CONDITION

Intestinal leiomyoma

An intestinal leiomyoma is a noncancerous growth arising from smooth muscle in the wall of the intestine.

WHAT IT IS
Benign smooth-muscle tumor of the intestinal wall

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Abdominal pain, intestinal bleeding, anemia, bowel blockage

WHAT CAUSES IT
Usually unknown abnormal smooth-muscle cell growth

HOW IT IS DIAGNOSED
Tissue examination and immunohistochemical testing

MAIN TREATMENT
Observation or complete removal

CAN IT BE CURED?
Yes - complete removal is usually curative

IS IT AN EMERGENCY?
Sometimes - with heavy bleeding or bowel blockage

LONG-TERM OUTLOOK
Usually excellent after complete removal

Overview

An intestinal leiomyoma is a noncancerous, or benign, tumor that develops from smooth muscle in the intestinal wall. Smooth muscle moves food through the digestive tract without conscious control.

These tumors may occur in the small intestine, colon, or rectum. Some are found by chance during a scan, colonoscopy, surgery, or examination of tissue removed for another reason. Others cause symptoms by bleeding or narrowing the intestine.

A leiomyoma does not normally invade nearby tissue or spread to distant organs. However, confirming the diagnosis matters because other intestinal tumors can look similar on a scan or during endoscopy. These include gastrointestinal stromal tumors, known as GISTs, and leiomyosarcomas, which are cancerous smooth-muscle tumors.

The diagnosis is therefore based on examination of tumor tissue, not symptoms or imaging alone. A pathologist-a doctor who examines cells and tissues-looks at the tumor under a microscope and may use special laboratory stains to identify the type of cell.

Symptoms

Small intestinal leiomyomas often cause no symptoms. A tumor is more likely to cause problems if it grows into the space inside the intestine, irritates the lining, or narrows the passage for food and stool.

Possible symptoms include:

Anemia means there are too few healthy red blood cells to carry oxygen around the body. Slow bleeding from a tumor may cause iron-deficiency anemia before any blood is visible in the stool.

A leiomyoma can occasionally act as a lead point for intussusception. This means one part of the intestine slides into another, which can block the bowel and affect its blood supply. Sudden or severe symptoms need prompt assessment, but this complication is not the usual course.

These symptoms have many possible causes. Having one or more of them does not mean that you have an intestinal leiomyoma.

- Abdominal pain, pressure, or cramping
- Blood in the stool or black, tar-like stool
- Tiredness, weakness, or shortness of breath from anemia
- Nausea, vomiting, bloating, or reduced appetite
- Constipation or difficulty passing stool
- Unexplained weight loss

Causes and risk factors

An intestinal leiomyoma begins when smooth-muscle cells grow into a localized mass. In most cases, it is not clear why this happens.

No specific food, activity, or lifestyle habit has been shown to cause intestinal leiomyomas. They are not generally considered an inherited condition, and having one does not usually mean that relatives need testing.

Some smooth-muscle tumors can occur in people whose immune systems are severely

weakened, including certain tumors associated with Epstein-Barr virus. These are uncommon and are not the same as an ordinary sporadic intestinal leiomyoma.

Because intestinal leiomyomas are uncommon, information about risk factors is limited. They can occur at different ages, and a person may have no recognizable risk factor.

Diagnosis

An intestinal leiomyoma may first be suspected after a test performed for abdominal symptoms, bleeding, anemia, or another reason.

Initial tests may include:

Capsule endoscopy uses a swallowed camera to photograph the small intestine. It may help investigate unexplained bleeding, but it is not suitable for everyone. If the intestine may be narrowed or blocked, the capsule could become stuck.

A scan or endoscopy can show a growth, but it usually cannot prove that the growth is a leiomyoma. A sample may be taken during endoscopy, although a shallow biopsy can miss a tumor located deeper in the intestinal wall. In some cases, the diagnosis is confirmed only after the growth has been removed.

Under the microscope, a leiomyoma is made of smooth-muscle cells with a nonaggressive appearance. Immunohistochemistry uses antibodies to detect proteins in these cells. Leiomyomas usually contain smooth-muscle proteins such as desmin and smooth-muscle actin. They generally lack proteins called KIT and DOG1, which are often found in GISTs.

The pathologist also checks how actively the cells are dividing and looks for tissue death, marked cell abnormalities, or invasion. These findings help distinguish a benign leiomyoma from leiomyosarcoma and other tumors.

- Blood tests to look for anemia or iron deficiency
- Colonoscopy to examine the colon and end of the small intestine
- Upper endoscopy when the upper digestive tract needs examination
- CT or MRI scans to show a mass, narrowing, or complication
- Specialized small-bowel endoscopy for a difficult-to-reach tumor

Treatment and management

Treatment is based on the tumor's location, size, symptoms, appearance, and whether the

diagnosis is certain.

A small tumor that is not causing symptoms may sometimes be monitored, particularly if testing strongly supports a benign diagnosis. Monitoring may involve repeat endoscopy or imaging. There is no single follow-up schedule that is right for every intestinal leiomyoma.

Removal is more likely to be recommended when a tumor:

Some small, accessible tumors can be removed through an endoscope. An endoscope is a flexible instrument passed through the mouth or rectum. This approach avoids an external incision but is only suitable for selected tumors.

Surgery may be needed for a deeper or larger tumor, a growth in the small intestine, or a tumor causing a complication. The operation may remove the tumor alone or remove a short section of intestine and join the healthy ends. The surgical approach depends on where the tumor is and how it involves the intestinal wall.

A confirmed benign leiomyoma does not usually require chemotherapy or radiation therapy. These treatments are used for cancer and do not have a routine role after complete removal of a leiomyoma.

After removal, the pathology report should confirm the tumor type and whether it was completely excised. Follow-up is usually more limited than it would be for GIST or leiomyosarcoma.

- Causes bleeding, anemia, pain, or blockage
- Is growing or has an uncertain diagnosis
- Cannot be adequately sampled
- Has features that may suggest a different type of tumor

Complications

Most intestinal leiomyomas remain localized. When complications occur, they are usually caused by the tumor's position rather than by spread to other organs.

Possible complications include:

A true leiomyoma is benign and does not metastasize, meaning it does not spread to distant parts of the body. If a tumor shows aggressive features, the diagnosis may instead be leiomyosarcoma or another tumor type. This is why expert tissue examination is important.

Endoscopic or surgical treatment also has risks, including bleeding, infection, leakage from an intestinal join, or injury to nearby structures. The risks differ according to the procedure and

the tumor's location.

- Slow blood loss leading to iron-deficiency anemia
- More noticeable intestinal bleeding
- Partial or complete bowel obstruction
- Intussusception
- Rarely, a hole in the intestinal wall
- Return of the growth after incomplete removal

Prevention

There is no known way to prevent an intestinal leiomyoma. It is not known to result from diet, exercise habits, or something you did.

Routine screening for intestinal leiomyoma is not recommended for people without symptoms or a known tumor. Standard bowel cancer screening may find an unrelated intestinal growth, but its purpose is to detect or prevent colorectal cancer, not leiomyoma.

If a leiomyoma has already been found, attending planned follow-up can help confirm that it remains stable or that recovery after removal is progressing as expected. Follow-up manages an existing condition; it does not prevent the original tumor from forming.

Living with it and what to expect

An intestinal leiomyoma may remain unnoticed for years. If it is small and confidently identified as benign, monitoring may be all that is needed. You may have periodic imaging or endoscopy to check whether it is growing or causing changes.

If the tumor has caused ongoing blood loss, tiredness and reduced exercise tolerance may improve as the bleeding stops and iron levels recover. Recovery from anemia can take time even after the tumor has been treated.

After endoscopic removal, many people return to normal activities relatively quickly. Recovery after intestinal surgery usually takes longer. Eating patterns, bowel movements, and energy levels may change temporarily while the intestine heals.

Complete removal is usually curative. Recurrence is uncommon when the diagnosis is a true leiomyoma and the entire growth has been removed. Your follow-up plan may still include review of the pathology results and, in selected cases, another scan or endoscopy.

Persistent abdominal symptoms after successful treatment do not necessarily mean the tumor has returned. Digestive symptoms can have several causes and should be assessed on their own merits.

When to get medical help

Arrange a routine medical appointment if you have ongoing abdominal discomfort, repeated changes in bowel habits, unexplained tiredness, or possible blood in your stool. These symptoms usually have causes other than leiomyoma, but they may need investigation.

If you have been diagnosed with an intestinal leiomyoma, seek earlier review if symptoms become more frequent, bleeding develops, or a planned follow-up has been missed.

Get urgent medical help for:

Call emergency services if heavy bleeding is accompanied by fainting, confusion, severe breathlessness, clammy skin, or difficulty staying awake. Sudden severe abdominal pain with persistent vomiting may also signal a bowel blockage or another emergency.

- Black, tar-like stool or a substantial amount of red blood
- Repeated vomiting with abdominal swelling
- Severe or rapidly worsening abdominal pain
- Inability to pass stool or gas with pain and bloating
- Marked dizziness, weakness, or a racing heartbeat

Common questions

Is an intestinal leiomyoma cancer?

No. A leiomyoma is a benign smooth-muscle tumor. It does not normally invade nearby organs or spread around the body. Tissue testing is needed because GIST and leiomyosarcoma can sometimes resemble it.

Can an intestinal leiomyoma turn into cancer?

A confirmed leiomyoma is not considered a cancer and malignant change is not expected. If a tumor behaves aggressively or has abnormal microscopic features, it may have been a different tumor type rather than a leiomyoma that changed.

Does every intestinal leiomyoma need to be removed?

Not always. A small, symptom-free tumor may sometimes be monitored if the diagnosis is

reliable. Removal is commonly considered for bleeding, pain, blockage, growth, or uncertainty about what the tumor is.

How is a leiomyoma different from a GIST?

Both arise from supporting tissues in the digestive tract, but they come from different cell types and contain different proteins. GISTs have their own range of cancer risk and may require different treatment and follow-up. Immunohistochemical testing usually separates them.

Will it come back after surgery?

A completely removed, properly diagnosed leiomyoma is unlikely to return. Follow-up may be advised if removal was incomplete, the diagnosis was uncertain, or symptoms continue.

Can diet shrink an intestinal leiomyoma?

No diet has been shown to shrink or remove this tumor. Temporary diet changes may be suggested around a procedure or if the intestine is narrowed, but they do not treat the leiomyoma itself.

Sources

- WHO Classification of Tumours Editorial Board. Digestive System Tumours . 5th edition. International Agency for Research on Cancer; 2019.
- Agaimy A, Wünsch PH. "True smooth muscle neoplasms of the gastrointestinal tract: morphological spectrum and classification in a series of 85 cases from a single institute." Langenbeck's Archives of Surgery . 2007;392(1):75-81.
- Miettinen M, Furlong M, Sarlomo-Rikala M, Burke A, Sobin LH, Lasota J. "Gastrointestinal stromal tumors, intramural leiomyomas, and leiomyosarcomas in the rectum and anus." The American Journal of Surgical Pathology . 2001;25(9):1121-1133.
- Miettinen M, Lasota J. "Gastrointestinal stromal tumors: review on morphology, molecular pathology, prognosis, and differential diagnosis." Archives of Pathology & Laboratory Medicine . 2006;130(10):1466-1478.
- MSD Manual Consumer Version. "Noncancerous Small Intestinal Tumors." Merck & Co.
- National Institute of Diabetes and Digestive and Kidney Diseases. "Gastrointestinal Bleeding." U.S. Department of Health and Human Services.