MINISTRY OF HEALTH

PHYSICAL ACTIVITY BASIC RESOURCE GUIDE

NATIONAL HEALTH FUND

Pan American Health Organization

Regional Office of the World Health Organization

This Manual has been prepared for healthcare workers to provide information on Physical Activity and to be used as a Resource Guide

S.K.I.P.

Setting Knowledge Into Practice

GLOSSARY

PA……. Physical Activity

RMR……. Resting Metabolic Rate

FITT ……..Frequency Intensity Time and Type

MHR……...Maximum Heart Rate

RPE……Rating of Perceived Exertion

MET……Metabolic Equitant Test

PAR-Q……Physical Activity Readiness Questionnaire

TABLE OF CONTENTS

ACKNOWLEDGEMENT

The Physical Activity Basics Manual for Health Care Workers was developed with the kind assistance of stakeholders who have collaborated with the Ministry of Health in promoting population-wide physical activity.

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We are thankful to the assistance of following Organizations:
Pan American Health Organization, Jamaica
Ministry of Sports in the Office of the Prime Minister
G.C Foster College of Physical Education & Sports

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The development of this guide was funded by the National Health Fund

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EXECUTIVE SUMMARY

Understanding how Physical Activity Works

Individuals will experience many health benefits when they invest in a physical activity programme. Research has shown that individuals are more likely to participate in physical activity when they are more informed about the importance of physical activity and living a healthy lifestyle. Increased participation in physical activity will be as a result of the knowledge of the area and the benefits experienced.

Doing Exercise Effectively

This section addresses how to demonstrate various types of activities in a safe and fun manner so that persons will be more inclined to participate in physical activity on a daily basis. In order for a physical activity programme to be sustained, the condition, fitness level, age and preferred activities must be addressed.

Physical Activity and Special Conditions

This section highlights ways in which the persons with special needs can still be accommodated in a physical activity programme. It emphasized that special attention must be considered when recommending physical activity for individuals with special conditions. It also states that they should be carefully monitored before during and after participating in moderate or vigorous physical activity sessions.

Physical Activity Programme

This section comprises useful and relevant information on types of physical activity for special groups; how to avoid injuries when exercising and examples of various types of physical activity programmes

BACKGROUND

According to the World Health Organization, Chronic Non-Communicable Disease (NCDs) are the major causes of mortality and morbidity worldwide, and is the main cause of premature deaths in 30-70 year age group (global Action Plan for the Prevention and Control of Non-communicable Disease 2013-2020). Approximately 63% of deaths globally are caused by NCDs, with cardiovascular disease ranking number 1(48%), followed by cancers (21%), chronic diseases (12%) and diabetes (3.5%).

Chronic Non-Communicable Disease is the leading cause of death and disability in the Caribbean. Approximately 60% of deaths in the Caribbean population can be attributed to NCDs. In Jamaica, NCDs are the number one contributor of morbidity and mortality. The four common underlining behavioural risk factors for these diseases are: tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity. (Jamaican National Strategic and Action Plan for the Prevention and Control of Non-communicable Disease, 2013)

INTRODUCTION

Physical inactivity is the fourth leading risk factor for global mortality and accounts for 6% of death. Some factors that promote physical inactivity include urbanization, automation and increased access to technology and the media. As a result of these changing social values and behavioural practices individuals are forced to live in a highly paced stressful environment which has contributed to them practicing a sedentary lifestyle.

Physical inactivity is the main cause for approximately 21-25% of breast and colon cancers, 27% of diabetes and 30% of ischaemic heath disease (WHO 2013). In Jamaica almost twice as many persons reported being inactive in 2008 compared to 2000 (30%vs.17%) and 33% report high activity in 2008 compared to 47% in 2000 (Jamaica Healthy Lifestyle Survey II). More than 19% of youth are overweight and 6% are obese (2006 Jamaica Youth Risk and Resiliency Behaviour Survey, 15-19 Yrs.)

The Health Promotion and Education Unit within the Ministry of Health has the mandate to guide and facilitate the development of strategies that promote population wide physical activity and its importance. Based on brief assessments done, the HPE Unit has recognized the need to build capacity in physical activity among the Health Education team as well as other Health care workers. This will aid in strengthening and expanding existing programmes and interventions that promote physical activity as well as the development of new ones.

This booklet is meant to be a simple resource guide for health workers who play an integral role in the promotion of physical activity in special settings.

GOAL

To promote population wide physical activity

OBJECTIVE

To empower health care workers and community leaders to promote physical activity in various settings (workplaces, schools and communities).

PURPOSE

The booklet is a simple resource guide that provides basic information on physical activity, simple demonstrations of physical activity techniques and strategies to aid in promoting physical activity.

TARGET AUDIENCE

This Guide targets healthcare workers and community leaders who facilitate physical activity sessions in their sphere of influence.

DESIGN OF BOOK

The Guide is divided into four (4) main sections, they are:

- Section 1: Understanding how Physical Activity Works
- Section 2: Doing Exercise the Right Way
- Section 3: Physical Activity and special condition
- Section 4: Physical Activity Programme

SECTION 1: Understanding How Physical Activity Works

A What is Physical Activity?

Physical Activity:
The action of the body in the form of movement. It works the muscles and allows the body to utilize more energy than is needed when resting.

Some examples are walking, gardening, running, dancing, hula hooping, skipping, sweeping the yard, mowing the lawn. It is recommended that these activities be executed at different intensity levels on a regular basis: light, moderate or vigorous to improve health.

Exercise:
A set of activities that is planned, structured and done on a regular basis that allows the body to improve physical fitness.

Fitness:
The body's capacity to perform and adapt well to the stress and physical demands of life without becoming fatigued**.**

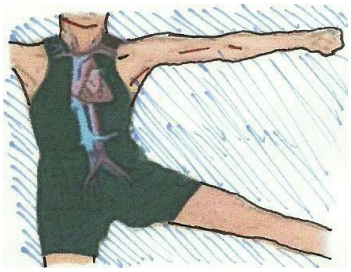
The fitness level of a person is dependent on the following two factors:

a) The genetic makeup of his/her body

b) The ability to do activities that requires flexibility, endurance and strength

B Components of Fitness

Cardio-respiratory Endurance:
The ability of the body's respiratory and circulatory systems to sustain and transport oxygen to skeletal muscles while undergoing prolonged physical activity at a moderate or vigorous pace.

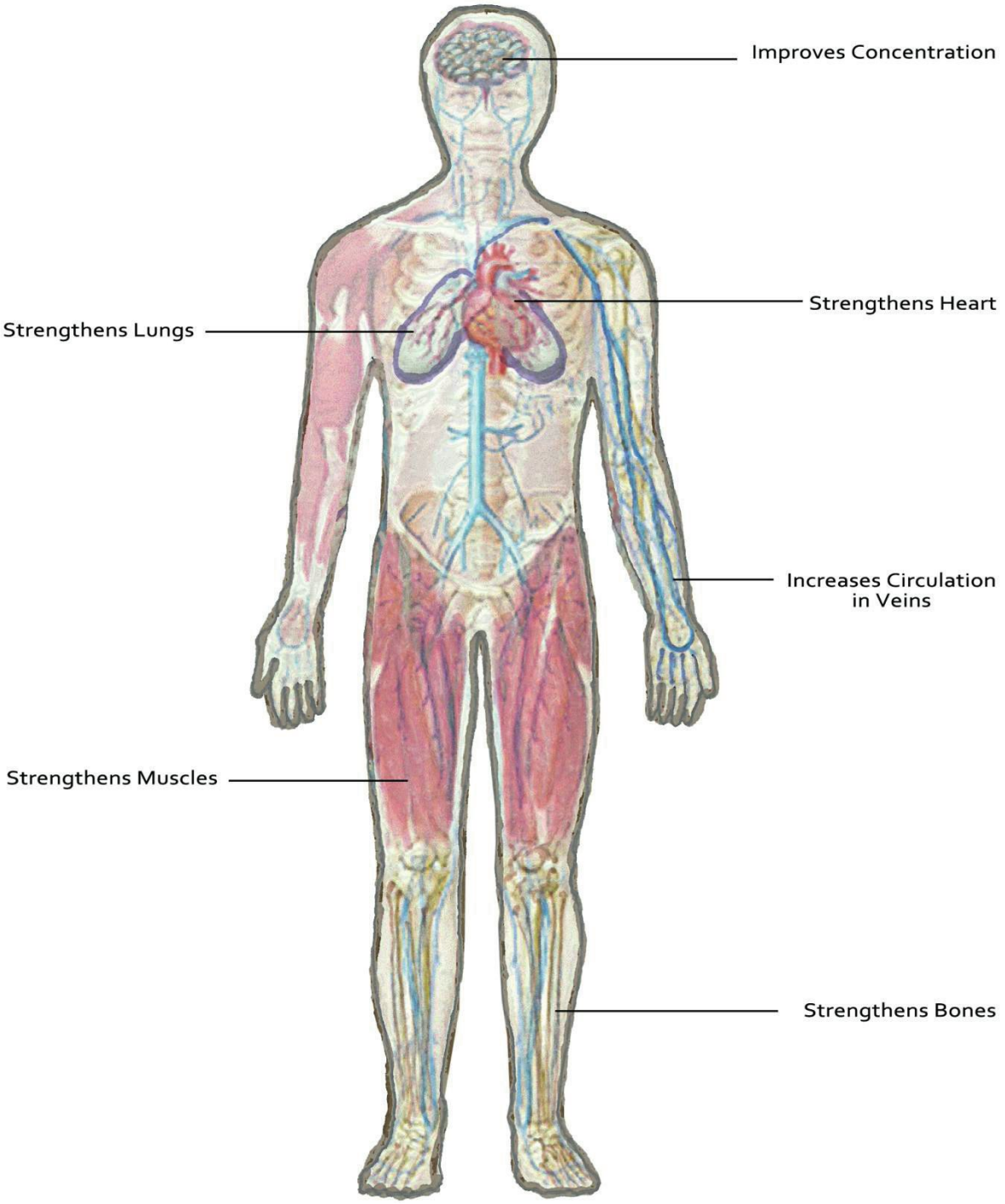


Muscle Strength:
The muscle's ability to generate and sustain maximum force in one effort

Muscular Endurance:
The muscles' ability to constantly withstand pressure on a consistent basis over long periods of time

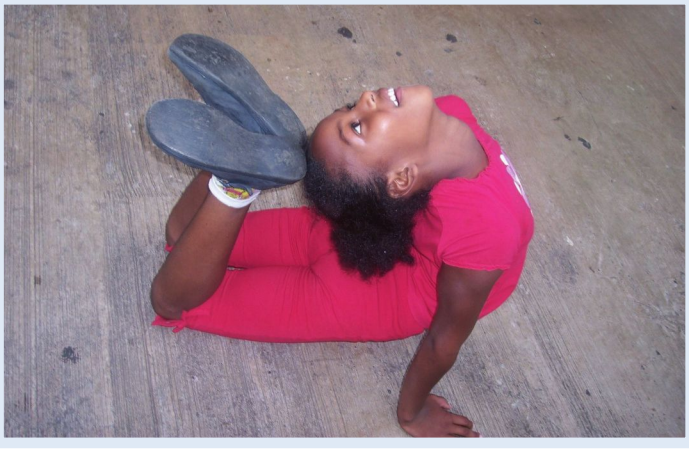
Flexibility:
The ability of the joints to go through full range of motion exercises without becoming fatigued

C Benefits of Physical Activity



Many benefits can be derived from becoming more physically active:

- Makes you look better - bright eyes and healthy skin
- Gives you more energy
- Strengthens your heart and lungs
- Helps you relax and sleep better
- Improves sensitivity to insulin
- Lowers the risk of heart disease, high blood pressure and type 2 diabetes
- Increases the good cholesterol in your blood
- Burns fat and helps you maintain a healthy weight
- Strengthens bones and reduces osteoporosis(bone loss) later
- Makes you stronger and more flexible
- Makes you more alert with better concentration



D Getting Medical Approval

PARQ TEST (Physical Activity Readiness Questionnaire)

Physical inactivity is listed as the fourth leading cause of global mortality. With this in mind persons are encouraged to be more active in order to live more healthily. Whilst it is usually safe for persons to become more physically active, it is important that persons experiencing certain conditions check with their physicians before they start any form of physical activity programme.

If you are planning to start a physical activity programme here is a list of questions you should answer before you start and these questions will help to determine how safe it is for you.

The PAR-Q is for the age group, 15 to 69, and will determine if you should check with your doctor before you start exercising. If you are over 69 years of age, and you are not used to being very active, check with your doctor. Common sense is your best guide in answering these questions. Read the questions carefully and answer each one honestly.

Yes	No	
☐	☐	Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
☐	☐	Do you feel pain in your chest when you do physical activity?
☐	☐	In the past month, have you had chest pain when you were not doing physical activity?
☐	☐	Do you lose your balance because of dizziness or do you ever lose consciousness?
☐	☐	Do you have a bone or joint problem that could be made worse by a change in your physical activity?
☐	☐	Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
☐	☐	Do you know of any other reason why you should not do physical activity?

If you answered YES

If you answered "yes" to one or more questions, talk with your doctor before you start becoming more active. Your doctor will advise you on what type of activity is best for you to participate in. It is very important that you follow his/her advice.

If you answered NO

If you honestly answered no to all the questions, you can be reasonably sure that you can start becoming much more physically active. Make sure you start slowly and gradually increase your activity load.

Things Change

Although you answered "no" to all questions, if you are feeling sick with a cold or fever or if you are pregnant, discuss with your doctor before becoming more active. You might need to alter your physical activity programme.

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity programme or a fitness appraisal, this section may be used for a legal or administrative purposes.

I have read, understood and completed this questionnaire. Any question I had was answered to my full satisfaction.

NAME_____ DATE_____

SIGNATURE

OF PARENT_____WITNESS_____

OR GUARDIAN (for participants under the age of minority)

Make sure you get approval from your doctor before starting an exercise program. Your doctor will determine the level at which one should start exercising. Discuss with your doctor what types of exercise might be appropriate for you.

Complications of diabetes such as severe eye disease and nerve damage may make some forms of exercise dangerous. Your doctor may also schedule a test to see how your heart responds to exercise

PAR-Q and You. Canadian Society for Exercise Physiology. Revised 1994.
Physical Activity Readiness Questionnaire, British Columbia Ministry of Health Department of National Health and Welfare, Canada, revised 1992

E Understanding Body Composition and Its Importance to Good Health

Body composition is the virtual amount of fat to fat-free mass in the body. Fat free mass is a combination of all the body's non fat tissues - muscle, bone, teeth and water, connective tissues and organ tissues. Body fat is a combination of essential and non essential body fat.

Essential Fat

These are lipids that make up the body and critical for normal body functions. They are incorporated into the nerves, brain, heart, lungs, liver, and mammary glands.

Male to Female Ratio

Approximately 3% of total body weight in men and 12% in women. (The larger percentage in women is due to fat deposits in the breasts, uterus, and other sites specific to females).

Non-essential Body Fat

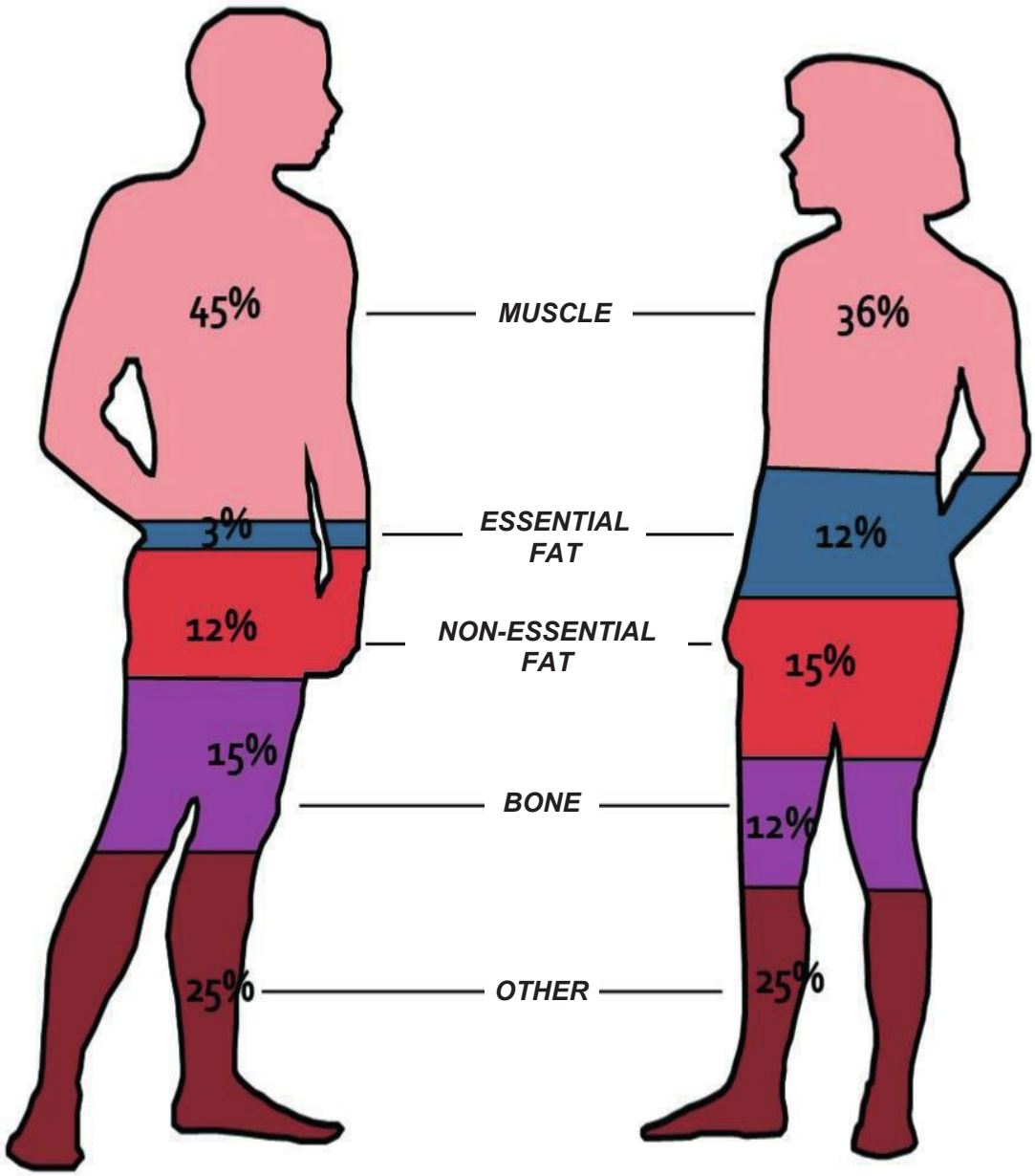
These are lipids that mainly exist within fat cells, or adipose tissue. They are often located just below the skin and around major organs. Excess body fat has been linked to a number of health conditions such as cancer, diabetes and heart disease.

Male to Female Ratio

Depending on the individual, the amount of fat storage will vary depending on factors such as: age, heredity, gender metabolism, diet, and activity level.

When a person consumes more than the body is able to use then the excess is stored as fat.

Persons with ideal body composition are usually healthier than those who are overweight or obese.



Metabolism and Energy Balance

Metabolism is the process by which the body handles a particular substance within the body's capacity to do its daily functions. This is the number of calories the body burns at rest. The largest portion of metabolism, resting metabolic rate (RMR), is the energy that is necessary to maintain essential body functions such as: heart rate, body temperature, respiration, and blood pressure, during the period the body is at rest, is responsible for 55-75% of daily energy expenditure. The second largest of RMR is the energy output that is necessary to digest food 5-15% of daily energy expenditure. The remaining RMR10-40% is expended during physical activity.

Metabolic rate is affected by factors such as gender, heredity, increased activity and diet. Genetics plays a vital role in metabolic rate; some people will inherit high or low. A person with a high metabolic rate (HMR) is able to burn more calories without gaining weight (muscle is more active than fat). Men have a higher percentage of muscle in comparison to women, thus they are less likely to gain weight than women. A person who participates in moderate or vigorous activity will increase their resting metabolic rate (RMR). This will improve muscle mass, which is linked with a higher metabolic rate. Physical activity also burns calories, raising total energy expenditure. A person with high energy expenditure can eat more than a person with low energy expenditure and does not gain weight. The metabolism will adjust to changes in diet. For example when a person loses weight the energy that is required to do daily task will decrease. The body tries to defend its original weight by conserving energy making it susceptible to gaining weight.

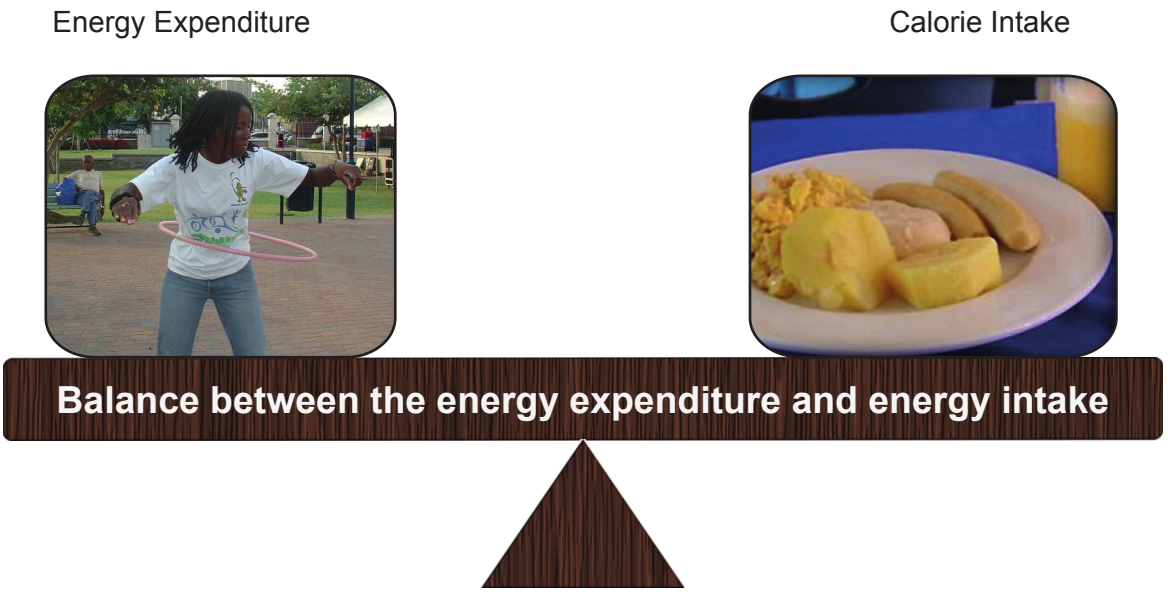
F Weight Management

Two factors that impact Weight Management are Diet and Physical Activity

A healthy diet along with a physical activity programme that is done on a consistent basis is the best way to manage and maintain healthy weight.

The best way for this to happen is to ensure that total number of calories consumed equal the number you burn (refer to the energy-balance equation in figure 1). In order for one to lose weight he/she must burn more calorie than he/she eats.

Fig. 1 **Energy Balance Equation for effective Weight Management**



SECTION 2: Doing Exercise Effectively

A Exercising the FITT Way

Frequency
Intensity
Time
Type

1. Frequency

The number of times that physical activity is being done on a regular basis for the week:

- most days of the week
- 3 or more days per week
- 5 or more days per week

It is recommended that physical activity be evenly spaced out throughout the week.

2. Intensity

This refers to the energy level at which the physical activity is carried out. There are three levels of intensity: light, moderate and vigorous.

There are several methods an individual can use to measure physical activity intensity: Two examples are (1) target heart rate and estimated maximum heart rate and (2) talk test.

» Target heart rate and estimated maximum heart rate

This is a common method used to measure if a person's pulse or heart rate is in the normal target zone during a physical activity routine.

An individual's maximum heart rate (MHR) is calculated by using the formula:

220 – the person's age = MHR

Normally, the pulse rate during the physical activity session and the % MHR is calculated to assess intensity. The more intensely the physical activity is being performed, the higher the heart rate. This method is described as percentage of maximum heart rate or %-MHR.

The intensity level can be calculated by using the following guidelines and formula:

40-54% MHR	**=**	**Low (or Light) is**
55-69% MHR	**=**	**Moderate is**
70% MHR and over	**=**	**High (or Vigorous)**

For example a 37 year old female. Her heart rate would be estimated as follows:

220-37=183

40-54% MHR = Low (or Light) is

183x.40 (40%) = 73 beats per minute

183x.54 (54%) = 99 beats per minute

55-69% MHR = Moderate is

183x.55 (55%) = 100 beats per minute

183x.69 (69%) = 126 beats per minute

Over 70% MHR = High (or Vigorous) is

183x.70 (75%) = 128 beats per minute

The overall levels of intensity for a 37-year-old would be as follows:

- Low Intensity: heart rate is 73-to-99 beats per minute.
- Moderate Intensity: heart rate is 99-to-126 beats per minute.
- High Intensity: heart rate is more than 128 beats per minute.

Assessing your heart rate is very simple; the pulse is normally taken at the wrist, neck and chest. It is recommended that it be taken at the wrist. Briefly pause physical activity session, place the middle and index finger in line with the thumb on the artery and gently press over the radial pulse on the wrist. Count the number of beats for 60 seconds. The number of beats will give you an indication of your intensity level, for example if a 37 year old number is 128 beats per minute, he/she is doing physical activity at high intensity level.

» Talk Test

This is a very simple method a person can use to determine the intensity level of their physical activity routine. If a person is out of breath and is too exhausted to carry on a conversation he/she is said to be doing vigorous physical activity

A person who is capable of engaging in a conversation comfortably during their physical activity routine is considered to be doing moderate intense activity.

If a person is out of breath and is too exhausted to carry on a conversation he/she is said to be doing vigorous physical activity.

3. Time

The benefits that can be derived from becoming more active will vary depending on the amount of time spent doing physical activity. The recommendations are as follow:

Adults

- At least 30 minutes 5 days per week or an accumulation of 150 minutes at least 5 days per week to gain some health benefits.
- At Least 60 minutes 5 days per week or an accumulation of 300 minutes at least 5 days per week if you want to lose weight
- At least 60-90 minutes or an accumulation of 300-450 minutes at least 5 days per week if you are obese and want to lose and maintain weight

There are a number of ways one can accumulate the recommended amount of physical activity each day/week. Example a 30 minutes physical activity session can be done in three 10 minute bouts throughout the day. In order for this to be effective each 10 minutes bout must be done continuously each time. Choose a method that best fits into your daily routine that you can be achieved.

Children

- 3-5 years at least 60 minutes of structured activities and several hours of free play daily
- 6-17 years at least 60 minutes of moderate to vigorous at least 5 days per week.

They should do a combination of muscle strengthening and bone strengthen activities at least 3 days per week as a part of the 60 minutes

4. Types of Exercise:

There are two types of exercise: **Aerobic** & **Anaerobic**

Aerobic Exercise

This activity is done at low or moderate pace that allows the body to utilize oxygen. This type of activity can be maintained for long periods of time example: 1 hour or longer.

Examples Aerobic Activities

Running	Dancing
Swimming	Skipping
Washing the car	Football
Walking	Aerobics
Gardening	Mowing the lawn

Anaerobic Exercise

This activity is done at moderate to high intensity that requires little or no oxygen. This type of activity can only be maintained for a short period for example a few minutes.

Examples Anaerobic Activities

Power lifting
Sprinting
Tennis
Basketball
Explosive jumping

A common mistake some people make is how anaerobic/aerobic exercise affects the body

Aerobic and anaerobic exercises both provide health-related benefits. They are both vital components of fitness. Each person's body will responds differently to each type of exercise

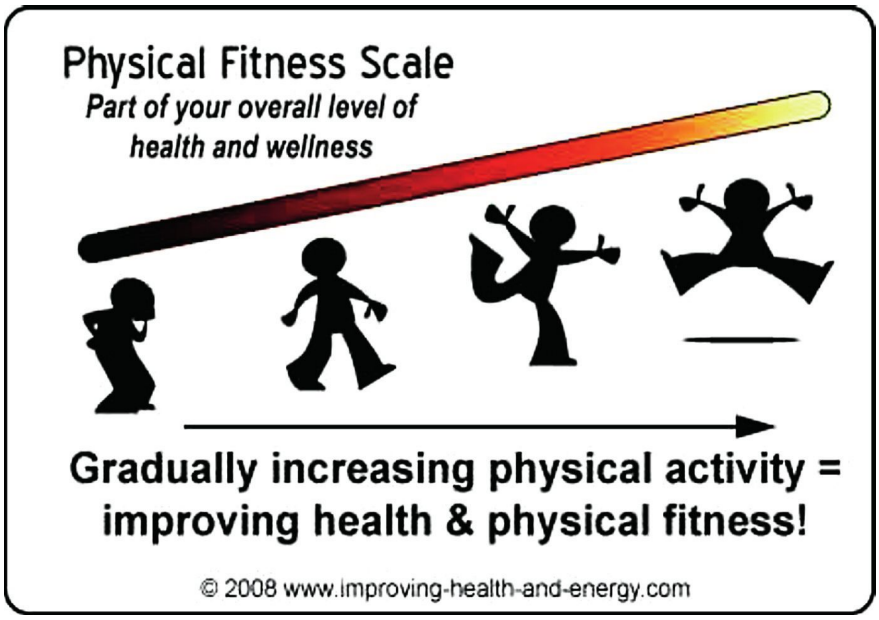
Aerobic exercise is more efficient for the heart and lungs, they help to control blood sugar and pressure levels. When done at sufficient level is a very effective way to lose weight. During aerobic exercise, oxygen is retained in the tissue. This allows the body to burn calories that is stored in the form of fat to produce the energy that is needed to carry out the activity.

Thus it is critical to understand that in order to burn fat the body needs oxygen: if the body does not have oxygen that is required to burn calories, the body will be required to burn calories by breaking down lean muscle tissue (proteins) and/or carbohydrates for energy.

During Anaerobic activity the body is without oxygen, therefore the body fails to breakdown stored body fat for energy that is needed to carry out the activity. Anaerobic exercise is more effective at toning muscles which will increase lean muscle tissue that will enhance the body's ability to burn more calories when resting.

B Getting started is easier than you think!

An inactive person should start out slowly and gradually increase. When they feel that they have mastered level one, move on to the next level by increasing the length or intensity of activity.



C Effective individual strategy

Get up and start moving slowly.

Join a group that can provide support and encouragement

Define your Goals

S – Specifics

M – Measurable

A – Attainable

R – Relevant

T – Time-bound

Motivation

Stay Motivated Celebrate your Achievement Regular exercise is the best predictor of maintaining weight loss, while frequent television viewing is the best predictor for weight gain. A successful weight management programme requires long-term lifestyle changes.

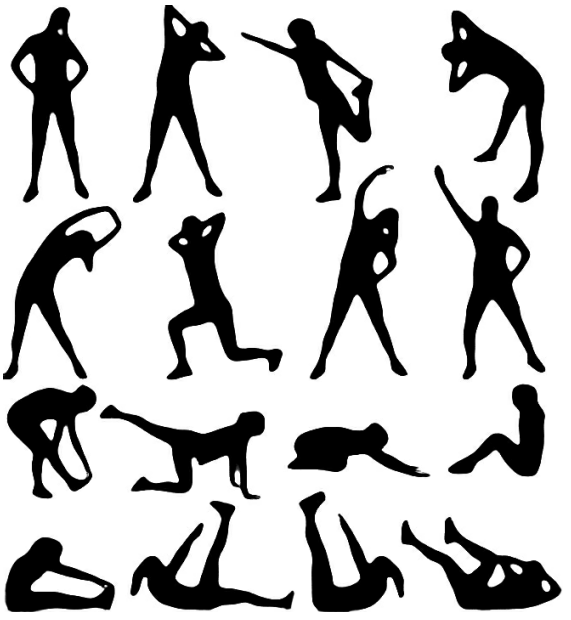
N.B

Exercise cannot be stored. It should be done on a regular basis

D Example of a physical activity workout

Phase 1: Warm up

It is very important to warm up before main/aerobic activity as this will help to minimize the risk of injuries. Warm-up activities help to keep the muscles flexible, increase joints range of motion, blood flow to muscles and heart rate, and help to prevent injuries as the body prepares for main activity.



- Jog or walk moderately for 2-5 minutes.
- Stretch all the major muscles.
- Hold each stretch for at least 30 seconds.
- Do not bounce or jerk while stretching.
- Do each stretch at least 3 times.
- Breathe regularly, do not hold your breath

Phase 2: Main (aerobic/anaerobic) Activity

In order to get maximum health benefits it is recommended that the main activity be done at least 30 minutes at moderate or high intensity for at least 5 days per week.

Aerobic Activities

Running	Dancing
Swimming	Skipping
Washing the car	Football
Walking	Aerobics
Gardening	Mowing the lawn

Anaerobic Activities

Power lifting
Sprinting
Tennis
Basketball
Explosive jumping

Example of how to walk effectively

Main Activity (aerobics)

Most people think that walking is not as effective as running and that it does not burn calories and cause weight loss. Walking is one of the most convenient ways to exercise. It is easy, safe and can be done anywhere, at any time at no cost.

Step 1

Bend your elbow at 90 degrees angle, swing the arms back and forth in motion with your legs.

Step 2

Walk briskly enough to cover at least 1 mile in 20 minutes. Shorten your strides and push off with the back leg.

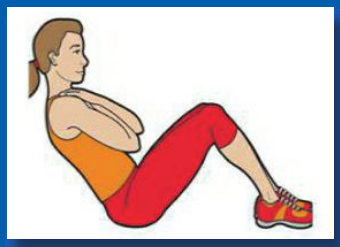
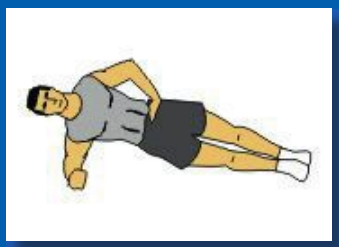
Walk in an upright position at all times, this helps prevent discomfort and help you to breathe easier.

Step 3

Keep an intense pace throughout your work out. You should walk for at least 30 minutes, increase the speed or walk up some hills.

Examples of Strength Training Activities



Phase 3: Cool Down

It is very important that you cool down for at least 2-5 minutes after your main activity. This helps to gradually return the heart rate and blood pressure to resting or pre resting rate. This also helps prevent blood pooling. Walk or slow jog for 5-7 minutes and repeat the stretches that were done for warm up.

Stretch the muscle you used, hold each stretch for at least 30 seconds. Do each stretch at least 3 times. Take deep breaths and hold for 20 seconds, exhale, and relax. Do this at least 3-4 times.

A Physical Activity and Diabetes/Hypertension

Appropriate investigations should be completed prior to starting a physical activity program during and after physical activity.

Physical activity in general is safe for most people, however it is recommended that some people check with their doctor before they start a physical activity programme.

A doctor will determine what type of activity might be appropriate and the intensity level at which one should start doing physical activity. Some physical activities can be dangerous for complications of diabetes for e.g. nerve damage and severe eye disease.

An inactive person should start activity slowly and gradually increase. When they feel that they have mastered level one, move on to the next level by increasing the length or intensity of the activity.

A person should not participate in physical activity if the blood sugar is greater than 250 mg/dL (milligrams per deciliter) and the ketones are positive. This is a sign that the body may already have a lack of insulin and physical activity will only cause a greater rise in the blood sugar.

It is very important for clients who want to participate in physical activity programmes to know that their insulin and/or medication dosages may need to be changed or altered by their doctor.

- Always check blood pressure before during and after each physical activity session
- Patients with diabetes should always take a candy/snack with them just in case their blood sugar drops below the norm
- Clients should be encouraged to find out how different physical activities affect their blood sugar
- Always check for bruises, check shoes to ensure there are no pebbles in them
- Clients should be encouraged to stop if they are feeling pain during physical activity and discuss with their doctor
- During physical activity sessions, if client feels light headed or dizzy they should stop. Clients should check their blood sugar/pressure and discuss with their doctor

Persons who have chronic conditions are more prone to injuries when exercising is not done properly

N.B. clients should never alter any medication while on a physical activity programme (even if they feel good/better) without doctors advice/permission

B Hydration

Avoid Heat Exhaustion:

This is caused by heavy sweating; some signs and symptoms are: weakness, dizziness and nausea. Heavy sweating if not control can lead to dehydration, decreased blood pressure and volume, increased heart rate

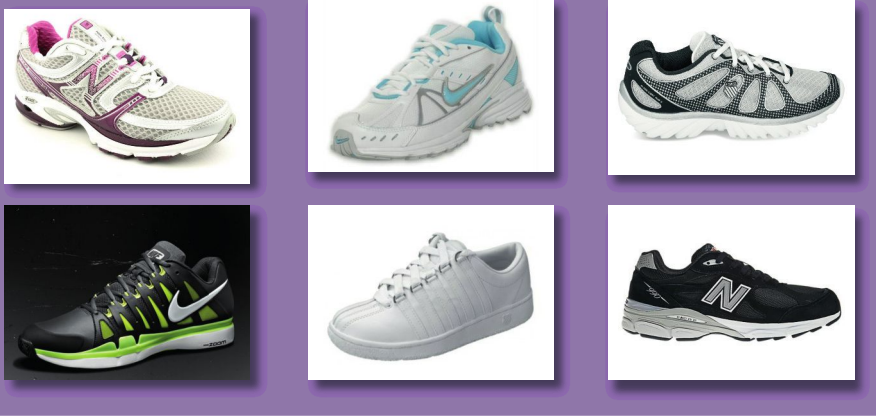
Make sure you drink lots of water before, during and after each physical activity session. Do not wait until you are thirsty before you drink water, this means that you are in danger. Exercise in the morning and evening when it is cool. Try not to work out too intensely if the day is very hot If you are exercising at a moderate or intense pace for more than 1 hour it is best to drink some sort of sports drink to replace the electrolytes the body loses during this process.

N.B. don't make your own sports drink, this can be very dangerous as the proper formula might not be attained and can adversely affect blood sugar level.

C Gear

- Wear clothes that are comfortable and free to move in. Tops and bottom should be soft and can absorb sweat/perspiration e.g. spandex cotton. Females should wear proper bra for support
- Each person should invest in a shoe that fits comfortably. A proper shoe is one that gives you the proper support, flexibility, cushioning, and compensates for any stride problems you may have, such as overpronation.
- There are some factors to consider when purchasing an exercise shoes: type of activity, your weight, distance, intensity of the activity and surface the activity will be performed on.
- Wear proper socks.

Types of Exercise Shoes



Exercise Gear

A Exercise Programmes

Beginners Programme

	Warm up	Walk	Cool Down	Total Workout Time
Week 1	Walk slowly 5 mins.	Walk briskly 5 mins.	Walk slowly 5 mins.	15 minutes
Week 2	Walk slowly 5 mins.	Walk briskly 7 mins.	Walk slowly 5 mins.	17 minutes
Week 3	Walk slowly 5 mins.	Walk briskly 9 mins.	Walk slowly 5 mins.	19 minutes
Week 4	Walk slowly 5 mins.	Walk briskly 11 mins.	Walk slowly 5 mins.	21 minutes
Week 5	Walk slowly 5 mins.	Walk briskly 13 mins.	Walk slowly 5 mins.	23 minutes
Week 6	Walk slowly 5 mins.	Walk briskly 15 mins.	Walk slowly 5 mins.	25 minutes
Week 7	Walk slowly 5 mins.	Walk briskly 18 mins.	Walk slowly 5 mins.	28 minutes
Week 8	Walk slowly 5 mins.	Walk briskly 20 mins.	Walk slowly 5 mins.	30 minutes
Week 9	Walk slowly 5 mins.	Walk briskly 20 mins.	Walk slowly 5 mins.	30 minutes

Advanced Walking Programme

	Warm up / Daily	Walk / Daily	Cool Down / Daily	Total Workout Time
Week 1	Walk slowly 5 mins.	Walk briskly 10-15 mins.	Walk slowly 5 mins.	20-15 minutes
Week 2	Walk slowly 5 mins.	Walk briskly 15-20 mins.	Walk slowly 5 mins.	25-30 minutes
Week 3	Walk slowly 5 mins.	Walk briskly 20-25 mins.	Walk slowly 5 mins.	30-35 minutes
Week 4	Walk slowly 5 mins.	Walk briskly 25-30 mins.	Walk slowly 5 mins.	35-40 minutes
Week 5	Walk slowly 5 mins.	Walk briskly 30-35 mins.	Walk slowly 5 mins.	40-45 minutes
Week 6	Walk slowly 5 mins.	Walk briskly 35-40 mins.	Walk slowly 5 mins.	45-50 minutes
Week 7	Walk slowly 5 mins.	Walk briskly 40-45 mins.	Walk slowly 5 mins.	50-55 minutes

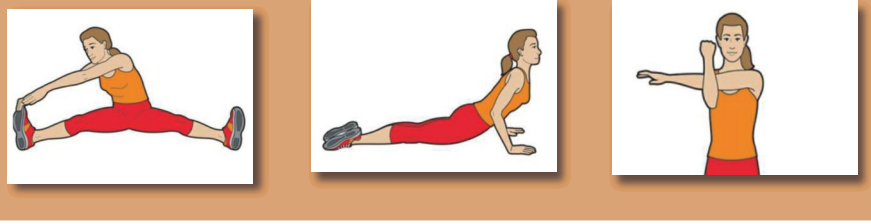
Moderate Exercise Programme

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 2	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 3	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 4	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 5	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 6	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 7	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats
Week 8	30 mins brisk walk	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats	30 mins brisk walk	30 mins brisk walk	Abs push-ups squats

Vigorous Exercise Programme

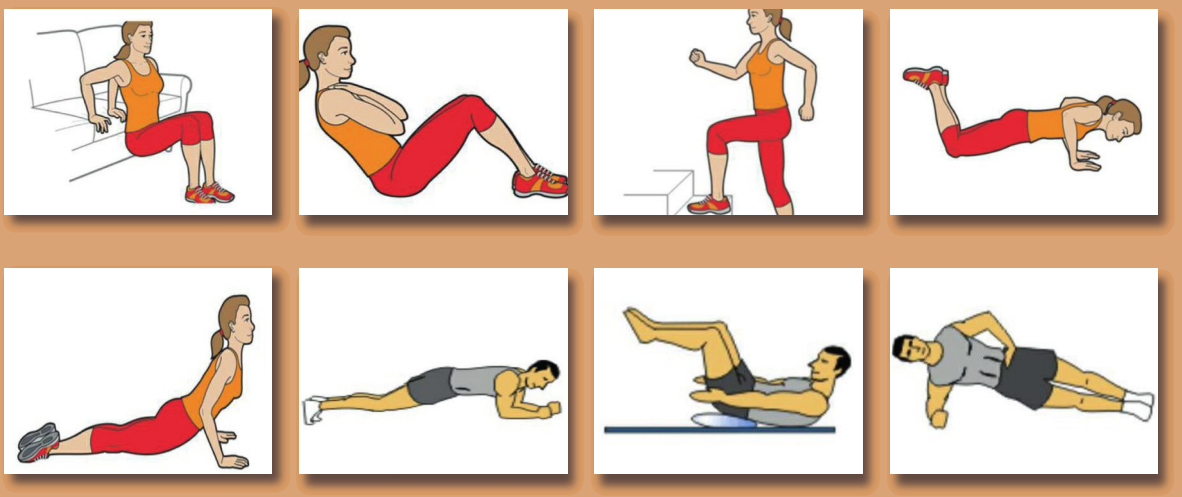
	Sunday	Tuesday	Thursday	Saturday
Week 1	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats
Week 2	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats
Week 3	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats
Week 4	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats	25 mins. jog	25 mins jog, 10 mins Abs push-ups squats
Week 5	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats
Week 6	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats
Week 7	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats
Week 8	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats	30 mins. jog	30 mins jog, 10 mins Abs push-ups squats

Examples of Stretching Exercise



Examples of Aerobic Exercise

Examples of Strength Exercise



B Types of physical activity for special groups

Examples of Exercise for Children

- Hop scotch
- Stretching
- Swimming
- Tug-of-war
- Running
- Skipping
- Hula Hoop
- Dancing
- Ball Games
- Ring Games
- Jumping Jacks
- Walking
- Playing with family/friends

Examples of Exercise for the Elderly

- Walking
- Slow jog
- Dancing
- Swimming
- Tennis
- Stretching
- Arm raises
- Leg raises
- Light free weights
- Gardening
- Sweeping the yard
- Doing the laundry

Exercise for Persons with Special Needs

- Stretching
- Swimming Walkng
- Ball Games
- Golf Weights
- Tennis
- Pushing the wheel chair around
- Arm curls
- Leg curls

C Be in the Know

Most new runners will get stitches and shin splint when they are just starting out

Shin Splint

This is a painful condition in the lower part of the leg (tibia) between the ankle and the knee. The pain is as a result of injury to the ligaments, tissue in the front of the leg and posterior peroneal Tendon. Shin splint happens when doing activities such as running, skipping, jumping too much on hard surfaces.

Preventing Shin splints

- Do a variety of activities
- Stretch before and after major activities
- Avoid doing activities on hard surface
- Wear shoe with cushion

Stitches

This sharp pain caused by a spasm of the diaphragm muscle under the lower edge of the ribcage. The pain is mainly triggered by vigorous activity and occurs more frequently on the right side.

Preventing a Side Stitch

- Practice deep breathing exercise
- Warm up properly before major activities
- Increase intensity of activities gradually
- Avoid eating before activities
- Drink more fluids
- Strengthen your core muscles (lower back, abdominal and oblique muscles)

Physical Activity Record Sheet

	Sunday	Monday	Tuesday	Wednes-day	Thursday	Friday	Saturday
Example	5 min.	10 min.	10 min.	10 min.	15 min.	15 min.	15 min.
Week 1							
Week 2							
Week 3							
Week 4							
Week 5							
Week 6							
Week 7							
Week 8							
Week 9							
Week 10							
Week 11							
Week 12							
Week 13							
Week 14							

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Prepared by the Health Promotion & Protection Branch in
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