

# Your child's respiratory polygraphy sleep study with non-invasive ventilation

## Information for patients, parents and guardians

We have given you this factsheet because your child has been referred for an overnight respiratory polygraphy sleep study (either on or off their ventilator). It explains what a respiratory polygraphy sleep study is and what the test involves, 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 respiratory polygraphy sleep study?

A respiratory polygraphy sleep study is a non-invasive test that is carried out while your child sleeps.

The test will monitor your child's:

- air flow (from either their nose or their ventilator)
- tummy and chest movements
- oxygen and carbon dioxide levels
- heart rate
- body movements
- position
- snoring

The test may be performed either on or off a ventilator. The results of this test will help us to decide what ventilation your child needs.

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

Before your child's test, you should:

- keep to your child's normal routine
- not apply moisturiser or oils to your child's skin
- refrain from giving your child entertainment consoles and/or a mobile phone (this will help us to get your child to sleep as quickly as possible)
- make sure your child is not wearing any nail varnish or false nails

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

- ventilator and plug
- ventilator mask
- dry or wet circuit (whichever your child is using)
- humidifier (if your child is on a wet circuit)
- 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)

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

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 test?**

Please arrive at the hospital at 6.30pm on the evening of your child's test.

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

- 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 three 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 breathing movement
- place a small tube under their nose to monitor their air flow (if your child is not wearing their ventilation), alternatively, if they are wearing their ventilation for the test, we will attach this tube to your child's ventilator
- video your child while they are asleep to monitor any movement or sound that may occur

We will then wait for your child to naturally fall asleep. A nurse or physiologist may come into your child's room throughout the night to adjust their ventilation settings.

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

We will wake your child up the next morning at 6am. We will remove all of the equipment from your child's body in order for you to leave hospital by 7am.

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

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

A respiratory consultant will review the analysed data from the respiratory polygraphy sleep study and will send you a letter with the results. If your child's ventilation settings need to be changed, a member of the long-term ventilation team will contact you.

### **Contact us**

If you have any questions or are in need of any equipment for your child's ventilator, please contact us before your child's test.

Children's long-term ventilation team  
Telephone: **023 8120 6968**

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