

DIAGNOSTIC APPROACH TO CONSTIPATION IN CHILDREN



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CONSTIPATION



Constipation

Constipation is considered in children when **hard stool** is passed with **difficulty** every **three days** that persist for **two weeks**.

Approach to Constipation in children

Guide for Managing Constipation in Children - An Autism Speaks ATN/AIR-P Tool Kit

Managing Constipation in Children

What is constipation?

Constipation is when a child has:

- Hard stools
- Pain or trouble passing stool
- Less than three stools per week

**TALK TO YOUR CHILD'S DOCTOR
OR NURSE.
HE/SHE CAN HELP YOU
KNOW IF YOUR CHILD HAS
CONSTIPATION.**

What is normal?

-Babies will pass stool from several times per day, to once every few days
What is important is that the stools are soft and easily passed.

-Breast-fed babies VS -Bottle-fed babies

-Breast-fed babies seldom become constipated



What is abnormal?

-It is not uncommon for stools to vary in colour ,smell and consistency from day to day.

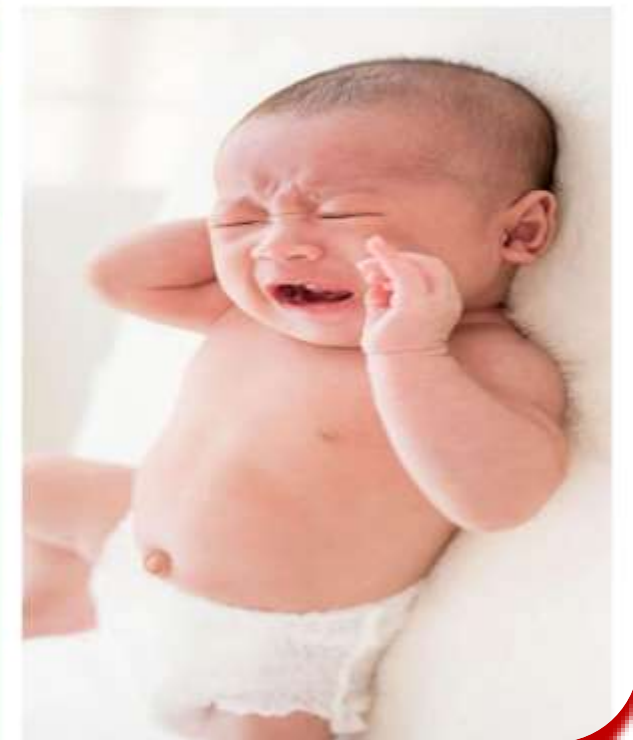
-Sometimes undigested food in the stool.

-It is normal for baby to go a bit red in the face strain and grunt during defecation ,then pass normal, soft stools.

Approach to Constipation in children

Presentation of constipation?

- Passing stools less often than normal.
- Hard ,large stool.
- Difficulty or pain during defecation.
- Withholding behaviours.
- Bloody stool.
- Recurrent abdominal pain.
- Bloating and distension .
- Encopresis.
- Behavioural changes.
- Anal fissures.
- Hemorrhoids.



Approach to Constipation in children

Common Causes of Constipation

Functional constipation

- Inadequate fluid intake
- Inadequate fiber intake
- Disruption of regular diet
- **Large amounts of dairy products**
- Disruption of routine
- Inactivity or immobility
- Stress
- **Resistance to bowel movements.**

Organic constipation

Medical

- Cow milk allergy
- Coeliac disease
- Hypothyroidism
- Hyper or hypocalcemia
- Cystic fibrosis

Neurological disorders.

Drugs/Toxins=

Surgical

- Hirschsprung disease
- Meconium ileus
- Anatomic malformations of anus
- Spinal cord abnormalities

Approach to Constipation in children

Functional GI disorders new definition; Rome IV

“Disorders of gut-brain interaction”

GI symptoms related to Combination of :

- ❖ motility disturbance.
- ❖ Movement of food & waste through the GI tract.
- ❖ visceral hypersensitivity.
- ❖ altered mucosal and immune function.
- ❖ Changes in gut's immune defense.
- ❖ altered gut microbiota.
- ❖ Changes in the community of bacteria.
- ❖ altered central nervous system processing.



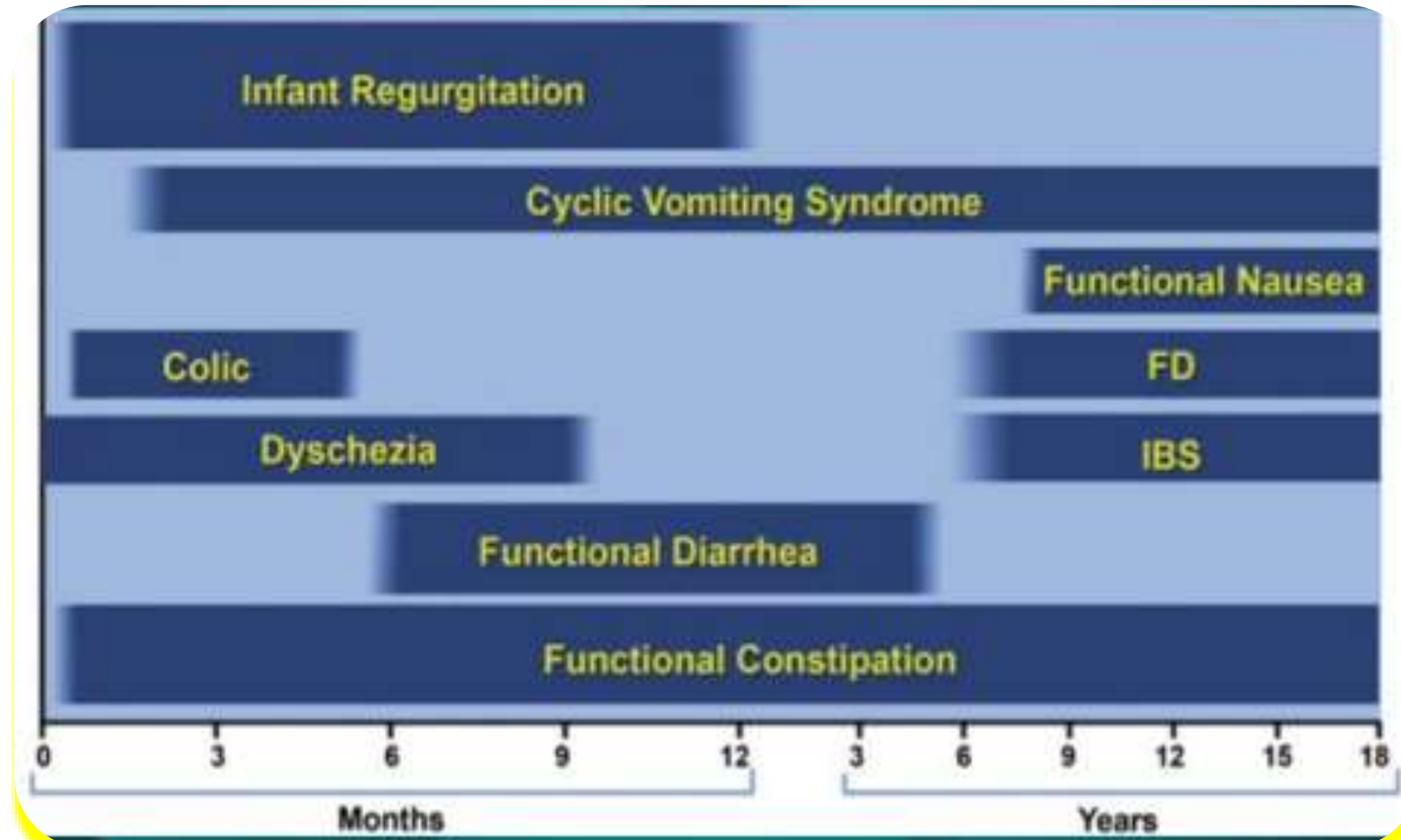
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Functional Gastrointestinal Disorders in Neonates and Toddlers



Rome IV criteria - Diagnostic criteria for Functional Constipation

Must include ≥ 2 criteria for at least 1 month in infants or 2 months in older children

1- ≤ 2 stools/week.

2-History of retentive posturing(**withholding behaviours**).

3-History of painful or hard bowel movements.

4-History of large-diameter stools.

5-Presence of a large faecal mass in the rectum .

6-In toilet-trained children, additional criteria may be used:

At least 1 episode per week of incontinence.



Red Flags

- 1-Constipation from birth or first few weeks of life.
- 2-Delayed in passing meconium > 48hrs.
- 3-Weight loss .
- 4-Bloody stool (not related to anal fissure).
- 5-Weakness in legs.
- 6-Abdominal distension + /-vomiting.
- 7-Bilious vomiting.
- 8-Abnormal appearance of anus .
- 9-Abnormal examination of spine.
- 10-IBD symptoms=

Functional Constipation

- 5% of general paediatric consultations.
- 25% of paediatric gastroenterology consultations .
- Peak incidence of constipation occurs at the time of toilet training
- Boys =girls.
- In 15% to 40% of children ,Starts in the 1st year of life .



Functional Constipation

Age of presentation

- ✓ Presents most commonly at three age periods at
- ✓
- ✓ 1-introduction solid foods.
- ✓ 2-at toilet training.
- ✓ 3-at the start of school.

Functional Constipation

- ANAL FISSURES
- RECTAL PROLAPSE
- FECAL INCONTINENCE
- CHRONIC BACK PAIN

- HEMORRHOID
- UTI
- HERNIA

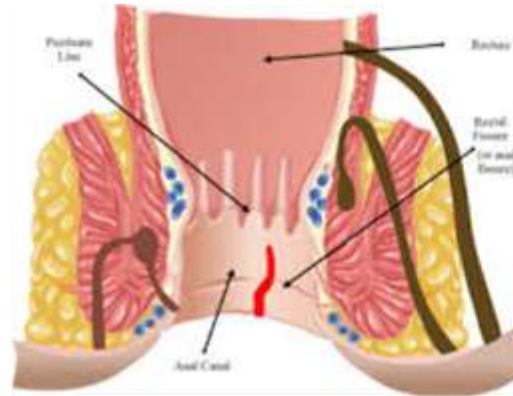


COMPLICATIONS OF CONSTIPATION

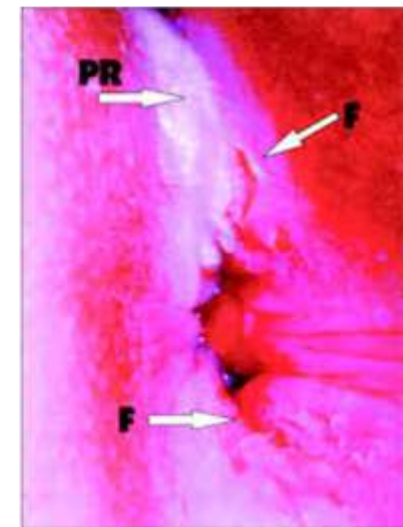
RECTAL PROLAPSE



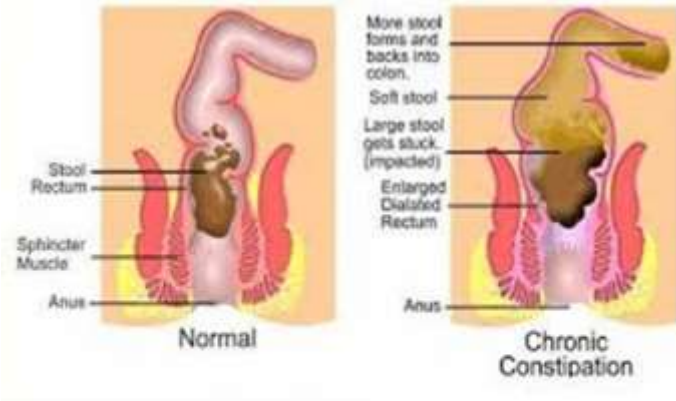
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ANAL FISSURES

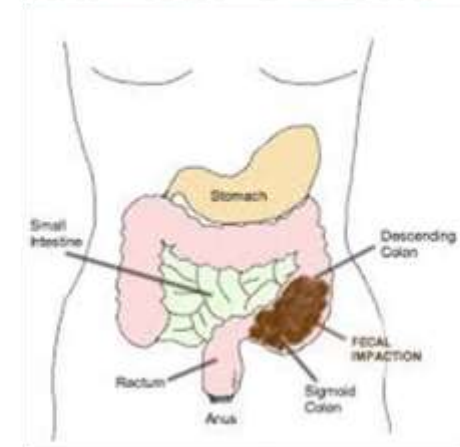


COMPLICATIONS OF CONSTIPATION

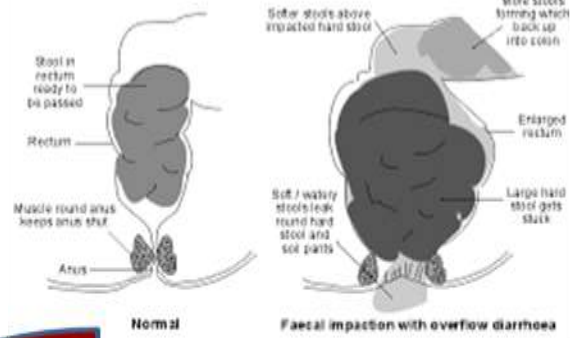


FECAL INCONTINENCE

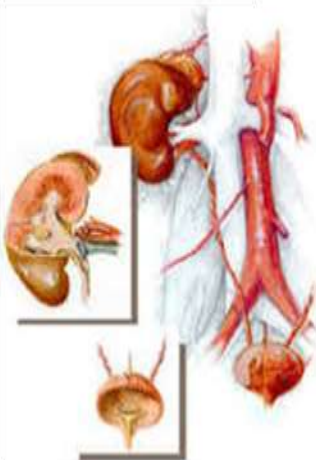
CHRONIC BACK PAIN



COMPLICATIONS OF CONSTIPATION

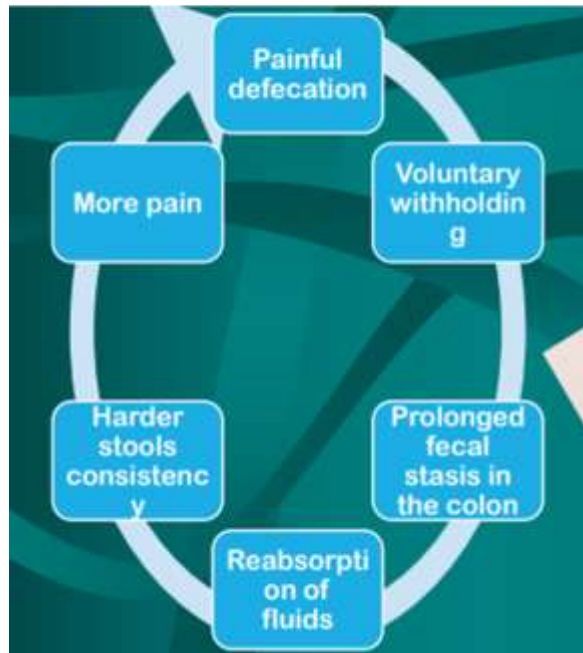


UTI



FUNCTIONAL CONSTIPATION IN CHILDREN

Pathophysiology



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Management

First step=-Exclusion of 'Red Flags

-Mainstay of treatment

1. Confirm Functional constipation, Reassure child and family.
2. Disimpaction.
3. Maintenance.
- 4-Follow up and wean medication.

-Treatment is often prolonged (months to years) .

Management

Disimpaction

Oral(preferred)

- PEG (movicol)1-1,5 g/kg/d for 3-5 consecutive days
- MG citrate 4 ml/kg/d for 2 consecutive days

Rectal

- NS= 10 ml/kg for 3 consecutive days
- Sodium phosphate enema for 3 consecutive days

<2 years=not recommended

2-4 years=1/2 pediatric fleet enema=33.75 ml

5-11 years full pediatric fleet enema=67.5 ml

>12 years= adult fleet enema =118 ml

Warn parents that disimpaction may increase the symptoms of soiling , abd pain.



Management post disimpaction

Once disimpacted, maintenance doses approx half the disimpaction dose(Movicol).



Management

- Educate
- Dietary interventions
- Behavioral modifications = Bowel retraining
- Medications = Laxatives

- Medications = Laxatives



Management

Education

- Educate about constipation., the physiology of normal defaecation .
- Give written information .
- Advice about diet and fluids .
- Let the family know that it is a chronic condition, and treatment may be needed for months.
- They should know how to make up and take the medication?

Behaviour modification and Toileting tips

- Try to get children into a regular toilet habit.
- Try to allow plenty of time .
- Toilet trainer should be relaxed, calm.
- Do not punish accidents.
- Encouraging = star charts.
- Encourage good amount of daily activity.
- Check toileting issues .



Management

Diet

- Treatment by diet alone is not enough.
- This will help to prevent a recurrence of constipation once it has cleared.
- A change to a high-fibre diet is often 'easier said than done'
- Offer fruit with every meal ,Add extra vegetables to dishes .
- Use whole meal/brown versions of bread, pasta and rice.
- Adequate milk formula preparation .
- An adapted infant formula with high lactose and magnesium



Management

Diet

Foods that RELIEVE constipation

Foods that can CAUSE constipation



Pears



Kiwi



Chocolate



Caffeine



Plums



ib.com/worldhealthadvice



Red Meat



Rye Bread



Beans



Dairy



Bananas

Рһіє Рһєау

Вєаиє

Дайи

Вананас

Laxatives

-Laxatives are recommended in association with dietary management.

1-Osmotic laxative=

Example = Movicol , Lactulose .

2-Stimulant laxatives=

Example = Sodium picosulfate , senna .

A stimulant laxative is added to a macrogol if it is not sufficient on its own.

-Laxatives are usually continued for several week to months.

-Do not stop laxatives abruptly.

ESPGHAN & NASPGHAN guidelines

Extra Fiber
supplementation

Extra fluid
intake

Extensively
Hydrolyzed Formula



ESPGHAN highlights the importance of cautiousness while using laxatives in infants below 1 y.

How long you will continue maintenance therapy?

Once the goals of maintenance therapy have been achieved
it will need to be continued for **at least 3-6 months**

Management

Pre/Probiotics

The routine use of prebiotics & probiotics is not recommended in the treatment of childhood constipation.



Common "Clean Out" Medicines

(Give only as recommended by your child's doctor or nurse)

Medicine Name	How given (oral or rectal)	Type of medicine	Notes
Polyethylene glycol-electrolyte solution (brand names: Colyte, GoLYTELY, NuLYTELY, TriLyte)	Oral	Osmotic	<ul style="list-style-type: none"> • Prescription needed • Extra care is needed if a child has heart or kidney problems or is taking other medications
Polyethylene glycol (Brand name: PEG 3350, DucoLax Balance, MiraLax)	Oral	Osmotic	<ul style="list-style-type: none"> • Over the counter • No taste • Mixed with a full cup of juice or water • Described as "taste and texture free", but may be rejected by some children with autism • Mixes best with liquid at room temperature
Mineral oil	Oral or rectal	Lubricant	<ul style="list-style-type: none"> • Over the counter • Rarely used because of danger if it gets into the lungs and bad taste. Cannot be given by mouth if child has problems with breathing or swallowing. Should not be given forcefully due to risk of getting in lungs
Magnesium hydroxide (brand names: Fleet Pedia-Lax, Phillips' Milk of Magnesia)	Oral	Osmotic	<ul style="list-style-type: none"> • Over the counter • Extra care is needed if a child has heart or kidney problems or is taking other medications
Magnesium citrate (brand names: Citro-Mag)	Oral	Osmotic	<ul style="list-style-type: none"> • Over the counter • Extra care is needed if a child has heart or kidney problems or is taking other medications
Phosphate sodium enema (brand names: Fleet Enema, Pedia-Lax Enema, LaCrosse Complete)	Rectal	Osmotic	<ul style="list-style-type: none"> • Over the counter • Extra care is needed if a child has heart or kidney problems or is taking other medications
Lactulose (brand names: Constulose, Enulose, Generlac, Kristalose)	Oral	Osmotic	<ul style="list-style-type: none"> • Prescription only • Use with caution in children with diabetes
Sorbitol	Oral or rectal	Osmotic	<ul style="list-style-type: none"> • Prescription only • Use with caution in children with diabetes
Senna (brand names: Sennosides, Senokot)	Oral	Stimulant	<ul style="list-style-type: none"> • Prescription or over the counter • May not see effect for 2-3 days
Bisacodyl (brand names: DulcoLax, ExLax, Fleet, Correctol)	Oral or rectal	Stimulant	<ul style="list-style-type: none"> • Over the counter • If taken by mouth, it should be taken on an empty stomach with water
Glycerin suppositories	Rectal	Lubricant	<ul style="list-style-type: none"> • Over the counter

Management



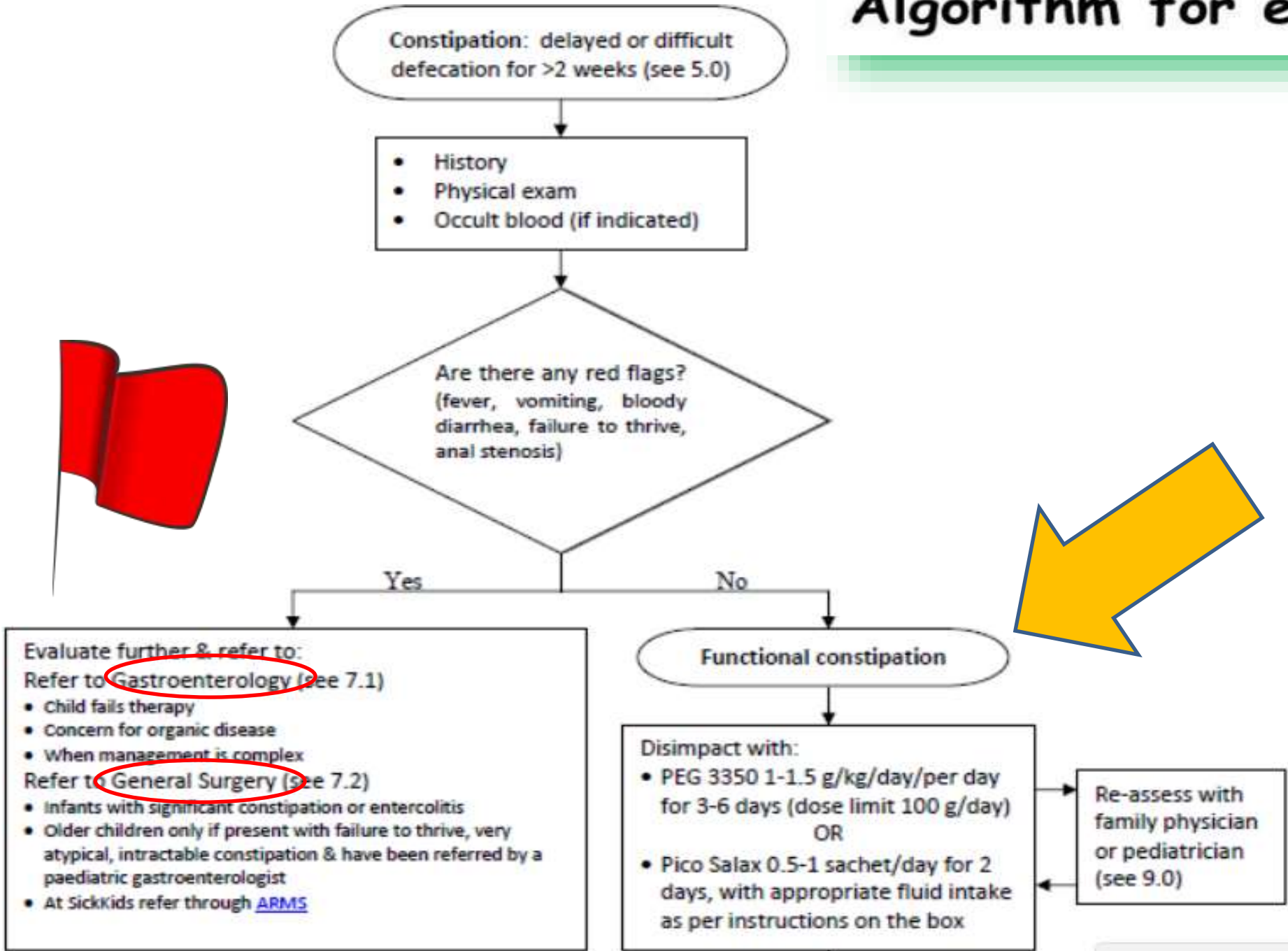
Diet

Behaviour modification and Toileting tips

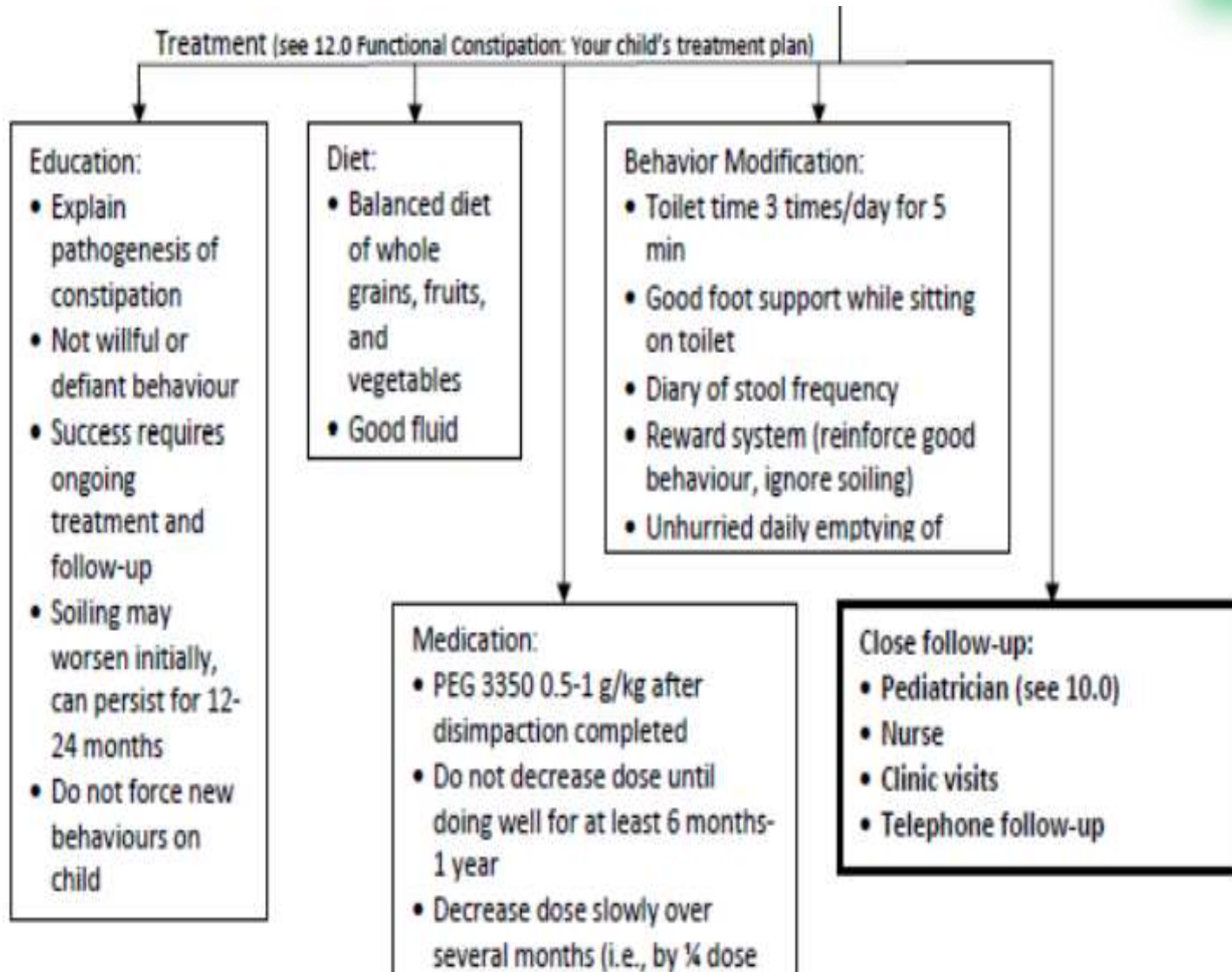
Medicines



Algorithm for evaluation



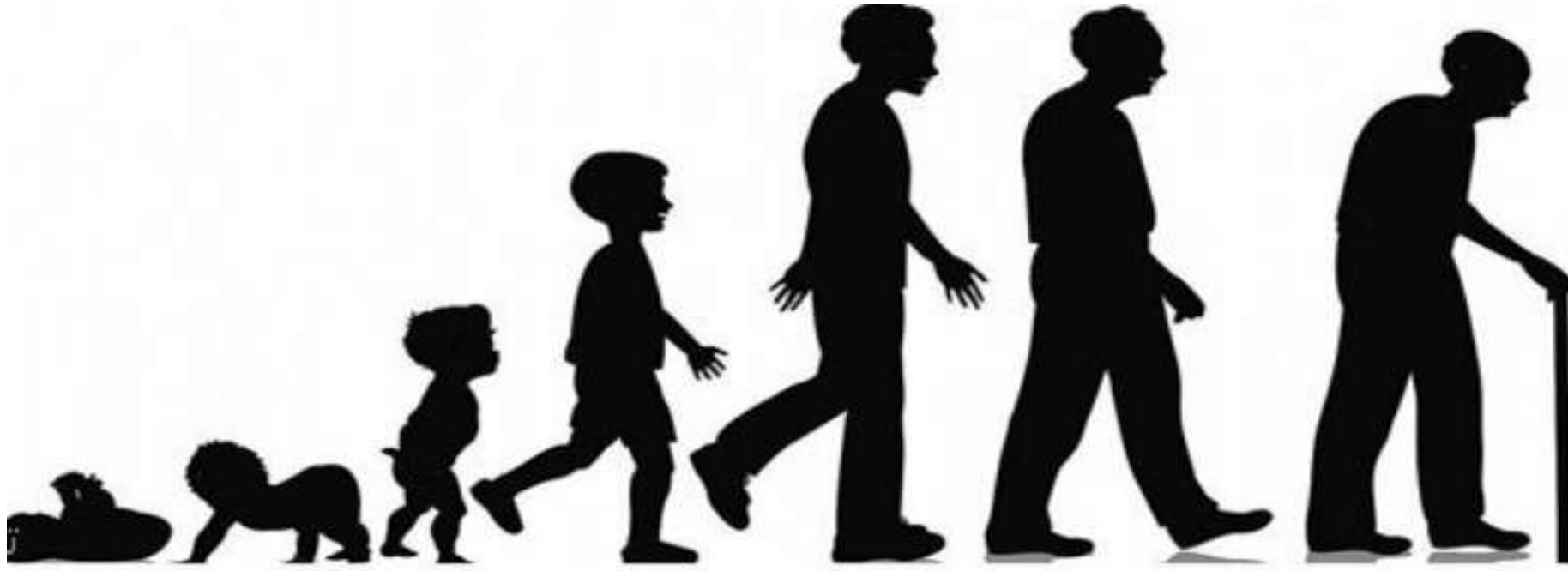
Algorithm for evaluation



Prognosis

-An early & adequate intervention is the most important factor for prognosis.

-Delay in constipation management may lead to lifetime constipation.





Functional Constipation

What causes constipation?

1. Withholding

Some children hold their stool in and try to stop the urge to have a bowel movement.

This may happen for many reasons, such as:

- fear of the toilet
- not wanting to use a different toilet
- not wanting to take a break from play
- worry that having a bowel movement will hurt

2. Toilet Training

Children resist and try to hold in stools when they are being toilet trained. Sometimes this becomes a habit. Habits can be hard to change.

3. Diet Problems

Fiber: Not eating enough fiber, found in fruits, vegetables, and whole grains

Dairy: An allergy to cow's milk or intake of too much dairy foods (milk, cheese)

Water/Fluids: Not drinking enough water or other fluids, especially when sick

Illness: Changes in a child's appetite or diet because of illness

4. Changes in Routine

Travel, hot weather or stress can affect the way bowels work.

5. Medication

Some medicines, such as antacids, antidepressants and some ADHD drugs can cause hard stools.

6. Medical Conditions

Children who have difficulty using their muscles, have low muscle tone or have Cerebral Palsy can have problems with constipation. Other medical conditions such as problems with gluten or casein could first be identified because of constipation.

Functional Constipation

Algorithm for evaluation

