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CLASS XI PHYSICAL EDUCATION NOTES

Training in Sports



Key Notes and Important Questions with Answers

TRAINING IN SPORTS

11.1 Meaning and concept 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, specially 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, 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.

11.2 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

- 11.3 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

Limbering down or cooling down :-

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 continuous 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.

11.4 LOAD, ADAPTATION AND RECOVERY

- (i) **Load :-** Load is defined as a weight or source of pressure. It is generally called an external stressor. It can also be explained as the amount of work to be done by a person or a machine. In the training of an athlete as a player, it refers to the total amount of work expected from him on a daily, weekly or monthly basis. Loading in training can be done in various ways, therefore load is known a work of exercise that a sports person performs in a training session.
- (ii) **Adaptation :-** Continued exposure to an extra load in the training of an athlete leads to an adjustment in his body function that enable him to bear the extra load without feeling uneasiness. To obtain a higher degree of adaptation the load of stressor should be increased gradually, overloading no doubt leads to adaptation.
- (iii) **Recovery :** means the restoration of the body to a normal state after a period of intense training for competition. This period is also referred to a period of regeneration during which stressor related efforts are gradually eliminated. The increase in heart rate and respiratory rate depends on the intensity of the workout. The time taken by an individual's pulse rate to come down to 80-85 beats per minute would be the recovery period. During the recovery period, the body's resting state is restored.

11.5 SKILL, TECHNIQUE AND STYLE

- (i) Skill 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 ful movement or performance. In other words it can be said that

skill is the ability to do something well. Skill that are 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 individuals expression of technique in motor action, there fore each sports person due to his specific physical and biological capacities realize the technique in different way. symptoms of over load and how to over come it

11.6 What is over load?

Over load is not something that only needs to be applied on a daily basis, it must be applied over a life time of training. The final principle deals with the importance of applying overload logically overtime.

During training, 'which is beyond the capacity' is known as over-load.

Causes of over- load

There can be various causes of over-load. It could be because of various factors.

How to Overcome Over Load

- a) Through observation
- b) Plan the training
- c) Proper Nutrition
- d) Psychological strategies
- e) Social Interaction
- f) Medical-aids

11.7 Free - Play

- “Play is fun” This is how children usually respond when asked about play. But play is more than just fun. Play is engaging voluntary and spontaneous. Free play is a way for children to learn more about. ‘Who they are’? and “What they can do”.
- All children have a right to play. It is a process by which children learn. Good quality play opportunity have a significant impact on child development.
- Play allows children to use their creativity while developing their imagination, dexterity, physical, cognitive and emotional strength. Play is important to healthy brain development.
- It is through play that children a very largely age engage and interact in the world around then.

Very Short Questions [1 Mark] 30 Words.

Q.1 What should be kept in mind while selecting a method of training.

Ans. Selection of a method of training has to take into account the specific objectives of training :-

- 1) Strength
- 2) Endurance
- 3) Speed
- 4) Agility
- 5) Flexibility

Q.2 What do you mean by warming-up?

Ans. Warming-up is primarily a preparatory activity in which through physiological preparation, an athlete adjusts himself for the fulfillment of the main activity.

Q.3 What do you mean by Technique.

Ans. Technique is a scientific and economic method adopted to attain superior performance. It is a motor procedure for taking a motor task. It is the most effective form to perform exercise.

Q.4 What do you mean by Adaptation.

Ans. It is the way, the body programs muscle to remember particular activities, movements or skills. By repeating that skill or activity, the body adapts to the stress and the skill becomes easier to perform.

Q.5 What do you understand by specific warming-up?

Ans. This type of warming up includes some special set of exercise which have a direct relation with the activity to be carried out. These special exercise are done along with the activities of general warming up.

Short Questions [3 Marks] [60 words]

Q.1 What is meant by limbering down ? Explain the beneficial effects of limbering down.

Ans. 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.

Beneficial effects of limbering 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.

Q.2 What are the Physiological reasons in support of warming up?

Ans. 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.

Q.5 Explain in detail the classification of skills.

Ans. There are a number of sports activities and each activity requires a set of skills. Owing to many characteristics of skill, it is difficult to classify. Generally there are the following skills:

- a) **Open skill** : The Skill which are not under control and are unpredictable are classified as open skill.
- b) **Closed skill** : Closed skill take place in a stable, predictable environment
- c) **Simple skill** : The skill which do not require large amount of co-ordination, timings and decision. These skills are straightforward, easy to learn and not difficult to perform, e.g. chest pass, under arm service.
- d) **Complex Skill** : The skills which requires large amount of co-ordination, timing and quick thought process are called complex skills e.g. over head kick in football.
- e) **Continues skills** : These skills have no obvious beginning and of one of one cycle of movement and beginning of next. e.g. cycling is an example of continues skills.
- f) **Fine skills** :- These skills include complex precise movements using small muscle groups e.g. snooker shot.
- g) **Individual skills**: Individual skills are those skills which are performed in isolation, e.g. high jump and long jump.

Long Question [150 words] 5 Marks

Q.1 Write down the method of warming up in detail

Ans. The following are the methods of warming-up which are generally used :-

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 part which is stronger and healthier.
2. **Warm -up with water :** Warm-up with luke 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.

Q.2 Explain the different ways of recovery in sports? Why recovery is important?

Ans. In order to get fitter or improve in sports, the body needs to be exposed to stress, the body then needs time to adapt to the stresses and for this there must be period of recovery.

New to Exercise

If you're just starting out in exercise, it's important that you build into slowly to allow your body to adapt to the demands of sport. If you just keep going without any rest, your body will soon start to fatigue and you'll find it difficult to complete any exercise sessions.

Recover Strategies :-

It's all very well being encouraged to exercise, you're started a new sports or even increased the amount of training you're doing then you need to consider some recover strategies to help your body to adjust.

Rest: It is one of the most important forms of rest and provides time for the body to adapt to the physical and mental demands of training.

Make sure of getting enough sleep ensure your sleep is good quality, quite and peace ful.

Passive resting such as reading and listening to music are greater ways for the body to relax both physically and mentally.

Nutrition and hydration

Ensuring that the body is fully nourished and hydrate is very much necessary for good recovery. It is most important to replace fluids after exercise and to replenish energy stores by eating the right food at the right time.

Cool down and stretch

The cool down is a group of exercise performed immediately after training to provide an adjustment between exercise and rest. It's purpose is to increase muscular soreness and bring the cardio vascular system backrest.

Q.3 Explain the process of stimulus, Recovery and Adaptation ?

Ans. Our body is made up of millions of very small living cells each type of cell or group of cells performs a different job. All the cells have the ability to adapt to what is happening to the body. There is also an adaptation to the training for games and sports because it helps to increase the sports performance for improving the sports performance the training load has to be increased. Stagnation training load means stagnation in performance. The response by the body is an adaptation to the stimules of the training load. The process of recovery and adaptation returns to the sports persons not just to his previous fitness level but to an improved level.

Q.4 What do you mean by technique and skill. Describe?

Ans. Technique is defined as the motor procedure for tackling a motor task. Motor procedure should be under stood as a system of movement of body parts in a definite sequence thus we can say that technique are the basic movements is always goal oriented. Therefore different techniques are required in different sports, e.g. in shot put the motor task is to put the shot as far as possible. There fore in sports, the sportsman has to learn a number of technique with possible variation.

Skill :- A motor skill is acquired through a long process of motor learning. Technical skills in sports therefore, represent automatization of motor movement. A sports



Free-play