

Let us maintain fitness for a healthy life

In order to lead a healthy life, it is important to maintain mental, social and physical fitness. Physical fitness is a combination of skills we can improve for maximum and correct performance of physical activities. When we successfully face challenges, live productively and happily it is known as mental fitness. Maintaining a good relationship with the society, contributing to the society and one's self is social fitness.

In previous grades under the section of fitness for a healthy life, we learned about tests to measure physical fitness, programmes to develop physical fitness and about mental fitness.

The first part of this lesson is on important factors for health related fitness and available programmes to develop these factors. The second part will deal with ways of maintaining the psycho-social well being by controlling emotions and relieving stress.

9.1 Health related physical fitness

Physical fitness is a set of attributes or characteristics that people possess or can be achieved which relate to the ability to perform day to day physical activities effectively.

Health related physical fitness is factors that help a person to maintain good health.

Following are the five components of health related physical fitness.

1. Cardio vascular fitness
2. Muscular endurance
3. Muscular strength
4. Flexibility
5. Body composition

The above factors can be further developed by engaging in exercise, training, having a balanced diet and having adequate rest. Let us learn more about these five components.

Cardio vascular fitness

Cardiovascular fitness refers to the ability of your heart, lungs and organs to consume, transport and utilize oxygen. There should be uninterrupted supply of oxygen and nutrition to the tissues to work for long periods as well as to remove the waste. The circulatory, respiratory and excretory systems work jointly for the optimum functioning of the muscles.

The energy required by the body is produced through aerobic metabolism by utilizing oxygen and nutrients.

Developing fitness will help us to do our work without much effort within a short period of time. The performance of those engaged in long distance running, football, walking and swimming will also be better.

Activities helpful in developing cardio vascular fitness

1. Brisk walking
2. Jogging
3. Cycling
4. Swimming
5. Aerobics

When engaging in such exercises it is important that the pulse rate is maintained above the normal rate. It is advisable not to use automated equipment in our daily life where you can exert your self.



Figure 9.1 - Brisk walking

e.g: Walking briskly
Sweeping the compound rhythmically for a long time

Benefits of developing cardio vascular fitness

1. Improves oxygen circulation in the body
2. Able to perform more work with less effort
3. Burning fat and weight reduction
4. Maintains mental well being
5. Improves performance in sports and other physical activities
6. Effective clearance of waste from body

Muscular Endurance

Muscular endurance is the ability of a muscle or a group of muscles to sustain repeated contractions against a resistance for an extended period of time. Developing this fitness has a direct influence on improving the health of a person. This can be improved by engaging in day to day activities, activities that can be performed using one's own body weight and activities that can be done using external resistance.

Exercise that can develop muscular endurance

It is important to engage in these activities for a long duration or do many repetitions.

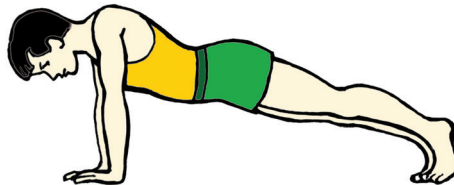


Figure 9.2 - Push - ups

- Activities using body weight
 1. Different types of jumps
 2. Push ups
 3. Dips
 4. Playing football/badminton
 5. Running on the beach
 6. Cycling
 7. Hiking
- Activities/exercises using extra weight and multiple repetitions.

Apart from this, it is important to do daily chores without using automated equipment e.g: drawing water from a well, working in the garden, pounding flour, chopping firewood, etc.

Benefits of developing muscular endurance

1. With less effort we can engage in more demanding work for a long period of time.
2. With less effort we can perform more work.

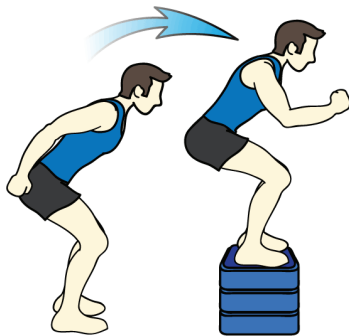
Muscular strength

Muscular strength is the ability of a muscle to exert maximal force through a given range of motions at a single given point.

In order to perform day-to-day activities smoothly a strong set of muscles are needed. For example, carrying a weight, pushing a weight. Similarly developing this strength is important when engaging in sports. Throwing the put shot and weight lifting are examples of some of them.

Activities that help in developing muscular strength

To develop muscular strength one should engage in activities lesser number of times as this will give more resistance.



Jumping exercises



Throwing heavy objects

Figure 9.3

1. Weight lifting activities under supervision of a trainer
2. Engaging in jumping exercises
3. Engaging in push ups
4. Engaging in dips
5. Throwing heavy objects

Along with the above activities engaging in the following activities such as drawing water from a well, pushing a loaded wheel barrow will help to develop muscular strength.

Benefits of developing muscular strength

1. Proper functioning of the blood vessels and muscles.
2. Improvement in the functioning of the muscles.
3. Ability to generate more muscle power.
4. Better functioning of joints and muscles.
5. Improved self-image.
6. Improvement in the co-ordination of movements.
7. Ability to maintain a good posture.
8. Ability to prevent injuries.

Flexibility

Flexibility is the range of motions in a joint or group of joints. For flexible movement of joints, the length of the muscles, state of the ligaments and joints are important.

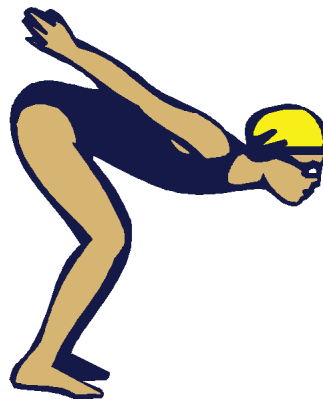
Limitations in flexibility will affect the function of the joints and the efficiency of the person decreases. As a result various joint ailments and injuries could develop.

By engaging in exercises, to suit different joints, one will be able to develop flexibility.

Activities to develop flexibility



Ballet dancing



Swimming

Figure 9.4

1. Stretching exercises
2. Yoga exercises
3. Gymnastics
4. Swimming
5. Ballet dancing

When engaging in the above exercises, and day-to-day activities such as chopping fire wood, drawing water and working in the garden flexibility can be improved.

Benefits of developing flexibility

1. Joints function to the maximum capacity
2. Minimum joint related ailments
3. Helps to maintain balance
4. Helps to improve posture

Body composition

The human body is composed of water, protein, minerals and fat. This is called body composition. Body composition can be divided into two main components.

1. Fat component
2. Fat free component

Fat component includes all the fat in the body. Fat free component is composed of all the non-fatty tissues of the body, including bones, muscles, organs and connective tissues.

The amount of fat in a healthy person is mentioned as a percentage of the body weight. Generally for a male it is between 20% - 25% while for a female it is 30% - 35%. Risk of getting a non-communicable disease is associated with a high level of fat in our body. Therefore it is important to maintain the proper percentage of fat in the body from young age.

Things that can be done to maintain a proper body composition

1. Have a healthy, well-balanced diet.
2. Minimize the intake of salt, sugar and oily food.
3. Engage in aerobic exercises or sports for at least 30 minutes daily.
4. Avoid using alcohol.

5. Get adequate amount of sleep and rest.
6. Whenever possible engage in day-to-day activities with minimum use of equipment
e.g: walking, climbing steps etc.
7. Engaging in day-to-day activities enthusiastically and actively.



Figure 9.5 - Climbing steps

Benefits of having the correct body composition

1. Be healthy
2. Be efficient
3. Minimize injuries and disabilities
4. Reduce risk of non-communicable diseases
5. Develop a good physical appearance



Activity

Plan an activity, incorporating different types of activities that will help develop muscular endurance.

Do this activity with your friends with help from the health science teacher.

Proper nutrition as well as physical exercise is important to lead a healthy life. We can use the “food pyramid” to learn about healthy food and use the “physical activity pyramid” to develop physical fitness.

Activity pyramid

Through the activity pyramid one can be certain how to maintain a healthy life by taking part in exercises and the time to be spent on the same.



Figure 9.6 - Activity pyramid

9.2 Psycho-social well-being

Psycho-social well-being is the ability to use talents and abilities to cope with stressful situations, work effectively and contribute positively to the society. Maintaining a very good physical and mental state is important. Emotions develop within a person and balancing them is very important for positive mental and physical health. The way we think in a situation, one's personality and behaviour of others affect our emotions.

Psycho-social well-being could be achieved by identifying positive and negative emotions, the reasons for them, the reasons for stress, its features and steps that can be taken to minimize stress.

Control of emotions

While playing a game of cricket with friends, Piyal misses a catch when Kumara the highest scorer was batting. Sunil gets angry over the issue and blames Piyal. Pubudu intervenes and settles the argument between Sunil and Piyal.



Activity

We come across many such situations in our day to day life.

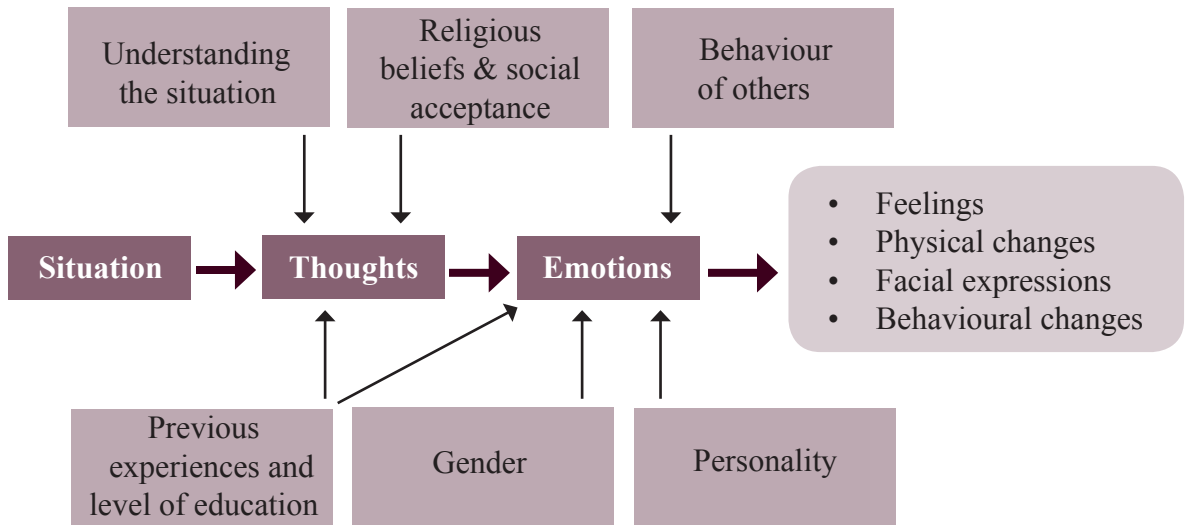
1. What are the emotions shown in the above situation?
2. What are the reasons for such emotions?

Emotion means a strong feeling. It can change our activities externally as well as internally. Emotions could also be identified as thoughts that occur very fast and instantly in the mind of a person.

We have pleasant emotions as well as unpleasant emotions. Happiness, appreciation, exaltation, compassion, and being bountiful are a few pleasant emotions. Anger, fear, disgust, sorrow and jealousy are a few unpleasant emotions.

Factors affecting emotions

Diagram 9.1



According to the above diagram many factors affect emotions. Let us find out reasons for Sunil's anger. The way we look at situations and what we expect in such situations affect our emotions. If Piyal had not missed the catch at a crucial point of the game it is possible that Sunil would not have got very angry. Sunil's and Pubudu's different reactions to the situation show how persons with different personalities differently react to the same situation.

There are other reasons that affect emotions. The way males and females express their emotions or feelings are different. Generally males hesitate to express fear or sorrow. In certain cultures, feelings or emotions are not expressed openly. Some emotions and feelings that are expressed may depend on past experience

e.g: Due to a road traffic accident in the past, a person may be reluctant to drive a vehicle.

Feelings and behaviour of others could affect our emotions. While watching a sports event if a group behaves in an unruly manner it will entice the others to behave in the same manner.

Changes that occur due to emotions

Physical changes such as an increase in the rate of heart beat, increased blood pressure, rapid breathing, increased sweating, dryness of the mouth and lips occur when an individual is subject to emotions like anger and fear. These changes help one to make a decision whether to escape or fight the situation. Characteristic facial expressions can be seen according to different emotions. Think for a while the changes you could see when you are sad, happy or afraid. These changes help others identify your emotions. Emotions can affect our decisions. It could make us take wrong decisions. Emotions can affect our behaviour and situations that create anger can result in one becoming aggressive. Even at times where positive emotions occur, one must not behave in a manner that would harm others.



Activity

Complete the following chart with the help of the teacher.

Results of positive emotions	Results of negative emotions

Stress

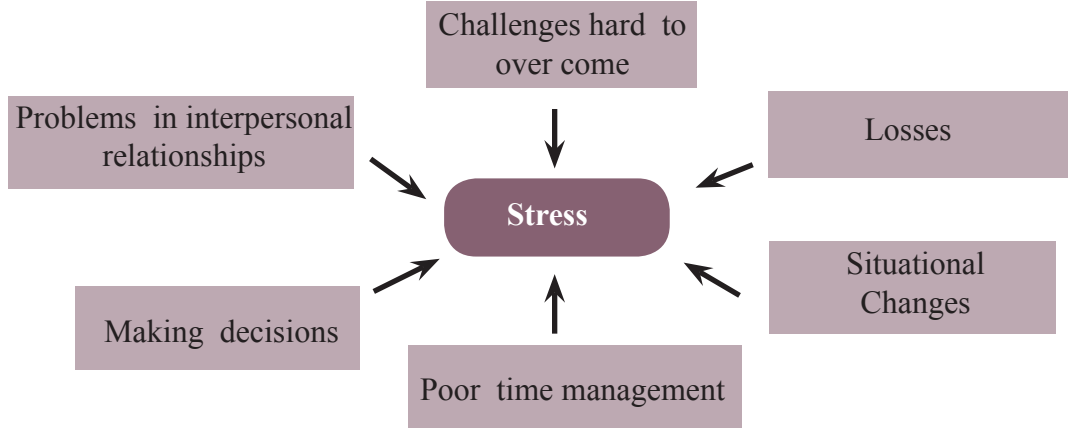
Stress is the pressure or worry caused by a problem and is a mental reaction to a situation involving challenge or danger. A moderate amount of stress helps us to engage in our day-to-day activities effectively. The stress to do well at an examination is a challenge and that stress helps you to study better but excess stress will interfere in our activities.

Stressful situations faced by students

1. Facing exams
2. Entering a new school
3. A close friend leaving school
4. Participating in sports
5. Brawls between parents
6. Separation from parents

Factors or situations affecting stress

Diagram 9.2



1. Problems in interpersonal relationships

A common reason for stress is found to be problems due to interpersonal relationships. Misunderstandings between parents, parents and children, employers and employees or among friends can lead to stressful situations.



2. Losses

Loss of something we enjoyed or loss of a person that we liked very much may lead to development of stress. A very close friend leaving school, parents going overseas, are a few instances that we get separated from loved ones. Similarly loss of money or property also leads to the development of stress. Situations where expectations are not met or self-respect is tarnished, can be considered as losses leading to stress.

3. Situational changes

Many changes take place in our day-to-day life. Achieving recognition through hard work, becoming a games captain or a promotion in the job are a few examples. Achievement of recognition brings happiness, but the effort to maintain it and the responsibility associated with it and the expectations can give us stress. Marriage, becoming parents, starting a job also gives rise to stress. These can be recognized as situational changes that contribute to stress.

4. Making decisions

In our day-to-day life, in different situations we make decisions. Selecting subjects or selecting a new school are some situations we face, where we have more than one choice. As we want to make the best selection, it would lead to development of stress.



5. Challenges that are difficult to achieve

Ambitions that are difficult to achieve or challenges difficult to overcome can also be a reason for stress. These are either expectations created by us or targets laid down by others which we strive to achieve. Facing such challenges successfully help us to have good mental and social well-being.

6. Poor time management

Poor time management is one of the main reasons for people to develop stress. Some students are able to attend to their studies while engaging in house hold activities as well as extra-curricular activities such as sports or music due to good time management.



Bullying

Very often school children are bullied. This can take place targeting a particular student in the class. This can take the form of harassing a student by mocking or joking which would tarnish the individual's self-esteem or stealing his belongings. The person getting bullied can find it intolerable suffer mental and physically. Such incidents occur when one tries to cover up one's own defects/short comings and demonstrate that he/she is better. The victims of bullying could face long term psychological distress. Ragging carried out at certain institutions can also be considered as a form of bullying. If you happen to witness bullying of any kind informing the teacher is our duty and responsibility.

Characteristics of stress

Certain physical changes can occur due to stress. As explained in the section on emotions, palpitation, high blood pressure, sweating, dryness of the lips are some such visible physical changes. These changes are important as they give energy either to face or escape the situation. Undergoing stressful situations for a long

time can lead to the development of the following mental and behavioural changes.

Table 9.1

Physical characteristics	Mental Characteristics	Behavioural changes
Increase in pulse rate	Irritability	Quarrelsome
Increase in blood pressure	Reduced concentration	Less active
Breathing very fast	Forgetfulness	Restless
Sweating	Desolation	Reduced interaction with others

Consequences of long term stress

Long term stress has many adverse effects on health:

- High risk of getting non-communicable diseases, such as diabetes, high blood pressure, heart disease and mental illness
- Depression

Losses and difficult challenges can lead to depression. Feeling sad most of the time, crying, preferring to be alone, reduced activity are some characteristics of depression. Medical advice is very important for this condition.

Managing stress

A few points to manage stress:

1. Identify reasons and implement alternative methods for dealing with stress
2. Express feelings
3. Understand the reality of the problem
4. Proper time management
5. Stress management – face it positively or control it confidently.

1. Identifying reasons and ways of coping with stress

Although some suffer from stress, the clear reasons for their stress are not clearly identified. The first step in the management of stress is to identify the reason for it. Once the problems are identified they should be solved by starting with the easiest ones.

It is important to work to minimize stressful situations e.g: accepting a work load that is possible to manage. Therefore it is important that one accepts work that is within one's capacity.

2. Expressing feelings

During times of stress talking and discussing about them with friends and family will help to reduce the stress. Stress that could develop due to negligence or carelessness of others at work place could also be overcome by discussing with them.

3. Understanding the reality of the problem

Looking at the stressful situation in a positive way, would help to relieve stress. As an example, when you are late to work due to traffic, by blaming the other drivers or tooting the horn results in increased stress. Understanding that you are not able to control the traffic and being calm will help you to reduce your stress. Reducing stressful situations eg. finding ways of avoiding traffic such as leaving before the traffic builds up or using alternative routes is another way of coping.

4. Proper time management

Education and job related stress can be well reduced by proper time management.

Stress could lead to behavioural changes in people. This brings negative effects on the individual as well as on others around you.

Behaviour that could be seen in people due to stress

1. Squabbling with others
2. Smoking
3. Using illicit drugs and alcohol
4. Binge eating or excessive intake of food
5. Postponement of work

Activities that we can indulge in to reduce stress in our daily life



Meditating



Yoga exercise



Engaging in games



Swimming

Figure - 9.8

1. Have adequate sleep and rest
2. Take a 30 minute walk daily, Engage in games such as volleyball, football etc. and in activities such as running and swimming
3. Engage in religious activities, meditation and exercises to develop concentration.
4. Enjoy the natural beauty
e.g: enjoy the scene of setting sun / sun rise
5. Peer group companionship
6. Listen to music
7. Engage in leisure activities
8. Rearing pets

In order to maintain good mental health it is important to be always of good behaviour and not only when faced with stressful situations. This can be achieved through walking, engaging in sports etc. It will improve our physical as well as mental health. Listening to music and engaging in hobbies help to improve mental health and reduce stress. As a result this helps us to face stressful situations successfully.

In stressful situations You can get the help of the counselling unit of your school or "Suwa sariya" of the Ministry of Health Education Bureau.

Suwa seriya - 0710107107 - www.suwasariya.gov.lk



Activity

Think of a stressful situation you faced. Make a small report on your behaviour at that moment

Summary

There are five components of physical fitness. They are cardiovascular fitness, muscular endurance, muscular strength, flexibility and body composition. Improving these five components directly help to lead a healthy life. To improve health related fitness we can engage in many activities such as games, exercises and getting involved in routine household activities. Leading a healthy life should begin in one's childhood. Using the food pyramid and physical activity pyramid, to plan a healthy diet and engage in adequate physical activity respectively, will help people to lead a healthy life.

We have positive as well as negative emotions. These emotions can bring about mental and physical changes in us, and influence our decisions and behaviour. Problems in relationships, situational changes, decision making, challenges, losses and poor time management are reasons for stress. To manage stress successfully, we should identify the reasons for stress, understand the reality, express feelings freely, and have good time management and stress management strategies.



Exercises;

1. Write five components of physical fitness.
2. Mention three benefits of improved cardio vascular fitness.
3. Mention three benefits of improved muscular strength.
4. Mention five activities that can be adopted to improve flexibility.
5. Mention three factors that will influence the development of emotions.
6. Mention five factors that will influence the development of mental stress.
7. Mention four activities that can be adopted to relieve stress.