

7th Science Lesson 6 Notes in English

6] Health And Hygiene

What causes sickness?

- Persons from different countries or backgrounds have different ways to explain what causes sickness.

A baby gets diarrhoea. Why?

- Some people may say that parents did something wrong, or perhaps because they made a God or Spirit angry.
- A doctor may say it is because the child has an infection.
- A public health officer may say it is because the villagers do not have a good water system or proper sanitation.
- A teacher may say that they need to be educated about health and sanitation.
- People see the cause of sickness in terms of their own experience and point of view.
- Who then is right about the cause? Possibly everyone is right, or partially right.

This is because...

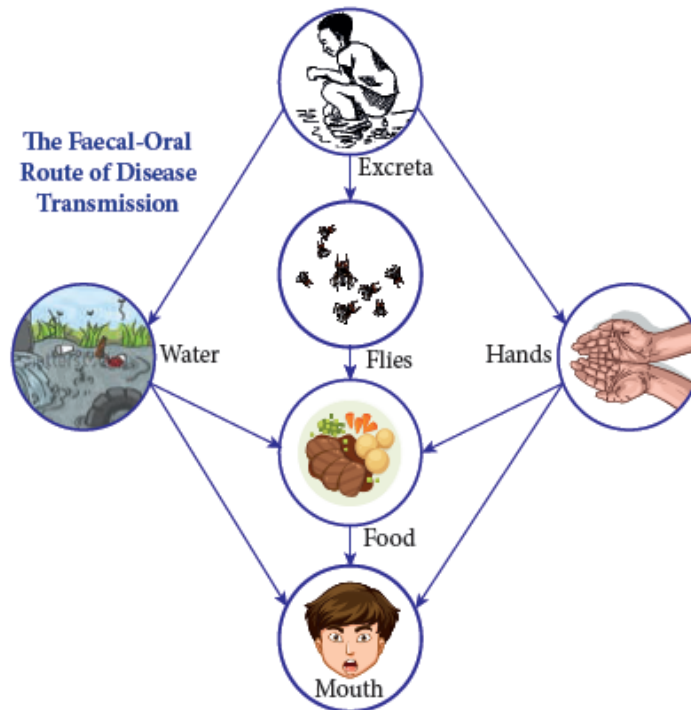
- Each of the causes seen above may be a part of the reason why a baby gets diarrhoea.
- To prevent and treat sickness successfully, it is necessary to have complete understanding of the common sicknesses in the area and the combination of things that caused them.
- Health is the best wealth. If you have good health, you will have a sound mind and you will gain good knowledge and wealth also.
- To maintain good health, you should follow good hygiene, eat nutritious food, do exercise, take rest and have a sound sleep.
- It also refers to a state of a sound mind and body free from any sickness or ailment, stress and problems. In simple words, health refers to the physical, emotional and psychological well-being of a person.
- Hygiene refers to the good habits and their practices which is followed to prevent diseases, maintain good health, especially through cleanliness, consumption of safe drinking water and proper disposal of sewage. It refers to all those activities that are done for improving and maintaining good health and sound mind.

Cleanliness

- Cleanliness refers to the maintenance of personal and environmental hygiene.
- In simple words, It refers to the state of being clean which is essential for good health.
- To protect us from diseases it is essential to maintain good health by taking regular bath, cleaning the clothes and surroundings and also avoiding unhygienic food consumption.

The Faecal-Oral Route of Disease

Transmission



Personal hygiene

- Personal hygiene is defined as “the branch of health which is concerned with the individual’s adjustment to the physiological needs of the body and mind for the attainment of the maximum level of health, it also refers to the cleaning and grooming of the body.
- Colds and the flu are common communicable diseases. It is caused not only by bacteria but also by virus.
- When you have cold and flu, you may also have running nose, cough, sore throat, and sometimes fever or pain in the joints. For some, this condition may also lead to mild diarrhoea.
- Secretions oozing out from the nose may contain the bacteria or virus.
- When the patient touches the nose and some other object or someone else the virus is transferred.
- When the patient sneezes or coughs the virus comes out with the droplets and becomes airborne.
- Hence it is a good practice for the patient with cold and flu to use a handkerchief to blow the noses and also wash the hands often to ensure that they do not accidentally spread the virus to others.

Community Hygiene

- A community is formed by a group of people living together in a particular area. If the people in a community wish to lead a healthy life, they should maintain basic community hygiene. It can be done by adopting the following measures.
- The surroundings should be kept clean.
- Drains should be covered properly.
- The domestic wastes should be segregated and properly disposed off safely in separate dust bins provided by the Government (Green and Blue).
- Used water from houses should not be let out into open drains or open areas.

Care of the body

- A human body is a massive miracle. It consists of organs and systems, which functions day in and out. Our body in compared to a machine.
- The human body systems work well with proper maintenance and guidance. For smooth functioning, all the parts of the body should work in unison.
- The digestive system, circulatory and muscular system is the core systems that should be in synchronization and functioning well. So keep them well by proper care.

Dental Care

- Dental care or broadly speaking oral hygiene is an important aspect of the personal health of an individual.
- Good oral hygiene implies sound teeth and healthy gums with healthy surrounding tissues.
- The physical act of chewing food promotes saliva and gastric secretions which helps digestion.
- The act of chewing and tasting is called 'mastication'. It gives pleasure and emotional satisfaction of eating food.
- Teeth is essential for good appearance and clear speech also.
- When you brush two times a day, it will prevent the formation of tartar and plaque on your teeth and gums.
- When you Floss, it will remove food particles, plaque, and bacteria which build up between your teeth.
- When you start flossing, your gums may bleed a little bit, but after few days that will be stopped. It should be started only with proper medical guidance.

Diseases affecting the teeth

- Diseases affecting the teeth and gums, their causative agents and remedial measure are given below:

Sl. No.	Name of the Diseases	Causative Agents	Impacts/ Consequences	Remedial measures
1	Bleeding gums	Vitamin C deficiency	Bleeding of the gums	Eating citrus fruits
2	Tooth decay	Bacteria in plaque	Bacteria produce acids	Brushing and flossing the teeth can prevent decay.
3	Periodontitis	Tobacco chewing	Severe form of gum disease ruin the bones, gums, and other tissues	Chewing type of tobacco should be avoided. Eat a well-balanced diet.

Eye Care

- Eyes are an important organ of our body. They are considered as “windows to the world”.
- Eyesight is the most important sense. 80% of what we perceive comes through the sense of sight.
- The protection of the eyes, can reduce the odds of blindness and vision loss.
- we protection of our eye from the diseases, surroundings, climate condition.

Diseases affecting Eye

- Disease affecting the eye and their remedial measure are given below:

Hair Care

- The condition of the hair reflects to some extent the nutritional status and general health of the body.
- Thin, sparse hair and the loss of hair indicates a poor nutritional status.
- The deficiencies in diet, physical and mental illness of various kinds may also leads to premature greying of hair.
- The hair follicles from which the hair grows] produce oil which keeps the hair smooth. The sweat and the dead skin cells come off the scalp.
- The oil, sweat and dead cells all add together and can make the hair greasy and look dirty unless it is washed regularly.

S.No.	Name of the Disease	Causative Agents	Impacts/Consequences	Remedial measures
1.	Night Blindness	a lack of vitamin A , a disorder of the cells in your retina	makes it hard to see well at night or in poor light..	Eat foods rich in anti-oxidant, vitamins and minerals.
2.	Conjunctivitis (Pink eye)	Caused by a virus and bacteria	One or both eyes can be affected. Highly contagious; can be spread by contamination and sneezing.	Antibiotic eye drops or ointments, home remedy
3.	Color blindness	genetic condition	• Difficulty distinguishing between colours • Inability to see shades or tones of the same colour	There is no known cure for colour blindness. Contact lenses and glasses with filters.

To keep the hair clean and healthy:

- The regular hair wash and massage of the scalp will remove the dead skin cells, excess oil and dust.
- Rinsing the hair well with clear water and using good toothed comb for hair dressing is highly essential for their maintenance.

Diseases

- A disease is the functional or physical change from a normal state that affects the health of a person by causing disability or discomfort. The following are reasons that could lead to the development of disease in an individual.
 - ❖ Infection caused by disease-causing microbes
 - ❖ Lack of balanced diet
 - ❖ Poor lifestyle and unhealthy habits
 - ❖ Malfunctioning of one or more body parts or organs

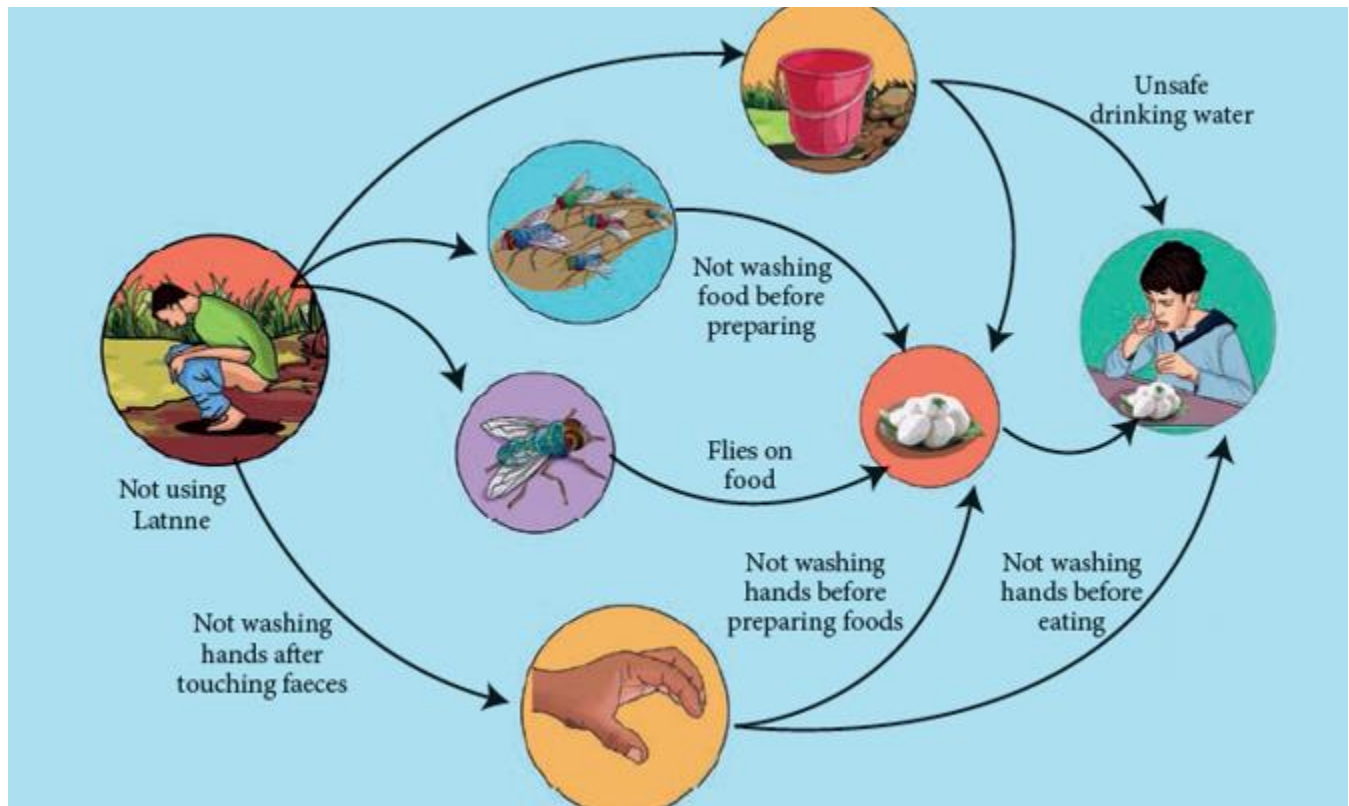
Different kinds of sickness and their causes

- The prevention and treatment of sickness can be considered in two groups for their better understanding. They are, communicable and non-communicable disease.

Communicable Diseases

- Communicable diseases are those that spread from one person to another. Healthy persons must be protected from people with communicable diseases.
- Diseases spread through contaminated air, water, food or vectors (insects and other animals)

Health Risks



Diseases Caused by Bacteria

- In this lesson, you will study about some communicable disease (like tuberculosis, Cholera and Typhoid), which are caused by microbes and spread through air, water and some other organisms also.

Tuberculosis:

- TB is caused by *Mycobacterium tuberculae* and spreads from one person to another person through air by spitting and prolonged contact with sharing materials of the patient.
- The symptoms are fever, weight loss, chronic cough, bloody spitting and difficulty in breathing.

Prevention and treatment

- BCG vaccination,
- Giving special attention to the patient,
- Regular medication like DOT

Cholera:

- Cholera is caused by *Vibrio cholera* and spread through the consumption contaminated food or water.

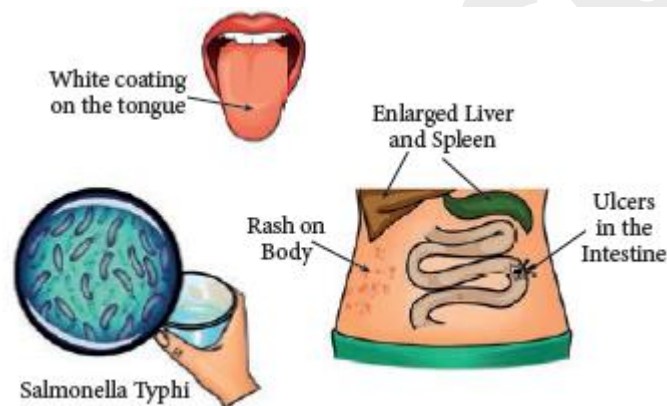
- The symptoms of Cholera is Vomiting, severe diarrhea and cramps in legs.

Prevention and treatment

- Good hygienic practices like, washing hands before eating.
- Avoid eating uncovered food from street vendors.
- Drinking boiled water.
- Getting Vaccination against cholera

Typhoid:

- Typhoid is caused by *Salmonella typhi* and spreads by contaminated food and water.
- The symptoms are Anorexia, headache, rashes on abdomen, dysentery and high fever up to 104°F.



Prevention and treatment

- Drinking boiled clean water
- Proper disposal of sewage
- Vaccination

Disease Caused by Virus

- Viral diseases are extremely widespread infections caused by many type of viruses.
- In this lesson you will learn about some disease caused by viruses like, Hapatitis, Chickenpox and Rabies.

Hepatitis:

- Hepatitis is one of the most dangerous and fatal diseases caused by Hepatitis virus- A, B, C, D, E.
- Its mode of transmission is Contaminated water, sharing of needles and blood transfusion.
- The symptoms of hepatitis is loss of appetite, (Anorexia), vomiting, eyes and urine in yellow color.

Prevention and treatment

- Drinking boiled water
- Proper cleaning of hands

Chickenpox:

- Chickenpox (chicken pox), also known as varicella, is a highly contagious infection caused by the varicella zoster virus. .
- This disease spreads through air and contact with an infected person.
- Its symptoms is appearance of rashes on the whole body, fever, headache and tiredness.

Prevention and treatment

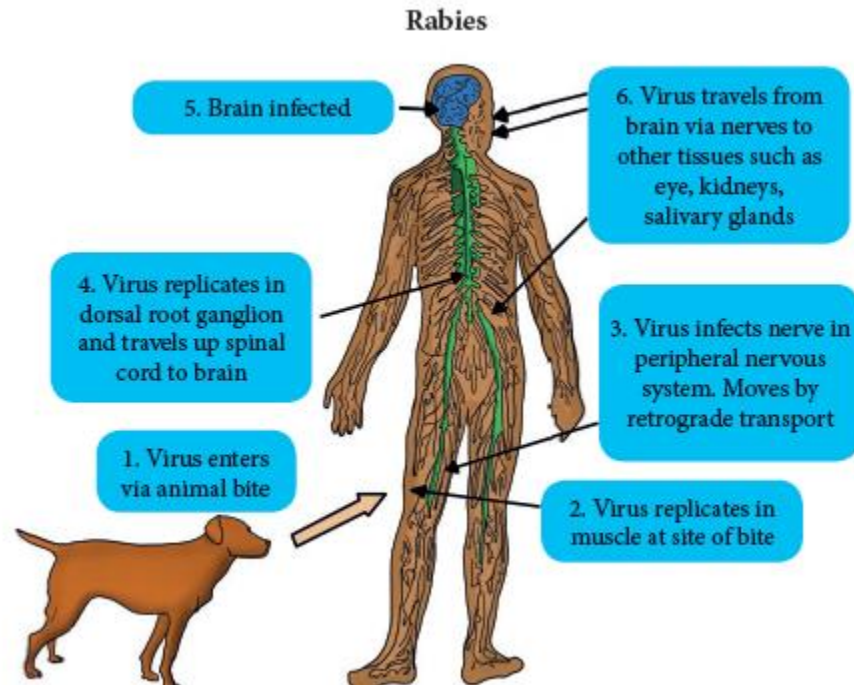
- The chickenpox (varicella) vaccine is the best way to prevent chickenpox Special attention should be given to the infected persons.

Rabies:

- Rabies is a fatal disease. Which is transmitted by the bite of the infected dog, rabbit, monkey, cat etc.
- The virus present in the saliva of dog enters the brain via neurons.
- The symptoms of rabies is hydrophobia (extreme fear for water), fever for 2 – 12 weeks and exaggerations in behavior.

Prevention and treatment

- In early stages rabies is very difficult to detect
- After an animal is bitten it usually takes two to twelve weeks to shows any symptoms and it may take as long as two years also.
- Fatality can be prevented by timely vaccination before the onset of symptoms.



Non-Communicable diseases

- Communicable diseases do not spread from person to person. They are caused by other factors.
- Therefore, it is important to know which sickness are communicable and which are not.
- They are never caused by germs, bacteria, or other living organisms that infect the body.
- Antibiotics, or medicines that fight against germs do not help to cure non-communicable diseases.

Problems caused by wearing out of body parts:

- Rheumatism, heart attack, epileptic seizures, stroke, migraine headache.
- Cataract and cancer

Problems caused by external harmful agents entering the body:

- Allergies, asthma, poisons, snakebite, cough from smoking, stomach ulcer, alcoholism.

Problems caused by a lack of trace elements in the body:

- Anemia, pellagra, night blindness and xerophthalmia, goiter and hypothyroidism.

Problems caused by Malnutrition.

- Nutritious food is needed for a person to grow well, work hard, and stay healthy.
- Many common sicknesses are caused by malnutrition.

Specific health problems of children

Anaemia

- It is caused by eating food with less iron content and can also be caused due to feeding some other foods instead of breast milk.
- Severe anemia in children may lead to hookworm infection, chronic diarrhoea and dysentery.
- In recent day school going children, especially the girls are affected by anemia.
- The Government of Tamil Nadu provides weekly iron folic tablets to all the girls in the schools of all areas.

The signs of anemia are:

- Pale or transparent skin, The inner surface of eye lids are pale, white fingernails, pale gums, weakness and fatigue.
- In severe cases, face and feet may be swollen, the heartbeat is rapid and with shortness of breath.
- Children and women who eat mud are usually anemic.

Treatment and prevention of anemia:**The signs of anemia are:**

- pale or transparent skin
- pale insides of eyelids
- white fingernails
- pale gums
- weakness and fatigue



- If the anemia is very severe, face and feet may be swollen, the heartbeat rapid, and the person may have shortness of breath.
- Children and women who like to eat dirt are usually anemic.

Consuming iron containing food**Sources**

- Food – Moringa leaves, Dates, Liver (Sheep and Chicken), Green, green leafy vegetables like beans, peas, lentils and Green banana.
- Pills - Cod liver oil tablet, Ferrous sulfate.

Safety and First Aid

- First aid is the immediate treatment given to the victim of trauma or sudden illness before medical help is made available.
- The first aid is
- To save the life
- To prevent further bleeding and determine the condition of the patient

- To relieve the pain
- To provide a medical care available at the earliest

Burns

- The tissue damage caused by heat, chemical, electricity, sunlight or nuclear radiation is known as Burns.
- Mostly burns are caused by scalds, building fires, flammable liquid and gases. There are three types of burns, according to degree of burning.
- First-degree burns affect only the outer layer (called the epidermis) of the skin
- Second-degree burns damage the epidermis and the layer beneath it (called the dermis)
- Third-degree burns involve damage or complete destruction of the skin to its full depth and damage to underlying tissues also. People who experience such burns often require skin grafting.

First Aid for Burning

- In case of minor burns, the affected area should be washed with cold water and an antiseptic cream should be applied.
- In case of severe burns, where deeper layers of tissues get destroyed and blisters appear, use of water should be avoided.
- The burnt area should be covered with a clean non- sticking cloth or bandages. Larger burns need immediate medical attention.
- It is very important to keep a fire extinguisher readily available.

Cut and Scratches

- Cuts and scratches are areas of damage on the surface of the skin.
- A cut is a line of damage that can go through the skin and into the muscle tissues below, whereas a scratch is surface damage that does not penetrate the lower tissues.
- Cuts and scratches may bleed or turn red, become infected and leave scars.

First aid for cuts

- For minor cuts, the affected area should be washed with cold running water and cleaned with an antiseptic liquid.
- Then apply an antiseptic cream on the wound and sterilized bandage should be tied to prevent infection.
- If the cut is deep, a clean cotton pad should be placed on the cut and pressed, and the injured person should be taken to a doctor immediately.

Basic cleanliness and protection.

- The most important thing is to help anybody, but you must also protect yourself from HIV and other blood-borne diseases when you help someone who is bleeding. You should wear gloves or a clean plastic bag on your hands.
- Be careful not to prick yourself with needles or other sharp objects around the person you are helping.

More to Know

- Dengue is spread by mosquitoes of *Aedes aegypti* caused by DEN-1, 2 virus belonging to the type- flavivirus. It decrease counting of the blood platelets of human blood and it has a maximum flight range of 50–100 meters in and around the places.
- Vaccine - A vaccine is a biological preparation that provides active acquired immunity to a particular disease. Vaccines like (BCG, Polio, MMR) are given at early child wood to protect from other diseases.
- Leucoderma is a non – communicable diseases caused by partial or total loss of pigmentation in the skin. (melanin pigment). This condition affects any age, gender and ethnicity. There is no cure. It does not spread by touching, sharing food and sitting together.
- As a general rule, iron supplements should be given orally, not to be injected, because it leads to dangerous.