

Lower Urinary Tract Obstruction LUTO

What is Lower Urinary Tract Obstruction?

Lower Urinary Tract Obstruction (formerly referred to as Bladder Outlet Obstruction or BOO) is a blockage in the fetus' bladder that restricts or prevents the flow of urine out of the body. In most boys with this condition there is a thin membrane, a posterior urethral valve, which blocks the urine. In rare cases, the urethra has not formed properly and the urine cannot exit the body, a condition known as urethral atresia. This can cause Lower Urinary Tract Obstruction (LUTO) in both boys and girls.

LUTO varies in severity from very severe, causing serious kidney problems and requiring surgery, to mild, requiring minimal treatment after birth. It is not related to anything the mother did or did not do during pregnancy.

How is LUTO diagnosed?

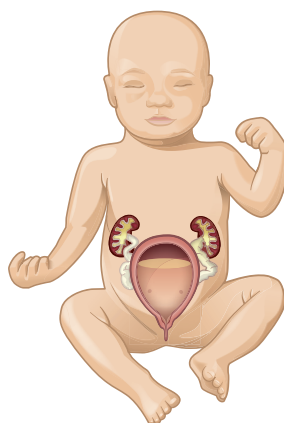
LUTO can be diagnosed as early as 16 weeks, but it is often found during a focused ultrasound at 20 to 24 weeks of gestation. In analyzing the ultrasound, the physicians at the SSM Health St. Louis Fetal Care Institute will look at the size of the fetal bladder, the size of the developing kidneys, and the amount of amniotic fluid to determine whether there is an obstruction, and how severe it is.

How is LUTO managed during pregnancy?

After diagnosing LUTO, our team assesses the severity of the obstruction. Mild cases may only require observation during pregnancy and further evaluation after birth. In severe cases, however, fetal surgery may be the best option.



*Baby With A
Healthy Urinary Tract and Kidneys*

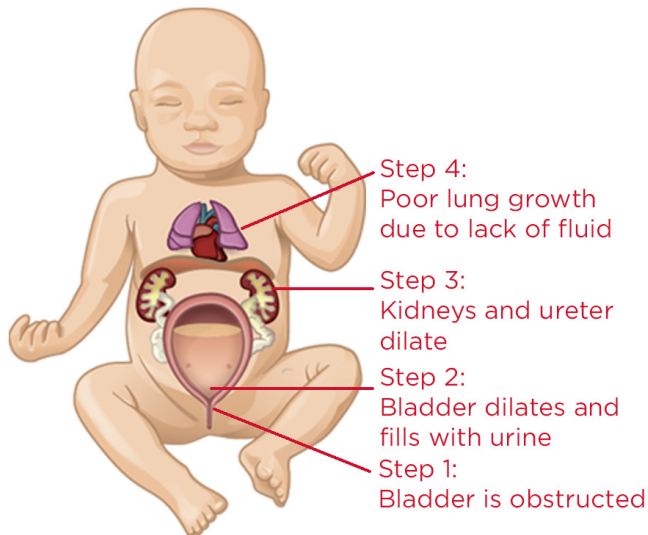


*Baby With A
LUTO Urinary Tract and Kidneys*

A Cardinal Glennon St. Louis Fetal Care Institute nurse is available 24 hours a day, seven days a week to discuss referrals with physicians and potential families by calling 314-268-4037, option 2.

Phone 314-268-4037, option 2
Toll-free 1-877-SSM-FETL (776-3385)
Web stlouisfetalcare.com
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Typically, the earlier the obstruction is diagnosed, the more severe the condition, because there is a higher chance of severe kidney and bladder dysfunction, as well as poor lung development. The kidneys and lungs are linked in development through the amniotic fluid. The amniotic fluid exerts pressure on the lungs, promoting growth. Most of the amniotic fluid is composed of fetal urine. When the urine cannot get out of the bladder, the amount of amniotic fluid begins to decline and there is no pressure on the lungs, leading to poor lung growth.

What is the fetal surgery for LUTO, and how does it work?

Before considering surgery, the Fetal Care Institute team must examine the degree of kidney damage by doing an ultrasound or a fetal urine analysis. To perform the fetal urine analysis, the surgeon places a very small needle through the mother's abdomen and into the fetus' bladder—much like an amniocentesis, to collect a urine sample. The fetal urine is analyzed to help determine the kidney function.

Once the kidneys have been evaluated, our team will help you make the best decision for your baby and whether fetal intervention is an option. Those most likely to benefit from fetal surgery are those with an obstruction severe enough to damage kidney and lung development, but not so severe that the kidney damage is irreversible. Fetal surgery aims to restore the normal flow of urine into the amniotic fluid, allowing the lungs and kidneys to develop.

The most common fetal procedure established for LUTO is the placement of a vesicoamniotic shunt. This shunt is a small flexible tube that is placed through the fetal skin, into the baby's bladder and allows urine to pass into the amniotic cavity (the bag of water). The shunt can increase the potential for normal pressure in the fetal kidneys and bladder as well as normal fluid in the amniotic cavity. This establishment of normal amniotic fluid allows for the best chance of normal lung development.

How does LUTO affect my baby after delivery?

Shortly after delivery, your baby will require kidney ultrasounds, as well as blood and urine tests to ensure that the kidneys are functioning well. In some cases, a pediatric urologist will perform a third test called a Voiding Cystourethrogram (VCUG) to ensure that the urine is not backing up from the bladder into the kidneys.

LUTO impacts every child differently; our pediatric urology team will work with you and your family to determine the best course of care for your newborn baby.

We understand that Lower Urinary Tract Obstruction LUTO can be a scary diagnosis. That's why we're available to help 24 hours a day, 7 days a week. For more information or to schedule an appointment, call us at 314-268-4037 or toll free at 877-SSM-FETL (877-776-3385).

While we can't change the diagnosis, we can provide you with expert care and support, helping your baby get the most out of treatment and life.
