



## Information About Radiology Investigations (MRI, CT And X-Rays)

During your appointments with your GP or Neurologist before IIH is diagnosed you are likely to be asked to have some radiology tests. This will be to try and see if they can see an obvious cause for your headache and other related symptoms. If IIH is suspected as the condition you are suffering from then the scans are used to rule out other causes of your symptoms i.e. brain tumour or brain haemorrhage etc.

For further explanations in how these tests are used in diagnosing IIH and on going tests after diagnoses see below.

### X-Rays

X-rays are very quick to do and are completely painless. Depending on which part of the body they are taking pictures of, you will be asked to stand or sit in a certain position to enable them to take a clear image, you may also be asked to take a deep breath and hold it for a couple of seconds. Sometimes you may be asked to put on a hospital gown for the x-ray; this is because they need to be sure there are no metal fragments on your body that will affect the picture quality.

**IMPORTANT: IF YOU ARE FEMALE YOU WILL BE ASKED TO SIGN A FORM TO SAY TO THE BEST OF YOUR KNOWLEDGE YOU ARE NOT PREGNANT.**

X-Rays are not likely to be used before being diagnosed with IIH or if you don't have a shunt.

However, if a shunt is placed to help reduce the intracranial pressure then x-rays are likely to be used quite a lot.

An x-ray produces a 2-dimensional picture of whichever part of the body it is taking pictures of.

If you are having a shunt placed then they are used to check the position of the shunt at different angles. Once your shunt is in place then x-rays can be a useful tool in checking the position of the shunt if it's suspected to have moved or become dislodged.



*This image is an example of a head x-ray. This person had a VP Shunt inserted.*

### **CT Scan**

CT Scans are also known as CAT Scans, this stands for Computerised Tomography scans. This takes a series of x-rays to create detailed picture of the inside of the body. The test is completely painless and takes 15mins max to complete; the machine is a bit noisy this is totally normal. Sometimes the medical professional that has requested the test may ask for you to have contrast or dye injected to get a clearer image. This is painless but can feel a bit strange, you will feel a warm sensation over your body also you may feel the increased need to urinate but this is just a feeling and will pass very quickly. For the test you will be asked to lie on a flat bed and this will move in an out of a 'big round polo' looking machine which will take the images. You will be required to lie still for the duration of the test. You may be asked at regular intervals to take a breath and hold it for a few seconds this is to improve the image quality. Sometimes you may be asked to put on a hospital gown for the scan; this is because they need to be sure there are no metal fragments on your body that will affect the picture quality.

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A CT Scan is particularly useful with IIH as they can quickly produce a clear image of your head for example, if your symptoms are particularly bad at that current time. A CT Scan is likely to be used as they need to rule out other causes besides the IIH, this is standard medical practise. If you have a shunt a CT scan is also very useful to check the alignment of the shunt catheter tubing and the destination of the distal (lower end) and the proximal end (top end). This will then show if the shunt tubing is in the correct places, not kinked and free of obstructions. THIS CANNOT HOWEVER SHOW IF THE SHUNT IS DRAINING NORMALLY.

To see further information and an image of a CT Scanner click on the link [https://en.wikipedia.org/wiki/CT\\_scan](https://en.wikipedia.org/wiki/CT_scan) .

### **MRI Scan**

MRI stands for Magnetic Resonance Imaging and it's the most detailed of all the radiology tests. An MRI Scanner uses magnetic fields and radio waves to build images of the body part it's scanning. Normally when undergoing this type of scan the test is in small parts, for example the whole scan takes 1hr but its cut into several 10min bursts one after the other. The reason for this is the images of the body are almost cut into slices which then build up a very comprehensive image of the body part, which allows the specialist's to view the images in great detail. It's likely that you will be given a short questionnaire before the scan begins which asks simple health and lifestyle questions.

The scanner itself looks like a large cylinder and you will be asked to lie on a flat bed that moves slowly backwards and forwards when scanning. The scan itself is completely painless however it will be very noisy, this is completely normal and you will be provided ear plugs. You will be required to lay completely still for the duration of the scan but depending on the body part being scanned the test can be lengthy, it may be possible for you to have rest breaks if requested. The one issue that most people find with this scan is the scanner is quite restricted inside so if you suffer from claustrophobia then you may like to request a light sedative medication to help you relax. You will be provided with a call button to hold throughout the scan, so should you feel anxious then you press the button and the radiologist will bring you out without hesitation.

Sometimes the medical professional that has requested the test may ask for you to have contrast or dye injected to get a clearer image. This is painless but can feel a bit strange, you will feel a warm sensation over your body also you may feel the increased need to urinate but this is just a feeling and will pass very quickly.

Sometimes you may be asked to put on a hospital gown for the scan; this is because they need to be sure there are no metal fragments on your body that will affect the picture quality.

**IMPORTANT: IF YOU HAVE ANY METAL FRAGMENTS IN YOUR BODY ALERT THE RADIOLOGIST BEFORE THE SCAN BEGINS THIS INCLUDES STENTS. YOU MUST ALSO INFORM THEM IF YOU HAVE A SHUNT WITH AN ADJUSTABLE VALVE AS THE MAGNETS IN THE SCANNER CAN ADJUST THE VALVE SETTING, SO IT WILL NEED TO BE CHECKED BEFORE AND AFTER THE SCAN.**

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This type of scan is very useful if you have not been diagnosed with IIH but it's suspected. This is because this gives the best detailed images of the insides of your body.

For further information and an image of what the scanner looks like click the link <http://www.radiologyinfo.org/en/info.cfm?pg=headmr> .

**Useful links**

<http://www.nhs.uk/Conditions/X-ray/Pages/What-is-it-used-for.aspx>

<http://www.nhs.uk/conditions/ct-scan/pages/introduction.aspx>

<http://www.radiologyinfo.org/en/info.cfm?pg=bodyct>

<http://www.nhs.uk/conditions/mri-scan/Pages/Introduction.aspx>

<http://www.radiologyinfo.org/en/info.cfm?pg=headmr>

<http://www.bir.org.uk/patients-public/x-rays-and-their-safety/>