BOWEL FUNCTION AND CARE

Overall Outcomes
- Primary Outcomes
  - Maintenance of social continence as appropriate for age level
- Secondary Outcomes
  - Maximization of independence with managing bowel program
  - Maximized knowledge and compliance with diet and bowel program
- Tertiary Outcomes
  - Minimization of constipation

PRENATAL/INFANCY (THROUGH ONE YEAR)

Clinical Questions
1. What evidence exists that prevention of constipation in the first year of life improves outcome of bowel management in later childhood?

Guidelines
1. Monitor stool frequency, consistency, and amounts.
2. Use dietary management, in particular breastfeeding, if possible, as it is easier to digest and offers better restoration of the microbiome after surgery.
3. Consider dietary management (fiber and fluids) before pharmacologic adjuncts (Senna), and/or rectal stimulants (glycerin suppositories) to manage constipation and fecal incontinence.
4. Use barrier creams to protect perineal area from breakdown as needed.

TODDLER (1-3 YEARS)

Clinical Questions
• Is there evidence to support the benefit of toilet training a child with Spina Bifida at the same developmental stage as peers without dysfunction?

Guidelines
1. Discuss toilet training and habit training with parents.
2. Establish goal of working toward bowel continence.
3. Focus on fiber, fluids, exercise, and timed bowel movements after meals.
4. Consider 2-fold attack of oral and rectal interventions to meet goal of bowel continence without constipation.
5. Use dietary management (fiber and fluids), pharmacologic adjuncts (Senna, polyethylene glycol), and/or rectal stimulants (glycerin, ducosate sodium, or bisacodyl suppositories) to manage constipation and fecal incontinence.
6. Use barrier creams to protect perineal area from breakdown as needed.
7. Refer to spina bifida clinic or specialist with expertise in bowel management in spina bifida.
**PRE-SCHOOL (3-5 YEARS)**

**Clinical Questions**
- Is there evidence that “habit training,” or forced evacuation with stimulants, such as suppositories or enemas, increases social continence?

**Guidelines**
1. Establish goal of bowel continence. Institute bowel program using timing, suppositories, pharmacologic agents or enemas as needed for continence.
2. Focus on fiber, fluids, exercise, and timed bowel movements after meals.
3. Consider 2-fold attack of oral and rectal interventions to meet goal of bowel continence without constipation or fecal incontinence.
4. Use dietary management (fiber and fluids), pharmacologic adjuncts (Senna, polyethylene glycol), and/or rectal stimulants (glycerin, ducosate sodium, or bisacodyl suppositories) to manage constipation and fecal incontinence.
5. Discuss consequences of constipation and bowel incontinence (including shunt malfunction, UTIs, skin breakdown, social isolation).
6. Use barrier creams to protect perineal area from breakdown as needed.
7. Refer to spina bifida clinic or specialist with expertise in bowel management in spina bifida.

**SCHOOL AGE**

**Clinical Questions**
1. What is the evidence that the MACE (Malone antegrade continence enema) procedure or continent cecostomy is an effective form of bowel management in children with refractory incontinence?
2. What are the most effective protocols for MACE (ACE) management?
3. What is the evidence that electrical stimulation (trans-rectal or intravesicular) provides benefit for increased bowel continence?

**Guidelines**
1. Establish goal of bowel continence. Institute bowel program using timed toileting, suppositories, pharmacologic agents or enemas as needed for continence.
2. Assist child with learning how to minimize and manage bowel accidents.
3. Use barrier creams to protect perineal area from breakdown as needed.
4. Keep bowel habit diary to better understand triggers for incontinence and overall patterning to direct choice of options for bowel management.
5. Discuss consequences of constipation and bowel incontinence (including shunt malfunction, UTIs, skin breakdown, social isolation).
6. Focus on fiber, fluids, exercise, and timed bowel movements after meals.
7. Consider 2-fold attack of oral and rectal interventions to meet goal of bowel continence without constipation or fecal incontinence.
8. Use dietary management (fiber, fiber supplements, and fluids), pharmacologic adjuncts (Senna, polyethylene glycol), and/or rectal stimulants (glycerin, ducosate sodium, or bisacodyl suppositories) to manage constipation.
9. Discuss options for treatment if above have failed, including cone enema or other transanal irrigation, cecostomy, or antegrade continence enema.
10. Refer to spina bifida clinic or specialist with expertise in bowel management in spina bifida.

**TEEN AGE (12-18 YEARS)**

**Clinical Questions**
1. What support is needed by teens with Spina Bifida to be successful in maintaining their bowel program?
2. Is there evidence that hormonal fluctuations impact continence?

**Guidelines**
1. Establish goal of bowel continence. Institute bowel program using timed toileting, suppositories, pharmacologic agents or enemas as needed for continence.
2. Assist teen with learning how to minimize and manage bowel accidents.
3. Discuss consequences of constipation and bowel incontinence (including shunt malfunction, UTIs, skin breakdown, social isolation, impact on participation in recreational activities).
4. Use barrier creams if needed to protect perineal area from skin breakdown.
5. Keep bowel habit diary to better understand triggers for incontinence and overall patterning to direct choice of options for bowel management.
6. Focus on fiber, fluids, exercise, and timed bowel movements after meals.
7. Consider 2-fold attack of oral and rectal interventions to meet goal of bowel continence without constipation.
8. Use dietary management (fiber, fiber supplements, and fluids), pharmacologic adjuncts (Senna, polyethylene glycol), and/or rectal stimulants (glycerin, ducosate sodium, or bisacodyl suppositories) to manage constipation.
9. Discuss options for treatment if above have failed, including cone enema or other transanal irrigation, cecostomy, or antegrade continence enema (Malone).
10. Refer to spina bifida clinic or specialist with expertise in bowel management in spina bifida.
11. Access support services for personal care if needed.

**ADULTS**

**Clinical Questions**
1. What impact does pregnancy have on bowel management or on use of Malone?
2. Does early chronic constipation impact management of constipation in adult years?
3. Is there a change in bowel function later in life that should be addressed with a more aggressive bowel program? Does menopause result in changes?

**Guidelines**
1. Establish goal of bowel continence. Institute bowel program using timed toileting, suppositories, pharmacologic agents or enemas as needed for continence.
2. Assist adult with learning how to minimize and manage bowel accidents.
3. Use barrier creams if needed to protect perineal area from skin breakdown.
4. Keep bowel habit diary to better understand triggers for incontinence and overall patterning to direct choice of options for bowel management.
5. Discuss consequences of constipation and bowel incontinence (such as shunt malfunction, UTIs, skin breakdown, social isolation, impact on participation in recreational activities).
6. Discuss management of bowel program as it may impact sexual relations.
7. Focus on fiber, fluids, exercise, and timed bowel movements after meals.
8. Consider 2-fold attack of oral and rectal interventions to meet goal of bowel continence without constipation or fecal incontinence.
9. Use dietary management (fiber, fiber supplements, and fluids), pharmacologic adjuncts (Senna, polyethylene glycol, lubiprostone, or other prescription), and/or rectal stimulants (glycerin, ducosate sodium, or bisacodyl suppositories) to manage constipation.
10. Discuss options for treatment if above have failed, including cone enema or other transanal irrigation, cecostomy, or antegrade continence enema (Malone).
11. Refer to spina bifida clinic or specialist with expertise in bowel management in spina bifida.
12. Access support services for personal care if needed.

**Research Gap**

Are there benefits to probiotic use in the spina bifida population?

What is the evidence that electrical stimulation (trans-rectal or intravesicular) provides benefit for bowel continence in spina bifida?

Does an individualized, stepped approach to bowel management in spina bifida lead to less constipation and continence?

What factors contribute to a successful bowel program in the spina bifida population?

**REFERENCES:**


