



A lifetime of specialist care

Royal Brompton & Harefield **NHS**  
NHS Foundation Trust

Royal Brompton Hospital

# Your child's sleep study





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*This leaflet gives you general information on your child's sleep study. It does not replace the need for personal advice from a healthcare professional. Please ask us if you have any questions.*

## What is a sleep study?

Your child is having a sleep study to check if he or she has sleep problems or problems breathing at night. The sleep study is a painless test that involves monitoring a number of different body functions overnight. We will measure how much and how well your child sleeps, his or her breathing, heart rate, oxygen and carbon dioxide levels.

## Why do some children need sleep studies?

Children have sleep studies for different reasons, including:

### 1) To check for obstructive sleep apnoea

Some children snore when sleeping and have times when the muscles and soft tissue in the throat relax and collapse. This causes a blockage of the airway, called obstructive sleep apnoea (OSA). When the airway is blocked, not enough air can reach the lungs, causing the level of oxygen (the gas we breathe in) to drop and the level of carbon dioxide (the waste gas we breathe out) to rise. This irregular breathing pattern disturbs sleep.

### 2) To check the oxygen and carbon dioxide levels in the blood

Some children with medical conditions affecting the chest (such as muscle disorders, spinal problems or lung problems), may need to have sleep studies to check if their levels of oxygen and carbon dioxide are normal. Our breathing is naturally shallower when we are asleep. This means that if there are any problems with oxygen and carbon dioxide levels these are often first seen during sleep; before any changes would be picked up while we are awake.

### 3) To check the level of oxygen or ventilation needed

Some children use oxygen or ventilation machines (such as CPAP or BiPAP) during sleep and need regular sleep studies to check they are getting the right levels of oxygen or ventilation.



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## Where will my child's sleep study take place?

Your child's sleep study will take place in the children's sleep and ventilation unit, which is on level 4 of Sydney Wing, Royal Brompton Hospital. This is a separate unit from the children's ward (Rose Ward). Please come straight to the children's sleep and ventilation unit reception when you arrive.

Your child will have his or her own bedroom with space for a parent or guardian to stay overnight. Please let us know in advance if your child has any specific needs, such as a hoist.

We will make your child's night with us as comfortable as possible.

## What happens during a sleep study?

Your child's consultant will decide what we monitor and we will discuss this with you when you come in.

Before your child goes to sleep, a physiologist or nurse will place all the necessary sensors on your child. This does not hurt and your child will quickly get used to the different attachments.

During a sleep study, we may record your child's:

- Oxygen levels – through a small light sensor on the finger or toe
- Carbon dioxide levels – through a small sensor pad strapped to the forearm
- Movements and sleep disturbance – by recording video and sound
- Heart rate and rhythm – through three small stickers attached to your child's chest
- Breathing – through two small sensors placed under the nose
- Chest movements – through two soft belts strapped around the chest
- Brain wave activity (EEG) – via special sensors on the head (although this is less common)

One of our specialist nurses will monitor your child during the night and can assist if your child needs any help.





## How long does a sleep study take?

Your child will usually need to stay in hospital for one night for his or her first sleep study.

Please arrive on time at 4pm on the day of your child's sleep study. When you arrive, our nurses will confirm your child's details and take some basic measurements, such as weight and height. As part of our hospital infection prevention policy, we will also screen your child for MRSA. We have a separate leaflet about MRSA. Please ask us if you would like a copy.

One of our doctors will examine your child and make sure all medical details we have are correct and up to date. Your child will have some time to eat, play and get ready for bed.

A physiologist or nurse will connect the necessary sensors before your child goes to sleep. This may be earlier than his or her usual bedtime as it takes some time to attach the monitoring equipment.

We will stop the study when your child wakes up in the morning. You can usually go home soon after this. The nurse will give you all the paperwork you need to take with you.

Sometimes, you may need to stay a little longer to see the doctor or have equipment adjusted.

If you come in for a Friday night sleep study, please note that you will need to leave by 7.30am on Saturday.

## How can parents help?

The sensors and attachments we use to monitor your child do not hurt. However, it may take a little while for your child to get used to these as well as staying over in the unit. You can help by encouraging your child or distracting him or her

while we attach the necessary equipment. We will do our best to ensure your child is comfortable, while making sure we get good results. We appreciate it when parents are supportive and positive towards the sleep study plan.





## What do we need to bring?

Please bring with you anything that may be part of your child's bedtime routine, such as a special blanket, toys or books.

This helps us to recreate, as closely as possible, the typical sleep your child has at home.

It is important that you bring:

- All your child's medications
- Your child's pyjamas or sleeping clothes (including a vest and socks for babies)

- Toiletries (such as a toothbrush and toothpaste, nappies, liquid soap and creams)
- Equipment your child uses to sleep (such as a ventilation machine, tubing and mask)

You can stay overnight with your child in his or her room, so remember to bring what you need also.

## What meals are provided?

Dinner for your child is usually provided at 5.15pm in the play room on Rose Ward and breakfast is served at 8.30am in the sleep unit. Please note that breakfast is not provided in the unit on Saturday mornings.

Please let us know if your child has any allergies or specific food needs. Parents can buy dinner at the hospital restaurant, which is open from 5.30pm to 7.30pm. The restaurant opens again at 7am for breakfast.

## When will we know the test results?

It takes a few weeks to complete the detailed analysis of the sleep study. The sleep consultant will review the study first. The results will then be discussed at the multidisciplinary team

meeting. A letter with the results and a follow-up plan will be posted to you and your child's GP. You should expect to receive the results six to eight weeks after the study.



## How do I reach Royal Brompton Hospital?

Royal Brompton Hospital is in Sydney Street, Chelsea, London SW3 6NP. The hospital is in a pay-and-display parking meter zone (street parking) with very limited parking at the hospital. We suggest that you arrange for someone to bring you to the hospital or to use public transport.

For more information on coming into hospital, please visit our website: [www.rbht.nhs.uk/brompton-directions](http://www.rbht.nhs.uk/brompton-directions) or the Transport for London website: [www.tfl.gov.uk](http://www.tfl.gov.uk).

## Who can I contact for more information?

If you have any questions, or want further information, please call the nurses at the children's sleep and ventilation unit.

**Tel: 020 7352 8121** (switchboard), **extension 2267** or ask for the operator and then for **bleep 1291**.

## Who can I contact if I need to cancel or change my child's appointment?

If you need to change your child's appointment, please contact the paediatric bed co-ordinators as soon as possible so we can give your appointment to another patient and provide you with a more suitable time.

**Tel: 020 7352 8121** (switchboard), **extension 2118** or ask for the operator and then for **bleep 1256**.

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If you have concerns about any aspect of the service you have received in hospital and feel unable to talk to those people responsible for your care, call the patient advice and liaison service (PALS) on 020 7349 7715 or email [pals@rbht.nhs.uk](mailto:pals@rbht.nhs.uk). This is a confidential service.

Royal Brompton Hospital  
Sydney Street  
London  
SW3 6NP  
tel: 020 7352 8121  
textphone: (18001) 020 7352 8121

Harefield Hospital  
Hill End Road  
Harefield  
Middlesex  
UB9 6JH  
tel: 01895 823 737  
textphone: (18001) 01895 823 737

Website: [www.rbht.nhs.uk](http://www.rbht.nhs.uk)

إذا كنت ترغب في الحصول على ترجمة فورية لمضمون هذه الوثيقة إلى اللغة العربية، يرجى منك الاتصال بأحد مستخدمينا بجناح المصلحة التي يتم فيها استشفائك. أحد موظفينا سيسعى لترتيب إجراءات الترجمة وإتمامها في الوقت المناسب لك.

Brosurteki bilginin Türkçe tercemesi için tedavi görüyor olduğunuz bölüme bas vurunuz. Bölüm personeli tercemenin gerçekleşmesini en kısa zamanda ayarlayacaktır.

