How does the digestive system work?

The digestive system is essentially a very long tube that stretched from the back of the mouth to the anus. When we eat, food passes down the oesophagus to the stomach, squeezed by regular contractions – this is called peristalsis. When the food reaches the stomach, it is broken down into a mushy liquid called chyme by acids and enzymes. The chyme then passes into the small bowel, which is about 2 metres (7 feet) long in newborn babies and grows to about 6 metres (20 feet) long by adulthood.

It is made up of three parts. The first section is called the duodenum which is connected to the stomach. The next section is the jejunum which makes up about one third of the entire length of the small bowel. The last and longest part of the small intestine is called the ileum which leads to the large bowel or colon.

The small intestine is where all the goodness from our food is absorbed into the bloodstream. The remainder that cannot be used passes into the colon, where water is absorbed to form solid faeces or poo. This passes out of the rectum and anus.

Bowel incontinence

This information sheet from Great Ormond Street Hospital (GOSH) explains why bowel incontinence (encopresis or soiling) can occur in toilet-trained children and young people. It also gives suggestions for treatment and strategies to try at home to improve the situation.
What is bowel incontinence?

Bowel incontinence is the term used to describe leakage of faeces or poo from the anus in between bowel movements. It may also be referred to as soiling and in children, encopresis, although this term is not commonly used now.

There are different types of bowel incontinence:

- **Overflow incontinence** – If a child ‘holds on’ to avoid using the toilet, poo builds up in the rectum and gradually hardens. Runny poo can squeeze around the hard poo and may leak out, sometimes when coughing or sneezing or passing wind. This may be confused with diarrhoea.

- **Urge incontinence** – A child is aware that they need to have a poo but the urge is sudden and they may not have time to get to a toilet.

- **Passive incontinence** – A child is not aware that they need to poo so soils without realising it.

It is a very common problem in children and young people but also affects some adults as well. It often occurs during the daytime and may start as an occasional ‘accident’ but without treatment can occur more frequently.

Why does bowel incontinence occur?

Bowel incontinence can occur for a number of reasons:

- **Constipation** – This is the most common cause of bowel incontinence. Poo may harden and become more painful to pass, which may lead to reluctance to go to the toilet because it will hurt. Overflow incontinence can also occur as a result of constipation.

- **Anal fissure** – This is a tiny tear in the skin around the anus, often causing by the area being stretched by a large poo. It can be uncomfortable and can bleed a little when pooing. As it is painful, children may be reluctant to poo.

- **Physical problems with digestive system** – If a child had bowel surgery when they were younger, for instance, to treat Hirschsprung’s Disease or an anorectal anomaly, the ring of muscle around the anus (anal sphincter) may be too tight to poo comfortably or too loose to hold in poo.

- **Physical problems with the nerve supply** – For instance, in spina bifida, there may be problems with the signals travelling to the brain when a child needs to poo.

- **Disabilities** – Children with physical disabilities or learning disabilities may take longer to toilet train so may have accidents occasionally until they learn to control their bowels.

How is bowel incontinence diagnosed?

Initially, your family doctor (GP) may be able to help – they may feel your child’s abdomen to see if they can feel any bloating and examine your child’s anus and rectum by inserting their finger. If there is still doubt as to the cause of bowel incontinence, they may refer your child to hospital for further tests, which may include:

- **Contrast (barium) enema** – The doctor will pass a thin, soft, plastic tube into your child’s anus, which is then taped in position. The contrast liquid is then slowly introduced into the tube, so that it flows into the large intestine. X-ray pictures are taken while the liquid moves through the large intestine as far as the appendix.

- **Colonoscopy** – This is an examination of the large bowel (colon) by inserting a flexible plastic tube containing a camera and light into your child’s anus and passing it up through the rectum into the first part of the colon. They can also take small samples of bowel tissue (biopsies) to check the structure of the bowel wall.

- **Manometry** – This is a test to measure how well the muscles and nerves in the rectum and anus in your child’s bottom are working.
to push out faeces (poo). The doctor will insert a catheter (flexible plastic tube) into your child’s bottom and pass it up into the rectum. The other end is attached to a machine which measures how well the muscles and nerves are working. A small balloon on the end of the catheter is then inflated gradually, which mimics poo in the rectum. The machine will record the reaction of the nerves and muscles in your child’s rectum and anus when this happens. Further information about all these tests is available on our website at www.gosh.nhs.uk/medical-information-0/procedures-and-treatments.

How can it be treated?

There are plenty of options for treating bowel incontinence. Your doctor will discuss which one(s) are most suitable for your child.

**Diet and fluids** – A well-balanced diet with plenty of fluids can help to reduce constipation. In turn, this softens the poo so it is easier and less uncomfortable to pass. Ask for a copy of our information sheet Keeping your child’s bowels healthy for further details.

**Laxatives** – Your doctor may suggest trying a laxative medicine to treat constipation. These come in various formats, including special formulations for children, and should be taken regularly. There are two main types of laxatives: osmotic laxatives and stimulant laxatives, which may be used together. Osmotic laxatives work by drawing fluid into the bowel so that it makes the poo softer and easier to pass. Stimulant laxatives encourage the bowel to push out the poo. Your doctor may suggest keeping your child on laxatives for a while after their constipation has improved to make sure that their poo remains soft and easy to pass.

**Biofeedback therapy** – This concentrates on the pelvic floor muscles, which are vital for successful bladder and bowel function. Biofeedback works by measuring and displaying body functions on a computer screen, so a number of sticky pads (electrodes) are put on your child’s abdomen and buttocks. These are connected to the computer using long wires and measure your child’s pelvic floor muscle function.

**Bowel washouts** (or anal irrigation) – If your child has been constipated for a while, they may need a bowel washout to empty the bowel before treatment can start. A bowel washout involves inserting a flexible plastic tube into the anus and rectum and then using gravity to allow tepid salt water solution to flow into the bowel to soften the poo and wash it out. This can also be used every so often to keep the bowel clear.

**Antegrade colonic enema (ACE)** – This tends to be suggested for children with a longer term problem with constipation due to a physical problem. During an operation under anaesthetic, the surgeon creates a channel (usually using the appendix) into the large bowel at a point called the caecum. The fluid used to wash out the bowel can then be inserted easily. This fluid flushes the poo out through the rectum in the usual way.

Further information about all of these options is available from the Urodynamics Unit and Stoma Care team or on our website.
Strategies to try at home

As well as treatment from your doctor, there are several strategies you can try at home to reduce your child's soiling.


- **Talk to your child** – If they seem unhappy to poo anywhere apart from home, find out why they feel like this. If accidents seem to happen when they are at school, they may be scared to use the toilet at school for some reason.

- **Get into a routine** – Help your child to get into a toilet routine – the most important thing is not to rush. You could try putting your child on the toilet for 20 minutes or so after meals. There will be times of day when your child's bowels will open – teach them to listen to their body and go to the toilet when they need to – holding in poo can cause problems.

- **Try not to get upset** – Accidents will happen and getting cross will not help. Try to focus on positive behaviour, perhaps using a reward system for each day without soiling. It is also important to be a positive role model for your child, perhaps getting into a bowel routine as well.

- **Exercises** – The same muscles (pelvic floor muscles) that support the bladder, also play a part in bowel control. There are a number of exercises you and your child can do to strengthen their muscles. Ask for a copy of our Pelvic floor exercises information sheets for further details.

- **Cards and keys** – While your child has problems with bowel control, you could order a Can’t wait card from the Bladder and Bowel Foundation. This is a card you can show to access a toilet in a hurry, such as in shops and restaurants. If your child has a disability or health problem that makes bowel control difficult, you could request a RADAR key from the same organisation.

Further information and support

If you have any questions about bowel incontinence, please call the Urodynamics Unit on 020 7405 9200 ext 5916 or 5917 or the Stoma Care team on 020 7405 9200 ext 5965.

**ERIC** – the children’s continence charity – produces lots of helpful booklets on all aspects of managing bladder and bowels. Call their helpline on 0845 370 8008 or visit their website at www.eric.org.uk

**The Bladder and Bowel Foundation** can also offer information and support. Call their helpline on 0845 345 0165 or visit their website at www.bladderandbowelfoundation.org.

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Compiled by the Urodynamics Unit and Stoma Care team in collaboration with the Child and Family Information Group.

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