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## **Development of co-ordination of sucking, swallowing and breathing: ultrasound study of term and preterm infants.**

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Fourteen newborn babies of different gestational ages (33 to 40 weeks) but similar postnatal age (four to 19 days) were studied during bottle-feeding using real-time ultrasonography, combined with respiratory monitoring. Previously undescribed tongue movements and graded changes in the temporal relationships between tongue movements, swallowing and breathing were observed among infants of differing maturity. These were most marked in the least mature infants, but were occasionally seen in term infants. The results suggest that adequate neuromuscular co-ordination is more a function of gestational maturity than of postnatal sucking experience. The pattern of intraoral events for infants of differing maturity described in this study provides a framework for the study of feeding problems of term and preterm infants.

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