

Health and Sanitation

Health is a state of complete physical, mental and social well-being and not merely the absence of disease. There is a proverb “Health is Wealth” as health is more valuable than money. Money cannot buy health and happiness but a healthy person remains in a state of bliss and happiness. Combined with regular physical activity and nutrition, one can maintain healthy weight, normal BMI, reduce risk of chronic diseases and promote overall health status.

Few ways to keep a healthy life:

1. Take care of physical health
2. Regular exercise and get some freshness
3. Take care of ourselves
4. Spend time with people whose company we enjoy
5. Pursue a hobby or a new activity
6. Manage stress
7. Accept ourselves and believe in ourselves
8. Count our blessings

Sanitation refers to public health conditions related to clean drinking water, adequate treatment, disposal of human excreta and sewage. On 1st January, 2008, UNICEP officially declared “International Year of Sanitation”. All the health sector has a powerful motivation for improving sanitation. Declaration Alma Ata in 1978 emphasised the importance of primary health care and included an adequate supply of safe water and basic sanitation.

Adequate sanitation, good hygiene and safe water are the fundamentals to bring good health. It brings up social, economic development of a society. In 1923, Mahatma Gandhi said “Sanitation is more important than independence”.

Water supply, sanitation, hygiene and health are closely related. Inadequate quantities and quality of daily requirement of drinking water, lack of sanitation facilities and poor hygiene cause millions of the world’s poorest people to die from preventable diseases each year of which women and children are the main victims.

Water, sanitation and health are linked in many ways.

- i. Contaminated water consumption may result in water borne diseases e.g. viral hepatitis, typhoid, cholera etc.
- ii. Due to inadequate quantities of water for personal hygiene, skin and eye infections spread easily.
- iii. Water based diseases and water related vector borne diseases can result from water supply projects (dams, irrigation) providing habitats of mosquitoes and snails, these are the intermediate hosts of parasites (e.g. malaria, schistosomiasis, filaria)
- iv. Drinking water supplies containing high amounts of certain chemicals (e.g. arsenic, nitrate) can cause poisoning of such chemicals.

Burden following inadequate water supply and hygiene:

Approximately 4 billion cases of diarrhoea per year cause 2.2 million deaths, out of which 1.7 million are children less than 5 years of age. Out of these, about 1.5% are in the developing countries. Diarrhoeal diseases account for 4.3% of the total global disease burden. An estimated 88% of this burden is attributing by unsafe drinking water supply, inadequate sanitation and poor hygiene. This condition secondarily leads to malnutrition, respiratory tract infection in children and women due to decline immunity. Intestinal worms infect about 10% of the population of the developing world leading to malnutrition, anaemia and a retarded growth. 6 million people are blind from trachoma, 300 million

people suffer from malaria and 200 million people are infected with schistosomiasis of which 20 million people suffer severe consequences.

Improving drinking water quality would have no effect in neighbourhood with very poor environment sanitation. A better community sanitation reduces the concentration of faecal coliform by two order of magnitude which leads to 40% reduction in diarrhoea; with proper disposal of excreta around the house would lead to a 30% reduction of diarrhoea. Preventing human contact with faecal is part of sanitation as “Hand washing with soap”. Every year on 15th of October is observed as “Global Handwashing Day” giving the message about the importance of hand washing habits among school children.

Learning personal hygiene:

Practice of hand washing with soap and water before handling food and after defaecation reduces the diarrhoeal disease and worm infestations by about 43%. It should be practiced by everybody to avoid diseases. The practice of hand washing should be demonstrated to children by parents at home, anganwadi workers at anganwadi centres and teachers at school. Besides, trimming of nails and cleaning of nails, beds, washing utensils, fresh fruits and vegetables in running water before eating along with availability of clean and safe drinking water are essential.



Improvement of sanitation system protects human health by providing a clean environment. It will prevent transmission of disease especially through faecal-oral route.

Water storage:

To avoid hand and finger dipping in storage water, it should be kept in a narrow-mouthed pot with proper lid/plate. Keeping tumbler open on the lid/plate and repeated dipping in the storage water should be avoided. Preferably drinking water should be from a water filter.



Open defecation:

Practicing open defecation in India is one of the contributing factors for poor sanitation. The latest census data reveals that more households in rural India have access to TVs and mobile phones than toilets.

Excreta of children is considered to be harmless which is a wrong perception because of the perception children are allowed to defecate in and around home which leads to contamination of soil, food and drinking water at home as children and adult may handle drinking water with soiled hands and fingers.



Women folks defecate during dusk and dawn at a nearby bush. They get infected with germs from that open area and without proper washing with water and soap, they cook and serve or draw drinking water from container.

There were few cases of rape in girl child while going for open defecation. Improving school sanitation facilities, a girl child is less likely to miss school during menstrual period. On the top of this, they are facing danger of snake bite, pests and rain while going to bush. Men folks choose a far area of defecation. They combine the act of it with morning walk and smoking with a firm belief that smoking helps the act of defecation. It leads to lung disease e.g. COPD and lung cancer.

In India, half of the hospital beds are occupied by diarrhoea patients, spending extra money for the management and treatment. They lost their work and job, students are missing classes and relatives are engaged for caring them, thus both wasting of time, money and job.

Disposal of human excreta:

Human excreta disposal should be done by constructing sanitary latrines. Sanitary latrines should be acceptable, affordable and accessible. It should be 10-15 metres far from the source of water. Providing private excreta disposal reduces diarrhoea by 42%.

Disposal of waste water of household:

Construction of soakage pit to dispose waste water of household and discharge to a kitchen garden. The waste water in the pit is absorbed into the soil.

Solid waste management:

Solid waste from household is disposed by trenching sanitary land field and by biomass. Disposal of garbage and animal excreta should be done in manure pits.

Gobar gas plant is an appropriate technology which can be used for safe disposal of animal excreta.

Safe disposal of expired and unused medicines:

It is the usual tendency to throw the unused and expired medicines in the household trash, which is then collected by the waste collector or thrown into vacant plots in the neighbourhood or on the streets. But this approach to drug disposal is hazardous to the environment and thence to life. Then, there is the hypothetical risk of these drugs being recycled back into the market.

The US FDA has listed three disposal methods for unused or expired medicines:

- Medicine take-back options
- Disposal in the household trash and
- Flushing certain potentially dangerous medicines in the toilet

It is important to be aware of the drug disposal methods to avoid potential harm to the community.

Treatment of urban waste water:

Three fourths of surface water resources are polluted and 80% of the pollution is due to sewage alone. Waste water or sewage treatment facilities are not available in most towns. It is high time for proper sewage treatment facilities.

Urban sanitation:

The percentage of urban population without proper sanitation in India is 63%. Improvement of sanitation, waste disposal, water supply should be taken care of by the NGOs and urban government and management to ensure quick access to information, planning and decision support system.

Conclusion:

1. To assess sanitation and hygiene beliefs and practices as the basis for planning
2. Involve community members, beneficiaries in planning and implementing interventions

3. Maximize the impact of hygiene promotion and education by using participatory techniques targeting women and children and using women as facilitators
4. Identify practices to be changed targeting for
 - a. Proper hand washing with soap before food preparation and after dealing with faeces
 - b. Latrine use and safe disposal of children faeces
 - c. Safe weaning food preparation
 - d. Safe water handling and storage
 - e. Offer a range of technology options (e.g. different kinds of latrine), implementation of low-cost sanitation system with lower subsidies and to consider option for sanitary complexes for women.
 - f. Incorporate programs to change hygiene practices, in water supply, sanitation & health projects to the society and special emphasis should be given on school sanitation.
 - g. There should be co-operation among government, private participation and public private partnership. Public fund should be spend on promotional campaign and training.
 - h. Emphasis on sustainability with political commitment and pre-requisites to bring the changes to the society.