

Let us develop health related fitness

You, who are to join the national workforce soon, must be healthy to do so. To be healthy you must be physically, mentally and socially fit. Physical fitness is the ability to correctly perform bodily functions. These abilities are the qualities of being physically fit. They are called physical fitness factors. There are two categories of these as skill related physical fitness factors and health related physical fitness factors. Both of these can be developed through various activities.

In grade 7 you learned about five physical fitness factors, exercises to develop them and how to measure them.

In this lesson you will learn about health related physical fitness and how to develop it.

Physical fitness

We perform bodily functions on a daily basis. To perform these we use various movements, which occur at various levels.

Some find these movements easy, while others find them more difficult. These differences occur due to the differences in physical fitness.

As we know the skills we have to perform the above activities are called as physical fitness factors or physical fitness qualities. These qualities of physical fitness can be developed through various exercises and activities.

Health related physical fitness

Your body is created by many systems working together.

For example, imagine you are playing cricket and are running fast to catch the ball. As you run your heart rate and breathing increase. You breath faster to obtain the necessary oxygen. To distribute this oxygen around the body the heart beats faster.

Health related physical fitness factors are the factors that directly affect your health.

Health related physical fitness factors

1. Cardiovascular endurance
2. Muscular endurance
3. Muscular strength
4. Flexibility
5. Body composition

These factors help people to maintain good health.

Cardiovascular endurance

This is the endurance ability of the heart and lungs. Oxygen is essential for body functions, carbon dioxide is created as a waste material. The respiratory system helps to obtain this oxygen and the blood circulatory system distributes it around the body. The carbon dioxide in the cells enters the blood stream and travels to the lungs where it is removed from the body through respiration. Therefore both the respiratory system as well as the blood circulatory system are essential for this process.

Good cardiovascular endurance is the ability of the heart and respiratory system to function properly and provide more oxygen to the muscles.

Exercises to develop cardiovascular endurance

The heart rate will increase when activities are performed. If the heart rate does not increase cardiovascular endurance will not improve however much daily activities are performed.

These exercises can be performed at home by walking fast and by performing everyday activities manually instead of using machines.

eg:

- Walking fast
- Riding bicycles
- Jogging
- Swimming
- Aerobics

You will be able to increase the efficiency of your heart and lungs through these exercises.



Figure 15.1- Cycling

Benefits of developing cardiovascular endurance

1. The ability to distribute and use of oxygen becomes efficient
2. The waste products of the body are quickly excreted
3. Can do more work without getting tired
4. Become better at sports
5. Becomes happy
6. Burn fat and control weight



Activity

1. Measure your heartbeat and breathing rate before and after running for 5 minutes.

Muscular endurance

The muscular system helps in all movements of the body. To continue these movements effectively muscular endurance must be developed.

Muscular endurance is the ability of the muscles to work for a long time without getting fatigued.

Exercises to develop muscular endurance

These exercises should be performed for a long time or with many repetitions. Body weight or an external weight could be used for this.

eg:

- Mountain climbing
- Running on sand
- Climbing stairs
- Jumping exercise
- Using exercise machines (with weights)
- Playing football and badminton
- Gardening for a long time



Figure 15.2 - Playing football

Benefits of developing muscular endurance

1. Can work for a long time without exhaustion
2. Can work without being tired
3. Better at sports



Activity

Divide the class into 2 teams. One team forms a circle, the other team stays inside the circle. One person from the circle whilst hopping try to catch the people inside the circle. Those who get caught are out of the game. When the person hopping gets tired another person of his team becomes the catcher.

Muscular Strength

You have seen the muscles of weightlifters. Unlike our muscles theirs are well defined. They have a large amount of muscular strength. Short distance runners, those who participate in jumps and throws also need muscular strength. Those who lift weights in their occupation also have a large amount of muscular strength.

Muscular strength is the amount of energy that can be generated by the muscles in order to fulfill a task.

Exercises to develop muscular strength

As the muscles have to bear a large weight these exercises should only be repeated a few times.

eg:

- Jumps
- Push - ups
- Half squat
- Perform weightlifting under professional supervision
- Use weightlifting machines
- Pushing heavy equipment, pulling water from the well, pushing a wheelbarrow with a weight

These exercises
are suitable after
age of 17 years



Figure 15.3-Push - ups



Figure 15.4-Half - squat

Benefits of developing muscular strength

1. Development of muscles and blood vessels
2. Blood supply to the muscles increases
3. Muscle activity increases
4. Muscles can generate more strength
5. A good figure due to well defined muscles
6. Development of sports skills

Activity

In pairs face each other and keep hands together and push the hands forward and backward. The same side foot of both should be in front.

Flexibility

Observe a gymnast. Observe how the body bends at the joints. Flexibility is important to bend and stretch to maintain the postures in everyday life. If our body is less flexible our efficiency decreases. Flexibility is also important in sports.

Flexibility is the ability to move or stretch through the joints.

Exercises to develop flexibility

- Stretching exercises
- Gymnastics
- Yoga
- Swimming
- Dancing
- Reaching up or bending to get something, cutting paddy, pulling a weight



Figure 15.5 - Gymnastic

Benefits of developing flexibility

1. Minimize joint pains
2. Joints will be efficient
3. Correct posture
4. Balance
5. Develop sports skills



Activity

Sit on the floor with your legs frontstretched. Try to touch your toes with your hands bending your body.

Body Composition

Our body contains water, proteins, fat and minerals. The composition of the body can be divided into two main components.

1. Fat component
2. Components that is free of fat

Fat deposits are considered in the first category, and other components such as muscle, bone, skin and water, which do not contain fat are in the second category.

Body composition is the components which make up the body.

There are differences in the body of persons according to height and weight. Larger bodies have larger layer of fat deposited under the skin while thinner bodies have little or no fat deposited under the skin.

Body composition must be correct for good health, if body composition is maintained correctly you feel healthier and physical fitness improves. There is a direct link between the body composition and the athletic performance in athletes.

Exercises to maintain correct body composition

- Eat a correct diet according to your age and level of activity
- Eat less sugar, fat and salt
- Engage in exercise for 30 minutes daily.
eg: speed walking, jogging, aerobics, dancing
- Engage in household work briskly
- Do household activities manually with minimum use of mechanical equipment
- Walk and use the stairs whenever possible
- Get adequate rest and sleep
- Do not use narcotics



Figure 15.6 - Dancing



Figure 15.7 -Jogging

Benefits of having a good body composition

1. Can maintain the body mass index (BMI)
2. Due to a low amount of fat, easy to manoeuvre body and engage in activities are easier
3. Prevent noncommunicable diseases
4. Body can function more efficiently and can engage in activities more efficiently
5. Joint mobility is effective and prone to less stress



Activity

Create a dance or rhythmic exercise routine to a song and perform it.

Summary

Health related physical fitness help us to have a healthy life.

The health related physical fitness factors are cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition.

These can be developed through various activities such as exercises, sports and daily activities

Exercise

Fill the table

Factor	Definition	Exercises to develop the factor	Benefits of developing the factor
Cardiovascular endurance		1. 2.	1. 2.
Muscular endurance		1. 2.	1. 2.
Muscular strength		1. 2.	1. 2.
Flexibility		1. 2.	1. 2.
Body composition		1. 2.	1. 2.