Cystometrogram (sis-toe-MEH-trow-gram), or CMG, is a test used to look for problems with the filling and emptying of the bladder. The bladder is part of the urinary tract. It’s a hollow muscular organ that relaxes and expands to store urine. Cystometry measures the amount of urine in the bladder. If the CMG includes bladder x-rays, it is called a video cystometrogram, or VCMG.

How does a cystometrogram work?
A cystometrogram records and makes graphs of:
• Bladder pressure
• The amount of urine in the bladder
• Bladder neck (part of the bladder connected to the urethra) function

A healthcare provider will look at these graphs to understand how your child’s bladder works. If your child has a VCMG, the provider will also look at the bladder x-rays.

Why does my child need a cystometrogram?
Your child may need a CMG or VCMG if they have:
• A lot of bladder infections
• Trouble emptying their bladder
• An upcoming spinal surgery
• Spina bifida

What happens during a cystometrogram?
• Your child will remove their clothes from the waist down and lie on their back on a bed. Girls bend their knees up and out so the bottoms of the feet touch each other. Boys keep their legs straight.
• A healthcare provider washes the genital area with antibacterial soap. This may be cold or make your child ticklish.
• The provider coats a small, thin tube called a catheter with lubricant jelly. They will slide it into the urethra (tube that connects the bladder to the outside of the body) and then the bladder. Some children say the catheter feels like a pinch or makes them feel like they need to pee. Counting out loud, pretending to blow out candles, or blowing bubbles may help this feeling go away.
• The healthcare provider will tape the catheter inside your child’s leg to hold it while it drains urine from the bladder. They may use a syringe to gently draw urine out of the tube.
• The provider coats another catheter with lubricant jelly and puts it into the rectum. They will tape this catheter to the side of the leg and connect it to a transducer, which measures bladder pressure. They will also clean the rectum and a small area on one thigh and put small skin patches on these areas.

• Your child’s bladder is slowly filled with water for a CMG or contrast fluid (which shows up in x-rays) for a VCMG. The healthcare provider may have your child cough or sit up during the test. They will watch for any urine leaking from the bladder.

• The healthcare provider will put a small marker on the left side of your child’s abdomen and take x-rays if they are having a VCMG.

• If your child is toilet-trained, they will pee into a special toilet when their bladder is full. If they aren’t toilet-trained, the test ends when they pee on their own.

What happens after a cystometrogram?
After the test, your child’s healthcare provider removes the pieces of tape and skin patches. The catheters slide out, and most children say don’t feel them come out. Your child’s healthcare provider will talk to you about the test results and give you their suggestions.

What problems may happen after a cystometrogram?
Your child may have mild discomfort or stinging while peeing after a CMG or VCMG. Encourage your child to drink plenty of fluids, pee while sitting in a tub of warm water, or put a warm, wet washcloth over the urethral opening. If the stinging lasts more than a few days or gets worse, call your child’s healthcare provider.

When can my child go home?
You may take your child home when the test is complete. It takes about 1 hour. If you have more questions, call your child’s urologist or the healthcare provider who requested the test.