

2023 Pediatric Post-Splenectomy/Post-Splenic Embolization Prophylaxis and Vaccine Guideline

VACCINE	<2 YEARS OLD	2 TO 10 YEARS OLD	> 10 YEARS OLD	REVACCINATION (BOOSTER DOSES)
•Pneumococcus •PCV13 (Prevnar) AND •PPSV23 (Pneumovax)	4-dose series of PCV13 at 2, 4, 6, and 12 to 15 months of age	1 dose of PPSV23 ≥8 weeks after last dose of PCV13 (if 4-dose PCV13 series previously given) ¹		Revaccinate with PPSV23 every 5 years
•Haemophilus influenzae type b •Hib (ActHIB)	ActHIB: 4-dose series at 2, 4, 6, and 12 to 15 months of age	Recommended only if not previously vaccinated, vaccination status is unknown, or primary series is incomplete		Not required
•Meningococcus serotype •ACWYMenACWY (Menactra/Menveo/MenQuadfi)	4-dose series of Menveo at 2, 4, 6, and 12 months of age. ²	Menveo: 2 doses ≥8 weeks apart		Revaccinate at intervals based on age: •Age <7 years: 3 years after completion of primary series and every 5 years thereafter •Age ≥7 years: every 5 years
•Meningococcus serotype •MenB-4C (Bexsero)	Not recommended until age 10		Bexsero: 2 doses given ≥1 month apart	1 year after completing the primary series and every 2 to 3 years thereafter
Seasonal influenza ³	1 dose annually for children >6 months ⁴			Annually at start of influenza season

Goal: decrease the risk of overwhelming post-splenectomy sepsis (OPSS) due to Streptococcus Pneumonia, Haemophilus Influenza Type B, and Neisseria Meningitides.



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WHEN TO GIVE?

For patients undergoing emergency splenectomy, vaccine series should be started 14 days after splenectomy.

1. For children aged 2 to 6, give two doses of PCV13 if the four-dose PCV series is incomplete and <3 doses have been given; if incomplete and three doses have been given, give a single dose. For children >6 years old, give a single dose of PCV13. Following receipt of the appropriate number of PCV13 doses, give PPSV23. All pneumococcal vaccine doses should be given ≥ 8 weeks apart.

2. If the first dose is given at ≥ 7 months of age, give two doses. The second dose should be given ≥ 12 weeks after the first AND when the child is >1 year old.

3. Although live attenuated vaccines can be safely given to patients with impaired splenic function who lack other immunosuppressive conditions, the inactivated influenza vaccine is preferred over the live formulation because it is equally effective.

4. Children <9 years old who did not receive a total of two doses of influenza vaccine previously should receive two doses given ≥ 4 weeks apart followed by annual revaccination with a single dose thereafter.

INDICATIONS:

- All patients post-splenectomy
- All patients with functional asplenia secondary to trauma (defined as grade IV/V injury)
- All patients who have undergone splenic embolization with less than 50% of their spleen functionally intact.

Contraindications: allergy related to vaccination product

	AGENT	ALTERNATIVE
Daily prophylaxis	PENICILLIN VK <ul style="list-style-type: none">• <3 years: 125 mg BID• ≥ 3 years: 250 mg BID OR AMOXICILLIN <ul style="list-style-type: none">• 10 mg/kg BID (max 250/child 500/adult mg per dose)	CEPHALEXIN <ul style="list-style-type: none">• 25 mg/kg BID (max 250 mg per dose) OR AZITHROMYCIN <ul style="list-style-type: none">• 5 mg/kg DAILY (max 250 mg per dose)
<i>Give daily until 5 years of age or for 1 year post splenectomy in older patients</i>		
Emergency antibiotics (for fever)	AMOXICILLIN-CLAVULANATE (14:1) <ul style="list-style-type: none">• 45 mg/kg (amoxicillin component) BID (max 875 mg per dose)	CEFDINIR <ul style="list-style-type: none">• 7 mg/kg BID (max 300 mg per dose) OR LEVOFLOXACIN <ul style="list-style-type: none">• 10 mg/kg BID (max 375 mg per dose)
<i>Seek medical care and start emergency antibiotic</i>		

Updated APSA Blunt Liver/Spleen Injury Guidelines

Admission

- **ICU Admission Indicators**
 - Abnormal vital signs after initial volume resuscitation
- **ICU**
 - Activity - Bedrest until vitals normal
 - Labs – q6hour CBC until vitals normal
 - Diet – NPO until vital signs normal and hemoglobin stable
- **Ward**
 - Activity - No restrictions
 - Labs - CBC on admission and/or 6 hours after injury
 - Diet – Regular diet

Procedures

- **Transfusion**
 - Unstable vitals after 20 mL/kg bolus of isotonic IVF
 - Hemoglobin < 7
 - Signs of ongoing or recent bleeding
- **Angioembolization or Operative Exploration**
 - Signs of ongoing bleeding despite pRBC transfusion
 - Angioembolization is not indicated for contrast blush on admission CT without unstable vitals
 - Operative exploration may be indicated when additional procedures or information needed

Set Free

- Based on clinical condition **NOT** injury severity (grade)
- Tolerating a diet
- Minimal abdominal pain
- Normal vital signs

Aftercare

- **Activity Restriction**
 - Restricting activity to grade plus 2 weeks is safe
 - Shorter restrictions may be safe but there is inadequate data to support decreasing these recommendations
- **Follow up Imaging**
 - Routine imaging is not indicated in asymptomatic patients with low grade injuries
 - Consider imaging for **symptomatic** patients with prior high grade injuries

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