

## Ultrasound Insights into Neonatal Fasting: Get in the NP-Know



Current ASA guidelines for neonatal fasting vary by type of intake.

Normally infants feed every 2.5 to 3 h.

**Preoperative fasting can lead to hypoglycemia and dehydration.**



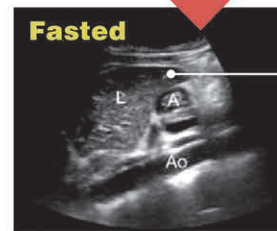
Lee *et al.*<sup>1</sup> evaluated 46 healthy neonates ages 0 to 5 days. Serial gastric antrum ultrasounds every 15 min after formula feeding determined gastric emptying times.

**Emptying times** ranged from 45 to 150 min and averaged 93 min (95% CI, 80 to 106).

No differences were found between sex and delivery type. Amount ingested and gastric emptying time were not correlated.



Thick fluid in the stomach appears hyperechoic and heterogenous, with peristalsis.<sup>2</sup>



An empty stomach is collapsed and flat with a thick, multi-layered wall.

**ASA Practice Guidelines**  
Formula: 6 h



**Study Observations**  
Formula: 93 min

**These data suggest that healthy term neonates can be safely anesthetized 3 h after formula feeding and current guidelines may be too stringent.<sup>3</sup>**

ASA, American Society of Anesthesiologists.

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1. Lee JJ, Price JC, Duren A, Shertzer A, Hannum R III, Akita FA, Wang S, Squires JH, Panzer O, Herrera J, Sun LS, Davis NA: Ultrasound evaluation of gastric emptying time in healthy term neonates after formula feeding. *ANESTHESIOLOGY* 2021;134:845–51
2. El-Boghdady K, Kruisselbrink R, Chan VWS, Perlas A: Images in anesthesiology: Gastric ultrasound. *ANESTHESIOLOGY* 2016; 125:595
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