

# Hemorrhoids

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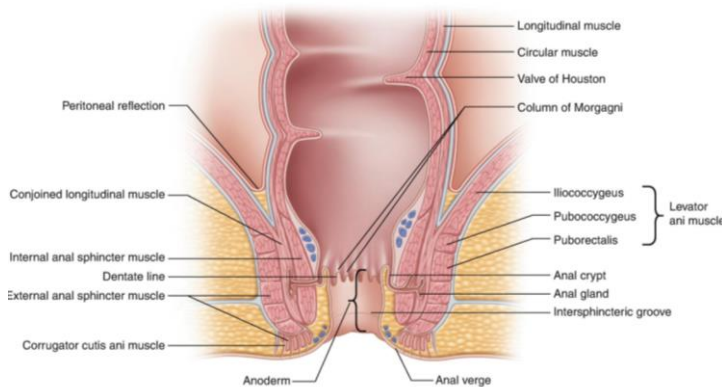
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- No financial disclosures

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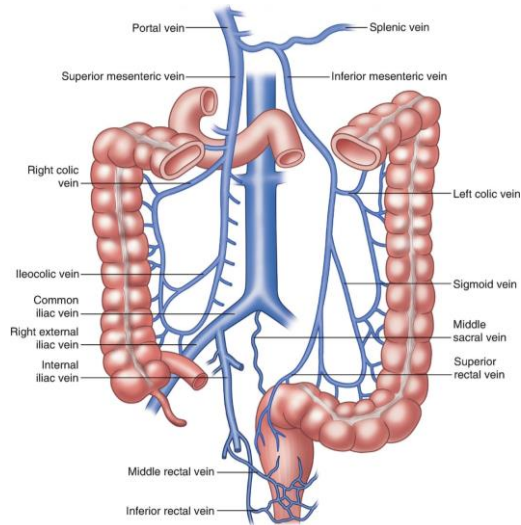
- Hemorrhoidal disease is estimated to affect approximately 4% of the US population (likely more)
- Over 3 million outpatient visits per year
- Highest incidence between ages 45 and 65.

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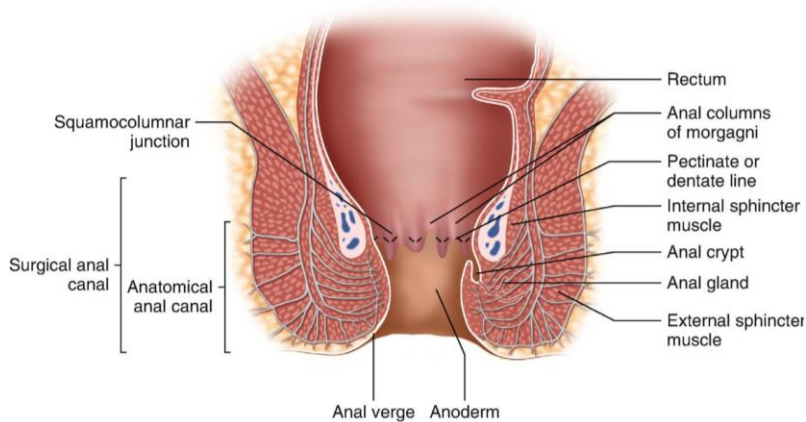
- Normal part of anatomy
- Arteriovenous structures in the anal canal
- Left lateral, right anterior, right posterior
- or

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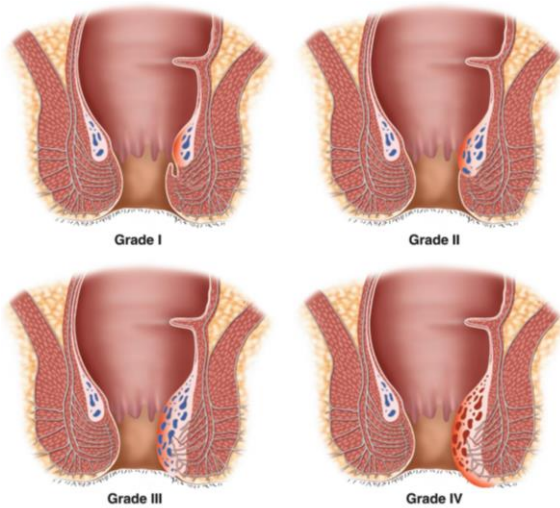
- Arterial flow from superior and middle hem arteries
- Venous outflow to superior, middle and inferior hem veins, then internal pudendal and IVC

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- Internal, external or mixed
- Internal are columnar mucosa
- External are modified squamous epithelium

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- I – visibly engorged but no prolapse
- II – prolapse below dentate line but reduce spontaneously
- III – prolapse below dentate line but DO NOT reduce spontaneously, CAN BE reduced manually
- IV – prolapsed and NOT REDUCIBLE

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- “strangulated” are type IV that are edematous with necrosis or even gangrene

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- Thrombosed external – external hemorrhoids with a clot under pressure
- Often a skin tag will form after the thrombosed hemorrhoid resolves



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- Internal hemorrhoids have visceral innervation so are sensitive to pressure
- External hemorrhoids have somatic innervation so are sensitive to pain and temperature
- In between is the anal transition zone with variable innervation from both

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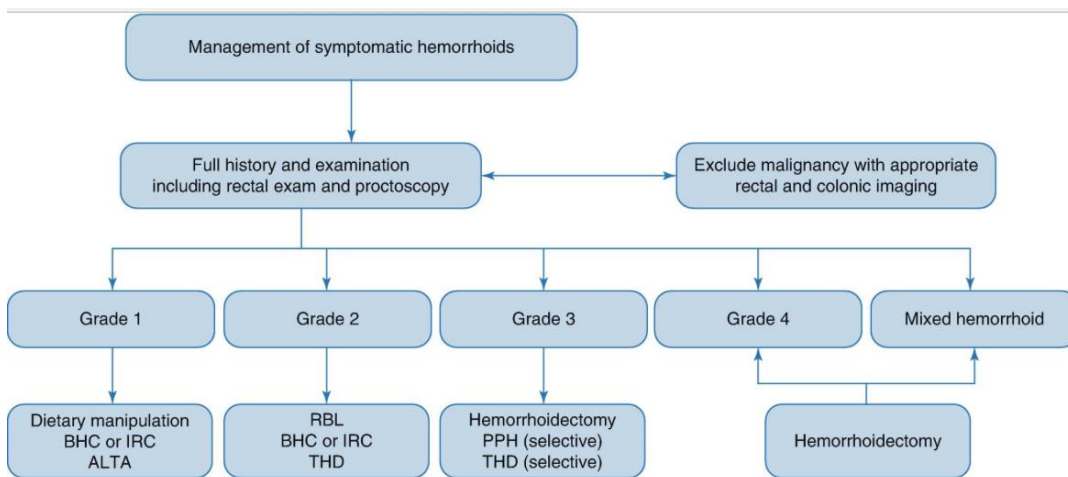
- Treatment is symptom based
- Only 40% of people with enlarged hemorrhoids are symptomatic
- Major contributors: straining, frequent Valsalva, impaired venous return
- Present with pain, pressure, bleeding, drainage, hygiene

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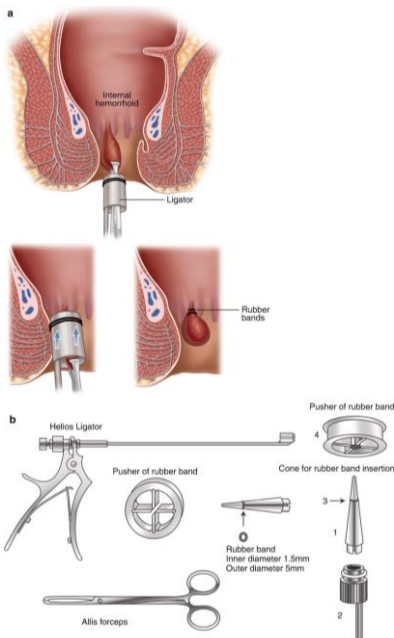
## NON-OP management

- Stool habits – straining, position, time
- Stool consistency
- Lidocaine, hydrocortisone, pramoxine

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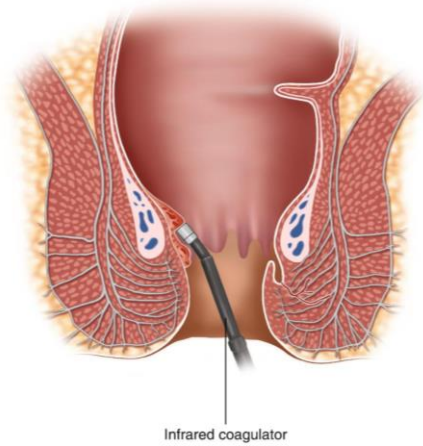


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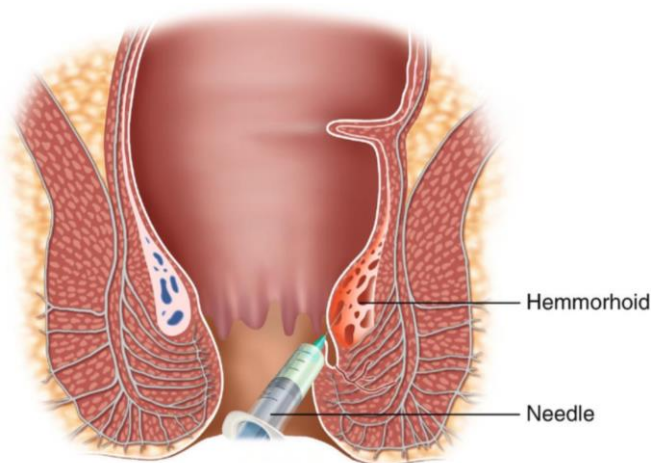
- Rubber band ligation
- Band placed on redundant mucosa above dentate line
- Necroses and falls off in a few days
- Expect pressure/pain and some spotting
- Risk of pelvic sepsis (pain/fever/chills/urinary retention) rare but rapidly progressive and can be fatal

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- Infrared coagulation
- Causes vascular necrosis and fixation of tissue
- Best for Grade I or II
- Applied at apex of hemorrhoid 3-4 times

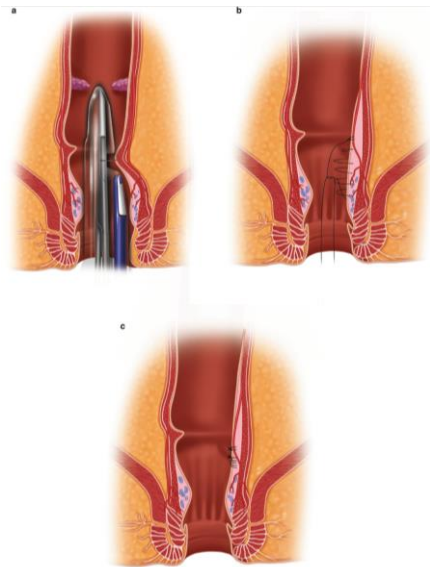
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- Injection sclerotherapy
- Grade I-III
- Injection of sclerosing agent into the submucosal layer of the hemorrhoid
- Causes fibrosis and fixation
- Usually saline with 5% phenol
- Can be done while on anticoagulation

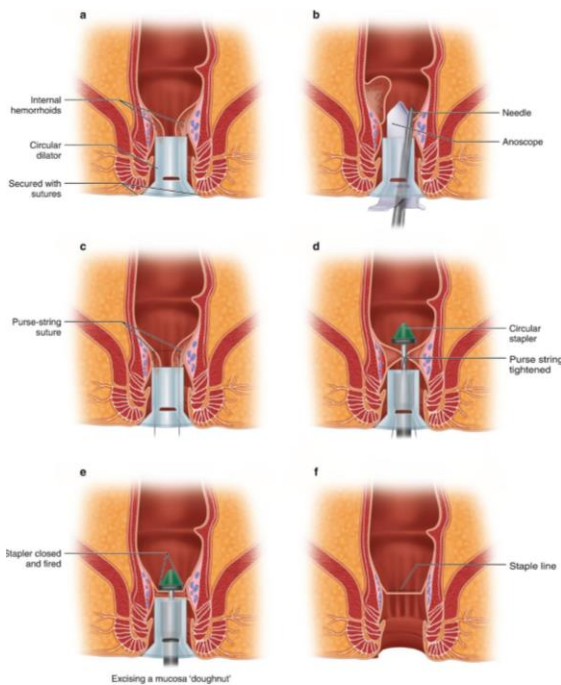
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- THD – transanal hemorrhoidal dearterialization device
- Uses anoscope with US probe to find hemorrhoid artery and these are suture ligated
- Decent short-term results but higher recurrence

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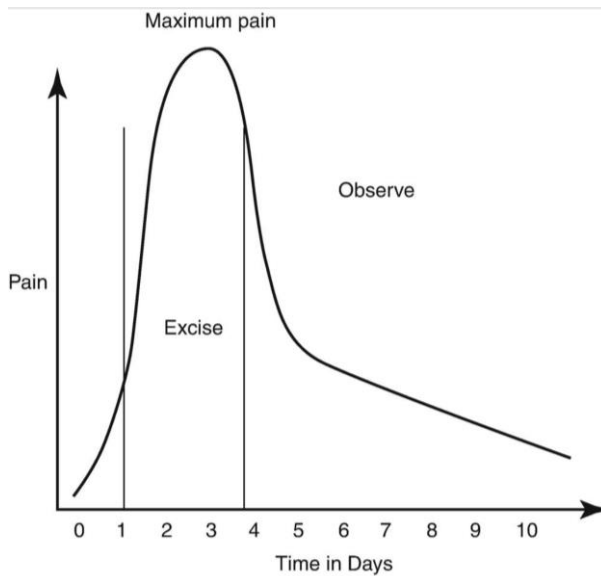
- Stapled hemorrhoidopexy
- Circumferential excision of redundant hemorrhoid tissue
- High complication rate
- Serious complications

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- Back to external hemorrhoids
- Non-op management of symptoms or excision

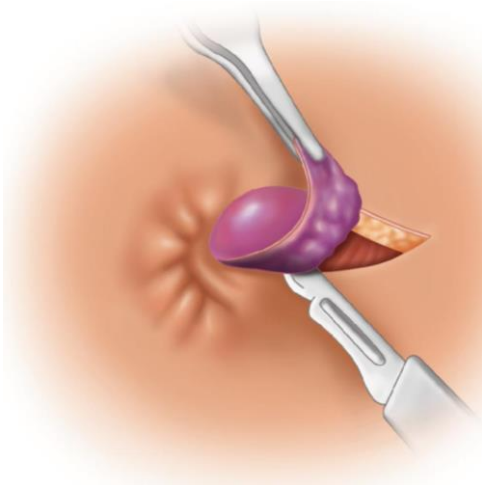


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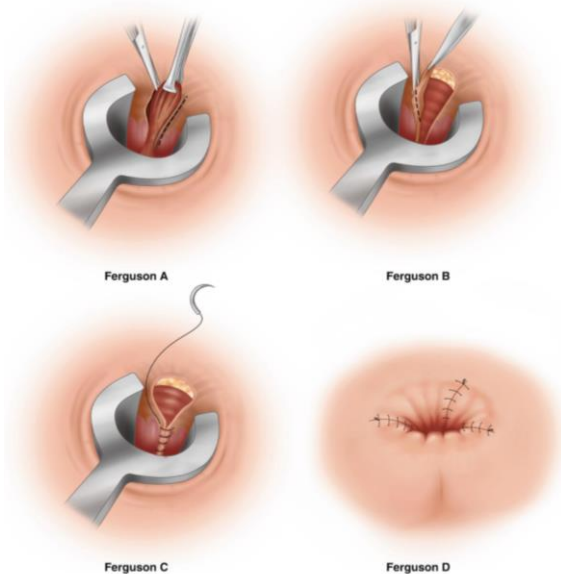
- After day 3-4 usually past the worst of the pain, advise non-op observation

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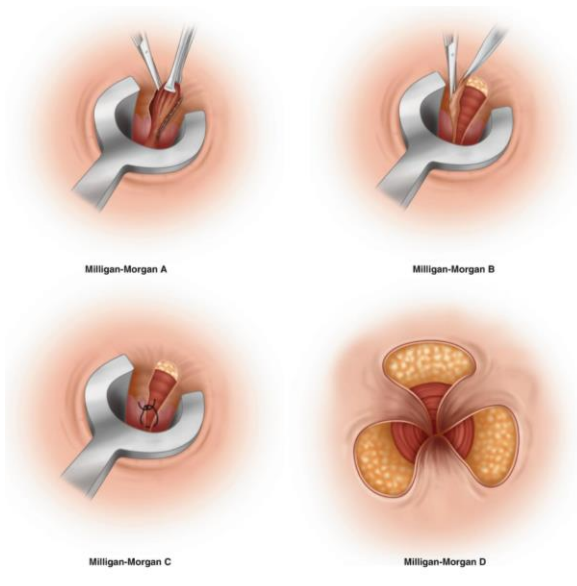
- Excision of thrombosed external hemorrhoid
- Can be done under local
- Excise external portion and clot
- Take minimal skin
- Pressure or silver nitrate to control bleeding
- Wound can take 14 days to heal

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- Excisional hemorrhoidectomy
- Usually grade III or IV, large external component, strangulated
- General anesthesia
- Significant pain ~2 weeks
- Can take ~4 weeks for wounds to heal

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- Open technique popular in UK
- Longer wound healing times, maybe more pain
- Can be necessary to avoid stenosis

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- Anesthetic during surgery (lidocaine, Marcaine, exparel)
- Post-op multi-modal pain control (Tylenol, NSAID, opioid, topical, muscle relaxer)
- Sitz baths
- Stool softeners
- Cussing out your surgeon

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- Hemorrhoids in pregnancy – observation and symptomatic care unless strangulated
- Most resolve after delivery

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- Hemorrhoids in liver disease
- Check for portal HTN
- Medical management, TIPS

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- AVOID
- IGNORE
- MANAGE
- surgery