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Systematic Review: Effect of Oral Motor Interventions on Sucking in Preterm Infants

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Background: For past few decades the survival ratio shows that there is a gradual increase in preterm infants. Majority of infants are skilled in suck, swallow and respiration during birth but few faces difficulty in co-ordinating suck, swallow and respiration which may lead to weight loss, length of hospital stay and stress. Different techniques were used to improve the sucking skill in preterm infants. Instruments are also used to improve the oral feeding skill. This work is a review of the instruments used in non-nutritive sucking in preterm infants and deals with the time to establish oral feeding, weight gain and length of hospital stay.

Objective: To determine the effect of using instrumental suck in preterm infants on the outcome of time to establish oral feed, weight gain and length of hospital stay.

Search Method: A systemic search of the literature published from 1990 to 2020 were selected. Articles were selected from PubMed, Cochrane. all trials improving sucking through NS OR NNS by use of instrument are included. Measured clinical outcomes. Research articles published in English or any other language for which a translator was available are included. All relevant abstract and titles were included, and their references were reviewed for additional data.

Result: Ten studies were included in which five deals with NNS and four with NS and one with evaluation of non-nutritive and nutritive sucking. Non-nutritive sucking is encouraged either with pacifier connected with a transducer, N trainer or a finger pressure device and weight gain, length of hospital stay were measured. Nutritive sucking is encouraged with nutrients. They also measured weight gain and length of hospital stay. Methodology for each study varies greatly. Non –nutritive sucking stimulated with orocutaneous stimulation shows a greater positive finding for improving suck response in preterm infants compared to nutritive sucking. Conclusion: some nutritive sucking shows promise for enhancing sucking and improve weight/growth of preterm infants but some methodological limitations and variation in results shows a careful consideration needed before clinical trial.
