Helping patients with constipation

The perennial problem of constipation is still best treated with simple measures such as improving diet, mild exercise and adequate fluid intake.

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Constipation is a common complaint in Australians, particularly in women and those over 65 years of age. It is a symptom, not a diagnosis. While it means different things to different people, it is defined as 12 weeks or more of one or more of the following complaints:

- the need to strain at stool
- hard or lumpy stools
- stools less than three times per week
- a sensation of incomplete evacuation
- anorectal obstruction more than 25% of the time.

It is important to take a detailed history from a patient presenting with constipation. Is there pain, abdominal bloating or rectal bleeding? Is this a change in bowel habit or a gradual worsening of a complaint that has been present for a long time? Is there a family history of bowel cancer? Management is determined by all of these factors.

Constipation in children

Constipation is common in children, particularly around the time of toilet training. Almost all cases are idiopathic and relate to difficulties establishing a normal toileting pattern. A significant medical cause is very unusual.

Encopresis

Encopresis is repeated involuntary defaecation into the underpants for a period of more than three months in a child aged four years or more. It occurs in approximately 3% of children and is more common in boys than girls.

In most cases encopresis develops as a result of longstanding constipation, which may be due in some children to the voluntary withholding of stool. In encopresis the motion becomes very large and distends the rectum, leading to a loss of rectal sensation, faecal staining of the underpants and even passage of motion without the child being aware of it. Physical signs include a palpable abdominal mass and a rectum full of faeces, although rectal examination is not always necessary. However, it is important to check for an anal fissure if the mother reports rectal bleeding. The majority of affected children do not have any psychological problems and come from normal families.

If there is no reason to suspect organic disease and the child's diet and fluid intake appear adequate, a behavioural approach to treatment is often successful. Passage of stool is rewarded using a star chart, or a small amount of money for an older child, and the empty rectum regains

IN SUMMARY

- **Constipation is common, particularly in women and in those aged over 65 years.**
- **A thorough history and physical examination is required to assess patients with constipation.**
- **Many patients with constipation respond to increased fibre and fluids.**
- **Check for medications that may cause the constipation.**
- **Fibre supplements and laxatives are useful in people who do not respond to dietary change.**
- **A simple rule of thumb for calculating the amount in grams of daily fibre that is adequate for children is the child's age plus five.**

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Table 1. Benign causes of constipation

Poor diet
Inadequate fluid intake
Medications
- Tricyclic antidepressants
- Calcium channel blockers
- Narcotics
- Aluminium-based antacids
- Anticholinergic agents
- Calcium supplements
- Iron supplements
- Antidiarrhoeal agents

Irritable bowel syndrome
Pelvic floor dysfunction (obstructed defaecation)
Slow transit constipation
Metabolic causes
- Hypercalcaemia
- Hypothyroidism
- Diabetes

Neurological causes
- Parkinson's disease
- Multiple sclerosis
- Stroke
- Spinal cord injury

Disease of the intestinal muscles
- Scleroderma

sensation. Laxatives are not usually required, but in the most troublesome cases a combination of stool softeners and stimulant laxatives may be necessary for a short period.

Other causes

Some children seem to develop constipation if they eat particular foods. There have been reports of milk products being associated with constipation. It is worthwhile asking the mother if there is a pattern that suggests a dietary relationship.

It is also worth asking the mother to write down the intake of vegetables, cereals, bread and fruits so an assessment can be made of the amount of fibre the child is consuming (Figure 1). A simple rule of thumb for fibre intake in children is age plus five: for example, for a 5-year-old child, 5 + 5 = 10 g of fibre/day.

Hirschsprung's disease is one of those very rare conditions that are in every medical student's list of the causes of constipation. It is unlikely to be seen in a medical lifetime, unless you are a paediatric surgeon or a gastroenterologist. Hirschsprung's is due to a congenital lack of neurons in a segment of bowel that may be very short and is usually distal. The lack of neurons results in failure of relaxation of the internal anal sphincter when the rectum is full and therefore a failure of defaecation. The diagnosis is usually apparent shortly after birth as the baby fails to pass meconium. Diagnosis is made as a result of a full thickness biopsy of the bowel wall, and treatment is surgical resection of the involved segment. Very occasionally a child with a very short segment affected may not present until after infancy. Hirschsprung's disease occurs in approximately 1 in 5000 live births and has a familial component. The condition is associated with Down's syndrome and a number of other rarer congenital abnormalities.

There are a number of other even rarer causes of constipation in children. Referral to a paediatric gastroenterologist is appropriate if such conditions are suspected.

Constipation in adults

Chronic constipation, which occurs in about one-fifth of Australians at some time, is more common in women, the elderly, during pregnancy, following surgery, in association with travel or in people who are immobile. Some women note that they are more constipated in their premenstrual week. There are also reports of increased constipation following hysterectomy.

Most GPs will see patients with constipation due to hypothyroidism and hypercalcaemia. There are, however, a number of exotic endocrine diseases that cause constipation, including glucagon producing tumours, phaeochromocytoma and pseudohypoparathyroidism.

Constipation is rarely a presenting symptom of colon cancer. However, bowel cancer should be considered in each and every patient – the possibility is easily dismissed in most.

Assessing the adult patient with constipation

A thorough medical history and physical examination, focusing on general health, diet, psychological status and any medications being taken are the mainstay of assessment (Table 1).

History

Take a detailed history. How often does the patient open his or her bowels, what is the shape and consistency of the motion, is there any rectal bleeding or abdominal pain? Establish how long constipation has been a problem – is it a new symptom that necessitates colonoscopy or a long term symptom that requires further management? Many women with constipation report that their mothers and sisters have similar bowel problems.

Questions to ask the patient include:
- is cereal eaten for breakfast?
- how many pieces of bread are eaten per day?
- how many pieces of fruit per day?
- how many serves of vegetables per day?
- how much water is drunk each day?

Also ask the patient to keep a diet diary for a few days as people often overestimate the amount of fibre and underestimate the amount of fat that they consume.

Associations with other conditions

Haemorrhoids. People who constantly strain at stool are, not surprisingly, at risk of haemorrhoids. It is important to enquire about the frequency of bowel motions and straining in patients who present with haemorrhoids as failure to address the underlying aetiology means that it is very likely haemorrhoids will recur in the future. It is surprising how

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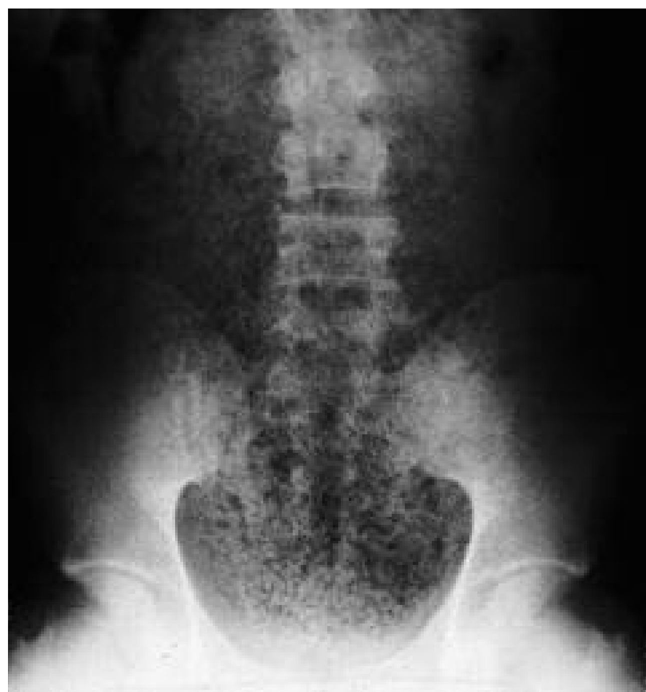

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Figure 1 (above). Increasing the fibre content of the diet is a major part of the management of constipation.
Figure 2 (right). Gross faecal loading in the distended rectum of a patient with constipation and sigmoid megacolon.

often patients complain that haemorrhoids have recurred after banding when it is to be expected unless there has been a change in the bowel habit that led to the problem in the first place.

Anal fissure. Anal fissure is not always associated with constipation. However, a reasonable proportion of patients with anal fissure do report constipation. Once again it is appropriate to treat the underlying aetiology, not only the fissure.

Rectal prolapse. It is worthwhile asking patients, particularly women, if they ever have a sensation of rectal prolapse. It is a symptom that is often not volunteered. If direct inquiry and physical examination lead to a diagnosis of prolapse it makes it all the more important to break the cycle of straining at stool. Many women who have a degree of prolapse will continue to strain because of the sensation of rectal fullness caused by the prolapse. A discussion of the mechanics of defaecation, with the aid of a diagram, can be most helpful to the patient.

Systemic conditions. Constipation is associated with a large number of systemic conditions. These include neurological syndromes such as Parkinson's disease, autonomic neuropathy, multiple sclerosis and stroke. Although the neurological manifestations of these conditions overshadow constipation, regular bowel function can improve quality of life. It is, therefore, worth specifically asking about bowel habit in patients who have these conditions.

Physical examination

Every patient requires a thorough physical examination, including rectal examination. Check in particular for abdominal masses, perianal disease such as an anal fissure, or clinical evidence of hypothyroidism.

A plain abdominal x-ray will demonstrate the distribution of faeces within the bowel and may show faecal loading (Figure 2) even if the rectum is empty. A colonoscopy is necessary if there has been a change in bowel habit or rectal bleeding is present, and may also be advisable if there is a family history of bowel cancer or a past history of colonic polyps. If colonoscopy is not easily available, a flexible sigmoidoscopy and barium enema should be arranged.

Other investigations

As hypothyroidism and hypercalcaemia can both cause constipation a thyroid stimulating hormone (TSH) and a serum calcium may be required to exclude these conditions.

Constipation is a common side effect of medications, particularly in the elderly (see Table 1). Substituting alternative treatment for medications that can be associated with constipation may be beneficial.

If constipation is resistant to simple treatment, referral to a gastroenterologist may be indicated. A colonoscopy may be necessary. Further investigations may be required to detect colonic inertia (slow transit constipation). Obstructed defaecation is due to lack of co-ordination of the muscles of defaecation and is associated with a feeling of incomplete emptying. Patients often use their finger or sit in an unusual position in order to get the faeces out of the rectum and do not volunteer this information unless specifically asked.

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MedicineToday PATIENT HANDOUT

What is constipation?

Constipation is one of the most common medical complaints in Australia. People say they are constipated when they can't empty their bowels as often or as easily as they would like to.

There is no rule about how frequently you need to go to the toilet but three times a day to three times a week is average. However, if there has been a change or if you are uncomfortable and find that you need to strain you should talk to your GP.

Constipation in children

Many healthy children have problems with constipation, particularly around the time of toilet training. Some children hold on to their motion, which can then become hard and dry and difficult to pass.

Very occasionally the motion becomes so large that it stretches the back passage, resulting in loss of feeling so that the child can't recognise when he or she needs to go to the toilet. This can lead to soiling on the underpants, causing much distress, particularly once the child starts school. This condition is known as encopresis.

What can I do about this?

The first step is to improve your child's dietary intake of fibre (e.g. fruit, vegetables, cereals and bread). A good rule of thumb is that a child needs their age plus five grams of fibre each day, e.g. for a 5-year-old, 5 + 5 = 10 g of fibre a day. Make sure they drink enough fluids. Don't let toilet training become too stressful. Encourage your child to sit on the toilet. Reward a good result with praise and if necessary start a star chart – every time a bowel motion is produced a sticker is placed on the chart. Very rarely children need to take medication to keep the motion soft. Consult your GP if there is blood on the toilet paper or the child seems to be in pain. There are some very rare causes of constipation in children. Your GP can advise you about this.

Do you have a good diet?

Aim to eat the following amounts of these food groups every day:

- brown or wholemeal breads, high fibre cereals, rice, pasta, legumes: 4 or more serves
- dairy products: 3 serves
- fruit: 2 or 3 pieces
- vegetables: 5 serves
- meat, cheese, poultry and fish: 1 or 2

AND drink 8 glasses of water, teas or juices each day.

Constipation in adults

What causes constipation?

Poor diet. Most Australians know the importance of fibre. However, knowing what to eat and doing it are two different things. It is worth keeping a diet diary for a week. If your fibre intake is low (less than 30 g/day) then try to increase it by eating:

- a high fibre breakfast cereal every morning – look on the side of the packet to calculate how much fibre the cereal contains
- brown or grain bread rather than white bread
- snackfoods that are high in fibre – such as muffins with bran, fresh fruit or vegetables
- desserts that are high in fibre – for example, apple crumble with cereal on top, or fruit loaf
- two or three pieces of fruit plus five serves of vegetables every day. Remember to drink more fluids when you increase your fibre.

Irritable bowel syndrome. Irritable bowel syndrome typically causes a variation in bowel habit between constipation and diarrhoea, together with pain in the abdomen. Some people are troubled mostly by constipation.

Medication. Many prescription medications cause constipation. Common culprits include the drugs used to treat blood pressure, heart disease and depression, as well as calcium supplements and iron tablets. If you become constipated when you start a new prescription you should discuss this with your doctor.

Slow transit time constipation. Slow transit time constipation is a rare condition of unknown cause in which the bowel muscles do not contract properly, resulting in constipation. It is much more common in women. Sometimes additional tests and treatment are required.

Pelvic floor dysfunction. Pelvic floor dysfunction is a common condition, particularly in women who have had children, in which the muscles in the pelvic floor do not work properly. The muscles in the back passage do not work as they should, making it difficult to push out the motion. Sometimes further tests are required.

Bowel cancer. Any change in bowel habit should be discussed with your doctor, particularly if you have seen any blood. Bowel cancer is an extremely uncommon cause of constipation but if you have noted a change further investigation such as a colonoscopy or barium enema may be required.

Other medical conditions. Your GP will be able to assess whether your constipation has been caused by another medical illness.

Treatment

A good diet, sufficient fluids and some regular exercise should lessen the problem of constipation.

Laxatives. If you are still having trouble with constipation, your GP may suggest a laxative. There are many types available and you may need to experiment with a few before finding one that suits you. Laxatives are divided into groups:

- fibre supplements, such as psyllium, sterculia, frangula, methylcellulose and ispaghula
- stool softeners – osmotic laxatives, such as lactulose, sorbitol and Epsom salts
- bowel stimulants, such as senna and bisacodyl
- lubricants, such as paraffin oil.

A glycerol suppository or Microlax enema may be particularly helpful if the problem is difficulty passing a soft motion out of the back passage.

Some people require lifelong treatment. All the laxatives listed are quite safe although your doctor may suggest that you avoid stimulant laxatives if you need to take something for many years.

Other treatments. Pelvic floor exercises seem to help some women, particularly those who have had babies. Other people find that sitting in a slightly different way on the toilet, e.g. with a small step placed under the feet, reduces the need to strain.

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Table 2. Examples of some commonly used laxatives

Fibre supplements
- Psyllium (husks, mucilloid [Metamucil, Mucilax], or seeds)
- Sterculia (Normafibe)
- Frangula (Granacol, Normacol Plus; both contain sterculia and frangula)
- Isphagula (Fybogel)
- Methylcellulose

Stool softeners
Osmotic laxatives attract water into the stool and make it softer. Examples include:
- Lactulose (Actilax, Duphalac, Genlac, Lac-Dol)
- Sorbitol (Sorbilax)
- Epsom salts

Polyethylene glycol can be used for the severely constipated (Glycoprep).

Bowel stimulants
- Senna (Bekunis Senna Tablets, Laxettes with Senna, Laxettes with Sennosides, Sennetabs, Senekot)
- Bisacodyl (Bisalax, Durolax, Fleet Laxative Preparations)

Excessive doses can cause abdominal cramping and occasional electrolyte abnormalities.

Lubricants
- Paraffin oil (Agarol, Parachoc)

Glycerol suppositories and Microlax enemas may be useful in obstructive defaecation

Tests of pelvic floor function, such as anorectal manometry or a defaecating proctogram, may be helpful as a guide to further treatment.

Treatment
A quick fix is rare. Many people need a bowel program consisting of a combination of simple measures such as gentle daily exercise, improved diet and increased fluid intake. Others may require fibre supplements, laxatives or toileting advice such as avoiding straining and making sure they answer the call to stool or set aside time in their busy schedules to go to the toilet.

Many Australians have insufficient fibre in their diet. Increasing intakes of fruit, vegetables, cereals and grains should be done gradually so as to avoid initial bloating and discomfort. Some people respond better to a fibre supplement than to increased dietary fibre – this also may need to be introduced slowly.

Laxatives
Constipated people who do not respond to a high fibre diet may require and respond well to laxatives. The main types of laxatives are listed in Table 2.

The appropriate dose of a laxative varies from individual to individual and finding it is a matter of trial and error. Many constipated people need laxatives for the rest of their lives; there is no evidence that this makes the constipation worse over time.

Other therapy
Clinical trials on the use of prokinetic agents in the treatment of constipation are in progress in Australia.

Biofeedback may be helpful for some individuals, particularly if they have difficulty with outlet obstruction. This therapy is available through specialised units in some capital cities.

Very rarely surgery is performed for people with colonic inertia. Results are good if patients are carefully selected.

Conclusion
Most people with constipation can be helped by simple measures such as increasing the fibre content of the diet, exercising and avoiding medications that cause constipation. MT

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