



A new, non-surgical treatment option for chronic hemorrhoids

Hemorrhoidal Artery
Embolization (HAE)



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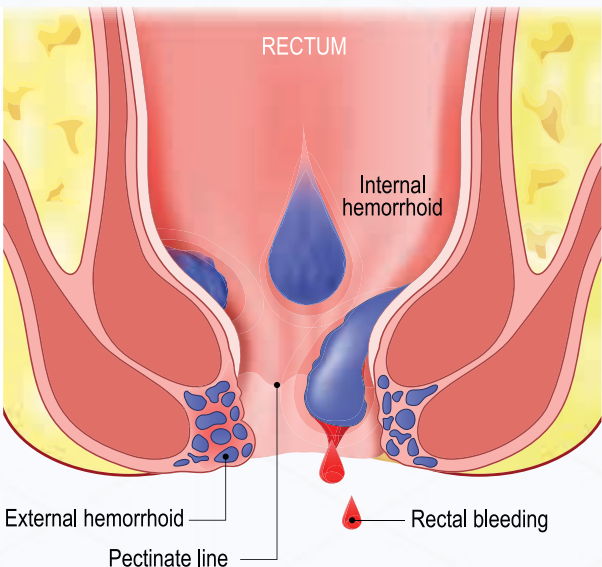
Hemorrhoidal Artery Embolization:

A minimally invasive alternative to surgery

About half of all Americans will experience hemorrhoids in their lifetimes. In most cases, hemorrhoids will go away on their own or with diet changes, topical treatments, medications or supplements. But they can also persist and cause bleeding, itching and painful bowel movements.

If conservative treatments have failed and symptoms persist, the potential complications of hemorrhoids can include:

- Perianal thrombosis
- Incarcerated prolapsed hemorrhoids
- Anemia
- Blood clots
- Blood loss (due to a burst hemorrhoid)
- Infection
- Skin tags



How do I know if HAE is right for me?

This procedure is recommended for patients:

- Who suffer from grade 1, 2 or 3 internal hemorrhoids
- Who's treatment with hygiene, dietary changes, medication or other conservative treatment has not worked
- That do not wish to have a hemorrhoidectomy, stapling surgery or rubber band ligation

The following conditions may disqualify you from hemorrhoid embolization:

- Grade 4 hemorrhoids
- Inflammatory bowel disease
- Stage IV Goligher prolapse
- Previous hemorrhoidal or colorectal surgery



What causes hemorrhoids?

Hemorrhoids are swollen veins inside the lower rectum or under the skin around the anus, similar to varicose veins. They most commonly occur in those between 45 and 65 years of age. They may be caused by an increase in pressure in the lower rectum through one or more of the following factors:

- Sitting for long periods
- Straining or excessive exercise
- Spinal cord injury
- Constipation or diarrhea
- Being overweight
- Pregnancy or childbirth
- Family history

A diet high in fiber, as well as drinking plenty of fluids and getting regular exercise can help prevent hemorrhoids.

Treatment

Conservative treatment for hemorrhoids may include diet changes, topical treatments (such as an over-the-counter hemorrhoid cream), sitz baths and oral pain relievers (such as Tylenol). If symptoms persist, or if you are experiencing severe pain, bleeding, changes in bowel habits or changes to the color or consistency of your stools, we encourage you to talk with your doctor about other treatment options.

Hemorrhoidectomy is a surgical procedure that comes with risks and complications that can include infection, bleeding, difficulty emptying the bladder, rectal prolapse and more. Recovery can be more difficult because bowel movements can put pressure on the surgical site. Although effective, this surgery is associated with intense postoperative pain and a prolonged time to return to normal activities.^{1,2}

A less invasive treatment, rubber band ligation, is also associated with pain and complications, especially for those taking anti-platelet or anti-coagulant medication, who have a higher risk of hemorrhage and infectious complications.³



A new and minimally invasive option to treat hemorrhoids is called hemorrhoidal artery embolization (HAE). This is typically recommended for patients with grade 1 to 3 internal hemorrhoids who have not responded to conservative treatment. It is safe and effective⁴, and offers comparable outcomes to surgery, but with less pain.⁵

The HAE procedure

HAE is performed by an interventional radiologist who inserts a tiny catheter into an artery in your upper thigh, and then uses x-ray imaging to guide it through the body's blood vessels to the rectal artery. Special coils are inserted into the artery to cut off the blood supply to the hemorrhoid, causing it to shrink. The success rate of this procedure is greater than 90%.⁵

Unlike surgery, there is no general anesthesia required for the procedure, no incisions and no scarring. You are able to return home the same day and resume normal activities.

Talk to your doctor about hemorrhoidal artery embolization

If your doctor is not familiar with hemorrhoid embolization, please share this brochure with them. If you have questions, call us! We are happy to help provide the information you need to make an informed decision with your doctor.

North Star Vascular & Interventional

The doctors at NSVI are pioneers in interventional radiology. Hailing from some of the region's most prestigious healthcare and academic institutions, they were among the first to perform certain imaging-guided procedures in the United States. In fact, NSVI doctors play a leading national role in training other doctors to perform minimally invasive procedures like HAE.

NSVI offers the full range of minimally invasive vascular and interventional radiology services, including cancer treatment, at their state-of-the-art Minneapolis-based outpatient center. Cancer, spine fractures, uterine fibroids, knee osteoarthritis and vascular disease can be treated faster, less expensively and with greater precision and safety than ever before.

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