

## Abscess and Fistula

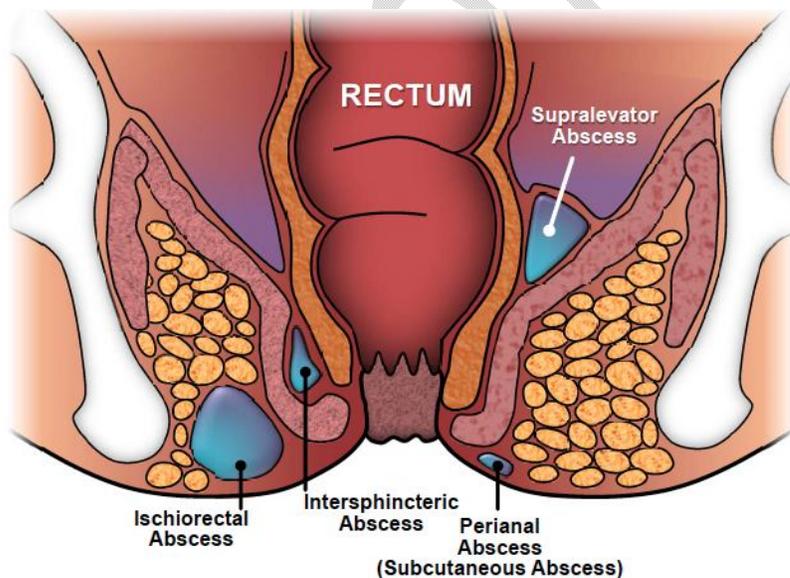
### What is an anal abscess or fistula?

An anal abscess is an infected cavity filled with pus found near the anus or rectum. Ninety percent of abscesses are the result of an acute infection in the internal glands of the anus. Occasionally, bacteria, fecal material or foreign matter can clog an anal gland and tunnel into the tissue around the anus or rectum, where it may then collect in a cavity called an abscess.

An anal fistula (also commonly called fistula-in-ano) is frequently the result of a previous or current anal abscess. This occurs in up to 50% of patients with abscesses. Normal anatomy includes small glands just inside the anus. The fistula is the tunnel that forms under the skin and connects the clogged infected glands to an abscess. A fistula can be present with or without an abscess and may connect just to the skin of the buttocks near the anal opening.

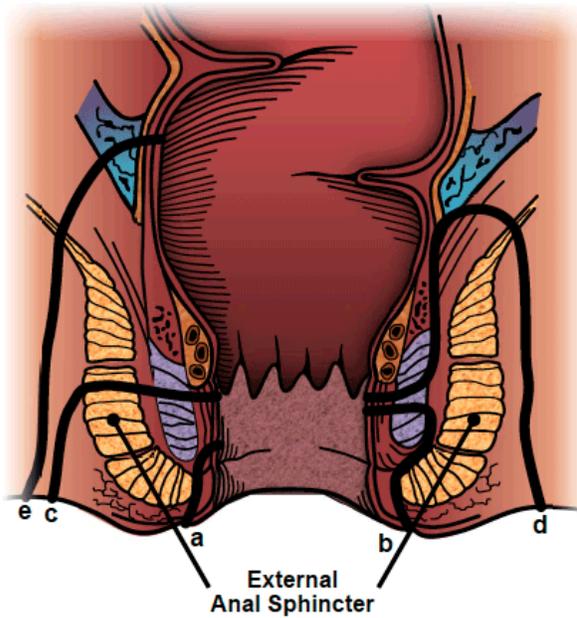
### Classification

Anal abscesses are classified by their location in relation to the structures comprising and surrounding the anus and rectum: perianal, ischioanal, intersphincteric and supralelevator. The perianal area is the most frequent and the supralelevator the least. If any of these particular types of abscess spreads partially circumferentially around the anus or the rectum, it is termed a horseshoe abscess.



Fistulas are classified by their relationship to parts of the anal sphincter complex (the muscles that allow us to control our stool). They are classified as intersphincteric, transsphincteric, suprasphincteric and extrasphincteric. The intersphincteric is the most common and the extrasphincteric is the least common. These classifications are important in helping the surgeon make treatment decisions.

- a: superficial fistula
- b: intersphincteric fistula
- c: transsphincteric fistula
- d: suprasphincteric fistula
- e: extrasphincteric fistula



### Symptoms

Anorectal pain, swelling, perianal cellulitis (redness of the skin) and fever are the most common symptoms of an abscess. Occasionally, rectal bleeding or urinary symptoms, such as trouble initiating a urinary stream or painful urination, may be present.

Patients with fistulas commonly have history of a previously drained anal abscess. Anorectal pain, drainage from the perianal skin, irritation of the perianal skin, and sometimes rectal bleeding, can be presenting symptoms of a fistula-in-ano.

### Examination

A careful history regarding anorectal symptoms and past medical history are necessary, followed by a physical examination. Common findings leading to the diagnosis of a perirectal abscess are fever, redness, swelling and tenderness to palpation. However, while most abscesses are visible on the outside of the skin around the anus, it is important to recognize that there may be no external manifestation of an abscess, other than a complaint of rectal pain. A digital rectal exam may cause exquisite pain.

When diagnosing an anal fistula, an external opening that drains pus, blood or stool is usually seen on examination. Heaped up tissue at the external opening suggests a well-established fistula. A digital rectal exam may produce pus from the external opening. Some fistulas will close spontaneously and the drainage may be intermittent, making them hard to identify at the time of the office visit.

### Use of diagnostic studies

Most anal abscesses and fistula-in-ano are diagnosed and managed on the basis of clinical findings. Occasionally, additional studies can assist with the diagnosis or delineation of the fistula tunnel. Today, both traditional two-dimensional and three-dimensional endoanal ultrasound are a very effective manner of diagnosing a deep perirectal abscess, identifying a horseshoe extension of the abscess, and delineating the path of a fistula tract. This may be combined with hydrogen peroxide injection into the fistula tract (via the external opening) to increase accuracy. CT scans can be useful for patients with complicated infections or with other medical conditions which may present similarly, such as Crohn's disease. A pelvic MRI has been shown to have accuracy up to 90% for mapping the fistula tract and identifying internal openings

### Treatment of anal abscess

The treatment of an abscess is surgical drainage under most circumstances. An incision is made in the skin near the anus to drain the infection. This can be done in a doctor's office with local anesthetic or in an operating room under deeper anesthesia. Hospitalization may be required for patients prone to more significant infections, such as diabetics or patients with decreased immunity.

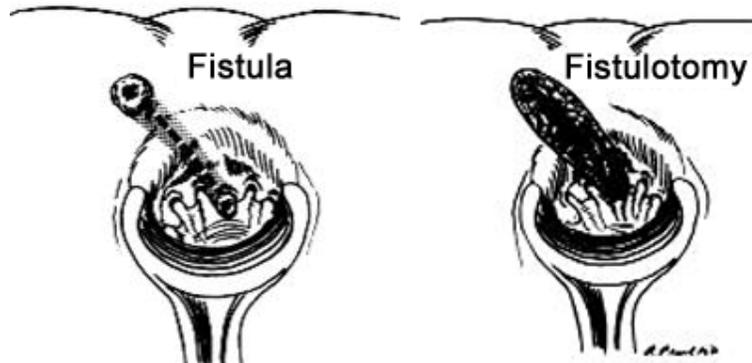
Up to 50% of the time after an abscess has been drained, a tunnel (fistula) may persist, connecting the infected anal gland to the external skin. This typically will involve some type of drainage from the external opening. If the opening on the skin heals when a fistula is present, a recurrent abscess may develop. Until the fistula is eliminated, many patients will have recurring cycles of pain, swelling and drainage, with intervening periods of apparent healing.

Antibiotics alone are a poor alternative to drainage of the infection. The routine addition of antibiotics to surgical drainage does not improve healing time or reduce the potential for recurrences in uncomplicated abscesses. There are some conditions in which antibiotics are indicated, such as patients with compromised or altered immunity or in the setting of extensive cellulitis (spreading of infection in the skin). The American Heart Association recommends the use of antibiotics for patients with prosthetic valves, previous bacterial endocarditis, congenital heart disease and heart transplant recipients with valvular pathology. A comprehensive discussion of your past medical history and a physical exam are important to determine if antibiotics are indicated.

### Treatment of anal fistula

Currently, there is no medical treatment available for this problem and surgery is almost always necessary to cure an anal fistula. If the fistula is straightforward (involving minimal sphincter muscle), a fistulotomy may be performed. This procedure involves unroofing the tract, thereby connecting the internal opening within the anal canal to the external opening and creating a groove that will heal from the inside out.

The surgery may be performed at the same time as drainage of an abscess, although sometimes the fistula doesn't appear until weeks or years after the initial drainage. Fistulotomy is a long-standing treatment with a high success rate (92-97%). This high success rate must be balanced, however, with the potential changes to a patient's continence (ability to control stool), as the more anal sphincter muscle is divided in a fistulotomy, the greater the risk of changes in continence. Therefore, the surgeon must assess whether a fistulotomy is appropriate for a given patient.



In addition to fistulotomy, there are a number of other surgical treatment options for anal fistula which do not involve division of the sphincter muscles. Fibrin glue injection is one such option, in which fibrin glue is injected into the fistula tract to obliterate the tract with the intention of becoming incorporated in the surrounding tissue. It has the advantage of avoiding dividing any sphincter muscle, thereby preserving continence. While there is a relatively high failure rate with this approach, it does not "burn any bridges" (risk affecting continence) and may be repeated.

An anal fistula plug is an elongated piece of material that is placed throughout the length of the fistula tract to fill the tract space and incorporate itself into the tissue around it. The plug also has the advantage of not requiring division of the sphincter muscle. However, like the fibrin glue, it has a relatively low success rate, with the majority of studies reporting success less than 50%.

An endoanal advancement flap is a procedure usually reserved for complex fistulas or for patients with an increased potential risk for suffering incontinence from a traditional fistulotomy. In this procedure, the internal opening of the fistula is covered over by healthy, native tissue in an attempt to close the point of origin of the fistula. Recurrence rates have been reported to be up to 50% of cases. Certain conditions, such as Crohn's disease, malignancy, radiated tissue and previous attempts at repair, and smoking, increase the likelihood of failure. Although the sphincter muscle is not divided in this procedure, mild to moderate incontinence has still been reported.

Yet another non-sphincter dividing treatment for anal fistula is the LIFT (ligation of the intersphincteric fistula tract) procedure. This procedure involves division of the fistula tract in the space between the internal and external sphincter muscles. This procedure avoids division of the sphincter muscle, but has not been performed long enough to adequately assess its success or the most appropriate cases to attempt it on.

Most of the operations can be performed on an outpatient basis, but in selected cases, may require hospitalization. Consider identifying a specialist in colon and rectal surgery who will be familiar with a number of potential operations to treat the fistula.

#### [What is a seton?](#)

As mentioned above, if a significant amount of sphincter musculature is involved in the fistula tract, a fistulotomy may not be recommended as the initial procedure. Your surgeon may recommend the initial placement of a draining seton. This is often a thin piece of rubber or suture which is placed through the entire fistula tract and the ends of the seton (or drain) are brought together and secured, thereby forming a ring around the anus involving the fistula tract. The seton may be left in place for 8-12 weeks (or indefinitely in selected cases), with the purpose of providing controlled drainage, thereby allowing all the inflammation to subside and form a solid tract of scar along the fistula tract. This is associated with minimal pain and you can still have normal bowel function with a seton in place. Once all the inflammation has resolved, and a mature tract has formed, one may consider all the various surgical options detailed above as staged procedures.

#### [Treatment of fistulas in Crohn's disease](#)

Fistula-in-ano is very common in Crohn's disease, which is a chronic inflammatory condition that can affect any part of the gastrointestinal tract. Patients with Crohn's disease are at increased risk for fecal incontinence because anorectal Crohn's disease tends to recur and may lead to multiple operations involving the sphincter muscle. It is important to acknowledge that the primary treatment of Crohn's perianal fistulas is medical, with surgery reserved for treating infection and, occasionally, as a supplement to medical therapy. The treatment should be individualized to the specific patient and incorporate factors that may increase the potential for fecal incontinence.

#### [What is the recovery like from surgery?](#)

Pain after surgery is controlled with pain pills, fiber and bulk laxatives. Patients should plan for time at home using sitz baths and avoiding the constipation that can be associated with prescription pain medication. Discuss with your surgeon the specific care and time away from work prior to surgery to prepare yourself for post-operative care.

#### [Can the abscess or fistula recur?](#)

As previously mentioned, up to 50% of abscesses may re-present as another abscess or as a frank fistula. Despite proper treatment and apparent complete healing, fistulas can potentially recur, with recurrence rates dependent upon the particular surgical technique utilized. Should similar symptoms arise, suggesting recurrence, it is recommended that you find a colon and rectal surgeon to manage your condition.

### What is a colon and rectal surgeon?

Colon and rectal surgeons are experts in the surgical and non-surgical treatment of diseases of the colon, rectum and anus. They have completed advanced surgical training in the treatment of these diseases as well as full general surgical training. They are well-versed in the treatment of both benign and malignant diseases of the colon, rectum and anus and are able to perform routine screening examinations and surgically treat conditions if indicated to do so.

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