Surgery for Hemorrhoids

What are hemorrhoids?

Hemorrhoids are a specialized collection of blood vessels under the lining of the anal canal. They are normal structures which enlarge when they fill with blood and return to normal size when they empty. Hemorrhoids are sometimes called anal cushions because they are involved in the finer control of stool and gas. Hemorrhoids are located at two levels – internal and external. **Internal hemorrhoids** are covered by mucosa and normally reside in the upper anal canal and low end of the rectum. **External hemorrhoids** are covered by skin and are found in the lower anal canal and beneath the skin around the anal verge (opening). Internal and external hemorrhoids have different types of sensation and cause different complaints.

Hemorrhoids may cause symptoms when they become dilated, thin walled and hang down. Internal hemorrhoids are kept inside the anus with special connective tissue that suspends them in their normal position. **Internal hemorrhoids** may cause complaints if the supporting tissue is damaged and the vessels dilate; the hemorrhoids may fill up with blood but not empty normally. Over time they may prolapse out of the anus to the outside, and they may bleed and cause discomfort and irritation. **External hemorrhoids** dilate, bulge and cause discomfort, especially with straining to have a bowel movement. They commonly become thrombosed (clotted) which causes sudden swelling and severe pain.

What surgical procedures are used for hemorrhoids?

**Excisional hemorrhoidectomy** – This is the classic surgery for hemorrhoids and is best for extensive internal and external hemorrhoids. The abnormal hemorrhoidal tissues are removed and the blood vessels coming down to them are tied off. To remove both the internal and external hemorrhoids, the operation begins high inside the anal canal where sensation is limited and continues down into the lower anal canal which is very sensitive. This is done for each hemorrhoid column which is enlarged – usually three. This is the most complete operation that is commonly performed. Complications rates are low and recurrence rates are low (5%), however recovery does take about 3-4 weeks.
Procedure for prolapsing hemorrhoids (PPH) – PPH, also known as "stapled hemorrhoidectomy", is a procedure where all the work is done in the anal canal and low rectum with a circular stapling device. This device removes a ring of lining tissue at the upper end of the internal hemorrhoids and staples the two edges of the ring together. This removes many of the feeding vessels that lead into the hemorrhoids, decreasing the blood flow and swelling. Additionally, a ring of scar tissue develops under the ring of staples. The scar tissue helps to keep the mucosal lining of the rectum stuck against the muscle wall which keeps the internal hemorrhoids suspended up inside the anal canal. Because all of the work is doing high up inside where there are few pain nerve, there is usually much less pain after this procedure. Recovery is typically faster than after an excisional hemorrhoidectomy, however the operation does not remove the dilated tissue and does not address the external hemorrhoids very well.

Doppler guided hemorrhoid artery ligation (DGHAL) and Mucopexy – DGHAL (also known as transanal hemorrhoidal dearterialization or "THD") is another procedure where all the work is done in the upper half of the anal canal. This is done with a device called a Doppler anoscope. The Doppler is a sensor that locates the arteries that bring blood to the hemorrhoids. The Doppler is attached to an anoscope that allows the surgeon to place a stitch directly around the artery and decrease the circulation to the hemorrhoids. This may help improve hemorrhoid complaints by limiting how much blood fills the hemorrhoids. Usually, six arteries are found and tied off. A ring of scar tissue develops from these six sutures. This scar tissue helps keep the mucosal lining stuck against the muscle wall of the anus which helps keep the internal hemorrhoids suspended inside the anal canal. Mucopexy is an additional procedure, often combined with DGHAL, that helps to shrink the internal hemorrhoids and help suspend them inside the anal canal. A suture is placed around and under the length of the enlarged and stretched internal hemorrhoid from the top down. The top and bottom ends of the suture are tied together, strangling the hemorrhoid tissue and pulling it up. The strangulated tissue dies and falls off, decreasing the size of the hemorrhoid without cutting it out. Scar tissue forms under the stitch and this helps the remaining hemorrhoid tissue to stay up inside the anal canal.

Which procedure is the best for me?

Excisional hemorrhoidectomy is the most effective procedure to treat hemorrhoids. The success rate is about 95%. It has been used for well over 100 years and long term success has been proven. Because the excision includes tissue from the sensitive lower half of the anal canal, there is significant pain during the first week of healing. Complications rates are low, and recurrence rates are low (5%), however recovery does take about 3-4 weeks.

PPH and DGHAL with, mucopexy are relatively new procedures. They have been used since the 1990s. The early success rate is about 90%, but the long term recurrent rates are not yet known. Because the work is done in the less sensitive upper part of the anal canal, these procedures cause less pain than excisional hemorrhoidectomy.
Are there any risks of hemorrhoid surgery?

The main risks associated with hemorrhoid surgery are persistence or recurrence of the hemorrhoid complaints, bleeding, infection, narrowing of the anal canal that makes it difficult to pass stool, and incontinence (loss of control of bowel movements). A common problem after anal surgery is difficulty urinating after the procedure. Occasionally, this requires placement of a temporary urinary catheter.

How do I prepare for hemorrhoid surgery?

If you have any significant medical problems, a medical clearance report is needed from your primary care doctor. You should call his or her office to arrange for this. If you have heart problems, you may need clearance from a cardiologist who may order additional tests. Bowel preparation on the day of surgery to clean out the rectum is usually needed, and is usually done with an enema. Do not eat or drink anything for at least 8 hours before the operation. Follow the preparation directions supplied closely.

What can I expect after surgery?

Most patients are discharged from the hospital when the anesthetic has worn off, about three to four hours after the surgery. You must be accompanied home by a responsible adult that you know. Occasionally, patients may be kept overnight for monitoring. Your doctor will prescribe pain medication. You will need to keep your stools soft and passing easily after surgery. This is accomplished by eating a high fiber diet, and taking stool softeners and fiber supplements. Sitz baths should be taken 3 times daily and after bowel movements. A dry gauze pad should be tucked between the cheeks against the wound at the anal opening. If you notice large amounts of blood or pus from the rectum, increased pain or fever you should call immediately.

Is any follow-up needed?

You will need to follow-up with your doctor after the operation to check the operative site and to look for new problems.

Patient information materials developed in the Section of Colon and Rectal Surgery at Rush University Medical Center. The information contained in this brochure is believed to be accurate; however, questions about your individual health should be referred to your physician.

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