

## What is a Sleep Study?



A sleep study is a medical test where sleep is monitored to assist with the diagnosis of sleep problems. It may be done at home or by staying overnight or during the day in a specialist sleep clinic.

Sleep tests are conducted using polysomnography (PSG). There are four types of routinely-performed sleep tests: Diagnostic, CPAP Pressure Determination Study, Multiple Sleep Latency Test (MSLT) and Maintenance of Wakefulness Test (MWT).



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**P** 02 9805 3000  
**F** 02 9805 3199  
**E** [info@woolcock.org.au](mailto:info@woolcock.org.au)

[www.woolcock.org.au](http://www.woolcock.org.au)

# Sleep Studies



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## WHAT IS POLYSOMNOGRAPHY (PSG)?

An in-lab, overnight PSG study is the gold standard test to diagnose sleep disorders.

Patients usually arrive in the early evening and go home upon waking up in the morning.

## WHAT DOES PSG INVOLVE?

Woolcock Sleep Clinic technicians will apply numerous leads to the patient's head and body, using creams and tape to detect and measure signs of sleep disorders. They will attach a nasal airflow piece, a belt around the waist and chest, and a probe on the finger that record signals to monitor breathing and oxygen levels in the blood. Heart rate (ECG), leg movements, sleeping position and snoring will also be recorded. All the recorded data combined with video monitoring allows us to ascertain whether there are any abnormal movements or restlessness while you are sleeping.

## DURING THE PSG

The Woolcock Sleep Clinic is a carefully-controlled environment and, although it's not your own bed, our sleep technicians ensure that the sleep you achieve at the Clinic and the data collected is accurate and indicative of a typical night at home. They will carefully monitor all recording devices and signals throughout the night.

Alternatively, home-based studies may be recommended by the treating sleep physician in consultation with a patient taking into account medical conditions, patient disability and psychosocial factors.

## WHAT DOES A HOME SLEEP STUDY INVOLVE?

The home sleep study set up is less comprehensive than lab sleep studies conducted at the Woolcock Clinic. As signals may be lost during the home test, sometimes the study may need to be repeated.



## WHAT DOES THE SLEEP STUDY TELL YOUR DOCTOR?

The signals from the brain show when you are asleep and when you wake up from sleep. Breathing signals and oxygen levels give information about breathing during sleep. Sleep technicians will look for sleep-disordered breathing (obstructive sleep apnoea or central sleep apnoea), insomnia, narcolepsy, restless leg syndrome, and parasomnias (unusual sleep behaviours such as sleep walking, night terrors, sleep paralysis, or sleep-related hallucinations).

## WHAT ARE THE RISKS OF A SLEEP STUDY?

A PSG is very safe and the most commonly-used technique to diagnose sleep disorders with thousands of tests being performed across Australia every week. The cream used to attach the leads may cause temporary skin irritation in some patients, but a PSG sleep study is not invasive or painful.

## HOW TO GET READY FOR A SLEEP STUDY

The Sleep Clinic will give you information about what you need to do and bring to your study. Your sleep physician may also give you specific instructions (e.g. stopping a medication). Otherwise, you should try and do exactly what you do on a normal day. Treat the night as a sleepover.

## WHAT IS A MULTIPLE SLEEP LATENCY TEST (MSLT)?

This is a test to see how sleepy you are during the day. It is the test of choice to diagnose narcolepsy and idiopathic hypersomnolence. After having an overnight PSG, waking and having breakfast, the technician will attach the leads on your head, taking away the breathing monitors, i.e. nose piece, chest and abdomen belts and the finger oxygen probe.

You will then be asked to “try and fall asleep” in nap trials conducted every two hours, four or five times during the day. In each trial, the technicians will determine how quickly you fall asleep and whether you enter REM sleep after 20 minutes. If you don't fall asleep during that time, the nap trial will be ended until the next attempt.

You must avoid any caffeine and stimulants. You must not sleep between the allocated 20-minute nap trials, as this will affect the results.

It is common to ask for a urine sample as a drug screen to ensure you have not taken any medication or drugs that may affect sleep and the sleep results. Most MSLTs will be finished by 5pm. You will be advised to take a day off work or school. We will provide food and drinks during the day and encourage you to bring reading material or a laptop. Our Sleep Clinic has Wi-Fi access.

## WHAT IS A MAINTENANCE OF WAKEFULNESS TEST?

The Maintenance of Wakefulness Test (MWT) is very similar to the MSLT, taking place during the day. However, unlike the MSLT, it aims to determine how awake you can remain when asked to sit still in a darkened room. The test is commonly used to see if individuals are safe to drive and whether medications are working as intended. You will be asked to stay awake for up to 40 minutes, four times during the day. This test is carried out after a PSG.

To find out more, go to [www.woolcock.org.au/clinic](http://www.woolcock.org.au/clinic).