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Common GI Problems: Volume 3

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Rectal Complaints

by John W. Popp, Jr., M.D., FACG

Introduction

The rectum refers to the last four to five inches of the digestive tract. The rectal outlet or opening is called the anal canal, or anus. There are many troublesome problems that can occur in the rectum. Fortunately, most are treatable when recognized early and properly diagnosed. Rectal symptoms of pain and bleeding should always be thoroughly evaluated by your physician. Sometimes your doctor may advise you to see a specialist in digestive disorders (called a gastroenterologist) or a surgeon who has received special training in diseases of the colon and rectum (called a colorectal surgeon or proctologist).

What are hemorrhoids?

Hemorrhoids are veins in the anal canal that become swollen or stretched. Just like varicose veins in the lower legs, hemorrhoids often cause no problems.

What are the different types of hemorrhoids?

There are two type of hemorrhoids: external and internal. External hemorrhoids are swollen veins that can be seen under the skin outside the anal canal. Usually they look like a small bulge and are the same color as the skin. Internal Hemorrhoids are swollen veins that arise from inside the rectum. When internal hemorrhoids become large they may prolapse through the anal canal. The most common sign of hemorrhoids are traces of bright red blood on toilet paper or drops of blood into the toilet. Thrombosed hemorrhoids contain a blood clot and are painful.

Burning, discomfort, and itching may result if hemorrhoids become irritated.

How do hemorrhoids develop?

Hemorrhoids are very common. About half the population have hemorrhoids by age 50 years. Hemorrhoids develop due to increased pressure often caused by straining to have a bowel movement. Hemorrhoids frequently develop in women during pregnancy when the presence of the fetus causes increased pressure on the rectal area. Chronic constipation or diarrhea may also lead to hemorrhoids as may heredity and aging.

How are hemorrhoids diagnosed?

As with all conditions involving the anal canal or rectum, diagnosis is made by examining the anus visually and by performing a digital (with a gloved finger) rectal exam. Following this, a lighted instrument is inserted into the anal canal so that the interior of the rectum may be visualized. This lighted tube may be an anoscope (a short tube which can examine the last few inches of the rectum) or a sigmoidoscope (a longer tube which can also examine the lower part of the large intestine).

How are hemorrhoids treated?

Medical Treatment

Eliminate constipation. Bowel movements should be soft not hard, and should pass without the need to strain. Constipation is usually caused by insufficient bulk in the bowel movement, creating the need to strain to pass it. Increasing water intake, dietary fiber (see table below) and exercise are often effective remedies. The average American diet is often deficient in fiber, and your doctor may advise you to take fiber supplements.

There are many medicated creams and/or suppositories that can be used to reduce swelling and discomfort of inflamed hemorrhoids, examples include Preparation-H and Anusol . It may also be helpful to sit in a tub of warm water (sometimes called a "sitz bath") several times a day, especially after a bowel movement. Cotton pads soaked in witch hazel may also provide temporary relief.

Sources of Fiber ("bulk" or "roughage")

| <u>Vegetables</u> | <u>Serving</u> | <u>Fiber grams per serving</u> |
|--------------------|----------------|--------------------------------|
| Green beans | 1/2 cup | 2 |
| Kidney beans | 1/2 cup | 5 |
| Broccoli | 1/2 cup | 2.5 |
| Brussel sprouts | 1/2 cup | 2.5 |
| Carrots | 1/2 cup | 2.5 |
| Corn | 1/2 cup | 3 |
| Green peas | 1/2 cup | 3.5 |
| Lettuce | 1/2 cup | 0.5 |
| Potato (with skin) | 1/2 cup | 2 |

| <u>Fruits</u> | <u>Serving</u> | <u>Fiber grams per serving</u> |
|---------------|----------------|--------------------------------|
| Apple | medium | 2.5 |
| Banana | 1 | 2 |
| Blackberries | 1 cup | 7 |
| Cantaloupe | 1 wedge | 1 |
| Grapefruit | medium | 3.5 |
| Grapes | 1 cup | 1 |
| Orange | 1 medium | 3 |
| Pear | 1 medium | 4.5 |
| Prunes | 1 cup | 13.5 |
| Raspberries | 1 cup | 6 |
| Strawberries | 1 cup | 3.5 |

| <u>Grain Products</u> | <u>Serving</u> | <u>Fiber grams per serving</u> |
|-----------------------|----------------|--------------------------------|
| Bread, white | 1 slice | 0.5 |
| Bread, whole wheat | 1 slice | 2 |
| Cereal, bran | 1 ounce | 8.5 |
| Cereal, corn flakes | 1 ounce | 0.5 |
| Cereal, oat Bran | 1 ounce | 4 |
| Shredded wheat | 1 ounce | 2.5 |
| Crackers, graham | 4 squares | 1 |
| Crackers, Saltine | 10 regular | 1 |
| Rice, brown | 1/2 cup | 5 |
| Rice, white | 1/2 cup | 1.5 |
| Spaghetti | 2 ounces | 2.5 |

| <u>Supplements</u> | <u>Serving</u> | <u>Fiber grams per serving</u> |
|--------------------|----------------|--------------------------------|
| Metamucil ® | 1 tsp | 3.4 |
| PerDiem ® | 1 tsp | 4.3 |
| Konsyl ® | 1 tsp | 6 |

The average American daily diet contains only 10-20 grams of fiber
the goal is 30-35 gms/day.

Surgical Treatment

When hemorrhoids bleed excessively or are very painful, they can be treated. There are several types of treatment:

Sclerotherapy- injection of a chemical solution into the hemorrhoids causing them to shrink

Infrared coagulation- a special device used to destroy the internal hemorrhoids

Banding- a rubber band is placed around the hemorrhoid and causes strangulation followed by scarring

Hemorrhoidectomy - surgical removal of hemorrhoids

The first three are office procedures which can be done as an outpatient.

What is an anal fissure?

This is a fairly common condition in which the lining of the anal canal becomes torn. This generally produces pain or burning, especially with passage of a bowel movement. Bleeding may also occur. A fissure usually occurs with constipation or after forceful passage of a large, hard bowel movement. However, fissures also may occur without straining, since the tissue lining the anal canal is very delicate.

How is a fissure diagnosed?

When a fissure is present, a digital rectal exam is usually painful. The fissure can be usually be visualized by an external inspection of the anus, or an anoscope can be used to determine the extent of the tear.

How is a fissure treated?

- * Warm tub or sitz baths several times a day in plain warm water for about 10 minutes.
- * Stool softeners to provide a regular soft, formed bowel movement.
- * Creams and/or suppositories (Preparation-H or Anusol).

Most fissures will heal within several weeks, but surgery may be necessary if symptoms persist. Surgical treatment usually consists of cutting a portion of the muscle in the anal canal (sphincterotomy). This procedure reduces the tension produced by the fissure and allows it to heal. Of course, the best treatment is prevention, and ingestion of a high fiber diet to promote bowel regularity is of utmost importance.

What is an anal abscess/fistula?

An abscess is a cavity filled with pus. This usually results from a blockage of the anal glands located just inside the anus. A fistula is a connection or tunnel between the anal gland and the buttocks, usually very close to the anal opening. An anal fistula is almost always the result of an anal abscess.

What are the symptoms of an anal abscess/fistula?

An abscess produces considerable discomfort and swelling just adjacent to the anal opening. Fever may also be present. A fistula produces drainage from the anal canal to the opening of the fistula on the buttocks.

How is an abscess treated?

Treatment consists of draining the pus. A small opening is made in the skin to allow drainage of pus. In about 50% of individuals, a fistula will form after the abscess has been drained. This usually develops after several weeks, but sometimes occurs several months or even years later.

How is a fistula treated?

Surgery

Generally the sphincter muscle is cut to open the tunnel, thereby connecting the internal and external openings of the fistula. A groove is formed which then slowly heals and forms scar tissue. During the healing process individuals are given stool softeners to lessen the risk of irritation from passing bowel movements. Sitz baths are also frequently recommended.

What is pruritus ani?

This refers to itching around the anal area. It is often most troublesome at night or following a bowel movement.

What causes pruritus ani?

Excessive cleaning or wiping of the anal area is frequently the culprit. Excessive sweating in the area around the anus is another cause. Certain beverages, including alcohol, citrus drinks, and caffeine-containing drinks may aggravate the problem and highly-spiced foods, chocolate, nuts and popcorn may be irritating as well. Rarely, infections and skin conditions can produce

pruritus ani. Poor hygiene is usually not a cause. Unfortunately, when the problem develops, individuals often compound the problem by excessively washing and cleaning the anal area. This leads to a cycle of increased irritation.

How is pruritus ani treated?

- * avoid irritating soaps (often those containing perfumes)
- * gently blot the area clean with a moist wash cloth
- * never excessively rub or scratch the area
- * eliminate irritant foods and beverages (coffee, alcohol, spicy foods)
- * keep the area dry with powder (avoid perfumed or deodorant powders)

What is rectal prolapse?

Rectal prolapse refers to a condition where the very end of the rectum protrudes out of the anal canal. This protrusion may be temporary, but may become permanent over time when the end of the rectum cannot be pushed back into the anal canal. This condition often results in constant leakage of stool and/or mucus. While the symptoms may be similar to those produced by hemorrhoids, in this condition there is protrusion of the rectum itself and not just swollen hemorrhoids.

What causes prolapse?

This is often caused by a longstanding habit of straining to have a bowel movement. In some cases there is a genetic predisposition. Still others may have weakness of the pelvic muscles and loss of control of the anal sphincter, the muscle which controls the release of stool. In some cases, a neurological condition leads to prolapse.

How is prolapse treated?

Unfortunately, once prolapse develops, surgical correction is often necessary. The type of operation performed often depends upon the severity of the prolapse, the age of the individual, and the presence of other health problems. As with most disorders of the anorectal region, prevention is best, and a high fiber diet and good bowel habits are most important.

Important Information for Patients with Chronic Liver Disease

by Jorge L. Herrera, M.D., FACP, and Barbara L. O'Brien, M.D.

Introduction

Patients who suffer from chronic liver disease may develop cirrhosis after years of disease. Cirrhosis of the liver is a serious condition characterized by severe scarring. Not everyone with hepatitis or liver disease develops cirrhosis. If your doctor has told you that you have chronic liver disease and/or cirrhosis, there are important precautions that you should take to prevent further damage to your liver.

Can I drink alcohol?

No, you should not drink alcohol.

Alcohol damages liver cells. A healthy liver is able to replace most liver cells that are injured by alcohol. However, in individuals with cirrhosis, the liver is unable to replace the damaged liver cells. Drinking any alcohol, not just hard liquor, but also beer or wine will speed up the process of liver destruction and may counteract any treatments prescribed by your doctor.

Is it safe to take acetaminophen (Tylenol®)?

It is generally safe to take acetaminophen in the amount specified in the labeling. Acetaminophen is the main ingredient in Tylenol®, but it is also found in many non-prescription products for headaches, the flu, sinus problems, arthritis or general aches and pains. In 1993, an FDA Advisory Committee recommended that all over-the-counter pain relievers contain an alcohol warning. Tylenol and some other pain relievers have included such an alcohol warning on their labeling. But, to date, not all over-the-counter pain relief products have complied with the FDA recommendation. There have been some reports that chronic heavy alcohol users may be at increased risk of liver toxicity from excessive acetaminophen use. Individuals who have been diagnosed with liver conditions will want to consult with their physician for advice on when and how to take pain relievers and should not exceed recommended doses of acetaminophen or any other pain reliever, especially if they are consuming alcohol. Pay particular attention to products labeled "aspirin-free"; because some prescription medications also contain acetaminophen, so be sure to ask your doctor about use of pain relievers.

Some Acetaminophen Containing Medicines

| | |
|---------------------------|-----------------|
| Tylenol ® | 325 mg/tablet |
| Tylenol Extra Strength ® | 500 mg/tablet |
| Tylenol Adult Liquid ® | 500 mg/teaspoon |
| Tylenol Extended Relief ® | 650 mg/tablet |
| Aspirin Free Excedrin ® | 500 mg/tablet |
| Excedrin Extra-Strength ® | 250 mg/tablet |
| Excedrin P.M. ® | 500 mg/tablet |
| Midrin ® | 325 mg/capsule |
| Actifed Cold & Sinus ® | 500 mg/tablet |
| Sinutab Sinus Allergy ® | 500 mg/tablet |
| Sudafed Cold & Cough ® | 500 mg/tablet |

What other medications should I avoid?

You may need to avoid iron supplements. Too much iron can damage liver cells or aggravate liver damage caused by some viruses. Most adults do not need to take iron supplements unless there is a history of obvious blood loss or a known deficiency of iron. Unless your doctor prescribes iron supplements for you, do not take any iron supplements or even multivitamins that contain iron.

What foods should I avoid?

Sewage runoff can infect edible sea organisms (clams, oysters, crustaceans and fish) with both bacteria and viruses. Contamination of seafood may be undetectable by smell or taste. Clams and oysters are especially susceptible to sewage contamination and should never be eaten raw.

Vibrio vulnificus is a bacteria that is found in contaminated oysters and other seafood. In healthy people, it rarely causes serious infection, but in individuals with cirrhosis it can cause death in 48 to 72 hours.

Hepatitis A is a virus that can be found in clams and oysters. Infection with hepatitis A can cause even healthy persons to become very sick. Individuals with cirrhosis are especially vulnerable to a life-threatening infection caused by this virus.

If you have open sores on your skin, you should avoid exposure to sea water during the warm summer months. Harmful organisms can enter the blood stream through these sores and cause serious infection.

Are vaccines important?

Yes. Ask your doctor if you would benefit from one or more of the following vaccines:

Hepatitis A Vaccine:

Used to prevent hepatitis A, which can be severe in individuals with cirrhosis. It consists of a series of two injections given six months apart.

Hepatitis B Vaccine:

Used to prevent hepatitis B, another type of viral hepatitis. It consists of a series of three injections. The second and third injections are given one and six months after the initial injection.

Pneumococcal Vaccine:

Used to prevent a kind of pneumonia caused by a bacteria called *Streptococcus pneumoniae*. It consists of only one injection, and should be repeated in five years.

Flu Shot:

Used to prevent influenza, a cause of severe upper respiratory infection and pneumonia. It is a single injection given yearly, usually in the Fall, just prior to the flu season.

Are there any natural herbs that can heal my liver?

Many causes of cirrhosis do not have any treatment available. For this reason, many individuals resort to the use of "health foods" and "natural herbs or supplements" to improve the liver. There is no scientific proof that any of these products are of benefit to the liver. Most of them are safe, but liver damage caused by herbal products has been reported. There are several herbal remedies that are known to cause liver damage. Be sure to tell your doctor before you begin any herbal products so that he or she may better monitor your condition.

Remember, take care of yourself.

Although cirrhosis is a serious condition, you may live many years without problems. Try to eat a well-balanced diet and exercise regularly. The more active you become in taking care of yourself and obtaining regular follow-up with your doctor, the more likely you will be one of the many individuals that do well for many years.

Intestinal Gas Problems

by Harris R. Clearfield, M.D., FACG

Introduction

Although the mention of intestinal gas problems, such as belching, flatulence, bloating and "gas pains" often elicits some degree of amusement, all of us have gas in our intestinal tract and must expel it in some way. Some individuals are very sensitive to the effects of gas collections in the stomach and intestinal tract and may develop significant discomfort. If such complaints are troublesome and persistent and do not respond to simple measures, such as change in diet, a visit to your doctor could be helpful.

Where does the gas that we belch or burp come from?

The gas brought back by belching comes entirely from swallowed air. We all swallow some air when eating food and drinking liquids. Most of the gas mixes with the stomach content and either enters into the small intestine or is belched back. The air that enters the small intestine is either absorbed or it may continue through to the large intestine and is then passed rectally. Individuals may swallow more air (and thus increase stomach gas) if they have a post-nasal drip, chew gum, have poorly fitting dentures, suck on hard candies or smoke tobacco. Drinking carbonated beverages (soda or beer) or eating rapidly can also increase stomach gas.

What causes repetitive belching or burping?

Some people have episodes of repeated belching. Since belched gas comes from swallowed air, these individuals are usually unaware that they caused the problem by swallowing air into the esophagus and bringing it back rapidly. Often, the habit can be broken if the person is made aware of the air swallowing behavior.

What foods cause increased flatus passage?

The food we choose to eat can influence the amount of gas passed rectally. Although most of our food intake is absorbed in the small intestine, some foods, such as cauliflower, broccoli, cabbage, baked beans, and bran are incompletely digested. They are then broken down by bacteria in the large intestine, causing the formation of gas.

A high roughage diet is important to promote bowel regularity, but excessive roughage or fiber may lead to bloating and increased flatulence. When increasing the amount of fiber in your diet, do so gradually, allowing your intestinal tract time to adjust.

Milk sugar (lactose) requires an intestinal enzyme (lactase) for digestion. When individuals lack this enzyme, the lactose in milk and other dairy products enters the large intestine where the lactose is broken down by bacteria, producing gas. Although milk is an excellent source of protein and calcium, many adults experience abdominal bloating, gas and diarrhea after consuming milk sugar. Persons from Asia and Africa are often extremely intolerant to the smallest quantity of dairy products.

Everyone passes some rectal gas, although the volume of gas is different each day. Much of the flatus comes from the nitrogen found in the air one swallows. The remainder of the flatus volume is the result of carbohydrates which are not absorbed in the small intestine and are broken down by bacteria in the large intestine. Therefore, the amount of flatus represents a combination of swallowed air and poorly absorbed carbohydrates. The unpleasant order of flatus is due to other gases, such as hydrogen sulfide, which are produced by the bacteria.

How can the volume of flatus be reduced?

In addition to the gas-forming foods cited above, some diet chewing gum and hard candies use sorbitol or fructose as sweeteners. These sugars can lead to excess gas production and should be avoided. Elimination of dairy products or the use of lactase-added milk can be helpful for those with lactase deficiency.

Where do I feel gas pains?

Individuals with irritable bowel problems (crampy pain and/or bowel irregularity) are often sensitive to excess intestinal gas. A common symptom is generalized abdominal cramping, sometimes relieved by passing flatus. If the gas accumulates in the right upper abdomen, the pain may radiate up into the right lower chest and could be confused with gallbladder disease. If the gas accumulates in the left upper abdomen, the pain may radiate into the left side of the chest and could mimic heart disease. If gas accumulates in the stomach, the upper abdominal pressure pain could radiate up to the lower chest and raise concern about a heart disorder.

Is there treatment for gas pains?

Your physician may wish to obtain tests to be confident that recurrent "gas pains" are not the result of some other disorder. If the tests are normal, a diet designed to reduce both air swallowing and the ingestion of gas forming foods would be helpful. Anti-spasmodic medications may relieve crampy discomfort, but these can have side effects on the eyes, plus bladder and bowel function.

What causes abdominal distension (bloating)?

Many individuals complain of abdominal distension which increases during the day and is most uncomfortable after the evening meal. Often distension is believed to be caused by the build-up of intestinal gas; however, there are other considerations. The tone of the rectus muscles (the muscles which support the abdominal wall and run along the length of the abdomen on either side of the navel) may be decreased due to the stretching of the abdominal wall in women who have had one or more pregnancies. If these muscles have become thinned, the abdomen may distend as food (and gas) moves through the intestine. This is most noticed after the evening meal. This explanation for distension (bloating) is most likely if the uncomfortable feeling is absent when the individual is lying down (you don't need the rectus muscle for a "flat" abdomen when lying down) but is apparent when standing or sitting erect. There is no effective medical therapy for this type of abdominal bloating but exercise directed toward strengthening the abdominal muscles may be helpful, particularly in younger women.

When should individuals with gaseous symptoms consult a physician?

Individuals with a long history of occasional gaseousness and abdominal discomfort need not seek medical attention. A change in the location of abdominal pain, significant increase in the frequency or severity of symptoms, or onset of new symptoms in individuals over the age of 40 are some of the reasons to see your doctor.

What over-the-counter drugs provide relief for gaseous symptoms?

Despite the many commercials and advertisements for medications which reduce gas pains and bloating, very few have any proven scientific value. Simethicone, a common additive to antacid preparations, shows some benefits when being tested in a lab, but many individuals feel little relief. Several scientific studies have found some benefit from activated charcoal preparations in gassy or flatulent individuals, but other studies have failed to show symptom improvement.

10 Steps to Decrease Symptoms of Intestinal Gas

1. Develop a regular routine of diet, exercise, and rest.
2. Correct bad habits:
 - * Chew food thoroughly
 - * Eat slowly and leisurely in a quiet atmosphere
 - * Avoid washing solids down with a beverage
 - * Avoid gulping and sipping liquids
 - * Avoid drinking out of small mouthed bottles or straws
 - * Avoid drinking from water fountains

- * Avoid carbonated beverages sodas and beer
 - * Eliminate pipe, cigar, and cigarette smoking
 - * Avoid gum chewing and sucking hard candy
 - * Check dentures for proper fit
 - * Attempt to be aware of and avoid deep sighing
3. Do not attempt to induce belching.
 4. Do not overload the stomach at any one meal.
 5. Avoid gaseous vegetables: navy beans, cabbage, brussel sprouts, cauliflower, broccoli, turnips, cucumbers, radishes, onions, melons, and excess raw fruit and vegetables.
 6. Avoid foods with air whipped into them souffles, sponge cake, milk shakes.
 7. Avoid long-term or frequent intermittent use of medications intended for relief of cold symptoms cough, nasal congestion, post nasal discharge.
 8. Avoid tight fitting garments, girdles, and belts.
 9. Do not lie down or sit in a slumped position immediately after eating.
 10. Take a leisurely stroll after meals.

Food Intolerance

by Steven M. Dandalides, M.D., FACP and John S. Goff, M.D., FACP

What is food intolerance?

When ingestion of a particular food or food additive causes unpleasant symptoms, a person is said to be intolerant to that food or additive. Symptoms occur as a result of either poor absorption from the intestine into the bloodstream or less commonly by the release of chemicals within the body occurring as a result of contact of the food/additive with the body. The most common symptoms are gas, bloating, nausea, diarrhea and abdominal pain. Less common symptoms include shock, welts, fluid retention, rash, wheezing, inflamed sinuses/eyes/nose, vocal cord swelling and, rarely, a migraine headache.

Which foods commonly cause problems?

Foods containing sugars (lactose, fructose, sorbitol), and gluten are the most common cause of problems. Foods containing monosodium glutamate (MSG), sulfites or histamines cause symptoms in far fewer people.

Sugars

Sugars that are not absorbed in the small intestine pass into the large intestine where bacteria feed on them and produce gas and other breakdown products that can cause symptoms of bloating, gas, diarrhea, nausea and cramps.

Lactose Intolerance

The most common food intolerance by far occurs in people who lack the ability to digest significant amounts of lactose, the predominant sugar in milk. This results from a shortage of the enzyme lactase, which is normally produced by the cells lining the small intestine. Lactase breaks down milk sugar into simpler forms that can be absorbed into the bloodstream. When there is not enough enzyme to digest the amount of lactose consumed, nausea, cramps, diarrhea, and bloating are common. Symptoms usually begin 30 minutes to two hours after eating or drinking food containing lactose (e.g., milk, cottage cheese, ice cream, cheese). The severity of the symptoms depends on the amount of lactose an individual can absorb in relation to the amount ingested.

How do I get lactose intolerance?

For most people, lactose deficiency develops naturally with age as the small intestine lining cells gradually lose the ability to make the enzyme lactase. Most people develop symptoms as adults. Some ethnic and racial groups are more commonly affected. The condition is least common in persons of northern European descent, whereas 90% of Asian-American and 75% of African-Americans are lactose intolerant.

How is lactose intolerance diagnosed?

Formal tests for lactose intolerance exist, but most cases can be diagnosed by avoiding lactose containing products and finding significant, if not complete, improvement of symptoms. Milk, dairy products, ice cream, and cheese are the most common lactose-containing foods. These should be completely avoided for several weeks to see the effect on symptoms. If the symptoms return after re-challenging the person's digestive system with lactose-containing food after noticing a dramatic reduction in symptoms with avoidance, the diagnosis of lactose intolerance is likely.

How is lactose intolerance treated?

Avoiding lactose-containing foods, or limiting the amount is effective treatment for most people. Dietary control depends on each person's learning, through trial and error, how much lactose he or she can handle. For people who develop symptoms from very small amounts of lactose or have trouble limiting their intake of lactose-containing foods, lactase enzymes are available in both liquid and chewable tablet form for use with either liquid or solid lactose-containing food. Calcium supplementation is recommended for anyone who significantly limits their dietary intake of milk products.

Lactose is hidden in some foods such as whey, curds, milk by-products, dry milk solids, and nonfat dry milk powder. In addition, lactose is used as a base for about 20% of prescription drugs and 6% of over-the-counter medicines. Individuals with very low tolerance for lactose will need to read all food/medication labels very carefully in order to control their symptoms.

Other Sugars

Fructose is found in many common foods, such as figs, pears, prunes, and grapes. It is also found in corn syrup which is used to sweeten foods, gums, candies and sodas. In people who cannot properly absorb fructose, symptoms similar to lactose intolerance occur. Sugarless or diet foods, beverages, and even some low calorie gums are sweetened with sugars which are poorly absorbed by most people. If enough of these foods/beverages are ingested, the large load of non-absorbed sugar which reaches the large intestine can again cause symptoms similar to those of lactose intolerance. Sorbitol, mannitol, and xylitol are sugars commonly used in this fashion.

What is Celiac Disease (sprue)?

People with Celiac Disease have an intolerance to a protein called gluten found in wheat, rye, barley and oats. Eating simple foods like wheat bread will damage the intestines, so food cannot be absorbed normally. Severe weight loss, bloating, gas, weakness and a change in bowel habits often occur.

Celiac Disease is diagnosed by a combination of blood tests, biopsy of the small intestine lining and by improvement in symptoms after removing gluten from the diet.

Treatment consists of removing gluten-containing products from the diet (wheat, rye, barley, and oats). Obvious sources of gluten, such as baked goods, wheat/oat-containing cereals, noodles, and spaghetti are easily avoided. Unfortunately, wheat is often used in processed food such as ice cream, salad dressing and canned vegetables/soups. It is also found in many brands of instant coffee, ketchup, mustard, candy bars and some over-the-counter medications. As a result, a successful adherence to a gluten-free diet requires careful label-reading since gluten can be present in many seemingly unlikely places.

Less Common Intolerances

Monosodium glutamate (MSG) sensitivity is the most common problem in this group of less common intolerances. MSG is used as a flavor enhancer and is popular in Chinese food. This has led to the name "Chinese Restaurant Syndrome" for symptoms of headache, chest tightness, nausea, sweating, burning neck and facial pressure which occur in some people 15 minutes to a few hours after ingesting Chinese food containing MSG.

Histamine containing foods such as cheese, spinach, eggplant, red wine, tuna, mackerel, and yeast can produce symptoms similar to allergic reactions in some people. These symptoms include headache, flushing, rapid heart rate, fainting and wheezing.

Foods, medications and cosmetics containing sulfites, tartrazine, benzoates, pargenes, and many dyes have been reported to cause a variety of symptoms. Asthma-type attacks of wheezing in response to ingestion of sulfites found on sprayed/dipped vegetables and fruits have received the most publicity.

Sugar, chocolate, caffeine and various additives have been suggested as agents which worsen migraine headaches, and/or attention deficit hyperactive disorder in some individuals. Dietary restrictions have been reported as helpful in controlling and improving symptoms in some individuals with these problems.

What should I eat?

A well balanced, nutritious diet is required to maintain good health and proper weight. Symptoms of abdominal bloating, nausea, diarrhea, gas, cramps, or weight loss may indicate intolerance to food or food additives. Less common symptoms include shock, rash, hives, generalized swelling, wheezing, inflamed eyes/nose/sinuses, vocal cord swelling, and migraine headache. Should you develop these symptoms, especially if they occur repeatedly, you should see your doctor and ask about the possibility of food sensitivity.

Accurate diagnosis of food intolerance is important to avoid unnecessary diet restriction which might lead to poor nutrition, higher food costs, social inconvenience/isolation, and preventing a more serious underlying disease from being left undiagnosed.

Abdominal Pain

by Christopher J. Gostout, M.D., FACP

Introduction

Have you ever experienced pain in your abdomen? Of course, all of us have experienced a "belly ache" sometime in our lives, but how can you decide when abdominal pain is serious? Here is a list of common questions your doctor will need to ask about your pain:

- * What does the pain feel like?
- * How long does the pain last and when did it first occur?
- * When does the pain occurs?
- * Where is the pain located?
- * What causes the pain?
- * What relieves the pain?
- * What other symptoms are associated with the pain?

What does your pain feel like?

The sensation and interpretation of how pain feels vary from one person to another. There are two predominant types of pain.

Cramping pain is also referred to as colic. It occurs in a repeating cyclic or wave pattern with a build up in intensity followed by a gradual easing in intensity. Gas pain is a common description used to describe cramping pain. A stretching or squeezing of the intestines will cause this type of pain. It arises from hyperactivity of normal intestinal peristalsis (muscle contractions) and may be due to excess gas, irritation of the intestines from infection or inflammation, blockage, and even stress.

Constant abdominal pain. There may be some variation in the intensity but, overall, this type of pain is distinctively steady. Other descriptions which have been used include "aching, burning, gnawing, hunger, or sharp" pain. This type of pain can arise from deep inflammation involving any of the abdominal organs and the abdominal cavity. Ulcers, blockage of the gallbladder by stones, and local areas of infection called abscesses can cause this type of pain. Irritation of the inner lining of the esophagus by gastric acid and irritation of the outside of the intestines and body cavity by leakage of blood, intestinal contents, and bile can also cause this type of pain.

How long does the pain last?

Pain which lasts for only seconds or a minute usually does not have a specific cause. Many people will experience a rare brief spell of abdominal pain, which is not serious.

Pain which lasts for hours or days should be considered potentially serious and medical attention should be obtained.

When does the pain occur?

Pain may occur spontaneously, at any time. Pain which awakens someone from sleep is regarded as potentially serious. It may occur before or after meals and before or after bowel movements. The "hunger" pain of peptic ulcers may occur just prior to mealtime. Gallbladder pain may develop after meals as can pain from the pancreas and intestinal obstruction. The irritable bowel syndrome is a common gastrointestinal problem which typically is associated with gaseous or crampy pain after meals along with a sensation of bloating. Inflammatory diseases of the intestine associated with diarrhea often cause crampy pain before or after bowel movements.

Where is the pain located?

The place where the pain is initially felt and where it may travel (radiate) is very important in determining the cause of the pain. Pain located in the center of the upper abdomen may arise from the esophagus, stomach, duodenum, liver, pancreas, or bile ducts. Pain from the gallbladder and an inflamed liver will more often be located toward the right side of the upper abdomen. Gallbladder pain may also radiate through the right shoulder blade. Pain from an ulcer or irritation of the pancreas may radiate through to the back. Pain arising from the small intestine can localize around the belly button. Pain arising from the large intestine may localize to either the right, left, or middle of the abdomen below the belly button. Pain developing from inside the pelvis will often be experienced as a pressure-like discomfort in the rectal area.

The most common locations of minor pain, often gas-like, are in the middle to upper abdomen and in the lower and left abdomen.

What causes the pain?

There may be some helpful clues from this observation. Chest pain arising from the esophagus (swallowing tube) may be related to certain foods, solid foods, or extreme temperature of foods (hot or cold). Meals stimulate the gallbladder to release bile and in the presence of gallstones may induce the pain of a gallbladder attack. Narrowed or blocked areas of the intestine

will be worsened after eating solid foods, especially fibrous vegetables. An excessive intake of certain foods such as beans can cause abdominal cramps. Some individuals are intolerant of certain foods, such as the milk sugar, lactose. For example, after drinking a milk shake or lots of milk, persons intolerant to milk sugar (lactose) may experience excessive gas, cramping, and eventually diarrhea.

What relieves the pain?

Whether the pain is new or has been recurring for some time, most people will try to relieve it or will notice what makes the pain feel better. Belching is a common maneuver used to relieve upper abdominal discomfort. The belch is created by swallowing air and immediately expelling it. It is a learned response which can become a habit. Belching does not provide much, if any, clue to the origins of upper abdominal pain. Flatus, the expulsion of gas from the rectum, may relieve crampy abdominal pains due to distension or stretching of the colon and rectum. Some individuals naturally have more gas than others which may cause discomfort, create cramps, and be relieved by the passage of flatus. Certain foods, such as beans, can create excess gas and cramping which is relieved by the passage of flatus.

The pain of peptic ulcer disease has been commonly referred to as hunger or gnawing pain which is typically relieved by eating. This pain may awaken a person from sleep. These individuals will often keep antacids, water or crackers on their bed stand to help relieve the night time pain.

More serious pain will cause restlessness, the need to be still, or to assume a certain position. An obstructed organ such as the intestine or gallbladder typically causes restlessness with a need for movement such as rocking or pacing. A perforation or leakage of intestinal contents will cause one to be very still to minimize irritation of the abdominal cavity and outer lining of the intestines. With inflammation in the lower abdomen, such as appendicitis, the pain may be relieved by lying down with the legs drawn up. Deep inflammation of the upper abdomen, as can occur with inflammation of the pancreas, may feel better by leaning forward or curling up in a ball on one side or the other.

What other symptoms are associated with the pain?

Severe pain of any kind may be associated with sweating. This is not a specific observation. Nausea and vomiting may be important responses to pain and may indicate a blocked organ such as the stomach, intestine or gallbladder. Nausea and vomiting are common symptoms associated with inflammation of the pancreas.

The abdomen may become swollen or distended with gas when there is blockage of the intestine. Blocked intestines may also be associated with loud grumbling sounds which usually

occur at the same time as the crampy waves of pain. These grumbling sounds may also occur normally and most often between meals. Blockage of the stomach may be due to an ulcer at the very end of the stomach. In addition to the steady pain of an ulcer, the individual may be aware of a sloshing sound of fluid in the blocked stomach. This is most noticeable when lying down and changing positions.

Fever with or without shaking chills can accompany intestinal infections, blockage of the bile ducts, and localized areas of infection called abscesses. The presence of shaking chills suggests serious infection with passage of bacteria into the bloodstream.

A change in the color of the urine and stool may accompany the pain from a blocked bile duct. In this setting, the urine becomes very dark, like strong tea, and the stool becomes light in color. With a prolonged blockage of the bile duct, the eyes and skin will turn yellow which is called jaundice.

Crampy pain accompanied by black or bloody stool is a combination of symptoms indicating severe bleeding which requires prompt attention.

Pain arising from the esophagus may be due to irritation and blockage. Individuals with this type of pain problem will describe difficulty swallowing foods, especially solids. When there is a complete blockage of swallowed food, the individual will have trouble swallowing saliva.

When should I see a doctor?

If you answer YES to any of the following questions concerning your abdominal pain, you should contact your doctor.

1. Is your pain steady, severe, or regularly recurring?
2. Does your pain impair your ability to work or perform your routine activities?
3. Have you lost weight or your appetite?
4. Is your pain associated with nausea and vomiting?
5. Do you experience fever?
6. Have your bowel habits changed?
7. Do you experience difficulty in swallowing?
8. Does your pain awaken you from sleep?
9. Do you have a previous history of ulcers, gastroesophageal reflux, gallstones, inflammatory bowel disease (ulcerative colitis, Crohn's disease), and intestinal surgery?
10. Are you taking any medicines that can cause ulcers, such as aspirin or other medications commonly used or prescribed for arthritis or headaches?