

UNIT-10

TRAINING AND DOPING IN SPORTS

Meaning and Concept of Sports Training

Meaning of Sports Training:-

Training has been referred to as a systematic exercise of effort for a considerable time, to develop ability to face greater load, especially for competitions. Sports training provides the other with the basic means to adapt to his particular stressor, through controlled exercise. This adaptation on the part of an athlete's body answered, that his body is prepared for a greater load, and this process is called training.

Concept of Training:-

Training for achieving something of for competition is not a new idea, with the passage of time, more time and efforts are being devoted to training of preparation for competitions, with the invention of new techniques every now and then in the field of athletics, weight training methods has shown very encouraging results. Training for any game or event has become very technical and a scientific approach is needed to get the desired results.

Principles of Sports Training:-

The principles of sports training are as following:-

1. Principles of continuity
2. Principle of over load
3. Principle of Individual Differences
4. Principle of general and specific preparation
5. Principle of progression
6. Principle of specificity
7. Principle of variety
8. Principle of warming up and cool down
9. Principle of rest and recovery.
10. Warming up and limbering down

Warming Up (Meaning of Warming Up, Types of Warming Up & Methods of Warming Up)**Warming up:-**

It is a short term activity carried out prior to any severe or skilled activities. Warming up is an essential before a competition. Through such a workout we try to bring the group of muscles

expected to take part in the activity to follow. It is primarily preparatory activity in which physiological and Psychological preparation of an athlete is done for the main activity.

Types of Warm up:-

(1) General Warm-up

(2) Specific warm-up

Methods of Warming Up:-

1. General Method:-

(a) Jogging: - Every athlete should perform jogging or slow running for 5 to 10 minutes to increase the body temperature.

(b) Simple exercise: - This is also a way of warming up. The exercise should be performed from simple to complex.

(c) Striding: - It means running the distance with long strides. The distance of running should not be more than 50 meters.

(d) Stretching exercise: - Stretching is one of the most critical parts which are stronger and healthier.

2. Warm -up with water: - Warm-up with like warm water gives relaxation to the muscles, which is usually followed in developed countries. Before a competition, a hot bath helps to raise the body temperature and thus activate muscles by increasing blood circulation in muscles.

3. Warm -up Through Massage: - The massage of muscles helps the muscles to tone up and is, therefore considered as a means of warming up.

4. Through Sun Bath: - The body can be warmed up through sun bath up to some extent, but in most of the sports this method of warming-up is not usually applied.

5. Through steam both: - The body can be warmed up through steam bath. Energy can be saved through steam bath but this method of warming-up is also not used frequently.

Importance of Warming Up, Physiological basis of warming up & Guiding Principles of Warming Up

Physiological basis of warming up:-

Warming up does produce physiological changes in the looking of a muscle and that warming

up serves as basis or foundation for the efficient warming of muscle. Warming up possibly helps in the following ways to increase muscular efficiency:

1. There is a local rise in temperature and accumulation of metabolic products. It helps in the efficiency of contraction and relaxation of muscles.
2. Warming up brings the muscles in a state of readiness to responds to stimuli efficiently.
3. The development of the neuron muscular co-ordination between the groups of muscles required to be involved in an activity also demands some initial warming up.

Guiding Principles of Warming Up:-

In the warming up there are certain guiding principles of warming-up as in the following ways: -

- (a) Simple to complex
- (b) Exercise for all parts of the body.
- (c) Stretching and loosening exercise should be included.
- (d) Intensive enough to increase body temperature.
- (e) Warming-up should be according to the activity or sports
- (f) Concerned Movement of games should be included.
- (g) Warming-up should be done at exact time.
- (h) Warming-up should be according to Age and sex.

Meaning of Limbering Down & Importance of Limbering Down

Meaning of Limbering:-

At the end of the training session or competition, athletes are normally advised to cool down. This is done normally in the shape of a light but continues activity such as jogging or walking for some time at the end of the event. Such an activity after the competition of an event is called limbering down or cooling down.

OR

Limbering down means lowering down the intensity of the work by performing the stretching exercise followed by deep breathing, relaxation exercise is called cooling down.

When we do exercise there is a lot of blood flow in our muscle if we stop suddenly there may be pooling of blood in the extremities and cause giddiness and some time collapse. Limbering down exercise prevent the post exercise soreness and stiffness.

Importance of Limbering Down: -**Two methods of limbering down are as follows:-**

1. Stretching exercise— one can cool down his/her body by stretching their body. It can be done with the help of partner or alone. This will help in normalizing the body temperature and relaxing the muscles.
2. Massage— this can also be one of the methods used to relax the body after strengthening exercises. It gives a soothing effect.

Skills, Technique and Style: -**(i) Skill:-**

It is an element of performance that enables the performer to do a large amount of work with little effort. The apparent visible ease of muscular work indicates a skill full movement or performance. In other words it can be said that skill is the ability to do something well. Skill that is unnatural and complex can be learned more easily if the different elements in the movements can be separated and learned by parts.

(ii) Technique:-

It means the way of doing a particular task scientifically. This way of doing a thing should be based on scientific principles and be effective in achieving an aim. It is a basic movement of any sports or event. We can say that a technique is the way of performing skill.

(iii) Style:-

It is the manner of doing something that is characteristics of a particular person or pattern. It may or may not be based on sound principles. A style of doing a movement, if perfect, looks graceful and appealing. It is an individual's expression of technique in motor action, therefore each sports person due to his specific physical and biological capacities realize the technique in different way or symptom of over load and how to overcome it.

Concept and Classification of Doping:-**(a) Meaning of Doping: -**

When an athlete uses banned substances or methods to improve performance in sports it is called as doping. Example: Drugs and steroid used.

(b) Concept of Doping: -

'Doping' is the word, which is used in the field of sports, when athletes use prohibited substances or methods to unfairly improve their sporting performance. In general way, doping is the use of performance enhancing substance or methods by sports person to gain an advantage over their competitors. In fact, some sport person take illegal substance to enhance their performance. The activity is known as doping. The use of banned performance enhancing drugs in sports is commonly referred to as doping. The uses of drugs are considered unethical by most international sports organisations. The anti doping authorities state that using performance enhancing drugs goes against the "spirit of sports"

Types of Doping (Classification)**(i) Performance enhancing substance:**

- Stimulants
- Anabolic Steroids
- Peptide hormones
- Beta-2 Agonist
- Narcotics
- Diuretics
- Cannabinoids.

(ii) Physical methods: -

- Blood doping and Gene doping comes under physical method.

Blood doping: It is the process of increasing the Red blood cells by blood transfusion. Blood doping increases haemoglobin allows higher amount of O_2 to fuel an athlete's muscles. This can improve stamina and performance, particularly in long distance events.

Gene doping: It is the non-therapeutic use of cells, genes, genetic elements or of the modulation of gene expression, having the capacity to improve athletic performance.

Increasing muscle growth, blood production, endurance, and pain-resistance in such cases, nothing unusual would enter the bloodstream. So officials would detect nothing in blood or urine test. Some viruses target certain organ, such as kidney, liver. Therefore only samples are taken from these areas that could lead to detection.

Prohibited Substances and their Side Effects**1. Stimulants –**

- Cause insomnia, anxiety and aggressiveness
- Poor Judgement

- Increases hypertension and body temperature

2. Anabolic steroid: -

- Can cause Sudden heart attack
- High blood pressure
- Mood swings, aggression/depression
- Can cause impotency and baldness in males
- Can cause facial hair growth and deep voice in females

3. Cannebinoids :-

- Reduce concentration and co-ordination
- Reduce lung capacity
- May cause heart decease and lung cancer
- Loss of memory

4. Beta Blockers: -

- Reduces endurance
- Headache and weak digestion.
- Risk of heart attack due to slow heart rate.

5. Narcotics: -

- Loss of balance and coordination
- May cause drowsiness, vomiting, constipation
- May cause fainting and coma

6. Diuretics: -

- Can cause dehydration
- May lead to kidney damage
- Mineral imbalance and low blood pressure and drowsiness

7. Beta-2 Agonists: -

- Cold hands, drowsiness
- Headache, vomiting etc.
- May cause insomnia and depression.

Side Effects of Prohibited Substances

1. Increased heart rate and Blood pressure
2. Sexual dysfunction
3. Features like male in females
4. Physical and mental weakness
5. Complications like stroke, cardiac problems and even death
6. Breast enlargement in males
7. Premature baldness
8. Enlargement of the prostate gland
9. Irregularity in menstruation
10. Problem of depression & aggression

Changing your Tomorrow

Dealing with Alcohol and Substance Abuse

Intoxicants are the substance, used for the purpose of Intoxication by the individuals. Those, who use intoxicants, lose their balance of mind or become unconscious. The individual who uses, intoxicants becomes habitual very easily. Nicotine, alcohol, Heroin, LSD, Cocaine, cannabis and morphine's etc are the main examples of intoxicants. The person, who takes these intoxicants every day, not only loses his physical, mental and also loses memory. The self and family but also burden on the nation, because they cannot give their contribution in the development of their nation.

1. Alcohol:

In the modern era there is highly increasing trends of alcohol. Some of the doctors said that if small quantity of alcohol is consumed it helps in digestion, but if it is consumed in large quantity it has bad effects on our health. It also

stimulates the nervous system. It takes it large quantity; it makes the consumer semi-conscious or even unconscious.

Effects of alcohol:

These are no doubt that alcohol has many bad effects not only on the individuals but on his/her family and society also. Its effects can be studied under two sub-heads.

- (i) Effects on individual
- (ii) Effects on family and Society

I. Effects on Individual:

These are certain bad effects of alcohol on individual.

(a) Effects on Nervous system:

Brain and nerves of the individual become weak Nuro-muscular co-ordination decreases, concentration power declines. Reaction time of such individual increases.

(b) Effects on digestive system:

It has bad effects on the organs of digestive system. Membranes of digestive organs become fatty. The digestive juices, which help in digestion, are produced in less quantity.

(c) Effects of Muscular system:

The extension and contraction capacity of the muscles become less. These muscles are not able to exert maximum force.

(d) Effects on excretory system:

Alcohol also affects the organs of the excretory system. These organs lose their efficiency and consequently waste products like acid phosphate, lactic acid etc, are deposited in the body. This waste product not removed from the body.

Failure of kidneys is common in such people. Liver is usually damaged by alcohol.

II. Effects on family and Society:

Family of an alcoholic is always disturbed. If he economic condition of the family is not good even than the individual arranges the money for alcohol by hook or by crook. They are unable to maintain the standard of their families. The family life becomes hell. These alcoholic people cannot contribute anything to their country or society. Such peoples are burden on society.

- Drug Addiction:

It is realized by all that drug abuse in our country is increasing day by day. It is resulting in suicidal deaths from over dosage. Perivale suffering, divorce, reduces working efficiency and loses to the society. These are a number of drugs which if taken persistently for a prolonged period. An individual can become addicted to these drugs. This habit is termed as 'drug addiction'. Alcohol, Nicotine, LSD, Heroin, cocaine and are endangering he youth are our country. Sportsman also takes drugs such as steroids, amphetamines, beta-blockers, Diuretics and erythropoietin. They take such drugs for one or the other reason. Some take these drugs for body building, for reducing weight and for muscle growth. Other takes such drug for fast movement endurance, removal of pain and fatigue. The civil effects of drugs could be stride earlier topic of doping.

Methods to deal with substance abuse and Alcohol and substance abuse are treatable conditions that can be overcome with the help of treatment specialists.

The following methods can be applied to deal with alcohol and substance abuse –

1. Ask for help – You can take help from your parents, teachers, counselor, or doctor – you can get rid of the problem if you seek proper help.
2. Detoxification – It helps the affected person to stop taking the harmful substances as quickly as possible. Detoxification may involve gradually reducing the dose of the drug.
3. Behavioral therapy – The therapist can help in coping with your drug cravings. He can suggest strategies to avoid alcohol and drugs. Behavior therapy helps the individuals to manage their thought pattern essentially controlling negative thought patterns that lead to alcohol and substance abuse.
4. Motivational enhancement therapy In This process, a therapist helps a patient to tap into their personal motivations to resist drug use.
5. Inform your friends about your decision to stop using drugs or alcohol – so that they also help you to get rid of these bad habits.
6. Remain away from your friends who sell endanger is substance abuse.
7. Involve yourself in different hobbies is distract yourself from indulging in substance abuse. 8. Talk to your family and good friends when craving occurs. They will help you in distracting you.
9. Medication: Medicine also helps to curb cravings. But medicine combined with counseling gives better results.