

Your child is scheduled for:

- Uroflow study:
- Electromyogram (EMG)
- Biofeedback

Date: \_\_\_\_\_

Test time: \_\_\_\_\_

These tests and procedures are all ways to find out more about your child's urinary system.

The purpose of the urinary system is to remove wastes from the body by making urine (pee). Two **kidneys** remove waste from the blood and produce urine. The urine flows from the kidneys to the bladder through tubes called **ureters**. The **bladder** is like a big muscular bag. Urine is held in the bladder by a strong band of muscle called the **sphincter muscle**. When the bladder is full, it sends a message to the brain. The brain decides whether it is a good time for the bladder to empty. If and when it is, the brain sends a message down to the sphincter muscle to tell it to relax. The urine then flows out of the body through a tube call the **urethra**.

*Editor's note: I will use pronouns such as "he" and "she" alternately. When you read the brochure, please correct the pronouns for your child.*

## What is a Uroflow study?

The **Uroflow study** measures:

- the amount of urine in the bladder
- how long it takes to urinate (pee)
- how fast the urine comes out.

## How is a Uroflow study done?

Your child will be asked to urinate into a commode (a portable toilet) connected to a computer. He or she may sit or stand, whichever is more comfortable. Your child must not have a bowel movement (poop) or put toilet paper into this toilet.



## How can we prepare for the Uroflow study?

If your child is having a Uroflow study, give him plenty to drink up to 1 hour before you come for the test. Or if your appointment is in the early morning, have your child try to hold morning urination until test time.

**Your child should arrive with a full bladder.**



## What is an EMG?

The EMG (electromyogram) is a way to record how certain muscles work. The EMG will show how well your child's sphincter muscles are working with the bladder muscle.

\* If your child needs this test, it is done at the **same time** as the Uroflow test.

## How is an EMG done?

Several electrodes (small sticky pads that help to measure muscle activity) will be placed on your child's skin. Here is how the electrodes will be placed:

- Two skin electrodes will be placed on either side of your child's buttocks
- One electrode is placed on your child's thigh
- Two electrodes are placed on either side of your child's belly button
- One electrode is place on your child's hip

These electrodes will be connected to a computer to record muscle activity. The electrodes do not hurt. Once the test is over the electrodes are easily removed.

## What is Biofeedback?

Biofeedback is a skill that your child can learn. It teaches your child how to relax her urinary sphincter muscle when urinating. It also teaches your child how to tighten the muscle when she needs to.

## How can Biofeedback help?

Biofeedback can help children with different control problems such as those:

- Who do not empty their bladders completely
- Who strain in order to urinate
- Who get urinary tract infections often
- Who experience times when they have to urinate urgently
- Who continue to wet despite other therapies

## How is Biofeedback done?

Several electrodes (small sticky pads that help to measure muscle activity) will be placed on your child's skin. Here is how the electrodes will be placed:

- ✓ **Two are placed on your child's belly.**
- ✓ **Two are placed on your child's buttocks.**

The electrodes are attached to a small computer that records the signals from the electrodes. The signal from the electrodes is on a computer screen for your child to see. There will be a signal for when your child tightens his sphincter muscles and another signal for when your child relaxes his sphincter muscles. Your child will experience how it feels to tighten and relax his sphincter muscles and can practice.

Your urologist may request that your child have more than one biofeedback sessions, as gaining proper control will take some time.

### Is Biofeedback painful?

No. The placement of the electrodes and the recordings into the computer are not painful. No electric shocks pass to your child.

### Is other testing performed during Biofeedback?

Yes. An ultrasound of your child's bladder may be done at the same time using a **Bladder Scanner**. An ultrasound uses sound waves so that we can look at your child's bladder and measure the amount of urine left inside after she urinates. The nurse clinician will run a wand over your child's stomach. This will not hurt your child.

### Finding out the results

A urologist studies the results and sends a report to your referring doctor. Your urologist or referring doctor will arrange an appointment to discuss the results of the test and make recommendations.



### Notes:

Lined area for taking notes, consisting of 20 horizontal lines.

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# Uroflow Study Electromyogram (EMG) Biofeedback

*Developed by the health care professionals of the Urology Department with assistance from the Department of Learning and Development*

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An agency of the Provincial Health Services Authority

4480 Oak Street, Vancouver BC V6H 3V4  
604-875-2345