

Cystometrogram (CMG)

Key Points

- We monitor your bladder pressure because constant high pressure can damage the kidneys.
- A cystometrogram can't be done if you have symptoms of a urinary tract infection.

What is a cystometrogram (CMG)?

We use a cystometrogram (CMG) to check how well your bladder functions during filling. A CMG also measures the pressure inside your bladder and the strength of your bladder muscle. The results of a CMG help us identify the size of your bladder and the amount of urine it can hold without leaking or causing problems for your kidneys.

People with spina bifida or spinal cord injuries frequently have neurogenic bladders. This means the bladder doesn't function in a normal way because the nerve supply has been affected. It's important to monitor and manage the pressure in your bladder to prevent continued high pressure from damaging the kidneys.

Where will this be done?

You'll have your procedure in a private room. Music, movies and aromatherapy are available to create a comfortable environment.

What do I need to do to get ready for the procedure?

You need to be sure that you don't have a urinary tract infection (UTI). A cystometrogram can't be done if you have a UTI.

Signs or symptoms of a UTI include:

- Fever
- Chills
- Strong odor in the urine
- Change in color of urine
- Cloudy urine
- Pain with urination
- Increase frequency of urination
- Increased urgency of urination

If you are experiencing any of these symptoms you must get a urine analysis/urine culture (UA/UC) at your primary care clinic. If you need treatment, begin it as soon as possible. If the infection occurs too close to your appointment,

or the infection is not treated before your appointment, you'll need to reschedule the CMG.

You can have a UA/UC done at your primary care clinic. Your results need to be faxed back to the lab at Gillette (651-229-3872).

Day Before Procedure

You must have a bowel movement the day before your procedure. You can accomplish this by using a bowel program that is already established, or by using an over the counter rectal suppository or enema.

What should I bring to my appointment?

- List of current medicines, dose and frequency
- List of allergies
- Bladder diary
- Your catheterization supplies, if you empty your bladder by catheterization
- If you wear a brief or pad, bring a fresh brief or pad for after the procedure
- A CD or music player, if you prefer to listen to specific music
- If you need assistance with communication or relaying information, please have a caregiver accompany you to be sure we communicate accurate information

What will happen during my CMG appointment?

Set Up

You'll lie down in a seated, reclining position for the procedure. You'll remove your undergarments and we'll cover you with a gown and blanket. We will have you empty your bladder prior to starting the procedure.

Two small tubes called catheters will be used to monitor pressures. Each catheter has a pressure sensor that connects to the CMG machine. We'll place one catheter into your bladder to give us the pressure inside your bladder. We'll place the other catheter into your rectum to give us the pressure in your abdomen outside of your bladder. We use these two pressure readings to figure out the bladder muscle pressure.

We'll use three small sticky electrode patches to monitor your sphincter muscle activity. We'll place two electrodes around your anus and one on your upper thigh.

Procedure

You'll empty your bladder at the beginning of the procedure. The catheter will begin to fill your bladder with a sterile saline solution. We'll ask you to describe how your bladder feels as it is filled. We'll record your bladder volume and the pressure of your bladder muscle on a graph. At the end of the procedure, we'll give you permission to empty your bladder.

Clean Up

After we remove the catheters and electrodes, we'll wash and dry your skin. Then you'll get dressed again.

Results

Your urology provider will review the results of your CMG. Information from this test will help determine if you would benefit from intermittent catheterization, medicine, or other interventions.

What should I expect after the CMG?

- You'll be able to return to your regular activities.
- You'll need to drink extra liquids for the rest of the day.
- You might feel uncomfortable urinating after the catheter is removed.

What are the risks of a CMG?

You might have an increased risk of a urinary tract infection (UTI). Please call your primary care clinic if you develop signs and symptoms of a UTI (see list above).

For people with a high spinal cord injury, autonomic dysreflexia could occur. These symptoms include: high blood pressure, severe headaches and sweating. If you become dysreflexic during the procedure, we would stop the CMG.

If you have a history of autonomic dysreflexia, please alert the provider performing your test to ensure proper precautions are taken.

When should I call a health care provider?

- Signs or symptoms of a urinary tract infection (see list above)
- Urinary retention (no void in more than 12 hours)
- Abdominal, back or flank (side) pain
- Painful urination after 48 hours
- Pain not relieved by over the counter pain medications

[Make An Appointment](#) [651-290-8707](tel:651-290-8707)

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](tel:651-229-3890).