

Keeping Mateo Fed and Growing

Why can't Mateo feed like a baby without a cleft, and what can we change today so he grows?

CARRY FORWARD

Testing is most useful when the history and exam create a question the test can answer.

10-YEAR TAKEAWAY

An open palate limits suction, so feeding support replaces suction with flow control and positioning.

Cells differentiate

Development sculpts

Cells move

Development can go wrong

1. Observe the analogy before naming the biology

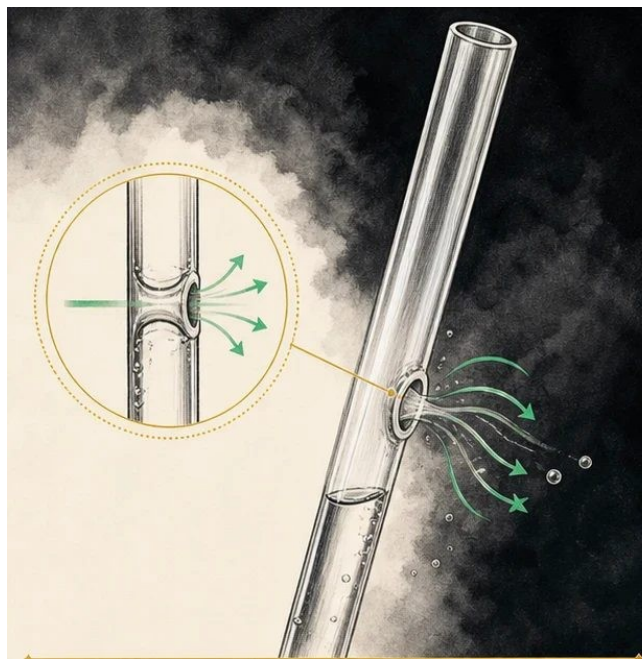


Illustration: A straw with a side hole cannot hold suction

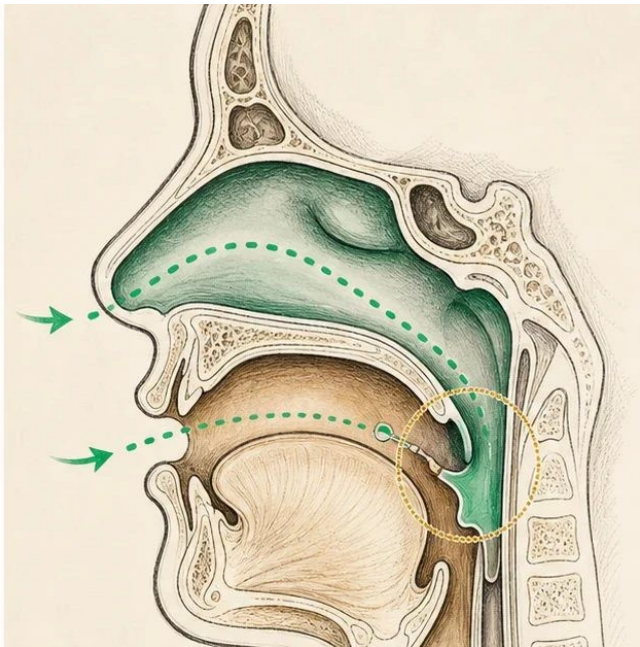
1. Where does air enter the damaged straw?
2. What happens to pressure inside it?
3. How could you move liquid without relying on suction?

2. Turn observations into rules

- 1. Rule 1: A sealed pathway is needed to build negative pressure. Explain it in your own words.
- 2. Rule 2: A leak reduces suction even when effort increases. Explain it in your own words.
- 3. Rule 3: Assisted flow can replace the missing pressure step. Explain it in your own words.

Where the analogy stops: Infant feeding uses coordinated sucking, swallowing, and breathing. The straw models only the pressure problem.

3. Map the rules onto the biomedical example



Biomedical teaching illustration: Replace missing suction with controlled assistance

Analogy step	Biology step	How the relationship stays the same
Side hole	Open connection between mouth and nose	
Lost suction	Difficulty creating intraoral negative pressure	
Squeeze the container	Assisted-delivery bottle provides controlled milk flow	

DISEASE LESSON 6 | CASE FILE AND DECISION

4. Use the case evidence

ID	Finding supplied in the case	Why it matters
D06-E1	Mateo tires during feeding and cannot maintain suction on a standard bottle.	The open palate is interfering with pressure generation.
D06-E2	Breathing is calm and oxygen level remains normal during the observed feed.	The immediate problem is feeding mechanics rather than respiratory failure.
D06-E3	With an assisted-delivery bottle, upright position, and pauses, intake improves.	The modified plan addresses the mechanism.

5. Make the clinical decision

You are the feeding specialist before discharge. Mateo must show a safe plan that his family can repeat at home.

- A. Use an assisted-delivery bottle, upright position, paced squeezes, and weight follow-up
- B. Use a standard bottle and feed faster
- C. Stop oral feeding without first assessing safety

Decision. Choose the discharge plan and connect each part to the evidence and pressure model.

Claim ceiling: You may recommend the observed safe strategy. You may not assume every infant with a cleft has the same feeding ability.

Claim. State the choice you can defend.

Evidence. Use these labeled IDs: D06-E1 + D06-E2 + D06-E3.

Reasoning. Explain why the evidence supports the claim and stays inside the claim ceiling.

6. Reduce the lesson to one lasting idea

Take-home. An open palate limits suction, so feeding support replaces suction with flow control and positioning.

1. What pressure problem does an open palate create?
2. How does each part of the feeding plan solve that problem?

Glossary

Term	Plain-English definition
intraoral negative pressure	The suction created inside the mouth that lets a baby latch and draw milk; a cleft palate can prevent this seal from forming.
suck	An infant's ability to create suction with the lips and palate to draw milk, which a cleft can disrupt.
failure to thrive	Poor weight gain and growth in an infant or child, often because feeding is difficult or nutrition is not absorbed well.
compressible (assisted-delivery) bottle	A soft squeezable feeding bottle that lets a caregiver push milk into the mouth of a baby who cannot create strong suction, such as one with a cleft.
upright positioning	Holding a baby in a more vertical posture during feeding so gravity helps keep milk out of the nose and airway.

Next lesson unlock

We answered today’s question: Mateo can be fed with the right bottle and position. But most is not all. A few cleft babies struggle not just to eat but to breathe, especially when the jaw is small and the tongue falls back. When is a cleft an actual airway emergency?

The journal links on the lesson page are optional. Everything required for this guided-notes set is already supplied here and in the case file.