

Coloproctology

Hemorrhoids



A patient's guide to treatments of Hemorrhoids

A.M.I.[®]

Agency for Medical Innovations



What are Hemorrhoids?*

Hemorrhoids are lumps inside and around your anus. Hemorrhoids are natural cushions of tissue and veins.

Along with the sphincter, this normal tissue is responsible for complete closure of the anus and prevents leakage.

***Sources**

<https://www.nhs.uk/conditions/piles-haemorrhoids/>

<https://www.mayoclinic.org/diseases-conditions/hemorrhoids/symptoms-causes/syc-20360268>

syc-20360268

Causes of Hemorrhoids*

Hemorrhoids are swollen blood vessels. During a bowel movement, the hemorrhoidal cushions become smaller to allow stool to pass through. When hemorrhoids become larger, then they may cause problems. Factors that are more likely to cause hemorrhoids:

- ▶ Straining during bowel movements, pushing too hard
- ▶ Constipation
- ▶ Obesity
- ▶ Heavy lifting
- ▶ Pregnancy
- ▶ Unhealthy lifestyle (lack of exercise, bad eating habits, alcohol...)

Which symptoms should I be aware of?*

Symptoms of Hemorrhoids include:

- ▶ Painless bleeding during bowel movements. You might notice small amounts of bright red blood on your toilet tissue or in the toilet
- ▶ Itching or irritation in the anal region
- ▶ Mucus in your underwear or on toilet paper after wiping your bottom
- ▶ Foreign body or pressure sensation in the anal area. In severe cases, the swelling will be constantly visible
- ▶ Pain around your anus

4 different grades of hemorrhoids*

Hemorrhoids (anal cushions) are normally held safely in place in the sphincter region by muscles and tissue.

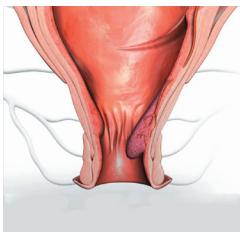
If too much pressure is exerted on them, the system of securing them may be damaged and the cushions will swell. When they protrude outside the anus, they are referred to as prolapsing hemorrhoids.

The enlarged cushions are classified into four grades, depending on their size and severity.

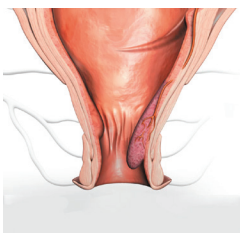
*Sources

<https://www.mayoclinic.org/medical-professionals/digestive-diseases/news/hemorrhoidal-disease-diagnosis-and-management/mac-20430067>

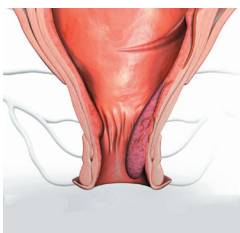
<https://patient.info/digestive-health/rectal-bleeding-blood-in-faeces/piles-haemorrhoids>

**Grade 1:**

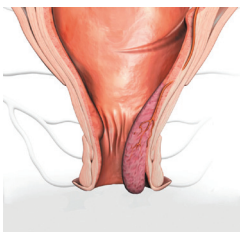
Slightly enlarged cushions on the inside lining of the anal canal, but do not prolapse

**Grade 2:**

Enlarged cushions that prolapse outside the anal canal but quickly go back inside

**Grade 3:**

Much larger cushions that protrude outside the anal canal and require manual reduction

**Grade 4:**

Extremely large cushions with permanent protrusion. They will stay outside the anus

Treatment of Hemorrhoids*

Hemorrhoids are common in both men and women and there is no need for sufferers to be embarrassed. The earlier you seek advice and a thorough diagnosis, the better the chances are that symptoms can be cured with minimal discomfort.

Your treatment will depend on the grade of hemorrhoids you have. Conservative Treatment can be tried first and Grade I hemorrhoids may require medication only. Higher grades may be treated with surgery.

Conservative Treatment and Prevention



Lots of fluid and plenty of fiber



Use damp toilet paper



Take a warm bath



Ice pack wrapped in a towel



Gently push the hemorrhoid inside



Keep your bottom clean and dry



Exercise and sports regularly



Avoid alcohol and caffeine



Medicated creams and medication

If there's no improvement to your hemorrhoids after home treatments, you should speak to your doctor about further treatment options.

Outpatient procedures:

- ▶ **Rubber band ligation:** a band is placed around your hemorrhoids to make them drop off
- ▶ **Sclerotherapy:** a liquid is injected into your hemorrhoids to make them shrink
- ▶ **Electrotherapy:** a gentle electric current is applied to your hemorrhoids to make them shrink
- ▶ **Infrared coagulation:** an infrared light is used to cut the blood supply to your hemorrhoids to make them shrink

Surgical Interventions:

- ▶ **Doppler Guided Hemorrhoidal Artery Ligation (DG-HAL) plus mucopexy:** stitches are used to cut the blood supply to your hemorrhoids to make them shrink
- ▶ **Stapled hemorrhoidopexy:** your hemorrhoids are stapled back inside your anus
- ▶ **Hemorrhoidectomy:** your hemorrhoids are cut out

*Sources

<https://www.nhs.uk/conditions/piles-haemorrhoids/>

Our product solution for Hemorrhoids

Instead of painful operations, the Hemorrhoidal Artery Ligation and Recto Anal Repair (HAL-RAR) using **A.M.I.'s TRILOGY** offers a more gentle treatment method for all degrees of hemorrhoids.

TRILOGY

Doppler ultrasound system for HAL-RAR Treatment

- ▶ **Locate**
- ▶ **Ligate**
- ▶ **Lift**

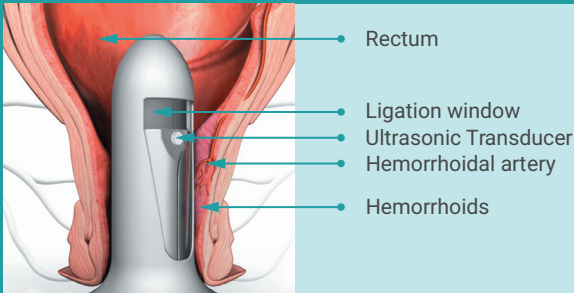


What is TRILOGY?

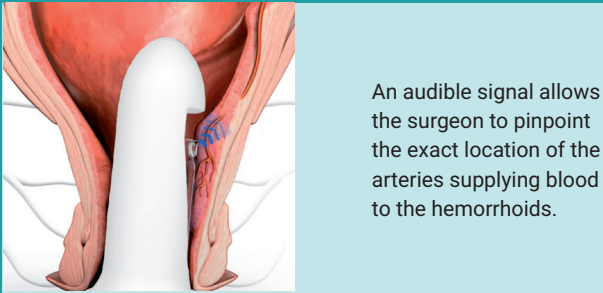
TRILOGY is an ultrasound system for detection and surgical treatment of hemorrhoidal disease. The HAL-RAR method is used as the operational technique.

HAL – Hemorrhoidal Artery Ligation

HAL is suitable for treating low to medium grade hemorrhoids. The ligation reduces the arterial blood supply, causing the hemorrhoidal cushions to shrink back to normal.



A miniature Doppler ultrasound device (TRILOGY) is gently inserted into the anus.



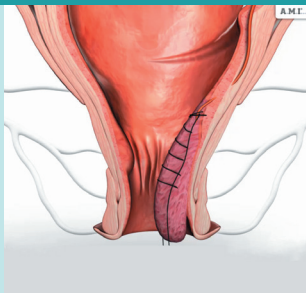
The surgeon then ties off each artery (called ligation) by placing a stitch around it and knotting the ends. The stitch is placed not in the anus but in the lower rectum, where there are almost no pain nerves.

With the blood supply to the hemorrhoids being obstructed, the pressure in them is reduced almost immediately and they start to shrink. In just a few weeks, they are no longer noticeable and the symptoms resolve.

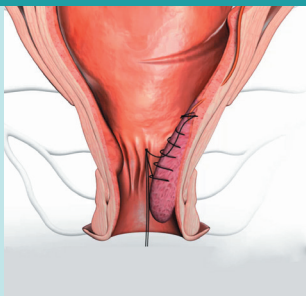
RAR - Recto Anal Repair

RAR is suitable for treating medium to high grade hemorrhoids.

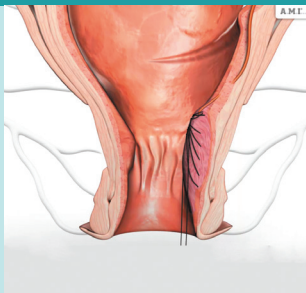
First, a running stitch is made from the top to the bottom. Only the prolapsing tissue is caught by the needle.



The ends of the threads are pulled together and knotted at the top. This has the effect of lifting up the hemorrhoids that are hanging down.



With this "lifting" the hemorrhoids are repositioned. The tissue integrates "seamlessly" back into the anal canal.



What are the benefits of the HAL-RAR method?

- ▶ **Low risk** of peri-operative (short- and long-term postoperative) pain
- ▶ **Improved Quality of Life** and patient satisfaction
- ▶ **A minimal invasive surgery** with a low risk of intra-operative complications
- ▶ **Less post-operative pain** compared to hemorrhoidectomy
- ▶ **Shorter recovery time** compared to hemorrhoidectomy





Relief is possible.

Talk to your doctor about the gentle HAL-RAR treatment for hemorrhoids with A.M.I.'s TRILOGY – a high-quality solution designed and manufactured in Austria. Be sure to discuss with your doctor all potential risks and benefits to decide if this treatment is right for you.

A.M.I.[®]

Empowering Innovations.
Empowering Lives.



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