Unit V

Health Education & Health Problems

(a) **Meaning and definition of 'Health' and 'Health Education**

(b) **Principles and importance of Health Education**

(c) **Health problems and role of Health Education in solving them:** Principles and objectives of Health Education. Importance of Health Education for adults and the younger generation through formal and non-formal channels of education. Various prevalent Health Problems: Communicable diseases – meaning, examples and common mode of spread. Epidemics – meaning and examples; Water, noise and air pollution – causes and prevention; Occupational Health Hazards – meaning and examples.

(d) **Disability and Rehabilitation:**

Causes of disability. General principles for prevention of disability; Meaning and scope of Rehabilitation; services available for rehabilitation; role of the community and government organizations in rehabilitation programmes.

(e) **Posture** :

Meaning of posture. Correct posture – meaning, importance of correct posture (standing, sitting, walking). Common postural deformities: kyphosis, scoliosis, lordosis, flat foot, knock-knees, bowlegged, hunch back, round shoulders – meaning, causes and corrective measures for each.

(f) **Personal hygiene and sleep requirements:**

Personal hygiene: Meaning of personal hygiene, importance of personal hygiene for a healthy life style. Care of eyes, ears, feet,hair, skin, oral hygiene, nose and clothing. Foot care: causes of corns, broken nails due to tight footwear; Causes of diseases like ring worm, athletes foot due to walking in wet areas; proper care of feet. Sleep requirements: Sleep requirements for different age groups. Effects of insufficient sleep on human body.

(g) **Substance Abuse:**

Effects of use of alcohol and smoking on the individual and society. Drugs: Meaning of 'drugs' and 'drug abuse'; Stimulants and Narcotics – Analgesics. Awareness of the fact that use of certain drugs has been banned by World Anti-Doping Agency (WADA) and National Anti-Doping Agency (NADA) and reasons for the same.

Meaning and definition of ‘Health’ and ‘Health Education’

- A person's **health** is the condition of their body and the extent to which it is free from illness or is able to resist illness.
- Mental health **includes our emotional, psychological, and social well-being**. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood.
- Physical health can be defined as normal functioning of the body at all levels; a normal course of biological processes that ensures individual survival and reproduction; a dynamic balance between the body's functions and the environment; participation in social activities and socially useful work; performance of basic social functions

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HEALTH EDUCATION

- Health education is the profession of educating people about health. Areas within this profession encompass environmental health, physical health, social health, emotional health, intellectual health, and spiritual health. It can be defined as the principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance, or restoration of health. However, as there are multiple definitions of health, there are also multiple definitions of health education.
- **The Joint Committee on Health Education and Promotion Terminology of 2001 defined Health Education** as "any combination of planned learning experiences based on sound theories that provide individuals, groups, and communities the opportunity to acquire information and the skills needed to make quality health decisions."
- **The World Health Organization defined Health Education as** "comprising of consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge, and developing life skills which are conducive to individual and community health."

Principles of Health Education

Basic Principles of Health Education:
There are eleven basic principles of health-related education which are discussed in the following:

1. Interest:
It is a psychological principle that people are unlikely to listen to those things which are not to their interest.

2. Participation:
It should aim at encouraging people to work actively with health workers and others to identify their own health problems. Health educators should allow the clients to go through the stages of identification of problems, planning, implementation, and evaluation.

3. Known to Unknown:
Start where the people are and with what they understand and then go ahead to new knowledge.

4. Re-enforcement:
Repetition at intervals and take feedback is extremely useful for understanding all health information and level of understanding.

5. Motivation:
Every individual has a unique way to learn. Find out and stimulate or awakening of the desire of learning called motivation.

6. Communication:
Health educators must be aware of the various barriers to communication and the cultural background of the community. The health educator has to adjust his talk and action to suit the group for whom he has to give health education. When the health educator has to deal with illiterates and poor people, he knows the local language.

7. Need-Based:
All health-related education should be need-based. **Community health** education programs should be purposeful, ascertain, specific, and relevant to the problems and available solutions.

8. Change Behavior:
The purpose of health related education is to change behavior. Therefore the multidisciplinary approach is necessary to understand human behavior as well as for an effective teaching process.

9. Scientific Based knowledge:
Health-related education must be scientific and current knowledge-based. Therefore a health educator should have the recent scientific knowledge to provide health education.

Importance of Health Education

- To help people understand that health is an asset in the community.
- Inspiring people to adopt health-promoting behaviors by providing appropriate knowledge and helping to develop a positive attitude.
- Supporting people to make decisions about their health and achieve the necessary confidence and skills to put their decisions into practice.
- To train the people with skills, knowledge, and attitude.
- To promote the development and proper use of health services.
- To develop desirable health practices and health habits.
- To develop health consciousness in the school and the community.
- To combat the superstitions and prejudices in the community.
- To provide a healthful environment for physical and mental growth.

Importance of Health Education for adults

1. Health education helps adults in personal development, well-being, increased self-confidence, etc.

2. Health education helps in health literacy. The capacity of people to understand how to deal with their health (indications of a doctor, instruc-tion leaflets on medicines, information leaflets on illnesses, etc.) helps in better health of adults.

3. Health education helps adult to have better understanding of the preventive measures and treatment for communicable and non- communicable diseases.

4. Health education helps in promotion of healthy lifestyles. Courses on nutrition or cooking but also yoga and gym classes, etc. help the adults to have healthy concepts for having healthy lifestyle.

5. Helps in promoting the proper use of health services available in adults.

6. By focusing on prevention, health educa-tion reduces the costs of adults (both financial and human) that individuals would spend on medical treatment.

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Importance of Health Education for young generation

1. Helps in instilling behaviors into young generation to prevent or delay the onset of the leading causes of death.

2. Helps in promoting the proper use of health services available in young generation.

3. Health education builds students' know-ledge, skills, and positive attitudes about health. Health education teaches about physical, mental, emotional and social health. It motivates students to improve and maintain their health, prevent disease, and reduce risky behaviors.

4. Health education curricula and instruction help students learn skills they will use to make healthy choices throughout their lifetime. It provides logical reasons for avoiding alcohol, tobacco, and other drugs.

5. It helps to cite the young generation regarding the importance of injury prevention, having good physical and emotional health, proper intake of nutrition, physical activity, prevention of diseases and sexuality and family life.

6. Health education promotes learning in other subjects. In general, healthy students learn better. Numerous studies have shown that healthier students tend to do better in school. They have higher attendance, have better grades, and perform better on

Communicable Disease

A communicable disease is one that is spread from one person to another through a variety of ways that include: **contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect**.

- How these diseases spread depends on the specific disease or infectious agent. Some ways in which communicable diseases spread are by:
- physical contact with an infected person, such as through touch (staphylococcus), sexual intercourse (gonorrhea, HIV), fecal/oral transmission (hepatitis A), or droplets (influenza, TB)
- contact with a contaminated surface or object (Norwalk virus), food (salmonella, E. coli), blood (HIV, hepatitis B), or water (cholera);
- bites from insects or animals capable of transmitting the disease (mosquito: malaria and yellow fever; flea: plague); and
- travel through the air, such as tuberculosis or measles.

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- # Epidemics

An outbreak of disease that spreads quickly and affects many individuals at the same time

Yellow fever, smallpox, measles, and polio are prime examples of epidemics

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Air Pollution

Causes

- Dust
- Animals
- Radioactive decay
- Wildfires
- Vegetation
- Volcanoes
- Aircraft
- Vehicles
- Marine vessels
- Waste deposition in landfills
- Military sources
- Fossil fuels
- Mining
- Agriculture
- Industry
- Private households

Effects

- Mortality
- Cardiovascular diseases
- Lung diseases
- Cancer
- Effects on the central nervous system
- Acid rain
- Global warming
- Depletion of the ozone layer
- Effects on animals
- Effects on agriculture
- Economic effects

Solutions

- Change in energy consumption behavior
- Reduce material consumption
- Avoid the use of cars
- Reuse and recycle
- Biodigesters
- Use of energy efficient devices
- Convince others

Noise Pollution

Causes

- Urban planning
- Industrialization
- Public transportation
- Noise pollution from cars
- Construction
- Children
- Events
- Domestic appliances
- Agriculture
- Alarm systems
- Military
- Storms
- Rainfalls
- Thunder

Effects

- Psychological disorders
- Tinnitus
- Stress
- Annoyance
- Brain damages
- Hearing problems
- Cardiovascular diseases
- Communication issues
- Sleeping issues
- Effects on animals and plants

Solutions

- Reduce sound in your space
- Turn off electronics
- Mask noise
- Close windows
- Move to another home with low level of noise pollution
- Build a fence
- Plant trees
- Install quiet spaces
- Electric cars
- Earplugs
- Headphones
- Government regulations
- Be social
- Education
- Convince others

Water Pollution

Causes

- Water pollution caused by natural phenomena
- Water pollution caused by human behavior
- Sewage
- Industrial Waste
- Private Waste
- Mining
- Oil leakages
- Dumping
- Fossil fuels
- Increasing meat consumption
- Chemical fertilizers
- Pesticides
- Leak of sewer lines
- Radioactive garbage

Effects

- Effects on humans
- Effects on animals
- Effects on plants
- Effects on water animals and plants
- Disruption of the food chain
- Diseases
- Eutrophication
- Destruction of whole ecosystems

Solutions

- Responsible use of fertilizer and pesticides
- Discourage firms from disposing their trash in rivers, lakes or oceans
- Replace fossil fuels by renewable energies
- Minimize stormwater runoff
- Reduce meat consumption
- Support other countries to improve their technologies
- Convince people

Occupational Hazard

- An **occupational hazard** is a hazard experienced in the workplace. This encompasses many types of hazards, including chemical hazards, biological hazards (biohazards), psychosocial hazards, and physical hazards

- **1) Physical hazard: Related to exposure to noise, ionizing radiation, and temperature.**
- **2) Chemical hazard: Related to exposure to gases, vapors, fumes, and chemicals.**
- **3) Biological hazard: This includes exposure to viruses, bacteria, blood and blood products.**

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Disability

- A physical or mental condition that limits a person's movements, senses, or activities.

Causes

Poverty and malnutrition
War
Nuclear accidents
Poor access to health care
Illness
Medicines and injections
Accidents

Prevention at three levels

- **Primary Prevention** – Action taken prior to the onset of the disease/disability, which will remove the possibility that a disease/disability will occur.
- **Secondary Prevention** – Action, which halts the progress of the disease/disability at its incipient stage and prevents complications. The specific interventions are early diagnosis and adequate treatment.
- **Tertiary Prevention** – All measures available to reduce or limit impairments and disabilities, and minimize suffering caused by existing disability. This phase is also called rehabilitation, which includes physical, psychosocial and vocational measures taken to restore the patient back to normal or near normal condition

- Rehabilitation is defined as “**a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment**”

- Rehabilitation covers an enormous spectrum within our patients' pathways. It includes **support to learn basic communication skills; exercise classes to improve or maintain optimum health, wellbeing and occupation; and complex neurological rehabilitation following major trauma or stroke**

Role of the community and government organizations in rehabilitation programmes.

- Addresses impairment, improves functioning and independence, and promotes participation of all people on an equal basis.
- Empowers people with disabilities to make informed decisions, attain their goals and understand their individual rights.
- Enhances the quality of life of people with disabilities and their caregivers by addressing gaps in basic needs. Benefits to the community u Builds awareness of the diversity within the community, including diversity in functioning of people with disabilities, older persons and children.
- Fosters more positive attitudes towards people with disabilities, and develops a greater understanding of disability, rights and the importance of equity so that no one is left behind when community development activities occur.
- Focuses on local service systems, local resources and local practical solutions to real barriers that exist for people with disabilities and their caregivers with respect to access to services and participation in society.
- Promotes inclusion of all people, particularly those with disabilities, in local decision-making, governance and resource allocation.

What Government Do

- Invest in CBR..
- Promote sustainable funding. Use local resources and gradually reduce external funding.
- Develop strong linkages between services and stakeholders.
- Leave no one behind.

Posture

- Posture is **the position in which you hold your body upright against gravity while standing, sitting, or lying down**. Proper posture requirements: Good muscle flexibility. Normal motion in the joints. Strong postural muscles.

- Correct posture means **the balancing of body in accurate and proper manner while sitting ,standing, reading,writing or during any other action of body**.

- Sitting and standing with proper alignment improves blood flow, helps keep your nerves and blood vessels healthy, and supports your muscles, ligaments, and tendons. People who make a habit of using correct posture are less likely to experience related back and neck pain.

Kyphosis

- Kyphosis is a forward rounding of upper back. Some rounding is normal but the term "Kyphosis" usually refers to and exaggerated rounding, more than 50 degrees. This deformity is also called round back or hunch back. It also leads to kyphosis cervical pain.

Kyphosis Causes:

  - Malnutrition.
  - Carrying heavy loads.
  - Improper furniture.
  - Weak muscles.
  - Bending while walking.
  - Wearing shapeless and tight cloths.
  - Due to heredity.

- **Precautions of Kyphosis:**
  - Adopt correct posture.
  - Wear loose clothes.
  - Use suitable furniture.

- **Kyphosis Treatment and Kyphosis exercises:**
  - Always keep a pillow under your back while sleeping.
  - Bend your head backward in standing position.
  - Perform swimming.
  - Perform dhanur asana, Chakra asana regularly.



Lordosis

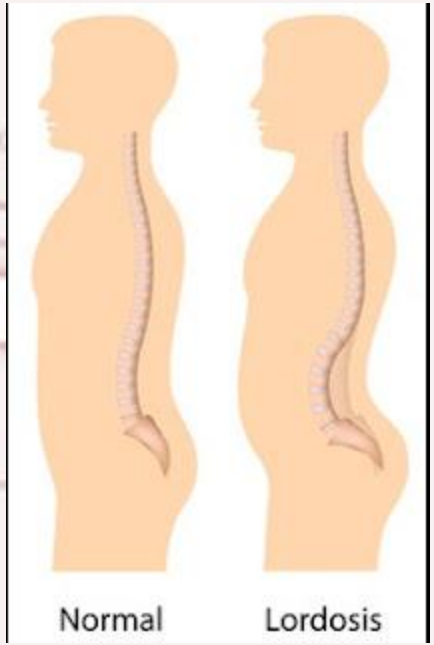
- Lordosis is a postural deformity in which the lumbar spine bends infront beyond the normal level. Thus, abdomen is ahead of body and shoulders come outward and sideward. Lordosis symptoms are lower back pain, stomach appears to be bulging out more than normal.

Lordosis Causes:

  - Imbalanced diet.
  - Improper development of muscles.
  - Taking more food than required.
  - Overweight or obesity.
  - Diseases of spinal muscles.

- **Precautions of Lordosis:**
  - Balanced diet should be taken.
  - Stand straight while carrying weight.
  - Never take excessive food.
  - Maintain your weight.

- **Lordosis Treatment and lordosis exercise:**
  - Perform toe-touching at least 10 times.
  - Perform sit-ups regularly.
  - Stand straight and touch your feet with hands.
  - Perform Hal asana, Paschimotan asana and Vipritkarni asana regularly.



Knock Knees

- Knock knees or Genu Velgum is a postural deformity in which the legs are bent inward and knees strike each other while walking or running.
  Between birth and 18 months, an outward-turning alignment from hip to knee to ankle is normal. Between about 18 and 24 months, this alignment normally becomes neutral. When the child is between 2 and 5 years old, an inward-turning alignment is normal. The alignment returns to neutral as the child grows.
  Knock knees causes:
  - Rickets.
  - Obesity during childhood.
  - Muscular or ligaments weakness at early age.
  - Fractures and injuries involving the knee joint.
  - Lack of Balanced diet.
  - Flat foot.
- **Precautions of Knock knees:**
  - Balanced diet should be taken.
  - Babies should not be forced to walk at very early age.
  - Perform proper exercises.
- **Knock knees exercise and Knock knees Remedies:**
  - keep a pillow between the knees and stand erect for some time.
  - Use cod liver oil.
  - Horse riding.
  - Use walking calipers.



Flat foot

- Flat foot is a postural deformity in which the inner curve of foot has bulge more than normal. In this default of feet person gives complete print of his foot sole over the plane surface.

Flat foot Causes:

  - Weak muscles.
  - Obesity.
  - Using improper shoes.
  - Carrying heavy weight for a long period.
  - Standing for a long time.

- **Precautions of Flat foot:**
  - Always wear the shoes of proper shape and size.
  - Obesity should be avoided.
  - High heeled shoes should be avoided.
  - Don't carry heavy weight for a long period.
  - Babies should not be forced to walk at very early age.

- **Flat foot Remedies and Flat foot exercises:**
  - Walk on heels.
  - Loose weight.
  - Skip on rope.
  - Perform stretching exercises.
  - Use good quality shoes.
  - Walk bare footed over the sand.
  - Run fast bare footed over clean surface.



Bow legs

It is a postural deformity. It is opposite to knock-knees. In this deformity knees are widely apart. There remains a wide gap between knees when a bow legged person keeps his feet together. It occurs during childhood. Bow legs for babies are common. Sometimes parents get affraid about their bow legs baby. But as they grow their legs starts to come in proper shape. If there is bow legs in toddlers, then it is due to lack of nutrition.

Bow legs Causes:

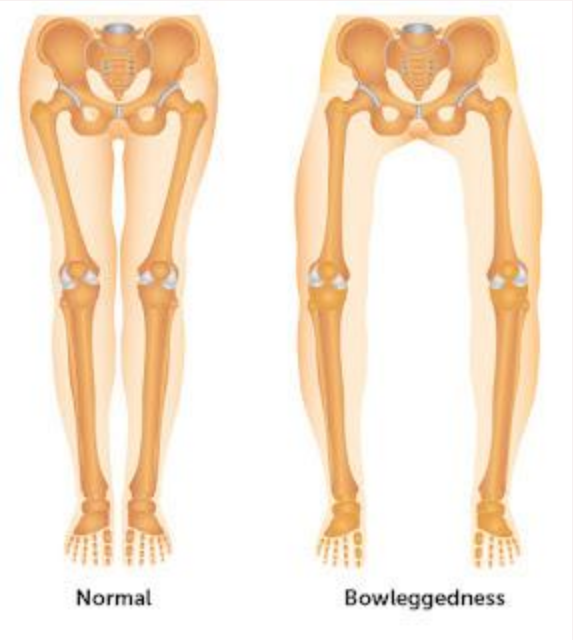
- Rickets.
- Deficiency of vitamin D and calcium.
- Improper way of walking.
- Obesity.
- Using defaulted footwear.
- Forcing babies to walk at early stage.

Precautions of Bow legs:

- Don't carry heavy weight in childhood.
- Babies should not be forced to walk at very early age.
- Balanced diet should be taken.
- Always walk properly.
- Use good quality shoes.

Bow legs Remedies and bow legs exercises:

- vitamin 'D' and calcium should be taken in required amount.
- Walk on inner edge of the feet.
- Walk by bending the toes inward.
- Perform Garud asana regularly.



Round shoulders

- Round Shoulders or arm around shoulder is a postural deformity in which the shoulders become round and sometimes they seem to be bent forward. If you are looking for how to fix rounded shoulders, you are at right place. Fix your rounded shoulders without any surgery. See round shoulder exercise given below for treatment of rounded shoulders.

Round shoulder Causes:

  - Due to heredity.
  - By wearing very tight clothes.
  - By sitting on improper furniture.
  - By walking, sitting in bent position.
  - Lack of proper exercise.



- **Precautions of Round shoulder:**
  - Never sit, stand or walk in bent position.
  - Use loose fitting clothes.
  - Always use proper furniture to sit.
- **Exercises for Rounded shoulders and Round shoulder Remedies:**
  - Keep your tips of fingers on your shoulders and encircle your elbows clockwise and anticlockwise direction for same number of times.
  - Hold the horizontal bar for some time.
  - yoga for rounded shoulders - Perform Chakra asana and Dhanur asana regularly.

Scoliosis

Scoliosis is a postural deformity related with spine. Scoliosis is a sideways curvature of the spine that occurs most often during the growth spurt just before puberty. If spine curves more than one time at different parts of spine it is called multiple scoliosis. Scoliosis causes one shoulder down and other is raised up. Body weight is shifted to side ward and it causes lot of pressure on one side of the foot. Here, I have provided you exercises for the treatment of scoliosis without any scoliosis surgery. Read following instructions to know how to treat scoliosis.

Scoliosis Causes:

- Birth defects.
- Wear and tear in the spine.
- Difference in the lengths of the legs.
- Lifting weight towards one side in routine.
- Wrong standing posture.
- Unsuitable furniture.



Precautions of Scoliosis:

- Never walk for long time with carrying weight in one hand.
- Always stand in correct posture.
- Use suitable furniture.
- Balanced diet should be taken.
- Study should be avoided in sideways bending position.

Scoliosis treatment and Scoliosis exercises:

- Hold the horizontal bar woth hands and let your body hang for some time.
- Swim by using breast stoke technique.
- Performing bending exercise in opposite side of the 'C' shaped curve.
- Perform Trikon asana and Ardhchakra asana in opposite direction.

Personal Hygiene

- Personal hygiene includes: **cleaning your body every day**. washing your hands with soap after going to the toilet. brushing your teeth twice a day. covering your mouth and nose with a tissue (or your sleeve) when sneezing or coughing

IMPORTANCE

- It protects you from infections or diseases that could weaken your immune system.
- It prevents you from spreading the infection to your loved ones and people you interact with daily.
- It helps maintain your skin's pH levels, making it healthy and glowing over time.
- It helps you avoid getting into unpleasant situations wherein people are disgusted by your presence due to foul odour.
- It helps you regain your confidence, appear attractive, and enhance your appearance.
- It allows people to believe and entrust responsibilities to you, which could involve planning a safe and hygienic event for everyone.

Recommended sleep times are broken down into nine age groups. In each group, the guidelines present a recommended range of nightly sleep duration for healthy individuals. In some cases, sleeping an hour more or less than the general range may be acceptable based on a person's circumstances.

	Age Range	Recommended Hours of Sleep
Newborn	0-3 months old	14-17 hours
Infant	4-11 months old	12-15 hours
Toddler	1-2 years old	11-14 hours
Preschool	3-5 years old	10-13 hours
School-age	6-13 years old	9-11 hours
Teen	14-17 years old	8-10 hours
Young Adult	18-25 years old	7-9 hours
Adult	26-64 years old	7-9 hours
Older Adult	65 or more years old	7-8 hours

Effects of insufficient sleep on human body.

- Sleep Deprivation Leads to Health Issues
- A Lack of Sleep Causes Depression
- Sleep Hurts the Learning Process
- Not Sleeping Enough Impairs Judgment
- Gaining Weight is More likely when You Lack Sleep
- Fatigue Leads to Accidents

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Alcohol Effects

- Alcohol consumption is a risk factor in numerous chronic diseases and conditions, and alcohol plays a significant role in certain cancers, psychiatric conditions, and numerous cardiovascular and digestive diseases.[4] Additionally, alcohol consumption can increase the risk of diabetes, stroke, and heart disease.
- Alcohol-Related Aggression and Violence
- Impact of Alcoholism on the Family

Smoking effects

- Addiction to nicotine
- Long-term cough
- Faster heart rate
- Lung problems
- Higher blood pressure
- Less stamina and endurance
- Higher risk of lung cancer and other cancers
- More respiratory infections
- Smoking also gives you bad breath, yellow teeth, and yellow fingernails; makes your hair and clothes smell bad; and wrinkles your skin.

What do you mean by drugs?

- Drugs are **substances that change a person's mental or physical state**. They can affect the way your brain works, how you feel and behave, your understanding and your senses. This makes them unpredictable and dangerous, especially for young people. The effects of drugs are different for each person and drug.
- The use of illegal drugs or the use of prescription or over-the-counter drugs for purposes other than those for which they are meant to be used, or in excessive amounts. Drug abuse may lead to social, physical, emotional, and job-related problems.

- **Stimulants** are a class of drugs that speed up messages travelling between the brain and body. They can make a person feel more awake, alert, confident or energetic. [1]. Stimulants include caffeine, nicotine, amphetamines and cocaine.
- **Narcotic**, drug that produces analgesia (pain relief), narcosis (state of stupor or sleep), and addiction (physical dependence on the drug). In some people narcotics also produce euphoria (a feeling of great elation).
- **Analgesics**, also called painkillers, are **medications that relieve different types of pain** — from headaches to injuries to arthritis. Anti-inflammatory analgesics reduce inflammation, and opioid analgesics change the way the brain perceives pain

WADA

The independent international organization was created to **promote, coordinate and monitor the fight against doping in sport around the world**. WADA is governed and funded by both the sport movement (Olympic Movement) and governments of the world.

The List of Prohibited Substances and Methods (List) indicates what substances and methods are prohibited in sport and when.