



Ministry of Education  
and Sports

# HOME-STUDY LEARNING



PHYSICAL EDUCATION

A u g u s t 2 0 2 0





Published 2020

This material has been developed as a home-study intervention for schools during the lockdown caused by the COVID-19 pandemic to support continuity of learning.

Therefore, this material is restricted from being reproduced for any commercial gains.

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## FOREWORD

Following the outbreak of the COVID-19 pandemic, government of Uganda closed all schools and other educational institutions to minimize the spread of the coronavirus. This has affected more than 36,314 primary schools, 3129 secondary schools, 430,778 teachers and 12,777,390 learners.

The COVID-19 outbreak and subsequent closure of all has had drastically impacted on learning especially curriculum coverage, loss of interest in education and learner readiness in case schools open. This could result in massive rates of learner dropouts due to unwanted pregnancies and lack of school fees among others.

To mitigate the impact of the pandemic on the education system in Uganda, the Ministry of Education and Sports (MoES) constituted a Sector Response Taskforce (SRT) to strengthen the sector's preparedness and response measures. The SRT and National Curriculum Development Centre developed print home-study materials, radio and television scripts for some selected subjects for all learners from Pre-Primary to Advanced Level. The materials will enhance continued learning and learning for progression during this period of the lockdown, and will still be relevant when schools resume.

The materials focused on critical competences in all subjects in the curricula to enable the learners to achieve without the teachers' guidance. Therefore effort should be made for all learners to access and use these materials during the lockdown. Similarly, teachers are advised to get these materials in order to plan appropriately for further learning when schools resume, while parents/guardians need to ensure that their children access copies of these materials and use them appropriately. I recognise the effort of National Curriculum Development Centre in responding to this emergency through appropriate guidance and the timely development of these home study materials. I recommend them for use by all learners during the lockdown.



**Alex Kakooza**

Permanent Secretary  
Ministry of Education and Sports

## ACKNOWLEDGEMENTS

National Curriculum Development Centre (NCDC) would like to express its appreciation to all those who worked tirelessly towards the production of home-study materials for Pre-Primary, Primary and Secondary Levels of Education during the COVID-19 lockdown in Uganda.

The Centre appreciates the contribution from all those who guided the development of these materials to make sure they are of quality; Development partners - SESIL, Save the Children and UNICEF; all the Panel members of the various subjects; sister institutions - UNEB and DES for their valuable contributions.

NCDC takes the responsibility for any shortcomings that might be identified in this publication and welcomes suggestions for improvement. The comments and suggestions may be communicated to NCDC through P.O. Box 7002 Kampala or email [admin@ncdc.go.ug](mailto:admin@ncdc.go.ug) or by visiting our website at <http://ncdc.go.ug/node/13>.



**Grace K. Baguma**  
Director,  
National Curriculum Development Centre

## ABOUT THIS BOOKLET

Dear learner, you are welcome to this home-study package. This content focuses on critical competences in the syllabus.

The content is organised into lesson units. Each unit has lesson activities, summary notes and assessment activities. Some lessons have projects that you need to carry out at home during this period. You are free to use other reference materials to get more information for specific topics.

Seek guidance from people at home who are knowledgeable to clarify in case of a challenge. The knowledge you can acquire from this content can be supplemented with other learning options that may be offered on radio, television, newspaper learning programmes. More learning materials can also be accessed by visiting our website at [www.ncdc.go.ug](http://www.ncdc.go.ug) or [ncdc-go-ug.digital/](http://ncdc-go-ug.digital/). You can access the website using an internet enabled computer or mobile phone.

We encourage you to present your work to your class teacher when schools resume so that your teacher is able to know what you learned during the time you have been away from school. This will form part of your assessment. Your teacher will also assess the assignments you will have done and do corrections where you might not have done it right.

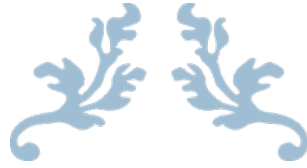
The content has been developed with full awareness of the home learning environment without direct supervision of the teacher. The methods, examples and activities used in the materials have been carefully selected to facilitate continuity of learning.

You are therefore in charge of your own learning. You need to give yourself favourable time for learning. This material can as well be used beyond the home-study situation. Keep it for reference anytime.

Develop your learning timetable to cater for continuity of learning and other responsibilities given to you at home.

**Enjoy learning**





# PHYSICAL EDUCATION SELF STUDY MATERIAL

SENIOR TWO, THREE AND FOUR



## TOPIC 1: PHYSICAL FITNESS



### The Concept of Physical Fitness

Dear Learner you are welcome to today's lesson. In this physical education self-study material, you are going to learn about the different aspects of physical fitness.

#### Introduction

When you think about what you do daily, you notice that you do not perform the same activity equally. For example, when the bell rings and you all run to class, you will enter class at different times, yet you will all be running from the same place such as the canteen or the playing field. In this case, those who run and reach class first are said to be fit.

Physical fitness is a measure of your body's ability to function well through the daily demanding activities you engage in. These activities affect your body in various ways. You therefore need a number of characteristics to do the different fitness activities. They are called the physical fitness components as shown in the figure below.





## Ensuring Safety During Exercise

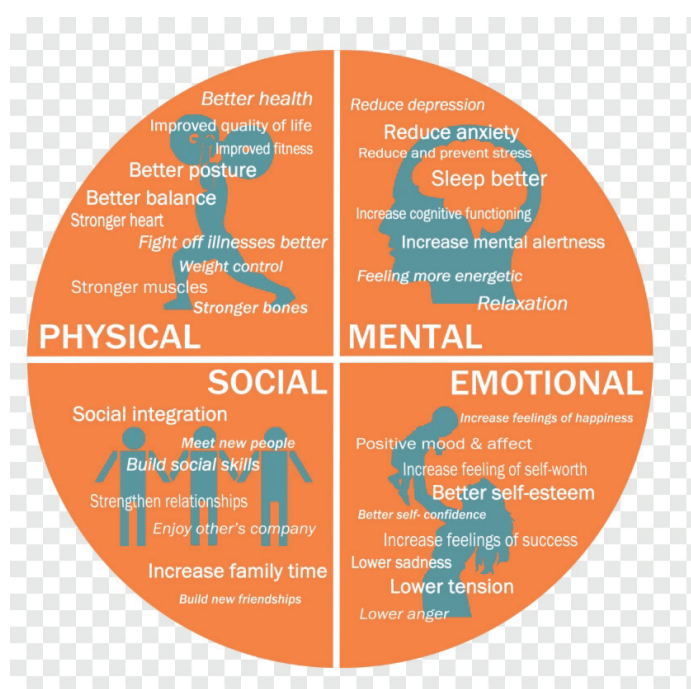
Before starting the exercises in this self-study material, you need to keep safe. There are four main parts for ensuring safety while exercising. These are:

1. **The safety of the place where you are going to exercise from.** Clear so that it is free from all the objects that can cause you harm. You also need a soft ground onto which to perform other exercises.

2. **The safety of the materials you are to use while exercising.** Make sure that they are the right materials for the intended exercise.
3. The safety of the exercises you are to perform
4. The safety of your body before, during and after exercise
  - a) Always warm up thoroughly before performing physical fitness training. Perform 5-10 minutes of light aerobic exercise followed by stretching to all the major muscle groups. Warm up is intended to prepare your body muscles, raise body temperature and prepare you even psychologically for the activity to be carried out.
  - b) The exercises in this self-study material have been designed for safety if you engage in them correctly. It is recommended that you follow the given instructions or illustrations.
  - c) Always finish your training with a cool down composed of slow movements like walking or jogging followed by stretching exercises.

## Benefits of Engaging in Physical Activity

The figure below shows some benefits of participating in organized physical activity.



## Topic Summary

In this introductory chapter, you have learnt about the meaning of physical fitness, the components and the importance.

**TIP:** Prepare yourself for the different physical exercises to improve your physical fitness. This will greatly improve your health and well-being as you go through this break caused by COVID-19.

## Glossary

- **Physical fitness** is a measure of your body's ability to function well through the demanding activities you engage in.
- **Physical fitness components** are a set of characteristics, possessed by an individual that can be improved upon by engaging in appropriate exercise programmes, in turn aiding health and physical performance.
- **Hypo-kinetic diseases** are health conditions which people get due to sitting much of their time. As a result, they accumulate a lot of fat in their bodies which puts them at risk of diseases. These include high blood pressure, diabetes, obesity, stroke and heart attack.

## TOPIC: FITNESS-CARDIO VASCULAR ENDURANCE



### Performing Cardiovascular Endurance Exercises

By the end of this lesson, you should be able to perform cardio vascular endurance exercises with an aim of improving fitness levels.

**You will need:** a clean space to work from free from harmful objects.

- first aid materials
- appropriate wear
- access to drinking water
- skipping rope

## Introduction



In your daily life, you engage in various activities like walking, running, dancing, mopping and digging. As you perform these activities, your heart supplies blood with oxygen to the whole body so that you can be able to carry on with these activities for some time.

Cardiovascular endurance is the level at which your heart and lungs work together when you are exercising for an extended period of time. This shows how efficiently your respiratory system functions and is an indicator of how physically fit and healthy you are.

The longer the heart and lungs can withstand a physical activity, the fitter and healthier you are!

Do you engage in physical activities daily? If yes, what kind of activities do you do and how do you feel? Are these physical activities good to your heart and lungs when you engage in them?

**TIP:** It is very important for you to engage in cardiovascular endurance exercises more often for a better lifestyle.

### Activity 1

**Instructions:** Perform exercises 2-7 below. Do 3 sets of the same exercises but take a break of 3 minutes in between the different sets.

A set in training means one occurrence of a certain number of repetitions. For example, if you do all the exercises illustrated below (2-7), that is one set. So in this case, you are to do 3 sets of the activities below.

1. Conduct a simple warm up for 5 minutes before the following activities

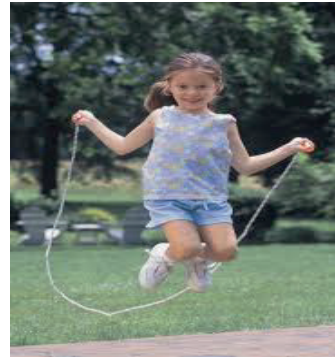
2. Jog in place for 3 minutes



3. 20 Jumping jacks



4. 60 skips of a rope



5. 20 squat jumps





6. 20 mountain climbers



7. 40 butt kicks

## Summary

During this lesson, you have been able to perform core cardiovascular endurance exercises. Please note that having greater cardiovascular fitness means you can confidently complete activities that have a cardiovascular demand, such as climbing stairs, walking up from the water well, riding a bicycle to and from the training centre among others. Being able to move through your day without feeling breathless can make a huge difference in your confidence and quality of life.

## Improving Fitness Levels

By the end of this lesson, you should be able to perform cardio vascular endurance exercises with an aim of improving fitness levels

### You will need:

- a clean space to work from free from harmful objects.
- first aid materials
- appropriate wear
- access to drinking water
- skipping rope

## Introduction

In the previous lesson, you performed core exercises that aimed at improving the cardio system. In this lesson, you are to again perform cardiovascular endurance exercises but this time round, you will perform for extended times for each activity.

Remember to do 3 sets of the activities below.

## Activity

### Instructions

Perform exercises 2-7 below. Do 3 sets of the same exercises with a break of 3 minutes in between the different sets.

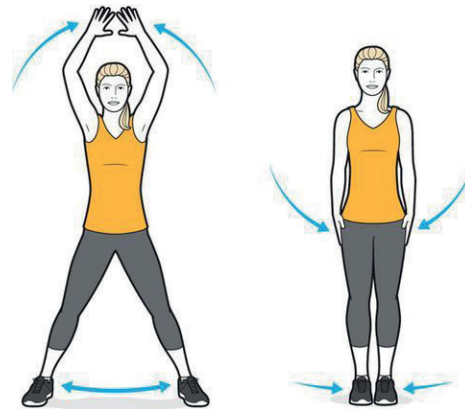
A set in training means one occurrence of a certain number of repetitions. For example, if you do all the exercises illustrated below (2-7), that is one set. So in this case, you are to do 3 sets of the activities below.

1. Conduct a simple warm up for 5 minutes before the following activities
2. Jog around for 5 minutes





3. 40 Step touches



4. 30 jumping jacks



5. 50 butt kicks



6. 20 high knees

7. 30 jump rope hops



## Summary

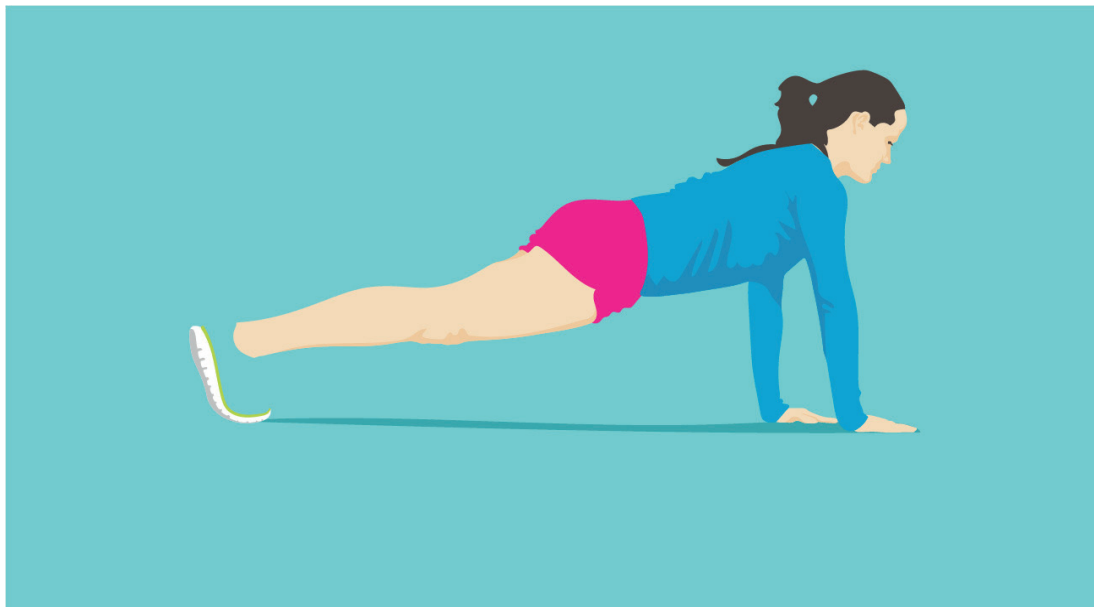
During this lesson, you have been able to perform cardiovascular endurance exercises. You have also learned the benefit of doing such exercises.

The first benefit is that it strengthens both the heart muscle and the muscles involved in breathing such as the lungs. Not only can we carry out sustained periods of activities with minimal discomfort there are also biological benefits such as reducing one's blood pressure, increased resting metabolism to burn fat, and the release of messages to the brain which gives us a general feeling of well-being decreasing the chance of depression and anxiety. The list can go on and on, it is therefore very important that you make an exercise routine that caters for this kind of fitness

## Glossary

1. Cardio: Physical exercise that increases the rate at which your heart works.
2. Endurance: ability for one to withstand an activity for a long time.
3. Set: means one occurrence of a certain number of reps

## TOPIC: MUSCULAR ENDURANCE



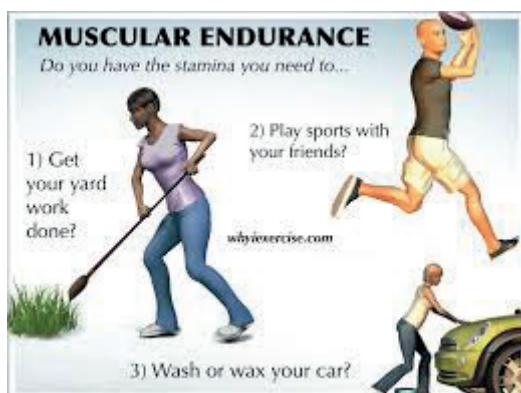
### Lesson 1: Muscular Endurance of the Upper Body

By the end of this lesson you should be able to perform different exercises for improving muscular endurance of your upper body

#### You will need:

- space to work on that is clean and clear of sharp objects
- first aid materials
- appropriate wear for exercises

#### Introduction

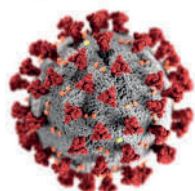


In your day to day routines you perform activities such as pumping the borehole, digging, carrying a jerrycan of water, playing with your peers, carrying a bucket of water from the well/tap, or walking 30 minutes to and from school or climbing stairs. You realize that these activities are normally performed

for some long period of time. The ability for your muscles to perform those activities for a longer period of time without getting tired is what is called muscular endurance.

**TIP:** You need to always perform simple **WARM UPS** and **COOL DOWNS** before and after the day's activities.

Novel Coronavirus  
(COVID-19)



Remember that COVID-19 is transmitted from one person to another when you do not follow the guidelines as given by the Ministry of Health. These include washing hands with soap and enough water, use of sanitizer, putting on a face mask and coughing in the elbow. You also need to maintain a social distance when you have to interact with another person.

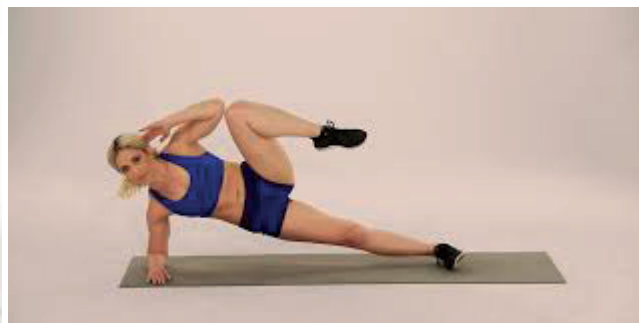
**Note:** Since you do not keep on your mask during exercise, you need to ensure social distance while exercising with other people.

Study the diagrams below and practice the exercises illustrated.

### Activity 1: The Plank

Hold up in position for as long as you can. The target should be 120 seconds. This helps to improve the stability of your upper body as well as improve your mental concentration. These exercises work on your back, rib (intercoastal), hip, bum, abdomen and leg muscles.

Select 5 of the activities below and perform them for 10 minutes. Since this is the beginning of muscular endurance training, you may get hardship in making the 120 seconds. Keep practicing to get there and plan to integrate it in your daily activity plan.





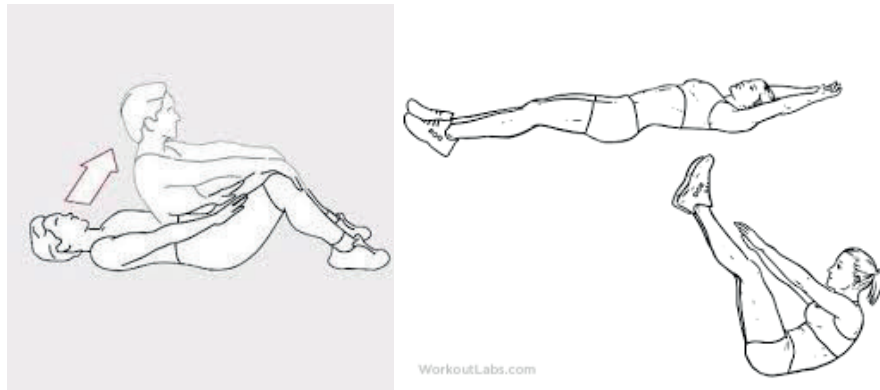
skimble



## Activity 2: Sit-ups

Move the upper body up and down several times. The target should be 30 sit-ups repeated 3 times. This improves your belly shape by reducing the fat and making it flatter. Through the variations given, you will also improve on your hip, bums and thigh shape.

Select 1 of the activities below and perform it for 5 minutes. Since this is the beginning of muscular endurance training, you may get hardship in making the 30 sit-ups 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 3: Push-ups

This is one of the ways of improving your ability to use your hands in support and defense. Carry on pressing as many times as you can. The target should be 60 repetitions done three times with rests of 1 minute.

Select 1 of the activities below and perform it for 10 minutes. Since this is the beginning of muscular endurance training, you may get hardship in making the 60 push-ups 3 times. It is



possible if you keep practicing to get there and plan to integrate it in your daily activity plan.

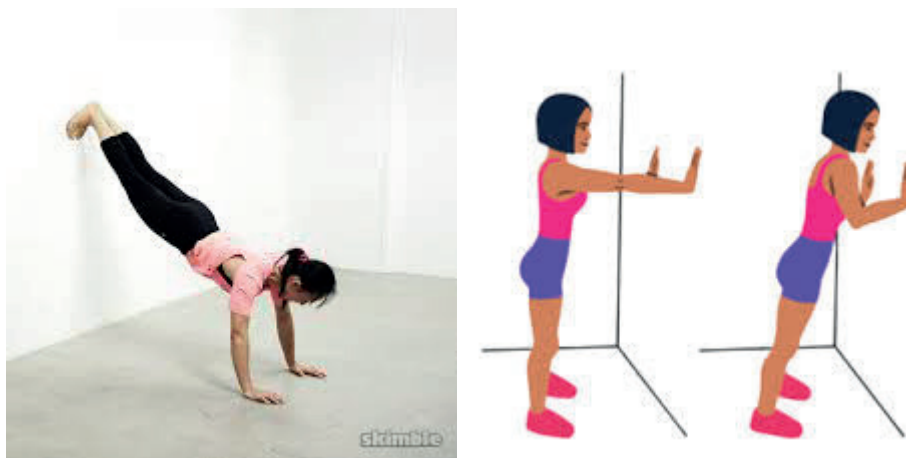




### Activity 4: Wall Push-ups

This is another way of improving your ability to use your hands in support and defense. Carry on pressing as many times as you can. The target should be 60 repetitions done three times with rests of 1 minute. You can increase the angle of leaning to make it more complex.

Select 1 of the activities below and perform it for 10 minutes. Since this is the beginning of muscular endurance training, you may get hardship in making the 60 presses 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 5: Burpees

For any given burpee set, perform it 10 times then rest for 30 seconds before repeating it. The goal should be ability to perform 5 sets of 10 burpees. These exercises work on the entire body muscles but more specifically of the legs, arms and bums.

Work on the activities in the routine given below and perform them for 5 minutes. Since this is the beginning of muscular endurance training, you may get hardship in making the sequence of 10 burpees repeated 5 times. No worry, keep practicing to get there and plan to integrate burpees in your daily activity plan.

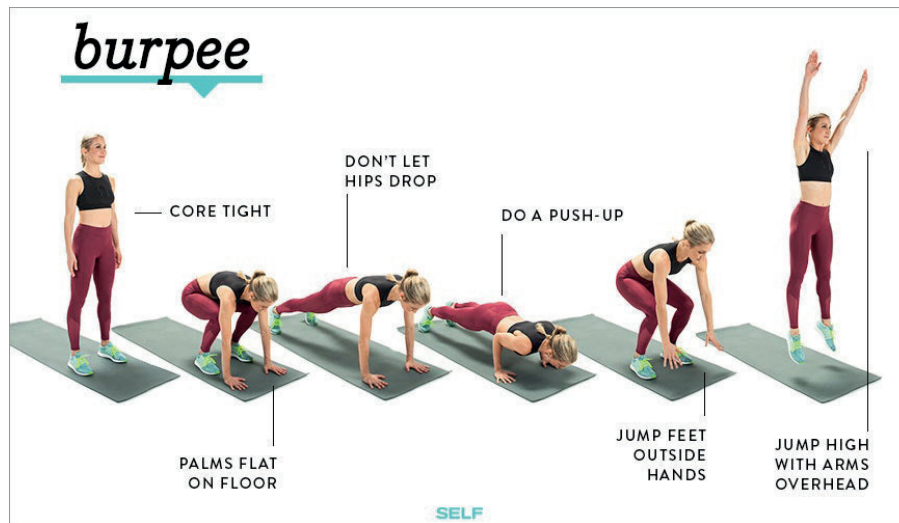


Figure 1 A figure showing the different stages of a burpee exercise

### Lesson summary

You have learnt about the different exercises you can perform to improve the endurance of your upper body. You also got to learn about the meaning and importance of muscular endurance.

## Lesson 2: Muscular Endurance of the lower body

By the end of this lesson you should be able to perform different exercises for improvement of muscular endurance of your lower body

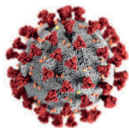
### You will need:

- space to work on that is clean and clear of sharp objects
- first aid materials
- appropriate wear for exercises

### Introduction

In the previous lesson you learnt about improving the endurance of your upper body muscles. In this lesson, you will perform exercises aimed at improving muscular endurance of your lower body.

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Do follow the guidelines to prevent the spread of the disease by following the guidelines as given by the Ministry of Health.

Study the illustrations below and perform the exercises therein.

### Activity 1: Body weight squats

These exercises can be done with feet together or apart. Move up and down for as many times as you can. You can modify by holding in the lower state for 5 seconds every time you squat. The target should be 30 squats repeated 3 times with rests of 1 minute. That gives a total of 90 squats. This improves the ability of your leg muscles to contract and move for a good time. It also makes your hip, bums and thighs firm enough.

Select 1 of the activities below and perform it for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 30 squats 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



## Activity 2: Walking lunges

Perform slow sustained launches continuously. The target should be 30 consecutive times repeated at least 3 times with rests of 1 minute. This will improve your ability to move on your legs for good distances without fatigue.

Select 1 of the activities below and perform it for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 30 lunges 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 3: High Knee Lift

Do the activity in an alternate format 60 times. Repeat the activity 3 times after a brief rest of 1 minute. This will help you to shape your lower body as well as enabling you to pace your walking easily without fatigue.

Select 1 of the activities below and perform it for 10 minutes. At the beginning of the training in this activity, you may get hardship in making the 60 knee lifts 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



#### Activity 4: Toe touches

Do the exercises in alternate way for 30 consecutive times repeated 3 times with rests of 1 minute. This improves your lower back endurance to enable you do the personal chores like washing with less fatigue.

Select 1 of the activities below and perform it for 5 minutes. At the beginning of the training of this activity, you may get hardship in making the 30 toe-touches 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 5: Calf-lifts

Lift your body up and down 30 times and repeat the activity 3 times with a 1 minute rest. This will improve your ability to move, dance, walk or run for longer times. The exercise also improves on the appearance of your lower leg by toning it. The exercise is also used for rehabilitating the pain in the ankle besides improving the jump endurance for players of basketball, high jump as well as volleyball.

Perform the activity below for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 3 sets of 30 calf-lifts. Keep practicing to get there and plan to integrate it in your daily activity plan.



### **Activity 6: Jumping Jack**

Select one activity and perform it 60 times. Repeat the activity 3 times after a brief rest of 1 minute. This exercise will work out your entire body to improve the health of your heart, reducing body fat, improving your coordination, awakens the mind and improves your joint stability.

Perform the activity below for 5 minutes. At the beginning of the training in this activity, you may get hardship in making 3 sets of 60 jumping jacks. Keep practicing to get there and plan to integrate it in your daily activity plan.





### Activity 7: Wall sit-ups

Perform the exercise holding at the sitting position for 3 seconds 15 times. Rest for 30 seconds and repeat the set 3 times. The wall sit exercises are ideal for improving the endurance of your back, abdomen, hip, knees and ankle with little stress on your legs.

Select one activity and do it for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 15 wall sit-ups 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 8: Butt Bridge

Lift your body and hold for 10 seconds. Perform the activity continuously 10 times. Rest for 15 seconds and repeat the activity 5 sets. The activity will improve the endurance of your back muscles (latis), bums (glutuals), abdomen (abs) and the leg (low limb) muscles.

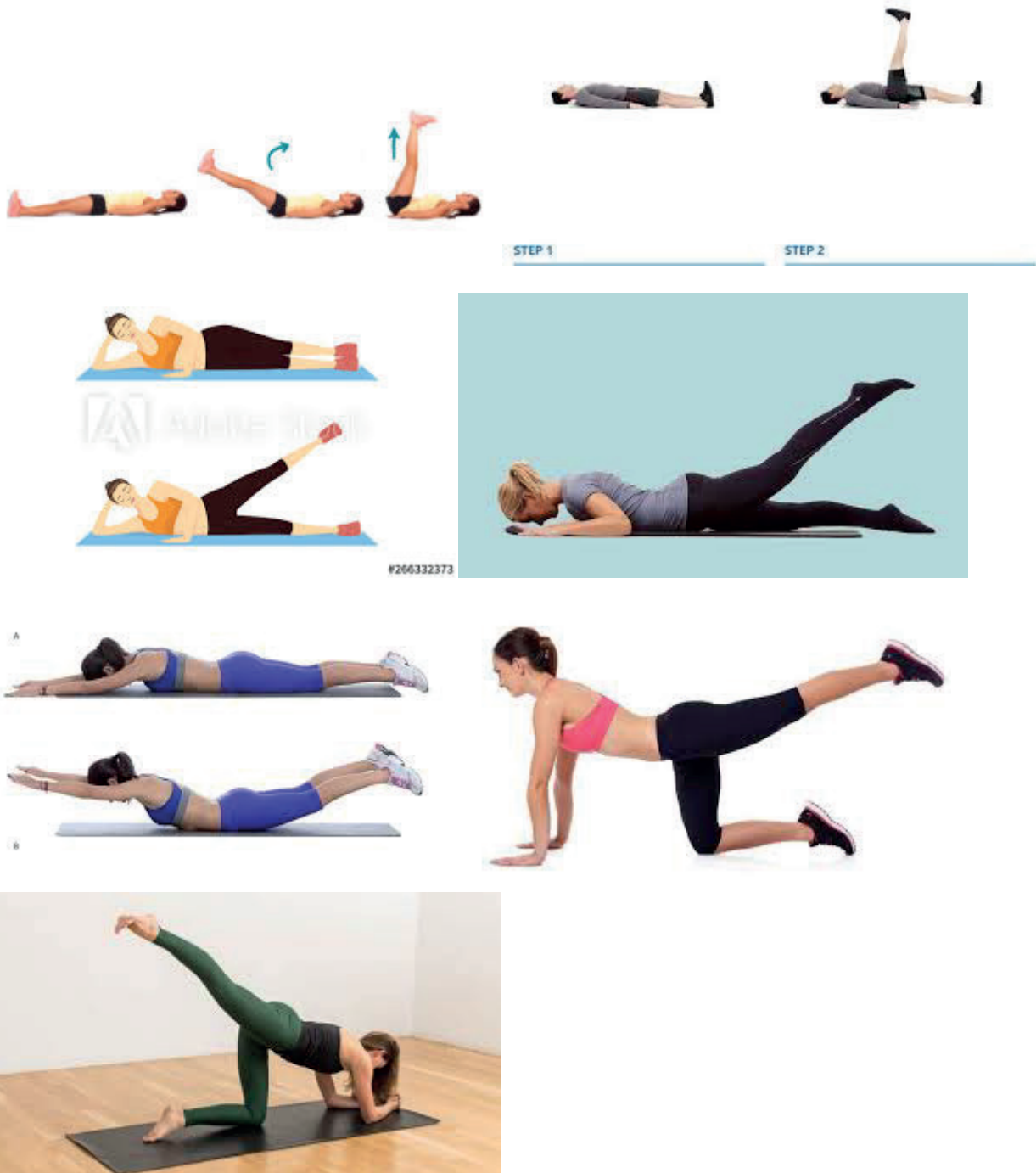
Select 1 activity and perform it for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 10 butt bridges 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



### Activity 9: Leg Raises

**For each exercise, raise the leg and hold for 5 seconds for 10 repetitions. Rest for 15 seconds and repeat 3 sets. These exercises improve the endurance of your abdominal, back and thigh muscles.**

**Select 1 activity and perform it for 5 minutes. At the beginning of the training in this activity, you may get hardship in making the 10 leg raises 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.**



### Activity 10: Tiptoe Walk

1. Stand on your tiptoes as shown in the image below.
2. Walk continuously on your toes to make 30 continuous steps to make a set. Don't let your heels touch the floor at any time. If you can, do these tiptoes on barefoot for greater muscle activation.

3. Take a break of 30 seconds after the first set.
4. Make two more sets.
5. In order to develop endurance, do this activity for at least 5 minutes.

This exercise improves your mental alertness, improves the endurance of your foot and leg muscles as well as improving your balance and coordination.

At the beginning of the training in this activity, you may get hardship in making the 30 tiptoes 3 times. Keep practicing to get there and plan to integrate it in your daily activity plan.



## Planning an Exercise Session

- Training for muscular endurance can be done by using lighter weights for a higher number of repetitions, normally between 10-20 repetitions
- However, because of difficulty in obtaining light weights, you will perform bodyweight exercises such as squats, push-ups, pull-ups, or sit-ups. Therefore, this number may exceed 20 repetitions in most of the cases. For example, performing 50 push-ups in a row without stopping will develop endurance of your arm and chest muscles.
- You can measure your muscular endurance by:
  1. Counting the number of repetitions your muscles can contract before getting tired.

2. Checking the time, the muscle takes in a contracted state before getting tired.
- You have choice to perform a set of activities in
    1. **Isolation.** Isolation method is dealing with one type of exercises working on the same muscles or
    2. **Circuit.** This is a combination method where different exercises are combined to work on different muscles

## Summary

In this lesson, you have learnt about improving the muscular endurance of your lower body. It is hoped that you can utilize the knowledge you gained for lesson one for the improvement of your overall muscular endurance.

## Topic: Muscular Strength



### Lesson 1

By the end of this lesson you should be able to perform muscular strength exercises to improve your fitness.

You will need:

- space to work on that is clean and clear of sharp objects
- appropriate wear
- some water



### Introduction

You probably involve yourself in activities such as lifting a jerrican to the head, lifting your suitcase to the car or even lifting a child, your sibling or someone smaller. This happens within a short time and your muscles contract once. What you need to achieve this kind of activities is Muscular strength.

Muscular strength is one of the components of muscle fitness and it relates to the ability of your body to apply a force. Your body will require a very large force to overcome a resistance in a single muscle contraction. You

therefore need strength exercises to achieve this. A strength exercise is any activity that makes your muscles work harder than usual. This increases your muscles' strength, size, power and endurance. The activities you are yet to be exposed to involve using your body weight or working against a resistance. Most of these we have already used them under developing endurance.

## Practice

Before starting your workout, do a warm up routine for at least 5 to 10 minutes. This can include brisk walking, jogging on the spot, or movements that work your legs, arms, and other major muscle groups.

Remember, as you go on your routine of muscle strength exercise, observe the COVID-19 prevention guidelines such as social distancing, regular hand washing, using a sanitizer and using a mask in public places.

Perform the following activities to attain the muscular strength and fitness. Perform each activity for 10 seconds with maximum force without stopping.

### Activity 1: The Plank

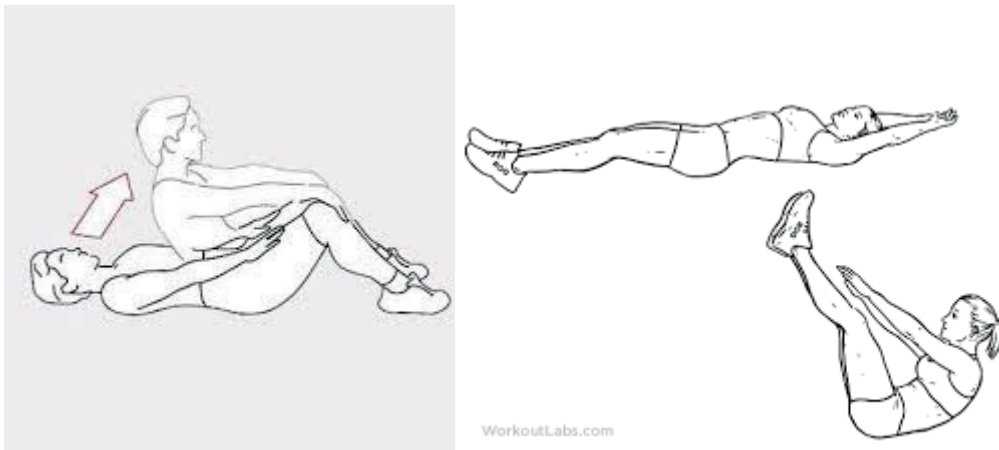
A plank helps you build strength in the core, shoulders, arms and legs. This exercise also helps you tone your abs and build strength in your upper body.







### Activity 2: Sit-ups



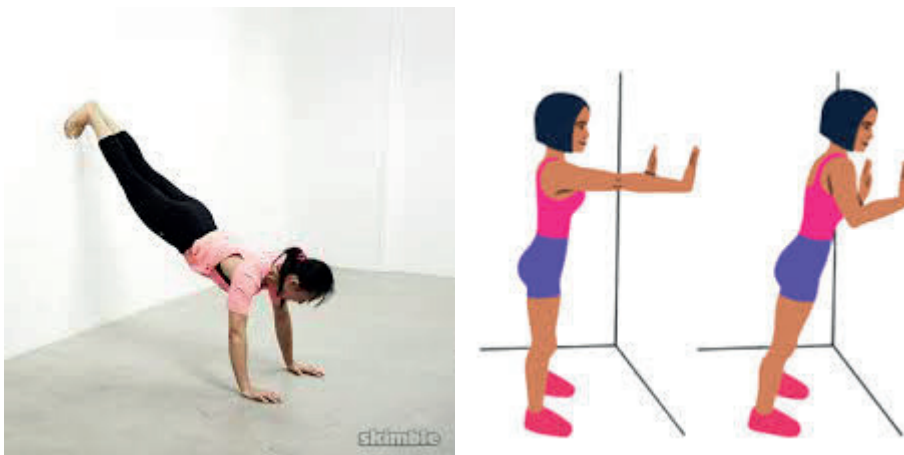
### Activity 3: Push-ups

Push-ups effectively work the muscles in your shoulders and chest.

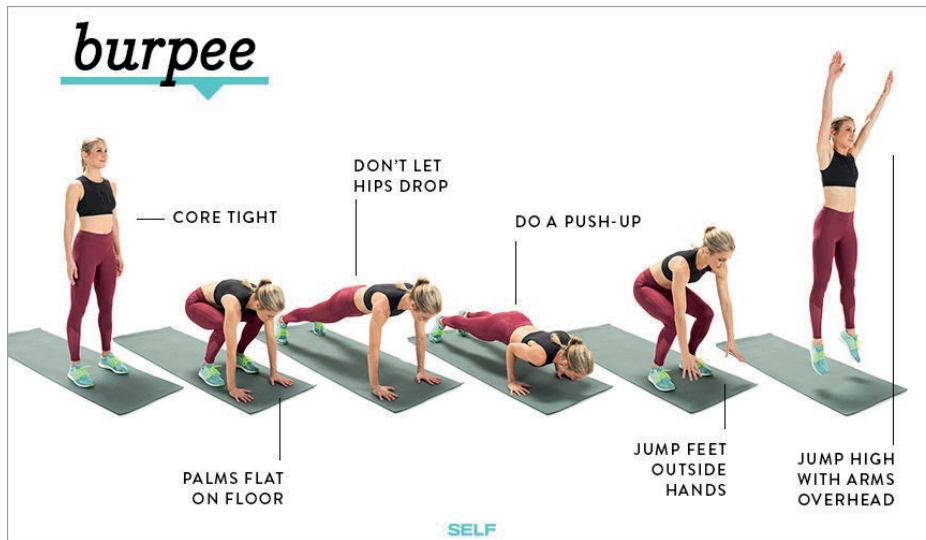


#### Activity 4: Wall Push-ups

This is another way of improving your ability to use your hands in support and defense.



## Activity 5: Burpees



## Summary

You have learnt about the different exercises you can perform to improve the strength of your upper body. You also got to learn about the meaning and importance of muscular strength.

## Lesson 2: Muscular Strength of the Lower Body

By the end of this lesson you should be able to perform different exercises for improvement of muscular strength of your lower body

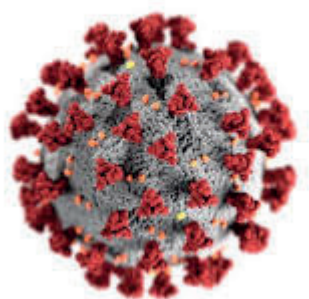
### You will need:

- space to work on that is clean and clear of sharp objects
- first aid materials
- proper wear for exercises

### Introduction

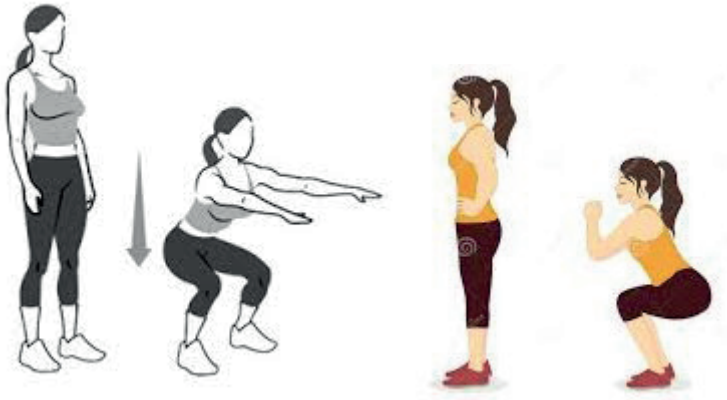
In the previous lesson you learnt about improving the strength of your upper body muscles. In this lesson, you will perform exercises aimed at improving muscular strength of your lower body. Study the illustrations below and perform the exercises therein.

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(COVID-19)



Follow the guidelines to prevent the spread of COVID-19 by following the guidelines as given by the Ministry of Health.

### Activity 1: Body weight squats



### Activity 2: Walking lunges



### Activity 3: High Knee Lift



### Activity 4: Toe touches

Toe Touches with Reach is an *exercise* that focuses on strengthening your abs, muscle, and also stretches the hamstrings (thigh muscles).



### Activity 5: Calf-lifts

This exercise helps to strengthen your curve muscles which are used when you straighten yourself to reach out for something at a high level.



## Activity 6: Wall sit-ups

This exercise builds the strength of the thigh and overall leg muscle



## Activity 7: Butt Bridge

This strength exercise works the hamstrings, lower back, abs, in addition to the glutes (butt muscles)





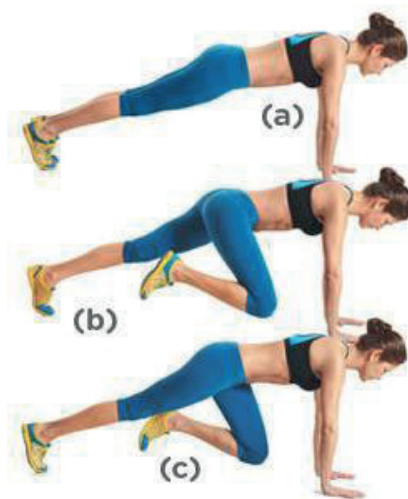
### Activity 8: Leg Raises

This exercise targets the muscles in your glutes (buttocks) and abs (stomach).



### Activity 9: Mountain Climbers

This exercise is like when climbing a mountain or steep peaks except it's done on the flat surface of your floor. This exercise builds the strength in your core, back, arms and legs.



## Summary

Now that you have learnt some of the muscle strength exercises, develop a daily routine of these exercises to keep fit. You have also learnt that warm up exercises help your body to prepare for the muscle strength exercise.

## TOPIC: FLEXIBILITY EXERCISES



### Lesson 1: Performing Flexibility Exercises

By the end of this lesson you should be able to perform flexibility exercises to improve your fitness levels.

#### You will need:

- space to work on that is clean and clear of sharp objects
- proper wear
- self-study material
- drinking water

#### Introduction

In your daily life, you engage in activities such as bending, walking, lifting, reaching to tie your shoe laces or picking a coin from the corner under the bed or scrub the middle part of your back while bathing. To do these activities it requires that you move your joints or extend fully to reach the point at target and usually if you are not fit enough, you may not reach those points. See the illustration below:



When someone says they are flexible, it usually means that they can reach down and touch their toes or bend deeply into a squat. Flexibility is the ability to move joints effectively through a complete range of motion. Like most things, flexibility decreases with age and it is very important to include flexibility exercises in your daily workout routine.

The best way to maintain flexibility is to stretch regularly. Whatever your age, you must incorporate stretching at least once a day. Even if it is not part of an exercise routine, there are several simple stretching exercises that you can do at your desk or even in front of the TV. Focus on stretches that work the larger muscle groups such as shoulders, hamstrings, hips and lower back, and calf muscles. It is these areas that are prone to stiffness and soreness. Remember to always be careful to not overdo it.

Before starting your workout, do a warmup routine for at least 5 to 10 minutes. This can include brisk walking, jogging on the spot, or movements that work your legs, arms, and other major muscle groups.

Remember, as you go on your routine of muscle strength exercise, observe the COVID-19 prevention guidelines such as social distancing, regular hand washing, using a sanitizer and using a mask in public places.

## Activity

Practice each of the flexibility exercises below for a count of 15 each

### a. Hamstring stretch



This stretch works on the behind muscles of the thigh (hamstring)



### b. Piriformis stretch



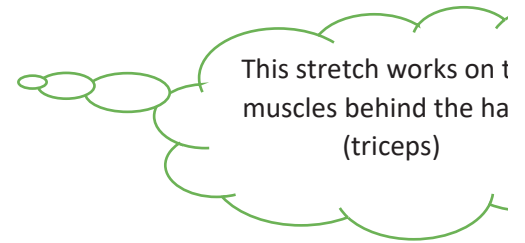
YOGA  
BASICS



This stretch works on the muscles that deep in the butts



c. Triceps stretch



d. Figure four stretch



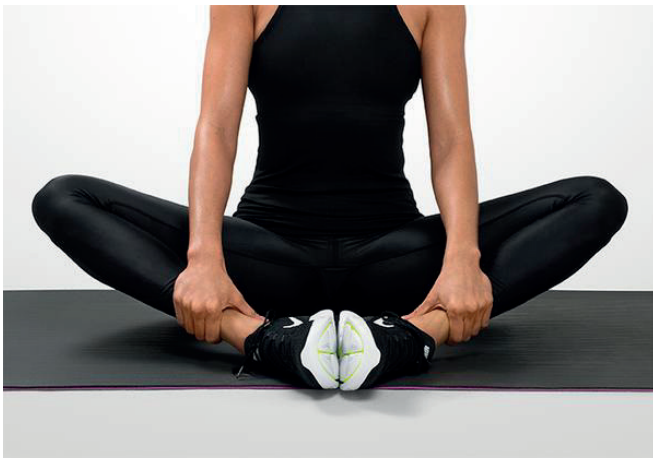
This stretch works on the butt muscle, those on sides and behind the thigh

## e. Frog stretch



This stretch works the inner thighs and the groin muscles

## f. Butterfly stretch



This stretch also works the inner thigh and groin muscles

**Summary**

In this lesson you have learned what flexibility is and how it applies to your daily activities. You have also practiced through various exercises on how to improve your flexibility. Remember that these exercises should be part of your routine in order to build on your fitness levels and wellbeing.



## Lesson 2: Practice of Flexibility Exercises

By the end of this lesson you should be able to develop flexibility through practice of various exercises.

### You will need:

- space to work on that is clean and clear of sharp objects
- proper wear
- self-study material
- drinking water

### Introduction

In the previous lesson you learnt what flexibility is and how you can improve your flexibility through the different exercises that you performed. Below are more exercises that you should practice to further improve your flexibility

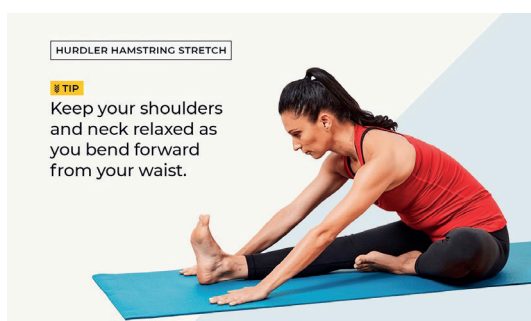
Begin with a gentle warm-up to increase your body's core temperature. Then, you progress through a series of stretching exercises to lengthen the muscles in your feet, your legs, your hips and torso, and finally up through the head and neck.

Remember, as you go on your routine of muscle strength exercise, observe the COVID-19 prevention guidelines such as social distancing, regular hand washing, using a sanitizer and using a mask in public places.

### Activity

Practice each of the flexibility exercises below for a count of 20 each.

#### a. Ham string stretch







b. Hamstring inner thigh stretch





c. Quadriceps stretch



d. Side body stretch



e. Tummy stretch



f. Side-ways sit and reach



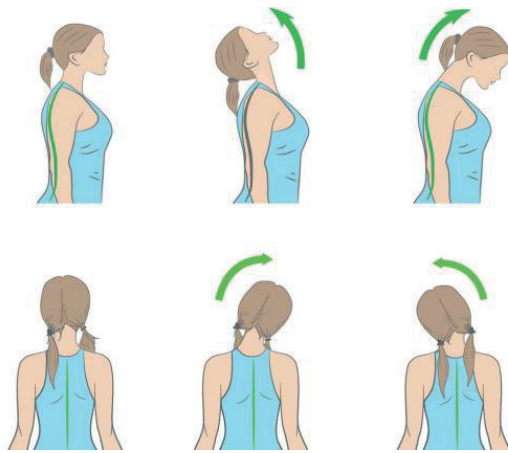
g. Baby pose



h. Low back stretch



i. Neck stretch



## Summary

Note that as you grow older, your muscles naturally lose strength and size and can become less flexible and stiffer. This can affect the range of movement around your joints, which may lead to stiffness in the muscles and joints. It is this loss of tissue elasticity that can cause muscles and joints to tighten up.

There are a number of ways to test your flexibility. One of the most common ways, according to fitness experts, is to check if you can touch your toes while standing up with both legs straight. (You could check out various fitness sites available online for a more exact test.) If you find that you feel stiff, lacking in flexibility, suffering from bad posture or would like to increase your flexibility to improve your normal exercise routine, flexibility training is a must.

## Glossary

**Flexibility:** is just the ability to move muscles and joints through their complete range.

## TOPIC 7: BODY COMPOSITION



### Lesson One: Understanding Body Composition

By the end of this lesson you should be able to perform body composition exercises to improve your own wellbeing.

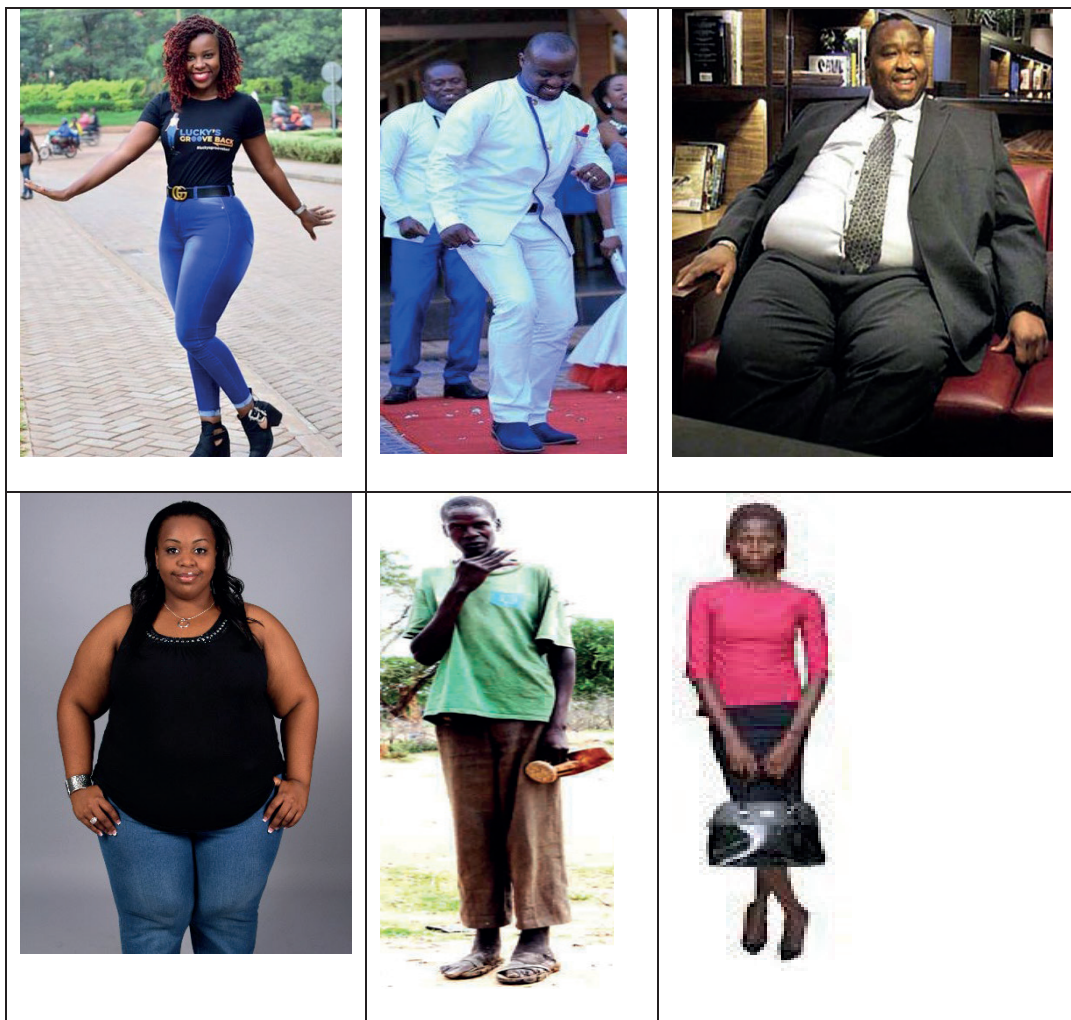
#### You will need:

- safe space to work from
- appropriate wear
- self-study material
- access to drinking water
- notebook and pen

#### Introduction

The picture below represents the different body shapes of the people we see in our community.





- Which body shape in the picture is similar to your body shape?
- Observe the people at home/immediate neighbors and relate their body shape to the closest body shape in the pictures.

You now agree that people have different body shapes. What makes your body shape to be different is what is in your body. A condition called body composition.

Body composition is the proportion of fat and non-fat mass in your body.

Your body is composed of two types of mass; body fat, and non-fat mass

Knowing your body composition can help you assess your health and fitness level.

- **Body fat:** This can be found under the skin (subcutaneous fat), or around organs (visceral fat).
- **Non-fat mass:** This includes bone, fluids, muscle, organs, and tissues.

Healthy body composition involves a high proportion of non-fat mass and an acceptable level of body fat. If you have excessive body fat, you are more likely to experience a variety of health problems. The best way to lose excessive body fat is through a healthy life style

## Factors Affecting Body Composition

i) **Exercise**

ii) **Diet**

The above two factors can be controlled by the individual. While you may not be able to control the factors below;

i) **Age**

ii) **Genes**

iii) **Hormones**

iv) **Sex/Gender**

## Exercises to Improve Body Composition

- Domestic chores like mopping the house, washing clothes, digging or slashing the compound are appropriate physical activity for body fat control. So you are encouraged to engage in house work as one way to keep in shape.
- Other exercises include
  - a. Getting involved in sports regularly e.g. Basketball, soccer, Volleyball etc.
  - b. Long distance walks or jogging for at least 30minutes regularly.
  - c. Structured exercise like;
    - ✓ Step ups
    - ✓ Planks
    - ✓ Sit ups
    - ✓ Bicycle crunches



## ✓ Bent leg twist

**Activity 2**

You can do this alone or with everybody at home. Organize a circuit training activity area for six different exercises. The exercise will include; Step ups, Planks, Sit ups, Bicycle crunches and Bent leg twist. Do 10 repetitions for each exercise and move to the next station. Make 3 sets for each exercise.



**NOTE:** Do not forget that COVID19 is out there. Therefore, follow the SOPs as you do these exercises. It is to your health benefit if you work from home and with only the people at home.

## Lesson 2

### Body Composition and Health Living



By the end of this lesson you should be able to appreciate healthy feeding and exercise as key factors to help check your body fat for your well-being.

### You will need:

- safe space to work from
- appropriate wear
- self-study material
- notebook and pen

### Introduction

In the previous lesson you learnt about body composition. In simple terms, body composition relates with your body weight and shape. A healthy body composition will increase your lifespan; reduce the risk of some diseases, increase energy levels, and improve your self-esteem.

Diet and Exercise are the two key factors that you can manipulate in order to have control over your body composition.

## Diet

Nothing has greater influence on your body composition than your diet. This is especially true of body fat because it's a matter of energy balance. You're either storing fat or using it for energy to perform activities. Understanding your energy needs and knowing the appropriate range of calories you need to consume for your ideal weight is a good place to start.



### Activity 1

1. Remind yourself about the different types of food nutrients you learnt earlier and note down their importance in your notebook.
2. Advise your parents on the most suitable type of food for you and your siblings as growing children.

Taking in quality food, you need to do exercise regularly. Exercising helps to improve your muscle size and strength. It also helps in the burning of fats to provide you with energy. It does not matter whether you choose to focus on cardio-type exercises, emphasize strength

training, or combined both. It's most important to find a routine that you enjoy and you should promote consistency.

## Activity 2

- A. Work with your siblings/immediate neighbors to perform exercises similar to those you did to improve;
- Cardiovascular endurance
  - Muscular endurance
  - Muscular strength

## Please Note

You should do these activities for

- Long duration (at least 20minutes)
- Moderate intensity (Should not be explosive)
- Regularly (at least 3 days in a week). Fitness is never stored

## Misconception about Burning Body Fat

When it comes to the concept of “fat,” there are numerous misconceptions and myths. From justifying fitness levels based on body fat to trying to reduce it with a restrictive diet, get in the know and learn the truth about body fat.

	MYTHS	TRUTH
1	The lower the body fat, the more fit you are.	Body fat is absolutely essential for overall health for both males and females. It acts as a cushion to protect essential organs and regulate body temperature
2	Having excessive body fat means being unfit	A person with excessive body fat if exercises regularly is more fit than a thin person who lives an inactive lifestyle.

3	The body can turn excess body fat into muscle.	Fat and muscle are separate: You burn off fat and build muscle through different physiological processes.
4	Body fat is caused by consuming dietary fat.	Eating fat does not necessarily lead to excess body fat. But eating an excess of calorically-dense foods and living an inactive lifestyle can.
5	Excess body fat is always carried around the belly.	The abdomen is a common carrier of excess weight, but in a person, fat storage is distributed even to other body parts like; the buttocks, thighs, arms, and others.
6	You can target specific areas of the body to store body fat.	The only way to reduce body fat in any area of the body is through overall weight loss.
7	The best way to lose excess body fat is to skip some meals.	Yes, skipping some meals might lead to quick weight loss. However, this can tarnish health goals in the long run.

## Summary

Body composition is the ratio of your fat free mass to body fat mass. You need the correct body composition in order to live a healthy life style. Taking in a good diet and regular exercise will help you control your own body composition.



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