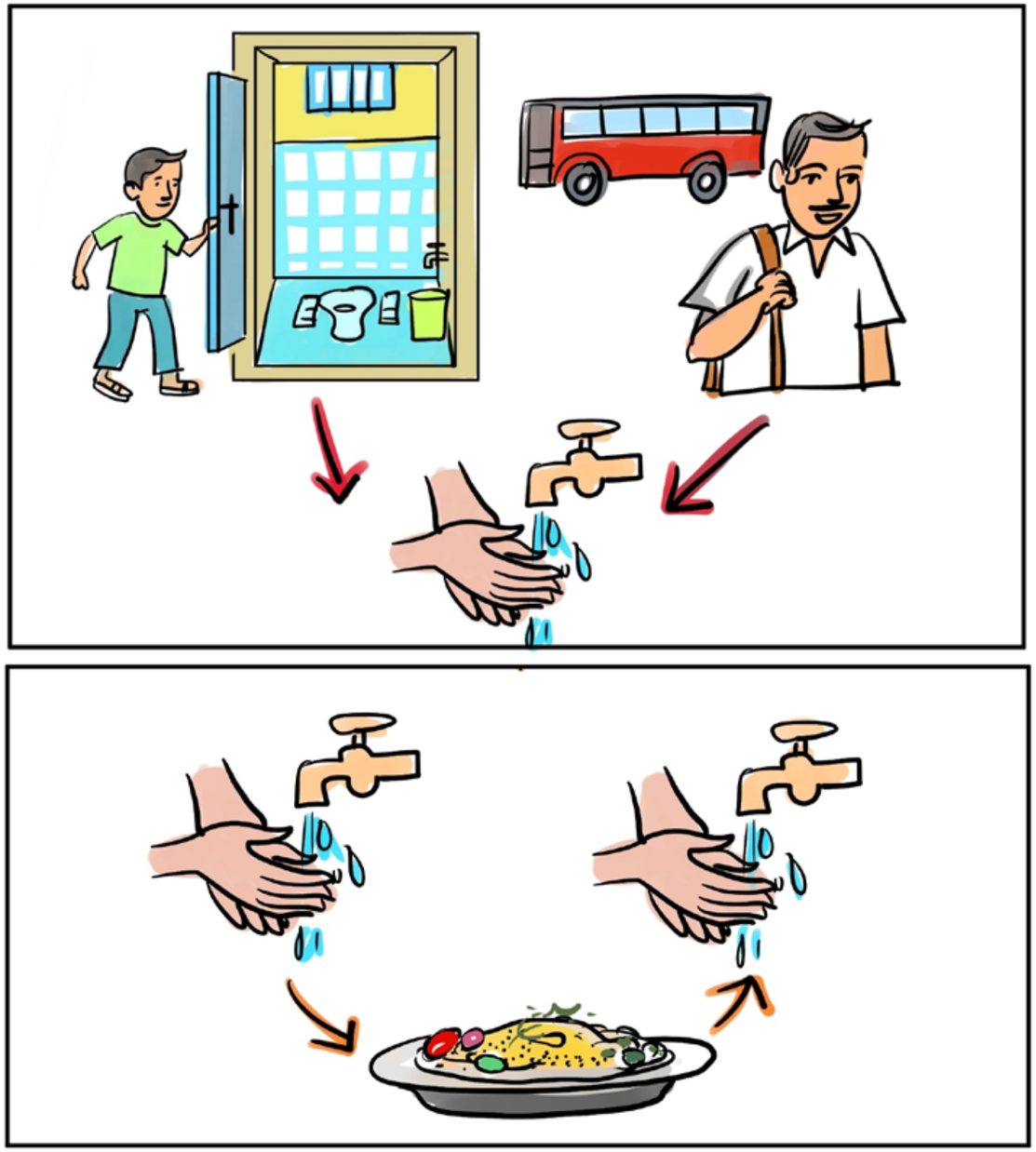
Hepatitis A

Typhoid

E. Coli

The personal hygiene includes washing hands regularly and taking care of oneself while menstruating.

Hand Wash



Hand Wash

Hand washing prevents diseases for self, families and others.

People touch their mouth, eyes, and nose throughout the day without realising it. These actions can spread disease with dirty hands.

Hand washing is the most important way to prevent getting sick and getting others sick.

Good hand-washing practices can reduce child deaths from diarrhoea by 44%

Good hand-washing practices could prevent one out of six children from pneumonia.

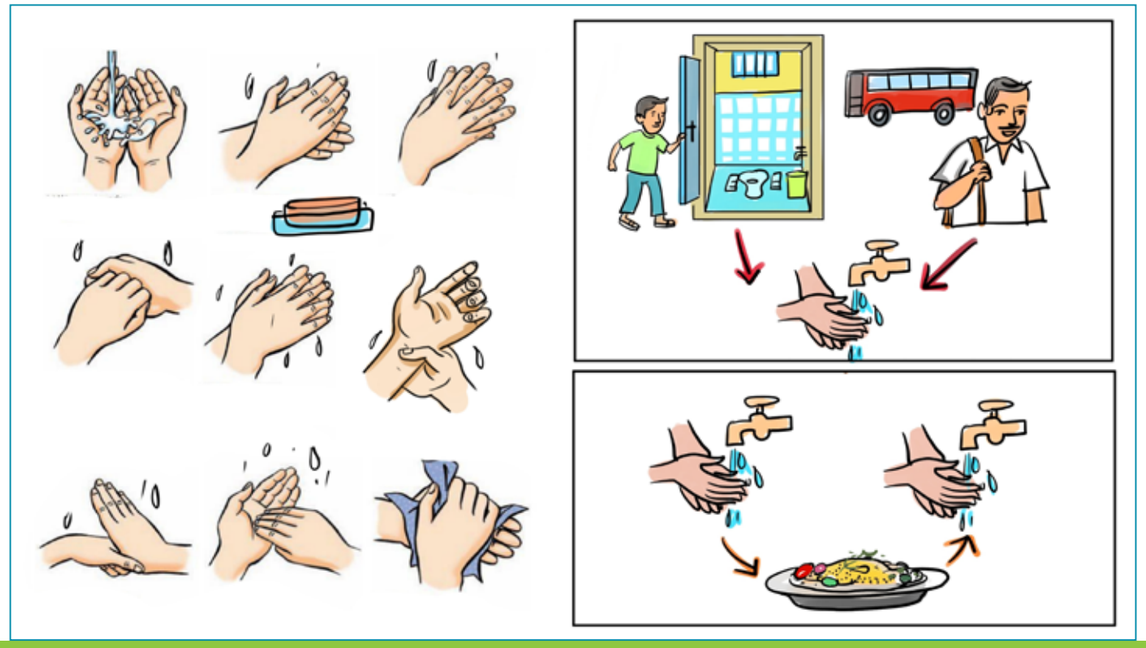
When should you wash your hands?

- After visiting the toilet/relieving self
- Before handling food and drink
- Before eating or drinking
- After using public transportation

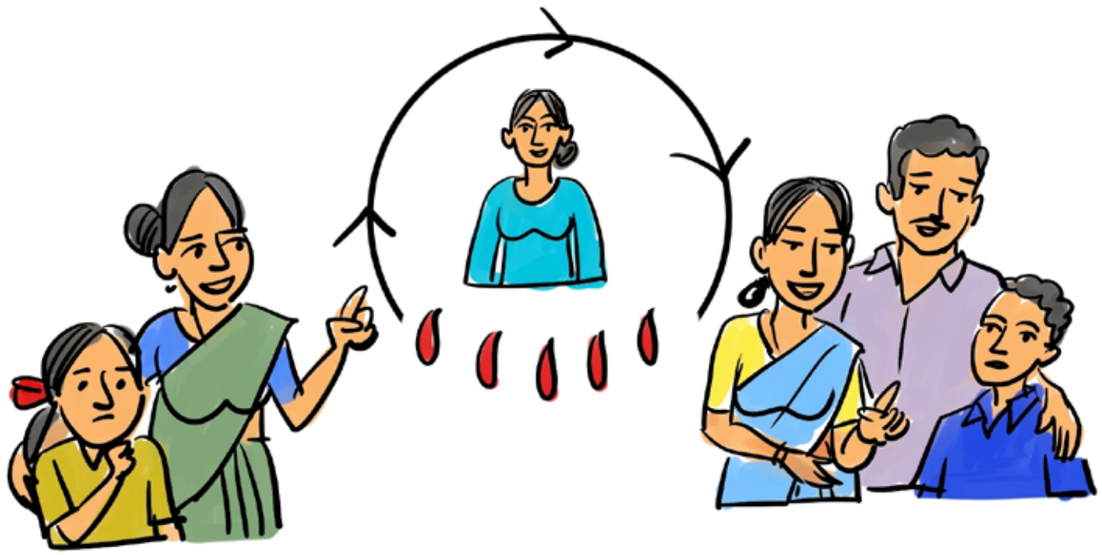
How people generally wash their hands?

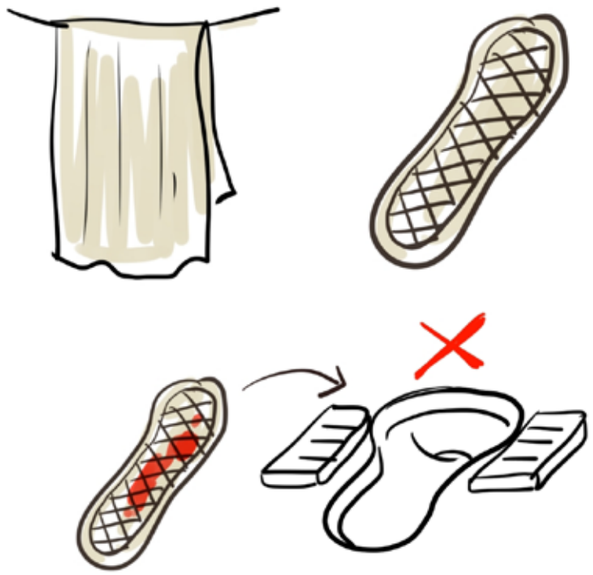
Always use soap to wash your hands. Wash your hands thoroughly, taking care to wash the area between the fingers. Make lather and rub your hands thoroughly. Be sure to scrub between fingers, under fingernails, and around the top and palms of hands. Rinse well to remove all traces of soap. Dry your hands with a clean towel or handkerchief.

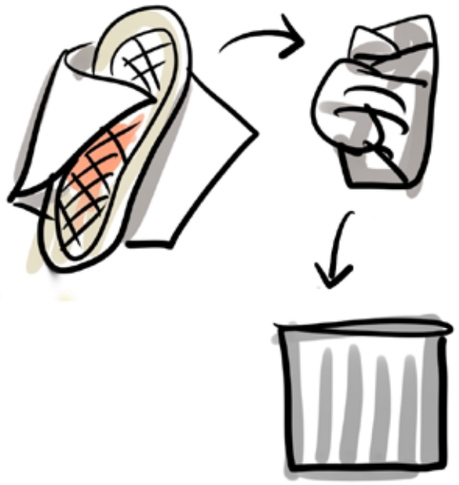
The correct method takes more time, but it helps to get all the germs we can't see off of our hands and prevents the spread of disease.



Menstrual Hygiene







Menstrual Hygiene

Menstruating is a normal, important, and healthy part of life for women and girls.

It is important not to feel embarrassed by this common occurrence.

Mothers/aunts should teach girls not to feel embarrassed and tell them how to take care of themselves during their periods.

Parents and teachers should also inform boys about menstruation, as well as ensure their behaviour and attitude towards girls and women is positive and empathetic.

The importance of menstrual hygiene through these key points:

Menstruation is a part of a female's reproductive cycle.

- Not using hygienic solutions may cause health problems, like urinary and reproductive tract infections.
- Practising good menstrual hygiene allows women and girls to continue leading a normal life while menstruating.

Practising good menstrual hygiene can help remove the stress and worry about staining clothes.

If you suffer from severe pain and stress, you should consult a gynaecologist and take medication and treatment as prescribed by the doctor to relieve the pain.

Share that the good practices for proper menstrual hygiene include:

- Access to clean toilets
- Maintaining personal cleanliness

Discuss options for menstrual hygiene:

- If using cloth as sanitary napkins it is important to wash with soap before reusing. The cloth should be completely dry (do not use it again while it is wet as it could cause infection).
- If using disposable sanitary napkins, they should be changed at regular intervals.
- It is generally advisable to change every two to three hours.
  If someone has heavy periods, she should change more often.
- Also mention incorrect disposal can harm the environment.

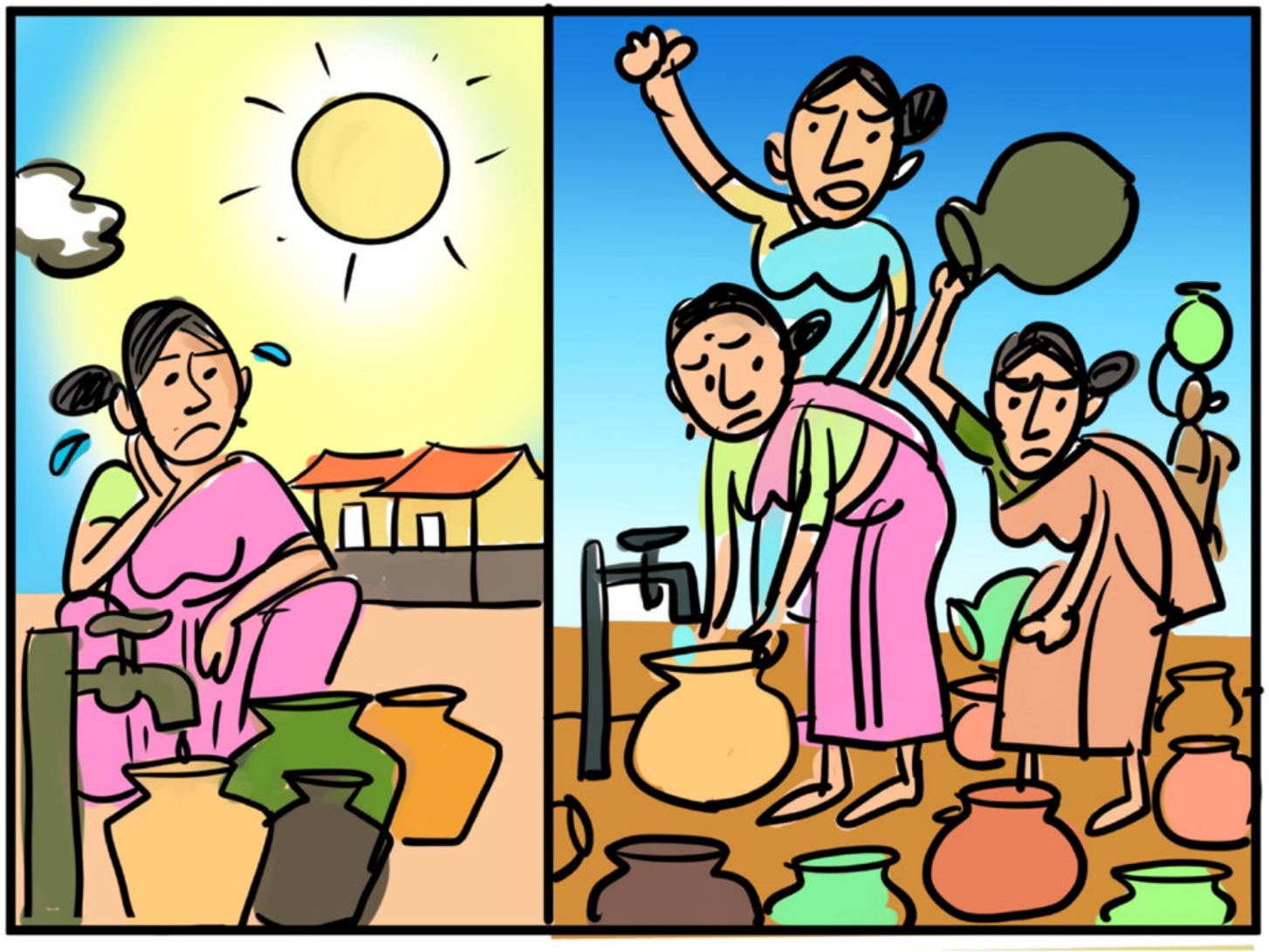
Do not dispose of sanitary pads in latrines.

Dispose in waste basket, wrapped in newspaper or waste papers, tissue or bag, if available.

This ensures the sanitary waste does not spread any contamination in the ground or groundwater.

Sanitary napkins ultimately should be incinerated to prevent and control any contamination.

Right to Clean Water



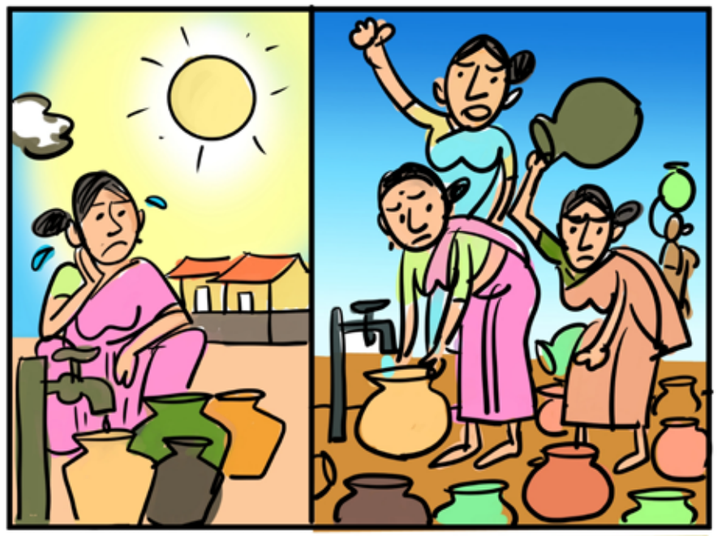
Right to Clean Water

Access to clean drinking water is a basic human right.

Many countries have in their constitutions the rights for all its citizens to have access to clean and safe water
Some resources to access relevant

What are the types of safety risks women generally may face. (experiences, or observations or learning from the news.)

Observed any arguments at community wells or water pumps?

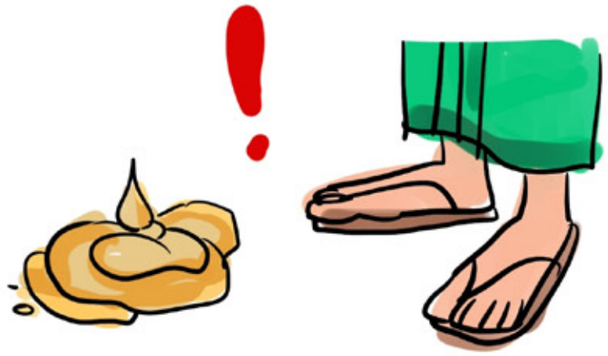


Safety and Water Access

Safety and Water Access

* In many parts of the world, women are vulnerable to gender based violence when they have poor
access to water and sanitation.
* In such cases, it is important to negotiate responsibilities for water collection with family and community members.
* Recommend collecting water from community sources in daylight (morning) hours and in pairs/groups,
especially if the water source is in an isolated area.
* Emphasise that it is important to be aware of your safety, and to promote a safe environment for women and girls in
your community. Help encourage others to be alert and aware by speaking to your children about the importance of
safety for women and girls. It is important to not only speak with girls about their safety, but to teach men and boys
to help create a safe environment for girls and women.
* Encourage speaking to community leaders to make safety a priority in the neighbourhood and the region.
* Review safety issues also seen with children falling inside bore wells due to lack of any protective
barriers or reckless digging.

Advantages of Toilet Use



Advantages of Toilet Use

Good toilets are built to avoid faecal contamination of water sources and to provide clean ways to relieve self.

Toilets help prevent infection and are better for good menstrual hygiene.

Toilets in the home are safer than open defecation (relieving oneself out in the open), due to the privacy of the home and that good toilets prevent soil and water contamination.

If a toilet is available in the home, all members of the household (including children) should be encouraged to use them.

Women express fear in using a toilet that is not inside their homes due to:

* Fear of shame
* Fear of own safety - verbal, physical, sexual assault

Key Messages:

The safety and security issues around access to water and toilets, specifically:

* Gather water in groups and during daylight hours.
* Be alert, aware and ensure your safety is a priority.
* Shout for help whenever you are in danger or you perceive a potential threat.
* Provide a learning task to discuss safety and health issues for water and toilet use with family members.
* For your personal safety as well as that of others with various individuals and departments, be it your family members, elected members of your community, neighbours and fellow passengers. Provide a learning task to discuss safety and health issues for water and toilet use with colleagues and family members.

For information and support visit **www.swasti.org**

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