Khoo Teck Puat Hospital
NHG Health

Yishun Community Hospital
NHG Health

Adding Years of Healthy Life

Department of
Rehabilitation Services - Physiotherapy

Basic Exercise Module

Benefits of Exercise

- Regular exercise is important to maintain good physical and mental health
- Provides long-term health benefits especially those with chronic conditions and the elderly
- Being physically active and exercising regularly can help prevent or delay many diseases and functional disabilities

Exercise can also…



Boost
energy levels



Improve
mood



Reduce risk
of heart disease,
control blood pressure



Reduce obesity,
control blood
sugar level



Reduce risk of
certain types of
cancer

Objectives

By the end of this module, you should be able to

- Understand the different types and benefits of exercise
- Understand the FITT principle and general guidelines for exercise
- Design your own exercise programme

Goal Setting

How can exercise achieve your goals?



I want to exercise because:

_____

_____

_____

_____

_____

WARM UP EXERCISES

Essential part of exercise!

Reduces risk of injuries

Prepares body for exercise



Optimum duration:
About 15 minutes (varies across individuals)

Benefits

By the end of this module, you should be able to

- Allows muscles and tendons to be more flexible
- Increases blood flow, delivering more oxygen to muscles
- Prepares your heart for an increase in activity, preventing a rapid increase in blood pressure
- Increases speed of nerve conduction, improving reaction time during exercises

AEROBIC EXERCISES

Any activity that involves large muscle groups and makes you breathe harder than at rest

Greater ability to tolerate physical activities and get tired less easily.

Example: Brisk walking, jogging, stair climbing, swimming, dancing



Benefits

- Increases endurance, which helps you exercise longer without getting tired.
- Reduces stress, anxiety and depression.
- Reduces body fat and helps maintain a healthy weight.
- Reduces the risk of developing heart disease and diabetes.



AEROBIC EXERCISES

F

Frequency

Most days of the week, preferably 5x per week

I

Intensity

Moderate Intensity	**Vigorous Intensity**
Breathing faster than usual but not short of breath(slight panting)	**Only** if you have been regular with exercise for the past 4-6 months
Able to speak full sentences	Breathing and perspiring even more, speaking few words at a time

T

Type

- Exercises involving large muscle groups for a period of time
- Brisk walking, jogging, cycling, swimming, Zumba, stair climbing

T

Time

- Average of 150-300 minutes per week
- Recommended 30 mins, 5x per week
- Possible for 50 mins, 3x per week
- Aim at least 250 minutes to lose weight

Monitoring intensity

How hard?

Rate of Perceived Exertion				
0	No Exertion At All	休息	Tiada Usaha	
0.5	Very, Very Slight	特别轻微	Amat, Amat Ringan	
1	Very Light	非常轻微	Amat Ringan	
2	Light	轻微	Ringan	
3	Moderate	中度	Sederhana	
4	Somewhat Hard	有点吃力	Agak Berat	
5	Hard (Heavy)	吃力	Berat	
6				
7	Very Hard	非常吃力	Amat Berat	
8				
9	Very, Very Hard (almost maximal)	特别疲累	Sungguh Berat	
10	Maximal Exertion Hardest Effort	极度疲累	Tahap Maksima	

Monitoring intensity

How hard?
You should be exercising at about 65% to 75% of your Maximum Heart Rate (MHR)

Step 1: Calculate your age-predicted (estimated) MHR

MHR = 220 - *(Your Age)* =

Step 2: Calculate your Target Heart Rate Range (THRR)

Lower limit = 65% x

=

Upper limit = 75% x

=

To achieve moderate intensity, your exercise heart rate range should be between:

and

RESISTANCE EXERCISES

Did you know?

Age:

25 Muscle strength peaks

35 Remains fairly constant

40 Physical inactivity can result in 3% to 5% of muscle mass per decade

50 10% of muscle mass would have been lost



Benefits

- Gain/preserve muscle strength and mass
- Enables you to lift items easily
- Improves insulin sensitivity
- Improves/preserve bone density
- Lowers risk of developing musculoskeletal conditions related to muscle weakness and inactivity

RESISTANCE EXERCISES

F

Frequency

2 – 3x per week

I

Intensity

Moderate Intensity	Vigorous Intensity
Moderately heavy weights (rep range 8-15 reps)	**Only** if you have been regular with exercise for the past 4-6 months
During body weight exercise: Breathing should increase noticeably	Body weight exercise: Breathing should increase even more and done continuously

T

Type

- Weights (dumbbells, water bottles, ankle weights), bodyweight, gym machines, resistance band
- Major muscle groups (chest, back, shoulders, arms, gluts, thighs, calves)
- Push/pull movements in horizontal and vertical direction

T

Time

- Time taken to complete 8-15 reps, 2-3 sets.
- 1-2 minutes rest time between sets (varies)
- For body weight circuit exercise, time to complete 3 to 5 rounds, of about 3 to 5 exercises covering major muscle groups

FLEXIBILITY EXERCISES

Did you know?

Elasticity of your tendons and ligaments decreases with age.

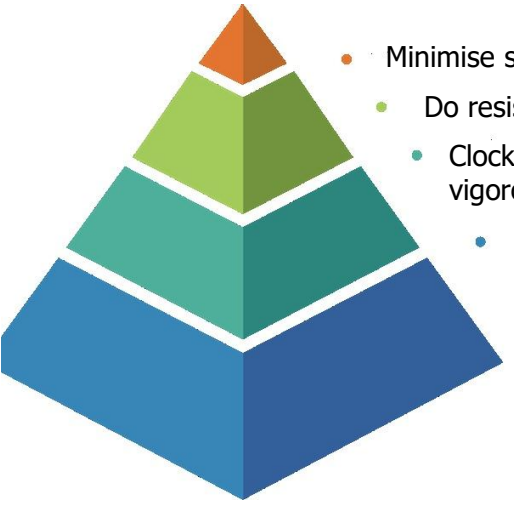
Adults can lose 8 – 10cm of lower back and hip flexibility as they age

Flexibility exercises or stretches can lower risk of musculoskeletal conditions related to body stiffness



F	I	T	T
Frequency	**Intensity**	**Type**	**Time**
Daily	Light intensity Breathing easily	Upper and lower body stretches	Hold for 20 to 30 seconds. Repeat 3 to 5 times.

PHYSICAL ACTIVITY PYRAMID



- Minimise sitting and sedentary time.
- Do resistance training 2-3 times a week.
- Clock 150-300 minutes of moderate to vigorous intensity aerobic exercise a week.
- Keep an active lifestyle. Aim for at least 10,000 steps per day!

I can keep myself active everyday by…

_____

_____

I can perform 150 minutes per week of aerobic or recreational activities such as…

_____

_____

I can improve my muscle strength and flexibility by doing…

_____

_____

I must reduce inactivity/sedentary times by…

_____

_____

Notes

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