

RNOH Patient Information Leaflet:

Compartment Pressure Testing

Q1: What is Compartment Pressure Testing (CPT)?

- You have been referred to RNOH for Compartment Pressure Testing. This is a diagnostic procedure where the pressures in one or more of the compartments are tested with a needle attached to an intracompartmental pressure monitor.
- The intention is to diagnose or exclude the medical condition known as Chronic Exertional Compartment Syndrome (CECS). There are various ways of performing this and the interpretation of results can be challenging. An abnormal result does not always equate to CECS. Lower limb CECS is a known cause of exercise-induced leg pain (EILP). EILP typically occurs in sports which involve running, marching or jumping.
- *Compartment Pressure Testing is more frequently performed for issues arising from the but can occasionally be carried out for issues in the upper limb (forearm) too. For that reason, many of the questions and answers below will focus more on the lower limb but the general principles of preparation and testing are similar.*

Q2: What preparation is required?

- An initial clinic appointment will occur where your consultant will take a detailed medical history and perform a clinical examination.
- Patients with known severe clotting disorders, on anticoagulation medication, have metalwork from previous surgery to the area or are generally unwell may not be suitable to have this procedure performed. Your safety is paramount.
- Please bring along any referrer or previous clinic letters, blood test results, imaging reports and images for your initial clinic appointment as these can be very relevant.
- *You should attempt to go for several runs over a few days before you have the procedure done- this increases the likelihood of being able to reproduce your actual symptoms consistently on the day of testing, making the test results more accurate.*

Q3: What does the procedure involve?

- Following an informed explanation about the procedure, risks and aftercare instructions, you will be asked to sign a written consent form.

- During the procedure, you will be asked to run on a treadmill in order to reproduce the symptoms of leg pain/ weakness / numbness that you may experience regularly on exercise.
- CECS testing is carried out using a handheld intracompartmental pressure monitoring system. This involves a small needle catheter inserted under local anaesthesia and sterile conditions into the compartment/s to be examined. Pressure measurements will be taken and a raised pressure reading is suggestive of CECS. Pressure measurements may be repeated for between 1 to 5 minutes after exercise has stopped.
- *You will need to bring your own running attire, running shoes and gym towel for this test. Ensure you have eaten and drank clear fluids beforehand.*
- *Ensure that you are also well rested before the test as you may be asked to run very vigorously on the treadmill in order to accurately reproduce your leg symptoms.*

Q4: What are the possible risks associated with this procedure?

- This is generally a safe procedure. You may experience some bruising and mild pain at the site where the needle has been injected.
- Care is taken to do this under aseptic (clean) conditions but there is a very small risk of infection (less than 0.01%) where the cannula is inserted. If you should experience severe pain, fever or swelling in the days after the procedure, you should contact your doctor or attend the emergency department outside of normal working hours to have it checked.
- There is a very small chance of getting an acute compartment syndrome (less than 0.01%) if one of the blood vessels in your legs is damaged during the procedure. If you develop severe pain and swelling within 24 hours of the procedure, you should attend emergency department to have it checked. Incidentally, the treatment for this is the same operation (surgical release of the affected compartment) as CECS.
- During the Covid-19 pandemic, additional safety precautions will be applied to ensure the safety of the patient and clinic staff throughout the testing procedure. These precautions will be explained to you in detail during the initial consultation.

Q5: What happens after you have had the procedure?

- A clean dressing will be applied over the site of injection. Your results will be explained to you after the procedure. Your consultant will write back to the referrer with the results to keep them informed.

Q6: Should I rest after the procedure?

- There is no specific need to rest after the procedure. You can return to gentle exercise the following day but avoid strenuous exercise or impact (e.g. sprinting, aerobics) for 48 hours after the procedure.
- Oral painkillers can be helpful if you are sore after the procedure. This soreness often settles quickly- within a few hours to a few days.