Lancashire Teaching Hospitals
NHS Foundation Trust

Information for Patients and Carers

Imaging Investigations for Suspected Physical Abuse (SPA)

This information is for those with parental responsibility for children who require x-rays and scans in cases of legally required imaging.

The doctor looking after your child has requested imaging which may take the form of x-rays, CT (computed tomography) or MRI (magnetic resonance imaging). This leaflet will explain what happens during these examinations.

What is a skeletal survey?

A skeletal survey is an X-ray examination of the whole body and will involve a minimum of 24 separate X-ray images on the initial survey and a minimum of 7 on the repeat.

This examination takes place over two visits about two weeks apart.

The skeletal survey is carried out by radiographers who are skilled in dealing with children. They will help you and your child throughout the examination. A registered health professional, usually a nurse will also be present to help and support you and your child.

You will be given an appointment for the second visit once the first appointment is complete.

Preparation for the skeletal survey

Sometimes it is necessary to sedate a child or give them a general anaesthetic if they cannot keep still. The doctor will discuss this with you should they think it necessary. Usually there are no special preparations for a skeletal survey so your child can eat, drink and take any medication as normal. You may wish to bring a comforter or the child's favourite toy. Please also bring milk/snacks as this may also help.

X-ray Imaging

1ST APPOINTMENT
To complete all the X-rays can take up to 90 minutes.

Your child will need to keep still for each image taken. A nurse will accompany and hold your child, and you may be able to assist. It is not unusual for a child to become distressed or agitated during the appointment, due to the length of time it can take to perform the imaging.

If you are present with your child in the X-ray room, you will be required to wear a heavy protective apron to protect you from the scattered radiation.

You will be able to comfort your child between X-ray images.

2ND APPOINTMENT
The skeletal survey examination is not fully complete until a shorter second series of images has been concluded.
You should ensure your child returns for the second appointment, usually 11–14 days after the first series.
The process will be very similar to your first appointment.

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

CT Scan

A CT scan is performed by experienced radiographers and produces cross-sectional images of the brain and the skull.

The scan is relatively quick although your child will need to lie very still. Sometimes sedation may be used to help to keep your child still. This would be arranged on the ward prior to arriving at the CT department.

The radiographers who perform the CT 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.

X-ray and CT scan: Are there any risks?

There are some small risks involved with the radiation received during an X-ray or CT scan but only the minimum amount of radiation is used to produce the images required. This is particularly important with children as they are still growing and more susceptible to radiation. We use the smallest dose possible, in line with national regulations. This allows us to make an accurate diagnosis to help plan your child's care. Your clinician has determined that the benefits of having the X-ray and CT examination far outweigh the radiation dose your child will receive.

We are all exposed to natural background radiation. This is made up of cosmic rays from space and trace amounts of radioactive elements in food, air and water.

X-rays give a small additional dose of radiation.

A skeletal survey is equivalent to a few months' background radiation. A CT head scan is equivalent to about 12 months' background radiation.

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

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

Pregnant parent 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 must inform the radiography staff. To protect any unborn babies from unnecessary exposure to radiation, pregnant parents will not be allowed in the room when the X-rays/scans are taking place. However, you may accompany your child to the hospital.

A friend or relative may be able to support your child during the X-ray/scan or if necessary, professional health care staff will be available to assist.

MRI scan

It may be necessary for your child to have an MRI scan of their brain and other body areas in addition to the x-rays.

Magnetic resonance imaging (MRI) is the name given to a technique which takes very detailed pictures of the inside of your body. It uses a powerful magnetic field and radio waves together with an advanced computer system to build up a series of images. This will be performed by a specialist radiographer in the MRI department. MRI scans are very noisy so your child will be given ear plugs as ear protection and headphones. MRI scans can often be lengthy.

Your child will need to be completely still for an MRI scan as movement can reduce the quality of the images. This may mean your child needs a general anaesthetic so that they are asleep whilst the scan is performed. The anaesthetic will be given by an anaesthetist (a doctor) who is medically trained for this role. The anaesthetist will explain this procedure prior to the MRI scan. You will be asked to provide your consent for this procedure to be undertaken.

You will not be able to stay with your child during the scan but will be able to return to them once the scan is completed.

The MRI staff will not know the results of the scan. 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: Are there any risks?

The MRI scan poses no risk when appropriate safety guidelines are followed. All staff follow appropriate safety measures before, during and after the scan.

Due to the strong magnetic fields within MRI, a safety check will be completed with you and your child when you attend your appointment, to make sure you are both safe to enter the MRI environment.

In modern anaesthesia, serious problems are uncommon. Most children recover quickly and are soon back to normal after their anaesthetic. Some children may feel sick or have a sore throat. These usually last a short time. Medicines to treat sickness are available and often given.

Risk of complications cannot be removed completely; however, the anaesthetist can discuss this with you in more detail when you attend for your child's scan.
Further information on anaesthetic risks is available at:
https://www.rcoa.ac.uk/patients/patient-information-resources/anaesthesia-risk

Can I stay with my child?

Those with parental responsibility 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.

You do not have to remain in the room if you choose not to, as there will be experienced health care staff present to look after your child.

Your results

A consultant radiologist will report these images, and this will be sent to the doctor looking after your child.

Contact details

Should you require further advice or information please contact: **01772 522264** and ask to speak to a lead radiographer.

Sources of further information

www.lancsteachinghospitals.nhs.uk
www.nhs.uk
www.accessable.co.uk
www.patient.co.uk
www.lancsteachinghospitals.nhs.uk/veteran-aware
https://bepartofresearch.nihr.ac.uk/

NHS Choices – Radiation
www.nhs.uk/conditions/Radiation/Pages/Introduction.aspx
GOV UK – Radiation: risks from low levels of ionising radiation. 2008
www.gov.uk/government/collections/radiation-risks-from-low-levels-of-ionising-radiation
Patient dose information: guidance - GOV.UK (www.gov.uk)

You can also seek further information from your radiographer.

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If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone 08081962638

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This information can be made available in large print, audio, Braille and in other languages.

Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or join our reading group please contact on email address:
patientexperienceandinvolvem@LTHTR.nhs.uk

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