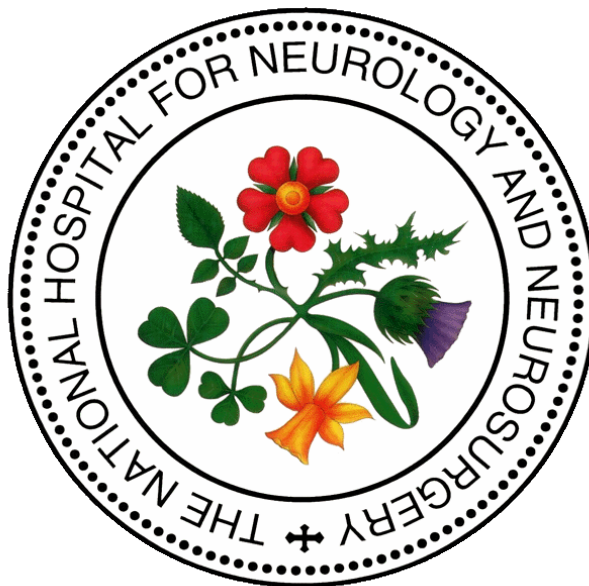


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# Nerve Biopsy

Information for patients, family and carers



The National Hospital for  
Neurology and Neurosurgery





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Your neurologist has recommended that you have a nerve biopsy to help make a diagnosis of your condition, or to help decide on the best treatment 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 nerve biopsy is, how it is performed and what you are likely to experience. If you have any questions about this procedure please contact a member of our team. They will be happy to answer any questions you may have.

### **What is a nerve biopsy?**

A biopsy is a procedure in which a small sample of tissue is removed. This tissue is examined under the microscope for abnormalities that may reveal important information about your condition. In a nerve biopsy a piece of nerve approximately two centimetres long is removed. This is usually a nerve that supplies the feeling to a small area of skin (called a sensory nerve). Most commonly this is the 'sural' nerve near your ankle. Rarely, your neurologist might recommend using a nerve from a different site. If this is the case they will explain the differences to you.

### **How can a nerve biopsy help?**

A nerve biopsy can help in diagnosing conditions associated only with nerve damage, as well as some rare conditions associated with brain disorders. It can also help in the



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diagnosis of conditions causing inflammation of the blood vessels (called vasculitis). It is able to show which part of the nerve is damaged; the insulating sheath (myelin) or the conducting core (axon) and if there are abnormal cells or inflammation present.

This can help in many ways. It may help your doctor decide about immediate and long term treatments. It may inform your doctors so that they can advise you better about the cause and likely course of your condition.

### **What are the risks of a nerve biopsy?**

Unfortunately there are no guarantees that this procedure will be helpful. Your doctors and the neuromuscular disorders specialist nurse can help you in your decision to go ahead or not. All operations have risks and your doctor will discuss the risks of nerve biopsy with you. The commonly occurring ones are listed below:

- **Problems that may happen straight away**

All patients develop numbness in the area supplied by the nerve (see 'What happens during a nerve biopsy?').

The most common problem is pain at the site of the biopsy, this happens to about 30 patients in every 100, but in most cases this settles in a few days or weeks.

A small amount of bleeding or discharge from the wound may occur for two or three days. Swelling often occurs but



subsides in a few days. On extremely rare occasions an allergy to medicines or dressings used may develop, which can require treatment in or out of hospital.

- **Problems that may happen later:**

Infection, although rare, may occur in the wound. It is more likely if you have diabetes, are on steroids, or have poor circulation to the feet. When infection develops, wound healing may be slow and poor. Sometimes this needs prolonged wound dressing and antibiotics and you may be left with a larger scar.

- **Problems that are rare, but serious:**

Pain can persist indefinitely at the nerve biopsy site or in the area of the numbness described above. Usually this is described as a minor electric shock sensation or like the feeling of knocking your funny bone. It may be brought on by activity or movement. Sometimes it is necessary to use medicines or other techniques to minimise the discomfort.

### **What will happen if I choose not to have a nerve biopsy?**

The choice to have a nerve biopsy is yours. To decline a nerve biopsy will not affect your general care. However, decisions about your diagnosis and future treatments may depend upon the biopsy result, especially if long term or potentially toxic treatments are being considered. We would



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not wish to give you such treatments without good evidence that it is right for you. If you are not clear about any aspect of the procedure, the reasons for it, the benefits or the possible risks and complications please ask your doctor to help you.

### **What alternatives are available?**

Before considering a nerve biopsy your doctor will have gathered as much information as possible through other tests such as blood tests, electrical studies or a lumbar puncture. In some cases, a biopsy of skin or other body tissues can help. Sometimes the best method is to look directly at the nerve under the microscope.

Before the biopsy we will ask you to sign a consent form.

The consent form confirms that you agree to the procedure and understand what is involved.

A senior member of the team caring for you will explain all the risks, benefits and alternatives. If you are unsure about anything that has been said to you, please do not hesitate to ask.

### **What happens during a nerve biopsy?**

- The doctor performing the biopsy will not usually be the doctor looking after you, but will be a trained surgeon.
- The procedure is performed in an operating theatre. The surgeon will ask you to lie on your side. The skin over the



biopsy site will be sterilised (usually the area around and behind the ankle bone) with iodine or other cleaning solution. A local anaesthetic is injected into the area to numb it which initially causes a stinging sensation. Once the area is numb a two to four centimetre incision (opening) is made through the skin above and behind the ankle.

- As the doctor locates the nerve some little static shock sensations may be felt which is normal. Once the nerve is located it is cut and this often results in the same sort of sensation as hitting your funny bone. This uncomfortable sensation may last between 10 seconds and two to three minutes. A two to four centimetre section of nerve is removed.
- After the section of nerve is removed the area of foot over the wound site will become numb. For some patients the area over the outside of the foot (from the little toe to the area of surgery) is numb for the rest of their lives. For many patients the area of numbness gradually shrinks. It does not usually interfere with function. However in most patients this area is numb anyway, so new numbness may not be noticed.
- The skin is closed with stitches and a dressing is applied.

### **What should I expect after a nerve biopsy?**

After the surgery the biopsy the site will be covered with a sterile dressing and an elastic bandage. The dressing should remain in place for 10 days. You should keep it dry. The



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elastic bandage aids support when walking and should be removed when resting or sleeping. Sometimes 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.

For 24 hours after the biopsy you should try to rest, ideally with the leg raised on a pillow to prevent swelling and complications and to help 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 the leg resting on a pillow on the seat. After 24 hours it is important to maintain mobility in the ankle but try to avoid a significant exercise or excessive walking for two weeks. For example, you should be able to get around your home but should not plan outdoor walking unless absolutely necessary.

We would strongly recommend that you do not have a biopsy within a month of a planned holiday. Please discuss any holiday plans that you have with your doctor.

### **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 you should 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.

For non urgent enquiries you can contact the Neuromuscular Nurse Specialist on 0845 155 5000 / 020 3456 7890 extension 88008, between 9am and 5pm Monday to Friday. During working hours our answer phone is checked at least twice per day. Please leave a message with your name and a contact number and we will get back to you as soon as possible.

### **When and how will I receive the results of my nerve biopsy?**

A full report of the findings from the nerve biopsy is usually available four weeks after the biopsy, but this is sometimes longer if additional special studies need to be performed.

A preliminary result of your nerve biopsy may be available in seven days and if treatment needs to be started it may 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.



### Where can I get more information?

The GBS Support Group can provide more information on nerve biopsy, and also about inflammatory diseases of the peripheral nerves:

GBS Support Group	Tel: 01529 304615
LCC Offices	E-mail: <a href="mailto:admin@gbs.org.uk">admin@gbs.org.uk</a>
Eastgate	Web site: <a href="http://www.gbs.org.uk">www.gbs.org.uk</a>
Sleaford	
Lincs, NG34 7EB	

The Neuropathy Trust is also another useful resource: <http://www.neuropathy-trust.org/>

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

### How to contact us

Neuromuscular Disorders Nurse Specialists  
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London  
WC1N 3BG  
Switchboard: 0845 155 5000 / 020 3456 7890  
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Email: [neuromuscularnurse@uclh.nhs.uk](mailto:neuromuscularnurse@uclh.nhs.uk)



Space for notes or questions



**If you would like this document in another language or format or if you require the services of an interpreter please contact the Clinical Nurse Specialists directly.**

Publication date: November 2008

Date last reviewed: October 2011

Date next review due: October 2013

Leaflet code: UCLH / NHNN/ MUS/ NB/ PIL03

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