CONDITION

Umbilical hernia in children

An umbilical hernia is a soft bulge at a child's belly button caused by an opening in the abdominal wall.

WHAT IT IS
Opening in the abdominal wall beneath the belly button

BODY SYSTEM
Abdominal wall and digestive system

MAIN SYMPTOMS
Soft belly-button bulge, larger with crying, usually painless

WHAT CAUSES IT
Incomplete closure of the umbilical ring after birth

HOW IT IS DIAGNOSED
Physical examination

MAIN TREATMENT
Observation or surgical repair

CAN IT BE CURED?
Yes - often closes naturally or surgery repairs it

IS IT AN EMERGENCY?
Sometimes - when the bulge becomes painful and trapped

LONG-TERM OUTLOOK
Excellent for most children

Overview

An umbilical hernia is a bulge at the belly button, also called the umbilicus. It forms when the opening in the abdominal muscles that carried the umbilical cord before birth does not close completely.

A small amount of tissue, usually fat or part of the intestine, can move through this opening. It remains covered by skin. The bulge may appear and disappear as pressure inside the abdomen changes.

Umbilical hernias are usually harmless and painless in babies and young children. Many close naturally as the abdominal muscles grow stronger. This often happens during the first few years of life.

An umbilical hernia is different from an omphalocele, a serious condition present at birth in which abdominal organs develop outside the body. It is also not necessarily the same as having an "outie" belly button. A healthcare professional can determine whether a belly-button bulge is a hernia.

The main reasons to monitor an umbilical hernia are to see whether it closes and to identify the uncommon situation in which tissue becomes trapped. A hernia that remains open as a child gets older may be repaired with surgery.

Symptoms

The usual sign is a soft, rounded bulge at or beneath the belly button. It may be noticeable soon after birth or become clearer during infancy.

The bulge may:

Most uncomplicated umbilical hernias do not cause pain. They usually do not affect feeding, digestion, growth or bowel movements.

The size of the visible bulge is not always the same as the size of the opening in the abdominal wall. A large-looking bulge may have a relatively small opening beneath it. The opening's size can help a healthcare professional estimate how likely the hernia is to close naturally, but it is not the only consideration.

Pain, tenderness, vomiting, skin discoloration or a bulge that remains firm and does not become smaller are not typical features of an uncomplicated hernia. These symptoms need prompt medical assessment.

- Become larger when your child cries, coughs, strains or sits up
- Become smaller or disappear when your child relaxes or lies down
- Feel soft when the child is comfortable
- Vary in appearance from one day to another

Causes and risk factors

Before birth, the umbilical cord passes through a natural opening in the baby's abdominal muscles. The cord carries oxygen and nutrients from the placenta.

After birth, the opening normally closes as the muscles come together. An umbilical hernia develops when this closure is incomplete.

Crying, coughing and straining do not cause the opening. They raise pressure inside the abdomen, which can make an existing hernia more visible.

Umbilical hernias are more likely in babies born prematurely or with a low birth weight. They are also reported more often in Black children. Certain genetic or medical conditions can be associated with them, but most children with an umbilical hernia do not have an underlying disorder.

An umbilical hernia is not caused by how the umbilical cord was cut or clamped. It is also not caused by anything a parent did during pregnancy or after birth.

Diagnosis

A healthcare professional can usually diagnose an umbilical hernia by examining your child's abdomen. No blood test is needed.

During the examination, they may look at the belly button while your child is lying down or while pressure inside the abdomen increases, such as during crying. They may gently check whether the bulge becomes smaller and assess the size of the opening.

Ultrasound or other imaging is not usually required for a straightforward umbilical hernia. Imaging may be considered when the diagnosis is uncertain, the examination is unusual or complications are suspected.

The assessment also helps distinguish an umbilical hernia from other lumps or conditions around the belly button.

Treatment and management

Most painless umbilical hernias in young children are managed with observation. The opening often closes as the child grows, especially during the first few years.

Routine monitoring can usually take place during regular health visits. A healthcare professional may record the size of the opening and check whether it is becoming smaller.

Surgical repair may be considered when:

The timing of planned surgery is based on the child's age, symptoms, examination and likelihood of natural closure. Surgery may be recommended earlier if a complication develops.

During repair, the child usually receives general anaesthesia, meaning they are asleep and do not feel the operation. The surgeon makes a small cut near the belly button, returns any protruding tissue to the abdomen and closes the opening with stitches. Mesh, a reinforcing

surgical material often used in adult hernia repair, is not commonly needed for routine repairs in children.

Many repairs are day procedures, so the child can return home after recovering from anaesthesia. There may be temporary soreness, swelling or bruising. The surgical team provides instructions about wound care, pain relief, bathing, school and physical activity.

Do not place a coin, tight band, tape or binder over the hernia. These methods do not close the muscle opening and may injure or irritate the skin. Repeatedly pressing or forcing a firm bulge inward is also unsafe.

- The hernia remains open around age 4 to 5
- It causes pain or other symptoms
- Tissue becomes trapped
- The opening is unlikely to close naturally
- There are concerns about the diagnosis or the overlying skin

Complications

Complications from childhood umbilical hernias are uncommon, but they can occur.

An incarcerated hernia happens when tissue becomes trapped in the opening and cannot move back into the abdomen. The bulge may become firm, swollen, tender or painful.

Trapped intestine can sometimes cause a bowel obstruction. This may lead to worsening abdominal pain, vomiting, a swollen abdomen or difficulty passing stool or gas.

A strangulated hernia occurs when the blood supply to trapped tissue is reduced or cut off. The skin over the bulge may become red, purple or dark, and the child may appear increasingly unwell. This requires emergency treatment.

Possible complications of surgery include bleeding, infection, fluid collecting under the skin, anaesthesia-related problems and the hernia returning. Your child's surgical team can explain these risks in relation to the planned procedure.

Prevention

There is no proven way to prevent an umbilical hernia in a child. It results from the natural opening for the umbilical cord not closing completely after birth.

Cord care, feeding choices and a child's usual crying do not prevent or cause the condition.

Coins, tape and belly bands cannot make the opening close.

Complications cannot always be prevented. Knowing the signs of trapped tissue and attending planned follow-up can help your child receive timely care if the hernia changes.

Living with it and what to expect

For most children, an uncomplicated umbilical hernia causes little disruption. Your child can usually feed, sleep, attend childcare or school, and take part in normal play. Routine activity does not usually damage a painless hernia.

The bulge may look larger during crying, coughing, laughing or straining. This does not necessarily mean the opening is getting worse. It may flatten again when your child relaxes.

Over months and years, many openings become smaller and close without treatment. Closure cannot be promised for an individual child. Larger openings and hernias that remain present later in childhood may be less likely to close on their own.

If the hernia is still present near school age, your child may be referred for a surgical opinion. This is usually routine when the hernia is painless and easily becomes smaller. Planned repair generally has a good outcome, although every operation has risks.

After surgery, soreness and reduced activity are temporary for most children. The belly button may look swollen at first, and its final appearance can take time to settle. Follow the surgical team's instructions about returning to sports, swimming and other activities.

When to get medical help

Seek emergency medical care if your child has an umbilical hernia and:

These symptoms can mean that intestine or other tissue is trapped.

Arrange a prompt medical assessment if the hernia starts causing milder pain, changes noticeably, develops skin damage or discharge, or you are unsure whether it is behaving as usual.

Routine follow-up is appropriate for a soft, painless bulge that appears with crying and becomes smaller when your child relaxes. It is also reasonable to discuss the hernia at regular health visits, especially if it is not getting smaller as your child approaches age 4 to 5.

- The bulge suddenly becomes very painful, firm or tender
- The bulge remains stuck outside and does not become smaller

- The skin over it becomes red, purple, dark or unusually swollen
- Your child has repeated vomiting or green vomit
- Your child develops severe abdominal pain or a swollen abdomen
- Your child seems very unwell, unusually sleepy or difficult to comfort

Common questions

Will my child's umbilical hernia go away by itself?

Many close naturally during the first few years of life. A hernia that remains open around age 4 to 5 is less likely to close and may be considered for surgical repair. Your child's age, symptoms and examination help guide the decision.

Does crying make an umbilical hernia worse?

Crying makes the bulge more visible because it increases pressure inside the abdomen. It did not cause the hernia and does not usually stop the opening from closing.

Should I push the bulge back in?

Do not force or repeatedly press the bulge. A soft hernia may flatten naturally when your child relaxes. If it becomes firm, painful or stuck, seek urgent medical care rather than trying to push it inward.

Can I tape a coin over the hernia?

No. Coins, tape, bands and binders do not close the opening in the abdominal muscle. They can irritate the skin, cause pressure injury or introduce infection.

Will my child need an operation?

Not necessarily. Observation is usual for a young child with a painless hernia because natural closure is common. Surgery may be advised if the hernia persists later in childhood, causes symptoms or traps tissue.

Can my child play sports or swim?

A child with an uncomplicated, painless hernia can usually take part in normal activities. After surgery, there will be temporary limits while the wound heals. Follow the instructions provided by the surgical team.

Sources

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