

## FREQUENTLY ASKED QUESTIONS (FAQs)

**1 What causes Hemorrhoids?**

Hemorrhoids are common and occur in approx. 50% of people during their life with a peak incidence at the age of 45 - 65 years.<sup>1</sup> They can be caused through an increase in pressure in the lower rectum by the following reasons: straining, sitting for long periods, spinal cord injury, chronic constipation or diarrhea, anal intercourse, family history of hemorrhoids, excessive exercise.

**2 How can I prevent to have Hemorrhoids?**

Eating high fiber food, drinking enough fluid and exercise help preventing the occurrence of hemorrhoids. Avoid straining when sitting on the toilet, and in general, long periods of sitting.

**3 When is the Embolisation treatment the best option for me?**

The embolisation treatment is the best option for you if you suffer from internal hemorrhoids of grade 2 or 3 and treatment with hygiene and dietary measures, medication or non-surgical minimally invasive methods was not successful. Also, if you did not benefit from a surgical treatment, this technique can be the right option for you.<sup>7</sup> Prior to treatment a CT Angiography will be performed to identify if this procedure is suitable for your vascular anatomy.

**4 What are the contra-indications for the Embolisation technique?**

You should not undergo this treatment in case you have a grade 4 internal hemorrhoid, acute hemorrhoidal complications, a history of colorectal surgery or chronic anal fissures. Allergy to the contrast medium is also a reason to not undergo this procedure.

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# Hemorrhoidal Disease

A Patient Guide

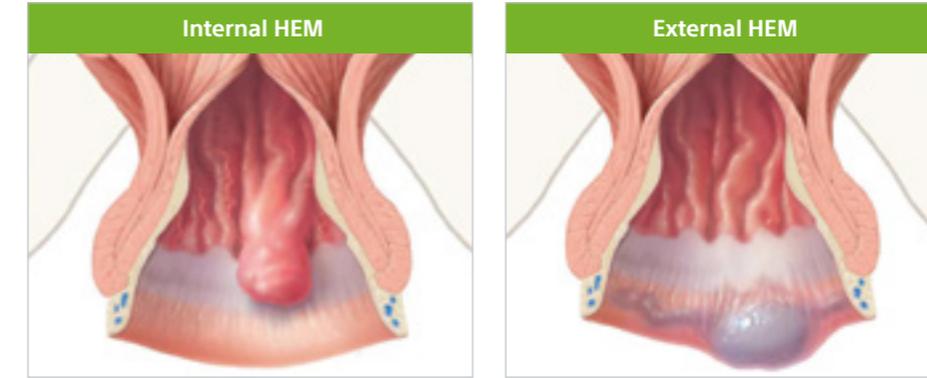


The brochure informs you about the embolisation technique as a treatment for the hemorrhoidal disease. It explains the indications for this minimally invasive treatment, the procedural details and advantages. The information provided in this brochure should help you to have a basis for further discussions with your doctor.

## WHAT IS A HEMORRHOIDAL DISEASE (HEM)?

Hemorrhoids are cushions of fibrovascular tissue in the anus helping to seal the anus and maintain anal continence. They can be easily irritated, become enlarged and form into swellings, often caused by straining and constipation.

The hemorrhoidal disease describes the swollen or inflamed state of these vascular structures inside or around the anal canal. It is the most frequent anorectal disease with 5% – 40% occurrence in the population<sup>1</sup>.

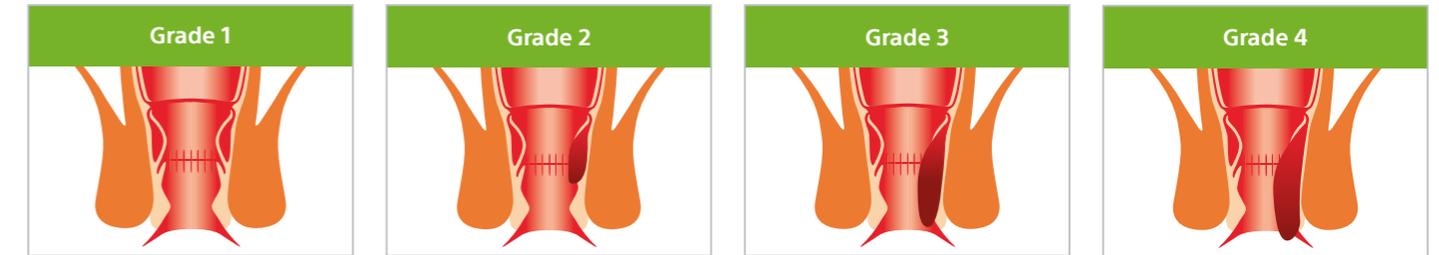


Hemorrhoids can be located internal at the upper part of the anal canal in the rectum or external under the skin around the anus.

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Internal Hemorrhoids are more frequent than external Hemorrhoids and can enlarge and slip out (prolapse) through the anal opening. They are graded by their size and severity from grade one to four.<sup>1</sup>



Grade 1  
Small swellings on the inside lining of the anal canal, no prolapse is present.

Grade 2  
Larger swellings that may prolapse when pushing but go back (reduce) spontaneously.

Grade 3  
Prolapse outside the anus and must be pushed back (reduced) manually.

Grade 4  
Permanently hang outside the anus and cannot be reduced manually, cause pain and bleeding.

## WHAT ARE TYPICAL SYMPTOMS CAUSED BY HEM DISEASE?

**Bleeding** is the most common presenting symptom as hemorrhoidal tissue has increased blood supply.

- When internal hemorrhoids prolapse through the anal canal the tissue can become traumatised leading to bleeding that is bright red in color
- Internal Hemorrhoids may cause itching and perineal irritation
- Prolapsing tissue can lead to “fecal soiling” by impeding the ability of the anal verge to seal
- External Hemorrhoids are typically asymptomatic unless they become thrombosed or inflamed
- External thrombosed Hemorrhoids cause a painful perianal swelling



## HOW ARE HEMs DISEASES DIAGNOSED?

### Medical History

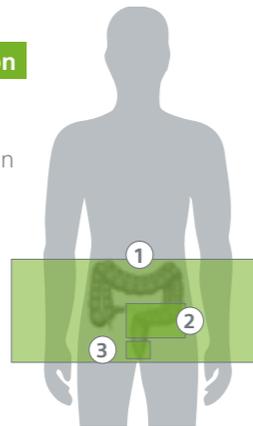


### Physical Examination

A visual inspection of the peri-anal area will allow for the description of any external abnormalities.



### Digital rectal examination



### 1 Coloscopy

Allows the endoscopic examination of the entire colon.

### 2 Flexible Sigmoidoscopy

Endoscopic examination of the large intestine from the rectum up to the sigmoid (distal colon).

### 3 Anoscopy

An anal speculum (anoscope) is used for internal inspection of the lower rectum.

## WHAT ARE THE TREATMENT OPTIONS FOR HEM DISEASE?

There are several suggested treatments, according to the severity of the symptoms:

### Dietary and lifestyle changes



### Drug Therapy



### Non-surgical minimally invasive treatments



- Rubber Band Ligation
- Radiofrequency Ablation
- Infrared Photocoagulation
- Sclerosis Injection

### Surgery

#### Minimal invasive surgery



Doppler-guided hemorrhoidal ligation (DGHAL)



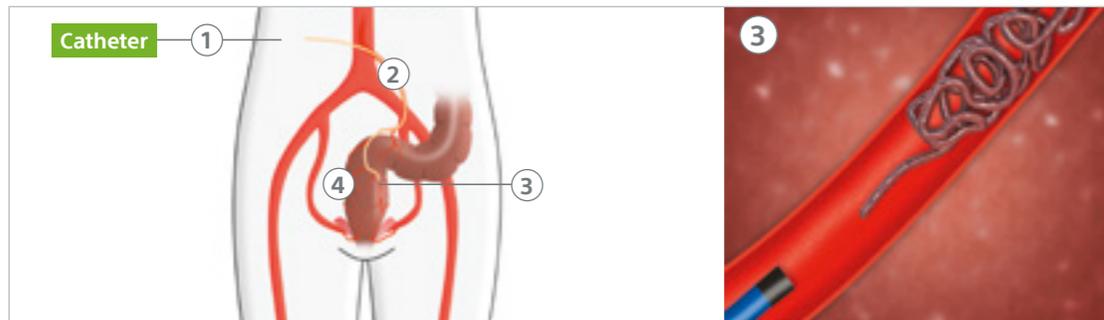
➤ Alternative non-surgical treatment:  
**Embolisation of the Superior rectal arteries**

## SUPERIOR RECTAL ARTERY EMBOLISATION: PROCEDURAL DETAILS

This minimally invasive procedure is less aggressive than surgical treatment. An Interventional Radiologist performs the procedure. The embolisation technique is applied under local anaesthesia in patients with internal hemorrhoids of grade two or three.<sup>2-7</sup>

Internal hemorrhoids are composed of a dense arteriovenous network called Corpus Caverosum Recti (CCR). The embolisation of the hemorrhoidal artery aims to reduce the blood flow in the CCR, thus reducing the venous pressure and the symptoms.

- ① A **small opening measuring 1.5 mm** in diameter is made in the groin area through which a thin **catheter** is inserted into the femoral artery.
- ② The catheter is **guided through the superior rectal artery tree to the terminal branches** while the Interventional Radiologist watches the progress of the procedure using a moving x-ray (fluoroscope).
- ③ Small coils are placed into the terminal branches of the arteries to seal the vessels.<sup>5,6</sup>
- ④ It **may be necessary to repeat the embolisation** for hemorrhoids on the opposite side, through the **same opening** and using the **same catheter and microcatheter combination**.



Hemorrhoidal artery coil embolisation is a painless technique. The procedure time is approx. 50 min. After the procedure, patients can return home on the same day.<sup>2</sup>

**With all medical procedures there are risks associated with the use of a device. Be sure to talk with your doctor so that you thoroughly understand all of the risks and benefits associated with the treatment options.**

Advantages of the embolisation technique:

- Leaves hemorrhoidal tissue in place
- No general anaesthesia needed
- Preserves anal continence
- Does not involve the creation of rectal wounds
- Good short-term results



## EMBOISATION TREATMENT – A PATIENT STORY

For 20 years I suffered from haemorrhoids, my daily life was hell: a father of young children, I was unable to run or play with them; I walked like a duck and had to wear a diaper due to the heavy bleeding; I live on the seaside but could not go to the beach or go swimming; I could not even go to the restaurant or out for the evening during a haemorrhoidal attack since I could not sit down!

I tried everything, all the creams recommended by the doctors, all the remedies, even old wives' remedies, nothing worked. In short, I suffered permanently and could not see any way out, which affected my spirits and my relations with my family. Especially since it is a sensitive subject to discuss and here, in the south of France, it is taboo and people would laugh at you.

One day, however, I came across an article in the local newspaper describing a new technique which consists in embolisation of the haemorrhoidal arteries, conducted in Marseilles hospital by Professor Vidal. They were looking for volunteers and, after consulting several vascular specialists, my case was considered as eligible for the embolisation technique.

It is quite simple: I went into hospital in the morning and left at 3 o'clock, as new man! Under local anaesthesia, Professor Vidal embolised my haemorrhoidal arteries successfully, and from then on, I no longer suffered. I had forgotten what it was like to live normally, I was reborn. To such an extent that I have almost forgotten just how painful it was at the time! It is as if I had never had anything wrong with me. My only regret is that this technique has only been developed recently, not 20 years ago!

