

Physical Activity



**For individuals
with Diabetes**



Exercise for those with Diabetes

Exercise is important for your general health and well-being. If you have diabetes, you can still exercise if you take some precautions, depending on your:

- **Type of diabetes**
- **Pre-exercise glucose level**
- **Medication and timing**
- **Recent food intake**
- **General health condition**



Exercise recommendations

Frequency

- Aim to exercise **3 to 7 days per week**
- Aerobic and stretching exercises can be done every day, with strength training on alternate days

Intensity

- Aim for **moderate intensity**, i.e., **talk but can't sing** while exercising

Time

- Aim for an average of **150 - 300 minutes of exercise per week** or 30 minutes of exercise for 5 days per week
- Do more to lose weight

Type

- Include a combination of aerobic, resistance and flexibility (stretches) exercises
- Progress to include other types of exercises such as balance, agility and even power training



Regular physical activity benefits you in many ways



Improves productivity
Boost attention, memory
and creativity



Improves overall mood
Reduces stress and
improves mental health



Increases health benefits
Reduces risk of colon
cancer, heart diseases,
diabetes and high blood
pressure



Increase fitness levels
Improves strength and
stamina

Taking small steps towards an active lifestyle

Make it a habit to do a few of these activities throughout your day



Take the stairs instead of the lift



Brisk walk for 10 minutes



Walk around every hour



Take **10,000 steps** daily



Get off one bus stop earlier and walk



Exercise with **family and friends**

How can I exercise safely?



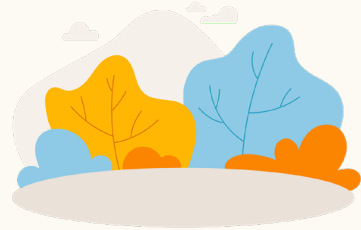
Start slow if you have not been physically active



Wear **comfortable clothing** and **appropriate footwear** (well-fitted shoes with adequate support)



Check your feet for wounds before and after exercising



Exercise at a **cooler time** (mornings or evenings, or in a cooler environment)



Bring along **healthy snacks** or sugar-containing sweets, in case of hypoglycaemia (low blood sugar)



Keep hydrated



Exercise **with family and friends**

Improving your fitness and performance gradually

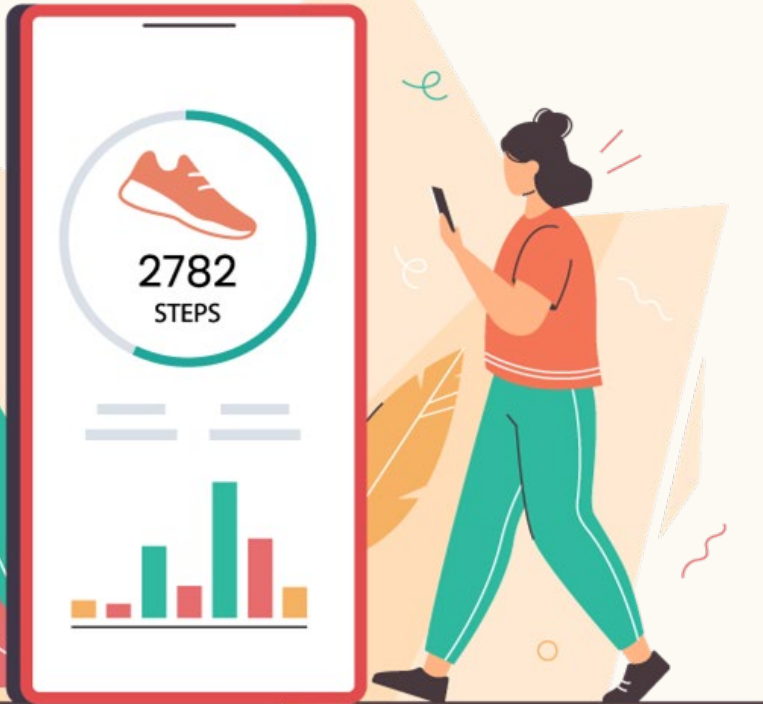
Progression of aerobic exercise

Once you're ready, you can add more structure into your routine.

You can progress to higher intensities of exercise based on your individual exercise tolerance.

There are 3 methods for challenging your aerobic fitness:

- Increase your speed
 - ↳ E.g.,: Walking on a treadmill, at 3.5km/h → 3.8km/h → 4.2km/h
- Increase your resistance
 - ↳ E.g.,: Lifting hand-weights, of 0.5kg → 1kg → 1.5kg
- Increase your duration
 - ↳ E.g.,: Going for a walk, for 20min → 30min → 40min



Exercise and pain management

Post-exercise muscle soreness

- Normal and expected discomfort occurs between 24 and 48 hours after activity (especially if you are new to the activity).
- Usually resolves on its own.
- If it is (1) excessive in intensity or (2) persists longer than 2-3 days, consider reducing the duration or intensity of your exercise.

Injury management (for minor sprains and strains)

- Rest: Do so for 48-72 hours; avoid excessive movement to the injured area.
- Ice: Apply for 10-15 mins to the affected area. Precautions: (1) use a towel – do not apply directly against your skin; (2) do not apply onto open wounds; (3) check your skin integrity and condition after applying ice.
- Elevate: If possible, keep the injured area elevated to reduce swelling.
- Seek medical attention if the injury does not improve.



Exercise and pain management



Claudication pain* for those with peripheral vascular disease

- Only exercise to the point of moderate pain (i.e., 3 out of 4 on the Claudication Pain Scale).
- Sit and rest intermittently when moderate pain is reached, and resume only when pain is COMPLETELY alleviated.

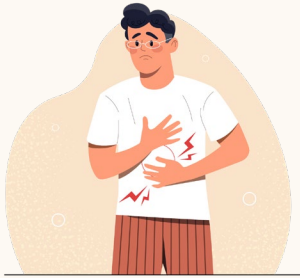
Claudication Pain Scale	
0 = no pain	Resting or early exercise effort
1 = very mild pain (onset of claudication)	1st feeling of any pain in legs
2 = mild pain	Pain which the patient's attention can be diverted
3 = moderate pain	Intense pain from which patient's attention cannot be diverted. (Most exercise programmes may recommend cessation of exercise at this point)
4 = severe pain	Excruciating and unbearable pain

* Pain in your thigh, calf, or buttocks when you walk, which can make you limp.

Source: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/claudication>

How can I exercise safely?

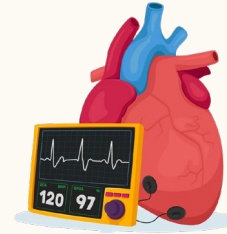
When exercising, please rest or stop if you experience
Symptoms of hypoglycaemia (low blood sugar of < 4 mmol/L)



Hunger



Hand tremors



Abnormally fast heartbeat



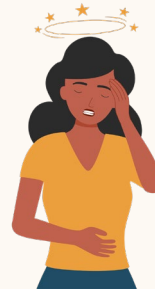
Difficulty breathing



Fatigue



Mood changes
(e.g., anxiety, irritability,
nervousness)



Dizziness or headaches



Pain
(especially in the
chest or abdomen)

To note: Delay or postpone exercise if you are feeling unwell. Always listen to your body.

What exercise are appropriate for me?

If the patient is a wheelchair user, skip Step 1 and proceed to Step 2

Step 1: Determine mobility level

<ul style="list-style-type: none"> On your own, do you have any difficulty standing up from a seated position without using your arms? 	Yes	No
<ul style="list-style-type: none"> On your own, do you have any difficulty walking for about 1 bus stop (~400m) without resting and using walking aids? 	Yes	No
<ul style="list-style-type: none"> On your own, do you have any difficulty climbing up 10 steps without resting, using handrails or walking aids? 	Yes	No
<ul style="list-style-type: none"> On your own, do you have any difficulty getting up from the floor without using furniture or other aids? 	Yes	No

Step 2: Determine activity level

<ul style="list-style-type: none"> Sedentary 	Seldom exercise
<ul style="list-style-type: none"> Semi-active — some exercise 	30 minutes, 3 times per week, at less than moderate intensity (can talk but can't sing), for past 3 months
<ul style="list-style-type: none"> Active — regular exercise 	30 minutes, 3 times per week, at moderate intensity (can talk but can't sing) to high intensity (can only say a few words) for past 3 months

What exercise are appropriate for me?

If the patient is a wheelchair user, skip Step 1 and proceed to Step 2

Step 3: Get relevant handouts

	Full mobility	Limited mobility	Wheelchair users
Sedentary	1A	1B	1C
Semi-active	2A	2B	2C
Active	3A	3B	3C

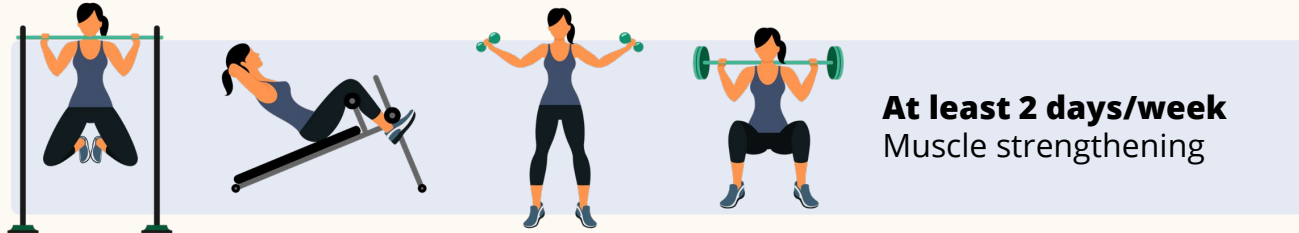
- This assessment tool is designed for use by individuals as a guide to calibrate their physical activity based on their mobility and activity levels
- Complete steps 1 to 3 to identify the relevant category of handouts for the individual



Recommended guidelines



and

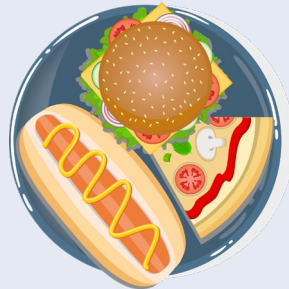


You can't out exercise a bad diet

For an 80kg individual:



320 calories



792 calories

