Constipation

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Constipation is common and in most instances is the product of too little fiber in the diet which leads to decreased stooling frequency, a gradual increase in the size of the stool and firming of the fecal stream. The eventual result of these gradual changes is a somewhat stretched and dilated large intestine that no longer can effectively move stool toward the anus for passage. At this point, many children will have experienced pain with bowel movements and as a result will begin to try not to pass stool. You'll see children standing straight legged, ankles touching, with tight leg and abdominal muscles doing all they can **not to pass stool**. If you think about it, no one trying to pass a bowel movement would pick that posture to help the process. Children will often head to another room for privacy to focus completely on the process of not passing stool. Most children will be successful for a period of time at aborting or delaying the passage of stool. This only leads to larger and firmer stool with more colonic distention and further loss of functional propulsion of stool to the anus for passage. At some point, the anal sphincter will be overwhelmed by the dilation and begin to leak into the underwear. Quite honestly, the child will not smell the feces. It's part of his body odor and not at all apparent to the child. The first clue to the child of fecal leakage will be when the underclothes stick to his skin courtesy of wet skin. If you've reached this stage, be patient! His fecal leakage is almost unintentional, not within his power to control and far more disturbing to his psyche than to your day's routine.

No matter where you are along the constipation pathologic pathway to fecal incontinence, the first step toward wellness and normal bowel behavior is the removal of the first large residual feces in the colon. Literally, days of feces may reside in the dilated ineffective colon when a child passes a constipated stool after exhausting all efforts not to pass stool. It's the long term back up that can allow children to have daily, usually formed or firm stool that disguises the magnitude of constipation to the surrounding family members. Occasionally soft stool will "slide" around and pass the long residing firmer fecal stream and be passed ahead of the firmer stool future confounding the family about the mass of hidden constipation. Until these residual feces are thoroughly removed, the dilated large intestine will not begin to regain its normal tone, dimension and ability to propel the stool toward the anus for elimination.

So here is a suggested clean out regimen based on age:

> **Ages 3 to 5:** Four capfuls of polyethylene glycol (Miralax) in 20 oz. of Gatorade or other uncarbonated beverage. Proceed with a stimulant dose (suggested products and doses listed below) and follow one hour after the Miralax with another stimulant dose. Consume the Miralax over a period of two to three hours.
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> **Ages 6 to 11:** Increase the Miralax to six capfuls in 32 oz. of Gatorade or uncarbonated beverage with the same stimulant doses (suggested products and doses listed below) to precede and follow the consumption of Miralax over the recommended two to three hours.
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> **Ages 12 and beyond:** Increase the Miralax to ten capfuls in 32 oz. of Gatorade or other uncarbonated beverage. Increase the stimulant doses (suggested products and doses listed below) to double that of the younger child categories described above to precede and follow the consumption of Miralax over the recommended two to three hours.

Repeat this process at approximately twenty-four hour intervals until the stool is liquid and clear. Some cramping may be experienced with the use of stimulants. This is part of the process and is only temporary.

Once the clean out has been effectively completed, the child will be left with a large intestine that somewhat resembles the loose casing of a sausage. In order for the constipation to not recur, the fecal stream must be kept very soft until the large intestine has fully recovered its muscular tone and propulsive ability. This will usually take a period of several to many months. Maintenance use of Miralax is not habit forming and side effects are quite uncommon.

In younger children, suggested doses would be one half to one capful up to twice daily, and one to two capfuls up to twice daily in older children. These doses are suggested and may require some adjustments over time. Just remember the fecal stream needs to be no firmer than soft serve ice cream or peanut butter while the colon is healing.

Remember the propulsive function of the colon is still compromised and the sensory and contractile capability of the rectum is also compromised in the early recovery phase. While keeping the fecal stream soft as described earlier, it can be helpful to provoke fecal output by increasing the contractile activity of the colon with stimulants. I'd suggest that you use a rescue dose of stimulant if the recovering constipation patient goes more than 48 hours without passing adequate stool. Remember the longer stool sits in the colon, the firmer it will become and risks pain with passage.

Stimulant products are grouped by their active ingredients (sennosides & bisacodyl) into two groups. The following are suggested products and doses. Dulcolax tabs are marketed as swallow only products and will therefore have limited usefulness in children who cannot swallow tablets.

Dulcolax (bisacodyl) 5 mg tab:

6-11 year olds: one tablet per dose
>12 year olds: two tablets per dose

Pedia-Lax Quick Dissolving Strips (sennosides) 8.6 mg/strip:

2-5 year olds: one strip per dose
6-11 year olds: two strips per dose

Ex-lax Regular Strength Chewables (sennosides) 15 mg/ piece-chocolate flavored:

2-5 year olds: one-half piece per dose
6-11 year olds: one piece per dose
>12 year olds: two pieces per dose

Ultimately, the lifetime maintenance of constipation is a dietary issue. Limit dairy product. The more the digestive process is slowed; the risk of constipation is increased. Beyond the second birthday, most healthy children should be consuming reduced fat products.

Dietary fiber in children should be increased to 20-25 grams of fiber per day. You may need to become familiar with the nutritional squares on the food you are buying. The internet can be helpful in selecting foods with the most dietary fiber. One way to do this is to google the phrase "glycemic index" and visit a number of linked webpages. You'll notice immediately that these pages provide dietary information to diabetic patients. You needn't be diabetic to benefit from the information on these webpages. Pick fruits, vegetables, and grains that have the lowest glycemic index and you will also be picking the most complex carbohydrates in these categories. These carbs have the most dietary fiber. They fill you best, keep you "full feeling" longer and because they have the most fiber will help with constipation issues. These are natural diet foods, and if consumed as a large part of the diet will tend to manage weight loss or maintenance better than other choices you could be making.

Daily water intake should be increased to maximize the benefit of both Miralax while the intestine is healing and dietary fiber during the rest of the life maintenance. Daily exercise is also essential in promoting healthy stooling habits, so make it a priority.

Encouraging a regular stooling schedule can be helpful. Most people stool in response to being fed. Remember how noticeable the association between feeding and pooping is in a newborn? Well, that association doesn't go away. Our scrutiny of older children diminishes with age and the association becomes more subtle. If you're a good observer, you should be able to notice which meal is most likely to provoke a bowel movement. Armed with this knowledge, a brief period of no more than five minutes of sitting to have a bowel movement can be helpful in establishing good habits. This is not a time for reading or video gaming devices. Encourage the child to remain focused on the purpose for being on the toilet. Longer periods of time for timed stooling are likely punitive and to be avoided. Try to avoid conflict in this area by finding a reward system that works for you, and encourage the child to fully participate.

Take home messages:

1. Thorough disimpaction is essential at the beginning of therapy or failure to relieve constipation and soiling/incontinence will be the likely result.
2. Stools must remain soft long enough that the child forgets about defecation associated pain in the past.
3. Recovery of the functional ability of the colon to propel stool and the rectum to sense the presence of feces to be "passed" can be long time in coming as well.
4. The duration of stool softener use should be months to years. Divide the age of the child at the time of diagnosis by two and you have an estimate of the required duration of stool softener use. For example, a four year old would likely require softeners for two years.
5. The use of stimulant laxatives can be very useful in creating the sensation of "needing to defecate" in a child whose dilated colon/rectum are dysfunctional and do not respond with normal sensation to the filling of the rectum with feces.