



Transcranial dopplers (TCD)

Information for parents

What is a transcranial doppler scan (TCD)?

- A Doppler machine uses an ultrasound probe (like the ultrasound test used during pregnancy) to detect the rate of blood flow in blood vessels.
- Placing the probe over blood vessels (arteries) in the head and neck allows the speed of blood flow to be measured in some of the arteries supplying the brain.
- If arteries are narrow, the blood travels faster through the narrowed area and makes a higher pitched noise.

What you need to know

- We routinely offer TCD as an annual regular screening test in the sickle cell clinic as part of your child's care. This begins at the age of two until your child is 16.
- By using screening tests, such as blood tests and TCD, we aim to detect and treat any problems at an early stage.
- In most children with Sickle Cell Disease, the TCD is normal, but if it is abnormal we may need to repeat it or do further tests to check the arteries of the head.
- It is recommended that all children with certain types of Sickle Cell Disease have this screening test attempted by two years of age and then yearly thereafter.

Why test children with Sickle Cell Disease for abnormal blood flow?

- In some children with Sickle Cell Disease, abnormally fast blood flow in the arteries of the brain may indicate a narrowing.
- This may reduce the blood flow to part of the brain, and if it is much reduced, it may increase the risk of having a stroke in the future.

What are the benefits?

- By doing the TCD test, we aim to detect problems related to blood flow to the brain at an early stage.
- We can then discuss with you and your child the need for more detailed tests.
- We can advise you and your child about the treatment options available for preventing the development of more serious problems, such as having a stroke.

What will happen when my child has TCD screening?

- Your child's appointment for the TCD scan will be in Clinic 4D, the Children's Outpatients department at the Whittington Hospital.
- The test usually takes about 30 minutes, but with younger children it may take longer.
- The test is painless, but your child needs to be relaxed and still during the test.
- They will be awake, and in a lying or sitting position.
- During the test, you will be able to stay with them.



Who performs the scan?

- The scans are performed by a specialist.
- Please let the Nurse Specialist know if your child has been unwell in the previous week, as this may affect the result.

Are there any risks?

- There are no known risks or side effects of this test.

What happens after the test?

- The results will be given to a Consultant Paediatrician and a Consultant Haematologist for their interpretation. This may not happen on the same day.
- If the test is normal, we will simply plan to repeat the test every year.
- If the results show fast blood flow, indicating possible blood vessel narrowing, or do not give clear results, we will probably arrange another TCD test within a few weeks.
- We may also arrange other tests, such as a brain scan called an MRI (Magnetic Resonance Imaging and Angiography), which is another painless scan to check the brain and its blood vessels in more detail.
- We will talk to you and your child to explain what the results mean and what treatment options are available.

Contacts

Switchboard	020 7272 3070
Paediatric outpatients	020 7288 5883
Children's clinical nurse specialist	020 7288 3017
Paediatric secretaries	020 7288 5616
Ifor Ward (Paediatrics)	020 7288 5442

Patient advice and liaison service (PALS)

If you have a compliment, complaint or concern please contact our PALS team on 020 7288 5551 or whh-tr.PALS@nhs.net

If you need a large print, audio or translated copy of this leaflet please email whh-tr.patient-information@nhs.net. We will try our best to meet your needs

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Whittington Health NHS Trust
Magdala Avenue
London
N19 5NF
Phone: 020 7272 3070
www.whittington.nhs.uk

Date published: 30/08/2024
Review date: 30/08/2026
Ref: CYP/PaedHaem/TCD/05

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