

The Fucile Protocol

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Objective: To assess whether an oral stimulation program, before the introduction of oral feeding, enhances the oral feeding performance of preterm infants born between 26- and 29-weeks' gestational age.

Study Design: Preterm infants ($n = 32$) were randomized into an experimental and control group. Infants in the experimental group received an oral stimulation program consisting of stimulation of the oral structures for 15 minutes. Infants in the control group received a stimulation program. Both were administered once per day for 10 consecutive days, 48 hours after discontinuation of nasal continuous positive air pressure.

Results: Independent oral feeding was attained significantly earlier in the experimental group than the control group, 11 ± 4 days (mean \pm SD) versus 18 ± 7 days, respectively ($P = 0.05$). Overall intake and rate of milk transfer were significantly greater over time in the experimental group than the control group ($P = .0002$ and $.045$ respectively). There was no difference in length of hospital stay between the 2 groups.

Conclusion: An early oral stimulation program accelerates the transition to full oral feedings in preterm infants. This was associated with greater overall intake and rate of milk transfer observed in the experimental group when compared with the control group.

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Instructions

1. Program is suitable for infants born < 33 weeks.
2. Program is 15 minutes in duration.
3. Administer program once a day for 10 days.
4. Commence program 48 hours after discontinuing CPAP.
5. Conduct program 30 minutes prior to feeding OR during clustered care time.
6. Infant remains in isolette during the program.
7. Used gloved fingers for perioral component.
8. Stop the program if infant is crying inconsolably or experiences apnea, bradykinesia, and/or oxygen desaturation.
9. Infant should be in quiet alert.

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Table 1. Oral stimulation program

Structure	Stimulation steps	Purpose	Frequency	Duration
Cheek	<ol style="list-style-type: none"> 1. Place index finger at the base of the nose. 2. Compress the tissue, move finger toward the ear, then down and toward the corner of the lip (ie, C pattern). 3. Repeat for other side. 	Improve range of motion and strength of cheeks, and improve lip seal.	4×each cheek	2 min
Upper lip	<ol style="list-style-type: none"> 1. Place index finger at the corner of the upper lip. 2. Compress the tissue. 3. Move the finger away in a circular motion, from the corner toward the center and to the other corner. 4. Reverse direction. 	Improve lip range of motion and seal.	4×	1 min
Lower lip	<ol style="list-style-type: none"> 1. Place index finger at the corner of lower lip. 2. Compress the tissue. 3. Move the finger away in a circular motion, from the corner toward the center and to the other corner. 4. Reverse direction. 	Improve lip range of motion and seal.	4×	1 min
Upper and lower lip curl	<ol style="list-style-type: none"> 1. Place index finger at center of lip. 2. Apply sustained pressure, stretch downward toward the midline. 3. Repeat for lower lip—apply sustained pressure, and stretch upward toward the midline. 	Improve lip strength, range of motion, and seal	2×each lip	1 min
Upper gum	<ol style="list-style-type: none"> 1. Place finger at the center of the gum, with firm sustained pressure slowly move toward the back of the mouth. 2. Return to the center of the mouth. 3. Repeat for opposite side. 	Improve range of motion of tongue, stimulate swallow, and improve suck.	2×	1 min

Lower gum	<ol style="list-style-type: none"> 1. Place finger at the center of the gum, with firm sustained pressure slowly move toward the back of the mouth. 2. Return to the center of the mouth. 3. Repeat for opposite side. 	Improve range of motion of tongue, stimulate swallow, and improve suck.	2×	1 min
Internal cheek	<ol style="list-style-type: none"> 1. Place finger at inner corner of lips. 2. Compress the tissue, move back toward the molars and return to corner of lip. 3. Repeat for other side. 	Improve cheek range of motion and lip seal.	2×each cheek	2 min
Lateral borders of the tongue	<ol style="list-style-type: none"> 1. Place finger at the level of the molar between the side blade of the tongue and the lower gum. 2. Move the finger toward midline, pushing the tongue towards the opposite direction. 3. Immediately move the finger all the way into the cheek, stretching it. 	Improve tongue range of motion and strength	2×each side	1 min
Midblade of the tongue	<ol style="list-style-type: none"> 1. Place index at the center of the mouth. 2. Give sustained pressure into the hard palate for 3 seconds. 3. Move the finger down to contact the center blade of the tongue. 4. Displace the tongue downward with a firm pressure. 5. Immediately move the finger to contact the center of the mouth at the hard palate. 	Improve tongue range of motion and strength, stimulate swallow, and improve suck.	4×	1 min
Elicit a suck	<ol style="list-style-type: none"> 1. Place finger at the midline, center of the palate, gently stroke the palate to elicit a suck. 	Improve suck, and soft palate activation.	N/A	1 min
Pacifier	<ol style="list-style-type: none"> 1. Place pacifier in mouth. 	Improve suck, and soft palate activation	N/A	3 min