

# Supporting Students Before and After Surgery

*A guide for teachers, school psychologists, and other school professionals*



## **Preoperative anxiety**

- Preoperative anxiety is significant fear or worry prior to a surgical procedure.
- Risk factors for high preoperative anxiety include:<sup>2</sup>
  - Age (older children are more anxious about surgery)
  - Temperament (anxious, inhibited, shy)
  - Parental anxiety (high parental anxiety associated with high child anxiety)
  - Quality of previous medical encounters

**Children with high preoperative anxiety experience higher pain post-operation, delayed hospital discharge, maladaptive behavioral changes, and other negative outcomes.<sup>2</sup>**

## ***National resources for pediatric surgery***

### **[American Pediatric Surgical Association Pediatric Surgery Library](#)**

Provides an overview of pediatric conditions, symptoms, and treatments for adults.

### **[Children's National Visual Supports and Resources](#)**

Orients visual learners to medical procedures through videos, stories, and role plays.

## **Childhood surgery background**

- Every year, 4.7% of children receive surgical intervention.<sup>1</sup>
- The most common pediatric surgeries are related to the ear, nose, and throat and have an average recovery time of 6 days.<sup>2,3</sup>
- Up to 60% of young children undergoing surgery and anesthesia report significant anxiety.<sup>4</sup>
- 40% of children report moderate to severe pain after surgery.<sup>5</sup> Emotional and behavioral challenges are also common.<sup>6</sup>

## ***How can we support students before surgery?<sup>6</sup>***

### **Do:**

- Provide the student with simple information about what to expect (e.g., steps of the procedure) to reduce anxiety.
- Validate fears (e.g., “It makes sense that you’re scared”)
- Practice and model relaxation strategies with the child (e.g., deep breathing, distraction)
- Target at-risk children
- Help parents manage their own anxiety with coping strategies
- Provide education to parents (i.e., dispel myths)

### **Don't:**

- Avoid talking about the procedure
- State false or premature assumptions (e.g., “it won’t hurt,” “you’ll get better right away”).
- Be dismissive of the child’s anxiety (e.g., “you’ll be fine,” “don’t worry”)
- Demonstrate excessive anxiety or emotionality when interacting with the student.

## School re-entry after surgery

- Children take an average of 13 days to return to school and miss 7-8 school days.<sup>7</sup>
- Common areas of concern:
  - Social worries (answering peer questions, stigma)
  - Academic concerns (missed content and homework)
  - Emotional issues (adjustment to changes, managing pain)<sup>8</sup>

### How can we help students after surgery?<sup>8</sup>

- Provide school passes to show the teacher when the student needs a break.
- Identify a warm, trusted staff member the student can seek out when they need support. Adopt a check-in/check-out model with this individual.
- Develop a clear and reasonable outstanding work plan.
- Promote connectedness through access to school-based groups or activities.



## Pain management and treatment adherence

- Approximately one-third of children report significant pain for up to one week after surgery.<sup>9</sup>
- Even when parents recognize that their child is in pain, most parents give inadequate doses of medication to control their child's pain.<sup>10</sup>
- Parental perceptions can be a barrier to pain medication utilization.<sup>11</sup> Common perceptions include:
  - Fear of side effects
  - Fear of addiction
  - Belief that the less medication is used, the better they work

**MYTH:** Giving a child an opioid will get them addicted.

**FACT:** Adolescents often have a higher risk of addiction due to their still-developing brains, social pressures, and/or prevalent mental health challenges. However, carefully following discharge directions and providing the child with drug education can mitigate this risk.<sup>12</sup>

**MYTH:** Pain is necessary for healing and one should wait until pain becomes unbearable to take pain medications

**FACT:** Poorly regulated pain is associated with increased recovery time and decreased functioning and quality of life.<sup>13</sup> Encourage parents to closely adhere to surgeon directions and ask questions if in doubt.

## References

1. Rabbitts JA, Groenewald CB. Epidemiology of Pediatric Surgery in the United States. Cravero J, ed. *Pediatric Anesthesia*. 2020;30(10):1083-1090. doi:<https://doi.org/10.1111/pan.13993>
2. Goodman DC, Morden NE, Ralston SL, Chang CH, Parker DM, Weinstein SJ. Common Surgical Procedures. www.ncbi.nlm.nih.gov. Published December 11, 2013. <https://www.ncbi.nlm.nih.gov/books/NBK587398/>
3. Verbeeck F, Hens G, Willem L, et al. Postoperative recovery in children after outpatient ENT surgery. *B-ENT*. 2016;12(3):165-173. <https://pubmed.ncbi.nlm.nih.gov/29727119/>
4. Kain Z, Mayes L, O'Connor T, Cicchetti D. Preoperative Anxiety in Children Predictors and Outcomes Editor's Note: Now we need more studies to evaluate potential preventive or therapeutic interventions. *Arch Pediatr Adolesc Med*. 1996;150:1238-1245.
5. Kozlowski LJ, Kost-Byerly S, Colantuoni E, et al. Pain Prevalence, Intensity, Assessment and Management in a Hospitalized Pediatric Population. *Pain Management Nursing*. 2014;15(1):22-35. doi:<https://doi.org/10.1016/j.pmn.2012.04.003>
6. Trottier ED, Doré-Bergeron MJ, Chauvin-Kimoff L, Baerg K, Ali S. Managing pain and distress in children undergoing brief diagnostic and therapeutic procedures. *Paediatrics & Child Health*. 2019;24(8):509-521. doi:<https://doi.org/10.1093/pch/pxz026>
7. Willimon SC, Johnson MM, Herzog MM, Busch MT. Time to Return to School After 10 Common Orthopaedic Surgeries Among Children and Adolescents. *Journal of Pediatric Orthopaedics*. 2019;39(6):322-327. doi:<https://doi.org/10.1097/bpo.0000000000000947>
8. Hellmuth J. School Re-entry and Calming Kids' Anxiety After a Medical Leave | Brown University Health. Brown University Health. Published 2023. <https://www.brownhealth.org/be-well/school-re-entry-and-calming-kids-anxiety-after-medical-leave>
9. Hah J, Bateman B, Ratliff J, Curtin C, Sun E. Chronic opioid use after surgery: Implications for perioperative management in the face of the opioid epidemic. *Anesth Analg*. 2017;125(5):1733-1740. doi:<https://doi.org/10.1213/ANE.0000000000002458>
10. Finley AG, McGrath PJ, Forward PS, McNeill G, Fitzgerald P. Parents' management of children's pain following "minor" surgery. *Pain*. 1996;64(1):83-87. doi:[https://doi.org/10.1016/0304-3959\(95\)00091-7](https://doi.org/10.1016/0304-3959(95)00091-7)
11. Zisk RY, Grey M, MacLaren JE, Kain ZN. Exploring Sociodemographic and Personality Characteristic Predictors of Parental Pain Perceptions. *Anesthesia & Analgesia*. 2007;104(4):790-798. doi:<https://doi.org/10.1213/01.ane.0000257927.35206.c1>
12. Kate K. Safely Managing Your Child's Pain After Surgery. Hospital for Special Surgery. Published August 23, 2023. <https://www.hss.edu/health-library/conditions-and-treatments/safely-managing-your-childs-pain-after-surgery>
13. Gan TJ. Poorly controlled postoperative pain: Prevalence, consequences, and prevention. *Journal of Pain Research*. 2017;10(1):2287-2298. doi:<https://doi.org/10.2147/jpr.s144066>