Diarrhoea in adults

By Tannyth Menton and Jacqueline van Schoor
Amayeza Info Services

Introduction

Diarrhoea is a common problem, which can affect anyone at any age. It is defined as an increase in the volume, wateriness or frequency of stools, when compared to the patient’s usual bowel movements. It is important to remember that stool frequency and consistency are variable from one person to another and what may be considered a problem for one individual may be normal for another. This article addresses the approach to the management of diarrhoea in adults only.

Diarrhoea can either be acute or chronic.

- **Acute diarrhoea**
  Acute diarrhoea is characterised by its rapid onset and is often accompanied by stomach cramps, abdominal pain, flatulence, nausea, vomiting and, occasionally, pyrexia (fever).

- **Chronic diarrhoea**
  Chronic diarrhoea may be defined as diarrhoea that lasts for more than two to three weeks. It can be a symptom of a more serious underlying condition. Patients with chronic diarrhoea, therefore, should be referred to a general practitioner for assessment. Patients with chronic diarrhoea may report several previous bouts of diarrhoea or diarrhoea alternating with periods of constipation, may experience weight loss or anorexia and will often complain of feeling weak.

**Note:**
Diarrhoea in an adult that does not clear up within a few days or diarrhoea alternating with constipation and the presence of blood or pus in the stool requires referral, as does a temperature of over 38°C.

Diarrhoea may further be classified as **infectious** or **non-infectious**.

- **Infectious diarrhoea**
  Viral and bacterial organisms account for most cases of infectious diarrhoea. Infectious diarrhoea is more likely to occur where sanitation systems are either not well developed or are completely non-existent. Infectious diarrhoea can also be spread from person to person, especially if hygiene is poor - For example, if someone who is ill prepares food for others without washing their hands. Since infectious diarrhoea often occurs when travelling to other countries, it is also referred to as Traveller’s diarrhoea.

Infectious diarrhoea is usually a severe but short-lived infection but can spoil that long-awaited exotic holiday. Sometimes infectious diarrhoea may persist and in these instances the patient should be referred for further medical attention.

People travelling to exotic locations should be advised to avoid foods that have not been washed in clean water, boiled or thoroughly cooked. A simple rule to abide by is ‘If you can’t peel it, boil it or cook it – Don’t eat it’!

- **Non-infectious diarrhoea**
  Diarrhoea may also be a side effect associated with the taking of certain medicines. It is therefore important to ask the patient whether they are taking any medication and with the help of the pharmacist, to evaluate the side effect profile of each medicine. Remember to ask about natural and herbal remedies or food supplements that the patient may be taking as these could also cause symptoms of diarrhoea. Some medicines that have been implicated in causing diarrhoea include antacids, antibiotics, laxatives, misoprostol and the non-steroidal anti-inflammatories.

Drinking too much alcohol and eating spicy foods or large amounts of fruit may also cause a non-infectious diarrhoea. Even a sudden, recent, dramatic change in diet may cause diarrhoea. In some cases, diarrhoea can be brought on by stress or exercise. For example, some people, before that important board meeting or during an endurance sports event, often experience symptoms of diarrhoea.

When the patient presents in the pharmacy complaining of diarrhoea, it is necessary to assess the presenting symptoms and then to recommend appropriate treatment or to refer the patient for further medical attention.

**Suggested questions to ask the patient include:**

- What is the nature of the stools?
- How long have you had these symptoms?
- How often are you passing stools?
- What is the nature of the stools?
- How long have you had these symptoms?
- Was the onset sudden?
- Do you have any other symptoms such as nausea or vomiting, abdominal cramping or fever?
- Is there anyone else in your close environment with this problem?
- Have you changed your diet recently or consumed excessive amounts of alcohol?
- Have you travelled anywhere within the last week or so?
- Are you currently taking any medication?

**Patients that require referral for further medical attention:**

- Acute diarrhoea that has persisted for more than 3 days in an adult.
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- Diarrhoea associated with severe vomiting and fever.
- The presence of blood or mucus in the stool.
- Diarrhoea alternating with constipation.
- Diarrhoea associated with the use of a particular medicine.

**Treatment of acute diarrhoea in adults**

Diarrhoea is a symptom and its treatment depends on the cause. The objectives of treatment in adults are preventing dehydration, relieving symptoms and identifying and removing the causative factor.

Most episodes of acute diarrhoea in adults are self-limiting and all that is required in terms of management is the replacement of lost fluid in order to prevent dehydration. If large amounts of fluids and electrolytes are lost, blood pressure can drop enough to cause fainting, heart rhythm abnormalities and other serious disorders.

For most adults, dehydration can be prevented and mild dehydration corrected by ensuring an adequate fluid intake (e.g. water, ready-made glucose and electrolyte solutions, herbal tea or dilute fruit drinks). The amount of fluid that may be recommended to prevent dehydration in an adult is 400ml per loose stool. For more severe dehydration, the patient may require the intravenous administration of fluids and hospitalisation may be required.

**Note:** Concentrated fruit drinks should be avoided because they tend to be high in sugar, which may worsen diarrhoea.

**Signs of dehydration in adults**
- Increased thirst, dry mouth
- Decreased urination
- Feeling weak or light-headed

Most adults with acute diarrhoea prefer not to eat any solid food for 24 hours. Once the diarrhoea has settled, patients may eat bland food such as dry bread, rusks or crackers, boiled potatoes, rice or clear soup. Patients with diarrhoea might be best advised to avoid milk and dairy products. This is because during diarrhoea the enzyme in the gut, which usually digests milk (i.e. lactase), is inactivated. A temporary lactose (milk sugar) intolerance may occur, which may make the diarrhoea worse.

Although acute diarrhoea is usually self-limiting and drug therapy is not usually necessary, patients with severe symptoms and those wanting to stop the symptoms as soon as possible, may elect to use one of the several anti-diarrhoeal medicines available. Antibiotics are not usually indicated.

**Note:** Most episodes of infectious diarrhoea should be allowed to run their course to allow the causative organism to be flushed out of the system. If patients elect to use one of the medicines discussed below, it is important to emphasise that these medicines do not provide fluid replacement. Patients should be counselled about ensuring an adequate intake of fluid in order to prevent dehydration.

**Medicines used in the management of adult diarrhoea**

- **Medicines that alter gut motility**
  - Diphenoxylate e.g. Lomotil® Diphenoxylate is a derivative of pethidine but has no analgesic activity. It is combined with atropine (an anticholinergic) to prevent abuse by deliberate overdose. Diphenoxylate reduces gastro-intestinal motility and delays the transit of the intraluminal contents.

  **Onset of action**
  Diphenoxylate has an onset of action of 60 minutes and a duration of action of 3 to 4 hours.

  **Side effects**
  Side effects are uncommon but include dizziness, vomiting, nausea, fatigue, blurred vision, dry mouth, urinary hesitancy and central side effects such as malaise, lethargy, confusion, depression, euphoria and headache.

  **Precautions**
  Diphenoxylate may exacerbate intestinal obstruction and should not be used if the cause of the diarrhoea has not been established or if the patient complains of severe abdominal pain. The use of diphenoxylate is contra-indicated in liver disease, in children less than 4 years of age and in diarrhoea associated with antibiotic-induced pseudomembranous colitis.

- **Loperamide** e.g. Imodium® or Imodium® Melt
  Loperamide is an effective anti-diarrhoeal treatment for use in adults. It is a synthetic compound that prolongs transit time, increases stool viscosity, increases bulk density, reduces daily faecal volume and diminishes the loss of fluid and electrolytes. Loperamide, as an anti-diarrhoeal agent, is reported to be 2 to 3 times more potent than diphenoxylate on a per mg basis.

  **Onset of action**
  Loperamide has an onset of action of 1 to 3 hours.

  **Side effects**
  Side effects include constipation, dry mouth and abdominal pain.

  **Precautions**
  Loperamide is contra-indicated in children under 5 to 6 years, in severe inflammatory bowel disease and in diarrhoea associated with antibiotic-induced pseudomembranous colitis. When recommending loperamide, the pharmacist or pharmacist assistant...
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should remind patients to drink plenty of extra fluids.

 Fluid adsorbents e.g. kaolin-, pectin-containing preparations These are hydrophilic bulk forming agents that adsorb water avidly and may also bind enterotoxins. They provide symptomatic relief and increase the viscosity of the faeces. There are several products available – some that contain only kaolin and pectin (e.g. Betapect®, Gastropect®), some that contain kaolin/pectin and electrolytes (e.g. Bipectinol®, Enterolyte®) and some that contain kaolin/pectin, electrolytes and an antispasmodic agent such as chlorodyne (e.g. Chloropect®, Pectrolyte®).

 Probiotic preparations e.g. Lactobacillus acidophilus/ Saccharomyces boulardii (e.g. Culturelle®, Reuteri®, Inteflora®)

Preparations containing various Lactobacillus species have been used in the treatment of diarrhoea. Saccharomyces boulardii is a non-pathogenic yeast used primarily to treat diarrhoea, usually secondary to antibiotic disruption. Probiotic preparations may restore intestinal function and suppress the growth of pathogenic micro-organisms.

Side effects Adverse effects include flatulence and constipation. Saccharomyces boulardii should be avoided in patients with allergies to yeast.

 Antispasmodics such as hyoscine-N-butylbromide e.g. Buscopan®

These agents do little to reduce diarrhoea but may reduce cramping and abdominal pain associated with diarrhoea.

Conclusions Acute diarrhoea in an adult is usually no more than a temporary, minor discomfort. However, diarrhoea may be a symptom of another underlying problem. The health professional advising on the appropriate management of diarrhoea in adults and the use of over-the-counter medicines, should ensure that patients know how to use the appropriate anti-diarrhoeal medicines and also know when to seek further medical attention.

References: Available upon request.

1. www.homehealth-uk.com
2. www.dotpharmacy.co.uk
3. Merck manual of Medical Information Home Edition
4. Micromedex

<table>
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<tr>
<th>GENERIC NAME</th>
<th>TRADE NAME</th>
<th>ADULT DOSE</th>
<th>COST#</th>
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<tr>
<td>Diphenoxylate HCl (0.25mg)</td>
<td>Lomotil®</td>
<td>Four tablets, followed by two tablets every six hours. Do not exceed ten tablets daily.</td>
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<td>Atropine (0.025mg)</td>
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<td>Loperamide HCl (2mg)</td>
<td>Betaperamide®</td>
<td>Two tablets initially, followed by one tablet after each subsequent loose stool. Do not exceed eight tablets per day.</td>
<td>R12.21/10</td>
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<td></td>
<td>Imodium®</td>
<td></td>
<td>R18.87/6</td>
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<tr>
<td>Loperamide HCl (2mg)</td>
<td>Imodium Plus®</td>
<td>Two tablets initially, followed by one tablet after each subsequent loose stool. Do not exceed four tablets per day.</td>
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<td>Simethicone (125mg)</td>
<td>Chew tablets</td>
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<tr>
<td>Kaolin/Pectin</td>
<td>Gastropect®</td>
<td>Five to ten medicine measures three to four times daily with water.</td>
<td>R4.80/100ml</td>
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<tr>
<td>Probiotics</td>
<td>Culturelle®</td>
<td>As directed One capsule twice daily or as prescribed.</td>
<td>-</td>
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<td></td>
<td>Inteflora®</td>
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# Cost is the Single Exit Price – Correct as at December 2004.

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