

Feeding prior to eye exams reduces stress in premature infants

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Premature infants are often examined for retinopathy of prematurity (ROP). This exam can be quite stressful for the neonate, causing changes in heart rate, blood pressure and oxygen saturation, and increased crying. In a recent study published in the *Journal of AAPOS*, the Official Publication of the American Association of Pediatric Ophthalmology and Strabismus, researchers found that feeding infants one hour before the examination unexpectedly reduced stress but did not increase vomiting or gastric aspirates.

Investigators from Queens University, Kingston, Ontario, Canada, and the University of Alberta, Edmonton, Alberta, Canada, indicated that there is no published scientific literature supporting the practice of withholding feeding from infants before ROP examinations, thought to reduce gastrointestinal distress.

According to Dr. Yi Ning J. Strube, MD, MS, FRCSC, Assistant Professor, Pediatric Ophthalmology and Strabismus, Queen's University, Department of Ophthalmology, Kingston, Ontario, Canada, "This study is important in that it lets parents and nurses know that they can safely feed their baby according to the baby's usual feeding schedules without concern that it will affect the baby's [stress response](#) and gastrointestinal effects due to the ROP examination. Our data suggests that feeding prior to the eye examination, rather than withholding feeds prior to the eye examination, may in fact provide additional comfort, reducing the stress of the examination with no increased gastrointestinal side effects, such as vomiting. This is the first study to specifically examine the

relationship between the timing of feeding before the ROP examination and to consider its effects on gastrointestinal function and stress response in preterm infants. It emphasizes the importance of managing and reducing neonatal pain during procedures, such as the ROP examination, and provides new guidelines to those caring for infants in the neonatal intensive care units."

A total of 34 infants were enrolled in the study, with 57 separate eye examinations conducted. [Premature infants in Neonatal Intensive Care Units](#) are typically fed every 2 to 3 hours. For 22 infants, feeding was scheduled at 1 hour before the exam. For 12 infants, feeding schedules were adjusted so that no [feeding](#) occurred in the 2 hours before the exam. For the first group, there was 19% less crying, 3 times less vomiting, lower gastric aspirates, lower diastolic blood pressure, and higher respiratory rate during the examination, although pulse rate was greater at the start of the examination.

Neonatal pain may result in increased pain sensitivity over time, altered responses to pain later in life, and possible short- and long-term changes in neural development as suggested by animal studies on brain and spinal cord development. Since the ROP examination is known to cause distress in neonates, any actions to reduce this distress will likely be beneficial.

More information: The article is "Relationship between feeding schedules and gastric distress during retinopathy of prematurity screening eye examinations" by Yi Ning J. Strube, MD, FRCSC, Jeffrey A. Bakal, PhD PStat, and Brian W. Arthur, MD, FRCSC. It appears in the *Journal of AAPOS*, Volume 14, Issue 4 (August 2010) published by Elsevier.

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