

Short Bowel Syndrome Management:  
Recommendations for School Nursing Practice

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**Define EBP:** evidence-based practice is an approach to nursing care that utilizes the most up-to-date research (evidence) to provide the best care possible to patients or students

**Health Topic:** Short Bowel Syndrome (SBS)

- Inability to absorb nutrients due to ("Short Bowel Syndrome," 2015)
  - surgery/removal of significant portions of small and/or large intestine
  - damage to small intestine
  - poor digestive motility within intestines
- Diagnosis
  - medical and family history (inc. surgical operations) ("Short Bowel Syndrome," 2015)
  - physical examination ("Short Bowel Syndrome," 2015)
  - MR enterography ("Short Bowel Syndrome," 2015)
  - upper GI series ("Short Bowel Syndrome," 2015)
  - CT scan ("Short Bowel Syndrome," 2015)
- Signs/symptoms ("Short Bowel Syndrome," 2015)
  - bloating
  - cramping
  - fatigue/weakness
  - foul-smelling stool
  - heartburn
  - vomiting
  - diarrhea
- Complications ("Short Bowel Syndrome," 2015)
  - malnutrition/dehydration
  - peptic ulcers
  - kidney stones
  - Infection
  - Osteoporosis (Carroll et al, 2016)
  - Liver disease (Carroll et al, 2016)
- Treatment/management - Intestinal Rehabilitation (IR)
  - Nutritional Support ("Short Bowel Syndrome," 2015)
    - Rehydration
      - Oral
      - Intravenous
    - Parenteral nutrition (PN) via central venous catheter (CVC) (Carroll et al, 2016)

SHORT BOWEL SYNDROME MANAGEMENT

<ul style="list-style-type: none"> <li>• Enteral Nutrition (Carroll et al, 2016)</li> <li>• Vitamin/mineral supplements (“Short Bowel Syndrome,” 2015)</li> <li>• Diet (“Short Bowel Syndrome,” 2015)             <ul style="list-style-type: none"> <li>• “small, frequent feedings”</li> <li>• Avoid: high-fat, high protein/sugar/fiber</li> </ul> </li> <li>• Medication (“Short Bowel Syndrome,” 2015)             <ul style="list-style-type: none"> <li>• Antibiotic regimen</li> <li>• proton pump inhibitors</li> <li>• H2 blockers</li> <li>• Hypomotility (Carroll et al, 2016)</li> </ul> </li> <li>• Surgery (“Short Bowel Syndrome,” 2015)             <ul style="list-style-type: none"> <li>• Intestinal Transplant</li> <li>• Colostomy/Ileostomy</li> </ul> </li> </ul>			
<b>Peer-reviewed Journal Articles (at least 3)</b>			
<b>Reference (APA)</b>	<b>Type/Purpose of article</b>	<b>Evidence-based practice findings</b>	<b>Limitations/Strength of evidence for practice change</b>
Carroll et al, 2016	<p><b>Type:</b> systematic review  <b>Purpose:</b> identifying new (within the last 10 years of publication) developments in SBS feeding, management, and care</p>	<p><b>Major findings:</b> new pharmacologic therapy interventions may make it possible for PN dependent patients to reduce/wean off PN  <b>Recommendations:</b> intestinal rehabilitation and surgical intervention should be used in combination with drug treatment; goal of management is not just survival but patient independence</p>	<p><b>Limitations:</b> SBS can impact patients differently on an individual basis and most need tailored diet regimens, making it difficult to generalize recommendations from reviews  <b>Strengths:</b> given the evidence reviewed and the article’s methodology of reviewing evidence within the last 10 years, school nurses could use this to confidently make recommendations for new drug therapies feeding regimens for students suffering from SBS</p>

SHORT BOWEL SYNDROME MANAGEMENT

Diamanti et al, 2014	<p><b>Type:</b> cohort study  <b>Purpose:</b> study the safety and efficacy of longterm PN to prevent intestinal failure-associated liver disease (IFALD) in patients with ultra-SBS (U-SBS)</p>	<p><b>Major findings:</b> patients on longterm PN had reduced inpatient stays, and avoided liver deterioration, though IFALD was still prevalent in the cohort, major morbidity was CVC infections  <b>Recommendations:</b> multidisciplinary management with a focus on PN and prioritize antiseptic CVC care</p>	<p><b>Limitations:</b> Small cohort group (9 cases) due to mortality and inclusion criteria; short follow-up time (5 years)  <b>Strengths:</b> understand the impact of PN on quality of life in school-age children and contributes to literature by focusing on U-SBS</p>
Merritt et al, 2017	<p><b>Type:</b> systematic review  <b>Purpose:</b> review studies of IR programs in patients with intestinal failure (IF, complication of SBS)</p>	<p><b>Major findings:</b> IR is most current and up to date methodology for SBS management and can be used to individualize care with a multidisciplinary team  <b>Recommendations:</b> IR program should include gastroenterologist, surgeon, dietitian, and nurse; patients with worsening SBS should be referred to IR programs</p>	<p><b>Limitations:</b> limited data on efficacy of IR as an intervention  <b>Strengths:</b> involves the nurse as part of the multidisciplinary management team and reinforces need and propriety for referral for patients/students with worsening SBS or SBS</p>
<b>EBP Website (at least 2)</b>			
<b>Reference (APA)</b>	<b>Type/Purpose of website</b>	<b>Evidence-based practice findings</b>	<b>Limitations/Strength of evidence for practice change</b>
National Institute of Diabetes and Digestive and Kidney Diseases (www.niddk.nih.gov) "Short Bowel Syndrome," 2015	<p><b>Type:</b> government  <b>Purpose:</b> research about diabetes, digestive, and kidney diseases: lab/ research funding and trainings</p>	<p><b>Major findings:</b> signs, symptoms of SBS; complications; treatments; it is still unknown how SBS is caused or how it can be prevented  <b>Recommendations:</b> treatment of SBS should be tailored based on patient need, clinical trials can help expand knowledge of SBS</p>	<p><b>Limitations:</b> limited data and research available about the disease  <b>Strengths:</b> provides evidence-based information about SBS that school nurses can use to learn about the disease and understand management</p>
Oley Foundation ( <a href="http://oley.org/">http://oley.org/</a> ) Oley Foundation, 2015	<p><b>Type:</b> association  <b>Purpose:</b> Connect families to network supporting PN lifestyle and management to help enrich lives of patients on longterm PN</p>	<p><b>Major findings:</b> membership with Oley Foundation helps achieve normalcy, improves quality of life, reduces infection risk  <b>Recommendations:</b> increased outreach and to help connect patients to Oley Foundation</p>	<p><b>Limitations:</b> research presented on the website could have selection and recall bias due to study methodology  <b>Strengths:</b> school nurses can use the research-supported Oley Foundation as a resource for students with SBS and their parents</p>

## SHORT BOWEL SYNDROME MANAGEMENT

<b>Health condition impact on learning</b>	<ul style="list-style-type: none"><li>• Diet management and parenteral nutrition management could result in adjustment of student's schedule to accommodate</li><li>• SBS students with ostomy bags and CVCs- may require adjusted physical activity requirements (Diamanti et al, 2014)</li><li>• Hospitalizations due to infections or complications from SBS- developmental delay and student could miss long periods of school (Diamanti et al, 2014)</li><li>• Psychosocial implications related to student's appearance and ability to participate in activity</li></ul>
<b>Implications for school nursing practice</b>	<ul style="list-style-type: none"><li>• Due to disease rarity, school nurses may never encounter a student with SBS or may encounter a student with SBS once in their careers ("Short Bowel Syndrome," 2015)</li><li>• As more SBS evidence and studies are presented and researched, school nurses should utilize databases and resources such as the Oley Foundation and the National Institute of Diabetes and Digestive and Kidney Diseases</li><li>• Nurses are an essential component of the multidisciplinary team and play an active role in SBS management for school-age children with SBS (Diamanti et al, 2014)</li><li>• Maintain antiseptic environment to prevent infection (Diamanti et al, 2014)</li></ul>

## References

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