

Mandatory Admission Criteria for Neonates and Infants Undergoing Anesthesia

All Infants and particularly formerly premature infants are at a higher risk of postoperative respiratory complications after anesthesia (both general and regional). For otherwise healthy full term infants, the risk of post-operative apnea after anesthesia is extremely low beyond 45 weeks Post-Conceptual Age (PCA). For formerly premature infants less than 55 weeks PCA, this risk is very substantial. Hence forth, the incidence of post-operative apnea tapers off to insignificant levels by 60 weeks PCA.

There are no standard national guidelines on the cutoff age beyond which infants can be discharged home safely. However most programs have developed near similar guidelines based on the available data.

At our institution, the mandatory admission guidelines are as follows:

THE FOLLOWING INFANTS MUST BE ADMITTED FOR OVERNIGHT OBSERVATION AND RESPIRATORY MONITORING (*Apnea Monitor and Pulse Oximetry*) AFTER RECEIVING ANESTHESIA, REGARDLESS OF PROCEDURE AND TYPE OF ANESTHESIA.

Any infant born PRE-TERM, and less than 55 weeks Post Conceptual Age (PCA) on day of surgery

Any infant born FULL-TERM, and less than 45 weeks Post Conceptual Age (PCA) on day of surgery

There are some infants who require overnight observation based on their medical condition and perioperative events despite meeting the age criteria for discharge. The staff pediatric anesthesiologist may, in certain situations, have discretion to override this policy, but the rationale must be discussed with the surgical team and documented in the patient's medical record.

Premature Infant: Infant born at less than 37 weeks gestation

Full Term Infant: Infants born at or greater than 37 weeks gestation

Post Conceptual Age (PCA) in weeks: **Gestational Age + Post Natal Age** (age since birth)

References:

Coté CJ, Zaslavsky A, Downes JJ, Kurth CD, Welborn LG, Warner LO, Malviya SV. Postoperative apnea in former preterm infants after inguinal herniorrhaphy. A combined analysis. *Anesthesiology*. 1995 Apr;82(4):809-22. PubMed PMID: 7717551.

Jones LJ, Craven PD, Lakkundi A, Foster JP, Badawi N. Regional (spinal, epidural, caudal) versus general anaesthesia in preterm infants undergoing inguinal herniorrhaphy in early infancy. *Cochrane Database Syst Rev*. 2015 Jun 9;6:CD003669. doi: 10.1002/14651858.CD003669.pub2. Review. PubMed PMID: 26058963.