



# Needle muscle biopsy: information for families of children and young people with neuromuscular disorders

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**A needle muscle biopsy is a short procedure to remove a small piece of muscle tissue from your child's thigh using a hollow needle. This information sheet from Great Ormond Street Hospital (GOSH) explains about the procedure and what to expect when your child comes to GOSH to have a needle muscle biopsy. An Easy Read information sheet is also included for your child.**

Once the sample has been taken to our laboratory, the muscle cells are checked for various proteins, which may be responsible for neuromuscular disorders. The sample of tissue can also be examined under a microscope and tested chemically.

## Why does my child need a needle muscle biopsy?

A needle muscle biopsy is usually suggested when a child has a muscle abnormality of some kind, which might show up as unusually tense or floppy muscles and/or there is suspicion that important energy producing structures called mitochondria are not working properly.

The doctors can tell a certain amount by examining your child's blood but there are some diseases that can only be diagnosed by looking at a sample of muscle. Your child's doctors will discuss the reason for your child's biopsy fully.

## Getting ready for the biopsy

As your child will be having a general anaesthetic for the needle muscle biopsy, it is important that your child does not eat or drink anything for a few hours beforehand. This is called 'fasting' or 'nil by

mouth'. Fasting reduces the risk of stomach contents entering the lungs during and after the procedure.

You will be informed the night before the procedure of the time that your child should be 'nil by mouth' – in other words, have nothing to eat or drink before the anaesthetic.

It is equally important to keep giving your child food and drink until those times to ensure they remain well-hydrated and get adequate nutrition. This may involve waking your child in the night to give them a drink which we recommend.

## What happens before the biopsy?

The doctors will explain the procedure you in detail and they will ask you to give permission for the biopsy by signing a consent form. This will either already have been discussed before your child is admitted, or when your child's doctors see you when you arrive on the ward.

If your child has any medical problems, including allergies, please tell the doctors. We will also ask if your child or anyone else in the family has problems with blood clotting. If this is the case, we will check your child's blood for abnormalities

before we do the biopsy. An anaesthetist will also see you to discuss your child's anaesthetic.

The person bringing your child to the test should have 'Parental Responsibility' for them. Parental Responsibility refers to the individual who has legal rights, responsibilities, duties, power and authority to make decisions for a child. If the person bringing your child does not have Parental Responsibility, we may have to cancel the test.

## What does the biopsy involve?

The procedure will be done in theatre and the biopsy itself only takes a few minutes.

We will use a hollow needle to remove one or two pieces of muscle about the size of an orange pip from your child's thigh.

At the end of the procedure, local anaesthetic will be used to numb the area so it is not painful for the first few hours.

The muscle pieces will be taken to the laboratory in the hospital to be examined closely.

## Are there any risks?

Healthy children usually cope well with the anaesthetic, but the risk increases if your child has other problems.

Sometimes after a general anaesthetic, a child may feel sick and may also complain of a headache, sore throat and feeling dizzy and may be upset. These side effects are usually short lived.

The amount of muscle biopsy needed for the investigations is small and therefore will not raise any problems using that muscle afterwards. There might be some bleeding straight after the procedure, but this will stop when pressure is applied to the site. There is a certain risk of infection around the surgical site. This risk is minimal, as the procedure takes place in theatre. Your child might complain about some pain when

they wake up after the procedure. You can give your child paracetamol or other pain medication according to the instructions on the bottle or package.

## What happens afterwards?

Your child will be able to recover from the biopsy on the ward and may be sleepy for a few hours as the anaesthetic wears off. Your child's blood pressure, pulse and breathing rate will be monitored frequently as your child recovers.

The anaesthetic may make your child sleepy and fairly floppy too, which may make breathing quite noisy while they are recovering. Your child's head will need to be in a comfortable position that does not cause any problems breathing. Chewing and swallowing are also affected by the anaesthetic, so your child should not have anything to eat or drink until fully awake.

As soon as your child has woken up fully, they will be able to have a small drink. If they are not sick, you will be able to give something to eat. Once we are happy that your child is recovering well, you will be able to go home.

## Going home

Your child will probably be quite sleepy for the rest of the day. This is due to the anaesthetic and is quite normal.

Most children do not need pain relief when they get home after a muscle biopsy, but you can give your child a dose of paracetamol if necessary.

The area where the needle was inserted will not need any stitches but it will leave a circular scar about 4mm across.

The area will be covered with a small plaster, which should be left on for five days. Your child can have a bath or shower but try to keep the area clean and dry.

Your child should be able to return to normal everyday activities within 24 hours of the biopsy. However, we advise against swimming for the first five days as the biopsy site needs to be kept clean and dry.

We will send you the date and time of the follow up appointment. We will also write to your family doctor (GP) to inform them that your child has had a muscle biopsy.

You should call the ward or your family doctor (GP):

- If the biopsy site is still painful more than three days after the biopsy was taken and/or pain relief does not work
- If the biopsy site is red or 'angry' looking
- If there is any oozing from the biopsy site
- If your child develops a high temperature
- If your child is not eating or drinking

**If you have any questions, please call the Neuromuscular Clinical Nurse Specialists on 020 7405 9200 ext 1195. You can also send an email to [neuromuscular.cns@gosh.nhs.uk](mailto:neuromuscular.cns@gosh.nhs.uk)**

## Having a needle muscle biopsy



You are coming to hospital for a muscle (said: muss-ull) biopsy (said: bye-opp-see).



A biopsy is a tiny bit of body tissue. People in our laboratory (said: lab-orr-ra-tree) look at it under a microscope (said: my-cro-scope). This helps the doctors work out how to look after you.



You will have an anaesthetic (said: ann-ess-thet-ick) for the biopsy. You will not be able to feel anything or know what is happening.



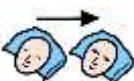
The doctor will use a needle to take a bit of muscle, the same size as a grain of rice. They usually take a tiny bit of a muscle in your leg.



Usually they will take 2 or 3 bits. They send these to the laboratory. Scientists will look at the bits under a microscope. They will send a report of what they see to your doctor.



The doctor will put a plaster over the area.



You will come back to the ward to wake up from the anaesthetic.



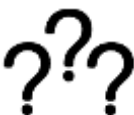
You might feel a bit sore where the biopsy was taken. You can take pain medicine to help.



You can go home a bit later the same day. Keep the dressing dry for two days. Tell someone if there is anything making the plaster wet.



Your doctor will get a report of the results of the biopsy. They will discuss it with you in clinic as soon as possible.



Please ask us if you have any questions.