Royal Free London
NHS Foundation Trust

Intermittent Claudication: Supervised Exercise Therapy (SET) programme

Name:

Your training zone (bpm) 40% lower – 70% higher

Information for patients

This booklet is a guide for your supervised exercise therapy programme. Please use it alongside any advice given by the vascular surgery team. Please seek advice before undergoing any new activities and follow the guidelines to exercise safely and effectively.

During your programme, your healthcare team will guide you on how practice safe and effective exercise techniques. These exercises are designed to:

- Build your confidence
- Increase how long you can be active
- Help you handle daily tasks more easily

If you have any questions as you progress through the programme, please do not hesitate to ask your vascular nurse specialist or exercise therapist for advice, they will be happy to guide you through your exercises. We hope you enjoy your programme and learn skills that will help you walk better and improve your health.

Benefits of physical activity

To improve claudication symptoms, it is necessary to take part in physical activity, particularly walking.

Physical activity could help increase your claudication distance and provide health benefits both physical and psychological, some of these include:

- Reduce leg pain caused by claudication
- Reduce the need for a surgical intervention
- Reduce cardiovascular risk factors
- Help improve your blood sugar control
- Help you keep a healthy weight
- Reduce stress, anxiety and improve your sense of wellbeing

Government guidelines recommend that every adult should participate in at least 150 minutes of moderate exercise each week. A guide on how to plan your exercise for the week (Circulation Foundation leaflet is enclosed) and can be used in conjunction with your exercise prescription.

Setting your exercise goals

Before you begin your programme, you should set SMART (specific, measurable, achievable, relevant, time-based) goals for the duration of your programme. It is important to set both short-term and long-term goals as they will help you to measure your progress and stay focused and motivated.

My three best reasons for being more active

1)

2)

3)

Short term	Medium term	Long term
Achieve in the next two to six weeks?	Achieve in the next two to four months?	Achieve in the next six to 12 months?

Staying safe during physical activity

This booklet is designed to guide you on how to exercise safely at home, at your own pace. It should be used alongside the advice given during your intermittent claudication programme.

Please inform someone immediately and do not begin or continue to exercise if you experience any of the following:

- Pains in the chest
- Breathlessness or wheeziness at rest
- Any nausea
- Palpitations
- Flu symptoms, a cold, high temperature or very tired
- Excessive sweating
- Dizziness or unusual weakness

Where possible, have a family member or friend nearby in case you need help during your exercise session.

For patients who use a GTN spray or tablets

If you have been prescribed a glyceryl tri-nitrate (GTN) spray or tablets then please ensure you have it with you before exercise.

If you need to use the GTN as prescribed, make sure:

- Stop activity, sit down and rest
- If these symptoms aren't relieved, take GTN spray/tablets
- Repeat at five-minute intervals up to a total of two doses
- if symptoms are relieved, rest for five minutes, then re-warm before resuming exercise
- If no relief five minutes after second dose dial 999.

If you use inhalers regularly, it is advised that you have this with you as well when you exercise and if you develop wheeziness during exercise, do administer the relevant inhalers prescribed for you.

If you feel unwell, please seek medical advice from your GP or NHS 111. In an emergency call 999.

What to avoid when exercising

- Soon after a meal – wait 1 to 2 hours after eating
- When you feel unwell – rest and recover first
- Extreme temperatures
- Competing with others - focus on your own training zone, not what others can do
- Sustained overhead exercises – these can increase cardiovascular strain
- exercises while lying on your back or stomach
- holding positions without movement (like staying in a low squat) – these can raise blood pressure
- holding your breath during exercise – remember to breathe normally throughout

What's normal during physical activity

- Breathing changes – you should be breathing harder but still able to talk
- Light sweating – a mild sweat and warm skin is normal
- Muscle aches – your muscles may feel sore for 1 to 2 days after exercise as they adapt and grow stronger. This temporary soreness will decrease as you exercise regularly
- Positive feelings – it is normal to feel pleasantly tired and proud that you've completed your exercise session

Measuring your exercise intensity

During the twelve-week course we use two methods to measure and track exercise intensity: pulse rate (beats per minute) and the 6 to 20 Borg score (see end of leaflet).

A pulse rate is the number of times your heart beats per minute (BPM). As you exercise, this increases to help supply oxygen rich blood to the working muscles. To measure your pulse, we use a blood pressure monitor, pulse oximeter or a smart watch.

If your pulse is abnormally low or high after 10 minutes of rest, then please do not exercise and report this to your GP.

How hard should I exercise?

When you feel pain in your legs while walking or exercise, it helps your body develop better blood flow.

Here is what to do:

- Walk or exercise at a pace that causes your leg pain to start within 5 to 10 minutes once the pain begins, keep going until it reaches a moderate level (about 4 to 5 on the Claudication Pain Scale shown at the end of this booklet)
- When you reach this moderate pain level, stop and rest or switch to a very light movement
- Wait until the pain completely goes away before starting again

Your exercise training zone guide

Your training zone (shown on the front cover of this booklet) is based on your age, resting heart rate and medications. This is the heart rate you should aim for during the main part of your exercise sessions.

Getting started

- When starting your programme, exercise at a lower intensity so you can complete the entire session.
- As you get comfortable, you can gradually work at higher intensity within your zone
- If you have a smart watch or fitness tracker, you can use it to check your heart rate

For good cardiovascular health, aim to exercise between 40% to 70% of your maximum heart rate. This range helps your cardiovascular system improve most effectively.

Using the Borg Scale (6 to 20)

The Borg scale helps you measure how hard you're working:

Before Exercise: Level 6 to 8

- You're at rest
- No effort or extremely light effort

Warm up: Level 8 to 11

- Gradually increasing effort
- Light physical activity

Main exercise: Level 11 to 14

- More challenging effort
- You should still be able to talk
- This is your target zone!

Cool down: Level 8 to 11

- Gradually decreasing effort
- Returning to lighter activity

After Exercise: Level 6 to 8

- Back to resting levels

How to exercise safely and effectively

Before you warm up, check your exertion levels. Your pulse should be at a normal resting level for you. Normally this is between 50 to 100 BPM. Another way to check is via the Borg score. You should be at levels 6 to 8 (very light physical effort) before exercise. Factors that can affect this may be stress, medication, food or drink, time, and recent activity. Have some water ready to drink regularly throughout your session.

Warm-up

Borg score: Build up to 11

Heart rate: Build up to your training zone (see front cover)

The warm-up should include around 15 minutes of pulse raising exercises and muscular stretches held for six to 10 seconds. It should gradually develop in intensity, starting with smaller movements and building up to incorporate larger, more physically demanding movements. With any physical activity, it is most important to complete the gradual warm up to ensure your body adapts and is suitably prepared for the activity.

Main exercise

Borg score: 11 to 14

Heart rate: Training zone (see front cover)

Talk test: Should be breathless but able to maintain a conversation / sing while exercising

The main part of the exercise (20 to 30 minutes) should consist of a multi-station circuit of various cardiovascular exercises and active recovery stations. You should exercise to achieve breathlessness but be able to maintain a conversation during the cardiovascular stations and recover your breath during the active recovery stations.

You should work at an intensity that you can sustain for the full duration of your planned session. Slow down or perform smaller movement or reduce the weight of the equipment if you find you are at 15 or more on the Borg scale.

Cool down

Borg score: Gently return to resting levels (6 to 8)

Heart rate: 50 to 110 BPM

The cool down should be at least 10 minutes in length and gradually decrease in intensity until you feel you are back to resting levels. It should also incorporate the same stretches, but this time hold the stretches for 10 to 15 seconds to help develop flexibility. The gradual cool down should be completed to allow your body an appropriate amount of time to bring the heart rate back to resting levels.

It is important to make sure you have reached resting exertion levels (see the Borg scale) before you finish your cool down.

After exercising you should expect to feel warm and as though you have exerted yourself. Ensure you drink water to replenish any of the fluids lost during exercise and it is recommended to allow a full 24 hours before undertaking any further moderately intense exercise sessions to ensure your body has enough time to recover.

If you have not exercised for some time, your muscles may ache in the days after your exercise sessions. This is normal as your muscles adapt and recover from the exercise routine. Try to stretch often and eat nutritionally rich meals to help improve muscle recovery. Good nutrition is as important as exercise, so please ask a member of the vascular surgery team for advice if you would like further information.

Further advice

If you have any questions regarding your condition, then please ask one of the members of the vascular surgery team or your vascular nurse specialist:

Useful online resources

The NHS website is full of useful information to help you understand and improve your condition:

- www.nhs.uk/conditions/peripheral-arterial-disease-pad/
- www.nhs.uk/live-well/eat-well/
- www.nhs.uk/live-well/exercise/

The Circulation Foundation website provides advice specific to peripheral arterial disease: www.circulationfoundation.org.uk/

The National Institute for Health and Care Excellence (NICE) is where you can find the latest evidence-based healthcare information for various health conditions:

www.nice.org.uk/guidance/conditions-and-diseases/cardiovascular-conditions

Rating of perceived exertion (RPE) 6 to 20 borg scale

Score	Perceived exertion
6	Not exertion at all
7	Extremely light
8	
9	Very light
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard (heavy)
16	
17	Very hard
18	
19	Extremely hard
20	Maximal exertion

Claudication pain scale

1	No pain
2	Onset of pain
3	Mild pain
4	Moderate pain
5	Severe pain

American Association of Cardiovascular and Pulmonary Rehabilitation

Borg RPE Scale® Ratings (R) of Perceived (P) Exertion (E). © Gunnar Borg, 1970, 1998, 2017

More information

For more information about cardio vascular services at the Royal Free London, please visit our website:

Your feedback

If you have any feedback on this leaflet or for a list of references for it, please email: rf-tr.communications@nhs.net

Service: Cardiovascular
Version number: 1
Leaflet reference: RFL1243
Approval date: June 2025
Review date: June 2028
www.royalfree.nhs.uk

Notes

Notes