

# Your child's polysomnography sleep study and multiple sleep latency test

## Information for patients, parents and guardians

We have given you this factsheet because your child has been referred for a polysomnography (PSG) sleep study and a multiple sleep latency test (MSLT). It explains what a PSG sleep study and an MSLT are and what the tests involve, so that you know what to expect and can help prepare your child. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please speak to a member of our team.

### What is a polysomnography (PSG) sleep study?

A PSG sleep study is a non-invasive test that is carried out while your child sleeps. The test will monitor your child's:

- brain waves
- air flow (from their nose)
- tummy and chest movements
- oxygen and carbon dioxide levels
- heart rate
- body and limb movements
- position
- snoring

### What is a multiple sleep latency test (MSLT)?

An MSLT is an all-day study which tests for excessive daytime sleepiness. An MSLT is usually performed the day after a PSG sleep study and consists of five scheduled nap times. The test will monitor your child's:

- brain waves
- eye movement
- muscle tone

The results of both of these tests will help us to diagnose any sleep disorders and decide what the right treatment is for your child.

### How should I prepare for my child's tests?

Before your child's tests, you should:

- keep to your child's normal routine
- avoid applying moisturiser or oils to your child's skin on the day of the tests
- make sure your child is not wearing any nail varnish or false nails

Please bring the following items with you to your child's tests:

- two-piece pyjamas or a night gown for your child (your child cannot sleep nude or in their underwear as the device and sleep bands will be positioned over nightwear)
- socks for your child
- any medications that your child takes regularly
- comfort items to make your child feel like they are at home (for example, teddies, a pillow or a blanket)
- any formula, special foods or medical equipment that your child might need
- a sling for the hoist (if needed)
- food and drinks (no meals will be provided, but there will be access to hot drinks and a microwave)

You are also welcome to bring in some activities to occupy your child between MSLT naps. If possible, please avoid bringing screen-based entertainment into hospital with you, such as consoles and/or a mobile phone, as screen use at bedtime and naptime will make it harder for your child to fall asleep.

### **Can I stay with my child during the tests?**

We do request that a parent or legal guardian remains with your child at all times, as this will help them to feel less anxious. Unfortunately our rooms can only accommodate a bed for one parent or legal guardian.

### **What will happen during the tests?**

Once your child is settled and in their nightwear, we will:

- place small sensors (electrodes) on their head, face, legs and chin
- wrap a soft probe (device) around their toe to monitor their oxygen levels
- place a sensor just below their collarbone to monitor their carbon dioxide levels
- attach two sticky ECG pads to their chest to measure their heart rate
- place two stretchy bands round their chest and tummy (over their nightwear) to monitor their movement
- place a small tube under their nose to monitor their air flow
- video your child while they are asleep to look at their pattern of breathing and any body or limb movements that may occur

It will take around 45 minutes to fix these sensors in place. We will then wait for your child to naturally fall asleep.

We will wake your child up the next morning at 6am. We will remove all of the equipment apart from the sensors that allow us to measure your child's brain waves, eye movement and muscle tone. We will give your child up to five opportunities to nap during the day (usually at 9am, 11am, 1pm, 3pm and 5pm). It is very important that your child does not fall asleep between these set nap times.

### **What will happen after the MSLT?**

After the MSLT, we will remove the sensors from your child's body. If your child does not need any further tests, they will be able to go home.

We will then analyse the video alongside the other measurements taken throughout the tests.

### **When will I receive my child's results?**

Your child's consultant will review the PSG sleep study and MSLT, and discuss the results with you at your child's next clinic appointment.

### **Contact us**

If you have any questions or concerns, please contact us.

Sleep physiology team

Telephone: **023 8120 8368**

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Version 1. Published April 2021. Due for review April 2024. 2820