

The mouth is like a crystal ball.

- but -

The eyes cannot see what the
mind does not know.

Keys to prevention:

- Education
- Motivation

Without prevention, a quality health care system will fail.

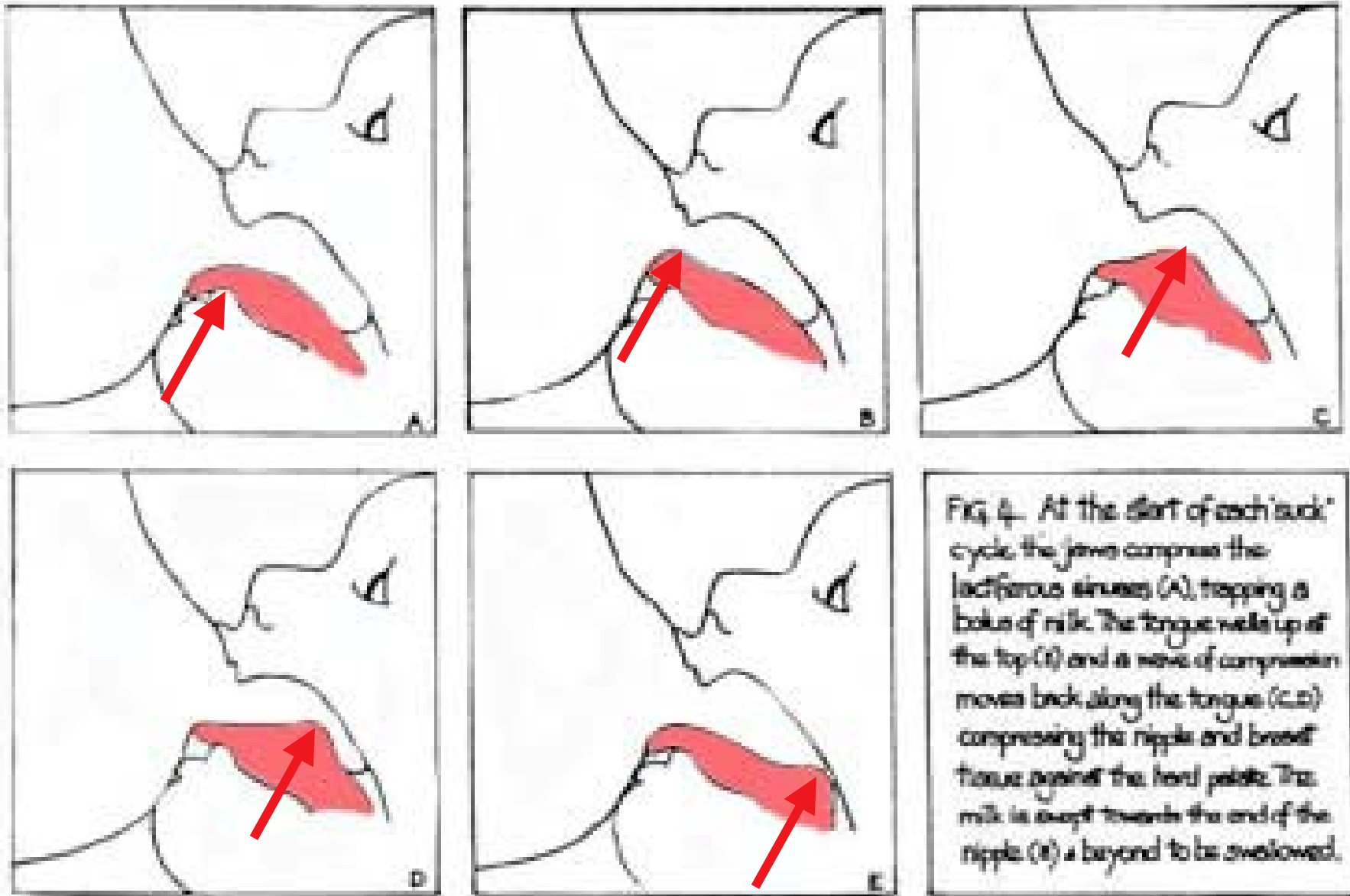
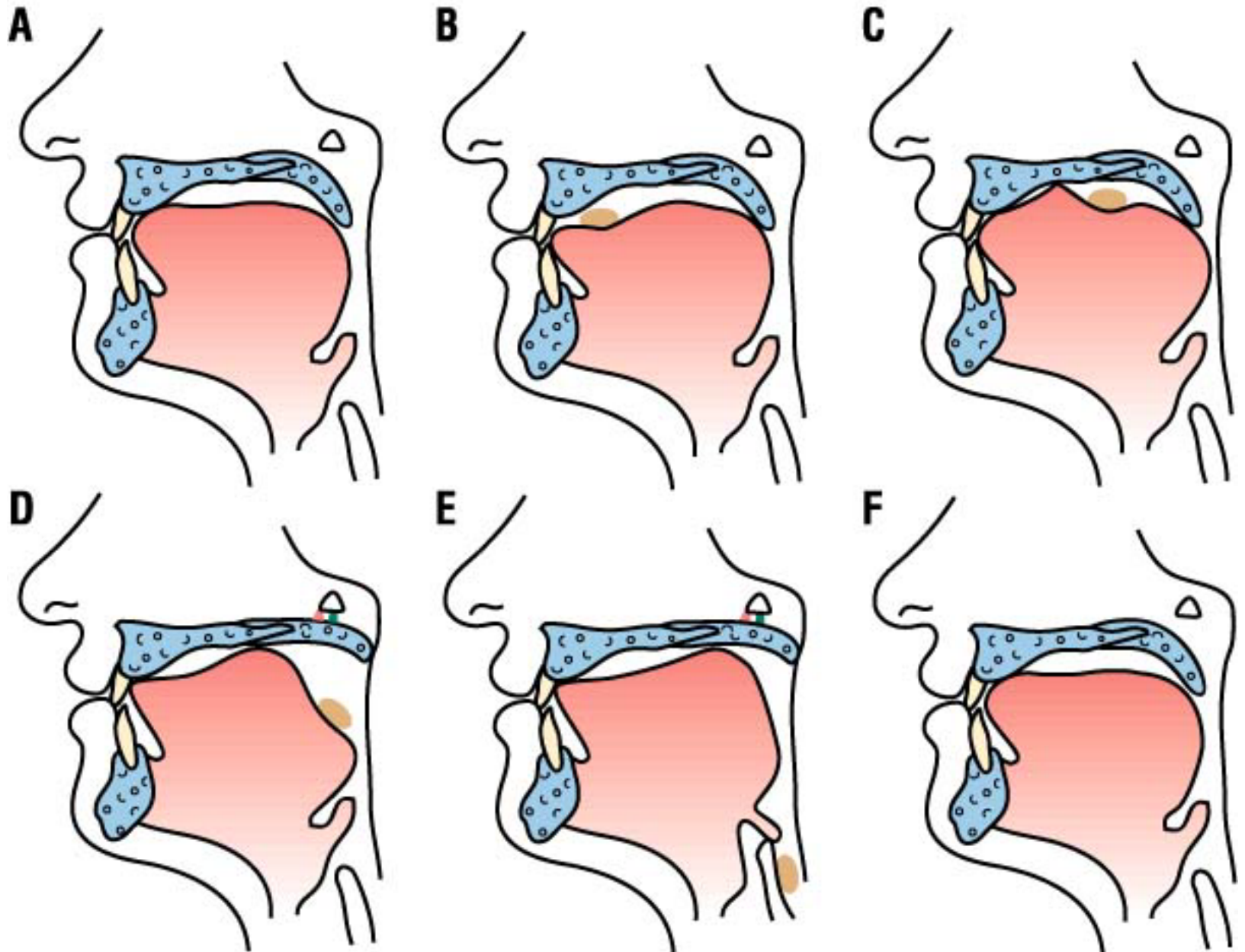


Illustration from Ros Escott article, Positioning, Attachment and Milk Transfer, Breastfeeding Review, 1989, p.35.

Adult Swallow



Morphometric formula

Kushida C. et al., A predictive morphometric model for the obstructive sleep apnea syndrome, *Annals of Internal Medicine*, Oct 15, 1997; 127(8):581-87.

This is one of the most important formulas in the medical field today!

Stanford Morphometric Model

$$P + (Mx - Mn) = 3 \times OJ + 3 \times (BMI - 25) \times (NC/BMI)$$

P = palatal height

Mx = maxillary intermolar distance

Mn = mandibular intermolar distance

OJ = overjet

NC = neck circumference

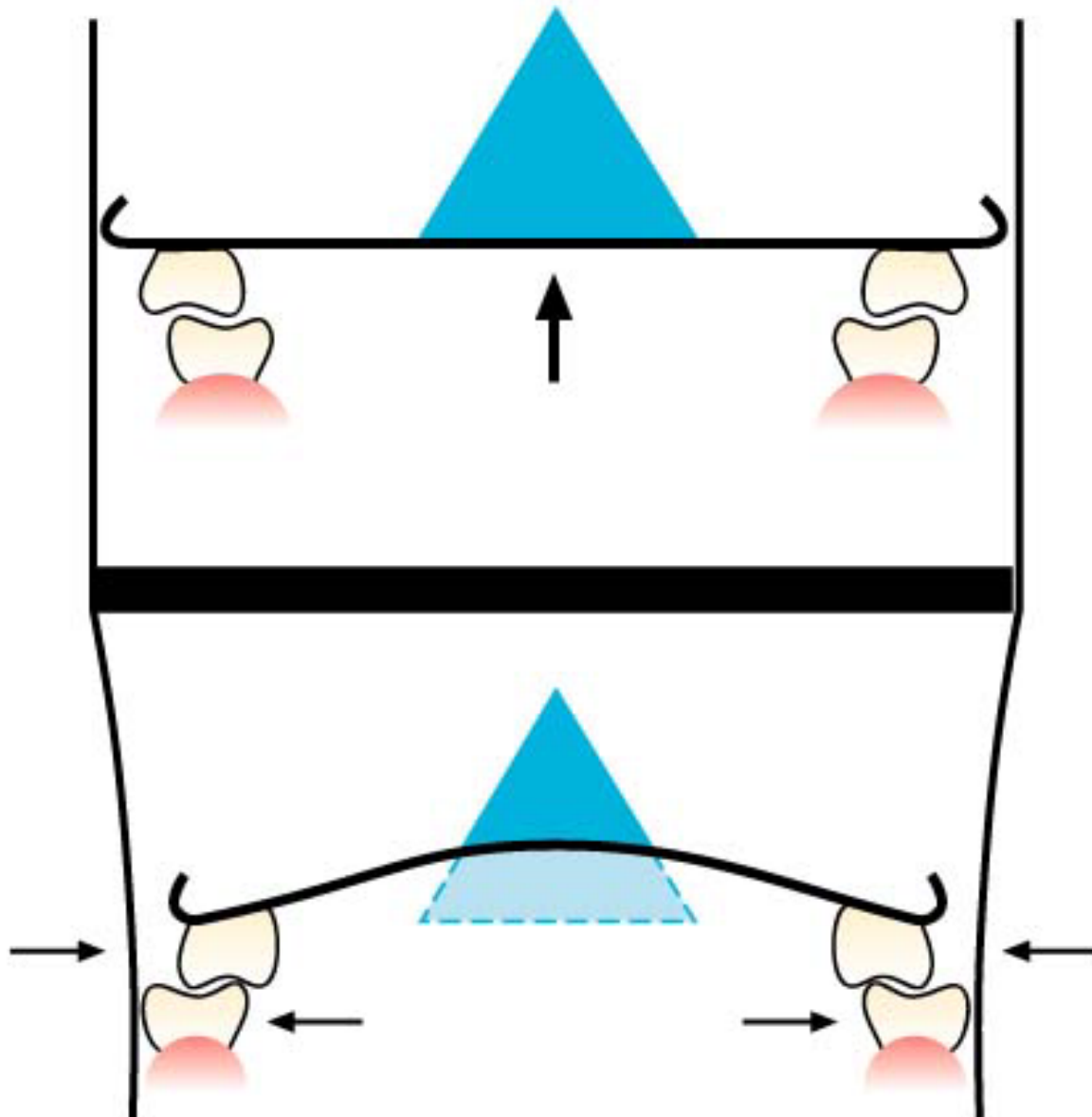
BMI = body mass index

“Model has clinical utility and predictive values for patients with suspected obstructive sleep apnea”

Summarizing formula

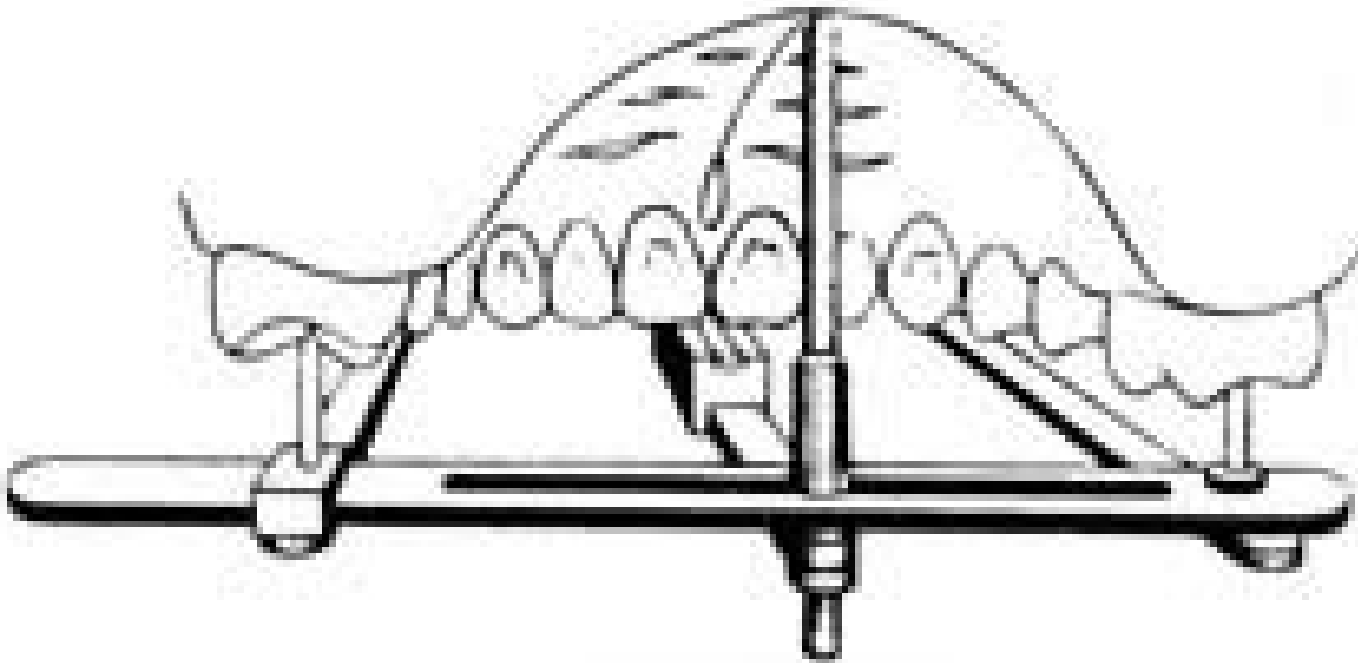
Anyone with a high palate, narrow dental arches, overjet, large neck and/or large body mass, is at risk for sleep apnea. If the individual does not have a large neck size or body mass, the predictive value of the formula is based on the height of the palate, arch wide and overjet.

Palate Formation



A key illustration to a better understanding of OSA/SDB.

Caliper to measure arch width and palatal height.



Caliper may become a standard measuring device in dental offices.

Caliper described in: Sten Linder-Aronson, Arne Backstrom. A comparison between mouth and nose breathers with respect to occlusion and facial dimensions. *Odontol Revy* 1960, 11(4):343-376.

The connection:

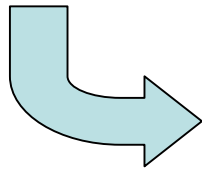
Bottle-feeding

Excessive thumb sucking

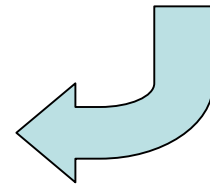
Pacifier use

Snoring

Sleep apnea



**Similar signs
and symptoms**



Calculating Body Mass Index (BMI)

$$\text{BMI} = \text{Weight in lbs.} \times 704 / \text{height in inches} / \text{height in inches.}$$

Ranges for BMI

- Normal - 18.5 - 24.9
- Overweight - 25.0 - 29.9
- Obese - 30.0 - 39.9
- Extremely obese - > 40

Key Conclusion

Breastfeeding is one of the most natural of all human instincts. When any mammal is born, and humans are but one species of mammals, the newborn instinctively goes to its mother's breast for nourishment. It is critical for its survival. Of all the mammalian species, only humans have tried to alter that inborn natural instinct.

Breastfeeding is the best way to nurture our young. Bottle feeding will never be better than breastfeeding. Pacifiers can also have a very negative impact on our health as well.

I conclude that breastfeeding **IS** the key to good health and **IS** the cheapest form of health care!

Brian Palmer, D.D.S. Dec. 2004.

The oral cavity is the gateway to overall health and natural beauty.

I hope this presentation has helped you better understand the the importance of the oral cavity / airway.

“Knowledge is most meaningful
when shared with others.”

Brian Palmer, D.D.S.

Thanks to Kansas University.



KU Jayhawk

For Better Health!

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