WHAT TYPE OF TESTING DO CHILDREN PARTICIPATE IN?

The study will include 3 different tests:

1. Polysomnography (PSG):
This test is conducted at night. A technician will place sensors on your child's head and body to monitor sleep patterns. Brain waves, muscle activity, heartbeat, and leg and arm movements will also be recorded.

2. Multiple Sleep Latency Test (MSLT):
The test consists of 4-5 nap sessions at 2 hour intervals across the day, beginning 1.5-3 hours after waking up. An average sleep latency over the 4-5 nap opportunities is taken to be a measure of sleep propensity.

3. Virtual Classroom cognitive test:
Is a standardized classroom-simulator program which measures specific aspects of cognitive capacity such as alertness, distractibility and impulsivity.

WHAT ARE THE RISKS AND BENEFITS OF STUDY?

We know of no harm that taking part in this study could cause your child. There may be an inconvenience in traveling to the sleep centre and the time commitment required to participate. Also, the child or adolescent will have to stay overnight at the clinic to take part in the polysomnography study. For younger children a parent must be present.

The detection and treatment of an associated sleep disorders in your child may have considerable clinical impact. It may contribute to early detection of a possible cause of the child/adolescent weight management problems. Some study patients may be diagnosed with a sleep disorder and treatment will be offered. This may benefit your child in understanding and treating the sleeping disorder which in turn may help the underlying obesity. In addition there may be a change in eating habits and further gains in weight management.

WHAT IS THE TIME FRAME OF THE STUDY?

The study will take place in 3 visits to Youthdale Child and Adolescent Sleep Centre:

Visit 1: During this visit, a pediatrician will meet with you and your child to explain the procedures and answer any questions. A detailed clinical evaluation and sleep history will be obtained and any questions will be answered.

Visit 2: During this visit, your child will take part in the 2-night polysomnography test, as well as the Multiple Sleep Latency Test (MSLT) and Virtual Classroom cognitive test, during the day.

Visit 3: During this visit, you and your child will be scheduled to meet with the sleep physician who will give them the results of the 2 night sleep test and daytime assessment. If your child is found to have a sleep disorder, you will be informed at this time and the sleep physician will discuss options for clinical management.

For each individual study patient, the three study visits will take place in approximately 4 week timeframe. This is dependent on your schedule.

If you are interested in this program please ask your doctor to refer you to the Youthdale Sleep Centre or phone the Centre.

Youthdale Child and Adolescent Sleep Centre

Tel: 416-703-0505

Fax: 416-703-0507

OBSTRUCTIVE SLEEP APNEA AND CHILDHOOD OBESITY

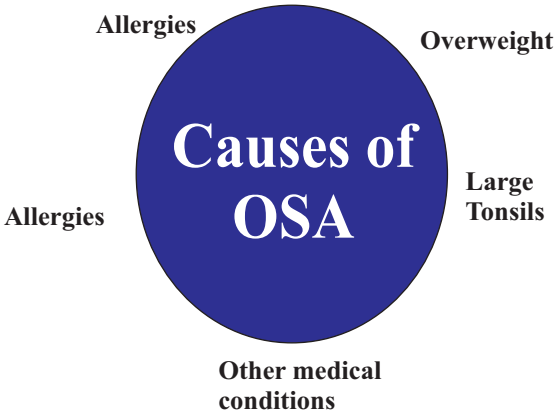
WHAT IS IT?

Obstructive Sleep Apnea (OSA) is a condition in which a person stops breathing repeatedly during sleep. Breathing stops because the airway collapses and air is unable to enter the lungs. Apnea is defined as the absence of breathing for at least 10 seconds (in older children) or at least three missed breaths (in younger children).

WHAT ARE COMMON SYMPTOMS OF OSA?

- Often snore loudly
- Stop breathing for a short period during the night, followed by gasping for air or waking up
- Sweating during sleep
- Sleeping in an abnormal position in an attempt to keep air passages open
- Experience any of behavioral, learning, irritability, attention, memory, or daytime fatigue symptoms the next day

WHAT CAUSES OSA?



HOW IS OSA DIAGNOSED?

If you suspect that your child may have OSA, you should visit a sleep specialist who has experience with children. The specialist will record your child's sleep in a laboratory with a test called polysomnography (PSG). During the night, the sleep technician will place electrodes on your child's head and body to monitor his or her sleep patterns. The evaluation will record breathing patterns, muscle activity, leg and arm movements, heartbeat, and brain waves. The study is not dangerous or harmful and is non-invasive. The study will tell the specialist if the child has OSA or any other sleeping disorders.

WHAT EFFECTS COULD OSA HAVE ON CHILDREN?

OSA is associated with an increased risk of:

- Diabetes and other medical disorders
- Symptoms of ADHD
- Decreased quality of life
- Difficulty sleeping at night and show behavioral problems during the day
- Irritability
- Hyperactivity
- Learning problems
- Lower mood
- Poor response to other treatments
- High blood pressure
- Heart attack and/or heart disease

HOW IS OSA TREATED?

Some possible treatments of OSA are:

- lifestyle changes such as weight loss with
- combined diet, exercise and behavioral changes
- adenotonsillectomy (surgery to remove large tonsils and adenoids)
- Nasal continuous positive airway pressure (CPAP) is a device that blows air and comes with a small mask worn over the nose during sleep. This is to prevent the throat from closing during sleep.

CURRENT STUDY ON OSA AND CHILDHOOD OBESITY AT YOUTHDALE SLEEP CENTRE

WHY ARE WE CONDUCTING THIS STUDY?

Currently, many overweight children are not being regularly screened for sleep disorders. It has been recommended that these patients should be tested for underlying sleep problems, such as sleep apnea. The diagnosis and treatment of an underlying sleep disorder may substantially complement intervention strategies in treating pediatric obesity. Previous research suggests a strong correlation between obesity in adults and sleep disorders. We are interested in establishing how frequent sleep disorders are in overweight children. We are also interested in any neuropsychological effects which a sleep disorder may have. There is an urgent need to find out if obesity related sleep disorders have an effect on cognition and memory in children (as is the case in adults).

WHAT ARE THE OBJECTIVES OF THIS STUDY?

We have two main objectives in this study:

1. To determine the frequency of undiagnosed sleep disorders in children who are overweight/obese.

2. To examine the effects of obesity and sleep disorders on neuropsychological performance on various cognitive and attention tasks.