Micturating cystourethrogram (MCUG)

This information sheet explains about the micturating cystourethrogram scan, what is involved and what to expect when your child comes to Great Ormond Street Hospital (GOSH) for the scan.

What is a micturating cystourethrogram?
A micturating cystourethrogram (MCUG) is a scan that shows how well your child’s bladder works. It is used to diagnose why your child may have urinary tract infections. It is also used to show up any abnormalities with your child’s urinary system.

Are there any alternatives?
Various types of scan such as CT, ultrasound and x-rays can show the size and shape of your child's bladder, but not how it is emptying. The results of the scan are used to plan your child’s treatment.

When you receive your appointment letter
If you are unable to keep this appointment, please inform the department at least two weeks beforehand. Sometimes, we can offer the appointment to another child on the waiting list. As so many children and young people need to use our services, we have had to introduce a policy where if a child cancels or does not attend two appointments in a row, we will close their referral and inform their GOSH consultant.

One week before the appointment
Your child will need to have a three-day course of antibiotics after this scan, so it will be helpful to make an appointment with your family doctor (GP) or referring consultant to make sure you have a prescription ready. This is because inserting the catheter into the bladder can increase the risk of a urinary tract infection and the antibiotics may help to prevent this. If your child is not currently taking antibiotics to prevent urinary tract infections, he or she will need to take an antibiotic (trimethoprim) twice a day for three days, from the day before the scan until and including the day after the scan. If your child is currently taking antibiotics to prevent urinary tract infections, you will need to give double the dose for the three days, either in one single larger dose or give an extra dose in the morning or evening. The doctor who does this test will explain all this to you on the day of your appointment.
The day of the scan
Please arrive at the Radiology department at the time stated in your child’s appointment letter.

Many of the studies we perform involve the use of x-rays. Legally, we are obliged to ask any girls over the age of 12 whether there is any chance they might be pregnant. This is to protect babies in the womb from receiving unnecessary radiation. We will also ask mothers or other female carers if they could be pregnant, especially if they are planning to come into the scanning room with their child. If you are pregnant, we suggest you bring another member of the family with you, to be with your child during the scan instead.

It can help if your child has a favourite toy to hold to comfort them during the study. Older children will need to empty their bladders before the scan. Your child will need to wear a hospital gown for this scan but can keep a vest or t-shirt on underneath. All other underwear or nappies need to be removed once the child is in the examination room, just before the scan starts.

The scan
You will be able to stay with your child throughout the scan. Your child will need to be put onto the scanning bed so that the doctor can insert the catheter into your child’s bladder through the urethra. This does not hurt but it may be a little uncomfortable just while to tube goes in (this usually takes less than a minute). If your child usually has a urinary catheter in place, we will use this for the scan. Once the catheter is in place, a small amount of contrast medium or dye will be injected through the catheter to fill up the bladder. A contrast medium is a clear liquid that shows up on an X-ray. Babies and young children will naturally pee when the bladder is full. Older children will be given a jug to pee into while lying on the table, when they feel ready. The radiographer will take a few X-ray pictures while your child is peeing, which you will be able to see on the screen. Your child may need to be held still while these pictures are being taken. When we have enough pictures, the catheter will be removed from your child’s bladder. The scan usually takes about 30 minutes.

After the scan
If your child is not having any further tests or scans, he or she will be able to get dressed again and you will be free to go home. The radiology doctor will send a report about the scan to your child’s doctor.

Are there any risks?
The contrast medium will not interfere with any medicines your child is taking and no extra precautions need to be taken with dealing with his or her bodily fluids.

Inserting the catheter into the bladder can increase the risk of a urinary tract infection. Taking a course of antibiotics (or increasing the dose if your child is already taking them) can reduce this risk. Your child needs to start the antibiotics the day before his or her scan. Please contact your family doctor (GP) or referring hospital doctor to discuss this a week beforehand, so that you have the antibiotics ready to start the day before your appointment.

When you go home
Although very unlikely, if your child develops a high temperature, has discomfort when peeing or becomes unwell, please contact your family doctor (GP).

Compiled by the Radiology department in collaboration with the Child and Family Information Group
Great Ormond Street Hospital for Children NHS Foundation Trust, Great Ormond Street, London WC1N 3JH
www.gosh.nhs.uk

If you have any questions, please telephone the Radiology department on 020 7829 8625