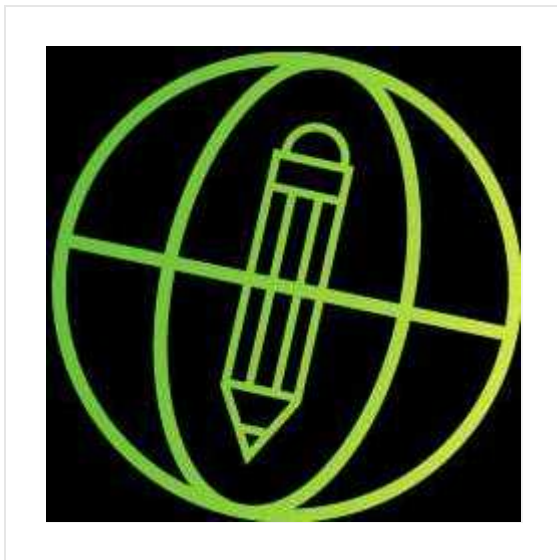


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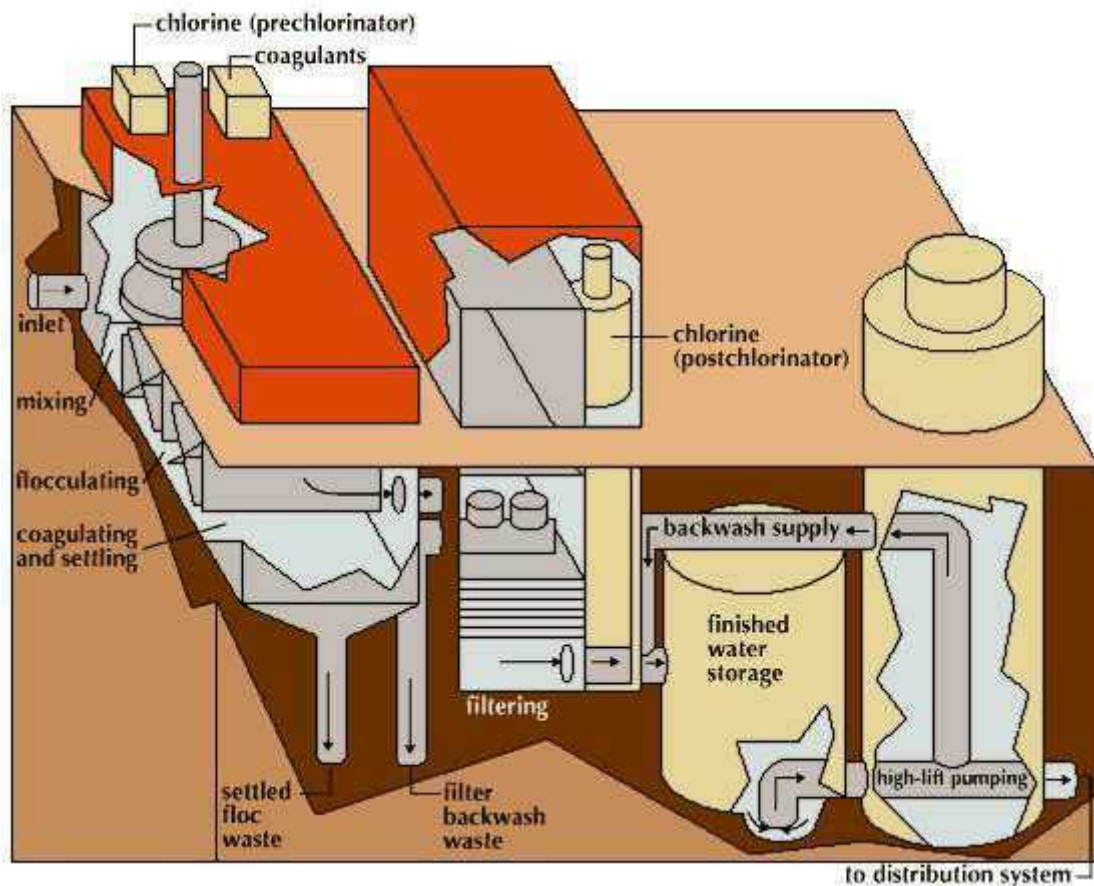
**Water purification**, process by which undesired **chemical compounds**, organic and inorganic materials, and biological contaminants are removed from **water**. That process also includes **distillation** (the conversion of a liquid into vapour to condense it back to liquid form) and deionization (**ion** removal through the extraction of dissolved salts). One major purpose of water purification is to provide clean drinking water. Water purification also meets the needs of medical, pharmacological, chemical, and industrial applications for clean and potable water. The purification procedure reduces the concentration of contaminants such as suspended particles, parasites, **bacteria**, **algae**, **viruses**, and **fungi**. Water purification takes place on scales from the large (e.g., for an entire city) to the small (e.g., for individual households).

Water from inlets located in the water supply, such as a lake, is sent to be mixed, coagulated, and flocculated and is then sent to the waterworks for purification by filtering and chemical treatment. After being treated it is pumped into water mains for storage or distribution.

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### A TYPICAL WATER TREATMENT PLANT IN A LARGE METROPOLITAN AREA



Water from inlets located in the water supply, such as a lake, is sent to be mixed, coagulated, and flocculated and is then sent to the waterworks for purification by filtering and chemical treatment. After being treated it is pumped into water mains for storage or distribution.

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from [artesian wells](#) was historically considered clean for all practical purposes, but it came under scrutiny during the first decade of the 21st century because of worries over [pesticides](#), [fertilizers](#), and other chemicals from the surface entering wells. As a result, artesian wells were subjected to treatment and batteries of tests, including tests for the parasite *Cryptosporidium*.

Not all people have access to safe drinking water. According to a 2017 report by the [United Nations \(UN\) World Health Organization \(WHO\)](#), 2.1 billion people lack access to a safe and reliable drinking [water supply](#) at home. Eighty-eight percent of the four billion annual cases of [diarrhea](#) reported worldwide have been attributed to a lack of sanitary drinking water. Each year approximately 525,000 children under age five die from diarrhea, the second leading cause of death, and 1.7 million are sickened by diarrheal [diseases](#) caused by unsafe water, coupled with inadequate sanitation and hygiene.

## **Air and noise pollution**

- [Load fact sheet in pdf format](#)

Air pollution and excessive noise harm our health and our environment. Air pollution mainly stems from industry, transport, energy production and agriculture. The EU air quality strategy aims to achieve full compliance with existing air quality legislation by 2020 and sets long-term objectives for 2030. The Environmental Noise Directive helps to identify noise levels in the EU and to take the necessary measures to reduce them to acceptable levels. Separate legislation regulates air and noise pollution from specific sources.

### Legal basis

Articles 191 to 193 of the Treaty on the Functioning of the European Union (TFEU).

### General background

Air pollution can cause cardiovascular and respiratory diseases as well as cancer, and is the leading environmental cause of premature death in the EU. Certain substances, such as arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons, are human genotoxic carcinogens, and there is no identifiable threshold below which they do not pose a risk. Air pollution also negatively impacts on the quality of water and soil and damages ecosystems through eutrophication (excess nitrogen pollution) and acid rain. Agriculture and forests

are therefore affected, as well as material and buildings. Air pollution has many sources, but mainly stems from industry, transport, energy production and agriculture. While air pollution in Europe has generally decreased in recent decades, the Union's long-term objective, namely 'to achieve levels of air quality that do not have significant negative impacts on human health and the environment', is still at risk. Air quality standards are often contravened, especially in urban areas (air pollution 'hotspots') – which is where the majority of Europeans live. The most problematic pollutants today are fine particles, nitrogen dioxide and ground-level ozone.

Environmental noise levels are rising in urban areas, mainly as a result of increasing traffic volumes and intensifying industrial and recreational activities. It is estimated that around 20% of the population of the EU are subjected to noise levels that are considered unacceptable. This can affect quality of life and lead to significant levels of stress, sleep disturbance and adverse health effects, such as cardiovascular problems. Noise also has an impact on wildlife.

### Achievements in combating air pollution

Air quality in Europe has much improved since the EU first started to tackle this issue in the 1970s. Concentrations of substances such as sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO), benzene (C<sub>6</sub>H<sub>6</sub>) and lead (Pb) have been significantly reduced since then. The EU has three different legal mechanisms to manage air pollution: defining general air quality standards for ambient concentrations of air pollutants; setting national limits on total pollutant emissions; and designing source-specific legislation, e.g. to control industrial emissions or set standards for vehicle emissions, energy efficiency or fuel quality. This legislation is complemented by strategies and measures to promote environmental protection and its integration into other sectors.

#### A. Ambient air quality

Building on the objectives of the 2005 [Thematic Strategy on Air Pollution](#) (to reduce fine particles by 75%, ground-level ozone by 60%, and the threat to the natural environment from both acidification and eutrophication by 55% – all by 2020 compared with 2000 levels), a revised directive on ambient air quality came into effect in June 2008, merging most of the existing legislation in the field. Only the [fourth 'daughter directive'](#) of the earlier Air Quality Framework Directive is currently still in place, setting target values (less strict than limit values) for arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons.

[Directive 2008/50/EC](#) on ambient air quality aims to reduce air pollution to levels that minimise harmful effects on human health or the environment. To

that end, it lays down measures to define and establish ambient air quality objectives (i.e. limits not to be exceeded anywhere in the EU) relating to the main air pollutants (sulphur dioxide, nitrogen dioxide, oxides of nitrogen, (fine) particulate matter, lead, benzene, carbon monoxide and ozone). Member States are required to define zones and agglomerations in order to assess and manage ambient air quality, to monitor long-term trends and to make the information available to the public. Where air quality is good it must be maintained; where limit values are exceeded, action has to be taken.

At the end of 2013, the European Commission launched the Clean Air Programme for Europe, with two key objectives: compliance with existing legislation by 2020 and new air quality objectives for the period up to 2030. The main legislative instrument to achieve these objectives is the revised [National Emission Ceilings Directive](#), which sets stricter national emission ceilings for the five key pollutants – sulphur dioxide, nitrogen oxides, non-methane volatile organic compounds, ammonia and fine particulate matter – in order to reduce their harmful effects on the environment and halve their impacts on health compared with 2005. The directive requires Member States to draw up national air pollution control programmes. It also transposes the 2020 reduction commitments made by the EU and its Member States under the revised Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to the United Nations Economic Commission for Europe (UNECE) Convention on long-range transboundary air pollution. A new directive to reduce air pollution from [medium combustion plants](#), such as those involved in electricity generation or domestic heating, was also adopted as part of the programme.

## B. Road transport

Several directives have been adopted to limit pollution from road transport by setting emission performance standards for different categories of vehicles, such as cars, light commercial vehicles, lorries, buses and motorcycles, and by regulating the quality of fuel. The current Euro 5 and Euro 6 emission standards for cars and light vans set emission limits on a number of air pollutants, in particular nitrogen oxides and particulate matter. Member States are required to refuse the type approval, registration, sale and introduction of vehicles (and replacement pollution control devices) that do not comply with these limits. Since September 2017, a more realistic test cycle has been in use: ‘Real Driving Emissions’ (RDEs) are now tested for new car models to reflect real driving conditions. Furthermore, there are [rules](#) on in-service conformity (which require vehicles to continue to conform to the standards while in circulation), durability of pollution control devices, on-board diagnostic (OBD) systems, measurement of fuel consumption, and access to vehicle repair and maintenance information

for independent operators. Similar rules are in place for [heavy-duty vehicles](#) such as buses and lorries. A new regulation on [type approval and market surveillance of motor vehicles](#), applicable from 1 September 2020, has recently been adopted to increase the quality and independence of technical services and to verify whether vehicles already on the road comply with the requirements.

### C. Other transport emissions

To reduce air pollution from ships – said to be responsible for 50 000 premature deaths every year – the EU has set limits on the [sulphur content](#) of marine bunker fuels used in ships operating in European seas. The general sulphur limit will fall from 3.5% to 0.5% by 2020 in line with limits agreed by the International Maritime Organisation. Since 2015, an even stricter standard of 0.1% has applied in certain areas designated ‘Sulphur Emission Control Areas’ (SECAs), such as the Baltic Sea, the English Channel and the North Sea. Further emission performance standards have been set for [non-road mobile machinery](#), such as excavators, bulldozers and chainsaws, as well as for agricultural and forestry tractors and recreational craft such as sport boats.

### D. Emissions from industry

The [Industrial Emissions Directive](#) (IED) covers highly polluting industrial activities that account for a significant share of pollution in Europe. It consolidates and merges all relevant directives (on waste incineration, volatile organic compounds, large combustion plants, integrated pollution prevention and control, etc.) into one coherent legislative instrument, with the aim of facilitating implementation of the legislation and of minimising pollution from various industrial sources. The IED lays down the obligations to be met by all industrial installations, contains a list of measures for the prevention of water, air and soil pollution, and provides a basis for drawing up operating licences or permits for industrial installations. Using an integrated approach, it takes into account the total environmental performance of a plant, including the use of raw materials or energy efficiency. The concept of ‘best available techniques’ (BATs) plays a central role, as do flexibility, environmental inspections and public participation.

### Achievements regarding noise pollution

The EU’s approach to noise pollution is two-fold, involving: a general framework for the identification of noise pollution levels requiring action at both Member State and EU level; and a series of pieces of legislation on the main sources of noise, such as road, air and rail traffic noise, and noise from equipment for outdoor use.

The [Framework Directive on environmental noise](#) aims to reduce exposure to environmental noise by harmonising noise indicators and assessment methods, gathering noise exposure information in the form of ‘noise maps’, and making this information available to the public. On this basis, the Member States are required to draw up action plans to address noise problems. Noise maps and action plans need to be reviewed at least every five years.

The regulation on the [sound level of motor vehicles](#) introduces a new test method for measuring noise emissions, lowers the existing noise limit values and includes additional sound emission provisions in the type-approval procedure. Other regulations set noise limits for mopeds and motorcycles. These regulations are complemented by further rules on the testing and limiting of [tyre rolling noise](#) levels and their gradual reduction.

Since June 2016, EU [aviation noise rules](#) in line with the ‘balanced approach’ created by the International Civil Aviation Organisation (ICAO) have applied to airports with more than 50 000 civil aircraft movements per year. This approach consists of four principal elements designed to identify the most cost-efficient way of tackling aircraft noise at each individual airport: reducing noise levels at the source through the deployment of modern aircraft, managing the land around airports in a sustainable way, adapting operational procedures to reduce the impact of noise on the ground, and, if necessary, introducing operating restrictions such as bans on night flights.

In the context of the [railway interoperability directive](#), a [technical specification for interoperability](#) (TSI) on noise sets maximum levels of noise that new (conventional) railway vehicles can produce. The [noise charge regulation](#) incentivises the retrofitting of freight wagons with low-noise composite brake blocks.

Large industrial and agricultural installations covered by the IED are able to receive permits following the use of best available techniques (BATs) as references. Noise emitted by construction plants (e.g. noise from excavators, loaders, earth-moving machines and tower cranes), as well as from recreational craft or equipment for outdoor use, is also regulated.

## Role of the European Parliament

Parliament has played a decisive role in the formulation of a progressive environmental policy to combat air and noise pollution.

For instance, MEPs voted to drastically lower the harmful sulphur content of marine fuels from 3.5% to 0.5% by 2020 and successfully fought attempts to postpone this deadline by five years. In line with recommendations from the

World Health Organisation, Parliament also called for stricter air quality rules, especially on fine particles. In the wake of the discovery in the US that the Volkswagen group used test-cheating software to drive down NOX emissions, Parliament set up a temporary committee of inquiry into emission measurements in the automotive sector (EMIS) to investigate the matter. In its final report, it calls for Member States and car manufacturers to be held accountable and urges them to retrofit or withdraw highly polluting cars from the market.

With regard to environmental noise, Parliament has repeatedly stressed the need for further reductions in limit values and for improved measurement procedures. It has called for the establishment of EU values for noise around airports and also for the extension of noise reduction measures to cover military subsonic jet aircraft. Furthermore, it has approved the phasing-in of new, lower noise limits for cars and has successfully campaigned for the introduction of labels to inform consumers about noise levels, similar to those of the existing schemes for fuel efficiency, tyre noise and CO<sub>2</sub> emissions.

### **What is alcoholism, or alcohol use disorder?**

Alcoholism has been known by a variety of terms, including alcohol abuse and alcohol dependence. Today, it's referred to as alcohol use disorder.

It occurs when you drink so much that your body eventually becomes dependent on or addicted to alcohol. When this happens, alcohol becomes the most important thing in your life.

People with alcohol use disorder will continue to drink even when drinking causes negative consequences, like losing a job or destroying relationships with people they love. They may know that their alcohol use negatively affects their lives, but it's often not enough to make them stop drinking.

Some people may drink alcohol to the point that it causes problems, but they're not physically dependent on alcohol. This used to be referred to as alcohol abuse.



## **What causes it?**

The cause of alcohol use disorder is still unknown. Alcohol use disorder develops when you drink so much that chemical changes in the brain occur. These changes increase the pleasurable feelings you get when you drink alcohol. This makes you want to drink more often, even if it causes harm.

Eventually, the pleasurable feelings associated with alcohol use go away and the person with alcohol use disorder will engage in drinking to prevent withdrawal symptoms. These withdrawal symptoms can be quite unpleasant and even dangerous.

Alcohol use disorder typically develops gradually over time. It's also known to run in families.

## **What are the risk factors?**

Although the exact cause of alcohol use disorder is unknown, there are certain factors that may increase your risk for developing this disease.

Known risk factors include having:

- more than 15 drinks per week if you're male
- more than 12 drinks per week if you're female
- more than 5 drinks per day at least once a week (binge drinking)
- a parent with alcohol use disorder
- a mental health problem, such as [depression](#), [anxiety](#), or [schizophrenia](#)

You may also be at a greater risk for alcohol use disorder if you:

- are a young adult experiencing peer pressure
- have low self-esteem

- experience a high level of stress
- live in a family or culture where alcohol use is common and accepted
- have a close relative with alcohol use disorder

### **What are the symptoms?**

Symptoms of alcohol use disorder are based on the behaviors and physical outcomes that occur as a result of alcohol addiction.

People with alcohol use disorder may engage in the following behaviors:

- drinking alone
- drinking more to feel the effects of alcohol (having a high tolerance)
- becoming violent or angry when asked about their drinking habits
- not eating or eating poorly
- neglecting personal hygiene
- missing work or school because of drinking
- being unable to control alcohol intake
- making excuses to drink
- continuing to drink even when legal, social, or economic problems develop
- giving up important social, occupational, or recreational activities because of alcohol use

People with alcohol use disorder may also experience the following physical symptoms:

- alcohol cravings
- withdrawal symptoms when not drinking, including shaking, nausea, and vomiting

- tremors (involuntary shaking) the morning after drinking
- lapses in memory (blacking out) after a night of drinking
- illnesses, such as [alcoholic ketoacidosis](#) (includes dehydration-type symptoms) or [cirrhosis](#)

### **Self-testing: Do I misuse alcohol?**

Sometimes it can be hard to draw the line between safe alcohol use and the misuse of alcohol. [The Mayo Clinic](#) suggests that you may misuse alcohol if you answer “yes” to some of the following questions:

- Do you need to drink more in order to feel the effects of alcohol?
- Do you feel guilty about drinking?
- Do you become irritable or violent when you’re drinking?
- Do you have problems at school or work because of drinking?
- Do you think it might be better if you cut back on your drinking?

[The National Council on Alcoholism and Drug Dependence](#) and [AlcoholScreening.org](#) offer more comprehensive self-tests. These tests can help you assess whether you misuse alcohol.

### **Professional diagnosis**

Your doctor or healthcare provider can diagnose alcohol use disorder. They’ll do a physical exam and ask you questions about your drinking habits.

Your doctor may ask if you:

- drive when you’re drunk
- have missed work or have lost a job as a result of your drinking

- need more alcohol to feel “drunk” when you drink
- have experienced blackouts as a result of your drinking
- have tried to cut back on your drinking but couldn’t

Your doctor may also use a questionnaire that assesses alcohol use disorder to help diagnose your condition.

Typically, a diagnosis of alcohol use disorder doesn’t require any other type of diagnostic test. There’s a chance your doctor may order blood work to check your liver function if you show signs or symptoms of liver disease.

Alcohol use disorder can cause serious and lasting damage to your liver. Your liver is responsible for removing toxins from your blood. When you drink too much, your liver has a harder time filtering the alcohol and other toxins from your bloodstream. This can lead to liver disease and other complications.

### **How is it treated?**

Treatment for alcohol use disorder varies, but each method is meant to help you stop drinking altogether. This is called abstinence. Treatment may occur in stages and can include the following:

- detoxification or withdrawal to rid your body of alcohol
- rehabilitation to learn new coping skills and behaviors
- counseling to address emotional problems that may cause you to drink
- [support groups](#), including 12-step programs such as Alcoholics Anonymous (AA)
- medical treatment for health problems associated with alcohol use disorder
- medications to help control addiction

There are a couple of different medications that may help with alcohol use disorder:

- Naltrexone (ReVia) is used only after someone has detoxed from alcohol. This type of drug works by blocking certain receptors in the brain that are associated with the alcoholic “high.” This type of drug, in combination with counseling, may help decrease a person’s craving for alcohol.
- Acamprosate is a medication that can help re-establish the brain’s original chemical state before alcohol dependence. This drug should also be combined with therapy.
- Disulfiram (Antabuse) is a drug that causes physical discomfort (such as nausea, vomiting, and headaches) any time the person consumes alcohol.

You may need to seek treatment at an inpatient facility if your addiction to alcohol is severe. These facilities will provide you with 24-hour care as you withdraw from alcohol and recover from your addiction. Once you’re well enough to leave, you’ll need to continue to receive treatment on an outpatient basis.

### **What’s the outlook for a person with alcohol use disorder?**

Recovering from alcohol use disorder is difficult. Your outlook will depend on your ability to stop drinking. Many people who seek treatment are able to overcome the addiction. A strong support system is helpful for making a complete recovery.

Your outlook will also depend on the health complications that have developed as a result of your drinking. Alcohol use disorder can severely damage your liver. It can also lead to other health complications, including:

- [bleeding in the gastrointestinal \(GI\) tract](#)
- damage to brain cells
- cancer in the GI tract

## UNIT 4

### What to know about coronary heart disease

- Causes
- Treatment
- Prevention
- Risk factors
- Diagnosis
- Summary

Coronary heart disease (CHD), or coronary artery disease, develops when the coronary arteries become too narrow. The coronary arteries are the blood vessels that supply oxygen and blood to the heart.

CHD tends to develop when **cholesterol** builds up on the artery walls, creating plaques. These plaques cause the arteries to narrow, reducing blood flow to the heart. A clot can sometimes obstruct the blood flow, causing serious health problems.

Coronary arteries form the network of blood vessels on the surface of the heart that feed it oxygen. If these arteries narrow, the heart may not receive enough oxygen rich blood, especially during physical activity.

CHD can sometimes lead to **heart attack**. It is the “**most common type of heart disease** in the United States,” where it accounts for **more than 370,000 deaths** every year.

### Causes

CHD can lead to [angina](#). This is a type of chest pain linked to [heart disease](#).

Angina may cause the following feelings across the chest:

- squeezing
- pressure
- heaviness
- tightening
- burning
- aching

Angina might also cause the following symptoms:

- [indigestion](#)
- [heartburn](#)
- weakness
- sweating
- nausea
- cramping

CHD can also lead to shortness of breath. If the heart and other organs do not receive enough oxygen, any form of exertion can become very tiring, which may cause a person to pant for air.

## Complications

Heart attack occurs when the heart muscle does not have enough blood or oxygen, such as when a blood clot develops from plaque in one of the coronary arteries.

The formation of a blood clot is called coronary thrombosis. This clot, if it is big enough, can stop the supply of blood to the heart.

Symptoms of a heart attack include:

- chest discomfort
- mild or crushing chest pain
- coughing
- dizziness
- shortness of breath
- a gray pallor in the face
- general discomfort
- panic
- nausea and vomiting
- restlessness
- sweating
- clammy skin

The first symptom is usually chest pain that spreads to the neck, jaw, ears, arms, and wrists, and possibly to the shoulder blades, back, or abdomen.

Changing position, resting, or lying down is unlikely to bring relief. The pain is often constant but may come and go. It can last from a few minutes to several hours.

A heart attack is a medical emergency that can result in death or permanent heart damage. If a person is showing symptoms of a heart attack, it is vital to call the emergency services immediately.

## **Treatment**

There is no cure for CHD. However, there are ways that a person can manage the condition.



- **Calcium** channel blockers: These will widen the coronary arteries, improving blood flow to the heart and reducing **hypertension**.
- **Statins**: These may have a positive impact on outcomes in CHD. One **2019 review** found that although taking statins cannot reduce the overall risk of death from CHD, they can prevent development and reduce the risk of non-fatal heart attacks. However, they might not be effective for people with cholesterol disorders such as hyperlipidemia.

In the past, some people used **aspirin** to lower their risk of CHD, but **current guidelines** only recommend this for people with a high risk of heart attack, **stroke**, angina, or other cardiovascular events. This is because aspirin is a blood thinner, which increases a person's risk of bleeding.

Doctors now recommend focusing on lifestyle strategies, such as adopting a healthful diet and getting regular moderate to intense exercise. These strategies can reduce the risk of atherosclerosis.

## Surgery

The following surgical procedures can open or replace blocked arteries if they have become very narrow, or if symptoms are not responding to medications:

- **Laser surgery**: This involves making several very small holes in the heart muscle. These encourage the formation of new blood vessels.
- **Coronary bypass surgery**: A surgeon will use a blood vessel from another part of the body to create a graft that bypasses the blocked artery. The graft may come from the leg, for example, or an inner chest wall artery.
- **Angioplasty and stent placement**: A surgeon will insert a catheter into the narrowed part of the artery and pass a deflated balloon through the catheter to the affected area. When they inflate the balloon, it compresses the fatty deposits against the artery walls. They may leave a stent, or mesh tube, in the artery to help keep it open.

- Holter monitor: This is a portable device that a person wears under their clothes for 2 days or more. It records all the electrical activity of the heart, including the heartbeat.
- Echocardiogram: This is an **ultrasound scan** that monitors the pumping heart. It uses sound waves to provide a video image.
- **Stress** test: This may involve the use of a treadmill or medication that stresses the heart in order to test how it functions when a person is active.
- Coronary catheterization: A specialist will inject dye through a catheter they have threaded through an artery, often in the leg or arm. The dye shows narrow spots or blockages on an X-ray.
- CT scans: These help the doctor visualize the arteries, detect calcium within fatty deposits, and characterize any heart anomalies.
- Nuclear ventriculography: This uses tracers, or radioactive materials, to create an image of the heart chambers. A doctor will inject the tracers into the vein. The tracers then attach to red blood cells and pass through the heart. Special cameras or scanners trace the movement of the tracers.
- Blood tests: Doctors can run these to measure blood cholesterol levels, especially in people at risk of high blood cholesterol levels.

## Summary

CHD develops when coronary arteries become too narrow. The condition causes blockages in the arteries that feed oxygen-rich blood to the heart.

CHD can be difficult to treat and may lead to a heart attack or stroke. However, people can take steps to reduce their risk of CHD by getting regular exercise, adopting a healthful diet, and avoiding or quitting tobacco.

People should seek immediate medical attention if they have chest pain and breathlessness, as this could indicate a heart attack.

Q:

Is CHD the most dangerous cardiovascular disease?

A:

CHD is the most dangerous cardiovascular disease, as it causes the most deaths of any heart disease in the United States.

Having undetected or untreated high blood pressure or high cholesterol can lead to a heart attack without causing any prior symptoms. Be sure to see a doctor regularly and seek regular blood tests.

Even those who consider themselves to be healthy may have high cholesterol and not know it.

Debra Sullivan, PhD, MSN, RN, CNE, COIAnswers represent the opinions of our medical experts. All content is strictly informational and should not be considered medical advice.

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Last medically reviewed on July 5, 2019

- Heart Disease
- Cardiovascular / Cardiology

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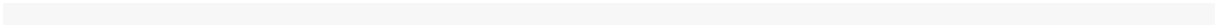
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**PAPER: PUBLIC HEALTH AND HYGIENE  
SUBJECT CODE-18KP3ZELZ4**

## **UNIT V**

### **Health education**

Health education is a profession of educating people about health.

**It includes –**

1. Environmental health,
2. Physical health,
3. Social health,
4. Emotional health,
5. Intellectual health,
6. Spiritual health,
7. Sexual and
8. Reproductive health education

### **Principles of health education**

- 1) **Credibility** –People should have trust and confidence in the communicator ( the person who is conveying the information)
- 2) **Interest** – the message should be to the interest of receiver.
- 3) **Participation** - People should participate in the planning and implementation of the health care.
- 4) **Motivation** : Motivation to take care of health is essential
- 5) **Comprehension** : Communication should be such that people can understand.
- 6) **Reinforcement** : Message should be repeated in different way so that people can remember it.
- 7) **Learning by doing**: Explain the importance of learning by doing.
- 8) **Known to unknown**: Start were the people are, what they understand and then proceed to

new knowledge

**9) Setting an example** - Health educator should set a good example in the things he is teaching.

**10) Good human relations** - Building good relationship with people like sharing information, idea, and feelings.

**11) Feed Back** – Getting feedback from audience is important.

**12) Leaders** – Leaders (village headman, schoolteacher, political worker etc.) can be made use of in health education work.

### **Importance of Health Education**

Health education improves the health status of individuals, families, communities, states, and the nation.

1. It enhances the quality of life for all people.
2. It prevents disease and cure.
3. It reduces the costs (financial) spend on medical treatment.
4. It teaches about physical, mental, emotional, and social health.
5. It motivates to improve and maintain healthy and prevent risky behaviors (tobacco use).
6. It helps to make healthy choices throughout ones lifetimes.

**Health education is imparted in India through following modes:**

#### **Learning methods:**

1. Lecture
2. Lecture with discussion
3. Role play and drama

#### **Teaching materials:**

1. Posters
2. Leaflets
3. Flipcharts
4. Media

## **Menstruation is:**

### **An indication that a girl is**

- Approaching maturity
- The shedding of tissue and blood from the lining of the womb through a woman's vagina

- Also called ‘ menses’, ‘ menstrual period’, ‘ period’, ‘ monthly bleeding’ and ‘ period,
- Menstruation is a normal and natural part of biological maturity.

### **Menstruation is not:**

1. Sickness
2. Illness
3. Disease
4. Infection
5. Harmful
6. Dirty
7. Shameful
8. Unclean

### **Pre-Menstrual Syndrome (PMS)**

Pre-Menstrual Syndrome is a group of symptoms linked to the menstrual cycle. PMS symptoms occur 1 to 2 weeks before the period (menstruation or monthly bleeding) starts. The symptoms usually go away after bleeding starts. PMS can affect menstruating women of any age and the effect is different for each woman.

### **Symptoms of Pre Menstrual Syndrome**

1. Acne
2. Swollen or tender breasts
3. Feeling tired
4. Trouble sleeping
5. Upset stomach, bloating, constipation, or diarrhea
6. Headache or backache
7. Appetite changes or food cravings
8. Joint or muscle pain
9. Trouble with concentration or memory
10. Tension, irritability, mood swings or crying spells
11. Anxiety or depression

Menstrual Hygiene related practices of women and adolescent girls during menstruation are of considerable importance, as it may increase exposure to Reproductive Tract Infections and other risks

### **Menstrual Hygiene is important because it**

1. Prevents infection
2. Prevents body odor
3. Enables women to remain healthy
4. Enables women to feel comfortable, confident and stay fresh all day

### **Safe Menstrual Practices**

1. Change sanitary material at least three times a day or when soaked
2. Change underwear /panty daily
3. Wash before and after changing sanitary pad/cloth
4. Use hot water and salt to wash sanitary cloth and dry them under sun
5. Use sanitary pad or clean cotton materials/cloth that have been preserved specifically for menstruation every month

### **Poor Menstrual practices**

1. Use of dirty cloth
2. Drying sanitary cloth inside dark corners of the house
3. Washing of used sanitary cloth in streams or rivers
4. Use of dirty /unclean underwear/panty

## **Non-Governmental Organization (NGO)**

**Non-Governmental Organization (NGO) is defined by World Bank as**

*“Private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services or undertake community development.”*

**History of NGOs in India:** NGOs have a long history in India. In the past, people in this country have been found to provide help to others in trouble. Since centuries there exists the tradition of voluntary service to the needy and helpless in this country. Floods, fires, earthquakes, epidemic outbreaks, and other kinds of calamities were the occasions which motivated people to voluntarily help those who were trapped in disastrous situations. It is around the late 18th and early 19th century that associations and organizations were being formed to render such activities in a more organized and permanent profile.

### **NGOs in Health Schemes in India**

The quality of health care available to the poor population in India is unacceptable. Services available through public health care facilities, which are supposed to be free, are often charged. Moreover, private health care services available to the population are of poor quality. So many non-profit NGOs operate in India to provide preventive and curative health care services to the people. A small number of NGOs also offer pre-payment health insurance schemes. Such non-profit community-based insurers offer the best hope of providing high quality, affordable and sustainable health care to the poor. As per estimates, NGOs provide health care to 5 % of the Indian population.

**LEADING NGOS IN INDIA- Below go through the slides**





## Help Age India

- An Indian organization focused on the concerns of elders.
- Established in 1978.
- Its mission is “to work for the cause and care of disadvantaged older persons and to improve their quality of life”.
- Headquarters located at Delhi.



## Smile Foundation

- Organization started in the year 2002.
- Office is located at Delhi.
- This aims at providing better status for child education in India.
- They make sure that every kid gets a good education.
- To abolish the child labor in the country.



## Goonj Limited

- Organization started in the year 1999.
- Started by a young journalist named Anish Gupta.
- It undertakes disaster relief, humanitarian aid and community development in 23 states across India.
- Goonj focuses on clothing for every poor kids throughout the country.
- Headquarters: Delhi

## CRY

- Started in the year 1979
- Strongly fights for the rights of the children
- The founder of this organization is Rippan Kapoor- an Indian Airlines purser started CRY with 6 friends and just Rs. 50.
- To provide the underprivileged children with better education, food and health
- Headquarters - Mumbai and branches in the Delhi, Bengaluru, Chennai and Kolkata.



[www.cry.org](http://www.cry.org)

## Give India

- Organization founded in the year 1999.
- This NGO collects financial funds from all over the world and distribute that raised fund for those NGOs which work inside the India.
- Location: Bengaluru, Karnataka, India



## Lepra Society

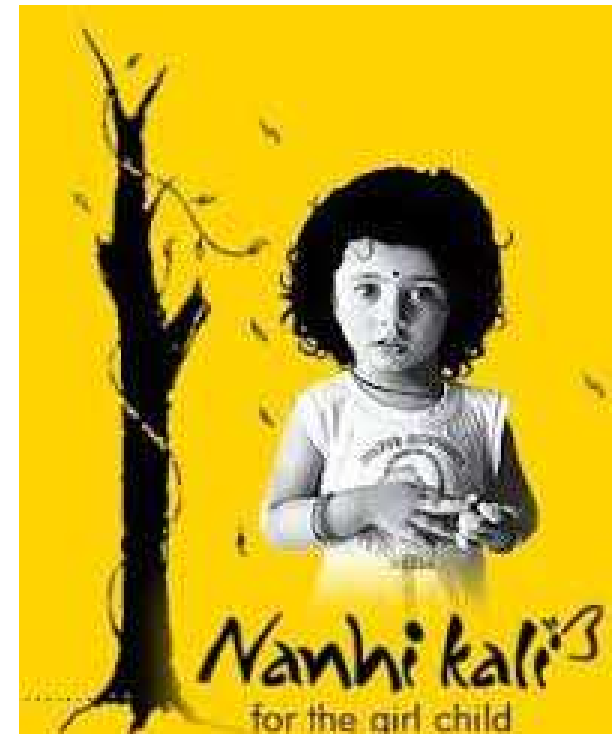
- Lepra is a UK-based international charity working on leprosy
- Lepra society or Andhra Lepra society was founded on 22nd February 1989.
- Give importance to disease such as Leprosy, malaria, lymphatic filariasis, tuberculosis, HIV AID and blindness and other diseases.
- The central office is at Secunderabad (Andhra Pradesh) and works in other states like Bihar, Madhya Pradesh and Jharkhand.



LEPRA Society

## Nanhi Kali

- Organization started in the year 1996. Founded by Anand Mahindra.
- Motto is to encourage girl education.
- Office is at Mumbai.
- Provides daily academic support as well as an annual school supplies kit, which allow the girls to attend school with dignity.
- It is jointly managed by the Naandi Foundation and the KC Mahindra Education Trust (Mahindra Group).



# **Leading NGOs Internationally**



## Wikimedia

- During the year 2003, Jimmy Wales, an internet entrepreneur established this charitable organization.
- It is headquartered at San Francisco.
- The nonprofit Wikimedia Foundation provides the essential infrastructure for free knowledge.



## Heifer international

- It is located at Little Rock,, Arkansas -established in the year 1944 by Dan West.
- Motto “Ending Hunger, Caring for the Earth”.
- Heifer International works on to eradicate poverty and hunger through sustainable, values-based holistic community development.
- It distributes animals, agricultural and values-based training to families in need around the world as a means of providing self-sufficiency.
- In India it is aiding women to build their own businesses and earn their own income.



## CARE

### (Cooperative for Assistance and Relief Everywhere)



- One of the world's largest independent, non-profit, international relief and development organization.
- Organized in the United States in 1945 to help war -ravaged Europe.
- CARE expanded its program to developing nations in Asia, Africa, and Latin America.
- Famous for its "CARE packages" of food.
- Goal is to build self-sufficiency by helping families meet three basic needs: income, education, and health and population services.
- It address a broad range of topics including emergency response, food security, water and sanitation, economic development, climate change, agriculture, education, and health.

**Conclusion:** The work done by NGOs goes a long way in nation building. In countries where the NGO/government collaboration is strong, the impact of the activities is greater and more sustainable. NGOs need to be transparent in their work and ensure that the funds raised, benefit those for whom they are intended. Regardless of all the problems and limitations, the activity of NGOs in the contemporary world is essential. NGOs are already proving to be agents of change. In times to come, they will continue to play a significant role in helping large sections of the Indian society come out from the grip of poverty and distress.

## **First Aid**

First Aid is the emergency assistance to individuals who have been injured or otherwise disabled, prior to the arrival of a doctor or transportation to a hospital.

### **Aims of the First Aid**

1. Prevent further injury
2. Preserve life
3. Promote recovery

### **Importance of first aid**

1. Providing quick medical treatment until professional assistance arrives.
2. First aid helps ensure that the right methods of administering medical assistance are provided.
3. Knowledge in first aid also benefits the individuals themselves.
4. It gives people the ability to provide help during various emergency situations.

### **Golden rules of first aid**

1. Do first things first quickly, quietly and without fuss or panic.
2. Give artificial respiration if breathing has stopped-every second counts.
3. Stop any bleeding.
4. Guard against or treat for shock by moving the casualty as little as possible and handling him gently.
5. Do not attempt too much-do the minimum that is essential to save life and prevent the condition from worsening.
6. Reassure the casualty and those around and so help to lessen anxiety.
7. Do not allow people to crowd round as fresh air is essential.
8. Do not remove clothes unnecessarily.
9. Arrange for the removal of the casualty to the care of a Doctor or hospitals soon as possible.

## **Physical conditions that often require first aid**

**Altitude sickness**, which can begin in susceptible people at altitudes as low as 5,000 feet, can cause potentially fatal swelling of the brain or lungs.

**Anaphylaxis**, a life-threatening condition in which the airway can become constricted and the patient may go into shock. The reaction can be caused by a systemic allergic reaction to allergens such as insect bites or peanuts. Anaphylaxis is initially treated with injection of epinephrine.

**Battlefield first aid**—This protocol refers to treating shrapnel, gunshot wounds, burns and bone fractures as seen either in the traditional battlefield setting or in an area subject to damage by large-scale weaponry, such as a bomb blast.

**Bone fracture**, a break in a bone initially treated by stabilizing the fracture with a splint.

**Burns**, which can result in damage to tissues and loss of body fluids through the burn site.

**Cardiac Arrest**, which will lead to death unless CPR preferably combined with an AED is started within minutes.

**Cramps** in muscles due to lactic acid build up caused either by inadequate oxygenation of muscle or lack of water or salt.

**Muscle strains and Sprains**, a temporary dislocation of a joint that immediately reduces automatically but may result in ligament damage.

**Stroke**, a temporary loss of blood supply to the brain.

**Shock and Electric shock**- electrical injury

**Wounds and bleeding**, including lacerations, incisions and abrasions.

Many accidents can happen in homes, offices, schools, and laboratories which require immediate attention before the patient is attended by the doctor.

## **Content of the First Aid Kit**

The Red Cross recommends that all first aid kits for a family of four include the following:

### **Dressing**

2 absorbent compress dressings (5 x 9 inches)

- 25 adhesive bandages (assorted sizes)
- 1 adhesive cloth tape (10 yards x 1 inch)
- Sterile eye dressing
- Gauze pad

## Medications

- 2 hydrocortisone ointment packets (approximately 1 gram each)
- 5 antibiotic ointment packets (approximately 1 gram)
- 5 antiseptic wipe packets
- 2 packets of aspirin (81 mg each)

## Bandages:

- 1 roller bandage (3 inches wide)
- 1 roller bandage (4 inches wide)
- 5 sterile gauze pads (3 x 3 inches)
- 5 sterile gauze pads (4 x 4 inches)
- 2 triangular bandages

## Others

- 1 blanket (space blanket)
- 1 breathing barrier (with one-way valve)
- 1 instant cold compress
- First aid instruction booklet

## Equipment's

- Tweezers-to pull out stings
- Scissors-to cut dressing/bandage
- Oral thermometer (non- mercury/nonglass)
- 2 pair of nonlatex gloves (size: large)
- Safety pin



# Health planning

## Health planning is a process of-

- ✓ defining national health problems
- ✓ Identifying needs and resources
- ✓ establishing priority goals, and
- ✓ setting out the administrative action needed to reach those goals.

## Health planning is important because

1. It is the first step in an orderly process to achieve improvement in the health status of individuals and populations.
2. The planning and evaluation cycle allows us to be successful in identifying and solving health problems.

Health Planning in India has been based on the suggestions of various committees which have been formed right from the time of independence. These committees were formed by the Govt. Of India from time to time to review the existing health situations and recommend measures for further action. The recommendations of these committees have shaped the formulation of various five year plans which forms the backbone of health policy in India.

## ROLE OF DIFFERENT COMMITTEES:

### Sokhey Committee (1938)

The first committee constituted to understand the existing health condition of the nation. Most members of this committee were part of the freedom struggle.

#### Recommendations:

1. Integration of preventive and curative function
2. maintenance of peoples health is a state's responsibility
3. Need for training large number of health workers
4. One health worker for every 1,000 population.

### Bhore Committee (1946)

#### Recommendations:

1. Development of Primary health centres in 2 stages

**a. Short term measures in rural area**

- ✓ Each PHC should cater a population of 40,000 and a secondary health center as supervisory, coordinating and referral institution.
- ✓ In PHC 2 medical officer, 4 public health nurses, one nurse, 4 midwives, 4 trained dhais, 2 sanitary inspectors, 2 health assistants, one pharmacist & 15 class IV employees.

**b. Long term measures**

- ✓ Primary health units with 75 bedded hospital for each 10,000-20,000 population
- ✓ Secondary units with 650 bedded hospital

2. Change in Medical education - 3 month training in SPM –Social Physicians

**Some other important committees which were formed in following years were:**

**Mudaliar Committee (1962)**- strengthening of the services provided by PHC (Primary Health Centres).

**Chadah Committee (1963)**- Recommended the formation of multipurpose workers who can take care of malaria eradication programme, vital statistics and family planning work.

**Mukerji Committee (1965)**- Recommended separate staff for family planning Programme and separate staff for Malaria Eradication Programme.

**Jungalwalla Committee (1967)**- Defined “Integrated health service” i.e a service with a unified approach for all problem instead of segmented approach for different problems.

**Kartar Singh Committee (1973)**- emphasized on multipurpose health workers.

**Shrivastav Committee (1975)**- Creation of bands of para-professionals and semi- professional health workers (School Teacher, Gram Sevak, Postmaster with the community).

This recommendation was accepted in 1977 and a rural health scheme was launched. Based on the recommendation of these committees health programs were formulated in the various five year plans and budget for the same was allotted.

**FIVE YEAR PLAN**

It was formulated by Planning Commission to re-build rural India, to secure balanced development of all parts of India.

**BROAD OBJECTIVES:**

1. Control or eradication of major communicable diseases
2. Strengthening of basic health services through establishment of PHC & SCs.
3. Population control



#### 4. Development of health manpower resources

First five year plan	(1951-56)
Second plan	(1956-61)
Third plan	(1961-66)
Fourth plan	(1969-74)
Fifth plan	(1974-79)
Sixth plan	(1980-85)
Seventh plan	(1985-90)
Eighth plan	(1992-97)
Ninth plan	(1997-2002)
Tenth plan	(2002-2007)
Eleventh plan	(2007-2012)
Twelvth	(2012-2017)
Thirteenth plan	(2017-2022)

#### **VARIOUS NATIONAL HEALTH PROGRAMS**


**Below go through the slides**

# NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAM (NVBDCP)



# Vector- Borne Disease

Disease that results from an infection transmitted to humans and other animals by blood-feeding arthropods, such as mosquitoes, ticks, and fleas. Examples of vector-borne diseases include Dengue fever, West Nile Virus, Lyme disease, and malaria.



- India is endemic for six major vector-borne diseases (VBD) namely:-
- **malaria**
- **dengue**
- **chikungunya**
- **filariasis**
- **Japanese encephalitis and**
- **visceral leishmaniasis**

- 1. NATIONAL ANTI-MALARIA PROGRAMME**
- 2. NATIONAL FILARIA CONTROL PROGRAMME**
- 3. JAPANESE ENCEPHALITIS CONTROL PROGRAM**
- 4. DENGUE FEVER CONTROL PROGRAMME**
- 5. CHIKUNGUNYA CONTROL PROGRAMME**

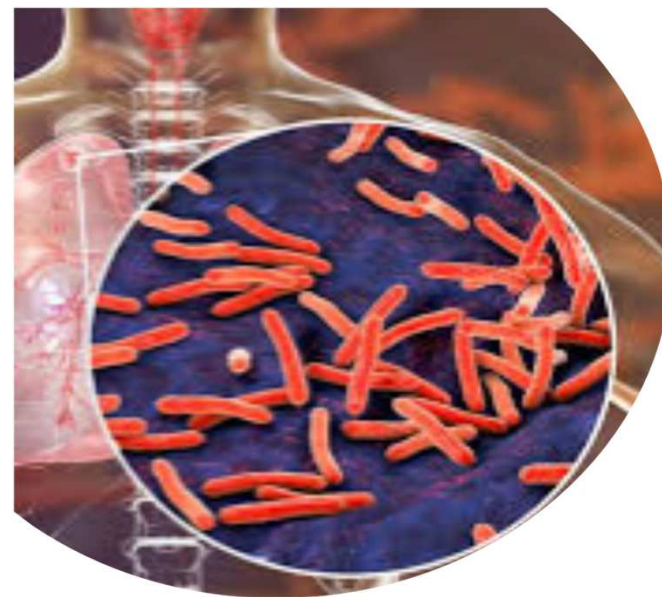
# NATIONAL LEPROSY ERADICATION



- Launched in 1955 with the objective to remove leprosy from our country.
- Leprosy, is a chronic infectious disease caused by *Mycobacterium leprae*.
- **Control measures:-**
  - 1) Decentralization and Institutional Development
  - 2) Strengthening Delivery system
  - 3) Disability Prevention ,Care and Rehabilitation
  - 4) IEC activities
  - 5) Training of staff of General Health Services India achieved elimination of leprosy in Dec. 2005.

# NATIONAL TUBERCULOSIS CONTROL PROGRAMME

- Launched in 1962.
- **Objective** -to detect the TB cases & provide treatment to TB patients.
- It is an infectious disease usually caused by *Mycobacterium tuberculosis* (MTB) bacteria.
- Attack the lungs.
- Treatment involves multiple antibiotics (MDR-TB)
- **WORLD TB DAY: 24TH MARCH**



## PREVENTION PROGRAMMES IN INDIA

- **NATIONAL AIDS CONTROL PROGRAMME**
- **Aims:-**
  - -To prevent further transmission of HIV.
  - -To decrease morbidity and mortality.
- **Control measures:**
  - Establishment of surveillance centers
  - Clinical management of detected cases
- **World AIDS Day –Dec 1**

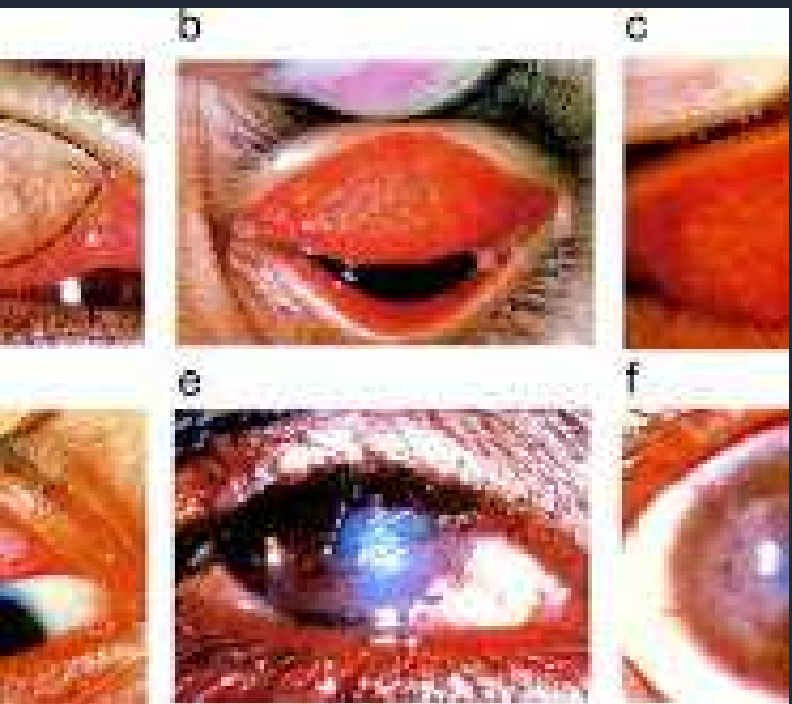


# NATIONAL PROGRAMME FOR CONTROL OF BLINDNESS

- 1963- National trachoma control program
- 1970- national prophylaxis program against blindness
- 1976- National programme for control of blindness
- **Activities:-**
  - Establishing regional institute of ophthalmology
  - Improving level of ophthalmic services
  - Vision 2020: RIGHT TO SIGHT •School level program







- **Trachoma** is a bacterial infection that affects eyes.
- It's caused by the bacterium *Chlamydia trachomatis*.
- Trachoma is contagious, spreading through contact with the eyes, eyelids, and nose or throat secretions of infected people.

# NATIONAL NUTRITIONAL PROGRAM

- i) Special nutritional program(1970-71)(MNP)
- ii) **Balwadi** nutritional program(1970-71)
- iii) Applied nutritional program(in 1963, it was introduced as a pilot scheme in Odisha. But in 1973, it was extended to all the state of country.)
- iv) **Mid-day meal program**(1995)(Tamil Nadu)



## **BALWADI NUTRITIONAL PROGRAM**

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National Nutrition Week 2020 is celebrated from September 1 to 7. It aims to create awareness about good nutrition and health.

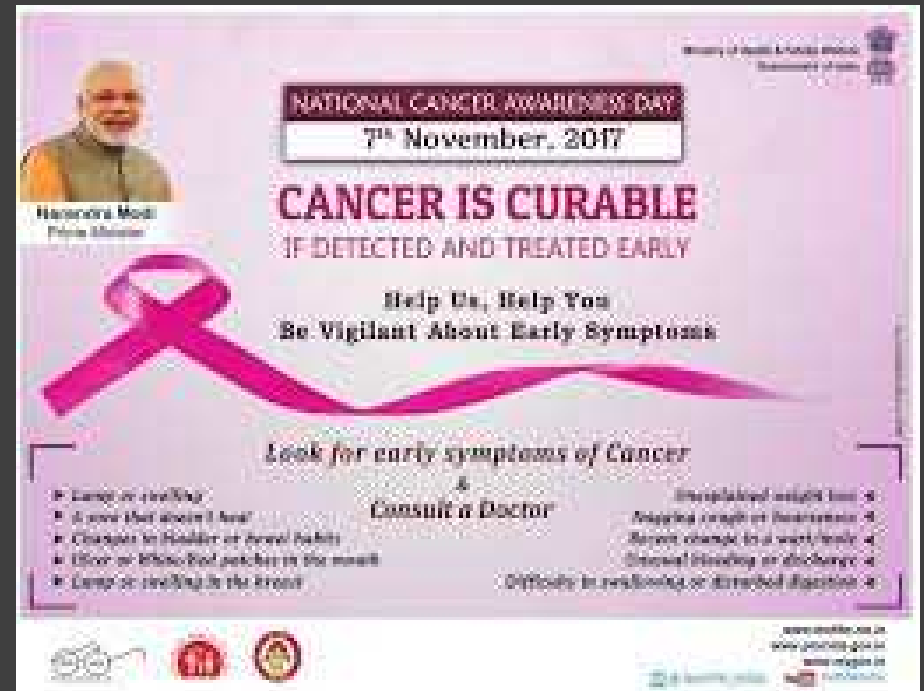
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NATIONAL CANCER  
CONTROL  
PROGRAMME(NCCP)

- Started as cancer control program in the year 1975-76 & and renamed as NCCP in 1985 & revised in 2004 .
- **OBJECTIVES:-**
- **Primary prevention:-** health education: Primary prevention of cancers by health education specially regarding hazards of tobacco consumption and necessity of genital hygiene for prevention of cervical cancer.
- **Secondary prevention :-** early detection & diagnosis: for example, cancer of cervix, breast and of the oro-pharyngeal cancer by screening methods and patients' education on self examination methods.



- **Tertiary prevention:-** Strengthening of existing cancer treatment facilities, which are woefully inadequate.
- **Palliative care** in terminal stage of the cancer.  
**IEC Activities:** IEC materials in the form of audio-video spots, posters, leaflets, flipcharts etc. have been developed. Advertisements have been given in the leading dailies for creating awareness about cancer among the general masses.



- The National Cancer Awareness Day is observed annually in India on **November 7**, to spread awareness on cancer, its symptoms and treatment.

- **Marie Curie** was a physicist, chemist and a pioneer in the study of radiation. She and her husband, Pierre, discovered the **elements polonium and radium**.
- They and Henri Becquerel were awarded the Nobel Prize in Physics in 1903, and Marie received the Nobel Prize in Chemistry in 1911.
- Curie worked on the X-ray machine discovered by German scientist Wilhelm Roentgen in 1895.
- She used her newly discovered element, **radium**, to be the gamma ray source on x-ray machines.







# NATIONAL MENTAL HEALTH PROGRAMME (NMHP)

- It was launched in 1985.
- **OBJECTIVES:-**
- Mental health care services to all.
- Identify the high risks group in community.
- **Activities:-**
- Mass education
- Follow up of mental patients
- Guidance and Counseling
- Awareness programme



# EXPANDED PROGRAMME ON IMMUNIZATION

- **The Expanded Programme on Immunization (EPI)** was initiated in India in 1978 with the objective to reduce morbidity and mortality from **diphtheria, pertussis, tetanus, poliomyelitis** and **childhood tuberculosis** by providing immunization services to all eligible children and pregnant women.

## **Pulse polio**

National Immunization Day (NID) commonly known as Pulse Polio Immunization programme was launched in India in 1995 and is conducted twice in early part of each year.



# Who is 'WHO'?

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- **World Health Organization (WHO)** is a specialized agency of the United Nations that is concerned with International public health.
- Established on 7 April 1948 and is headquartered in **Geneva, Switzerland**.
- Director-General of the WHO organization from 1 July 2017 is **Dr Tedros Adhanom Ghebreyesus**.



## **Vision**

*“The attainment by all people the highest level of health”*

## **Mission**

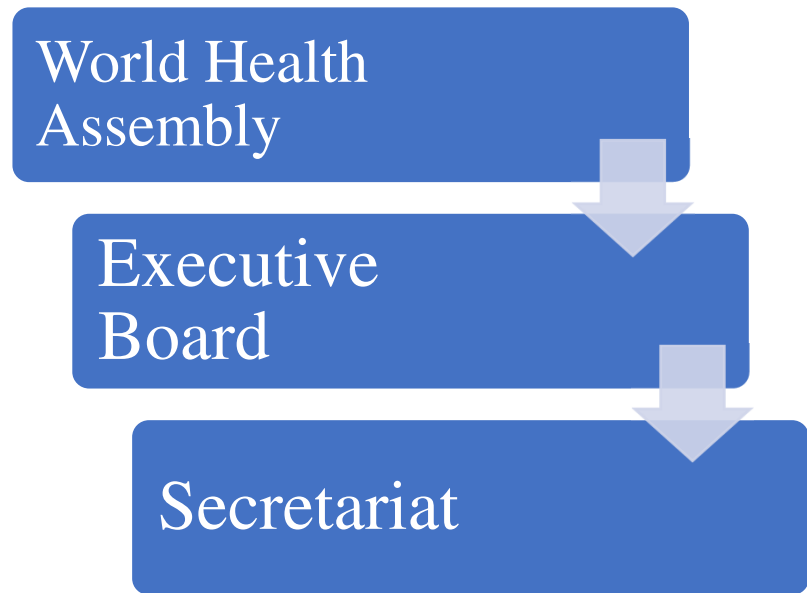
*“To lead strategic collaborative efforts among Member States and other partners to promote equity in health, to combat disease, and to improve the quality of, and lengthen, the lives of the all peoples of the world.”*

## **Objectives of WHO**

- (1) To develop and implement health activities throughout the world.
- (2) To promote public health.

# Organizational Structure

- Structure of WHO is divided into 3 subunits



- World Health Assembly (WHA) is the legislation and supreme body of WHO.

# 1. World Health Assembly

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- The world health assembly is the supreme decision-making body for WHO.
- For the first time (5th Oct 2017), an Indian **Dr Soumya Swaminathan** has been appointed as Deputy DG of WHO.





## 2. Executive Board

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- The main functions of the board are to give effect to the decisions and policies of the health assembly, to advise it and generally to facilitate its work.
- The executive board consists of the 34 members technically qualified in the field of health.
- Members of the board are elected for 3 years.
- The current Chairman of executive board is **Dr Assad Hafez**.



## 3. Secretariat

- The secretariat of WHO is staffed by some 8000 health and other experts and support staff on fixed term appointment, working at headquarters in the 6 regional offices.
- There are **6 regional offices of WHO** around the world.
- Each regional office is headed by a **Regional Director**

# WHO's Work

- It works on
  1. Malaria eradication
  2. Communicable diseases
  3. Environmental health
  4. Health statistics
  5. Organization of health service
  6. Family health

7. Research in epidemiology and communication science
8. Health protection and promotion
9. Education and training
10. Pharmacology and toxicology
11. Administrative management and personnel
12. Budget and finance

### **13. Emergency work:**

- To coordinate with others during natural and man-made emergencies.
- To reduce loss of life and the burden of disease and disability.

#### **Example: WHO announced**

- a) On 5 May 2014, spread of **polio** as world health emergency in Asia, Africa, and the Middle East.
- b) On 8 August 2014, spread of **Ebola** in Guinea and other West African countries.
- c) On 30 January 2020, declared the **COVID-19** pandemic as a Public Health Emergency of International Concern (PHEIC).

## **WHO and India**

- India became a part of the WHO Constitution on **12 January 1948**.
- It was inaugurated by **Pandit Jawaharlal Nehru**, Prime Minister of India.
- It was addressed by the WHO Director-General, **Dr Brock Chisholm**.
- The WHO Office for India is headquartered at **Delhi**.

# Four planned main concerned work of WHO in India

## Priority 1: Accelerate progress on UHC (Universal health coverage)

1. Implementing Ayushman Bharat.
2. Monitoring and evaluation of health sector performance
3. Access to health services such as immunizations, maternal and child health, tuberculosis, hepatitis
4. Digital health ecosystem
5. Eliminating neglected tropical diseases and control of vaccine-preventable and vector-borne diseases



## **Priority 2: Promote health and wellness by addressing causes of health**

1. Control of Noncommunicable diseases (NCDs)
2. Environmental health, including air pollution
3. Mental health promotion and suicide prevention
4. Nutrition and food safety
5. Road safety
6. Tobacco control
7. Integration of NCD and environmental risk factors in the digital health information platform





### **Priority 3: Better protect the population against health emergencies**

1. Disease surveillance and outbreak detection and response.
2. Integrated disease surveillance programme using the real-time integrated health information platform (IHIP)
3. Preparedness for, and response to all, emergencies
4. Control of antimicrobial resistance



## **Priority 4: Enhance India's global leadership in health**

1. Improving access to medical products of assured quality made in India.
2. Development and information sharing of innovations in health practices and technologies including IHIP
3. Strengthening India's leadership in digital health



# Goodwill Ambassadors

- The WHO operates "**Goodwill Ambassadors**"
- *members of the arts, sports, or other fields of public life aimed at drawing attention to WHO's initiatives and projects.*
- Appointed by the Director-General for two years at a time, they work closely with WHO to draw attention to its overall priorities or a specific health issue affecting people's lives and well-being.
- **Some of the goodwill ambassadors are:**
  - a) **Footballer Alisson Becker**-Health Promotion
  - b) **Dr Natália Loewe Becker**- Health Promotion
  - c) **Ray Chambers**-Global Strategy
  - d) **James Chau**-Sustainable Development Goals and Health
  - e) **Cynthia Germanotta**-Mental Health
  - f) **Peng Liyuan**-Tuberculosis and HIV/AIDS

# WHO AND COVID -19

## 30 Jan 2020

- The Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC), WHO's highest level of alarm.

## 11-12 Feb 2020

WHO convened a Global Research and Innovation Forum on the novel coronavirus, attended in person by more than 300 experts and funders from 48 countries, with a further 150 joining online.

## **Topics covered by the Forum included:**

- The origin of the virus,
- Natural history,
- Transmission,
- Diagnosis;
- Epidemiological studies;
- Clinical characterization and management;
- Infection prevention and control;
- R&D for candidate therapeutics and vaccines;
- Ethical considerations for research; and
- Integration of the social sciences into the outbreak response.

**7 Mar 2020**

WHO issued guidance covering the preparedness, readiness and response actions for four different transmission scenarios:

- no cases,
- sporadic cases,
- clusters of cases and
- community transmission.

# **COVID-19**

**Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.**

## **Most common symptoms**

- fever
- dry cough
- tiredness

## **Less common symptoms**

- aches and pains
- sore throat
- diarrhoea
- conjunctivitis
- headache
- loss of taste or smell
- a rash on skin, or discolouration of fingers or toes

# Prevention

## **To prevent the spread of COVID-19:**

- Clean your hands often. Use soap and water, or an alcohol-based hand rub.
- Maintain a safe distance from anyone who is coughing or sneezing.
- Wear a mask when physical distancing is not possible.
- Don't touch your eyes, nose or mouth.
- Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
- Stay home if you feel unwell.
- If you have a fever, cough and difficulty breathing, seek medical attention.



# Treatments

- To date, there are no specific vaccines or medicines for COVID-19. Treatments are under investigation and will be tested through clinical trials.

## Self-care

- If you feel sick you should rest, drink plenty of fluid, and eat nutritious food.
- Stay in a separate room from other family members and use a dedicated bathroom if possible.
- Clean and disinfect frequently touched surfaces.

- Everyone should keep a healthy lifestyle at home.
- Maintain a healthy diet, sleep, stay active, and make social contact with loved ones through the phone or internet.
- Children need extra love and attention from adults during difficult times.
- Keep to regular routines and schedules as much as possible.
- It is normal to feel sad, stressed, or confused during a crisis.
- Talking to people you trust, such as friends and family, can help.
- If you feel overwhelmed, talk to a health worker or counsellor.

## **Medical treatments**

- If you have mild symptoms and are otherwise healthy, self-isolate and contact your medical provider or a COVID-19 information line for advice.
- Seek medical care if you have a fever, a cough, and difficulty breathing.
- Call in advance.



## World Health Organization's response to the COVID-19 pandemic

- The WHO faced criticism from the United States' Trump administration while "guiding the world in how to tackle the deadly" COVID-19 pandemic.
- On 14 April 2020, United States President Donald Trump pledged to halt United States funding to the WHO while reviewing its role in "severely mismanaging and covering up the spread of the coronavirus."
- On 7 July 2020, President Trump formally notified the UN of his intent to withdraw the United States from the WHO.



## **REFERENCES**

1. National Health Portal, Ministry of Health and Family Welfare, Govt. of India <https://www.india.gov.in/national-health-portal?page=1>
2. <http://wikepidea.com/>

## **QUESTIONS**

### **SHORT ANSWER QUESTIONS**

- Q1. What is Health education ? How it is imparted in India?**
- Q2. Briefly explain the importance of maintaining good hygiene during menstruation.**
- Q3. Write about Non-governmental voluntary health organizations.**
- Q4. Write about the importance of First Aid.**

### **ESSAY TYPE QUESTIONS**

- Q5. Enumerate different health planning programmes in India.**
- Q6. State the objectives and enlist the functions of WHO**