RANA HOSPITAL

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Patient Information Leaflet

Constipation

Constipation

What is constipation?

Constipation is a symptom (what a patient complains of) not a disease (what a doctor diagnoses). The word "constipated" can mean different things to different people. It can be a feeling that the stools are too hard or that the bowels do not work regularly or easily. **For most people it is not harmful to be constipated.**

In Western society constipation probably occurs more than in other cultures – one in six people. It is estimated that as many as one young woman in every 12 suffers with constipation, mainly in their late teens to 20s. It is also more common in older people.

Very occasionally there is a disease underlying the constipation, but most of the time the disturbance in the bowel habit is **not** due to an abnormality of the colon (a structural problem) but is rather a functional problem (one due to a disturbance of how the bowel contracts or empties).

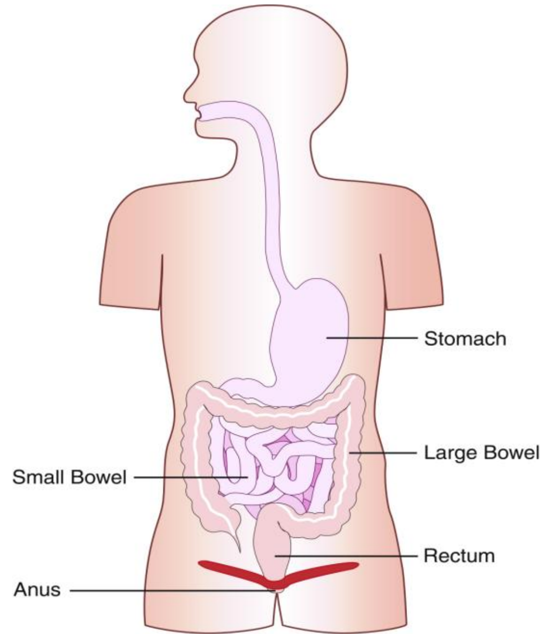
Bowel cancer is an uncommon cause of constipation. It is important to remember that even in patients who suffer with constipation over many years, there is no associated increased risk of bowel cancer.

Normal bowel function

Frequency of bowel movements varies widely in the general population. It is actually normal to pass stools between three times a day and once every three days. Most adults take bowel control for granted and need to give it little thought except for the few minutes a day that are spent emptying the bowel on the toilet. However, bowel control is actually a complex and incompletely understood process, involving delicate co-ordination of many different nerves and muscles.

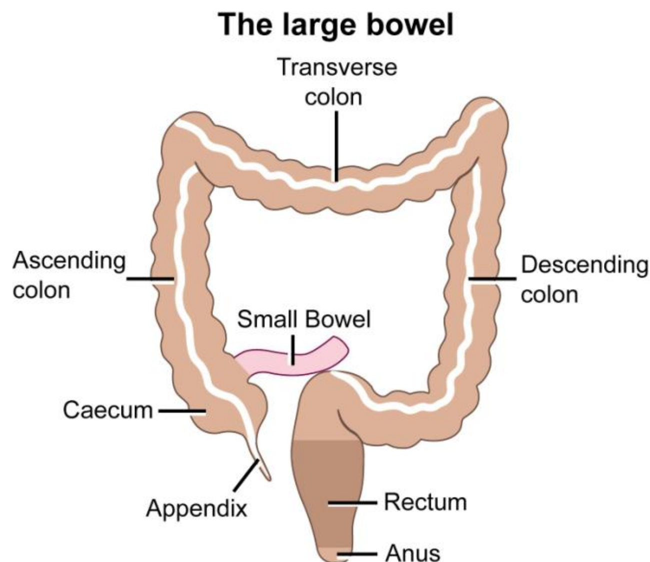
The bowel is part of the digestive system and its role is to digest the food that we eat, absorb the goodness and nutrients from the digested food into the blood stream and then to process and expel the waste products from the food that the body cannot use. This process starts at the mouth and finishes at the *anus* or back passage (Figure 1).

Figure 1: The bowel



The *small bowel*, or *small intestine* is the part of the bowel where the useful parts of food are absorbed. The small bowel delivers 1-2 pints (500-1,000mls) of waste to the *colon* per day. The colon, or *large bowel* is the waste processing part of the system (Figure 2). This waste is the consistency of thick pea soup when it enters the beginning of the colon. It is the job of the colon to absorb fluid from this waste and, as it moves around the colon, to gradually form it into *stools (*also called *faeces* or *bowel motions).* Stool consistency can vary between hard lumps to very loose or mushy, often depending how long the stools have been in the colon and how much water has been absorbed from them. Ideally stools should be formed into soft smooth sausage-shapes which are comfortable to pass.

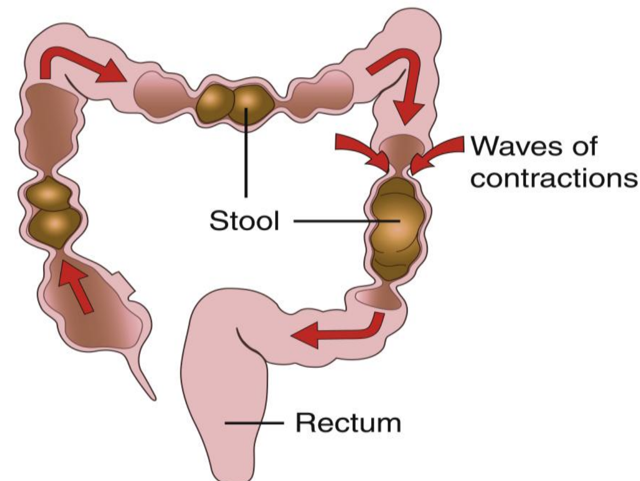
Figure 2: The large bowel



The left side of the colon and the *rectum* are the "storage tank" at the end of the large bowel. Normally the rectum is relatively empty. Some stool enters the rectum fairly regularly, but most arrives as a result of *mass movements*, which happen from

time to time, especially before the need to go to the toilet is experienced. These mass movements are major waves of pressure, which can move stools through the whole length of the colon, like toothpaste being squeezed along a tube (Figure 3). Often a large part of the contents of the colon arrives in the rectum at once.

Figure 3:



These mass movements are often triggered by the *gastro-colic response.* Food arriving in the stomach when you eat a meal sets off a pressure wave in the colon some minutes later. This can lead to the need to empty the bowel, sometimes urgently, soon after eating. For many people the bowel is relatively quiet at night. The first meal of the day, together with the physical activity involved in getting out of bed and washing and dressing, stimulates contractions in the colon and mass movements. This leads to an "urge", the feeling that the bowel needs emptying, shortly after breakfast.

Food usually takes an average of one to three days to be processed and up to 90 per cent of that time is spent in the colon.

How often should I empty my bowels?

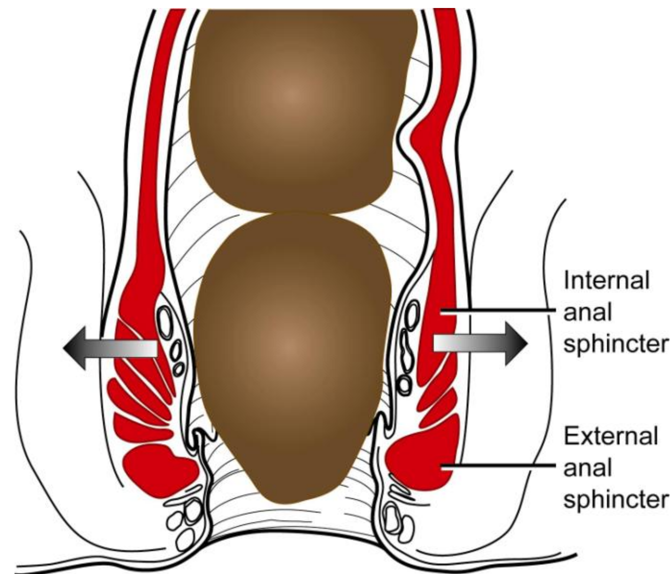
There is no right or wrong answer to this. There is a very wide range of "normal" bowel function between different people. It is by no means essential to have one bowel action per day, and indeed it is probably a minority of the total population who has this. Some people always go several times per day; others have several days between bowel actions.

Perception of what is normal is based on personal experiences and growing up with other people. Most of us do not discuss bowel habit with our friends, or even our family. A few people become obsessed with the need for a daily bowel action and spend excessive amounts of time in the toilet or take laxatives to achieve this. Often this is unnecessary.

Normal bowel emptying

When a stool enters the rectum the internal anal sphincter muscle automatically relaxes and opens up the top of the anal canal. This is normal and allows the stool to enter the upper anal canal to be "sampled" by the very sensitive nerve cells in the upper anal canal (Figure 4). People with normal sensation can easily tell the difference between wind (gas, also called *flatus*), which can safely be passed if it is socially convenient without fear of soiling, *diarrhoea* (very loose or runny stools needing urgent attention and access to a toilet) and a normal stool. Most people just know that stool is in the rectum without really having to think about it.

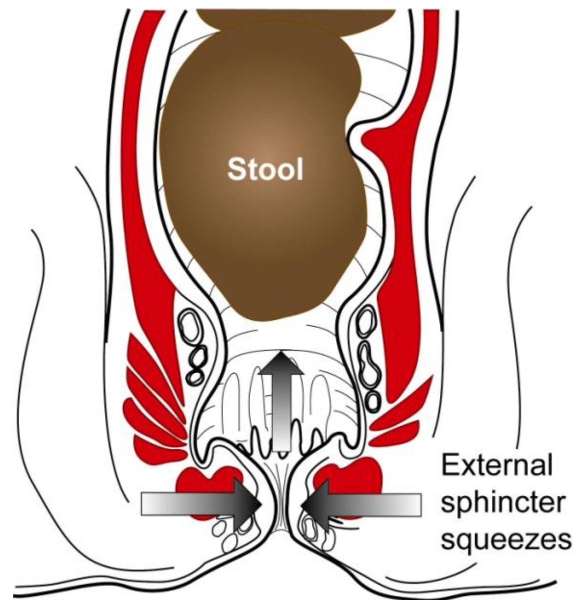
Figure 4: Internal sphincter relaxation when the rectum is full



Around the internal anal sphincter is the *external anal sphincter,* which is much thicker. This is the muscle around the anus that you can deliberately squeeze. Just like the muscles in the arm or leg, a person can decide when to use this muscle.

If a normal stool is sensed and it is not convenient to find a toilet at that moment, bowel emptying is delayed by squeezing the external anal sphincter. Squeezing the external sphincter ensures that the stool is not simply expelled as soon as it enters the rectum, and in fact the stool is pushed back up out of the anal canal (Figure 5). For most people this is not a deliberate action - you should not need to think, "I must squeeze my anal sphincter muscles so that I do not have a bowel action" - but this is actually what you do, without really thinking about it.

Figure 5: Delaying bowel emptying



This external sphincter squeeze does not need to last all the time until the toilet is found. Stools are propelled back into the rectum, and the rectum relaxes and so the urge to empty the bowel is resisted and wears off.

For most people, an urge to empty the bowel is felt, but if the time and place are not right, it is possible to delay bowel emptying, and the feeling of needing to go wears off very soon. Most people can then forget about the bowel for a while, and some can put off bowel emptying almost indefinitely, but may get reminders that the bowel is full at intervals until it is emptied. Continually resisting the urge to empty the bowel or ignoring the call to pass a stool can lead to constipation, as the longer the stools stay in the colon and rectum, the more fluid is absorbed and the harder the stools become.

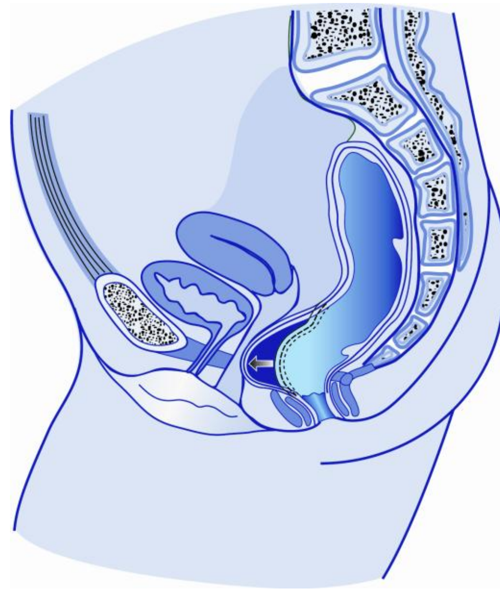
As you can imagine, this is a delicate system and unfortunately there are many things that can go wrong with it.

What are the possible causes of constipation?

Anatomical problems

1. **Rectocoele** – a bulging of the rectum, most commonly found in women who have had a baby by vaginal delivery or women who have strained repeatedly because of heavy lifting or constipation. In these women the rectum bulges forward into the vagina and stool can get trapped in the bulge.

Figure 6: Rectocoele



2. **Hirschsprung's disease** – this is a very rare condition where the lower part of the bowel lacks the proper nerve supply required to propel stools along. This is usually diagnosed in babies soon after birth.

3. **Megacolon or megarectum** – a rare condition with a large dilated bowel.

4. **Nerve disease or injury**. Some people with major nerve problems such as a spinal cord injury, multiple sclerosis or Parkinson's disease experience constipation. Just because the nerves are damaged does not always mean that symptoms cannot be improved.

5. **Autonomic nerve problems** – this is exceptionally rare with a generalised nerve problem of the bowel. This group of patients can also have bladder problems.

Functional problems

1. **Medications** – constipation is a side-effect of a wide variety of prescribed and over the counter medications. The main offenders are painkillers such as codeine, which is found in some common over the counter preparations. Others include iron tablets, and some medicines used to treat heartburn, high blood pressure, depression and heart problems.

2. **Pregnancy, and after childbirth** – the gut slows down during pregnancy, related to hormone levels, and as the uterus grows larger there is the additional factor of the extra volume in the pelvis. New mothers may find that they cannot respond to the urge to open the bowels and they then run into problems through a lack of routine.

3. **Following an operation** – the painkillers given after surgery often cause constipation by slowing down the bowel. After an abdominal operation the abdomen may be too painful for you to want to push. Food intake may also be erratic or even non-existent. Some major pelvic operations (*not* routine hysterectomy) can lead to damage of the pelvic nerves.

4. **Eating disorders** – patients who fail to eat regularly cannot expect a regular bowel action. The extreme examples of this are patients with anorexia nervosa or bulimia, whose gut may fail to fully recover even after normalisation of the eating behaviour.

5. **Lifestyle and bowel habits** - it is possible to train the gut to slow down. People sometimes feel unable to open their bowels at school or in their workplaces. Others even feel inhibited in their own homes. Over the years, their gastrointestinal tract gradually slows down and they become constipated.

6. **Psychological disturbances** – constipation is common in patients who have experienced major stressful events in their lives. This might be the death of a loved one or almost anything else that has led to depression or anxiety.

7. **Sexual or physical abuse - i**t is also surprisingly common to encounter patients who have been sexually or physically abused in some way in their childhood. This group of patients are often found to have incoordination between the rectum and anus. As the rectum contracts to expel the stool the anus contracts to retain it. It's a bit like keeping the lid of the toothpaste on when you are trying to squeeze the toothpaste out. Patients with this history of a traumatic childhood also often have a slowing down of gut transit.

8. **A fear of pain** on passing a stool can lead to constipation. This pain may be the result of an anal problem such as haemorrhoids (piles) or a fissure (split in the anal lining).

Obviously there are aspects of constipation that we do not fully understand. Women often have changes in their bowel habit which relate to their menstrual cycle. Some people get either more frequent stools or more constipated on holiday. This may be related to relief of stress or may be due to having to share toilet facilities, being away from your usual routine or a change in time zone, diet or fluid intake.

Complications of constipation

A large number of patients with constipation get abdominal bloating and discomfort. Patients often complain of tiredness and fatigue, although there is no clear evidence of anaemia or build up of supposed gut “toxins”. Pain and vomiting are rarer complaints.

It very uncommon for the young and fit to get serious complications from constipation. However **elderly or malnourished** people may develop problems including:

Faecal impaction – this is a condition in which a solid ball of stool builds up in the rectum. This can present with diarrhoea as only liquid stool can make its way past the obstructing stool. It is most often seen in people who are unable to move around easily and those who are taking lots of medications.

Stool perforation – this is an **exceptionally rare** condition where a hard stool sits in the colon for so long that it wears through the wall and surgery becomes necessary.

Rectal prolapse – this means that the rectum comes down out of the back passage. This may be a complication of constipation or of generally weak pelvic floor muscles, either due to advanced years or malnutrition.

There are many who believe that haemorrhoids (piles) are a complication of constipation. However, haemorrhoids are more common in young men than young women and constipation is less common in men. It is true however that sitting on the toilet for long periods of time can aggravate haemorrhoids.

What investigations are needed for constipation?

The decision to do various investigations will be based on factors such as symptoms, family history and age. Investigations may include:

Colonic investigations: your doctor may decide to look at your colon or part of your colon to see if there is a cause for your symptoms on the bowel lining. These may include a flexible sigmoidoscopy or colonoscopy or more rarely a barium enema. These tests are generally extremely safe, with only a very small risk of damage to your bowel.

Anorectal physiological testing: this test takes about 15 minutes and looks at the way the muscles and nerves of the rectum and anus are working. There is a separate information leaflet about this test so that you are fully informed about what to expect.

Transit studies: this test gives a measure of whether or not the passage of food through the gut (colon) is slow or normal. You must stop your laxatives, suppositories and enemas for the duration of this test. Your doctor will also want to know how many times you open your bowels during the test time, so you will need to keep a record of this. The test itself is simple – you will be asked to swallow some capsules (containing tiny “markers” that show up on x-ray) and then have an x-ray of your abdomen a few days later. The distribution of the markers in your colon shows whether your bowel transit is normal or slow. Normal transit of contents from the mouth to the anus is less than 72 hours for the majority of patients.

Dynamic MRI defaecography: this is a sophisticated test which avoids exposure to x-rays. A jelly is inserted into the rectum and then images are taken. These show the structure of the rectum in relation to the pelvic floor and the surrounding organs. Studies are performed at rest and then as you bear down.

Defaecating proctography: this involves insertion of a paste into the rectum, with x-rays being taken whilst the paste is passed from the rectum. The test shows the shape of the rectum and how it empties, including the presence of a rectocoele or rectal prolapse.

What treatments are available?

1. Lifestyle

It is important to try to make time for your bowels each day. Most bowels respond best to a regular habit. About 30 minutes after eating is the most likely time for the bowel to work. This is because of the “gastro-colic response” which means that eating sets waves of activity in motion in the bowel. Try not to rush going to the toilet. If you have a tendency to be constipated, set aside about 10 minutes in the toilet. Preferably this should be at a time when you are not rushing to do other things. Find a toilet that you feel comfortable to use and where you do not feel inhibited by lack of privacy or time.

Sport and exercise improve bowel habits in some people. If you lead a very inactive lifestyle (driving to work at a desk job) even taking a regular walk at lunchtime can make a difference. You can also try your own toilet exercises if you want to avoid a formal retraining program supervised by a therapist [Appendix A].

2. Diet and fluids

Eating regularly is the best stimulant for your bowels. Skipping meals, especially breakfast, can lead to a sluggish or irregular bowel habit. Contrary to popular belief a high fibre diet is not always the best diet for the constipation sufferer. Regular meals and an adequate fluid intake are the main aims.

Too much fibre can lead to an increase in bloating and discomfort, especially for people with slow gut transit. If you do feel your diet is short on fibre try to use fruit and vegetables (soluble fibre) rather than cereals (insoluble fibre) as they are less bloating. Some foods can act as natural laxatives in some people [Appendix B].

Try to drink at least eight to10 mugs of fluid a day. However, excessive fluid intake may make you feel more bloated and is unlikely to improve your bowel function further. Too much caffeine (coffee, tea and cola) can be dehydrating, as can too much alcohol.

3. Medications

If you are taking any medicines (prescribed or bought from the chemist) ask your doctor or chemist if they could be adding to your constipation. If possible, try to remove constipating medications.

If really necessary, try using a fibre supplement such as fybogel and possibly suppositories or mini-enemas to help regularise the bowels. It is best only to use

these as an aid to getting into a regular routine, rather than relying on them long-term.

Laxatives

The use of laxatives should usually be confined to people:

- who have only very occasional episodes of constipation.
- who need laxatives to counteract a short-term constipating medication.
- who need to avoid straining (e.g. angina sufferers)
- who are in hospital.
- with an anal condition which needs soft stools for the healing period.
- undergoing a radiological or surgical procedure.
- who are severely or terminally ill.

It is common for patients to come to clinic and say: “I tried this laxative and it worked well to start with but then it stopped working so well.” They try another and another and another and it’s the same story every time. The nature of long-term laxative use is that the bowel becomes progressively less responsive to all these agents, meaning that increasing doses are required.

There is no convincing evidence that the colon is permanently damaged by long term laxative use, and in particular there is no increased risk of bowel cancer caused by laxatives. Nevertheless, these are not drugs that should be considered harmless. Some laxatives such as Senna stain the insides of the bowel and this can be seen at colonoscopy (examination of the lining of the colon). The fact that a product is “natural” does not mean that it is necessarily “good for you”. Laxatives can cause significant loss of minerals from the bowel, and uncontrolled long-term use can result in changes in the body’s chemistry, especially in older people and those who are unwell. The more you take laxatives, the less likely it is that the bowel will work on its own. This does not mean that you cannot stop taking laxatives once you have started, but it can take a while for the bowel to start working on its own again.

Suppositories or mini-enemas

Whilst the idea of inserting a suppository or enema may not appeal to all, it is important to bear in mind a number of advantages.

- Their action is more predictable than that of laxatives, without the tendency to cause diarrhoea.
- They can encourage a more regular bowel action especially if taken at the same time of day, every day, every other day or once every three days.
- There are generally well-tolerated – they are acting locally just like a nasal spray taken for hayfever or inhalers for asthma. Since there is minimal absorption into the body, there is low potential for side-effects.

They must be inserted into the rectum for maximum effect. You can get a supply of gloves from your chemist. Suppositories and enemas work by causing contraction of the rectum, softening the stool in the rectum and by causing the bowel higher up to contract.

4. **Biofeedback**

This is a bowel retraining programme run by therapists who are usually nurses or physiotherapists. Advice on diet, toileting habits and access to acceptable facilities is reviewed. Patients are shown how the muscles and nerves can be retrained to co-ordinate and produce a satisfactory effort to empty the bowel. The therapy may involve four to five one-to-one sessions between the patient and therapist.

5. Surgery

This is needed in only a very small minority of pepole. There are women who benefit from a repair of a rectocoele. Rectal prolapse may also require an operation.

The results of removal of all or part of the colon to improve bowel function are often poor. About a tenth of patients return quickly to their previous levels of constipation, and a third have incapacitating diarrhoea, some with a degree of incontinence. Approximately one in ten who have part of the colon removed will end up with a stoma (bowel brought out to the skin to discharge bowel contents into bag) either because of severe symptoms that cannot be controlled, or as a result of the failure of previous surgery.

Appendix A

Ideas to ensure that you have the best chance of passing a stool

- Try to go to the toilet at a regular time or times every day. This may follow breakfast or a coffee.
  Take your time. Try to ensure that you will have about 10 minutes without interruption.
- Firstly make sure you are comfortable on the toilet. It is most natural for humans to squat to pass a stool. You may find that having your feet on a footstool about 20-30 cm (8-10 inches) high helps by improving the angle of the rectum within the pelvis, making it easier to pass stools. Keep your feet about 1.5 - 2 feet apart.
- Relax and breathe normally. Do not hold your breath as this will encourage you to strain.
- Using your abdominal muscles effectively is best done with one hand on your lower abdomen, and one on your waist. As your abdominal muscles tighten you should feel your hands being pushed out forwards and sideways. This is called ‘brace’ or ‘brace and bulge’.
- Concentrate on relaxing the anus to allow the stool to pass. Do not push from above without relaxing the anus below.
- Do not adopt any “weird and wonderful” positions – this will not help you in the long-term.
- Do not spend endless time on the toilet straining. If the bowels do not open - do not panic - try again at the same time the next day. It may not be normal for you to pass a stool every day.

Appendix B

Examples of foods which can act as natural laxatives for some people

- Prunes / prune juice
- Figs / fig juice
- Molasses
- Liquorice
- Chocolate
- Coffee
- Alcohol (within recommended limits!)
- Spicy food / curry

Add your own list of foods that you think may help you:

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What should I do if I want further information?

Please call Rana Hospital's clinical support staff at helpline: 098141-28667.

Contact details

Rana Hospital, Sirhind, Punjab (India)
Phone: 01763-220067
Email: ranapiles001@yahoo.in
www.ranapileshospital.com

Author: Rana Hospital

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