

Skeletal survey examination

Information for those with parental responsibility

Other formats

If you need this information in another format such as audio CD, Braille, large print, high contrast, British Sign Language or translated into another language, please Contact the PALS desk on 01271 314090 or at ndht.pals@nhs.net.

This information is for those with parental responsibility for children who need a skeletal survey (a set of X-rays and scans of all the bones in the body) when there are concerns raised for a child's welfare.

Why are any tests needed in this situation?

NHS hospitals and all their employees have a duty to protect children. Staff are encouraged and expected to raise concerns if they believe the care or welfare of a child is at risk. Although this can be upsetting and difficult for parents/carers, the child's wellbeing and safety come first.

If any concerns are raised, it is important that these are investigated fully. As part of the investigation it is essential to identify any injuries. In younger children and babies, injuries can be difficult to find. For example, bruising on the surface of the brain can occur without any apparent injury to the outside of the head. Similarly, bones may be broken without any obvious external signs. X-rays and scans can help to diagnose those injuries.

What X-rays and scans will be needed?

A baby or young child will require a skeletal survey X-ray examination and a computed tomography (CT) head scan. Other tests may also be necessary, which could include ultrasound, nuclear medicine or magnetic resonance imaging (MRI) scans.

What does a skeletal survey involve?

This examination takes place over two visits about two weeks apart. You will be given an appointment for the second visit once the first appointment is complete.

First appointment

The skeletal survey is carried out by appropriately trained radiographers who are skilled in dealing with children. They will help you and your child throughout the examination. A nurse, or other healthcare professional, will also be present to help and support you and your child.

A skeletal survey is an X-ray examination of the whole body and will involve around twenty separate X-ray images. This can take up to an hour to perform. Your child will need to keep still for each image taken. You may be asked to help hold your child still although toys and other distractions will be available. You may want to bring your child's favourite toy or comforter to help with this. Sometimes your child will be sedated, you will be able to discuss this with your doctor. The staff present will be able to help you in holding your child safely, so as to cause as little distress as possible to you and your child. You will need to wear a special protective apron while holding your child to prevent your own exposure to X-rays.



Pictures above show the X-ray room at North Devon District Hospital where skeletal surveys are performed (left) and the type of protective apron you will need to wear during imaging if you stay in the room to support your child.

If you are pregnant, or could be pregnant, you must tell the radiographer. You will not be allowed to hold your child in this case. It is not unusual for a child to become distressed or grizzly during the procedure due to the need to keep still for the images. You will be able to comfort your child between X-ray images.

The radiographers who perform your X-rays will not know the result. The images will be reviewed by a consultant radiologist. The results will be discussed with you by the doctor looking after your child's care.

Second appointment

Sometimes recent injuries are not visible initially and will only be seen on images obtained later. The skeletal survey examination is not complete until a shorter second series of images has been taken. You should ensure that your child returns for the second appointment 11-14 days after the first series. You will be given an appointment to bring your child back for these images. The process of taking the images will be similar to your first appointment.

CT brain scan



(Picture shows the CT scanner at NDDH)

A CT brain scan will be performed by experienced radiographers and produces images of the brain and the skull. The scan is relatively quick although your child will need to lie very still. If you are not pregnant you may be able to stay with your child. Sometimes sedation may be used to help keep your child still.

The radiographers who perform the brain scan will not know the result. The scan will be reported by a consultant radiologist. The results will be discussed with you by the doctor looking after your child's care.

MRI scan

It may be necessary for your child to have an MRI scan of their brain and other areas. This will be performed by experienced radiographers. The MRI scanner looks similar to the CT scanner, but the interior is more like the a tunnel. An MRI scan can take up to one hour and is noisy. Your child will need to keep perfectly still for this and may need a general anaesthetic to achieve this.

If a general anaesthetic is needed, this will need to be done at another hospital but, where possible, we will try to do this without anaesthetic first at the North Devon District Hospital to save you and your child a journey to another hospital. If a general anaesthetic is required then the anaesthetist will explain to you the details of the anaesthetic before your child has the MRI.

You will be asked to provide your agreement for the MRI scan to be undertaken.

The radiographers who perform the MRI scan will not know the result. The scan will be reported by a consultant radiologist. The results will be discussed with you by the doctor looking after your child's care.



(Picture shows the MRI Scanner at NDDH)

Can I stay with my child at all times?

Parents/carers may be able to stay in the room with their child during these examinations. If you are allowed to stay, the radiographer will tell you where to stand/sit and will ensure that you and your child are safe. Sometimes you may be asked to assist staff in holding your child. The radiographer will help you to do this safely. You do not have to remain in the room if you choose not to, as there will be experienced health staff present to look after your child. Unacceptable behaviour will not be tolerated and is likely to result in you being asked to leave the room.

In the X-ray or CT scan room you will be required to wear a heavy protective apron to protect you from the scattered radiation.

If your child is having an ultrasound or MRI scan you do not have to wear any protective clothing.

The MRI radiographers will go through a checklist with you to ensure that it is safe for you and your child to be in close contact to the MRI magnet.

If there is any possibility that you may be pregnant, please tell the radiographer.

Pregnant mother or guardian?

A baby in the womb can be particularly sensitive to the radiation of an X-ray or CT scan.

If you are, or may be, pregnant you can accompany your child to the X-ray department. You may not be allowed in the actual X-ray or scanner room when the X-rays are being used.

A friend or relative may be able to accompany your child if necessary. Professional health staff will always be there to look after your child.

Risks

Radiation

We all receive radiation, known as 'background radiation' every day, although mankind has successfully adapted to it over millions of years. This background radiation is due to natural causes from cosmic rays reaching the earth from space, from certain rocks (which may be contained in building materials), from travel (particularly air flight) and from naturally occurring radon gas (particularly widespread in granite areas of the country such as Cornwall and Dartmoor).

Every X-ray gives us a small additional dose of radiation.

A skeletal survey is the equivalent to a few months' background radiation.

A CT head scan is the equivalent to about 18 months' background radiation.

These extra exposures to radiation slightly increase the lifetime cancer risk but the increase in risk is very small.

Your child will not be exposed to any more X-rays and scans than is absolutely necessary to adequately complete the examinations. Before any examination that uses radiation is carried out, the benefits of having the examination are closely weighed against the risks of the radiation itself.

All X-ray doses are kept 'as low as reasonably practicable' to ensure that images of a high diagnostic quality are obtained without exceeding accepted doses. This is particularly the case with children as they are still growing and more susceptible to radiation. The radiographers will use techniques to try and ensure that they achieve the correct X-ray first time and use various methods to keep the dose to your child as minimal as possible. Your child will not be exposed to any more radiation than needed to gain the examination required.

MRI

Extensive research has been carried out into whether the magnetic fields and radio waves used during MRI scans could pose a risk to the human body. No evidence has been found to suggest there's a risk, which means MRI scans are one of the safest medical procedures currently available.

Not everyone can have an MRI scan. For example, they're not always possible for people who have certain types of metal implants fitted, such as a pacemaker (a battery operated device that helps to control an irregular heartbeat.

www.nhs.uk/conditions/pacemakerimplantation/pages/introduction.aspx). A safety check will be done by the radiographer for you and your child before an MRI scan.

Results

All of the X-rays and/or scans taken during your child's examination will be reviewed by a consultant radiologist at the North Devon District Hospital who will issue a provisional report. This will be looking mainly for any fractures which require immediate treatment.

The images will then be reviewed by a specialist paediatric radiologist based at another hospital who will add to the report in more detail. This may take a few days and so the formal results will not be available immediately following the skeletal survey. However, it is really important for the images to be reported by a specialist in this field.

Once reports have been completed the results will be discussed with you by the doctor looking after your child's care.

For further information

NHS Choices – Radiation www.nhs.uk/conditions/Radiation/Pages/Introduction.aspx

GOV UK – Radiation: risks from low levels of radiation.2008
www.gov.uk/government/collections/radiation-risks-from-low-levels-of-ionising-radiation

You can also seek further information from your radiographer.

References

The Society and College of Radiographers and The Royal College of Radiologists (2017)
The radiological investigation of suspected physical abuse in children. London: The Royal College of Radiologists. Available from:
www.rcr.ac.uk/system/files/publication/field_publication_files/bfcr174_suspected_physical_abuse.pdf

Northern Devon Healthcare Trust Violence and Aggression Policy. Available from
www.northdevonhealth.nhs.uk/2015/09/violence-aggression-policy/

Parental responsibility

Parental responsibility is defined in Section 3 (1) of Children Act 1989 as being:

“all the rights, duties, powers, responsibilities and authority which by law a parent of a child has in relation to the child and his property”.

In practical terms, parental responsibility means the power to make important decisions in relation to a child. Those with parental responsibility are referred to as parents/carers throughout this leaflet.

PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email ndht.pals@nhs.net. You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

Have your say

Northern Devon Healthcare NHS Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of staff or the PALS team in the first instance.

'Care Opinion' comments forms are on all wards or online at www.careopinion.org.uk.

Northern Devon Healthcare NHS Trust
Raleigh Park, Barnstaple
Devon EX31 4JB
Tel. 01271 322577
www.northdevonhealth.nhs.uk

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This leaflet was designed by the Communications Department.
Tel: 01271 313970 / email: ndht.contactus@nhs.net