FISTULA-IN-ANO

Thousand Oaks Proctology

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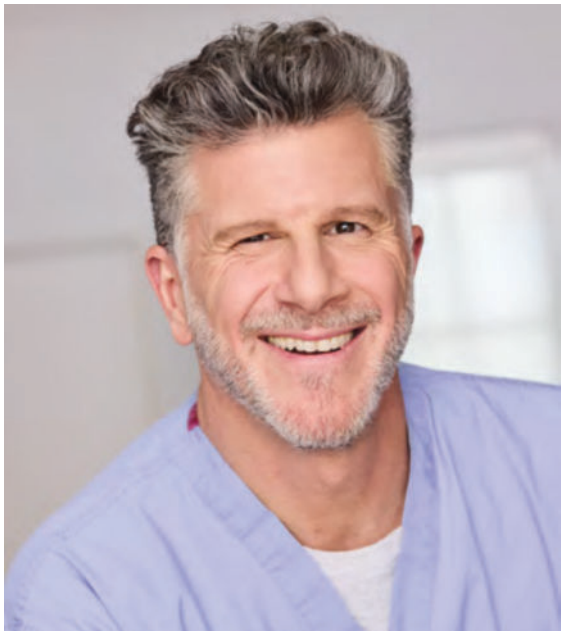

David B. Rosenfeld, M.D., F.A.S.C.R.S.

Dr. Rosenfeld has been in private practice since 1998 and spent 7 years at Cedars Sinai Medical Center. He was an active professor in the colorectal surgery fellowship program. Dr. Rosenfeld is now practicing in Thousand Oaks California. He is board certified in colon and rectal surgery

Dr. Rosenfeld finished his fellowship at USC in colon and rectal surgery in 1998. Dr. Rosenfeld is an expert in colonoscopy and proctology and has published a chapter on laparoscopic colectomy [Modern Management of Cancer of the Rectum: Chapter 9 : Laparoscopic Resections for Large Bowel Malignancy, Springer-Veriag Publications, London].

Dr. Rosenfeld specializes in colonoscopy and proctology including:

- Colonoscopy - Diagnostic and Surgical
- Hemorrhoid Disease
  - Burning
  - Itching
  - Bleeding
  - Pain
  - Lump in the rump
- Painless office hemorrhoid treatment
  - Sclerotherapy
  - Rubber band ligation
- Anal fissures and fistulas
- Perirectal abscess
- Pilonidal cyst and abscess
- Anal cancer and pre-malignant diseases of the anus
- HIV and AIDS associated anorectal diseases
- Hidradenitis

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DR. DAVID ROSENFELD

FISTULA-IN-ANO

Written by: David B. Rosenfeld, M.D., F.A.C.S,F.A.S.C.R.S.

FISTULA PHYSIOLOGY:

A fistula is a communication between the anus and the outside skin. A primary hole exists just inside the anus which is the beginning of a tract that leads to a hole outside of the anus. It is similar to a tunnel underneath a road. It is open on one side, travels under the road and comes out on the other side. Think about a tunnel near a beach where one opening is on the beach side and the other opening is on the land side. If the tide were to get very high, the water would travel into the tunnel and wash out on the land side. This is what happens with a fistula. The stool gets into the inside hole and travels along the tunnel which drains via the outside (land side) hole.

FISTULA DEVELOPMENT:

One type of fistula is called a cryptoglandular fistula. The inside of the anus is lined with 4-6 crypts (holes) which are connected to glands. The glands secrete mucous to lubricate the anus to help the bowel movements slide out. When the crypt becomes blocked with stool, the gland becomes infected leading to an abscess (infection). The abscess can drain spontaneously. If it does not drain on its own, it will need to be surgically drained, usually at the skin level outside the anus. Once the abscess is drained there is a 50/50 chance of forming a fistula or a tract between the inside crypt and the outside opening where the abscess drained. Crohn's disease (an inflammatory disease of the bowel and anus) is another cause of an abscess and fistula and is not described in detail in this pamphlet.

FISTULA HEALING:

It is rare for a fistula to heal spontaneously. In order to heal, the internal opening (crypt) must be obliterated and therefore surgery is necessary. Of the options to remove the internal opening, a fistulotomy is one of the best. Other methods include fibrin glue, a Surgisis® anal fistula plug or an endorectal advancement flap. The later procedures are reserved for complicated or recurrent fistulas.

FISTULA SURGERY

- **FISTULOTOMY:**

  This surgery works very well for uncomplicated and complicated fistulas.The success rate in uncomplicated fistulas is up to 98%. Let's go back to the tunnel explanation. If the shop owners on the land side were to complain to the city about the water leak from the tunnel, there are 2 ways of fixing the problem. One is the "cheap way" and the other is the correct way. The "cheap way" to fix the problem would be to build a brick wall on the land side of the opening. The salt water would still wash into the tunnel, but the wall would keep the land side dry. Over time the salt water erodes the wall and the leaking recurs. This “cheap way" is how your body tries to fix the problem. Your body creates scar tissue over the outer hole to prevent drainage. When too much fluid fills the tunnel (fistula tract) it erodes or bursts through the scar tissue and leaks.

  The correct way to fix the tunnel we spoke of earlier would be to remove the road down to the tunnel. This entails removing the cement or asphalt. Once removed the workers fill the tunnel with cement and then repave the road. A fistulotomy is similar to this process. In the operating room I find the tunnel with a probe and then remove the skin, and tissue below the skin which includes fat and muscle (all of the tissue constitutes the road). I then clean out the tunnel with an instrument. Unlike the tunnel analogy, I don't fill the open tunnel with cement as there is no such substance like this for the body. Your body will fill the open wound with scar tissue which acts like cement. The scar tissue grows from the deep tissue upward to fill the open tunnel. This process takes 4-6 weeks.

The majority of fistulas are simple and require opening the tract (fistulotomy I just discussed). One small risk of a fistulotomy includes leaking of gas or stool after the surgery. Since the fistula usually travels through the sphincter muscles, if too much muscle is cut, the risk of incontinence increases. This risk is about 3-5%. Prior to opening the fistula tract, the amount of muscle within the tract is observed and if a majority of the sphincter muscle is traversed by the fistula, a seton (rubber band) will be placed around the muscle instead of surgically dividing the muscle. The seton cuts through the sphincter muscle over a period of weeks allowing the muscle to be divided without losing its integrity. The seton is tightened in the office every 2-3 weeks until it falls out. Placing a seton decreases the risk of incontinence and heals the fistula.

- **FIBRIN GLUE**

  This surgery, like the anal fistula plug (below), was primarily used for complex or recurrent fistulas. Complex fistulas include; transsphincteric fistulas that involve greater than 30% of the external sphincter, suprasphincteric, extrasphincteric, or horseshoe fistulas and anal fistulas associated with IBD, radiation, malignancy, preexisting fecal incontinence, or chronic diarrhea. Fibrin glue was developed in the 90's to close fistulas. Like its name, it is a viscous or thick liquid used to fill the fistula tract. The glue is made of 2 types of human serum, fibrinogen and thrombin. After injecting the glue into the fistula and suturing the internal opening, the glue hardens and over time dissolves. This was the first real attempt at plugging the tract. The advantage of this technique was that there is no risk of incontinence and it could be repeated if it failed. The disadvantage is that the results of the procedure were very poor so this technique fell out of favor. I do not perform this technique.

- **Anal Fistula Plug**

  This surgery is primarily used for complex or recurrent fistulas. Complex fistulas include; transsphincteric fistulas that involve greater than 30% of the external sphincter, suprasphincteric, extrasphincteric, or horseshoe fistulas and anal fistulas associated with IBD, radiation, malignancy, preexisting fecal incontinence, or chronic diarrhea. The fistula plug is exactly what it sounds like. It is a plug used to fill the fistula cavity. The plug consists of a bioprosthetic absorbable material. In surgery the fistula is identified and the plug is placed within the fistula and sewn into place. The inner opening is oversewn to attempt to close the inner opening. The theory was that over time the plug dissolves and the fistula tract heals. The results in the literature show this surgery is only 24% effective. It is rarely used as treatment for anal fistulas. I do not perform this technique

- **Rectal Mucosal Advancement Flap**

  This surgery is also used for complex or recurrent fistulas. Complex fistulas include; fistulas that in most instances did not heal after the traditional surgery, fistulas that burrow very deep under the muscles, or fistulas caused by the inflammatory bowel disease called Crohn's disease. The rectal mucosal advancement flap operation is a major operation which involves taking the lining of the rectum just above the inner opening of the fistula and using it to cover the internal opening. The lining of the rectum is cut in a way that makes a flap of tissue with its blood supply intact. The flap is pulled down over the inner opening and sutured (stitched) into place. The success rate is about 60%. The reason the success rate is lower than the traditional surgery is due to a couple of factors. One reason is because these fistulas are complicated and have already failed surgery making them harder to cure. Secondly, this procedure involves a lot of suturing of tissue with the inherent risk of a failure of the wound to heal allowing stool to enter into the internal opening.

Finally, for patients with Crohn’s disease who need the surgery, the Crohn’s disease itself decreases the body’s ability to heal the area of surgery which lowers the chance of it working. This is the surgery of choice for patients who have Crohn's related fistulas or for patients without Crohn's disease who have failed the other forms of surgery and still have a fistula. If you require this surgery the risks and benefits can be explained at your office visit.

THE BENEFITS OF SURGERY:

- Fistulas rarely heal without surgery. It is very uncommon for a fistula tract to heal on its own even with the use of antibiotics.
- Without surgery recurrent infections and persistent drainage is common. The infections can become severe (Fournier’s gangrene) requiring emergency surgery.
- There is a small risk of developing a cancer in a chronic untreated fistula tract
- It works very well. The recurrence rate for fistulotomy (chance of the fistula coming back after surgery) is only about 2% (very low).

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THE RISKS OF SURGERY:

- Fistulotomy
  - Severe Bleeding 1-2%
  - Infection 1-2%
  - Recurrence of the fistula 2%
  - Anesthesia complications (rare)
    - Stroke
    - Clots in the legs
    - Heart attack
    - Pulmonary embolism
    - Death
  - Incontinence risk of 3-5%
  - Possible need for a seton requiring in office tightening.

The type of surgery wyou will need is based on the type of fistula you have along with other factors such as Crohn's disease and your risk of incontinence after surgery. For most fistulas I perform the fistulotomy surgery with or without a seton.

Prior to or after surgery the below products are recommended to improve bowel movements, colorectal health and post surgery recovery.

A large, long, soft and smooth bowel movement is essential after surgery. This acts like physical therapy to stretch the wound. The best way to bulk the stool is to add psyllium which is natures best fiber. Personally the bulking agent I recommend the most is **PERFECT P.O.O.P.®** which is raw psyllium formulated for me to taste better and go down smooth. No sugar, sugar substitutes, flavorings, colorants additives or preservatives. I take this every morning. When shaken (not stirred) with about 4-5 oz of juice or milk alternative it goes down smoothly and comes out long, solid, soft and clean. Other health benefits of psyllium include improving colorectal/anorectal health, lowering cholesterol, weight control, blood sugar control and improved immunity. One teaspoon of psyllium fiber adds 5 grams of fiber. It is important to drink enough water during the day in order for the fiber to work. Eating fiber without enough water can lead to constipation. It is recommended to eat 30-35 grams of fiber per day. The average daily American diet contains only 10-15 grams of fiber! It is also wise to eat foods lower in fat and cholesterol.

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L-Glutamine amino acid supplement for gas bloat with constipation, sticky stool or diarrhea. Gas Bloat with diarrhea or constipation is a very common problem in America. It comes from Irritable Bowel Syndrome (IBS), now felt to be Small Intestinal Bacterial Overgrowth (SIBO) or "Leaky Gut". The small bowel cells (Enterocytes) become inflamed and need nutrition to heal. L-Glutamine is the fuel or food for the enterocytes which leads to their healing. Once the cells heal the gut seals resolving the issues. My formula is pure L-Glutamine with tremendous gut healing, sealing potential. Take 2 grams twice a day and see the amazing results within 2 weeks.

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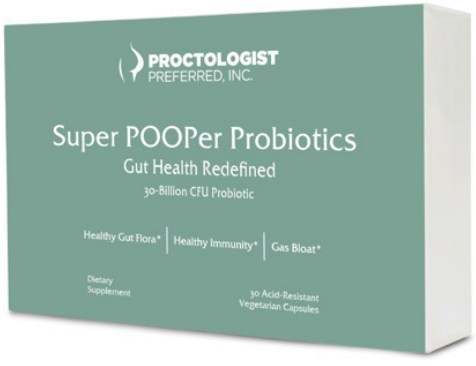

Super POOPer Probiotics provides four researched strains of beneficial bacteria, Lactobacillus acidophilus, Lactobacillus plantarum, Bifidobacterium longum and the extensively studied HN019® strain of Bifidobacterium lactis. These live microorganisms have proven health benefits and well-established safety, and have been tested for epithelial cell adhesion and/or resistance to low pH.*

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