

SLEEP STUDIES

(WHAT ACTUALLY HAPPENS)

How To Prepare For Your Sleep Study

Before the test you should shower and wash your hair. Do not put any gel or hairspray in your hair and do not put any makeup or creams on your face. If you are a man with a beard you will need to have a shave so that the electrodes may be applied to your chin. Make sure you have dinner before you come in as it is not supplied. Breakfast is supplied and if you are having an MSLT or MWT we will supply your lunch as well. It is a good idea to try and avoid caffeine (tea, coffee, chocolate) in the afternoon before your study and not to have a nap. The most common worry people have is that they will not be able to sleep in a strange environment with all these measuring devices. We have done our best to make sure the hospital is an easy place to sleep. Each person has a separate room. The wires are set up so that you can sleep in the same position as you normally do at home and you are reasonably free to move around. The rooms are air conditioned.



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ROUTINE/ DIAGNOSTIC STUDY

Your first sleep study will most likely be a diagnostic study. This involves you coming into the hospital in the evening. You will get changed into your pyjamas and then the technician will prepare you for the study.

Electrodes (a small metal cup on the end of an insulated wire) will be attached to your scalp and face. The electrodes are held in place with paste on the scalp and tape on the face. Leads are also attached to your chest to monitor your heart (electrocardiogram, ECG) and your legs (to monitor leg movements). Elasticised bands are placed around your chest and abdomen to detect breathing movement and a probe is put on your finger to measure oxygenation. The skin is cleaned with a cleansing wipe and sometimes areas with too much hair (chest and legs) have to be shaved. Once this initial setup is completed you are ready to go to bed at your normal bedtime. The leads are long enough that you can sleep in any position you wish. Our Sleep Unit uses a telemetry system, that is **you are not attached to the bed** or to the wall by any cables. All the information is transmitted wirelessly to the computer and you are free to move around the unit or even outside it while you are still recorded.

There is always a sleep scientist on duty each night to monitor your sleep recording and to make sure everything runs smoothly. If necessary the sleep study can be video-taped by infrared camera. The nursing staff are also available through the night if required.

TREATMENT STUDY

For sleep apnoea (stopping breathing during sleep) the study involves the use of a nasal CPAP (Continuous Positive Airway Pressure) machine. A mask is placed over the persons nose and fastened with head straps to prevent air escaping. Depending on the severity of the sleep apnoea different air pressures may be needed by different people. The first trial of the CPAP machine in hospital is to introduce the sleep apnoea sufferer to the machine and determine the pressure they need to maintain regular breathing.

The set-up for the CPAP Trial involves all the same leads as the diagnostic study. The technicians will increase the pressure of the machine until the person stops snoring and they are breathing without obstruction.

A CPAP machine involves a motor unit, to which a tube is attached. This tube is flexible and connects the machine to the patient. There is a soft mask which fits snugly over the persons nose and is held in place by straps. The soft masks come in different styles and sizes so that you can find one to suit your own needs. There are other accessories available to make the machine easier to use.

A new generation of CPAP machines allows the pressure to drop in expiration (breathing out), and these may be useful in some patients. One example is the ResWell. The use of a chin strap is widely advocated, but usually **not necessary** except in patients with neuromuscular disorders. In winter and in dry climates, and in particular when the CPAP pressure is high (>10cm), the use of humidification is beneficial. Automatic machines are usually not useful except in rare situations.

MSLT

(Multiple Sleep Latency Test)

This test is conducted during the day and usually follows immediately after a routine study. You get up at about 7am, get dressed and have breakfast. At around 9.00am you lie down in a quiet dark room for twenty minutes to see whether or not you fall asleep. After twenty minutes you get up and can watch TV or read or do some work until the next nap which is around 11.00am. There are a total of four naps which will finish at around 4.00pm. Depending on the results of these four naps you may need to stay for a fifth nap at about 5.00pm. During the test you are not allowed to have any caffeine as this will affect your sleep. This means no tea, coffee, cola or chocolate!

MWT

(Maintenance of Wakefulness test)

This test consists of four periods of 40 minutes duration (usually 9am, 11am, 1pm, and 3pm) whereby you are asked to stay awake whilst sitting quietly in a dim room. It is a test to assess your ability to stay awake. This test is often used in professional drivers.

This test needs to be started 1 and half hour after waking up and not later than 3 hours after wake up time. A light breakfast is also recommended.