

National Hospital for Neurology and Neurosurgery

Muscle biopsy

Centre for Neuromuscular Diseases
Neuromuscular Complex Care
Centre

If you would like this document in another language or format or if you require the services of an interpreter contact the Clinical Nurse Specialists or the ward directly. We will try our best to meet your needs.

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Your neurologist has recommended that you have a muscle biopsy to help make a diagnosis of your condition; this may also help decide what the best treatment is for you.

This booklet has been written by the neuromuscular team at The National Hospital for Neurology and Neurosurgery. Our aim is to explain what a muscle biopsy is, how it is performed and what you are likely to experience.

This booklet is intended for patients (or their family or carers) who may be offered this procedure. It is not intended to replace discussion with your consultant.

If you have any questions about this procedure please contact a member of our team.

What is a muscle biopsy?

A biopsy is a procedure in which small samples of tissue are removed. This tissue is examined under a microscope for abnormalities that may reveal important information about your condition. Three biopsy samples are taken for examination, the first is about a centimetre in length and about the same width as a matchstick (about two millimetres), the other two are around two centimetres in length and one centimetre in width (similar to the width of a biro). This is usually taken from the upper, outer thigh

muscle (the quadriceps muscle) but other muscles are sometimes selected by your doctor including the arm muscles (biceps or triceps) or the calf muscle. The biopsy will take around 20 to 30 minutes.

How can a muscle biopsy help?

A muscle biopsy can help in diagnosing conditions associated with muscle weakness. By looking at the muscle tissue under a microscope and doing other additional laboratory tests the cause of the muscle weakness can often be determined.

Sometimes a muscle biopsy is useful for investigating some rare conditions that do not directly cause muscle symptoms; for example a muscle biopsy may be carried out when investigating heart problems or rare brain disorders. It can also help in the diagnosis of conditions causing inflammation of the blood vessels (called vasculitis).

A muscle biopsy will often give your doctors further information so that they can advise you better about the cause and likely course of your condition. However, you should be aware that there are no guarantees that this procedure will be helpful.

What are the risks of a muscle biopsy?

All operations have risks and your doctor will discuss the risks of a muscle biopsy with you.

The commonly occurring ones are:

- **Problems that may happen straight away**

The most common problem is pain at the site of the biopsy after the local anaesthetic wears off. It is important that you ask your nurse for pain relief when you need it. In most cases this will stop in a few days to weeks. A small amount of bleeding or discharge from the wound may occur for two or three days. Swelling and bruising often occurs but should go away in a few days.

On extremely rare occasions an allergy to the medicines or dressings used may develop. If this happens treatment may be required in or out of hospital.

- **Problems that may happen later:**

Infection (although rare) may occur as with any wound. However it is more likely to occur if you have diabetes or you are taking medicines called steroids. When infection develops, wound healing may be slow and poor. A wound infection may require prolonged wound dressing and antibiotics and you may be left with a larger scar.

- **Problems that are rare:**

Some people experience ongoing pain at the biopsy site or persisting numbness overlying the scar. Occasionally it is necessary to use medicines or other techniques to ease ongoing pain.

On very rare occasions, swelling and bruising at the wound site may remain for weeks after and it is possible that a hard lump (haematoma) may develop under the skin. This is generally accompanied by pain around the biopsy area.

What will happen if I choose not to have a muscle biopsy?

The choice to have a muscle biopsy is yours. However, decisions about future treatments may depend upon the biopsy result, especially if long term or potentially toxic treatments are being considered. We would not wish to give you such treatments without good evidence that it is right for you.

If you are uncertain about any aspect of the procedure, the reasons for it, the benefits or the possible risks and complications, please speak to your doctor.

What alternatives are available?

Before considering a muscle biopsy your doctor will have gathered as much information as possible through blood tests (including genetic blood tests) and electrical studies. An MRI scan of the muscles may sometimes be helpful. In some cases, a biopsy of skin or other body tissues can help.

Asking for your consent

We want to involve you in all decisions about your care and treatment. If you decide to go ahead with this procedure, by law we must ask for your consent and will ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. You should be able to see the surgeon who is doing the biopsy in advance, and can be consented for the procedure however this is not always possible so you may have a telephone conversation with the surgeon and will sign consent on admission. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed treatment, please don't hesitate to speak to a senior member of staff again.

How should I prepare for a muscle biopsy?

Your doctor needs to know about all medicines you are taking; especially those which affect the blood's ability to form a clot such as anticoagulant or antiplatelet medicines as these may need to be stopped before surgery. Do not stop taking any medicines unless you are advised to do so by your consultant or clinical nurse specialist.

You may be admitted to the Day Care Unit, one of the wards or the Neuromuscular Complex Care Centre prior to your biopsy. We will send you information about the units with your admission letter.

Please bring any medicines you are currently taking with you on the day.

You will not need to fast for the biopsy as it is performed under a local anaesthetic. This means you will be awake throughout, if you would prefer to have sedation for the biopsy, please ask the team doing the procedure. We recommend that you have someone to accompany you on your homeward journey.

What happens during a muscle biopsy?

- The doctor performing the biopsy will not be the doctor looking after you, but will be a trained surgeon.
- The procedure is performed in an operating theatre under a local anaesthetic. This means you will be awake throughout the procedure. However you are able to request sedation if you wish for the procedure.
- The surgeon doing the biopsy will ask you to lie on your back or will position you so that the muscle the biopsy is to be taken from is easy to access.
- The surgeon will sterilise the area with iodine or other cleaning solution. A local anaesthetic (numbing medicine) will be injected around the area which initially causes a stinging sensation. Once the area is numb, a five centimetre incision (opening) is made through the skin.
- The surgeon then identifies the muscle before taking the biopsy. Patients experience a 'pulling' or 'pressing' sensation as the biopsy is taken and some patients find this uncomfortable/painful.
- Stitches are used to close the skin and a dressing is applied.

What should I expect after a muscle biopsy?

After the surgery, the biopsy site will be covered with a sterile dressing and a bandage. The dressing should remain in place for three to five days and it is important that you keep the wound and dressing dry. Generally stitches dissolve and do not need to be removed, but sometimes a stronger type of stitch is used, which will need to be removed. You will receive instructions as to which type of stitch you have and we will give you a letter which tells you when you need to have your stitches removed. Usually this can be done by your GP or practice nurse. We will give you a letter to take to your GP.

If the muscle biopsy has been taken from your leg you should rest for three hours afterwards ideally with your leg raised on a pillow to prevent swelling and complications and to aid healing. If possible, on your journey home you should avoid walking and you should be able to keep your leg raised, for example by sitting in the back of a car with your leg resting on a pillow on the seat.

After 24 hours it is important to maintain mobility but try to avoid a lot of exercise or too much walking for one week. If the biopsy was taken from the arm the main principles of care listed above still apply.

The Neuromuscular Nurse Specialists will be able to advise you further regarding exercise and wound care.

When and how will I receive the results of my muscle biopsy?

An initial report of the findings from the muscle biopsy is usually available four weeks after the procedure. This initial report is often sufficient but sometimes if additional special tests are required this report will take longer.

A preliminary result of your muscle biopsy may be available in seven days, and if appropriate, treatment could commence before a full report is available. Your doctor will contact you to discuss the result either immediately or at an appointment in the clinic.

What should I do if I have a question or I am concerned about the biopsy wound?

If you are at all concerned about your wound please seek medical advice. If you experience excessive pain, swelling, bleeding or drainage from the biopsy site or have any other concerns regarding your wound please see your family doctor (GP) or the practice nurse. If your GP is closed contact your local out of hour's service that deputises for

your GP or go to your local Accident & Emergency department.

The on-call Neurology Registrar covering The National Hospital for Neurology and Neurosurgery can be contacted by the treating Accident & Emergency physician through the switchboard.

For non urgent enquiries you can contact the Neuromuscular Nurse Specialists. During working hours our answer phone is checked at least twice each day. Please leave a message with your name and a contact number and we will get back to you as soon as possible.

Alternatively you can contact the Neuromuscular Complex Care Centre during normal working hours on 020 3448 3795.

Where can I get more information?

Centre for Neuromuscular Diseases
www.cnmd.ac.uk

Muscular Dystrophy Campaign
61 Southwark Street
London
SE1 0HL
020 7803 4800
info@muscular-dystrophy.org

UCL Hospitals cannot accept responsibility for information provided by other organisations.

How to contact us

The National Hospital for Neurology and Neurosurgery
Queen Square

London

WC1N 3BG

Switchboard: 0845 155 5000 (There is no additional service charge for using an 0845 number. The cost is determined by your phone company's access charge) / 020 3456 7890

Fax: 020 3448 3633

Website: www.uclh.nhs.uk/nhnn

Neuromuscular Disorders Nurse Specialists

Direct Line: 020 3448 8009

020 3448 8015

020 3448 8682

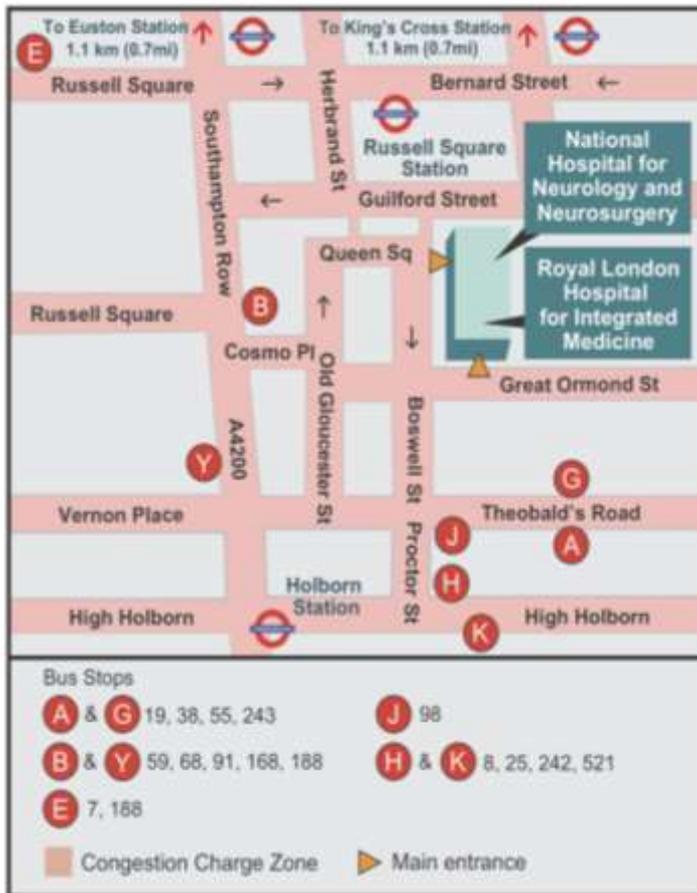
020 3448 3228

Neuromuscular Complex Care Centre

Direct Line: 020 3448 3795

Space for notes and questions

Where to find us



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