



Hemorrhoids

What Are Hemorrhoids?

Hemorrhoids (piles) are clumps of blood vessels of the rectum. The hemorrhoidal veins are located in the lowest area of the rectum just above the anus. Sometimes they swell when the veins enlarge and their walls become stretched, thin, and irritated by passing bowel movements.

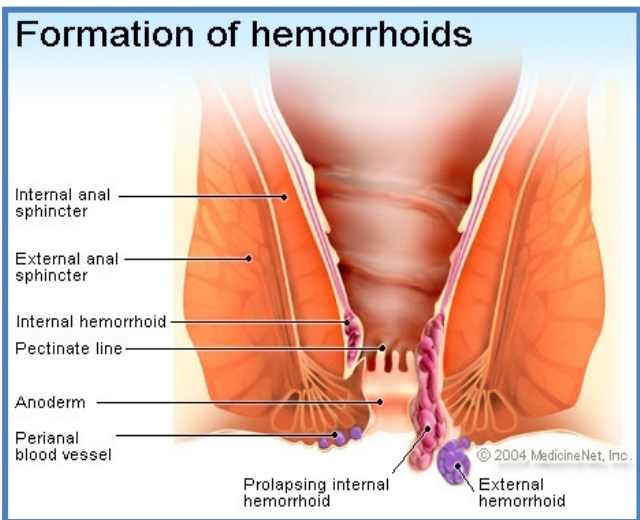
Hemorrhoids are classified into two general categories, internal, and external.

Internal Hemorrhoids

Internal hemorrhoids are located in the inside lining of the rectum (rectal mucosa) and cannot be felt unless they are substantially enlarged. They usually are painless and make their presence known by causing bleeding with a bowel movement. Sometimes internal hemorrhoids prolapse or protrude outside the anus. If so, you may be able to see or feel them as moist pads of skin that are pinker than the surrounding area. Prolapsed hemorrhoids may hurt because the anus is dense with pain-sensing nerves. Prolapsed hemorrhoids usually recede into the rectum on their own; if they don't, they can be gently pushed back into place.

External Hemorrhoids

External hemorrhoids are located underneath the skin (squamous epithelium) that surrounds the anus. They can be felt when they swell, and may cause itching, pain, or bleeding with a bowel movement. If an external hemorrhoid prolapses to the outside (usually in the course of passing a stool), you can see and feel it. Blood clots sometimes form within prolapsed external hemorrhoids, which can cause an extremely painful condition called a thrombosis. If an external hemorrhoid becomes thrombosed, it can look rather frightening, turning purple or blue, and could possibly bleed. Despite their appearance, thrombosed hemorrhoids usually are not serious though they can be very painful. They will resolve on their own in a couple of weeks.



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Everyone Has Hemorrhoids

Although most people think hemorrhoids are abnormal, they are present in everyone. It is only when the hemorrhoidal cushions enlarge that hemorrhoids can cause problems and be considered abnormal or a disease. They can become large and cause serious problems in about 4% of the general population. Hemorrhoids that cause problems are found equally in men and women, and their prevalence peaks between 45 and 65 years of age.

What Causes Hemorrhoids?

Researchers are not certain what causes hemorrhoids. It's likely that extreme abdominal pressure causes the veins to swell by blocking the flow of blood through them. They then become susceptible to irritation. The increased pressure can be caused by obesity, pregnancy, standing or sitting for long periods, straining on the toilet, coughing, sneezing, vomiting, and holding your breath while straining to do physical labor.

What Are the Symptoms of Hemorrhoids?

The most common symptom and sign from hemorrhoids is painless bleeding. There may be bright red blood on the outside of the stools, on the toilet paper, or dripping into the toilet. The bleeding usually is self-limiting. Bleeding with a bowel movement is never normal and should prompt a visit to a health care professional. While hemorrhoids are the most common cause of bleeding with a bowel movement, there may be other reasons to have bleeding including inflammatory bowel disease, infection, and tumors. Symptoms of internal and external hemorrhoids are described on the following figure.

Stages of Hemorrhoids

For convenience in describing the severity of internal hemorrhoids, many physicians use a grading system:

First-degree hemorrhoids:

Hemorrhoids that bleed, but do not prolapse.

Second-degree hemorrhoids:

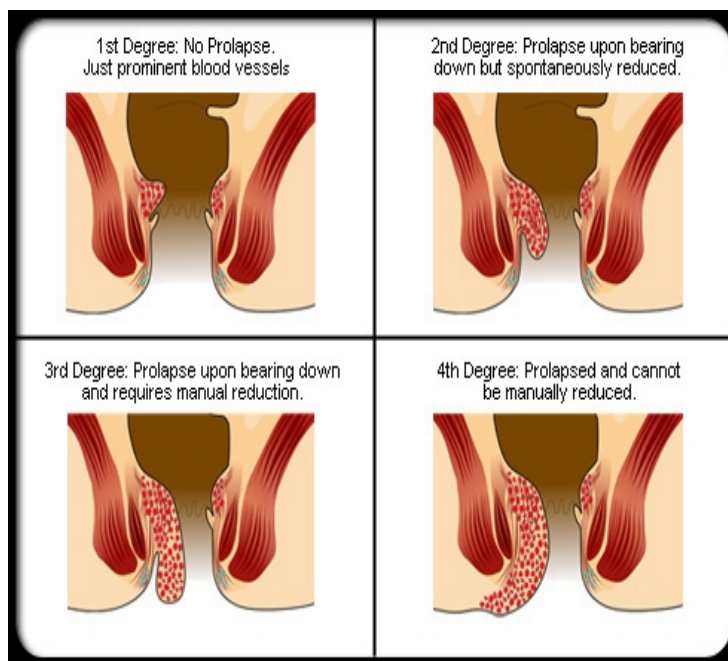
Hemorrhoids that prolapse and retract on their own (with or without bleeding).

Third-degree hemorrhoids:

Hemorrhoids that prolapse but must be pushed back in by a finger.

Fourth-degree hemorrhoids:

Hemorrhoids that prolapse and cannot be pushed back in the anal canal. Also include hemorrhoids that are thrombosed or that pull much of the lining of the rectum through the anus.



How Are Hemorrhoids Diagnosed?

Most individuals who have hemorrhoids discover them by either feeling the lump of an external hemorrhoid, note drops of blood in the toilet bowl or on the toilet paper, or feel a prolapsing hemorrhoid (protruding from the anus) after bowel movements. By the history of symptoms, the physician can suspect that hemorrhoids can be diagnosed on the basis of a careful examination of the anus and anal canal. A more thorough examination for internal hemorrhoids is done visually using an anoscope. Although the physician should try his or her best to identify the hemorrhoids, it is perhaps more important to exclude

other causes of hemorrhoid-like symptoms that require different treatment such as anal fissures, fistulae, perianal (around the anus) skin diseases, infections, and tumors.

What Is the Treatment for Hemorrhoids?

Hemorrhoids are treated with a variety of measures including, diet, over-the-counter medicine, procedures, and surgery.

– Diet

It is recommended that individuals with hemorrhoids soften their stools by increasing the fiber in their diets. Fiber is found in numerous foods including fresh and dried fruits, vegetables, grains, and cereals. Generally, 20 to 30 grams of fiber per day is recommended. Supplemental fiber (psyllium, methylcellulose, or calcium polycarbophil) also may be used to increase the intake of fiber. Increased drinking of liquids also may be recommended. Nevertheless, there is no strong, scientific support for the benefits of fiber, liquids, or stool softeners.

– Over-the-Counter Medications

Type	Description	Products
Local Anesthetics	Temporarily relieve pain, burning, and itching by numbing the nerve endings.	Benzocaine, Benzyl alcohol, Dibucaine, Dyclonine, Lidocaine, Pramoxine, Tetracaine
Vasoconstrictors	Make the blood vessels become smaller, reducing swelling.	Ephedrine sulfate, Epinephrine, Phenylephrine
Protectants	Forms a physical barrier on skin from aggravating liquid or stool.	Aluminum hydroxide gel, Cocoa butter, Glycerin, Kaolin, Lanolin, Mineral oil, White petroleum, Starch, Zinc oxide (calamine), Cod liver oil
Astringents	Promotes dryness of the skin, which helps relieve burning, itching, and pain.	Calamine, Zinc oxide, Witch hazel
Antiseptics	Inhibit the growth of bacteria and other organisms.	Boric acid, Hydrastis, Phenol, Benzalkonium chloride, Cetylpyridinium chloride, Benzethonium chloride, Resorcinol
Keratolytics	Cause the outer layers of skin or other tissues to disintegrate.	Aluminum chlorhydroxy allantoinate (alcloxa), Resorcinol
Analgesics	Relieve pain, itching, and burning by depressing receptors on pain nerves.	Menthol, Camphor, Juniper tar
Corticosteroids	Reduces inflammation, relieves itching, but chronic use can cause permanent damage to the skin.	Only products with weak corticosteroid effects are available over-the-counter.

Products used for the treatment of hemorrhoids are available as ointments, creams, gels, suppositories, foams, and pads. Ointments, creams, and gels - when used around the anus - should be applied as a thin covering. Suppositories or foams do not have advantages over ointments, creams, and gels.

– Warm Sitz Baths

Sitting in a few inches of warm water three times a day for 15 to 20 minutes (sitz bath) may help decrease the inflammation of the hemorrhoids. It is important to dry off the anal area completely after each sitz bath to minimize irritation of the skin surrounding the anus.

– Stool Softeners

Stool softeners may help, but once hemorrhoids are present, even liquid stools may cause inflammation and infection of the anus. Your health care professional and pharmacist are good resources to discuss their use.

– Sclerotherapy

Sclerotherapy is one of the oldest forms of treatment for hemorrhoids. During sclerotherapy, a liquid (phenol or quinine urea) is injected into the base of the

hemorrhoid. The veins thrombose, inflammation sets in, and ultimately scarring takes place. Pain may occur after sclerotherapy, but usually subsides by the following day. Symptoms of hemorrhoids frequently return after several years and may require further treatment.

– Rubber Band Ligation

The principle of ligation with rubber bands is to encircle the base of the hemorrhoidal cushion with a tight rubber band. The tissue cut off by the rubber band dies, and is replaced by an ulcer that heals with scarring. It can be used with first-, second-, and third-degree hemorrhoids, and may be more effective than sclerotherapy. With mixed internal and external hemorrhoids, only the internal component should be rubber band ligated. Typically, one hemorrhoid is ligated every 2 wk; 3 to 6 treatments may be required. Sometimes, multiple hemorrhoids can be ligated at a single visit. Symptoms frequently recur several years later, but usually can be treated with further ligation. The most common complication of ligation is pain. However, bleeding one or two weeks after ligation or cellulitis in the tissues surrounding the hemorrhoids may occur.

– Heat Coagulation

There are several treatments that use heat to destroy hemorrhoidal tissue, and promote inflammation and scarring. Such procedures destroy the tissues in and around the hemorrhoids and cause scar tissue to form. They are used with first-, second-, and third-degree hemorrhoids. Pain is frequent, though probably less frequent than with ligation and bleeding occasionally occurs.

– Surgery

The vast majority of patients with symptom-causing hemorrhoids are able to be managed with non-surgical techniques. Non-operative treatment is preferred because it is associated with less pain and fewer complications than operative treatment. It is estimated that less than 10% of patients require surgery if the hemorrhoids are treated early. Surgical removal of hemorrhoids known as a hemorrhoidectomy or stapled hemorrhoidectomy is reserved for patients with third- or fourth-degree hemorrhoids.

Hemorrhoid Prevention

The best way to prevent hemorrhoids is to keep your stools soft so they are easy to pass and don't require straining. Eating a high-fiber diet and drinking plenty of fluids (six to eight glasses each day) can help you stay regular and your stools soft, and may reduce constipation and the need to strain on the toilet, lowering your risk of developing new hemorrhoids.

References:

- 1) http://www.medicinenet.com/hemorrhoids_pictures_slideshow/article.htm
- 2) http://www.merckmanuals.com/professional/gastrointestinal_disorders/anorectal_disorders/hemorrhoids.html



Terminology

Paronychia

The term applied to inflammation near the nail. The infection, usually caused by Staphylococcus aureus, may affect the tissues around the nail, including its root, and sometimes spreads to the pulp of the affected finger or toe. The tendons that run along the back of the infected digit may occasionally become infected. Acute paronychia is the most common type, with local pain and tenderness and swelling of the nail fold. Treatment is with antibiotics or, if an abscess forms, local surgery to release any pus.

Sometimes infection may be caused by a virus, against which antibiotics are ineffective. If viral infection persists then antiviral drugs may eradicate it. Chronic paronychia occurs with reinfection of the nail bed. This is usually because the person's hands are regularly immersed in water, making the skin vulnerable to infection. The finger should be kept dry and a dry dressing applied accompanied by a course of antibiotics – flucloxacillin or a cephalosporin

Reference: Marcovitch H. 2005. *Black's Medical Dictionary*. 41th ed. London: A&C Black Publishers Limited. p 538.



FDA News

FDA approves new drug to treat HIV infection

Aug. 12, 2013– The U.S. Food and Drug Administration approved Tivicay (dolutegravir), a new drug to treat HIV-1 infection.

Tivicay is an integrase strand transfer inhibitor that interferes with one of the enzymes necessary for HIV to multiply. It is a pill taken daily in combination with other antiretroviral drugs.



Tivicay is approved for use in a broad population of HIV-infected patients. It can be used to treat HIV-infected adults who have never taken HIV therapy (treatment-naïve) and HIV-infected adults who have previously taken HIV therapy (treatment-experienced), including those who have been treated with other integrase strand transfer inhibitors. Tivicay is also approved for children ages 12 years and older weighing at least 40 kg who are treatment-naïve or treatment-experienced but have not previously taken other integrase strand transfer inhibitors.

About 50,000 Americans become infected with HIV each year and about 15,500 died from the disease in 2010, according to the Centers for Disease Control and Prevention.

Tivicay's safety and efficacy in adults was evaluated in 2,539 participants enrolled in four clinical trials. Depending on the trial, participants were randomly assigned to receive Tivicay or Isentress (raltegravir), each in combination with other antiretroviral drugs, or Atripla, a fixed-dose combination of efavirenz, emtricitabine and tenofovir. Results showed Tivicay-containing regimens were effective in reducing viral loads.

A fifth trial established the pharmacokinetics, safety and activity of Tivicay as part of treatment regimens for HIV-infected children ages 12 years and older weighing at least 40 kg who have not previously taken integrase strand transfer inhibitors.

Common side effects observed during clinical studies include insomnia and headache. Serious side effects include hypersensitivity reactions and abnormal liver function in participants co-infected with hepatitis B and/or C. The Tivicay label gives advice on how to monitor patients for the serious side effects.

Source: www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm364744.htm

Test Your Knowledge

- 1) Patients receiving amiodarone should be monitored for the development of
(A) pulmonary toxicity (B) pseudomembranous enterocolitis
(C) ptosis (D) stasis dermatitis (E) tinnitus
- 2) Fluvastatin is contraindicated for use in patients who are
(A) pregnant
(B) hypersensitive to sulfa drugs
(C) chronic asthmatics
(D) more than 25% over ideal body weight
(E) diabetic
- 3) Hyperphosphatemia associated with hypoparathyroidism can be effectively treated by administering
(A) calcium salts (B) potassium chloride (C) ascorbic acid
(D) dextrose (E) mannitol
- 4) Which of the following reference sources would be appropriate to use to find an American equivalent of a British drug?
(A) Martindale's Extra Pharmacopoeia (B) The Royal Compendium
(C) USPDI (D) AHFS Drug Information
(E) Facts and Comparisons



At the "Drug Information Center", we respond to enquiries from the professional health team as well as from others. Here's one of the enquiries received at the center!

Enquiry received from Ph. Huda Elsayed- Cardiology Dept., Assiut Univ. Hospital

Enquiry: Are midazolam inj. and dobutamine inj. compatible during injection?

Summary of Answer:

These two drugs are *variably compatible* in Y-Site injection; depending on both manufacturer and concentration:

Midazolam HCL (Roche) 1mg/ml + Dobutamine HCL (Gensia- Sicor) 2mg/ml -----Incompatible, particles form in 8 hr.

Midazolam HCL (Roche) 1mg/ml + Dobutamine HCL (Lilly) 4mg/ml -----> Visually Compatible for 24 hr at 23° C

Midazolam HCL (Roche) 2mg/ml + Dobutamine HCL (Lilly) 4mg/ml -----> Visually Compatible for 4 hr at 27° C

References: 1) *Trissel's Handbook on Injectable Drugs, 17th ed.*
2) *McEvoy. Gerald K :2005-06 ,AHFS drug information essentials*

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Complementary Medicine

Dandelion (*Taraxacum officinale*)

Dandelion flowers open with the sun in the morning and close in the evening or during gloomy weather. The dark brown roots are fleshy and brittle and are filled with a white milky substance

that is bitter and slightly smelly. While many people think of the dandelion as a pesky weed, it's chock full of vitamins A, B, C, and D, as well as minerals such as iron, potassium, and zinc.

Uses

- Historically, dandelion was most commonly used to treat liver diseases, kidney diseases, and spleen problems. Less commonly, dandelion was used to treat digestive problems and skin conditions.
- Today, dandelion is used by some as a liver or kidney “tonic,” as a diuretic, and for minor digestive problems.
- In traditional Chinese medicine, dandelion has been used to treat stomach problems, appendicitis, and breast problems, such as inflammation or lack of milk flow. In Europe, it was used in remedies for fever, boils, eye problems, diabetes, and diarrhea



How It Is Used

The leaves and roots of the dandelion, or the whole plant, are used fresh or dried in teas, capsules, or extracts. Dandelion leaves are used in salads or as a cooked green.

Side Effects and Cautions

- Dandelion use is generally considered safe. However, there have been rare reports of upset stomach and diarrhea, and some people are allergic to the plant.
- People with an inflamed or infected gallbladder, or blocked bile ducts, should avoid using dandelion.

Possible Interactions

- **Dandelion leaf may act like a diuretic**-- which can make drugs leave your body faster. If you are taking prescription medications, ask your health care provider before taking dandelion leaf. These medications may interact with dandelion:
- **Antacids** -- Dandelion may increase the amount of stomach acid, so antacids may not work as well.
- **Anticoagulants and Antiplatelets** -- It's possible that dandelion may increase the risk of bleeding, especially if you already take blood-thinners such as aspirin, warfarin, or clopidogrel.
- **Diuretics** -- If you also take prescription diuretics or other herbs that act as diuretic, you could be at risk for an electrolyte imbalance.
- **Lithium** -- Animal studies suggest that dandelion may make the side effects of lithium worse. Lithium is used to treat bipolar disorder.
- **Ciproflaxin** -- One species of dandelion, *Taraxacum mongolicum*, also called Chinese dandelion, may lower the amount of the antibiotic ciproflaxin that your body absorbs. Researchers don't know whether the common dandelion would do the same thing.
- **Medications for diabetes** -- Theoretically, dandelion may lower blood sugar levels. If you take medications for diabetes, taking dandelion may increase the risk of low blood sugar.

References: 1) <http://umm.edu/health/medical/altmed/herb/dandelion#ixzz2cNhpu2Ks>

2) U.S. Department Of Health And Human Services, National Institutes of Health, National Center for Complementary and Alternative Medicine, *Herbs at aGlance*.2009. p28.

Soy Fiber for Better Health

Overweight and obesity are important health issues in high-income countries and are also on the rise in middle- and low-income countries. They are the major risk factors for a number of chronic diseases, such as diabetes, cardiovascular diseases, and cancer. A diet rich in fiber is known to facilitate body weight loss, and help to lower total cholesterol levels and reduce body fat. During the production of tofu and soy milk from soybeans a byproduct rich in dietary soy fiber, proteins, lipids, minerals and vitamins is produced. So far most of this byproduct is discarded as industrial waste.

Scientists have analyzed the effects of diets rich in this soy fiber in a randomized controlled trial. Thirty-nine overweight and obese college adults, 19 to 39 years old, consumed control biscuits or biscuits supplemented with soy fiber for their breakfast for twelve weeks. The soy fiber was found to have favorable effects on body weight, body-mass index, and cholesterol levels in overweight and obese adults. According to the researchers, soy fiber could be used as a functional ingredient with health-promoting attributes.



Source: *Molecular Nutrition and Food Research/Wiley-VCH*

Answers:

Q1: (A) Amiodarone is an antiarrhythmic agent used in treating ventricular arrhythmias. It may cause a number of serious adverse effects, the most serious being pulmonary toxicity. Baseline chest x-rays and pulmonary function studies should be performed before therapy begins. Studies should be repeated at 3- to 6-month intervals.

Q2: (A) Fluvastatin is a cholesterol lowering agent contraindicated for use during pregnancy because of its great potential for causing fetal harm. The drug is in FDA pregnancy category X.

Q3: (A) Hyperphosphatemia associated with hypoparathyroidism can be effectively treated by administering calcium salts. Initially, IV calcium administration will correct the hypocalcemia these patients often experience. Oral calcium or aluminum compounds may also be administered to decrease GI absorption of phosphate.

Q4: (A) Martindale's Extra Pharmacopoeia is probably one of the most comprehensive, international, single-volume references on drugs and drug products.

Clean Eating

THE BASIC PRINCIPLES

- ✘ Eat whole foods
- ✘ Avoid processed foods
- ✘ Eliminate refined sugar
- ✘ Eat 5-6 small meals a day
- ✘ Cook your own meals
- ✘ Keep a balanced diet



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