

## Managing Diarrhoea

### Introduction

Most episodes of diarrhoea are short-lived and due to food poisoning or infective gastro-enteritis. This is acute diarrhoea. If it lasts for more than four weeks we refer to it as chronic diarrhoea. There are many possible causes and it is important to identify the underlying cause to ensure that a person receives the appropriate treatment. Treatment is aimed at correcting the cause, reducing loose stools, and treating any complications. Chronic diarrhoea can have a substantial impact on quality of life and overall health. It may be disabling and even life-threatening.

In the developed world, the most common causes are irritable bowel syndrome, inflammatory bowel disease (Crohn's disease and ulcerative colitis), malabsorption syndromes, and chronic infections. In other parts of the world, infection and parasites are much more common.

The evaluation of chronic diarrhoea involves a careful review of your medical history, a physical examination, and diagnostic tests..

### Medical History

A medical history often points to the underlying cause of chronic diarrhoea. Important issues are the time and nature of the onset of diarrhoea; the nature of the diarrhoea; factors that worsen or alleviate the diarrhoea; and your diet. You should mention food intolerances or allergies.

Other important features are recent travel to developing countries or exposure to potentially contaminated food or water; medications used; other medical conditions; and any chemotherapy, abdominal surgery or radiation treatment.

### Physical Examination

In most people with chronic diarrhoea, a physical examination is normal or provides little information about the cause of diarrhoea, but it is helpful to indicate the severity.

### Diagnostic Tests

**Blood tests** can sometimes provide information about the cause of chronic diarrhoea and the secondary effects of diarrhoea on overall health.

➔ A full blood count can detect the anaemia that results from long-standing blood loss or inflammation. It can also detect an elevated number of white blood cells, which may signal that diarrhoea is being caused by inflammation, infections, allergies or cancer.

➔ Blood chemistry tests can detect dehydration and electrolyte (salt and mineral) imbalances, as well as liver problems and nutritional deficiencies.

➔ Certain rare tumours (such as carcinoid or tumours producing "vasoactive intestinal polypeptide") can produce hormones called peptides that promote diarrhoea and can be detected in a blood sample.

➔ Antibody tests can detect infections or Coeliac disease (allergy to the gluten in wheat)

➔ Hormone tests can detect conditions of the thyroid gland or adrenal glands that cause diarrhoea.

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### Diagnostic Tests cont.

➔ Inflammatory markers--The erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels are non-specific markers of inflammation. Elevation of these markers may signal inflammatory bowel disease (Crohn's disease or ulcerative colitis)

**Stool tests** can help determine if chronic diarrhoea is watery, inflammatory, or fatty diarrhoea. They may also indicate the presence of infection or parasites.

- ➔ Some stool tests can be performed on a single stool specimen, but detailed information may require collecting all stools over a 48- or 72-hour period.
- ➔ Stool weight may indicate which part of the intestine is affected and may help narrow down the possible causes of diarrhoea
- ➔ Stool electrolyte tests help differentiate between different types of watery diarrhoea.
- ➔ A low stool pH (high acidity of stool) signals malabsorption of carbohydrates (sugars and starches).
- ➔ The faecal occult blood test detects microscopic amounts of blood in a stool specimen. The presence of blood in stools suggests that inflammation with or without infection, coeliac disease or cancer is causing diarrhoea.
- ➔ A high number of white blood cells in a stool specimen suggests that diarrhoea is being caused by an inflammatory condition.
- ➔ Microscopic examination for parasites may identify worms as eggs or cysts.
- ➔ Stool fat and carbohydrate tests can detect malabsorption.
- ➔ Stool cultures can reveal infections. Stool antigen and toxin tests can detect antigens (protein fragments) associated with *Giardia lamblia* infection and toxins produced by *Clostridium difficile* infection.
- ➔ Stool pancreatic enzyme tests can detect chymotrypsin and elastase to determine if chronic diarrhoea is being caused by pancreatic conditions.
- ➔ Stool tests for laxatives can confirm their presence.

**Sigmoidoscopy and colonoscopy** allow direct visual examination of the lining of the rectum and colon (the large intestine). These procedures also allow collection of biopsies (small tissue samples), which can be sent to the laboratory for more detailed testing. Sigmoidoscopy allows examination of the bottom third of the colon, whereas colonoscopy allows examination of the entire colon.

**Gastroscopy** allows direct visual examination of the stomach and the first part of the small intestine. The procedure also allows the collection of biopsies (small tissue samples) and intestinal fluid, which can be sent to the laboratory for more detailed testing. This can help diagnose some causes of chronic diarrhoea such as coeliac disease.

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### Diagnostic Tests cont.

**Barium Follow-through examination** is used to outline the profile of the stomach and small intestine on x-rays. This test can help diagnose conditions that alter the structure of the small intestine, such as Crohn's disease.

A **CT scan** can detect structural changes associated with inflammatory bowel disease, tumours, and infections. It can be particularly useful for identifying tumours and structural abnormalities of the pancreas.

**Pancreatic enzymes** play a key role in the digestion and absorption of food, and several different tests are used to assess pancreatic function.

### Treatment

The underlying cause of chronic diarrhoea is identified and treated, whenever possible. As examples, infections may be treated with antibiotics while inflammatory bowel diseases (such as ulcerative colitis and Crohn's disease) require treatment with specific medications. In some cases the solution may be as simple as eliminating an offending food (such as lactose-containing products or products containing artificial sweeteners such as chewing gum or sweets) or medication known to cause diarrhoea (such as antacids).

In some people, the main goal of treatment may simply be the relief of diarrhoea. This approach is used to treat diarrhoea before diagnostic testing, to treat diarrhoea when the results of diagnostic tests are normal or inconclusive, and to treat diarrhoea caused by chronic medical conditions.

If your doctor strongly suspects a specific cause of chronic diarrhoea, but the results of diagnostic tests are normal or inconclusive, he may recommend trials of various treatments to determine if they help. For example, your doctor may recommend a trial of antibiotics (for presumed infection), discontinuation of specific drugs (for presumed drug-induced diarrhoea), or dietary changes (for presumed food allergies or malabsorption syndromes).

Certain oral substances remain in the digestive tract and can firm up loose stools. These substances include absorbents, such as activated charcoal and resins that bind bile acids. They also include bismuth and stool modifiers, such as the fibre psyllium. These agents may control chronic diarrhoea in some people, although their effectiveness remains unproven.

Several anti-diarrhoeal drugs can help control chronic diarrhoea. In many people, over-the-counter drugs such as loperamide (Imodium®) effectively relieve loose stools, but some people may require stronger, prescription drugs.

Chronic or severe diarrhoea can lead to potentially serious complications, including dehydration and malnutrition. Several measures can help counter these complications. Rehydration replenishes the fluids and electrolytes (salts) lost in diarrhoea. Your doctor may recommend oral solutions or, in cases of severe diarrhoea, intravenous fluids. Occasionally it may even be necessary to use parenteral nutrition which is feeding through an intravenous line placed in the chest. In cases of severe diarrhoea, this type of feeding helps ensure that a person is getting adequate amounts of nutrients, vitamins, and minerals, and may be needed as a temporary measure.