

HEALTH AND PHYSICAL EDUCATION

(FOR CLASS VIII)



Punjab School Education Board
Sahibzada Ajit Singh Nagar

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Edition 2016.....4,000 copies

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Price : ₹ 20.00

Published by : **Secretary**, Punjab School Education Board, Vidya Bhavan, Phase-8, Sahibzada Ajit Singh Nagar-160062 & Printed by M/s Nova Publications, C-51, Focal Point Extension, Jalandhar.

Foreword

It has always been the endeavour of Punjab School Education Board since its constitution in 1969, to improve the syllabuses of different subjects on the modern lines and prepare the textbooks in a scientific manner as per the revised syllabuses.

Keeping in view the importance of sports on national and international level, Punjab is the pioneer state to introduce the subject of health and physical education, as a compulsory subject in the curriculum from class I to X.

The syllabus of this subject has been given a new shape before preparing the book in hand which will serve as a supplement to the study of the subject of Physical Education. This book has been got prepared by able, experienced and the concerned field experts of this subject. The language of the book is very simple, interesting and of the mental level of the students of the concerned classes. Proper illustrations have been provided to deal with the difficult ideas and sub topics. It has been our endeavour to make the study-material teacher friendly. It is hoped that this book will prove beneficial for both the students and the teachers as well. Suggestions from the field teachers and experts will be gratefully acknowledged by the Board.

Chairperson

Punjab School Education Board

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1.

NUTRITIOUS AND BALANCED DIET

Nutritious Food

Food is very useful for human beings. It is the base of human life. Food is for life not the life is for food. “We all eat to live and not live to eat”. As air and water are the important necessities, in the same manner food is very important for man.

The human body is always busy in one or the other work. Walking, roaming, running, jumping as well as looking, hearing, etc. are a part of its normal activities. Besides, these activities many other activities are going on inside the body, like circulation of blood, digestion and the throwing out of water products from the body. The human body is like a machine. The way petrol is used to run a machine, in the same way the body needs energy to run all the activities and we fulfil this requirement by eating food. In case, we do not take food, our body will become futile. The food not only helps us in repairing the broken cells of our body, but it also helps our body to fight against diseases. The food is such an eatable which dissolves and becomes a part of our body and is beneficial for its growth.

Wheat, pulses, vegetables, fruit, milk, meat, egg, fish, etc. is our food. Many out of these provide us with physical strength. Some of it repair our body internally and some of them protect body.

Function of Food

We take food many times a day. Whatever food we eat, it digests in the body and does many tasks as under :

1. Food helps in the growth of our body. The body grows and expands. By its use different parts of body are formed and grown by it. We get all the required products from the food.
2. Food gives strength of the body. Many activities are always going on in the human-body. The required energy for all these activities is derived from food.
3. The food produces heat in the body. Whatever food we eat, it gets digested, mixes up in the oxygen inhaled through breathing and gets boiled after mixing in the blood and it produces heat. The heat which it produces is very important for us. We can not live without it.
4. The food repairs all the broken cells of the body and forms the new cells in the body. Many cells of the body get damaged. Some of them are broken and many of the cells get totally destroyed because of the different activities going on in the body. Food helps in repairing the damaged cells and provides making new cells in place of totally destroyed cells.
5. The food protects the body from diseases. The strength is produced after we eat food. This strength helps us to fight against the diseases. This way we can save and protect ourselves from many diseases.

Balanced Diet

Good food is required for good health. One type of food cannot fulfil all the requirements of the body. Some eatables produce heat in the body. Some provide help for the growth of the body and some help in repairing the damaged and broken cells of the body. So it is important for us to eat such kind of mixed and balanced food which should help us to fulfil all the requirements of the body and in which all the required ingredients are available and which is capable of fulfilling all the important necessities of the body, is called a balanced diet. This kind of food is very important for the health of the body.

Importance of Balanced Diet

Every human being requires a balanced diet so that his body is capable of doing every work properly.

The ingredients of a balanced diet are as under :

- 1. Protein**
- 2. Carbohydrates**
- 3. Fats**
- 4. Mineral Salts**
- 5. Water**
- 6. Vitamins**
- 7. Roughage**

The balanced food can be available only in limited homes.

1. Protein : Protein is very important for the body. Proteins are made up of the chemical mixture of Carbon, Hydrogen, Oxygen, Nitrogen and Sulphur. They are of two types----The Proteins which we derive from animals is called animal Proteins and the Proteins which we derive

from the plants is called vegetable proteins. Animal-Protein is provided by Meat, Fish, Egg, Milk and Cheese.

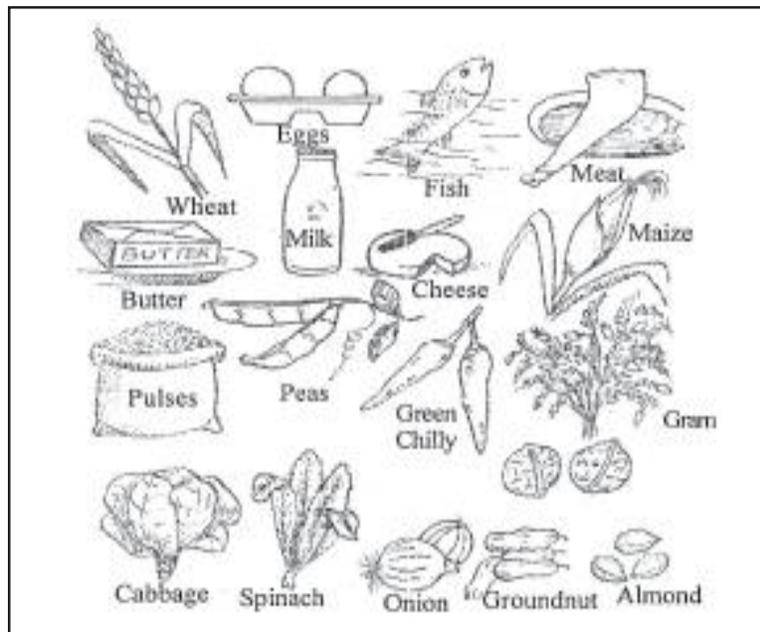


Fig. 1

Vegetable protein is provided by cereals, pulses, peas, cabbage, soyabean, grams, spinach, green chillies, onions and dry raisins etc. There is more of protein in the husk of the cereals.

Proteins produce strength in the body, it repairs the damaged cells of the body, form new cells, it helps to build bones and in the digestion of food. They are useful for the growth of the body and for its protection also.

Children, patients, lactating mothers, players and athletes should have enough of proteins in their food. For

an ordinary person, 70 to 100 grams of proteins is required. Its more or less quantity in the food is harmful to the body.

Less quantity of proteins make the body weak and more quantity of proteins, if consumed, many diseases can take place like obesity, arthritis, diseases of liver and kidneys etc.

2. Carbohydrates : It is the combination of Carbon, Hydrogen and Oxygen. Carbohydrates are of two types....in the form of sugar and starch. In the form of sugar they are found in the juice of sugarcane, jaggery, sugar, grapes, honey, dates, dry raisins, carrot and milk, and in the form of starch it is found in wheat, rice, barley, potatoes, bananas and walnut.

Carbohydrates burn like fuel in our body and give us heat and strength.

Every person gets the major part of his strength from the carbohydrates only. They produce fats in the body. They are cheaper than fats. Even with less income one can benefit from it.

Hard working people require them in abundance.

Carbohydrates

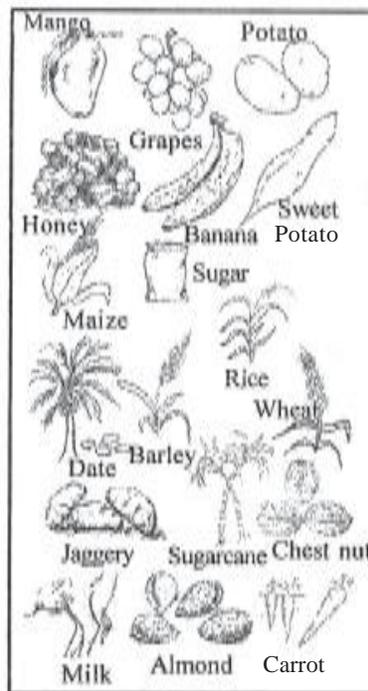


Fig. 2

A common man must have 400 grams to 700 grams of carbohydrates in his daily food. In case carbohydrates are used in excess quantity, food does not get digested fast, loose motions start and some part of the food excretes from the body without getting digested. One can have urinary diseases also. If a person gets fats by consuming them in less quantity the body becomes weak and does not grow properly.

3. Fats : Like Carbohydrates it is also the mixture of Carbon, Hydrogen and Oxygen. It works like fuel in our body and it produces double amount of heat as compared to Carbohydrates. It also has vitamin 'A', 'D', 'E' and 'K'. It is of two types-one

which is derived from vegetation and the other we get from the animals.

The fat which is derived from the vegetation is found in vegetables, fruits, raw raisins, almonds, walnut, groundnut and seed oil etc. Animal fat is found in ghee, milk, butter, liver oil and egg etc. This is more beneficial than vegetable fats.

The main function of fats is to produce heat and strength and to make up the deficiency of fats in the body. It improves the strength of the body. It helps in

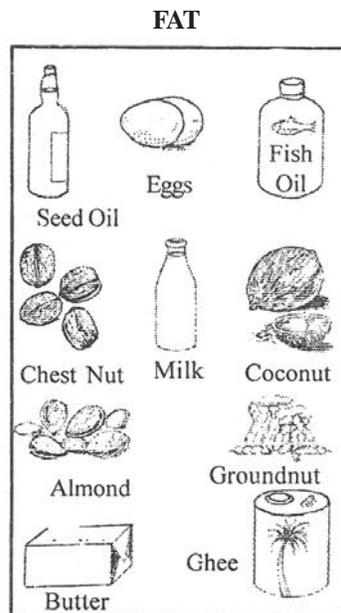


Fig. 3

digestion of Carbohydrates. It protects the organs of the body. It is very useful in countries with cold climate because it has the quality to produce heat. There should be 50 gms to 75 gms of fats everyday in a common man's diet.

It is harmful to use fats in the food in excess quantity.

The digestion gets spoiled, the body becomes fat and heavy. There are possibilities of heart problems. One can have blockage in blood-circulation.

The body remains slim and weak due to the less use of fats. That is why the use of the fats should be used carefully. Hardworking people can use it some quantity but athletes should use it in less amount.

4. Mineral Salts : Like calcium, phosphorus, sodium, iron, magnesium, potassium, iodine, chlorine and sulphur. They are derived from the food in the form of salts. We have different quantity of salts in our food. These minerals are found in green leafy vegetables, fresh fruits, meat, fish, eggs, milk, cheese etc.

All these minerals are found in milk but it has lesser quantity of iron in it.

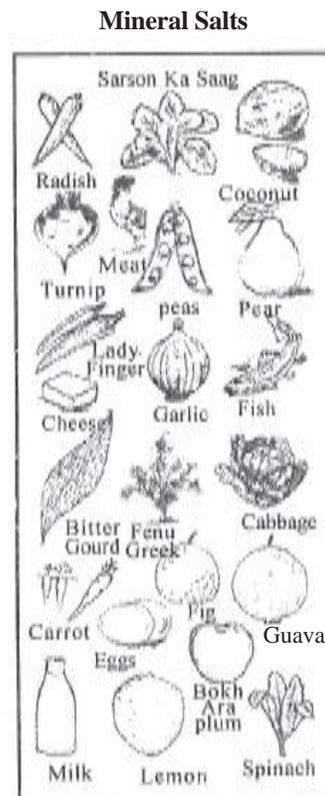


Fig. 4

Mineral salts are essential for our health. They build our bones and teeth strong and give lot of help to our heart to work. The blood gets red colour by them and digestion stimulates.

There should be 10 to 15 gms of mineral salts in our daily requirements. Deficiency of it causes many diseases like bones and teeth become weak, bones get deformed, the body becomes weak and disease like mums occurs.

Some important mineral salts and their properties are as following :

(i) Calcium and Phosphorus : They develop the body. They help in the formation of bones and make them strong. They are very useful for heart and brain. They make the body work. The bones of the body become weak and deformed due to their deficiency. The teeth start decaying. The weakness of the brain increases and we feel tiredness. They are found in milk, curd, cheese, egg, fish, meat, green vegetables, fresh fruits, porridge, pulses and almonds.

(ii) Iron : It is very helpful in maintaining health. It produces new blood and increases appetite. It produces, haemoglobin in the blood which keeps the blood pure. Its deficiency gives birth to Anaemia disease and the colour of the body becomes pale. It is found in green vegetables, fruits, cereals, eggs and meat in sufficient quantity.

(iii) Sodium : It prevents many type of diseases of liver and kidneys. It is usually used in the form of salt in pulses and vegetables. It makes the food tasty. It keeps

joints healthy and gives elasticity. Digestion is maintained. This is usually found in ladyfinger, figs, coconut, plum, salt, radish, carrot and turnip etc.

(iv) Potassium : It gives strength to liver and heart, removes constipation, provides elasticity to tissues, helps in the healing of wounds quickly. This is found in pear, plum, coconut, lemon, fig, cabbage, bitter-gourd, radish and turnip etc.

(v) Iodine : It increases the weight and the strength of the body. It makes juices in the thyroid glands. Due to its deficiency a disease called Goitre takes place.

It is mostly found in sea-fish, sea-salt, onions, garlic, tomato, apple, spinach, carrot and milk.

(vi) Magnesium : It helps to prevent skin diseases. It makes the muscles strong. Because of its deficiency constipation and loose motions start. It is found in excess in oranges, figs, plum, wheat, tomato and spinach.

(vii) Sulphur : It grows nails and hair, keeps the skin clean, removes the heat of the liver. It is found in excess in onion, radish, cabbage and cauliflower etc.

(viii) Chlorine : It cleans the body. It excretes the waste products. It helps to improve digestion and decrease fats. It is found in excess in onion, spinach, radish, carrot, cabbage and carrot.

5. Water : Water is compound of Hydrogen and Oxygen. It is not the food itself but it helps in the bringing up of all the cells of the body. It helps to digest the food

by dissolving and sends the nutrients to all the parts of the body, helps in blood circulation also. It throws out waste products in the form of sweat and urine out of the body. It maintains the body temperature. That is why it is much necessary to include it in the food. There is enough amount of water in fruits and vegetables, but still it cannot fulfil the needs of the body that is why some more water is required.

To fulfil this requirement of water we need to drink more water. Every man requires to take 1-½ to 2-½ liters of water. But according to the weather this requirement keeps decreasing or increasing. During hot weather more water

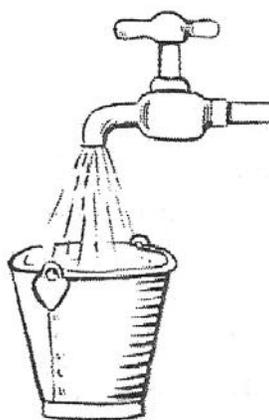


Fig. 5

is to be consumed. We should always take clean and pure water. Impure water gives birth to many diseases.

6. Vitamins : It is seen that by use of only proteins, carbohydrates, fats, mineral salt and water, the body can not be developed fully. Many other organic products like vitamins are required for the development of the body. For the maintenance of health these are essential. They give strength to life and protect them also. That is why they are called life givers. Only that food is considered to be good which has sufficient amount of vitamins in it. Vitamins help in keeping the body fit and help in

developing the body, they protect the body from diseases, increase digestion, make the bones and the teeth strong.

They clean the blood and increase the amount of blood also. Their deficiency in the body leads to many diseases. That is why their presence in the food is very essential. If eatables are cooked or roasted on fire for a long time or fruits and vegetables are kept for a long time then the vitamins in them get destroyed. Till now many vitamins have been found but famous vitamins are only vitamins 'A', 'B', 'C', 'D', 'E', and 'K'. Vitamins 'A', 'D', 'E' and 'K' are able to dissolve in the fats and vitamin 'B' and 'C' are soluble in water. The description of these vitamins are as follows :

(i) Vitamin 'A' : This vitamin helps in the growth and strength of the body. Their use especially by children is very useful. It increases the eyesight, body gets strength to fight against the diseases, appetite increases and the digestion remains good.

Its deficiency leads to many diseases like night blindness, diseases of throat and nose, infections diseases etc. The body gets weak and the strength to fight against the diseases also decreases.

This vitamin is soluble in fats. It is found in milk, curd,

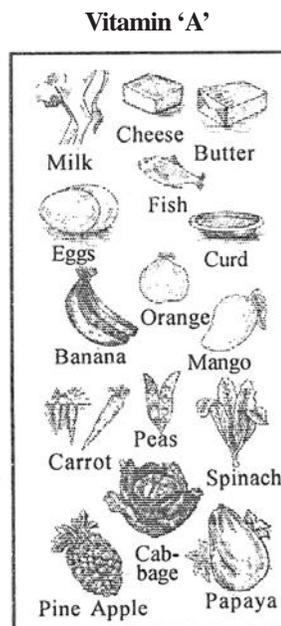


Fig. 6

butter, cheese, eggs, fish, fresh vegetables like spinach, carrot, cabbage, tomato, oranges, papaya and pineapple etc.

(ii) Vitamins B : It is the mixture of many vitamins. Vitamin B₁, B₂ and B₁₂ are found in it. This vitamin is famous by the name of B-complex. This vitamin is helpful in making the nervous system alright. It makes the nerves, muscles, heart and brain strong. It makes the bones also very strong. It increases appetite and it protects the skin from diseases.

Its deficiency leads to many diseases like decrease in appetite, skin diseases, boils on the tongue, falling of hair, anemia etc. Digestion also gets weak. The growth of the body gets disturbed.

This vitamin is soluble in water and is found in milk, curd, butter, cheese, whole pulses, wheat, soyabean, peas, eggs, meat, green vegetables and fruits like cabbage, onion, spinach, tomato, turnip, salary, carrot, guava, almonds, walnuts and dates.

(iii) Vitamin C : This vitamin keeps the blood pure and makes the teeth strong. It heals the wounds and

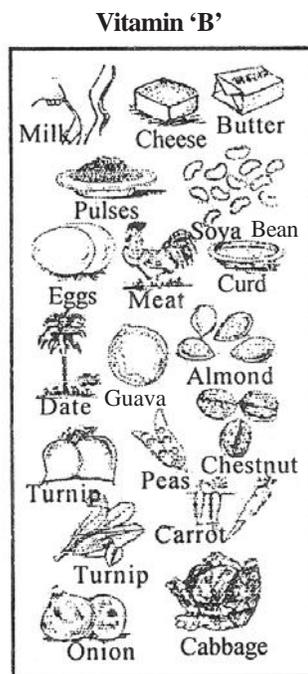


Fig. 7

broken bones quickly. It protects the body from infections diseases. Keeps the throat healthy. In this way it is very important for the growth of the body. Its deficiency leads to many diseases like phyrrhoea, scurvy, weakness of the bones, the wounds take time to heal, Anaemia and cataract etc. The muscles of the body get weakness and one feels tiredness. This vitamin is soluble in water. This is usually found in sour juicy fruits like Orange, Malta, Mosmi, Grapes, Pomegranate, Lemon, Guava and Amla etc. Besides these it is found in green vegetables, spinach, turnip etc.



Fig. 8



Fig. 9

(iv) Vitamin 'D': This vitamin makes our bones and teeth and make them strong. Children need it essentially for the growth of their body.

Its deficiency leads the bones to deformation and weakness and may lead to many diseases like ricket, hysteria and etc. The teeth do not grow at proper age in many children. Muscles also get weak.

This vitamin is soluble in fats. This is derived from milk, egg, yolk, butter, ghee, liver oil etc. This vitamins gets manufactured in the body by itself with the effect of the sun rays.

(v) Vitamin 'E' : This vitamin is very powerful. It increases the productive property in men and women. Its deficiency causes boils and pimples occur on the body and the milk becomes less in lactating mothers.

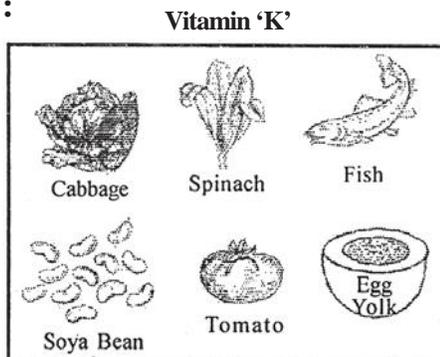
This vitamin is soluble in fats and is found in enough quantity in green vegetables like cabbage, carrot, salary, peas, onion, tomato, cauliflower etc. and also in honey, wheat, barley, rice, seed-oil, egg yolk, almonds, gram-pulse etc.



Fig. 10

(vi) Vitamin 'K' :

It stops the bleeding of the wounds and it helps in making a clot. Many skin diseases are possible because of its deficiency. The blood of the wounds does not stop easily. This vitamin is soluble in fats. It found in enough amount in cabbage, spinach, fish, soyabean, tomato and egg yolk.

**Fig. 11**

Roughage : Raw vegetable like radish, turnip, carrot, salary etc. help in the cleaning of the intestines.

It is clear by the above description of food that for the complete growth of the body, to protect it against diseases and to maintain good health, we should use this kind of food in which everything is found in enough amount.

No eatable is complete in it except milk. By consuming only one type of eatable alone the requirements of the body does not get fulfilled. This deficiency is overcome only by taking mixed food in which proteins, carbohydrates, fats, mineral salts, water and vitamins are present in the proper quantity and accurate perportion. If we do not use this kind of food, then it will not be useful for the body.

In case of the deficiency of any one of them, the food can not be digested. Children, who do not get proper food, do not grow properly. They remain weak. They feel tired very fast while working as well as playing. They do not have the strength to fight against diseases. Many diseases wardoff automatically by the use of balanced diet.

Products and their Properties

The balance diet can be derived by the mixture of the following products. Main eatable products are these ones :

(i) Wheat : Wheat, rice, grams, barley, maize, milk etc. cereals are commenly used. The body is build up by them. They provide strength also. Carbohydrates are found in enough amount in cereals. Their bran has magnesium, iron, vitamin and protein are available that are helpful for the growth of the body. If cereals are used with their bran, the problem of constipation does not arise.

(ii) Pulses : The main pulses are soyabeans, green gram, yellow gram, raw peas, kidney beans etc. They provide strength to the body and increase appetite. The digestion increases. Protein, mineral salts, iron, phosphorus, vitamin 'A', 'B' and 'C' are found in them in enough quantity.

(iii) Vegetables : The intake of fresh and green vegetable is very useful. Cabbage, spinach, mustard-leaves, funegreek, carrot, radish, salary, biterroot, tomato, potato, peas, bittergourd, brinjal, ladyfinger, cauliflower

and turnip are being used mostly. They protect the body and provide health to it because they have enough of vitamins and mineral salts. Specifically vitamin 'C' is found in enough of amount. They protect our body from diseases. By consuming them the body gets energy to work more.

(v) **Nuts** : Almonds, Walnuts, Pistassiu nut, Dates, Groundnut etc. and raw raisins are the important source of carbohydrates, protein and fats. They are helpful in the development of the body and increase the mental strength.

(vi) **Milk and milk products** : Butter, ghee, curd, cheese, buttermilk etc. are all milk-products and all the ingredients are found in them. They produce heat and strength in the body. They make the body grow. They repair the wear and tear of the cells and they make new cells. They prepare new blood and are very useful for the health of a person.

(vii) **Other eatables** : Meat, fish, egg etc. are such products, which are used immensely. They have enough amount of protein, fats, calcium, phosphorus, iron and vitamin 'A', 'B' and 'D'. They are helpful in the growth of the body and also protect it from diseases.

If all the above eatable product are taken altogether after mixing them; that is called the balance diet. This type of food is sufficient to fulfil all the needs of the body. This is found useful.

We should use food according to our needs only. Excess or less amount of food is not good for our health. Intake of less amount of food makes the body weak and the body can not growth fully. Muscles get weak, less amount of blood is produced. Many types of diseases fall. The intake of excess food puts burden on the liver and the digestion gets spoiled. So we should take food according to our need and in sufficient amount.

Milk is a perfect food

All the products of food are sufficiently found in milk. It has 3.4% protein, 4.8% carbohydrates, 3.6% fats, 0.7% mineral salts and 87.5% water. Besides these it has vitamins also. Milk is such a products in all the eatables that it has all the important products in it. It's use gives heat and strength. The broken cells get repaired. New cells are formed. The body becomes capable of fighting against the diseases. The blood is formed in large amount. The body becomes strong and healthy by its use. This way the milk can complete all the work of the food. That is why milk is the best among all other food products and is considered to be a complete food in itself. A young infant is brought up only by taking his mother's feed for some times. He cannot take cereals, pulses, vegetables and fruit but even then his physical growth is possible. It happens like this because he gets all the products by taking his mother's feed which is

important for the growth of the body. Milk helps a lot in the formation of bones, teeth and muscles. Its intake is important for everyone.

Important principles regarding food

Whatever food we take, to get its maximum benefits we should adopt certain principles for it. Those principles are as below :

1. Food should be taken at proper time.
2. We should wash our hand thoroughly before taking food.
3. Food should be taken slowly and chewed well. This way it will become easily digestible.
4. Nothing should be talked about or read while eating food.
5. One should remain happy while taking food. Food should be taken without any worry or a thought.
6. Food should not be taken without feeling hungry.
7. Food should be consumed according to the requirement. Excess or less amount of food is harmful for the body.
8. The place where food is to be taken should be clean.
9. Fried food should be taken in less amount. They do not get digested easily.

10. Stale or spoiled food is harmful for the body.
11. After taking food if some rest is taken, it is considered to be good.
12. Food should be eaten two hours early before going to sleep. Immediately going off to sleep after eating food is bad.
13. Cold water should be taken while eating hot food.
14. Exercising just after taking food is harmful.
15. We should clean our mouth with water after eating food, other wise teeth become spoiled and stinky.
16. Food should always be kept covered.
17. Very spicy and saur food is harmful for health.
18. Different food should be taken everytime.
19. Too much intake of sweets or soury food spoils health.
20. It becomes harmful, if water is taken while eating the food. Intake of water in-between the meals is useful.

Cooking of Food

Properly cooked food is good for health. But while cooking the vitamins of the food get destroyed. Vitamin 'C' and 'D' get damaged. Therefore it should taken into consideration that essential products do not get destroyed. Food should be properly cooked before it is consumed. There are many benefits of cooking food :

1. Cooked food is easily digested.

2. Many disease-germs get destroyed while the food is cooked.
3. Cooked food is tasty and one feels like eating it.
4. Many food products can be preserved after cooking them.

Fruits and green vegetables need not to be cooked. It is good to eat them raw. It should be taken into consideration while cooking that the food products should not get destroyed. The place of cooking and the person who is to cook the food, both should be neat and clean.

Methods of Cooking : Many methods of cooking are popular. Common methods of cooking are as under :

- (i) **Boiling**
- (ii) **Steaming**
- (iii) **Roasting**
- (iv) **Frying**

Boiling : In this method eatable products are boiled and cooked in water. This way they become soft and chewable, but food products like vitamins, mineral salt etc. get destroyed after dissolving in food. Less amount of water should be used while cooking so that the food is also cooked and there is no extra water left. If a little water is left after cooking, it should not be thrown but put to use. Many types of food like Rice, Pulses, Meat, Vegetable etc. are cooked by boiling.

Steaming : Food is cooked by steaming also. The nutrients of the food do not get spoiled by steaming food. In pressure cooker food is prepared through

steaming very fast. The food cooked, in this way is very useful for health. That is why this method is considered better than other cooking methods.

Roasting : In this method eatables are directly roasted on fire. The nutrients of the food get destroyed by too much of roasting. Meat is roasted on fire by arranging it on iron skewers. This way when meat is cooked it becomes tasty and easily digestible.

Frying : Firstly ghee or oil is heated in a pan, then eatable are put and fried in it. Pakoras, samosas and Puris etc. are made like this, and their preparation is tasty. Food gets cooked very fast by frying, but the nutrients of the food get destroyed. Fried food does not get digested very fast and its use is bad for health.

Main principles of cooking food :- It is very important to keep in mind the following principles :

1. The cook should be neat, clean and healthy.
2. The place where food has to be cooked should be clean. There should be iron mat fixed so that no mosquitoes or flies can enter inside .
3. The utensils that are to be used should be neat and clean. They should be made of steel or hindolium. The food does not get spoiled when cooked in this type of utensils.
4. Vegetables and pulses should be washed in water two three times and then should be cooked, so that they should get clean of sprayed medicines.

5. For making chappaties the flour has to be made into dough properly in hand ten minutes ahead.
6. The food should not be over cooked. Over cooking spoils the nutrients of the food. Less cooked food also does not digest fast that is why food should not be under cooked also.
7. The food that is cooked in pressure cooker is very useful. This way the nutrients of food do not get spoiled.
8. Food should always be kept covered.

Questionnaire

1. What is the meaning of food ? Why it is necessary for our body?
2. What are the main functions of food?
3. What do you mean by the balanced diet? What are its main nutrients? Write about them in short?
4. What are Proteins? Why are they compulsory in our food? They are found in which type of food?
5. Why do Carbohydrates and Fats are important for our body?
6. Explain the important mineral salts for health?
7. Why water is useful for our body?"
8. What are vitamins? Why are they important for our body?
9. How many types of vitamins are there? Explain their main functions. In which ingredients are they found?

10. Write about the diseases which are produced due to the deficiency of the vitamins?
11. Explain the main food Products and their properties?
12. 'Milk is a Perfect Food,' How?
13. Explain some important informations about Food?
14. Why it is compulsory to cook food ? Which are the various methods of cooking? Which method is considered the best out of all of these?
15. Write notes on the following :
 - (a) Balanced diet.
 - (b) Proteins.
 - (c) Calcium and Phosphorus.
 - (d) Deficiency of vitamins.
 - (e) Cereals, Pulses and nuts.
16. Explain the main principles of cooking ?

2.

THE YOGA AND THE ASANA

Yogasana is the oldest technique of physical exercises in India. This technique is in accordance with our physical build-up and is completely scientific. All over the world, the doctors as well as the physical education teachers have very well appreciated yoga. This technique has become very much popular abroad. Everyday its popularity is growing. Indian-government is also trying to make it very much popular. Infact these yoga-asanas have been in practice for the last 40-50 years only. Before this the yogasnas were considered useful only for the yogis. Indeed the yogasnas are not only useful for yogis but also the common people can also have healthy, well-built and strong physique by practising the yogasnas. It is necessary that it should be regularly put into practice.

Well students; the yoga is going to make you more useful, qualitative, healthy, strong and even great. Who is the one, who is not interested in acquiring qualities. The yoga is so vast like river Ganga, full of knowledge, that in its everydrop disease-killing capacities are found. The yog-sadhna keeps all the stress, worries and problems away from you. It is their basic cure. The yoga is not a miracle, but is a natural way of meeting God.

Once you decide to practise yoga, yogasna and follow the instructions of a yoga-instructor, you will find yourself in a new world. The yoga will bring a change in your routine. You will change and your bad-habits shall be eradicated. This will give you a new lease of life. You

will realize that you are a part of a very big existence. The existence of this power is already present in your life, but yoga has the ability to bring out more energy in you. The yoga takes us to a world where there is health, happiness and contentment.

So, let us enter into the new world of yoga. For this you need not do many things. You need to simply divert yourself towards your qualities, spend just some time in yoga and you will see that patients are cured, the weak become strong and the lifeless become blissful.

The yoga is an important means of reunion of soul with God and its source is mainly the body through strong physical body, we can see almighty God. The subject of the yoga is very vast and deep. Here we will define it through some techniques of yogasnas and their benefits.

Yogasna : Technique and Benefits

(1) Garud Asana

Stance : like a garud bird.

Technique : 1. Stand straight and twist your left leg on the right leg like a climber. This way the left leg will be on the right and the total weight of the body will be on one foot.

2. Now twist your left arm on your right arm, left it up and join your both the palms like namaskar.

3. Now bend your right leg and bring your body to the sitting posture. This way the nerves of the body will get stretched. After this bring your body in the straight form. And come to the state of attention.



Fig. 12

4. Now change your hands and legs and repeat the same posture of the body. Perform this asana on each leg from 1 minute to 5 minutes.

Benefits : 1. It gives strength to arms and all other parts of the body.

2. It saves a person from Hernia disease.

3. It removes the tiredness of legs and arms.

(2) Tarh Asana

Stance : like a Tarh tree

Technique : 1. Join the heels and fingers of your legs while standing.

2. Straighten up your arms upward and twist your fingers with each other.

3. Look forward and straight.

4. Inhale your breath completely.

Lift up your heels and put total body weight on your toes and stretch your body. After some times exhale slowly and bring your body down.

5. This has to be repeated ten to fifteen times.

Note : This is more beneficial if, while exhaling, and inhaling short breath are taken.

Benefits :

1. It stops constipation.

2. It saves us from intestinal diseases.

3. It removes obesity.

4. After taking cold water, if this asana is

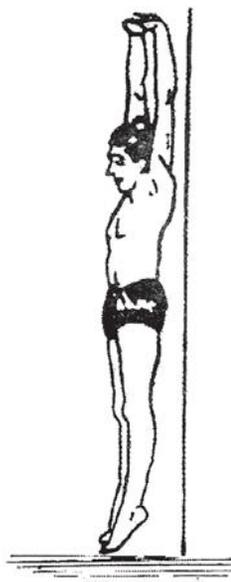


Fig. 13

performed regularly, it clears the stomach.

5. It is useful in increasing the height.

(3) Shirsh Asana

Stance : legs upward and head downward.

Technique : 1. Spread a blanket and sit on it while turning your knees inward.

2. Inter twine the fingers of both hands tightly.

3. Make angular shape of your hands and place them on the blanket.

4. Place the upper part of your head on your hands so that your both the thumbs should press the backward part of your head.

5. Now, with the help of head and hands, lift your body to wards the sky.

6. Now uplift your feet and bring your legs to straight form, first one and then the other.

7. The body has to be straight in this asana.

8. The weight of the body should be equally distributed on arms and head.

9. If required, initially we can take the support of a wall or a friend.

Do this asana first for half or one minute and then the time can be increased upto five minutes.

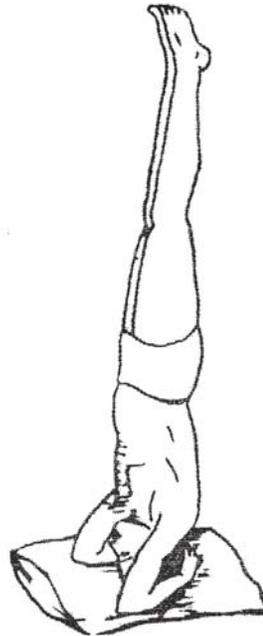


Fig. 14

The practise of this asana for two minutes everyday keeps us away from many diseases.

Note : Incase you find difficulty in doing this Asana (redness in eyes, ears and nose get blocked and you feel giddy) then come down. It is good to do this asana under some expert guidance.

Benefits :

1. Increases appetite.
2. It is good to reduce your big belly .
3. It improves the digestion system
4. Liver and bowels start working properly.
5. It helps to improve the purity of blood circulation.
6. It is useful for urinary diseases and cures the diseases like piles etc.

4. Padma Asana

Position : Like lotus flower

Method : Make your mind free from all tensions, squat on the ground and place your right foot on your left thigh in such a way that the heel of the left foot touches the upper part of the thigh bone. Then lift your left foot and place it on the

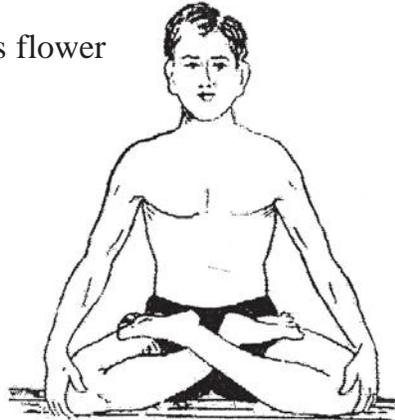


Fig. 15

thigh of the right leg in the same way. Straighten your spine, stretch your hands and place your hands on knees. In the beginning, this asana looks difficult, but after a few days of practice one can do it very conveniently.

Advantages : (1) It is the best means of mental concentration.

(2) Removes pain in the waist.

(3) Removes the problems of the heart and stomach.

(4) Increases the power of digestion.

(5) Is very useful for problem of frequent urination.

(6) It is very helpful in following celibacy.

5. Vajra Asana

Position : Twist your legs backward and sit on them. Place your hands on your knees.

Method : Twist your knees and let the feet go on your back. Rest yourself on the palms of your feet. The position of your feet below will be in this way. The thumbs of both the feet should touch.



Fig. 16

Let both the knees join. The waist and the spine should be perpendicular. Both the hands should be pressing against the knees. Breaths should be long and equal.

One should sit in this asana every day from 5 minute to 30 minutes. This asana is considered best for concentration.

Benefits : 1. People who suffer from indigestion, should sit in above mentioned vajrasana from 10-15 minutes after the meals.

2. It cures sugar/ diabetes.

3. It removes pain of the feet and knees.

4. It makes muscles strong.

5. This asana is very helpful for recovering tension and maintaining longevity.

6. Pashchimotan Asana

Position : Stretch the entire body & bend.

Method : Stretch both the legs forward and sit on the ground. Hold the thumbs of your feet with your hands and exhale slowly and slowly through the nose and try to touch the knees with your nose. To come back to the earlier position, inhale slowly & slowly and raise your head. One who has a bugged out belly will not be able to do this asana in the beginning, but daily practice will enable him to achieve success in two weeks. This asana should be done for 10-15 times everyday.



Fig. 17

Advantages : (1) It finishes many kinds of problems of the stomach.

(2) It reduces extra fat of the body.

(3) It removes acidity and it provides strength to the legs and thighs.

(4) It clears intestines.

7. Bhujang Asana

(Sarp Asan)

Position : Like the position of a cobra.

Method : Lie on the ground and let your

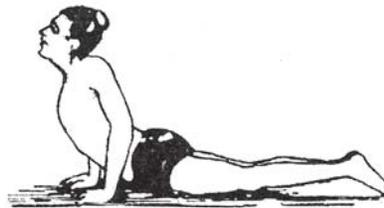


Fig. 18

belly touch the grounds. Place your hands in line with your shoulders against the ground. Now slowly and slowly tighten your legs and on the strength of your palms, raise your chest till the position your arms is straight. The toes should be inside. The head should be brought backward in a slow manner and let it hang backward. Gradually come to the earlier position. This asana should be done 3-4 times.

- Advantages :** (1) Removes constipation.
 (2) Increases power of digestion.
 (3) Reduces the bugged out belly
 (4) It finishes the problems of the liver.
 (5) It gives strength to lungs.
 (6) Strengthens spine and muscles.

8. Dhanush Asana

Position : Like a bow

Method :

(1) Lie down on the ground comfortably with your belly downward.

(2) Pull your knees upwards.



Fig. 19

(3) Hold the ankles of the feet with both hands.

(4) Take a long breath raise your head and chest as high as possible, tighten your feet and hand and make the position of a bow.

(5) Stay in that position as long as you can.

(6) Release your breath slowly, loosen your body and came back to your earlier position. This asana should be practised 3-4 times a day.

Note : It is important to perform Bhujang asana & Dhanush asana turn by turn because both are intimately inter related.

Advantages : (1) This asana gives strength to liver & intestines.

(2) It increases the power of digestion

(3) It reduces fatness/obesity.

(4) It makes spine & muscles flexible and strong.

(5) It removes the problems of gout, arthiritis and the problems of urine.

9. Chakra Asana

Position : To make the body almost like a circle.

Method : Lie straight on your back, twist your knees and flatten the palms of your feet on the ground. There should be a distance of 1 to 1½ feet between the two feet. Then place the palms of your hands on your back on the ground. Let the palms and the fingers properly fix on the ground.

(1) Now with the support of your hands and feet, give the shape of a circle to your body.

(2) The total body should acquire a circular shape.

(3) Eyes should remain closed and breathing should be normal.

This asana is difficult, so it should be done slowly and without a jerk. In the beginning it should be practised for a minute.

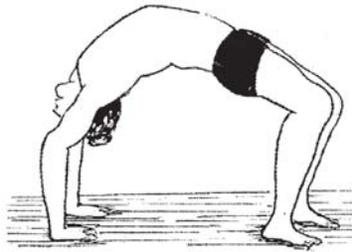


Fig. 20

Advantages :

- (1) It removes all kind of weaknesses of the body.
- (2) It makes all kinds of the body flexible.
- (3) It is very useful for the diseases of the liver and pain in waist.
- (4) It removes the problems of Hernia and other organs.
- (5) It increases the power of digestion.
- (6) It removes acidity.
- (7) It keeps the spine flexible.

10. Sarvang Asana

Position : Like Ardh-hal Asana

Method : Straighten your body and lie on your back. Place hands parallel to the thighs. Raise both the legs together and have the support of your palms against your waist, raise the body keeping your elbows on the ground. The total body (Trunk and feet) should be straight. The weight of the body should be on the chest and the shoulders. The chin should touch the upper part of chest. Stay in this position for sometime and come back to the earlier position slowly. In the beginning this asana should be done for 2 minutes. Later on its duration can be increased to 5-7 minutes.

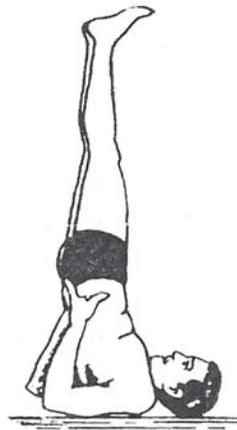


Fig. 21

Note : Those who cannot do Shirsh asana for certain reasons, can benefit for the same qualities from this asana.

Advantages :

1. It increases the blood circulation and purifies it.
2. It brings agility in limbs of the body.
3. Reduces the waistline.
4. Increases appetite.
5. Finishes acidity in the stomach.
6. It removes the problems of piles.

11. Shav Asana

Position : Lying straight on the ground with back on the ground, loosning the whole body.



Fig. 22

Method :

1. After lying on your back, loosen your body immediately.
2. Long and slow breathing.
3. Lie flat and let every limbs feels relaxed.
4. The distance between the two feet should be 1 to 1½ feet.
5. The palms of the hands should be skyward and a little away from the body.
6. Close your eyes, meditate and feel that your body is melting.
7. Experience relaxation in your body.

This Asana is considered the best. Shavasna should always be done before and after every other asana. This asanas can be done from 3-5 minutes.

Advantages :

1. Removes fatigue.
2. Brings freshness to the heart and the brain.
3. Removes tension and high blood pressure.

Important instructions about Asanas

1. Minimum 15 and maximum 30 minutes are enough for the exercise of asanas.

2. Asanas should be practised on empty stomach and after the toilet calls in the morning. Some writers have recommended asanas in the evening time also but evenings are not that useful because a man is already tired after his day's work and needs some relaxation and entertainment. He does not find interest in exercise at that time.

3. Bath can be taken before the asanas or half an hour after the asanas. After the asanas, milk or breakfast can be taken after one hour.

4. As far as possible, asanas should be performed in a solitary place.

5. During summer days, asanas can be performed in the open.

6. In winter, the windows and the ventilators of that room should be open, where asanas are performed.

7. While performing asanas, the clothes should be minimum possible and loose.

8. In summer, a single underwear is enough.
9. In winter season, a vest and a sweater can be worn.
10. Asanas should be performed on level ground. A mat or a light duree can be used on the ground.
11. The time of the asanas should be increased day by day.
12. In case of fever or any other serious disease, asanas should not be performed.

Questionnaire

1. What is the significance of yoga?
2. Narrate the advantages of Garud Asana, Tarh Asana and Shirsh Asana?
3. What points should be borne in mind while performing Shirsh Asana?
4. Narrate the advantages of Vajra Asana, Padma Asana, Paschimotan Asana.
5. Narrate the method and the advantages of Bhujanga Asana, Chakra Asana, Dhanush Asana and Sarvanga Asana.
6. Which asanas are useful for reducing fatness/obesity and the troubles of the stomach.
7. What are the important instructions/requirements for a Yoga Sadhak.
8. What is the importance of Shav Asana.
9. Which asana can prove beneficial for Hernia and the troubles of the Organs. Explain the position, method and the advantages of that asana.

3.

SPORTS MANAGEMENT IN SCHOOLS

Physical education has been considered as an important part of the educational system. This fact has also been accepted that physical education has an important place in the personality development of the child. His body becomes healthy and his mind gets enlightened through this education. His emotional aspect is converted and he develops into a good citizen in the society.

Children are the valuable assets of nation. That is why it becomes the duty of the society to protect this wealth. All those facilities must be provided which are important for their development. Every child should be hale and hearty and physically fit. For this physical education, sports and organized programs on science of health are required. The facilities of playing-ground, sports-stadium, gymnasium, indoor-stadium, auditorium, swimming-pool etc. and modern games- material should be provided for children so that they do practice for the whole year. Those teachers who are keen and interested in sports require coaching and cooperation. They should handle the young generation and provide them with an ideal atmosphere. Only then the hidden treasure of youngsters of our vast country will come up and they can win medals in the field of the sports for the country.

After independence, many new schemes have been started for the benefit of youngsters in our country. Central as well as state governments have also paid special

attention to physical education. Besides, sports councils and sports departments, there is an other different management unit in education department to look-after the sports of the schools in every state.

Sports Activities in Schools

Supervisory staff : Physical education is a very vast subject. Many activities are involved in the management of this subject. Many activities are being performed in our schools. Their explanation is as such :

- | | |
|---------------------------------|----------------------------------|
| 1. Mass P.T. and drill | 7. Major games |
| 2. Marching | 8. Relay Race |
| 3. Dumbles, Lasyum,
Mulkhamb | 9. Athletics |
| 4. Gymnastic | 10. Hiking |
| 5. Folk Dances | 11. Scouting and Girl
Guiding |
| 6. Minor games | |

Because all of these activities are technical that is why the teachers of physical education with complete capabilities are selected for the teaching of these activities. Physical education has become a compulsory subject at the school level. That is why the capable teachers are required to give the information regarding Science of Health, Physical Science, First Aid, National Flag, National Song, Nationality, Development of Sports and Olympics. At the District level there are two officials in the education department for the observation of the work of the physical education teachers. They are Assistant Education Officer and Circle Incharge,

N.F.C(National Fitness Corporation). They look-after the physical education as well as the training in the sports at the district level in the schools. There is an other officer in the office of circle education officer who is called Assistant Circle Education Officer. This officer looks after the entire circle of sports. In the office of Director Education Department there are two official Directors, Director Youth Program and Youth Welfare Officer who are responsible for the growth and management of physical education and sports in the schools and colleges of Punjab.

Sports Competitions and Their Importance

Every person has competitive feelings. In ancient times very cruel methods were used for the competitions of sports but now these competitions are held in a very disciplined manner. Competitions are the ways to satisfy our emotions. The clear evidence of the whole year's progress can be found in the competitions of sports. These competitions are not only a chance for a player to display his whole year's learned sports ability but they also give the knowledge of the capability acquired by the player. They give us the inspiration to develop. Sports become popular because of these competitions and the up-coming players are being recognized. Through these competitions spectators get entertainment and people feel fresh by forgetting the tiredness of their daily life. The players who come to the competitions become more friendly with each other. If these competitions are held properly in the neat and clean environment, then a person will get mental and physical health. This way his life span will increase and his life will be full of happiness. That is

why we need to organize the tournament in a very mature and effective way, because only through these tournaments children get chances of healthy competitions and their capabilities come in lime light through these competitions. Very good and energetic sports competition programs are required at the bottom level to the top National championships. Efforts should be made to make every boy and a girl a participant of it by providing them proper facilities. That is why tournaments are very essential and their management should be very good.

Different types of tournaments are being held in the country. They are held on Zonal, District, State, Interstate or National level and then at International Level. At International Level these tournaments are held in Asia, Europe, Pan America, Olympics, World Cup Test match or on friendly tours are also held. These tournaments are held in different events. Which are as under

1. League (Single League and Double League)
2. League-cum-league
3. Knockout
4. League cum knockout
5. (a) League-cum-knockout
(Sometimes double game in Final and Semi Final)
6. Knockout-cum-league

In brief these are explained as under :

1. Single League :

Under this event all teams play each other. Team scoring maximum points is decided as winner. While winning team gets two points, losing team gets zero. In

case of a draw each team is awarded one point. In case two teams have equal points, the winner is decided on the basis of “goals for–goals against.”

Double League : When pools are not made then all the teams once again play with each other like league matches.

2. League-cum-League

In this event winning team from different pools play against each other.

3. Knockout System

In this system as far as possible the four winner teams of the last year are given bye so that these teams should not get ousted after defeating each other in the first round only. Usually the winner team is placed at the top, runners up team at the lowest bottom and third and fourth team is placed somewhere in-between, other teams are made into pair considering their standing or by draw of lots. The team winning the final match is declared a winner and the loser as a runner up. Losing teams play for the third and fourth position. The defeated team in the semi final stand in the third or the fourth position.

4. League-cum-knock-out

(a) The teams are divided into groups according to their numbers in the sports-competition. This thing is taken into consideration, that the number of teams in a group should not be less than three. Group matches are played as per league but from every group which ever

team comes first, they play according to the knockout system so that first four positions can be decided.

When there are only two groups then only two winning teams from each group are taken and they have to play for the first four positions. The winner team of the first group plays against the runner up team of the second group. Similarly the winning team of second group plays with the runner up team of first group. The two winners will then play for the first and second position and the other two losing teams play for third and fourth position.

5. In double game system the winner teams of the groups have to play against each other twice so that the winner team is finally decided.

6. Knockout-cum-League

In this teams which reach semi final on knockout basis have to play according to the league system. This way the first four positions are decided on the basis of points.

The Arrangement of Tournaments in the Schools

1. Interclass and Inter-house Tournaments :

First of all the tournaments and sports competitions are conducted under the activities of a school. These activities are not different but a part of the entire school life. These activities are made successful by holding inter-class or inter-house games. This way the spirit of healthy

competition is inculcated in the children enabling them to be of strong character. Depending upon the strength of a school the children are divided into four or more parts or houses. Their names are given by the names of famous warriors or country's present or past leaders. Each house is given its different flag and colour. Each house under its flag takes part in sports, social or cultural activities like Debate, Declamation, Dance, Music, Drama and Skit etc. By awarding certificates, prizes or school flag the winning students are encouraged. This way organizing of competitions proves to be very useful. In school, where there are no arrangements for such competitions, to organize such activities and competitions becomes more important. Children will get chance to compete and participate in such activities and we shall get a chance to select capable and the outstanding players. Through proper bringing up of such talented children and by giving them more training in their favourites game or activities and by giving coaching in games they can be prepared for specific competitions.

2. Zonal Tournament

To organize the tournaments at the Zonal level, all the schools of the district are divided into different Zones. The number of these zones depends on the number of schools. Usually, there are eight to twelve schools in one zone. The teams of different schools make their junior and senior wings of boys and girls and participate in their allotted zonal tournaments. These tournaments are played under knockout system.

Game competitions for the school children are fixed up according to different age groups and different classes.

First Category

Under eleven (11) year group competitions : These competitions are both for boys and girls. The children of 11 year age group should be up to class Vth and age should not be more than eleven years.

Second Category

14 year age group : In this category the participants should be 8th class pass and not above 14 years of age.

Third Category

In this category the participants should not be more than 17 years and should have qualified matriculation.

Fourth Category

The age limit for this category is 19 years and the competitors should have qualified 10+2 (Twelveth class).

3. District and Inter Zonal Tournaments :

The winner teams take part in different games of District and Inter-Zonal tournaments. In many districts the Zonal teams are selected from the teams who only participate in the Zonals. The team which is selected at zonal level plays for interzonal or district tournaments, but in many districts only winner teams of zones take part in these tournaments. The district teams are selected from the competing teams and from the teams in the trials.

4. Interdistrict and National School games

After districts in the state of Punjab, in different districts, the sports wings and the sports academies, directly participate in the tournaments. During interdistrict tournaments, the players are paid to-and-fro fare and the food charges by the District Education officer District school tournament committees. With a view to forming Punjab State teams, selection camps are organised and the teams selected at the camp participate in the national school games. All the arrangements for boarding and lodging of the participants are made by the department of education. The participants for national games are supplied with track-suits, sports-kits etc. In addition they are given to-and-fro fare. The arrangement for the stay is managed by Department of Education, Punjab.

National School Games are arranged by School Games Federation of India. All the states participating in the National school games and other units have to seek approval from the School Games Federation. These games are arranged according to age level-under fourteen, seventeen and nineteen years. The students who participate in these games must have attended seventy five percent of lectures delivered in their respective schools.

During the National School games, top players are selected and camps arranged for them. They are given rigorous coaching, after which they are sent to participate in the International School Games. On the basis of the results of these tournaments, national scholarships are granted.

Subroto Mukerjee Cup Tournament

Every year a football tournament is being conducted by Durand Committee. This Committee started Subroto Mukerjee tournament for children by recognizing the importance of games. The name of this tournament is in the memory of Late Airmarshel Subroto Mukerjee. This is played in Delhi in the month of November and December. The importance of this tournament is that only one best football team of one school of any State can take part-and the age of the players should be upto 14 years and 17 years . The winner team gets a beautiful Trophy .

For selection of state-team first the state-level tournaments are held. In this the winner team is sent to Delhi to participate. This tournament is of great importance for children. Best players get scholarships.

Junior Jawahar Lal Nehru Hockey Tournament

On the lines of Subroto Mukerjee the hockey tournament is also for school children. Few years back Jawahar Lal Nehru Hockey Tournament Committee decided to hold tournament for children. This is a very successful tournament. In this only one team of Schools of a state can participate. The age-group for this tournament is 16 and 19 years. This tournament starts on first November on the birthday of Pandit Jawahar Lal Nehru and ends on fourteenth November.

After this the tournament for Seniors starts.

International School Competitions

On rotation different countries organize the school tournaments. But this has not become a regular feature. This tournament is held seldom in the country.

Now, students would be eager to know about who organizes these tournaments? To hold Inter-Class tournament at school level a sports committee is formed under the supervision of the principal. A physical education teacher is the organizer of this committee. All other teachers of the school and senior students are its members.

At the Zonal and District-level these tournament are conducted by tournament Committee. The selection is done every year. Usually, District Education officer is the Chairman of this Committee. Other members of the Committee are selected amongst the principals of Schools. On the state level the responsibility of Inter District tournament is of Education Department. These sports are handed over to different Districts.

Circle Education Officer is its Chairman. District Education Officer is appointed as its main organizer.

Inter-state tournaments are held under the supervision of Indian-School-Games-Federation. Its foundation was laid in 1955. All the states and Centre are its members. All the states organize these sports on rotation. A management committee is appointed for the tournaments.

At the International level, the tournaments of the school players are conducted by International school Federation and India is the member of this Organization.

Questionnaire

1. What are the uses of sports competitions?
2. Which sports competitions are held for the school students?
3. Who and how tournaments are organized at District level?
4. Explain about the School-Sports Competition at the Inter-District and at National level.
5. Which sports Activities are popular in the schools?
6. Explain the eligibility rules to participate in the School Sports Competition?
7. Write Notes on :
 - (a) Surboto Mukarji Cup Tournament.
 - (b) Jawahar Lal Nehru Junior Hockey Tournament.

4.

FIRST AID

First-aid is very important. Many accidents keep on happening in our life. In the houses, schools, colleges, offices and play-grounds accidents are commonly seen. Many people get injured due to the accident of Scooters and Cars on the roads. Accidents are increasing due to the abundance of machines, growing population and means of communication. Many people lose their lives due to the accidents, but every time, getting medical-aid is very difficult. That is why every person and every student should get the knowledge of first-aid, so that his condition does not deteriorate and his life can be saved. The meaning of first-aid is, aid which is provided to the patient or an injured person immediately at the time of injury or just after any accident before the doctor comes or aid which is given before the medical aid. Its importance is to provide immediate help to stop deterioration of the condition of a patient or an injured and to save his life.

Every person can not provide first-aid. Only those person are capable of doing this job, who have complete knowledge of it. First-aid given by an untrained person can be harmful rather than being useful. That is why first-aid should be provided by only trained person.

The person who provides first-aid should keep on taking care of the patient till he gets proper medical-aid.

His work may be over after the patient gets medical-aid but still it becomes his duty to inform near and dear of the patient for his care.

Qualities of First-Aid Assistant

It is important to provide first-aid assistance to the patient or an injured person to stop the deterioration of his condition and to avoid his serious condition. It is possible only if the first-aid assistant is intelligent and has the full knowledge of first-aid.

First-aid assistant should have following qualities to provide proper first-aid :

1. The first-aid assistant should be intelligent enough to understand the reason and impact of injury.
2. He should be smart and to capable to understand the condition of the injured and reasons thereof.
3. He should be trained enough to make best use of available means.
4. He should be smart, so that he can handle the patient just after an accident.
5. He should be a patriotic person so that he can obtain help of people available around him.
6. He should have the ability to take fast decisions about injuries requiring prompt attention.
7. He should be a hard working and strong willed person not to accept defeat even in hopeless

situation and should continue his efforts to help the patient.

8. He should be sympathetic so that he can provide complete rest and encouragement to the patient.
9. He should be very humble and sweet towards people.
10. He should be a healthy and broad minded person.

A good first-aid assistant should have all the above qualities.

The Rules of First-aid

No body's life is safe. A person has to face many accidents many a times in his life. He may have to face some accident at any place. In such a situation every person should have the knowledge of first-aid and should know its rules properly. The rules of First-aid are as under :

1. First of all the body of an injured should be examined to find out as to which part of the body is injured. It is possible, that he has got many injuries. In these circumstances the attention should be paid to the most serious injury and it should be attended immediately.
2. The flow of blood should be stopped from the wounds.
3. In case the patient is unconscious and his breathing has stopped, he should be given artificial breathing.
4. The patient should be treated immediately and according to the requirement, so that his

condition does not get more serious and his life is saved.

5. The crowd should not be allowed to surround the victim.
6. The patient should be given encouragement so that he stops worrying.
7. Try to save the patient from the shock.
8. Do not take-off his clothes if not required.
9. Take complete information about the patient if he is conscious. In the state of unconsciousness try to guess his symptoms and impact of injury
10. Give hot milk or tea to the patient.
11. After providing first-aid the patient should be immediately taken to the hospital or to some good doctor.
12. There should not be any doubt or hesitation while providing first-aid.
13. Be patient and polite while providing the First-aid.
14. The patient should be kept in a comfortable position so that his condition does not deteriorate.
15. In case there is a chance of his death, even then keep providing First-aid till the doctor comes.

Poisonous Bites of Animals and Reptiles and their Treatment

The life of a person is in danger if he is bitten by a poisonous reptile and sometimes it causes his death also.

When bitten by Snake or Scorpion and mad dog, hyena, cheeta or leopard, the poison spreads inside the body. It is therefore necessary to take steps to stop the spread of the poison.

Treatment of Snake bite :

There are many types of snakes but out of these five-six are of very dangerous type. The blood gets poisonous and the person dies. If timely help is provided then the life of a person can be saved. The first aid to a person bitten by snake is provided as under :

1. First of all the blood circulation of the bitten part should be stopped immediately so that the poison does not mix in the blood and spreads in his whole body. To stop the blood circulation the upper part of the wound towards the heart should be tied up tightly with a cloth or a rope. It should always be tied up on arm or around the feet, on the top of elbow or ankle. The blood circulation stops completely in this way. It should be kept tied up like this for two hours. But after every ten twenty minutes it should be left loose for half a minute.

2. The bitten part should be properly washed with water or potassium permanganate. This way the wound and its surrounding areas will get completely clean.

3. After this about one inch long and half inch deep cut should be made by some sharp knife or blade at the bitten place. While putting a cut it should be taken care that the main veins should not get damaged. The knife or the blade should be sterilized before it is used. This way the poisonous blood will flow-out and the poison will not spread in the body.

4. Then take the patient to the hospital or to some doctor.

5. The patient should be kept comfortably. He should not be allowed to roam about, because in case of movements, the poison can spread in the body.

6. Hot tea should be given to patient and he should be kept warm.

7. In case, his breathing has stopped, he should be given artificial breathing.

8. Keep encouraging him so that he should not get worried.

In case of the poisonous bite of Scorpio and kankhjura etc. help as explained above can be given.

The treatment of the Mad-Dog bite :

The poison spread in the body of a person after a mad-dog bite and the person can also die. The dog poison enters the Central Nervous System through the nerves from the bitten area. This way the poison enters in to the brain. This poison is present in the saliva of the dog and through rashes of the wound it enters into the body. A person bitten by mad-dog should be given First-aid in the following way :

1. When ever a mad dog bites a person, try to bring out the blood from the wounds so that the cut can be washed from outside. For this the area between the bitten part and trunk should be tied tightly with a rope or a ribbon or a piece of cloth, so that the clotted blood flows out. It should be made very tight so that the blood circulation of the nerves gets stopped.

2. Keep the bitten part towards the lower side.

3. Wash the wound properly by mixing potassium permanganate in luke warm water.

4. Give hot tea or coffee to the patient to drink.

5. After this take the patient for medical aid to a doctor and got him injections on the advice of the doctor.

If immediate medical aid is not available then burn the wound. For this, untie the rope and then with the help of pointed thin wood put any liquid-castic (Carbolic or castic acid or silver castic) on the wound. This way the poison is destroyed.

Dry dressing : Put dry ointment and put bandage on it. Keep observing the biting dog for at least 10 to 14 days so as to ascertain if the dog is mad, because egg incubation can be more than six months and the disease spreads is in the last 10 days. This way the bitten person will have less worry.

Sting's Treatment : Sting can be due to herbs and insects. Wasp and honeybees sting sometime. Swelling occurs at the stung area and it becomes red. Pain is felt at this place and sometimes dangerous symptoms occur. The sting should be treated in the following way :

1. Prick out the sting with the help of a needle-point but the needle should be heated in the fire so that it becomes germfree.

2. Use spirit, sal volatile, mild liquid amonia and

the mixture of soda-bicarbonate or the mixture of castic-soda on the stung area.

3. Put dry dressing on the stung place. Sting is possible in the mouth also. In this condition take two big spoons of soda-bicarbonate and mix in one glass of water and do gargles. Hot formentation on the outer part of the neck is useful.

Burn and its Treatment

Sometime hand or foot get burnt and the clothes catch fire. This usually happens because of carelessness. These kind of incidents often occur with the people working in kitchen, laboratories and factories. Due to burn the blood gets poisonous and a person can also die.

Causes :

1. Due to fire or by touching hot metal one can get burns.
2. The electric current and thunder lightening can also cause burn.
3. By contact of wire with the fast revolving wheel or fast moving rope can also cause burn.
4. One can get burn due to Acid and Alkali.
5. The wound can occur due to the burn of boiling water, steam, hot milk and oil.

Symptoms :

1. The skin can get red and burn can cause boils also.

2. There is lot of pain at the burning place.
3. The skin and even its deeper tissues can get damaged.
4. One can get shock after burning.
5. The burnt place looks very ugly.

Treatment :

The treatment of the burning area should be done in the following way:-

1. Do not remove the clothes of the patient nor prick the boils caused due to it.
2. Cover the burnt area with germfree dressing and tie it with a bandage, after putting a cotton pad but leave the bandage loose in case of boils.
3. Cover the patient with blanket so that he should remain warm.
4. To keep the burnt area stable use bandage and wooden pieces.
5. Give hot milk or tea to the patient.
6. The patient gets relief by washing the burnt area with luke warm water mixed with two table spoons of soda bicarbonate in a glass of water.
7. In case any one is burnt by a chemical substance then burnt area should be washed with alkeline mixture and if not available then plain water can also be used.
8. If the organ is burnt by alkali then first wash the burnt area with Chemical solution. For this purpose lime

juice or vinegar can also be used. In case chemical mixture is not available then plain water can be used.

9. After this take the patient for the medical aid to a good doctor.

When the face is burnt, from the lint cut a piece in the shape of the face leaving one big hole for breathing. Then cover the face with wet dressing of luke warm Alkeline water and leave it wet as it is.

In case a small child gets seriously burnt then put him in the luke warm Alkalin mixture with his clothes on. If Alkalin mixture is not available then salted mixture should be used. In case a person catches fire on his clothes then he should be covered with the thick blanket or coat etc. Then he should lie down and the fire should be extinguished by pressing the body. In case a person gets fire on his clothes and is all alone he should lie down on the ground and should cover his body with thick cloth and try to extinguish. He should not run around in the open area.

Sun Stroke

Sun stroke is caused due to heat in the summers. While walking or working the sun rays directly affect our head and body. This way the body gets heat this is called sun stroke. Many people who work in the sun get sick due to this.

Symptoms :

1. The patient faints due to its effect.
2. The Colour of his face gets blue.

3. His skin gets hot.
4. His pulse beats very fast.
5. He can hardly breathe.
6. His temperature increases too much and can go upto 110°F.

Solution : Don't move around in the sun. In case you have to go out in the sun then cover your head and body. An umbrella is very useful in the scorching heat. The use of goggles is useful for eyes. Salted lemon water is very useful.

Treatment

Sun stroke can be treated like this :

1. Try to revive the fainted person.
2. He should be taken to some shady cool place, where he can get fresh air.
3. His clothes should be loosened.
4. Fan him.
5. Put bags of ice continuously on his head and his spinal cord, till his temperature falls to the normal (98.4 F).
6. Keep sponging his body with the cold wet cloth or if available rub ice.
7. Make him drink lot of salted or plain cold water.
8. Take the patient to doctor for medical aid.

Electric Shock

One gets a strong Jerk by uncovered electric wire, which has current in it. A person can also die due to it. Some times a person gets stuck or he falls away due to jerk. Donot get upset. If person gets stuck to the wire then try to get him free wisely and urgently so that his life can be saved. In this situation try to switch off the main switch and if not found the following methods should be used.

1. If the power of electricity is up to 500 watts then some dry thing a bad conductor of electricity should be used to save the patient like-plastic gloves, plastic shoes and a stick of dry wood etc. Do not use any wet or metal thing because they are good conductor of electricity.

2. If the electric current is coming from other side in the wire then remove the plug or break the wire by pulling it, but never try to cut the wire with a knife or Pair of scissors.

3. In case the electric current is more than 500 watts then take the help of good electrician to save the life of the incident-prone person. Do not hold the patient with your hand, Instead use a dry wood or a stick.

The patient usually gets fainted due to the shock of electricity. He cannot breathe properly. Some times the body also gets burnt badly due to the strong current.

Treatment

1. In case the breathing of patient has stopped then artificial breathing should be given.

2. After this the burns should be treated.
3. Give hot milk or tea to the patient.
4. If necessary take the patient to the doctor for medical aid.
5. Patient should be kept in warm blanket or any other heavy cloth should be used.
6. Sympathise with the patient so that he does't not get upset.

Treatment of Drowning

While bathing in the canals and ponds many people get drowned. Many accidents keep happening by slipping of the foot from the edge and falling in to the water. Very small children get drowned in the puddles, ponds and wells while playing on their corners. While drowning the water goes in the stomach of the person and he gets unconscious. In case he stays in the same situation for a longer time it can lead to his death. If the drowned person is taken out of the water and is given first aid immediately, then his life can be saved. He should therefore be taken out of the water with caution and if required then take the help of other people also.

The drowned person should be treated according to the following ways.

1. The patient should be made to lie down on the earthen pot upside down. In case the earthen pot is not available then he should be put on the ground in upside down position. Then he should be lifted from the waist and then put down. This way the water from his stomach will come out.

2. His wet clothes should be removed and worn dry clothes.

3. To keep his body warm he should be covered with blanket or a thick cloth.

4. He should be given artificial breathing.

5. When the patient gets his consciousness then give him hot tea or coffee.

6. If necessary then take him to the doctor for medical aid.

Artificial Respiration

If the breathing of the person stops he gets unconscious.

Breathing can stop due to many reasons like :

1. By drowning.
2. Getting wounded in an serious accident.
3. By getting electric shock.
4. By inhaling poisonous gases.
5. Choking.
6. By getting shock.
7. By choking in the throat.
8. By getting swelling on the upper tissues of the throat.

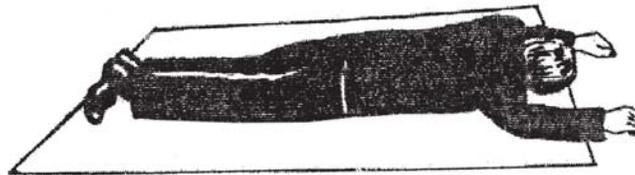
If the breathing remains stopped for a longer period then his life is in danger, and can result in death. In this condition of artificial breathing is given then he can regain his breathing and his life can be saved. Many different ways of artificial breathing are used but the popular ways are following.

1. Schafer's Method

A. Position of the patient :

(a) The patient should be kept on the floor in such a way that his face should be towards the floor and his arms should be above his head and his palm should be towards the ground, his head should be turned to one side and his clothes should be loosened immediately.

(b) If the patient is lying with his back on the floor then he should be turned with face towards floor. The arms should be kept straight touching the body. Then cross his far off leg over the second leg. While protecting his face he should be put, on the floor face wise by holding his waist.



Position of Patient

Fig. 23. Schafer's method

B. Position of the operator :



Position of the Assistant

Fig. 24.

Sit on your toes by bending your knees at one side below the waist of the patient. While sitting his face should be towards head of the patient.

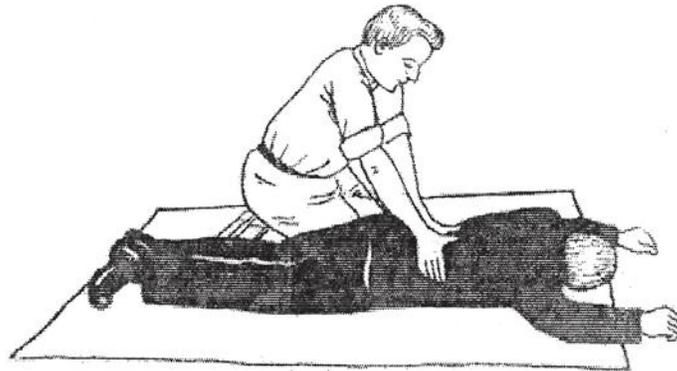
Then put your hands on your waist in such a way that your hands should be on the either side of his spinal cord. Thumbs and fists should be almost joined and the position of the fingers should be towards the ground. Both the arms should be straight.

C. Application of the Artificial respiration :

(i) By moving forward slowly put your body weight on the waist of the patient. This way his abdominal organs and his diaphragm will be pressed towards the ground and the air will be released from the lungs. This way exhaling is possible. Only two seconds should be taken for this movement.

(ii) Remove your body weight from the waist after putting your weight only for two seconds. Then come back towards, your heels. This way the abdominal organs will move back and diaphragm will fall and the air will be filled in the lungs. This way the action of inhaling is possible. This action should take three seconds. Both the actions should take the time period of five seconds. It means in one minute all actions should be completed 12 times.

The artificial respiration should continue until natural respiration starts or till a doctor decides that there is no need of any further effort.



Artificial Respiration

Fig. 25

2. Silvester's method :

This method is used only when it is impossible or it is not right to make the patient lie with his face towards the floor.

(A) Position of the Patient

1. Put the patient with his back on the flat surface. A pad or cloth should be kept under his shoulders so that his head is little turned down.

2. It is possible that the tongue may go backward thereby choking his wind pipe. In this situation to stop the wind pipe from closing take the help of someone who should hold the tongue out ward with the help of handkerchief. If a helper is not available then turn his head towards one side as far as possible.

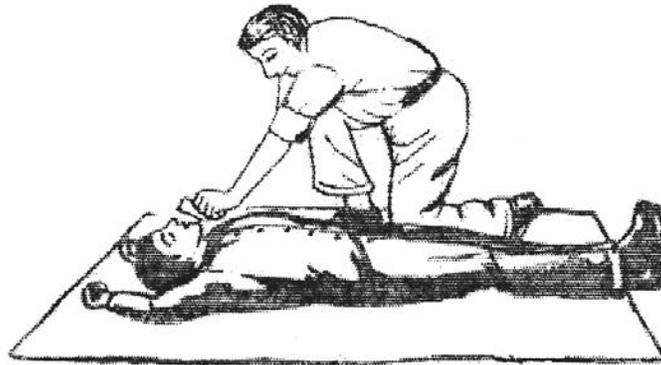


Fig. 26

(B) Position of the operator

Sit on your knees towards the upper side of the head of the patient.

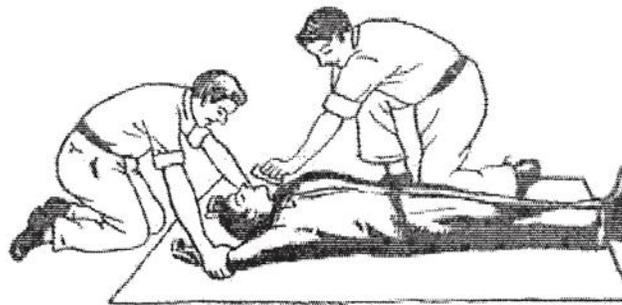


Fig. 27

(C) Application of the artificial respiration

1. Now bring the forearms of the patient on his

chest towards each other and hold the elbows from the lower side. Pull his arms by bringing them upward and then outward and press the elbow on the ground. This way the size of the chest increases and air fills in the lungs. In this way the method of inhalation is done. Only three seconds should be taken for this method.

2. After this bring the arms back according to the previous method and press his chest so that the air comes out of the lungs. Only two seconds should be taken. In both these methods only five seconds should be taken and in one minute these methods should complete twelve times.

This way the artificial respiration should be continued till the natural respiration starts, or till the doctor says that there is no need for any further effort.

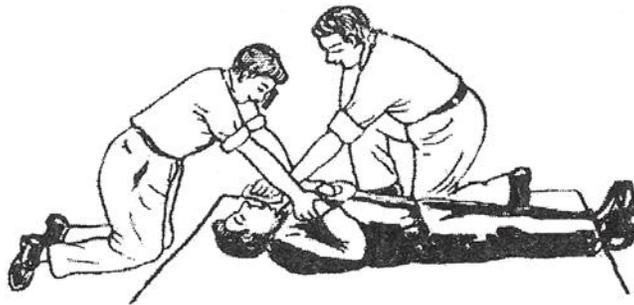


Fig. 28

3. Holger Nielson's Method :

In this method the air is taken out of the lungs by pressing the back and the arms are lifted upwards so that the air enters the lungs. This way the respiration starts and that is why this method is called "Press the back lift the arm method."

(a) Position of the Patient

The patient should be made to lie down with face downwards. His arms twisted and forehead placed on his hands. Turns his head towards one side, so that there should be no obstruction in front of his nose and mouth. His clothes should be loose. If the patient is lying on his back. Then he should be turned upside down as per the shepherds method.



Fig. 29. Holger's method

(b) Position of the Operator

1. Put your left knee towards the upper side of the patient's head. Right foot should be kept near the left elbow of the patient. This way sit on your feet by bending your knees.



Fig. 30. Holger's method

2. Now put your hands on the shoulders of the patient so that the thumbs should touch the spinal cord and the position of the fingers should be towards the feet of the patient. Both the arms should be straight.

(c) Artificial respiratory system

1. Keep your arms straight and bend forward and put pressure of your body for $2\frac{1}{2}$ seconds by counting 1 to 3. This way the air will exhale from the lungs.

2. Then leave the pressure slowly and bring your hands towards the elbow of the patient by counting one to four in one second.

3. By pressing backward the arms and the shoulders of the patient by counting five six, seven in $2\frac{1}{2}$ seconds lift him up. Care should be taken to ensure that his chest does not lift from the floor. This way the air will be filled in the lungs.

4. After this by putting your hand under the arms of the patient and by counting eight in 1 second bring his hands towards his back in the previous situation. Only seven seconds should be taken for this exercise and completed nine times in 1 minute. This way the artificial

respiration should continue till the natural respiration starts, or the doctor recommends to stop it.

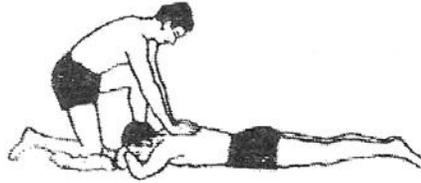


Fig. 31. Holger's method

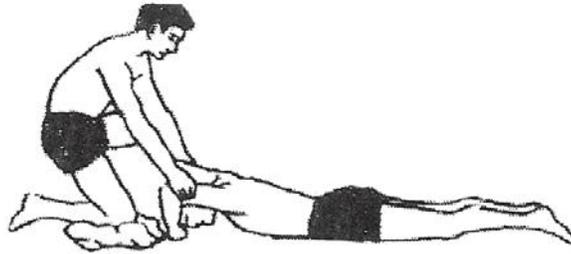


Fig. 32. Holger's method

For this exercise counting should be done like this

- (1) By counting one, two, three (in 2½ seconds) putting pressure on the shoulders with hands.
- (2) By counting four (in 1 second) bringing hands towards elbows.
- (3) By counting five, seven (In 2½ second) Lifting up of arms and shoulders.
- (4) By counting up to eight (In 1 second) Bringing down the arms and hands towards the shoulders.

When the natural respiration starts then keep lifting

the arms and shoulders upwards/downwards some time by counting one to three and by counting four, five, six bring down the arms.

If the arms of the patient are wounded even then the movements as above should be done but keep holding, the arms from the shoulders. If there are wounds on the Chest of the patient then only the movements of lifting up and bringing down arms should be done.

If the patient is wounded on both arms and chest then only his arms should be lifted up and down by holding his shoulders.

Note : While putting pressure the gender and the age of the patient should be considered so as to put only that much pressure by which the chest is slowly pressed. While giving artificial respiration to the children very less amount of pressure should be given.

Questionnaire

1. What is the importance of first aid ?
2. What do you mean by first aid ? Explain its main principles?
3. Explain the Properties of first aid in details ?
4. What do you mean by burns ? Explain its reasons, symptoms, and treatment ?
5. If a person's clothes catch fire then how will you help him ?

6. What do you understand by sun stroke describe its reasons, symptoms and treatments ?
7. What do you mean by electric shock ? How will you treat it?
8. In what conditions artificial respiration is given to the patient?
9. Explain any one of the methods of giving artificial respiration?
10. Which first aid should be given under the following situation :
 - (a) Snake bite
 - (b) Bitten by mad dog
 - (c) Drowning
 - (d) Stung by Honey bee
11. How growing population becomes the cause of accident.

5.

DISCIPLINE AND SPORTS

Discipline and sports : Discipline is a very important and necessary part of human life. No country can grow and progress without it, No work looks degnified and accomplished without discipline. This is necessary at every step of life. There are some rules in homes as well as in the schools. The student becomes disciplined by following, these rules. There are certain rules of society and by their adoption a student can become a good citizen.

In our ancient times lot of emphasis was laid on discipline in the educational institutions, as there is great relationship between educational system and character building. Unfortunately these days no attention is paid to discipline and character formation in the educational institutions. Therefore indiscipline can be seen at many places. In some cases children are deprived of the education and discipline at home. Students themselves are also responsible for this indiscipline.

They adopt many undesired means to get their demands fulfilled. This is true that young students have lot of excitement but with this excitement understanding and awareness is necessary. The students should be serious

and they should try hard to gain knowledge. The results of indiscipline are always harmful for students as well as for the society. The students who participate in strikes, waste their time and do not get complete education.

Discipline is to follow the rules and remain in control. Discipline is such a training which teaches us to lead life in a proper way, to obey and exercise self control. There are always rules not only in homes, schools, colleges, offices but also at all places where we spend some period of our life. When we follow these rules strictly, it is called discipline.

Discipline is of two types :

1. Self discipline
2. Forced or command discipline

1. Self discipline : In this the feeling of obeying the rule develops in the mind of a person by itself and he does his work by following the rules without being told by any body. This kind of discipline is permanent.

2. Forced or command discipline : In this the rules are obeyed as per the instructions of somebody or due to fear of punishment. This kind of discipline is temporary. And it remains till the person giving the instructions is present or till fear of punishment exists.

Amongst these two self discipline is the best. Children should have the feeling of self, discipline, so that they can become good students and better citizens.

Importance of discipline : Discipline is the foundation of society. Without it human life would become different. If everyone follows discipline the society and the nation will also become disciplined. It is very important in every walk of human life. Its importance can be judged from the following facts.

1. Discipline produces good students and responsible citizens.
2. Children learn to respect their teachers, parents and elders.
3. Discipline teaches children to obey.
4. Disciplined children start behaving nicely with others.
5. Discipline brings regularity in us and we learn to do work in time.
6. While living in discipline a person grows mentally because he learns good habits and qualities.
7. Discipline improves personality of a person, because he acquires good and healthy habits and good qualities.
8. Discipline also helps to improve the social life.
9. Discipline makes the society and country stronger and progressive.
10. It builds the nation and makes it powerful and strong.

Discipline makes every man's life a success. As a disciplined army succeeds in safeguarding its country, similarly disciplined labourers can achieve higher production in the factories. Students should also learn to remain in discipline. They should respect and obey their teachers and elders. It is important to have discipline at home-front also. The home where its members are disciplined will always progress and remain happy. Discipline therefore is of great importance for every man, society and nation.

To be successful every man should follow discipline at Home, School and play ground etc. as these are places, where a person gets a good chance to learn about discipline.

To learn discipline at home.

Home is the first and best place to make a person disciplined. All the relatives in the house like parents, brothers, sisters, etc. live together. The elder member of the family is the main person or the leader and all other members obey him. They all love each other. They all give desired respect to each other and share joys and sorrows. The environment of love and warmth is maintained in the house. The members of the house behave affectionately with each other. Children learn discipline by living in such an environment. The home is a place, where child learns to live in discipline from the beginning of his life.

But many a times it has been seen that children do not obey their parents and elder brothers and sisters.

This way they become undisciplined. This is very bad for them. They should enhance their self respect by their good behaviour. Young children follow their parents, brothers and sisters. It is therefore necessary that their parents, brothers and sisters should lead a disciplined life.

To learn discipline in the School

The children studying in School can make themselves disciplined students by following the rules of the school. They (disciplined children) respect their teachers and obey them. They cooperate and love their co-students. It becomes their habit to sit, study and play together. They help to clean and decorate their school. The qualities like reaching school at right time, completing their homework regularly, always speaking truth, the habit of not stealing anything and helping each other etc. becomes a part and parcel of their character. In this healthy environment they learn to lead a disciplined life. The environment of the school is therefore very important for inculcating discipline in the children.

Sports and Discipline

Sports and other activities create discipline among children. In the playground all the students have to play under the instructions of the captain and the coach. Wherever, any student is found to be violating the discipline, he is warned immediately. Children learn much

more in the playground than those students who simply study in the class. While playing they learn many qualities which help them for success in life. These qualities are as following :-

1. **To obey** : All the games are played under rules. Every player follows those rules obeys their coach, referee and the Captain. They never criticise the referee and accept his decision gracefully. Thus they learn to obey.
2. **Patience** : By participating in games they learn the quality of patience. They accept their defeat gracefully. This quality of patience proves to be very useful for them and they do not get upset in their life.
3. **Regularity in time** : Good players reach playground at the fixed time. They are neither late nor absent. They become the players of high standards by daily practice of their game. This way they develop the habit of doing their work at fixed time and become successful in their life.
4. **Speaking Truth** : Players always speak truth. Whenever, during the game, if the rule is violated or the ball goes out of the ground, they never hesitate in saying the true position to the referee or to the umpire.
5. **Determination** : The players who play with full energy in the match, get victory at the end. This way

they develop the habit of working with determination and they become successful in life. They never give up courage and always keep trying.

6. **Noble-character** : Many students are offered some temptation during matches but good players never get involved in such offers. They only play for their team and play with full energy to win. This way they keep themselves away from bad things and make their character strong.
7. **Helping others** : Many a times due to attack of the opponents, players get into serious trouble. At this time the co-players help the player who is in trouble and save their team from losing game. This way players get a chance to help each other during the play and thus learn to help each other by playing in various matches.
8. **The feeling of friendliness** : All the players in the match have to play as a team. A single player can never win the game. That is why all the players play in co-operation and the feeling of friendliness and cooperation develops in them.
9. **Self Confidence** : In sports the players gain self-confidence. While playing if they commit a mistake they do not lose heart. They try to improve their

mistake. This way they do not get desperate by their mistakes but they correct them and achieve success.

- 10. Spirit of competition :** The player have to labour hard to achieve victory in games. After playing matches regularly, it becomes a habit with the players and they try to go ahead in their career.

By participating in sports children can acquire all the above qualities which enable them to achieve success in life. They learn to lead a disciplined life with these qualities.

Every game has different rules and all the games are played according to their rules. Children mould themselves as per rules and become disciplined player by following these rules. By sports their whole physical growth and development is possible and healthy and good habits are inculcated in them. In this way, through sports, children are educated to remain in discipline. All the children should take part in games and acquire all these qualities and make themselves disciplined students.

The Need of Discipline for the Society and the Country

Man is a social being. He cannot stay alone and aloof. He has to be dependent on others for various needs of his life. He cannot fulfill all his needs by himself. We have to take other people's help in our day-to-day activities. That is why we can not violate the rules of society. We have to follow the rules which are made for

the benefit of the society, it is a must for us to live in discipline. The society can be stable only if we are in discipline. Indiscipline is harmful for the society. Many problems occur in life due to it. One has to take help of the society to lead his life comfortably. For this society also has to be in discipline.

A Society is made by grouping of many people. A government is made by the chosen people of the society, who make the laws regarding the safety, comforts and facilities of the society. People have to obey these rules. This is possible, only if all the people live in discipline. Every citizen has to be in discipline in order to defend the society and the country from internal and external danger. A country can progress only if its citizens are disciplined. That is why it is necessary for the progress of the country that the whole of the society is disciplined. Discipline is of great importance for the progress of a country.

But is it also seen that to day indiscipline is increasing in many section of people in the society. Students, labourers and many employees of government and non-government organizations, waste their time in damaging property and strikes. They harm the property of the society and nation and use many types of wrong means to get their rights. We read and hear such type of incidents of indiscipline day to day in our life. This kind of indiscipline is not in the interest of society and the nation. The solution of any problem can be found by sitting across the table and through talks. The presentation of indiscipline is not required.

The students and other people are considered the power of nation and nation builders. That is why they should not use such kind of indiscipline methods.

Both the society and the country are ours. They are made by us only. Every benefit of the country is ours. That is why we should never do anything against the interest of our country. We all should work together to make our country strong and prosperous. The students, teachers, parents and people of all other states should think for the benefit of the country and should adopt a disciplined life, so that our country should also improve like other advanced countries. All these rules grow by itself with sports.

Questionnaire

1. What do you mean by discipline? Explain it in detail.
2. What is the importance of discipline in life?
3. Children learn discipline at home-How?
4. How is the school environment helpful in making children disciplined. Write in detail?
5. How do children learn to live in discipline by games?.
6. Do our society and our country need discipline? Write your ideas?
7. Why indiscipline is harmful for the country?

6.

ATHLETICS

Introduction - Athletics occupies a peculiar place in the physical educational curriculum of the school students. Running, hopping, jumping and throwing are natural gifts in man. By systematizing an improvement, these activities have been organized and given the name athletics. Since ancient times, these activities have been prevalent and popular. Of course their forms have been changing. In 1896, when the Olympic Games were reorganized, Athletic events were standardized. Every event was covered under regular rules.

Advantages- With a view to keep the youth in sound health, athletics are very important. Through them only, the basic expertise is further developed. In addition, these activities can be actually measured & calculated. Through them, we learn fair & healthy competition. The athletes themselves maintain a record of their expertise and achievements.

In order to sharpen their talents in athletics, it is important to have proper knowledge, the technique and the rules of athletics.

Events in Athletics :

Various kinds of events have been acknowledged for Olympic, National, and State level competitions. So

much so that they have been placed under different groups. Here, we will make a mention of only those events which school students are concerned with at district, state & national level.

Competitions in Athletics for school students have been placed under two groups, according to age—junior and senior. Girls and boys below the age of 17 fall under the category of junior group. The upper age unit for senior groups is 19 yrs, to be counted upto 31st of December of the year of games.

ATHLETIC EVENTS FOR SCHOOL STUDENTS

Senior Boys	Junior Boys
100m race	100m race
200m race	-----
400m race	400m race
800m race	800m race
1500m race	3000m race
5000m race	100m hurdles
110m hurdles	High jump
Long jump	Long jump
Triple Jump	Shotput (Gola)
High jump	Discus throw
Pole Vault	Javelin throw
Shotput (Gola)	4×100m relay race

Javelin Throw

Discus Throw

Hammer throw

4×100 m relay race

4×400m relay race

Senior Girls

100m race

200m race

400m race

1500m race

800m race

100m hurdles

High Jump

Long jump

Shotput (Gola)

Discus throw

Javelin Throw

4×100m relay race

Junior Girls

100m race

200m race

800 race

100m hurdles

Shotput (Gola)

High jump

Discus Throw

4×100m relay race

The above mentioned athletic events have been broadly divided into two categories:-

- (a) **Track events-** These include all the races.
- (b) **Field events-** These include all kinds of jumps,

throws like High jump, long jump, Triple jump, Pole vault, Hammer, Discus, Shotput & Javelin Throw etc.

BASIC REQUIREMENTS OR FUNDAMENTAL NECESSITIES :

Certain basic facilities are required for practice in the above-mentioned athletic events. In our country, there is lack of basic facilities almost for every game and event. Our desires may be very idealistic, yet they depend upon the basic facilities & the limited means. The basic necessities are as below :-

Track

For practice in athletic activities and to arrange them in a better way, there is the need of a particular area of land called the track. For practice various kinds of tracks are brought under use. But 400m tracks are considered ideal for track events. It is not essential that an athlete should know how to make a track but he should be familiar with its layout, so that he can make sure of the different points.

(A) few particulars of a 400m track are as below :

- (i) Straight tracks = 80.3 m
- (ii) The total running distance in the straight tracks = 160.6m
- (iii) The distance of the two curves = $400 - 160.6$
= 239.4m

$$\begin{aligned} \text{(iv) Semicircle of the curve} &= \frac{239.4}{2} \times \frac{7}{22} \\ &= 38.08 \text{ m} \end{aligned}$$

(v) The distance b/w the internal line of the track and the line of race 30 cm.= 0.30m

(vi) The last semicircle of the curve = 38.08-0.30
= 37.78m

(vii) The number of tracks/lines = 6 to 8

(viii) The width of tracks/lines = 1.22m

(B) The measurements of the field events:

1. Jump board for long and Tripple jumps

Length = 1.22m (or 4 feet)

Width = 200mm (8 inches)

Depth = 100mm (4 inches)

$$\frac{1075.8}{244}$$

Running passage = 20 to 25m in a track of 6 to 8 feet.

High Jump :

Distance between the poles = minimum 3.66m (12feet)

or maximum 4.02m (13 feet – inch)

Length of the crossbar = minimum 3.64m (11'- inch)

or maximum 4m (13'-)

The weight of the cross bar = 2 kilograms.

Take for the cross bar Posts = Width 40mm (')

= Length 60 mm (')

Triangular cross bar = 36m (')

The area of the fall = Length 5 m

Width 4 m

Reaching passage = minimum 15-20m

For direct takes (posts) no special measurements have been fixed, but they should be 8 feet long.

$\frac{1}{2}$

Shotput :

The weight of shotput:-

Group	Boys	Girls
Senior	8 Kg	4 Kg
Junior	5 Kg	3 Kg

Discus Throw:

Group	Boys	Girls
Senior	2 Kg	1 Kg
Junior	1.50 Kg	1 Kg

Javelin Throw :

Weight	600 gm	600 gm
Length	7'-6½''	7'-2½''

Note : The weight of the hammer, as it is thrown in full shape = 12 pound

Circle

Shot and Hammer 2.135m or 7 feet interior circle diameter. For Discus Throw, the diameter is 2.50 m (8 feet 2½) sector or region.

for Discus and Hammer = 34.92°

For Shotput = 40°

For Javelin = 29°

The Height of the Hurdles :-

Junior boys = 3

Senior boys = 3'-4"

Junior girls = 2'-6"

Senior girls = 2'-6"

the running passage for Javelin = minimum 30 m,
maximum 30.5 m.

For the guidance of the students, the technical knowledge about the rules of the Athletic Events can prove very beneficial.

Sprints or Fast Races : (short distances)

Short distance races in athletics are called sprints.

These include 100, 200 and 400 metre races. In it the runner may be of any constitution of body, tall, short or light weight, every-body is fit for sprint. The sprint runner must be physically strong and agile. He can make use of all his talents in a combined way and never the short distance like the current of electricity.

The qualities of a good runner are agility, light body, endurance and control on speed. He must inculcate in himself these qualities. The ankle should be used very efficiently. A strong push with weight on the toe of the foot gives the runner a natural and fast move. One has to bend his body a little forward in sprint. The arms should be slightly bent but swing in a natural way. The head and the remaining part of the body remain straight. For expertise, a good amount of training and practice are essential.

While running a fast race, the runner must bear in mind 3 things-start, race and the finish.

Start

In sprint, start carries special significance. A good runner rushes forward like the bullet of a gun. For that he needs rigorous practice. Most of the races have been won by virtue of a good start. Many-a time very good runners have been seen failing on account of poor start.

Bending position or crouch start is strongly recommended for start in the fast races/sprint.

Crouch start

In crouch start, set your feet on the rear blocks with your body bent forward, with the fingers of your hands a little to your side from the starting line. The fingers should be properly set and the front foot should be properly fixed almost one foot back. The knee of the rear leg be set close to the front foot on the ground. In this position, there can be a slight variation is possible according to the constitution of the runner. So the crouch start can be long, medium or short. On getting the order 'On your mark' take position as shown in fig 33. keeping the fingers of the hand in the rear of the starting line on the outer side and set your feet solidly against the blocks.

Loosening the muscles of your neck, lower your head. On getting the order 'set' lift your back as shown in fig. 34 till the



Fig. 33

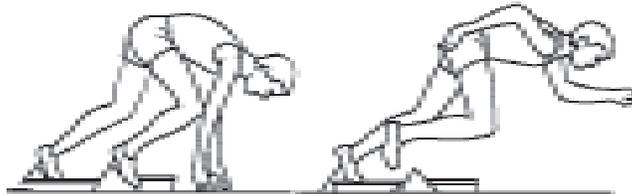


Fig. 34

Fig. 35



Fig. 36

sound of fire from pistol or gun is heard, continue to stay in the same position like a rock. In this position legs will be stretched and the front knee will make an angle of 90° . The head, the back should be in the straight line and the arms fully stretched. The weight of the body should come down to the toes of the feet and the fingers of the hands.

On hearing the sound of pistol or gun, like the flash of a current, push with your feet and the fingers of the hand for a start. This action of start should be natural, as natural as a bullet comes out of a barrel. In fact, it should become a habit with the athlete. At the time of start, while getting out of the blocks, the position of the body should be as shown in fig 35 and fig 36.

Races

The first step in the race will be like a normal step in it the front leg and the rear arm will have a quicker movement. The body will be a little bent in the beginning but gradually after 15-20 steps comes to its real position



Fig. 37

(see fig 37,38 and 39). When an athlete takes a longer step naturally his knees rise higher, so that he can cover the distance as easily as possible. With this the rear kick will cease. In the race, the movement of the arms should be natural and comfortable. It is very important to run on the toes. It will give a natural spring to the feet. In sprint not only the speed of the legs is the basic requirement but long steps are equally important, so always try to have longer steps, for easy finish.

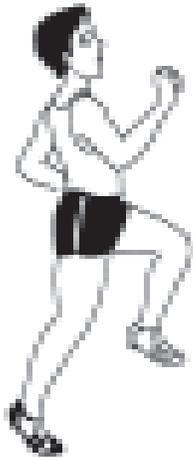


Fig. 38

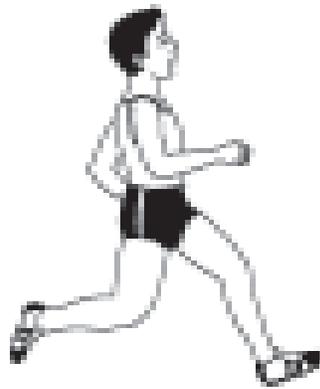


Fig. 39

Finish

Many races have been won by virtue of good finish and many others have been lost on account of poor finish. Therefore, good finish is as important as the good start. There are many kinds of finish but the best thing would

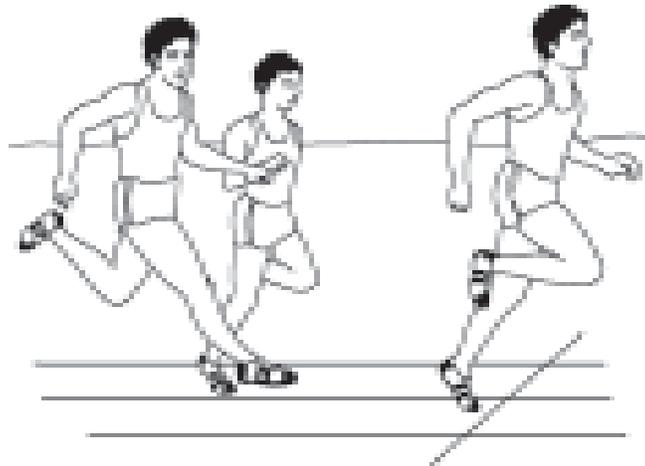


Fig. 40

be that about 8-10 metre short of the finishing line, maximum speed should be gained. A slight forward bend of the body is very useful for a good finish (see fig 40)

Time table for weekly practice

It is difficult to form different weekly timetable for every athlete. A general time table is suggested. An athlete can change the timetable according to his convenience and need.

Monday-	Jogging 400 m
	Movement of arms, legs & trunk
	200 m walk
	400 m race
	6-8 and 40-50 m fast race

Tuesday-	400m jogging Physical movements short and fast races 200 m walk 8-10 start 400 m race, show best and finally 100mt. full speed race.
Wednesday & Thursday-	Jogging and physical movements 8- 10 start and fast races. Once or twice" competing with other athletes
Friday-	Rest
Saturday-	Competition

Medium Distance Races

These include 800 and 1500 mt. races. For such races, a good athlete is he who, besides running fast, can maintain his speed. Therefore, these races primarily depend upon our physical stamina and strength. The real foundation of the education of the athlete is his stamina, strength and endurance. He should practice minimum five times more race both in morning and evening at the proper track. Sometimes he should run in sand, over the steps of the stadium or up hill. It can prove very beneficial for him.

The runners for these races should not get into confusion about the start etc. Start in these races can be from a standing position also. If the runner is confident of his training, doubtlessly he will lead the race. Athletes with short steps should also run with athletes with longer steps, for training purpose. A little costing during the training of races should also be learnt. It provides additional stamina and extra strength to the athlete in the last leg of the race, when he has to speed up. Those who run in short steps must increase their stamina so that they can run and complete the race at full speed. At the termination point, a runner with short steps should observe the length of the steps of the other athletes.

Hurdles

Two kinds of hurdles have been included in the sports clender of the school-higher hurdles for boys and lower hurdles for girls. This athletic event could not be



Fig. 41
Reaching Hurdle



Fig. 42
Jumping Hurdle



Fig. 43
Cross the Hurdle

very popular. Possibly because of the high cost of material. But it is not necessary to practise on very lofty hurdles. Ordinary and cheap hurdles can be prepared by anybody.

In the hurdle races, attention should be paid to the start, to reach the hurdle, to jump over it, the method of using steps in between the hurdles and the finish. Its start and finish are like the short races. In furlong, a school child takes about 8 jumps. The first hurdle can be reached in 7 or 8 steps. The jump should be so calculated that in the

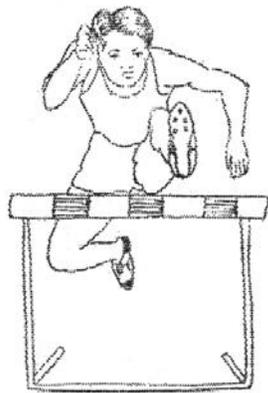


Fig. 44

Extended leg

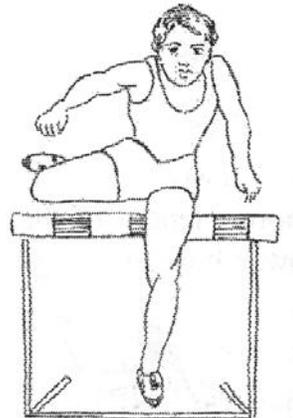


Fig. 45

Back leg position

1st hurdle the foot should be able to rise 6 ft before the hurdle to give its natural position. It should be so practised that a runner develops confidence and can jump over the first hurdle even with his eyes closed.

Crossing the hurdle should not appear as crossing the jumps, it should rather appear as a swim. For this action, the forward leg and step should be faster. While crossing a hurdle the waist should be bent forward and the rear leg should be seen twisting at the back.

The steps between the two hurdles depend on jumps. These jumps should be much practised so that you can maintain your speed.

Relay Races

Relay races are a team work, in which every member of the team runs an equal distance. In short distance relay races, the runner should run like sprint. The only difference between sprints and relay races is that in sprint it is an individual competition and in relay races it is a team competition. There are four members in a team, the baton is passed on to another member turn by turn while running.

To a large extent, the success of relay race depends upon the baton exchange. The responsibility of a exchanging or passing on the baton is that of the runner coming from the back. To take baton, the runner in the front, who has to take the baton, can be successful, if he runs at a speed of 20 mts.

The runner who has to receive the baton, will wait on the rear line of the exchange zone. When the rear runner is at a distance of 15-20 mts, the waiting runner (who has to receive the baton) will take the running position keeping his eyes focused on the rear runner.

When the rear runner is at the distance of 5- 10 mts, the next runner turning his head forward, will start running in the front. During the course of exchange, the front runner will extend his right arm towards back. The position of his hand will be like the letter 'V' shape and pass on the baton to front runner. There are techniques for baton exchange. For shorter races, indirect technique is applied as mentioned above. The position of holding and passing on the baton has been shown in the two figures below :

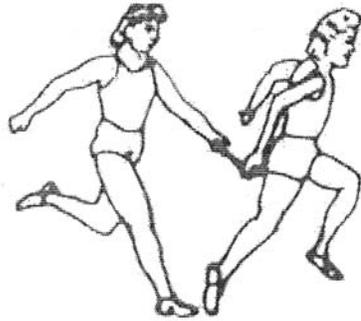


Fig. 46



Fig. 47

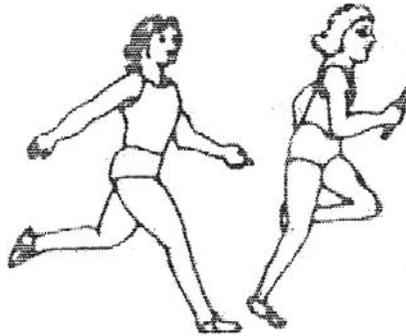


Fig. 48

In the competition of relay races, the four runners

will run in this sequence. The fastest runner will take off from no 4 and the slowest runner from no.1. The runner from no 1 should be a good starter. The remaining runners will be made to run from no.2 & no 3.

The general rules for the races

- (a) Sprints—are run in 4 wide lanes, so that there is no obstruction.
- (b) The choice of lanes is done by the draw of lots.
- (c) The starters will shout the instructions ‘take position’ and the runners will take position behind the starting line. Hearing the instructions ‘ready’ the runners will get ready and start at the sound of the gun shot. If any runner starts before the gun shot, that start is declared invalid. In the very beginning the runners are strictly warned about it. If he repeats that mistake, he is declared unfit to participate in the competition.
- (d) The runners who shift from their lanes are also declared unfit.
- (e) In 1500 and 5000 mts long distance races, the runners are not supposed to run in the separate lanes. If athlete wants to overtake the one ahead of him, he can do so only from the right side.

Regional meet /field events

Long jump- Long jump is a very popular athletic

event. Both speed and spring are required for it. Generally the following stages of technique are observed.

(a) reach (b) ascent (c) flight (d) descent

(a) Reach

For long jump, an athlete has to run 30-40 mts. At the time of this race, the jumper has to use two inspection points. First in the beginning and second at a distance of 15 mts. from the board of ascent. Till reaching the 2nd at the speed of the runner should be more. In the remaining part of the race he should prepare for the jump. He should mentally prepare himself for the upward jump so that the speed does not go less.

(b) Ascent

The situation of ascent begins from the jumping board. Foot should be placed flat on the board. After that



Fig. 49



Fig. 50

the foot should be rolled from the heel to the toe to gain a spring. The body should be kept straight. The centre of the gravity of the body falls on the ascending foot. When the ascending leg, gets straight for the jump, the other leg, the bending forward actions should be simultaneously done.

Fly

If the ascent is taken properly, the body will be straight and higher. From the chin to the upper part of the chest, the waist would make a straight line. The legs will be backward. By practice an athlete can learn this technique by kicking in the air. When the ascent is at the peak, the waist should be allowed to bend forward, so that the feet rise high. Slowly and slowly, move the legs forward, with heels in line with the waist.



Fig. 51
Position in Air

(c) Descent

At the time of descent, the feet must be extended at least one foot. Bring the body to the side of the feet between the knees so that the body goes ahead. For that pull your chin till the chest bends your waist forward and let your arms swing forward and downward.



Fig. 52

High jump

Like long jump, high jump is also a popular event in athletics. A man with a normal body and balanced habits can be a good jumper. Athlete with thin and light body are more successful in high jump. The new athletes, generally cross the bar through scissors style which has not proved very good. So the children should not be encouraged to follow this style.

These days high jump is generally in three styles-

- (1) Eastern style
- (2) Western style
- (3) Straddle

The high jump technique can be divided in 4 parts

1. Reach race
2. Ascent
3. Jumping over the cross bar
4. Descent

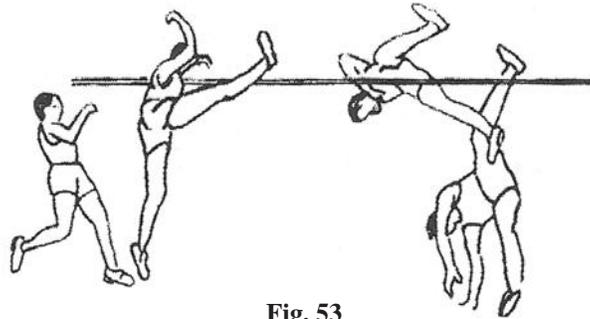


Fig. 53

Western Roll

(1) **Reach race**-In high jump, the reach race should be 7-9 steps, when the jumper will run to the cross bar at an angle of 45° . The jumper who is habitual of jumping with the right foot of jump will cross the bar with the right foot forward and the jumper habitual of jumping with left leg, from the left side.

(2) **Ascent** : Generally the ascent of the jumper will be at an angle of 45° from the cross bar, at a distance of 2 ft. With arms extended, the cross bar can be measured. Some athletes make a mistake by resetting to ascent much away from the cross bar. The jumper should feel relaxed while approaching the point of ascent. While taking the jump the jumper should raise the step, bend the body forward, extend his step a little and stamp the ground strongly. The free leg will swing upward and both the shoulders will be helpful in this swing. The body will swing forward. The forward step and the push from heel to toe will give a spring to the body. All this action should be perfect but comfortable. From the approach race to the ascent, there should be no pause in-between.

3-4 Ascent from the cross bar- In the western roll, the jumping leg is brought in-between the crossbar and the body. After crossing the bar, the descent is on the same leg. The face should be towards the ground and with the help of both the arms, the ascent is on one leg.

Straddle style- In this method, one has to make an angle of 25° - 40° till he reaches the cross bar. The runner with right foot-jumping, will make sure of the reach distance on left-side.

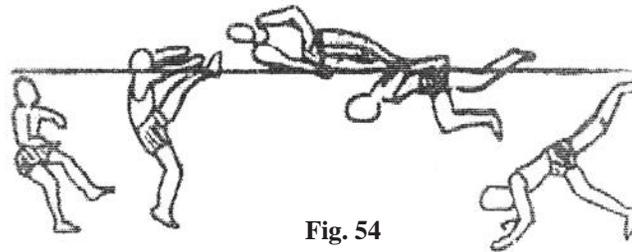


Fig. 54

Ascent- The foot for jumping comes right in front of the body. The body is straightened at the back. The foot has to be rolled from heel to toe. While jumping both the arms will swing to gain more and more help for the ascent.

Jumping over the Cross bar- The athletes who follow the straddle method generally take a long and high swing on the free leg. While jumping the cross bar, they bend enough over it. Then they stretch their legs and roll over the cross bar.

Descent- While jumping over the cross bar, the arms are bent over the elbows, but go with the body at the time of descent. The total descent is on one side back of the body.

Shot put - Throwing an article at a distance is a natural habit of man. In ancient times, man used to hunt animals by throwing stones. Possibly shotput originated from that. For shotput one needs good speed, stamina, the harmony between mental and physical reflexes and strong muscles. Tall and well-built athlete can achieve better. In reality the ball has not only to be pushed from the shoulder. In it one needs to learn some basic techniques as shown in the figures below.



Fig. 55. Holding

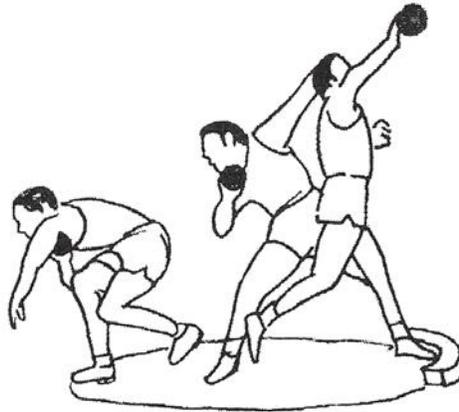


Fig. 56. Stance, Fig. 57. glide, Fig. 58. Release

(a) Holding- Place the shot between your fingers. The thumb and the little finger should be towards the body. The central 3 fingers should be stretched around the shot. In this way, the shot would be under control. After this hold, the shot will be brought between the chin and the neck.

The shot is carried on the front side of the shoulder. The other arm crosses upwards. (Primary position)

(b) Readiness- After coming into the proper position, the athlete catches the first preparation in the rear part of the circle. The upper part of the body bends a little backward. The other free arm is across the chest about 8-10 inches away. The total weight of the body is on the right leg and the left leg, a few inches ahead (about 16 inches), coming the ground. It should be a little left to the right leg.

(c) Forward Movement - To develop confidence and balance, the athlete swings his front leg twice or thrice. When he finds himself ready, he quickly lifts his left leg and takes a strong push with the other foot (right foot) straightened at the back. In this slip forward the right foot comes forward from its first position to the middle of the circle. The left foot, in this forward movement should not go beyond the arch of the circle. Jumping in this way badly effects the speed and the smoothness. During the forward movement the body will be bent forward.

(d) Release- When the right foot-comes quickly in the front, and the left foot is placed for the throw, swing your body to the front and give a forceful push to the shot. The twisted arm gets straight, the body is

completely lifted upwards and the shot is quickly released in the proper direction. Fingers and the wrist play a great role in the release. Remember that a joint action of release and glide can throw the shot farther.

Training programme for shot-put athletes.

As said earlier in this athletic event, tall and well built athletes are more successful. He must be physically strong and agile. Weight lifting exercises have proved very helpful for this event. In addition, he should follow the following weekly action programme-

(1) 400 mt. jogging. With the help of fingers, one should have at least 20 push ups against the earth or the wall. Exercises for the muscles of the stomach are also very helpful.

(2) Throwing shot without the actual shot 15-20 times and then with the actual shot. While throwing the shot, efforts should be made to increase the speed.

(3) Competition once a week.

Discus- Discus throw is very common event. It was there in Greek Olympics also, but with the passage of time, its rules, technique, the circle of throw have changed so much that if a Greek of an ancient time is asked to throw the disc today he will certainly get upset.

For this game, a long and powerful arm is required. The body should be very active and mental reflexes and harmony should be of a higher degree. Long and powerful arm is doubtlessly very helpful. Powerful muscles particularly of the stomach, make the game easier. We can say that for this athletic event, short, strong and very agile people are needed.

Technique- The following techniques should be brought into use :-

(1) Grip (2) Rotation (3) Reverse

(1) Grip- Hold the disc in the palm in such a way that the front parts of your fingers have a complete grip over it. The fingers should be stretched. The thumb should be away from the nearest finger and should be used to balance the discus. After the grip the arm is swung 2-3 times. In this way the discus will set in the palm and release tension of the mind.

(2) Rotation and release- Holding the disc firmly, the athlete stands in the rear of the circle. His back will be on the side of the throw. His feet will be extended according to the need. His right foot should be on the back line/throw line of the circle and the left foot slightly towards the right. The weight of the body should be on the right foot.

The total action of discus throw is a constant art. So one should get expert in the total exercise. The waving of the arm and the rotation of the body should be so done that the total strength should be devoted to the throw of the discus. In this total exercise, there will be the following stages-



Fig. 59

(a) When the swinging and the twist of the disc arm starts, it goes back of the right shoulder and the waist. Athlete bends a little forward. Now the body is ready for

the swing and the change. Now the weight of the body shifts from the right leg to the left.

(b) For a swing on the left foot, the right foot lifts from the earth and the left foot takes a spring in such a way that the total weight is on the right foot.

(c) In this position right shoulder, discus and the waist are bent backward. The right foot is slightly towards the left of the throw line in the circle. Almost 30 inches to 36 inches away from the rear line of the circle. In this way, one rotation is over. Right leg slightly bent but left leg almost straight, because it has to come up at the time of throw. The speed gained by the body helps in rotating

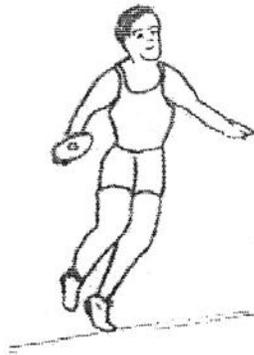


Fig. 60

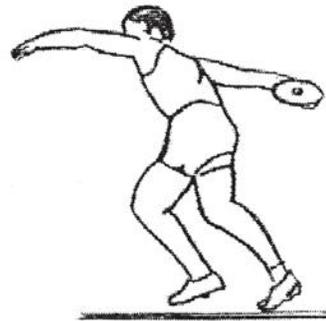


Fig. 61

and the left-leg reaches the front part of the circle. In this position, the discus arm is between the shoulder and the waist.

(d) This is the last stage when the whole body with

rotation gains speed and total strength is applied. The extension of the right leg, is a quick exercise. Side by side the waist bends forward and turns. The weight shifts on the left leg. Now with the help of fingers and the wrist, discus is thrown. If the release is proper, the disc will revolve and go like the hands of the clock, (see fig-60)

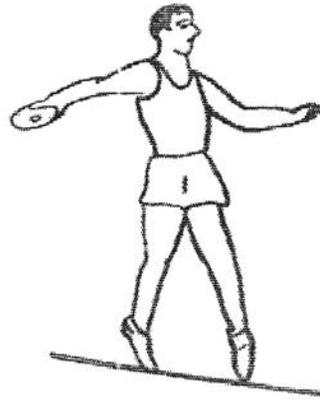


Fig. 62

(3) Reverse- The shifting of the feet is called reverse. In this the left foot comes forward and the right goes backward, so that the balance of the body can be maintained and one does not step out of the circle.

Training programme- For this event, strong and agile body is needed. For its training, the following are the techniques.

(1) Speed, Power, Agility, Balance should be maintained through exercises. Exercises which give strength to this event are 400 m slow race, exercises of the muscles, particularly shoulders, waist, stomach and legs.

(2) Without carrying the disc, do exercise, rotation and swing in the proper way.

(3) At least 2 competitions in a week.

Javelin throw

In the ancient times, at the time of war, Javelin throw was a very effective method used. The present game of Javelin throw, seems to have flourished in Scandinavia and Finland. That is why, the correct holding of Javelin is called 'Finish grip'

As in other events of distance throwing, in this event also, tall and strong armed athletes are required. For it a proper harmony of the reflexes of the body and mind are very important.

While throwing Javelin, the following facts should be borne in mind :-

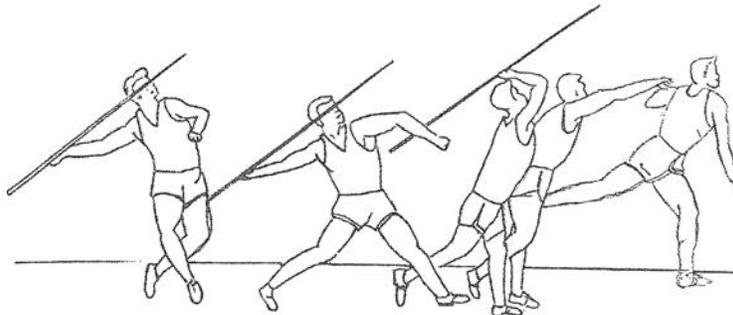


Fig. 63. Holding, Fig. 64. Carrying Javelin, Fig. 65. Approach, Fig. 66. Release,

Grip

Javelin can be gripped in two ways, one with the one finger and the other with two fingers. In both these grips, Javelin is placed in the palm and the upper part of the fist should be touching the strings. In one finger grip, the finger adjoining the thumb is on the upper part of string and gripped with the thumb. But the other fingers

are all on the strings. In the two finger grip, the two fingers adjoining the thumb are placed above the strings.

When the Javelin is carried, it should be borne in mind that it is above the shoulders and is pointed to the side of the throw line. It should be higher. Some athletes follow the wrong method of carrying it under the arm.

Reach- For gaining speed, an athlete has to run for about 100 ft. In this race, three inspection points are used. First in the beginning, next about 8 steps ahead and then 7 steps ahead of the second point. When an athlete reaches the third point, Javelin is pulled back and downwards. It is then in throwing position. The left part of the body is to the direction of the throw line. But the weight of the body is on the left foot.

The Release of Javelin : At this position, with a view to reducing speed of the body left foot is taken forward and fixed, whereas trunk moves forward. In this way, the power of the body goes to Javelin. Right leg should be extended and moved forward and hips are bent. The left shoulder is pulled down and the arm which has to throw the Javelin pulls it which is touching the elbow. In this position the total weight of the athlete is on the left leg and Javelin is hurled with full force. The last push is given by the wrist at the time of release.

Training : The legs of the Javelin thrower should be very fast and speedy. The muscles of his back and stomach should be very strong. The arm by which the

Javelin is thrown should also be strong. For proper training the following points are recommended :-

1. Exercise for the muscles and practice for 400 mt. slow race.
2. Running without Javelin, keeping in view the inspection point.
3. Throwing Javelin many times while standing.
4. Now throw Javelin 6-8 times so that your posture develops.
5. Two or three competitions of Javelin throw in a week.

General rules about throw

1. Shot discus and hammer are thrown by standing with in circles, the shape of which has already been mentioned.
2. Before and after the throw, no part of the body should touch the outer line of the circle.
3. After the throw, it is necessary to come out of the rear half of the circle. Going out of the circle from the front part is considered a foul.
4. The throw which falls in the fixed area only is considered correct.
5. If the participants in the competition are more than eight, the group is put on three preliminary trials. Out of the group only 8 such athletes are selected whose throws are maximum. Each gets three chances of throw with 3 throws in each. Out of these 6 throwers, the first position is given to the one whose throw is the maximum. The other positions are also decided on the basis of the throw.

Questionnaire

1. Which are the uses of athletics ?
2. Which are the athletic events prescribed for the school children ?
3. Give a brief account of the technique of an athlete ?
4. Throw light on the general rules of races ?
5. Write the qualities of a fast runner ?
6. **Answer the following :**
 - (a) The width of the track lane.
 - (b) The length, breadth and the thickness of board for long jump.
 - (c) Weight of the shotput, discus and javlin.
 - (d) The length of the hurdles for boys and girls.
 - (e) The diameter of the circle of ball and discus.
 - (f) Describe the rules of the throws.
 - (g) Write about the essential measurements of a 400 mt. track.
7. Describe the rule of the throws.
8. Write about the essential measurement of a 44 m track.
