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## Hydrocele

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## Hydrocele

By Mayo Clinic staff

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## Definition

A hydrocele (HI-droe-seal) is a fluid-filled sac surrounding a testicle that results in swelling of the scrotum, the loose bag of skin underneath the penis. They are common in newborns, but most hydroceles disappear without treatment within the first year of life. Older boys and adult men can develop a hydrocele due to inflammation or injury within the scrotum.

A hydrocele usually isn't painful. Typically not harmful, a hydrocele may not need any treatment. However, if you have scrotal swelling, see your doctor to rule out other causes.

## Symptoms

Usually the only indication of a hydrocele is a painless swelling of one or both testicles. Adult men with a hydrocele may experience discomfort from the heaviness of a swollen scrotum. Sometimes, the swollen testicle may be smaller in the morning and larger later in the day.

### When to see a doctor

#### For yourself

See your doctor if you experience scrotal swelling. It's important to rule out other possible causes for the swelling. Sometimes a hydrocele is associated with an inguinal hernia, in which a weak point in the abdominal wall allows a loop of intestine to extend into the scrotum and which may require treatment.

#### For your child

If your baby has scrotal swelling, make an appointment with your baby's doctor. If the doctor determines that the cause of the swelling is a hydrocele, it will typically disappear on its own. However, if your baby's hydrocele doesn't disappear after a year or if it enlarges, you should make another appointment for your child's doctor to examine the hydrocele again.

## Causes



Hydrocele

For baby boys, a hydrocele can develop in the womb. Normally, the testicles descend from the developing baby's abdominal cavity into the scrotum. A sac (processus vaginalis) accompanies each testicle, allowing fluid to surround the testicles.

In most cases, each sac closes and the fluid is absorbed. However, if the fluid remains after the sac closes, the condition is known as a noncommunicating hydrocele. Because the sac is closed, fluid can't flow back into the abdomen. Usually the fluid gets absorbed within a year.

In some cases, however, the sac remains open. With this condition, known as communicating hydrocele, the sac can change size or, if the scrotal sac is compressed, fluid can flow back into the abdomen.

In older males, a hydrocele can develop as a result of inflammation or injury within the scrotum. Inflammation may be the result of infection of the small coiled tube at the back of each testicle (epididymitis) or of the testicle.

## **Risk factors**

Most hydroceles are present at birth (congenital), and babies who are born prematurely have a higher risk of having a hydrocele.

Risk factors for developing a hydrocele later in life include:

- Scrotal injury
- Infection, including sexually transmitted infections

## **Complications**

A hydrocele typically isn't dangerous and usually doesn't affect fertility. However, it may be associated with an underlying testicular condition that may cause serious complications:

- **Infection or tumor.** Either may reduce sperm production or function.
- **Inguinal hernia.** A loop of intestine could become trapped in the weak point in the abdominal wall (strangulated), a life-threatening condition.

## **Preparing for your appointment**

Get immediate medical treatment if you or your child develops sudden, severe scrotal pain or swelling, especially within several hours of an injury to the scrotum. These signs and symptoms can occur with a number of conditions, including hydrocele. These signs and symptoms may also be caused by a condition called testicular torsion. Testicular torsion is an emergency medical condition that occurs when a testicle becomes so twisted that blood flow is blocked. The testicle can only be saved if this condition is treated within hours of when symptoms began.

If you or your child has painless scrotal swelling, call your doctor. After an initial appointment, your doctor may refer you to a doctor who specializes in urinary tract and male sexual disorders (urologist).

Here's some information to help you get ready for your appointment, and know what to

expect from your doctor.

### **What you can do**

- **Write down any symptoms you or your child has had**, and for how long.
- **Note possible sources of injury or infection.** Infants with hydrocele are typically born with the condition. But in an older child or adult male, the doctor will want to know if there has been any recent trauma to the scrotum. In sexually active men, possible causes of infection include having unprotected sex, having multiple sex partners or having sex with a new partner.
- **Write down key medical information**, including any other health problems and the names of any medications you or your child is taking.
- **Write down questions to ask** your doctor. Creating your list of questions in advance can help you make the most of your time with your doctor.

For hydrocele, some basic questions to ask your doctor include:

- What do you think is causing this swelling?
- Are there any other possible causes?
- What tests do you recommend?
- What treatment approach do you recommend, if any?
- If you're recommending watchful waiting, how often are follow-up exams needed?
- What signs or symptoms will indicate that it's time to treat this condition?
- Does hydrocele increase the risk of any long-term health problems?
- Do you recommend any restrictions on activity?
- Are there any home treatments that might help?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask any additional questions that may come up during your appointment.

### **What to expect from your doctor**

A doctor who sees you or your child for a possible hydrocele is likely to ask a number of questions.

If your child is affected:

- When did you first notice this swelling?
- Has the swelling increased over time?
- Is your child in any pain?
- Does your child have any other symptoms?
- What else concerns you?

If you're affected:

- When did you first notice the swelling?
- Do you have any signs or symptoms besides the swelling?
- Have you had any discharge from your penis?
- Have you noticed any blood in your semen?
- Do you have discomfort or pain in the affected area?
- Do you have pain during intercourse or when you ejaculate?
- Do you have a frequent or urgent need to urinate?
- Does it hurt when you urinate?
- Do you practice safe sex?
- Have you and your partner been tested for sexually transmitted infections (STIs)?
- Do your hobbies or work involve heavy lifting?
- Have you had one or more prostate or urinary tract infections in the past?
- Have you been diagnosed with any other prostate conditions?
- Have you ever had radiation or surgery in the affected area?
- Are you taking any medications?

### **What you can do in the meantime**

If you are a sexually active adult male, avoid sexual contact that could put your partner at risk of contracting an STI in the time leading up to your appointment. This includes sexual intercourse, oral sex and any skin-to-skin genital contact.

### **Tests and diagnosis**

Your doctor will do a physical exam. The exam may reveal an enlarged scrotum that isn't tender to the touch. Pressure to the abdomen or scrotum may enlarge or shrink the fluid-filled sac, which may indicate an associated inguinal hernia.

Because the fluid in a hydrocele usually is clear, your doctor may shine a light through the scrotum (transillumination). With a hydrocele, the light will outline the testicle, indicating that clear fluid surrounds it.

If your doctor suspects your hydrocele is caused by inflammation, blood and urine tests may help determine whether you have an infection, such as epididymitis.

The fluid surrounding the testicle may keep the testicle from being felt. In that case, you may need an ultrasound imaging test. This test, which uses high-frequency sound waves to create images of structures inside your body, can rule out a hernia, testicular tumor or other cause of scrotal swelling.

## Treatments and drugs

For baby boys, hydroceles typically disappear on their own within a year. If a hydrocele doesn't disappear after a year or if it continues to enlarge, it may need to be surgically removed.

For adult males as well, hydroceles often go away on their own within six months. A hydrocele requires treatment only if it gets large enough to cause discomfort or disfigurement. Then it may need to be removed.

Treatment approaches include:

- **Surgical excision (hydrocelectomy).** Removal of a hydrocele may be performed on an outpatient basis using general or spinal anesthesia. The surgeon may make an incision in the scrotum or lower abdomen to remove the hydrocele. If a hydrocele is discovered during surgery to repair an inguinal hernia, your doctor may remove it even if it's causing you no discomfort.

A hydrocelectomy may require you to have a drainage tube and wear a bulky dressing over the site of the incision for a few days after surgery. Also, you may be advised to wear a scrotal support for a time after surgery. Ice packs applied to the scrotal area after surgery may help reduce swelling. Surgical risks include blood clots, infection or injury to the scrotum.

- **Needle aspiration.** Another option is to remove the fluid in the scrotum with a needle. The injection of a thickening or hardening (sclerosing) drug after the aspiration may help prevent the fluid from reaccumulating. Aspiration and injection may be an option for men who have risk factors that make surgery more dangerous. Risks of this procedure include infection and scrotal pain.

Sometimes, a hydrocele may recur after treatment.

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