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Northamptonshire Healthcare
NHS Foundation Trust

CONSTIPATION MACROGOLS AND DISIMPACTION

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MAKING A DIFFERENCE FOR YOU, WITH YOU

WHAT IS CONSTIPATION?

Constipation is the most common bowel problem in children. It is the inability to do a poo regularly or to completely empty the bowel. It can start at any age (including babies) and affects up to 30% of all children (Tabbers & Benninga, 2015. Constipation in children: fibre and probiotics). It's particularly common among toddlers and pre-schoolers.

Constipation can be very uncomfortable and distressing for a child and difficult for the family to deal with.

A child is constipated if they poo less than four times a week.
EIC.co.uk

You can watch a video on childhood constipation and using macrogol laxatives effectively from ERIC: youtu.be/9WqxJqLmKao
(This video can also be found on ERIC.co.uk and www.bbuk.org.uk)

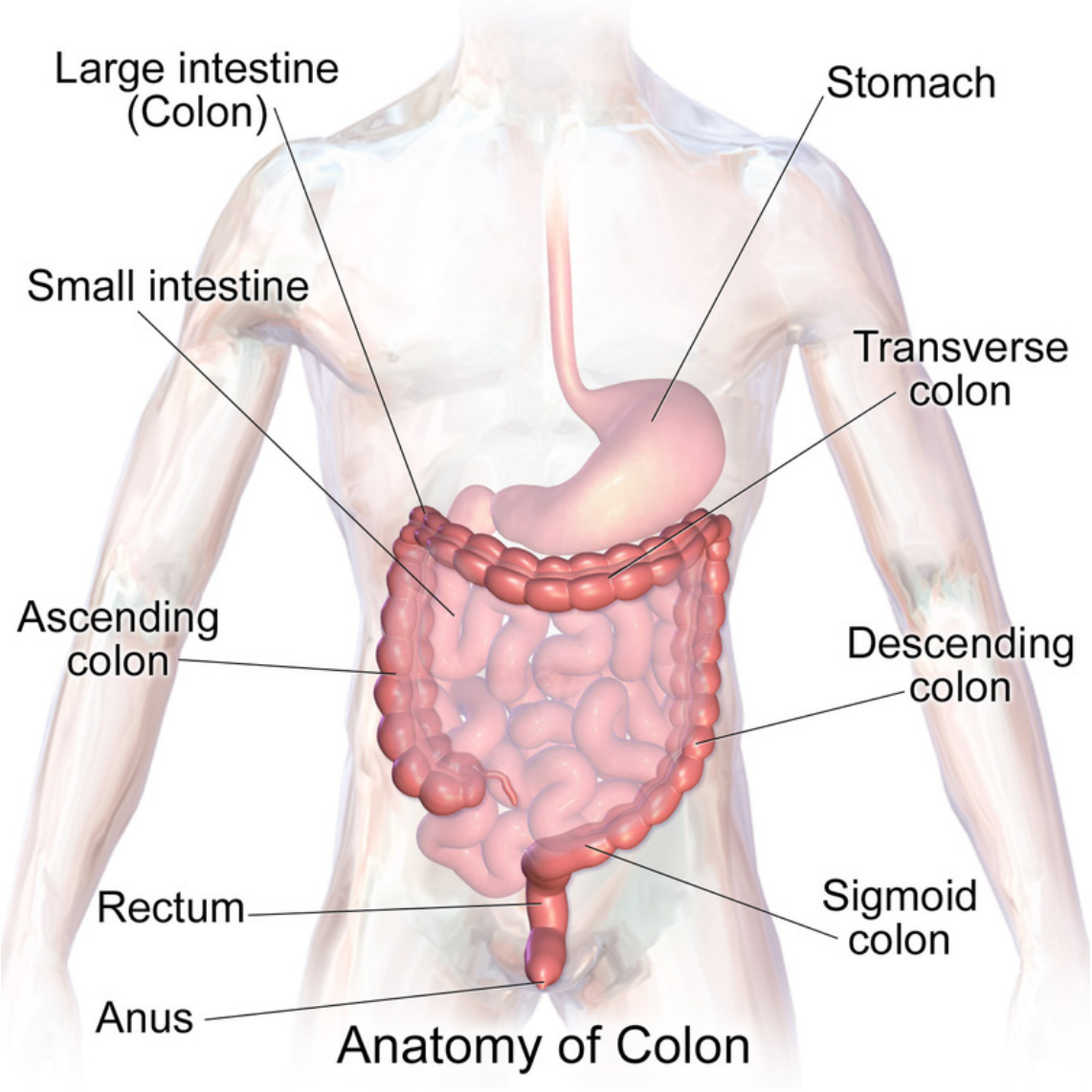

Image sourced from ERIC.org.uk

HOW DOES THE BOWEL WORK?

To explain why your child is having poo problems, it helps to understand how the bowel works.

FOOD GOES IN

The food we eat gets chewed into little pieces which are easy to swallow. When it enters the stomach, the food is mashed up even more and is turned into a soupy mixture. This then passes to the small bowel (or small intestine) where the nutrients are taken out and used by the rest of the body.

WASTE IS PRODUCED

The waste liquid - watery poo - then goes further down the digestive system to the large bowel (or large intestine). The large bowel has strong muscles which squeeze the poo along. The body absorbs water as the poo is squeezed along, so that it turns into a soft, smooth, sausage-shaped poo.

POO REACHES THE RECTUM

When the poo reaches the rectum, the lowest part of the bowel, the rectum stretches and a message is sent to the brain saying you need to do a poo.
A child with a healthy bowel can pass soft poos (Type 4 on the **Bristol Stool Form Scale**) at regular intervals without pain or discomfort at least four times a week.

b&b

Bristol Stool Chart

Since it can be hard to state what is normal and what is abnormal, some health professionals use a scale to classify the type of stool passed. This helps assess how long the stool has spent in the bowel.

Type 1 has spent the longest time in the bowel and type 7 the least time. A normal stool should be a type 3 or 4, and depending on the normal bowel habits of the individual, should be passed once every one to three days.

Type 1 	Separate hard lumps, like nuts (hard to pass)
Type 2 	Sausage shaped but lumpy
Type 3 	Like a sausage but with cracks on the surface
Type 4 	Like a sausage or snake, smooth and soft
Type 5 	Soft blobs with clear cut edges (passed easily)
Type 6 	Fluffy pieces with ragged edges, a mushy stool
Type 7 	Watery, no solid pieces, entirely liquid

Image reproduced by kind permission of Dr K Heaton, Reader in Medicine, University of Bristol.

Image sourced from Bladder and Bowel

WHEN THINGS GO WRONG...

If a child doesn't act on their body's signal that they need to do a poo, maybe because they've experienced a painful poo in the past, poo can build up in the large bowel. The longer the poo stays there, the more water is absorbed, and the harder and bigger the poo gets.

If the poo stays in the rectum, the rectum stays stretched, and the 'I need a poo!' message is no longer sent to the brain. So, your child might have no idea that they need to do a poo!

SOILING

Meanwhile, more liquid poo from higher up the bowel can leak around the hard lumps of poo and might even leak out of the child's bottom – this is called **soiling or overflow**. This poo might be runny, so you might think your child has diarrhoea, or it might be hard little bits, or both.

EARLY IDENTIFICATION IS IMPORTANT

It's easy to miss the signs of constipation, so the condition is often left untreated, misdiagnosed, or not treated properly. It's important to deal with constipation early to prevent the child from suffering unnecessarily and to stop it developing into a more serious problem possibly requiring treatment in hospital.

In England alone, there are 15,000 hospital admissions for paediatric cases of chronic constipation and urinary tract infections each year, 80% of which could be avoided, according to the **National Institute for Health and Care Excellence (NICE)** (www.NICE.org.uk)

For most children, constipation can be successfully treated. However, in some cases it can be a long and difficult journey; the child may need on-going support from health professionals and a lot of patience and encouragement from parents and carers.

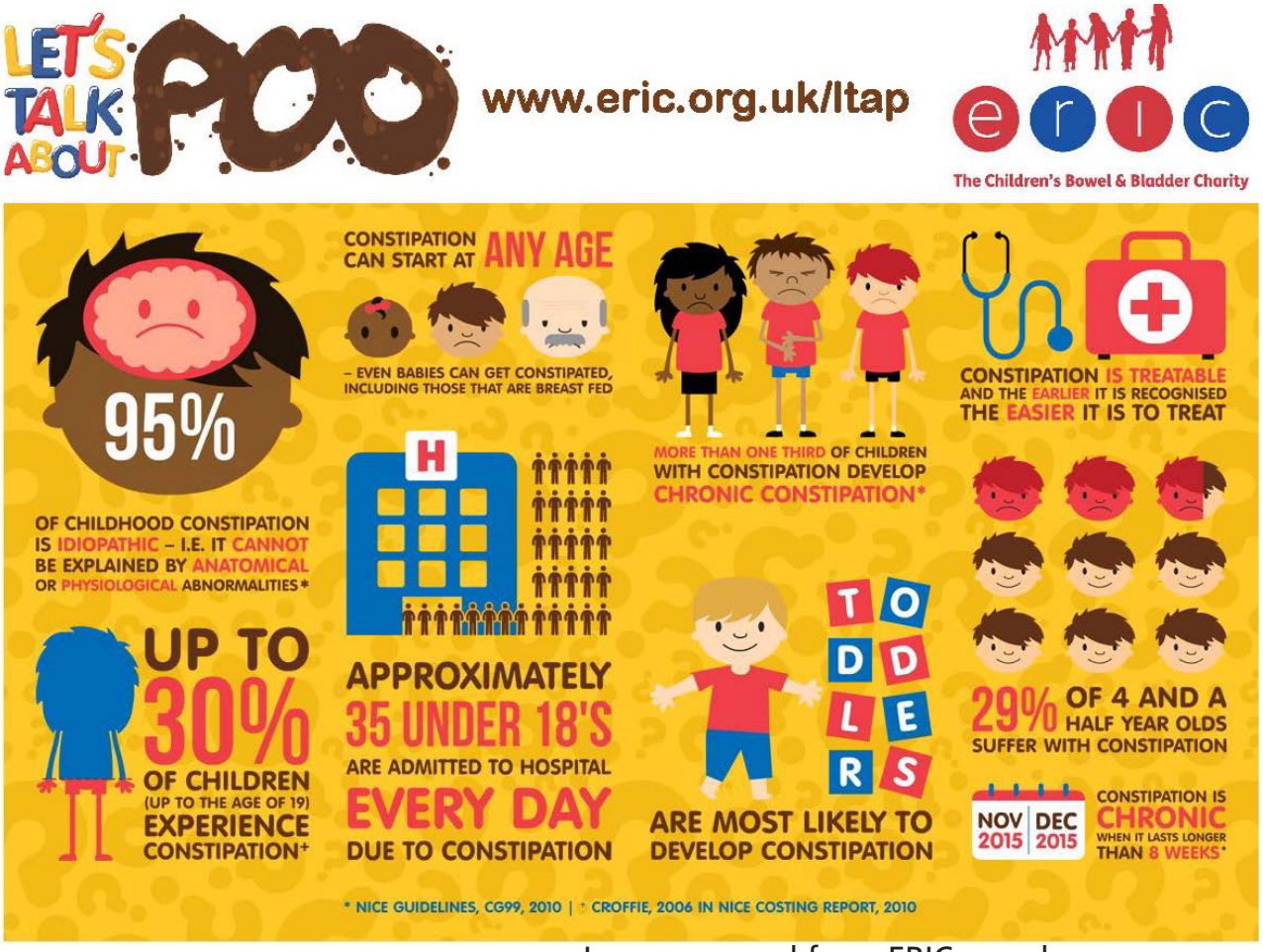

Image sourced from ERIC.org.uk

SIGNS OF CONSTIPATION

Some children avoid going to the toilet to do a poo. This is called **stool withholding**. Your child might cross their legs, sit on the back of their heels, clench their buttocks and generally be fidgety to resist the need to poo.

The poo gets bigger and harder the longer the child holds it in. Eventually, when they absolutely must go, it is very painful and difficult to pass.

Your child might start withholding stools for several reasons:

- If they've had a bad and possibly painful pooing experience before.
- If they have a sore bottom or anal fissure (a tear in the anal canal) which makes pooing very painful.
- If they do not want to use unfamiliar or unclean toilets and prefer to hold on until they get home.

CRYING WHEN POOING

A child who cries when they poo might be trying to pass a large, hard poo. Straining and forcing out a large poo can cause anal fissures, which can make pooing even more painful.

POOING IN PANTS / SOILING

Severe constipation can cause **faecal impaction** – when a very big poo or build-up of poo gets stuck in the rectum, the lowest part of the bowel.

Faecal impaction causes the rectum to stretch and the sensation of needing the toilet is reduced. When stretched, the rectum becomes floppy, making it more difficult to pass a large poo.

Impaction can lead to faecal soiling or overflow, where small bits of poo break off into the child's pants or soft, sometimes runny poo leaks around the large blocked mass in the rectum. Soiling is often mistaken by parents for diarrhoea.

A child who soils shouldn't be seen as lazy; they have no control over it, can't feel it and often don't smell it either.

Other signs of constipation to look out for:

- pooing less than four times a week or more than three times a day
- regular and foul-smelling wind
- foul-smelling poo
- a painful tummy or bottom
- a distended (i.e. swollen or bloated) tummy
- hard poo or runny poo (without associated vomiting)
- poor appetite
- lack of energy
- unhappy, angry or irritable mood
- day or night time wetting
- urinary tract infection.

HOW TO HELP TO PREVENT CONSTIPATION IN CHILDREN

1. **Drink plenty**
   The most important way to maintain healthy bowels is to drink lots of fluids. Keeping well hydrated ensures poo stays soft and easy to pass.

   Children should have at least 6-8 drinks a day, preferably of water or a water-based drink like well-diluted fruit juice or squash. 2-3 drinks of milk a day are fine as part of a balanced diet.

   The size of the drink will vary depending on their age: a 120-150ml cup is about right for a two year-old and a 150-175ml cup for a four to five year-old. Avoid drinks containing caffeine like tea, coffee and cola, and sweetened and fizzy drinks.

AGE	ADEQUATE INTAKE DEFINED BY EUROPEAN FOOD SAFETY AUTHORITY (TOTAL WATER, FROM FOOD + FLUIDS)
0-6 months	100 to190 mL/kg/day
6-12 months	800 to 1000 mL/day
1-2 years	1100 to 1200 mL/day
2-3 years	1300 mL/day
4-8 years	1600 mL/day
9-13 years	2100 mL/day for boys 1900 mL/day for girls
From 14 years onwards	The same as adults: 2600 mL/day for boys 2000 mL/day for girls

ERIC.co.uk

2. **Eat a balanced diet**
   Having a balanced diet that includes fibre from fruit, vegetables, cereals (like oats, wheat and bran) and wholemeal bread also keeps the bowels healthy. Fibre helps to retain fluid in the poo, keeping it soft and easier to push out.

3. **Keep active**
   Exercise sends blood to the gastrointestinal tract which helps move food waste through the bowels quickly and easily. Running around and playing will help keep the bowels healthy.

4. **Get into a good toileting routine**
   Children who have poo problems often have trouble knowing when they need to go to the toilet so it's important to get them into a good toileting routine.

   This should involve sitting on the toilet at the same times each day, ideally 20 minutes after each meal for 5-10 minutes. This makes the most of the natural squeezing that happens after eating. Your child should also go to the loo before bed.

   Explain constipation to your child: This will help them to understand what's going on in their body and what needs to happen for them to get better.

   You can take a look at the ERIC Poo and Wee section and also have a go at playing their poo game which can be found here: **letstalkaboutpoo.eric.org.uk/**

   Get into position: When they're sitting on the toilet, make sure your child's feet are firmly supported flat on a box or stool. Knees should be above the hips in a secure position. You might need a children's toilet seat or family toilet seat to help with this. Your child should lean forward slightly, rest their elbows on their knees and gently push out their tummy.

   Make it fun! We need to relax to let the poo out, so distracting your child with toys, games and books whilst they're sitting on the toilet can help. Keep these ready by the toilet, so they can sit for 5-10 minutes at a time.

   Stay relaxed: Gently rocking forwards and backwards and massaging the tummy in clockwise circles can help.

   Help the bowel muscles to push down: Laughing, coughing or blowing can help with this. Try blowing bubbles – then it's fun too!

   Give lots of praise for sitting on the toilet regularly and getting into a good routine. Your child obviously won't poo every time they go, but they should be praised for trying. For some children, being rewarded for every small, achievable step can make all the difference, so have a 'goody bag' of little, inexpensive rewards or treats at the ready.

   Keep a poo diary: This will help you record the different types of poo your child is doing and the time of day they do them (ideally the poo should look like a smooth sausage – Type 4 in the Bristol Stool Form Scale). By keeping a close eye on your child's poo habits, you'll be able to spot the signs of constipation early - download ERIC's Poo Diary to help track your child's pooing.

   Be patient: It will take lots of practice to get the poo in the loo!

5. **Don't forget the bladder!** The bladder and bowels are closely related. If a child is constipated their bowel may be so full of stools that it presses against their bladder and causes bladder problems such as urinary tract infections (UTIs), urgency and frequency during the day, and bedwetting.

HOW TO TREAT CONSTIPATION

For most children, constipation can be successfully treated. However, in some cases it can be a long and difficult journey; the child may need on-going support from health professionals and a lot of patience and encouragement from parents and carers.
If your child is showing signs of constipation, you should take them to their GP, or school nurse as soon as possible. The quicker they're assessed by the doctor or nurse, the easier it will be to treat the problem, and/ or refer on to a Specialist Childrens' Continence Service.
If left untreated, constipation can become chronic, which is when it lasts more than eight weeks.

THE GP / NURSE ASSESSMENT

The GP or nurse will determine if your child has a poo blockage in their bowel by examining the abdomen. They'll ask some questions about your child's pooing patterns and do a general examination to rule out any underlying causes.

If underlying causes are found, your child will be referred to a specialist health professional for further tests.

If there are no underlying medical causes, this is called idiopathic constipation. The National Institute for Health and Care Excellence (NICE) recommends laxative treatment for idiopathic constipation that has lasted more than a few days (See NICE guidelines on constipation in children and young people).

The laxatives prescribed by the GP or nurse will help clear out your child's bowels of the built-up poo and help them start pooing regularly again. Depending on the age of your child and the severity of their constipation, they will need different types and strengths of laxative.

LAXATIVE TREATMENT

The NICE guidelines provide information on how to take laxatives correctly and explain how they clear out, or disimpact, the bowel.

Children's laxatives are normally in powder form which should be mixed with water and then added to drinks or food.

Macrogol laxatives such as Movicol Paediatric Plain work by getting more water into the bowel, which keeps poos soft and easier to pass. Stimulant laxatives such as Sodium Picosulphate, Bisacodyl, Senna and Docusate sodium encourage the bowel to push the poos out.

Children who don't have an impacted rectum will be prescribed a 'maintenance therapy' using a Macrogol laxative. If this doesn't get the poo moving, a stimulant laxative might be added.

If the rectum / bowel is impacted, higher doses of laxatives are needed which will fully clear out the bowel. You know the bowel is cleared out once the child passes pure brown water for three consecutive days.

Many parents worry that the laxatives make the soiling problem worse, but it's important that the blockage is fully cleared. Stopping the medication too soon can result in the

constipation recurring. After this, a smaller, daily maintenance dose of laxatives will be required. The aim of the maintenance dose is to prevent poos from building up again. If the maintenance dose isn't followed, and the stretched rectum is not allowed to gradually return to its normal size, your child might become constipated again.

Laxative treatment may need to be taken for several months and shouldn't be stopped abruptly. Some children might need it for several years and a minority will require long-term laxative treatment.

CHANGES TO DIET

You may need to make some changes to your child's diet alongside the laxative treatment to ensure they're getting enough fibre and fluids. For more information see our information on how to prevent constipation.

DEVELOPING A GOOD TOILETING ROUTINE

Children who have chronic constipation often have trouble recognising when they need to go to the loo. This is because they lose the sensation of needing to do a poo when the rectum is stretched.

In addition to the laxative treatment, you should get your child into a good toileting routine. Encourage them to sit on the toilet at regular times each day, ideally 20-30 minutes after a meal for 5 – 10 minutes. For more information look at our tips for establishing a good toilet routine, earlier on in this booklet.

A PARENT'S GUIDE TO DISIMPACTION

If your child has been constipated for more than a few days, your doctor or nurse might say that they need to follow a **disimpaction regime**. This means giving laxatives in sufficiently large quantities to 'clear out' all the accumulated poo.

It is important to follow their advice; if you give a standard dose of laxative it is likely to soften the poo but not stimulate the bowel to empty fully. This means that symptoms such as soiling may get worse rather than better!

NICE Guidelines recommend disimpacting with paediatric macrogol sachets as follows:

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	EACH DAY AFTER
Child under 1	½ -1	½ -1	½ -1	½ -1	½ -1	½ -1	½ -1	½ -1
Child 1-4 years	2	4	6	8	8	8	8	8
Child 5-12 years	4	6	8	10	12	12	12	12

Children over 12 years should be treated with the adult preparation – the macrogol is exactly the same but there is twice as much in the sachet:

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	EACH DAY AFTER
Children over 12	4	6	8	8	8	8	8	8

The macrogol sachets might be called Movicol, CosmoCol or Laxido. Ensure macrogols are prepared correctly – you can see the 'How to prepare macrogol laxatives' advice sheet which can be found here: **www.eric.org.uk/pdf-how-to-prepare-macrogol-laxatives**

The dose needs to be increased as above until all the backlog of poo is cleared. The only way to be sure this is achieved is to continue until your child is passing brown watery poo for three consecutive days. You may feel worried about giving such large doses, but if you follow the regime you will not hurt your child. Macrogol laxatives are not absorbed into the bloodstream but simply 'bind with' the water and deliver it to the large bowel, where it will soften and lubricate the poo and in stimulate a bowel action.

Some people prefer to speed up the disimpaction process by using a combination of laxatives – a macrogol and a stimulant. Stimulant laxatives increase the muscular squeezing of the bowel, speeding up evacuation. Because of the way they work, stimulant laxatives can cause abdominal cramps. The medicine prescribed might be called Senna, or Sodium Picosulphate,

or Bisacodyl – or there are others. Your doctor or nurse will tell you how much to use. Some doctors/nurses prefer to try disimpacting with macrogols first, but if the poo has still not reached the watery stage by the end of the first week then a stimulant is added.

Whatever laxative(s) is/are used, it is important to prepare yourself and your child and make sure they know what to expect:

1. **Lots of poo!** The purpose of disimpaction is to clear out the backlog of poo; the child may poo a large quantity all at once, or several small poos. If your child is still wearing nappies buy lots of nappies and wipes. If they use the toilet, warn other members of the family that the bathroom is going to be busy and stock up on toilet paper and moist toilet tissue.

2. **More soiling.** If your child is experiencing soiling (leaking poo into their pants) explain that this may well get worse to start with as first of all the poo will be softened, then evacuated.

3. **Possibly some abdominal discomfort.** If your child has a tummy full of poo, then whatever laxative is used they should expect some discomfort as the poo starts to move along the bowel. Plenty of reassurance will help, and maybe a dose of paracetamol.

Because of all the pooing and the possible discomfort, your child won't really be able to go to nursery or school during disimpaction. It may be that you can wait for the next school holiday. If not, you may like to ask your doctor or nurse for a letter to explain your childs' absence.

WHAT TO DO ONCE WATERY POO HAS BEEN ACHIEVED

When your child's poo has the appearance of brown water for three consecutive days, the medication can be titrated down.

Laxative treatment does need to continue to prevent recurrence of constipation, and to allow the stretched bowel to regain its tone.

Your child should therefore be given a maintenance dose of their laxative. NICE recommends macrogol laxatives:

	TITRATION - NUMBER OF DECREASING SACHETS PER DAY	MAINTENANCE DOSE PER DAY
Child under 1	½ -1	½ -1 SACHET
Child 1-5 years	8 - 6 - 4 - 3	½ - 3 SACHETS
Child 5-12 years	12 - 10 - 8 - 6 - 4	1- 4 SACHETS
Children over 12	8 - 6 - 4 - 2	1 - 2 ADULT SACHETS OR 2 - 4 PAEDIATRIC SACHETS

Your doctor or nurse may choose a different laxative – follow their advice regarding dosage.

Whichever laxative is chosen, the dose should be adjusted to ensure your child poos **at least one soft poo every day**. You will therefore need to monitor their poos and increase/decrease laxative doses accordingly.

Please note: your child may need to stay on laxatives for many months or even years. You will know if they need less laxatives – just check their poo and decrease the dose if it is too soft/sloppy. Long term use of laxatives will not hurt your child. Poorly treated constipation will. If your child is toilet trained you will need to encourage them to follow a regular toileting programme – follow the advice in ERIC's Guide to Children's Bowel Problems which can be found at this link:
www.eric.org.uk/Pages/Category/bowel-problems

They may not reliably know when they need a poo for months, as the stretched bowel does not send reliable warnings, so plan regular toilet visits. They may not poo every time; you may need to introduce a reward system to motivate them to persevere.

HOW TO PREPARE MACROGOL LAXATIVES

(Movicol, CosmoCol and Laxido are all names of macrogols)

How to prepare macrogol laxatives can be a stumbling block for some parents, so we've created this factsheet to explain how to mix them correctly.

Macrogol laxatives work by 'binding with' water and delivering it to the large bowel. It is therefore essential to mix it with the correct amount of water or it will not work!

Paediatric sachets should be mixed with 63mls water PER SACHET

Adult sachets should be mixed with 125mls water PER SACHET

1. Empty the sachet of powder into a cup/glass/bottle.

2. First add the right amount of water and stir until the powder has dissolved and the water is clear. The resultant liquid can be mixed with anything your child likes, to encourage them to drink it, e.g. squash, juice, hot chocolate, milk.

DO NOT mix the powder straight into the milk/juice/flavoured drink – it needs to 'bind' with the water first.

TIPS

- **Formula fed babies.** Mix the macrogol with 63mls previously boiled water per sachet. Top up to the right volume of water for the baby's feed and add the formula powder. Mix well.

- **If your child does not like the taste**, try mixing the macrogol earlier and chill it in the fridge – it will last 6 hours after mixing (Laxido) or 24 hours (CosmoCol and Movicol).

- **Try a flavoured macrogol**, e.g. Movicol Chocolate, Orange/lemon/lime CosmoCol.

POO DIARY

DATE	TIME	POO IN TOILET	ANY SOILING	TYPE OF POO	DESCRIPTION	LAXATIVES GIVEN

POO DIARY

DATE	TIME	POO IN TOILET	ANY SOILING	TYPE OF POO	DESCRIPTION	LAXATIVES GIVEN

POO DIARY

DATE	TIME	POO IN TOILET	ANY SOILING	TYPE OF POO	DESCRIPTION	LAXATIVES GIVEN

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