

# Clinical Practice Guide Update 2021-2023

Melissa Lachapelle, BSc RD

Provincial Practice Lead, Nutrition Services

PEAS Standardized Practice & Education Chair



# Welcome & Objectives

- Overview of this year's updates to the PEAS Clinical Practice Guide
  - Screening
  - Diagnosing Pediatric Feeding Disorder
  - Facilitating Safe Swallowing & Skill Development
  - Sensory Processing
  - Enteral Nutrition Home Blended Feeding, Tolerance
  - Enteral Nutrition Administration, Weaning
  - Relational Feeding & the Neurorelational framework
  - Surgical management



Provincial Practice Lead

Melissa Lachapelle, RD

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## Today's Speakers:

**Melissa Lachapelle** BSc RD

**Julia Giesen** MSc. SLP, R.SLP, S-LP(C)

**Patty O'Krafka** BSc OT, MSc

**Kristina Van Nest** MSc RD

**Keri Fehler** MSc RD

**Dr. Carole-Anne Hapchyn** MD, FRCPC

**Dr. Hamdy El-Hakim** MB ChB, FRCS (Ed), FRCS (ORL), FRCS(C)



# Clinical Practice Guide Update

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The image shows a Zoom Webinar Chat window with a dark background. The chat window title is "Zoom Webinar Chat". A callout box points to the chat interface with the text: **For Comments** Use the **Chat** and select "All panelists and attendees" for public comments. The chat interface shows a "To:" dropdown menu set to "All panelists and attendees" and a note: "Your text can be seen by panelists and other attendees". At the bottom of the Zoom interface, there are three icons: "Chat", "Raise Hand", and "Q&A". A second callout box points to the "Q&A" icon with the text: **For Questions** Use the **Q&A or Raise Hand**. We will address them at the end of the presentation.

**For Comments**  
Use the **Chat** and select "All panelists and attendees" for public comments.

**For Questions**  
Use the **Q&A or Raise Hand**. We will address them at the end of the presentation

Zoom Webinar Chat

To: All panelists and attendees ▾

Your text can be seen by panelists and other attendees

Audio Settings ^

Chat Raise Hand Q&A

**We begin by acknowledging that our work is conducted on the territories of Treaty Six, Seven, and Eight and the homeland of the Metis.**

**We also acknowledge the many indigenous communities that have been forged in urban centres across Alberta.**

**We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with indigenous communities in a spirit of reconciliation and collaboration.**



**EVERY  
CHILD  
MATTERS**



# Project Scope

The Pediatric Eating And Swallowing (PEAS) Project is a provincial **quality improvement** initiative with the purpose of developing a provincial eating, feeding, and swallowing **clinical pathway** to standardize and improve care for children with a **pediatric feeding disorder**.<sup>1</sup>

**Target population:** Patients receiving care from provincial Outpatient Clinics, Home Care, or Community Rehabilitation

<sup>1</sup> Goday PS et al. *Pediatric Feeding Disorder: Consensus Definition and Conceptual Framework*. J Pediatr Gastroenterol Nutr. 2019 Jan;68(1):124-129.

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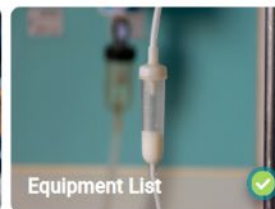
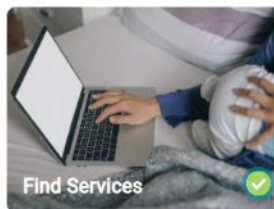
## Find relevant information

For families and care providers of children with an eating, feeding and swallowing disorder

FOR FAMILIES

FOR PROVIDERS

### Popular Resources for Families



peas.ahs.ca

# Screening & Diagnosing PFD

**Melissa Lachapelle** BSc RD  
Provincial Practice Lead  
Nutrition Services





- 5.1 Feeding Screening
  - Addition of the 6-question screener
- 5.2 Swallowing Screening
  - Parent-Reported Outcome Questionnaire for Swallowing Dysfunction in Healthy Infants and Toddlers

### 6-QUESTION SUBSET

Does your baby/child let you know when he is hungry?	YES	NO	
Do you think your baby/child eats enough?	YES	NO	
How many minutes does it usually take to feed your baby/child?	<5	5-30	>30
Do you have to do anything special to help your baby/child eat?	YES	NO	
Does your baby/child let you know when he is full?	YES	NO	
Based on the questions above, do you have concerns about your baby/child's feeding?	YES	NO	

*Red flag answers are in orange. If 2 or more of your answers are orange please contact your pediatrician.*

Concerned? Take the full questionnaire:  
[feedingmatters.org/questionnaire](https://feedingmatters.org/questionnaire)

## PEDIATRIC FEEDING DISORDER

### Diagnosing Pediatric Feeding Disorder

Alberta Health Services (AHS) recommends the term **Pediatric Feeding Disorder (PFD)** to diagnose children with impaired oral intake that is:

- ✓ not age-appropriate,
- ✓ lasts at least 2 weeks, and
- ✓ is associated with one or more disturbance of medical, nutritional, feeding skills, and/or psychosocial function.

**PFD is a multifaceted disorder associated with functional impairments impacting a child's eating, feeding, or swallowing.**

#### IT IS NOT

- **An eating disorder** – a psychiatric disorder with severe and persistent disturbance in eating behaviours and associated distressing thoughts and emotions (see DSM-5 criteria).
- **Related to food insecurity** or congruent with cultural norms.
- **Avoidant Restrictive Food Intake Disorder (ARFID)** – a psychiatric disorder with anxiety resulting in nutrition sequelae (see DSM-5 criteria). It is important to rule out underlying medical or skill dysfunction as the diagnostic criteria for ARFID can overlap with PFD.

See the PFD Clinical Practice Guide for [more information](#)

#### Use the term PFD to:

1. Assess your patient using the PFD criteria
2. Make a diagnosis for your patient
3. Document in Connect Care or alternative health information system
4. Refer to the appropriate health care professionals

#### Benefits of using the PFD term:

- Consistent messaging for parents and families
- Awareness and consistent identification of children with PFD
- Better understanding of conditions associated with PFD across health domains
- Accurate calculation of prevalence data in Alberta

Did you know? Pediatric Feeding Disorder is available as a diagnostic term in Connect Care.



For more information on Pediatric Eating, Feeding and Swallowing, visit [peas.ahs.ca](https://peas.ahs.ca)



## PEDIATRIC FEEDING DISORDER

### Diagnostic Criteria: Pediatric Feeding Disorder

**A** A disturbance in oral intake of nutrients, inappropriate for age, lasting at least two weeks and associated with one or more of the following:

#### Medical dysfunction

- a. cardiorespiratory compromise during oral feeding
- b. aspiration or recurrent aspiration pneumonitis



#### Nutritional dysfunction

- a. malnutrition
- b. nutrient deficiency or significantly restricted intake resulting from decreased diet diversity
- c. reliance on enteral feeds or oral supplements



#### Psychosocial dysfunction

- a. active or passive avoidance behaviors by child when feeding or being fed
- b. inappropriate parent or caregiver management of child's feeding and/or nutrition needs
- c. disruption of social functioning within a feeding context
- d. disruption of parent-child relationship associated with feeding



#### Feeding skill dysfunction

- a. need for texture modification of liquid or food
- b. use of modified feeding position or equipment
- c. use of modified feeding strategies



**B** Absence of the cognitive processes consistent with eating disorders and pattern of oral intake that is not due to a lack of food or congruent with cultural norms (Goday, et al., 2019)

#### References

- Goday, P. S., Hui, S. Y., Silverman, A., Lukens, C. T., Dodrill, P., Cohen, S. S., Delaney, A. L., Feuling, M. B., Noel, R. J., Gisel, E., Kerzner, A., Kessler, D. B., Kraus de Camargo, O., Browne, J., & Phalen, J. A. (2019). Pediatric Feeding Disorder: Consensus Definition and Conceptual Framework. *Journal of pediatric gastroenterology and nutrition*, 68(1), 124–126.
- Feeding Matters <https://www.feedingmatters.org/what-is-pfd/>
- Dodrill, P. New Diagnosis Codes Clarify Pediatrics Feeding Disorder Reimbursement. *The ASHA Leader* (2022).



For more information on Pediatric Eating, Feeding and Swallowing, visit [peas.ahs.ca](https://peas.ahs.ca)



# Facilitating Safe Swallowing & Feeding Skill Development

Julia Giesen

M.Sc, R.SLP, S-P(C)



## 8.2 Facilitating Safe Swallowing

- **Goal** of dysphagia management = facilitate oral intake while minimizing risk of airway compromise
- **Nature** of dysphagia multifaceted (medical, surgical, skill, nutrition)
- **Multidisciplinary team** is best practice to manage dysphagia
- Feeding and swallowing are *neurodevelopmental* skills

# Individualize care based on etiology

## Strategies:

- **Compensatory** – i.e. alter pace, texture, equipment
- **Rehabilitation** – improve oropharyngeal physiology
- **Habilitation** – develop or maintain skills
- [Table 8](#)

TABLE 8: COMPENSATORY, REHABILITATIVE, AND HABILITATIVE TECHNIQUES FOR DYSPHAGIA MANAGEMENT

MANAGEMENT	STRATEGY	EXAMPLE	OBJECTIVE
<b>COMPENSATION</b>			
	Pacing	Moderate the rate of intake by controlling or titrating the rate of presentation liquid or food provided, moderating the rate of presentation of food or liquid, and the time between bites or swallows	Encourage breathing (infants) Discourage overfilling the oral cavity (children)
	Modify texture	Offer moist, cohesive consistency	Reduce piecemeal deglutition, reduce choking risk
	Modify liquid viscosity	Thickened liquids consistency	Reduce risk of aspiration
	Modify position	Elevated side-lying positioning or semi-prone (for infants)	Maximize control of muscles for deglutition, reduce bolus flow, improve integration of suck-swallow-breathe sequence, reduce airway obstruction
	Provide head or face posture support	Provide jaw, lip, or cheek assist	Reduce risk of aspiration
	Use alternative equipment	Trial slow flow nipples	Reduce risk of aspiration
	Use adaptive equipment	Trial flexible cut-out cup	Reduce risk of aspiration
	Increase oral sensorimotor awareness	Alter food taste, temperature, tactile quality	Stimulate receptors of the tongue and oropharynx Provide additional sensory input for swallowing
<b>REHABILITATION</b>			
	Practice biting and chewing	Offer transitional foods which quickly dissolve	Improve underlying oropharyngeal physiology

## 8.2 Facilitating Safe Swallowing

- New! Pill Swallowing
- Updated: Medication Modifications
- Mode of delivery is important in pediatric dysphagia

## 8.5 Feeding Skill Development

- Consider neurodevelopmental stage
- Importance of early, timely, individualized assessment and intervention
- Collaborative goal setting is essential
- Building a responsive feeding relationship

# Apply principles of motor learning

- developmental progression
  - consistency and repetition
  - functional, motivating tasks
  - facilitate speed and endurance
  - simplify tasks, provide specific support
  - taper support, increase contexts & environments
- continually reassess to upgrade goals and reduce support while maintaining safety



# Update: 8.5 Feeding Skill

## New! Considerations for soother use

- Benefits: development of non-nutritive sucking, regulation
- Risks of long-term use

Considerations for feeding: breast, bottle, solids

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# Sensory Processing

Patty O’Krafka, OT

BSc OT, MSc



# Sensory Processing

Patty O’Krafka, OT

BSc OT, MSc



# Update: 8.7 Sensory Processing

- Full content review and update
- Authored by interdisciplinary team
- *NEW! Sensory Processing Occupational Therapy Pediatric Clinical Practice Guide*

Sensory Processing	
Occupational Therapy Pediatric Clinical Practice Guide	
<b>Table of Contents</b>	
Introduction.....	4
Background .....	4
Theoretical Frameworks and Evidence .....	4
Frameworks.....	5
Competencies for Occupational Therapists in Canada .....	5
Models of Occupation.....	5
Canadian Model of Occupational Participation .....	5
Canadian Model of Occupational Performance and Engagement .....	6
PEO.....	6
Clinical Theory - Sensory .....	6
Sensory Integration .....	6
Sensory Processing .....	7
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Supporting Theories, Frameworks and Concepts .....	8
Neuro-Relational Framework .....	8
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Self-Regulation.....	9
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# Home Blended Food for Tube Feeding

## Assessing Tube Feed Tolerance

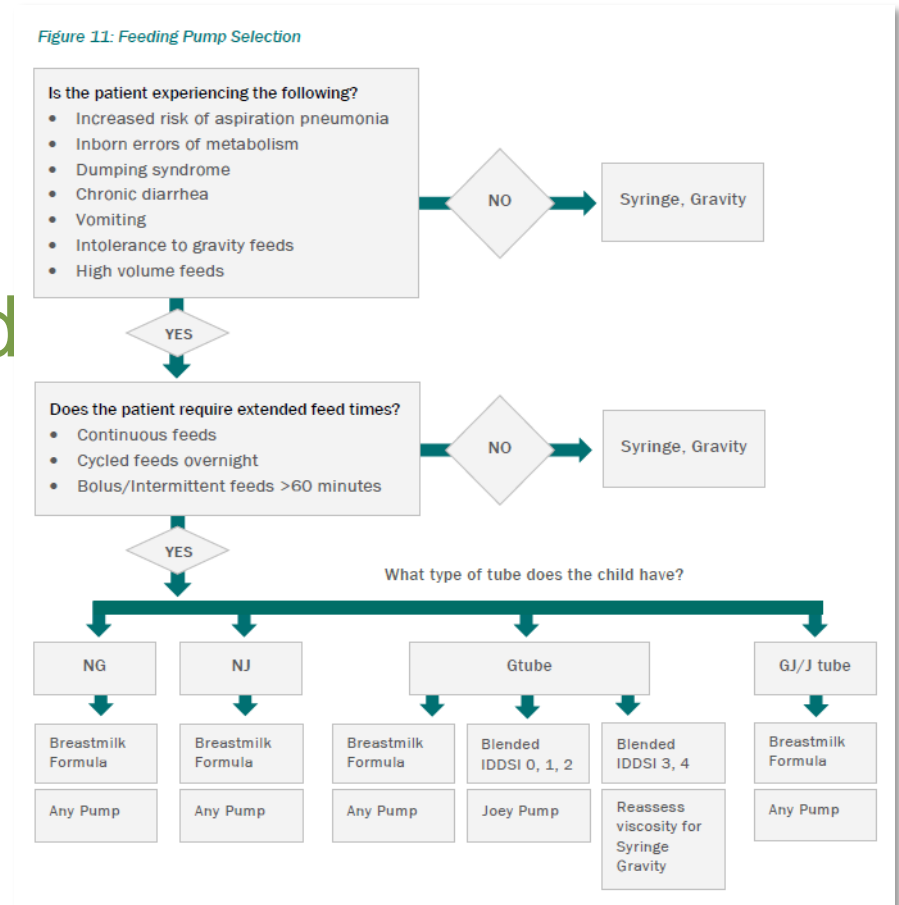
Kristina Van Nest, MSc RD

Pediatric Clinical Dietitian, Nutrition Services  
Neurosciences, ACH



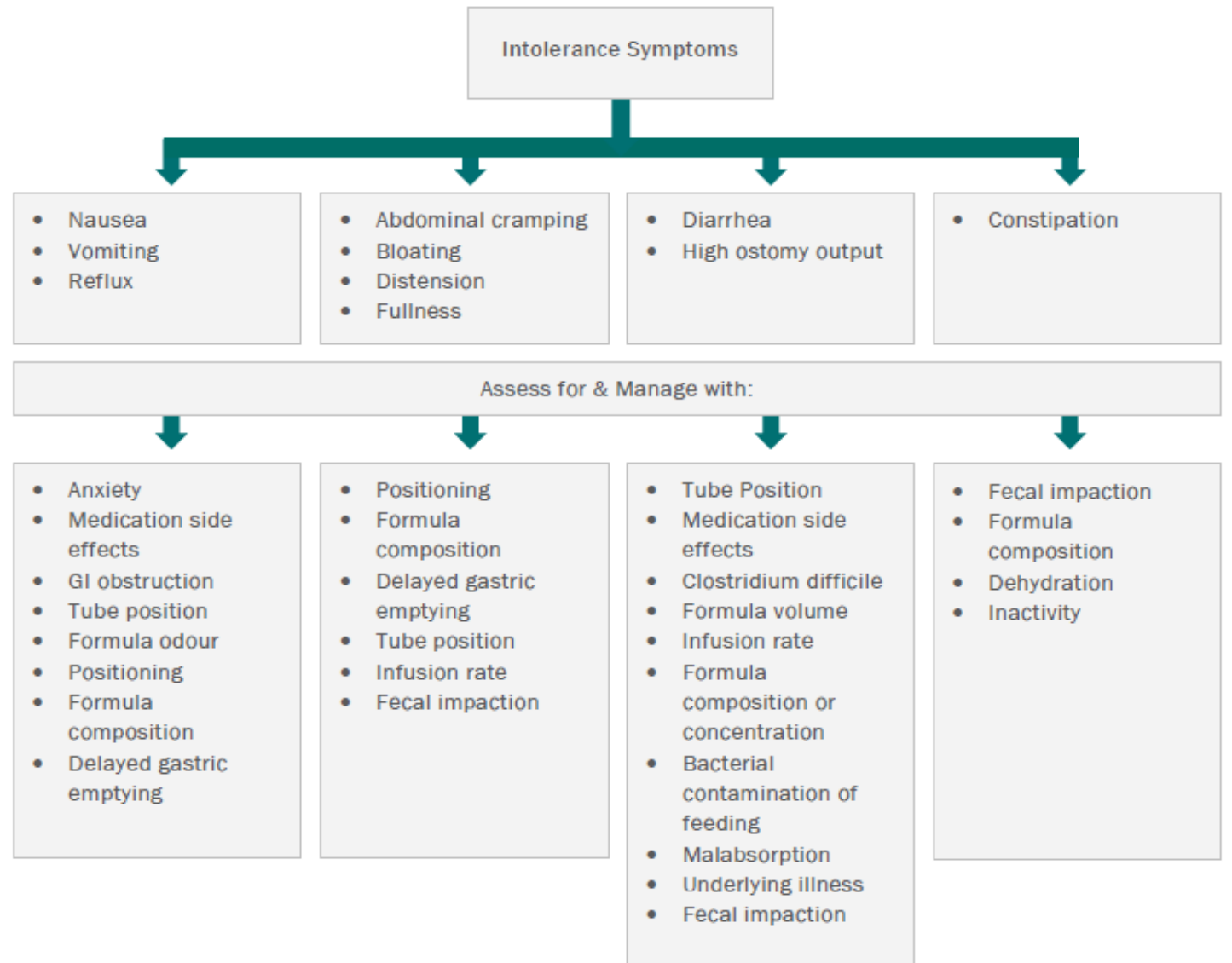
# New: Home Blended Food for Tube Feeding

- When to consider home blended food
- Candidates for home blended food
- Challenges that may arise
- Administration of home blended food
  - Pump eligibility (Table 12 & Figure 11)



# New! 9.1.10 Assessing tube feed tolerance

Figure 12: Identifying Cause of Tube Feeding Intolerance



# Enteral Nutrition Administration Tube Weaning

**Keri Fehler, MSc RD**

Pediatric Clinical Dietitian, Nutrition Services  
North Pediatric Home Nutrition Support Program





## New: Enteral Nutrition Administration

- Safe administration time at room temperature (hang time) chart
  - Compare hospital to home setting by feed type
- Bacterial contamination
- Fat and energy loss

## New: Reuse and cleaning of EN equipment

- Potential source of bacterial contamination:
  - syringes, feeding sets (bag with tubing), adaptors, tube extensions, and enteral feeding pumps
- PHNSP equipment cleaning recommendations
- PHNSP equipment reuse recommendations

# Update: Tube Weaning to Oral Feeding

- Tenets of the models used in literature and practice based on 3 approaches.
  - Behavioral
  - Child- and Family-Centered
  - Biomedical
- Recommendation for outpatient weaning program as first-line
  - Readiness, positive feeding relationship, normalization of feeding and eating behaviors and use of behavioral techniques to increase oral intake

# Relational Feeding Neurorelational Framework

Dr. Carole-Anne Hapchyn  
MD, FRCPC



# Updates: Relational Feeding

- Relevant sections were updated to be intentional with wording for relational and responsive feeding
  - 2.3 Responsive Feeding Therapy definition
  - Section 3
  - Section 6
  - 8.5
  - 8.6
  - Appendix 1

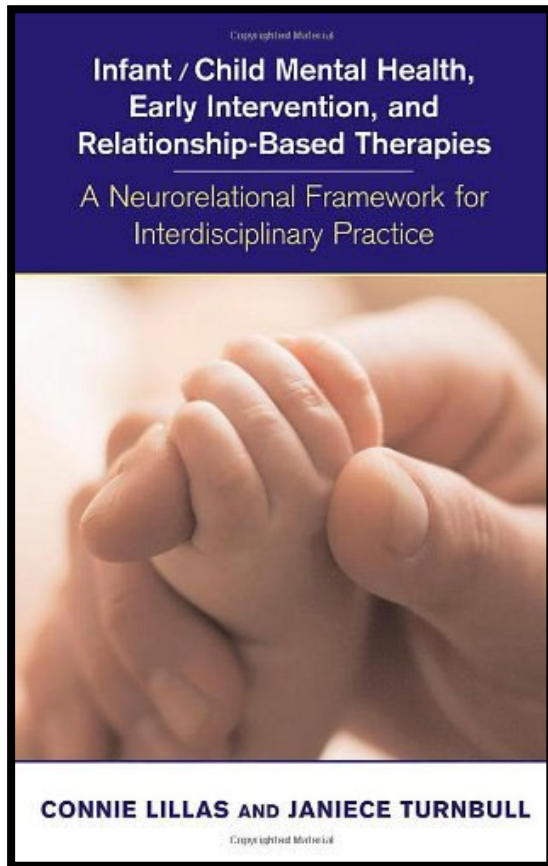
# Updates: Relational Feeding

- Overview of relational and responsive feeding
- NeuroRelational Framework
- How and when to engage with psychology/mental health services?
- Resources

# Updates: Relational Feeding

- Feeding as a relational and responsive process
- Serve and return – non-verbal and verbal reciprocity
- Cue sending and cue reading for the child and parent
- Child develops self-regulation in the context of the caregiver providing co-regulation
- Responsive Feeding Therapy

# Updates: NeuroRelational Framework





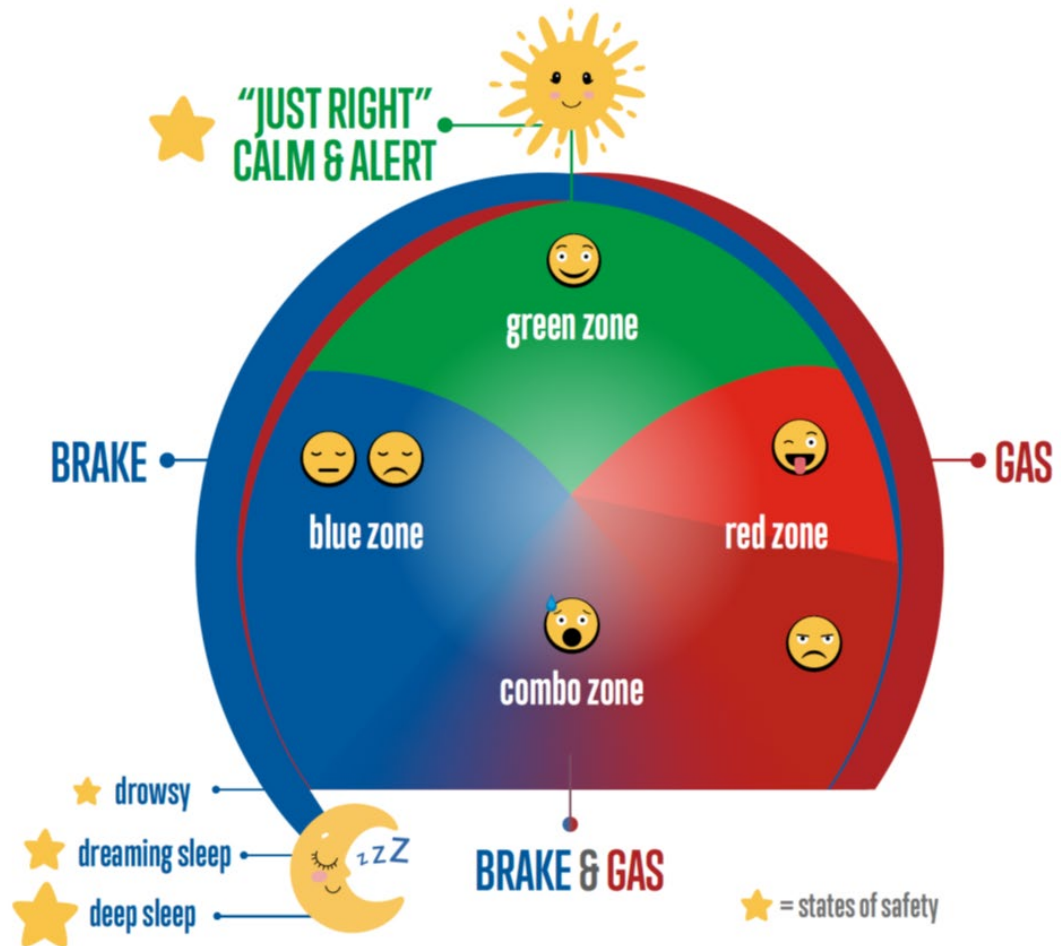
THE NEURORELATIONAL FRAMEWORK'S

# Safety-Challenge-Threat Triad

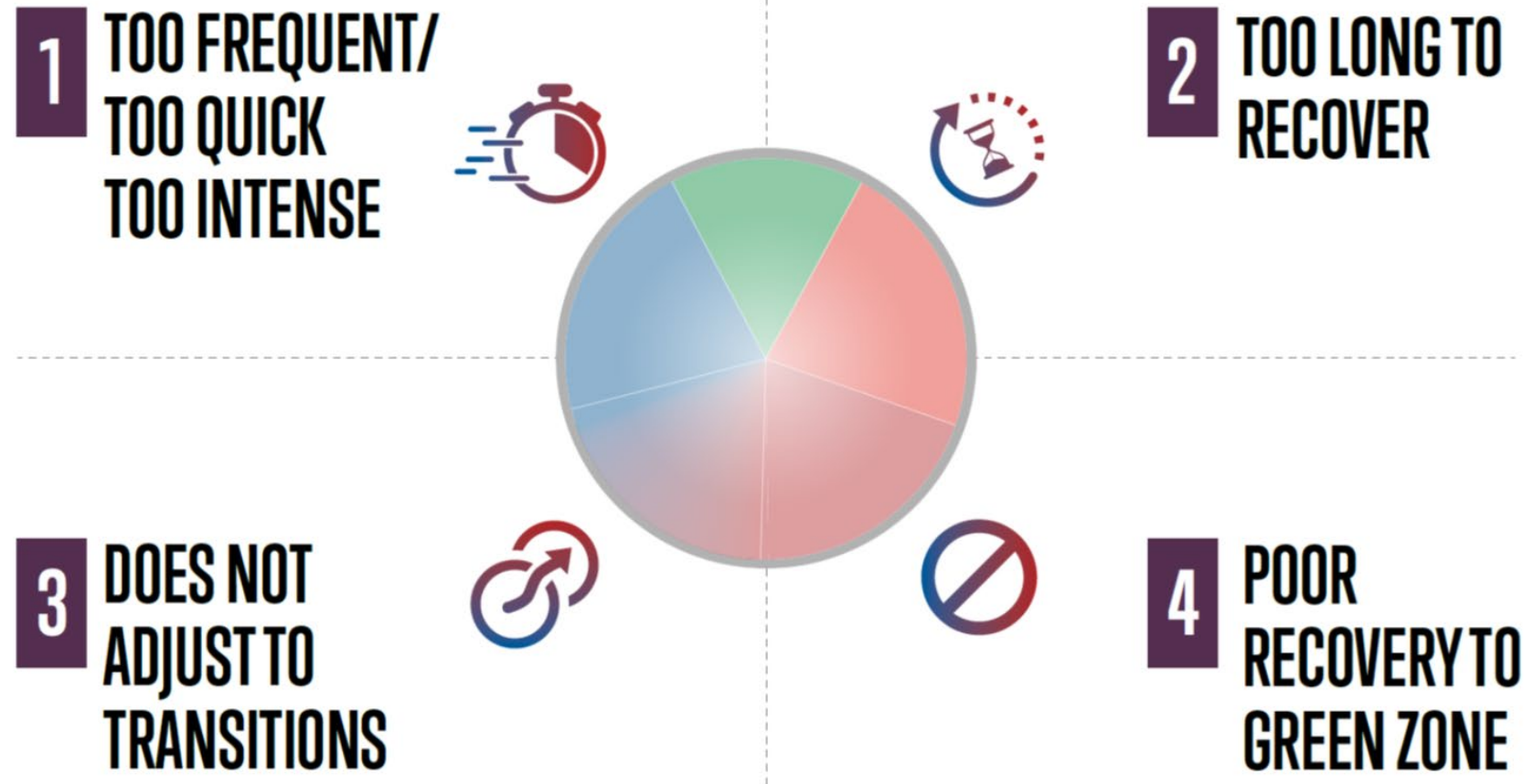


# Sleep-Wake States Arc

SUPPORTS HEALTH



# How Do We Identify Toxic Stress Patterns?



# How and when to engage with psychology/mental health services?

When:

- child and/or parent has experienced trauma and is suffering symptoms that are affecting function
- Child and/or parent has other mental health challenges

How: this is a problem in our current systems of care

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# Resources:

- [Tips for Success – Getting Through Mealtime Struggles:](https://www.youtube.com/playlist?list=PLOdesgeSAts2pb0d9ShY05tR67RKGrIgc)  
<https://www.youtube.com/playlist?list=PLOdesgeSAts2pb0d9ShY05tR67RKGrIgc>
- [www.NRFcare.org](http://www.NRFcare.org)
- [https://share.albertahealthservices.ca/teams/HPSP/AHPPE/Education/publicedlistings/Shared%20Documents/@NeuroRelational\\_Intro\\_Resource\\_Listings.pdf](https://share.albertahealthservices.ca/teams/HPSP/AHPPE/Education/publicedlistings/Shared%20Documents/@NeuroRelational_Intro_Resource_Listings.pdf)
- <https://www.aaimh.ca/neurorelational-framework>
- <https://developingchild.harvard.edu/science/key-concepts>

# Surgical Management

Dr. Hamdy El-Hakim

MB ChB, FRCS (Ed), FRCS (ORL),  
FRCS(C)



# **Surgery for pediatric dysphagia**

Hamdy El-Hakim FRCS(ORL) FRCS(Ed) FRCS(C)

Professor

Department of Surgery

University of Alberta

Physician Lead Aerodigestive Program

2023

# Disclosure

- No conflict of interest
- All visual material consented for



# Objectives

- Recognize some surgical options for treatment
- Inform on areas of overlapping types of dysphagia
- Recognize some limits of the evidence base in current practice

# Ankyloglossia

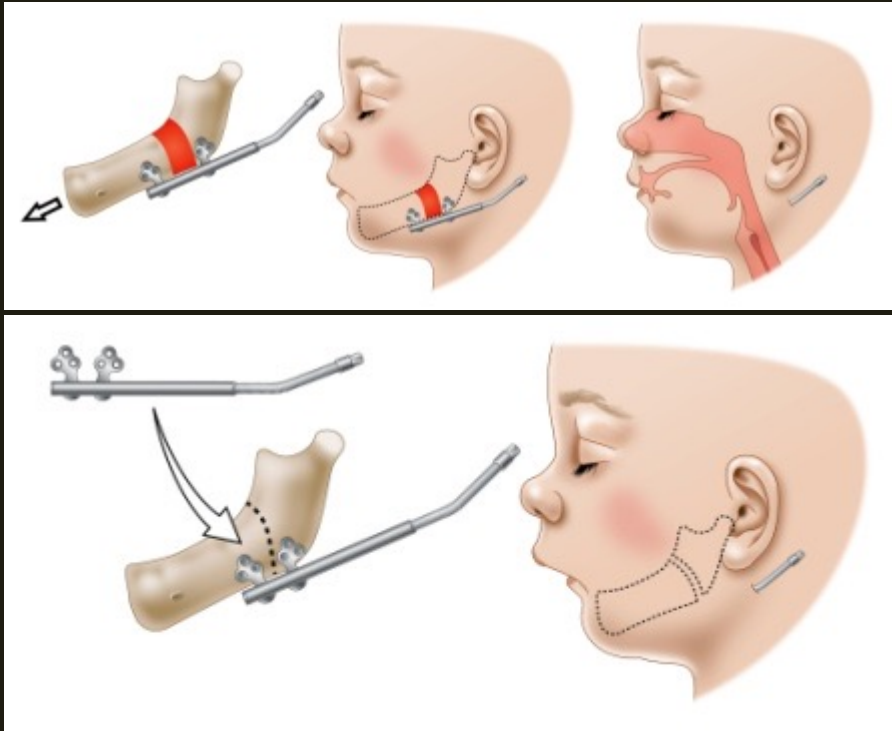


<https://andersonpediatricdentistry.com/blog/176292-tongue-tie-what-is-it-and-what-can-you-do-about-it>

**Table 3. Statements That Reached Consensus: Ankyloglossia and Breastfeeding.**

No.	Statement	Mean	Outliers
10	Breastfeeding difficulties are common in the newborn period and evidence shows that anterior ankyloglossia is a potential contributor to infant feeding problems	7.82	1
12	Maternal pain and poor infant latch can be caused by ankyloglossia but these symptoms can also be present with other etiologies of breastfeeding difficulties	8.73	0
8	Ankyloglossia in an infant should be evaluated by a careful history (including lactation history) and physical examination, including inspection and palpation	8.85	0
19	The maternal and infant breastfeeding dyad should be recognized as a vulnerable patient population and care should be taken to ensure adequate support services, education and counselling, and shared decision making.	8.82	0
20	Infants should ideally be evaluated by a lactation consultant prior to lingual frenotomy	7.27	1

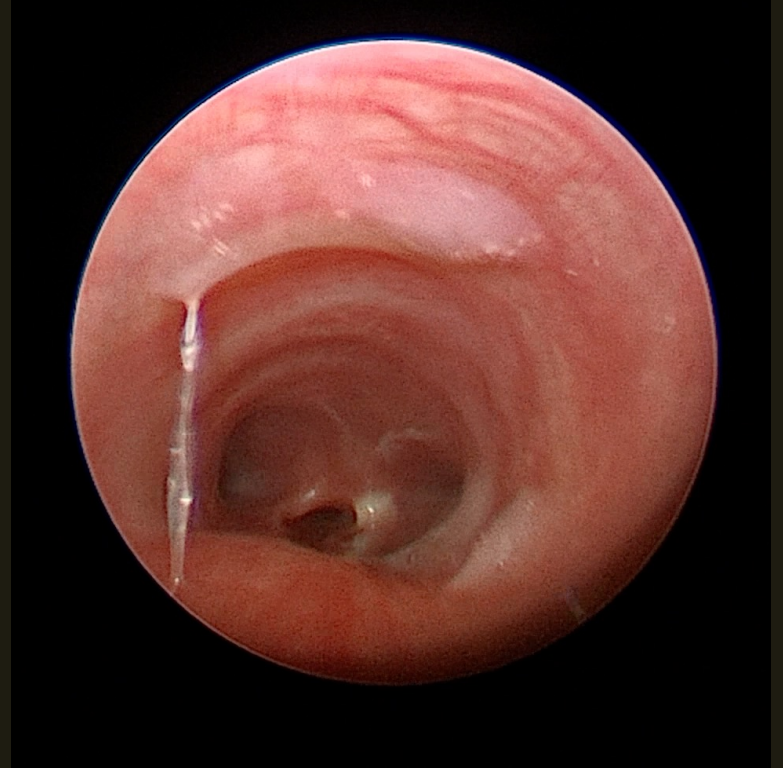
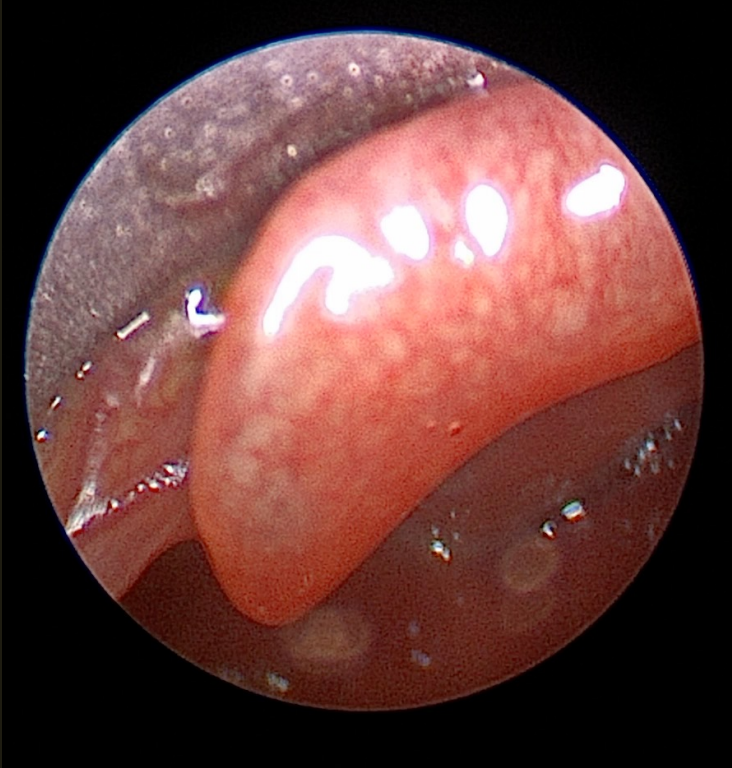
# Pierre Robin sequence / complex



## Evidence on mandibular distraction

- Weak evidence that feeding improves with the improvement of airway obstruction.
- In a systematic review, 82% of children were feeding exclusively orally after mandibular distraction osteogenesis.
- Babies with isolated Pierre Robin fared better than the syndromic children (93.7% versus 72.9%).

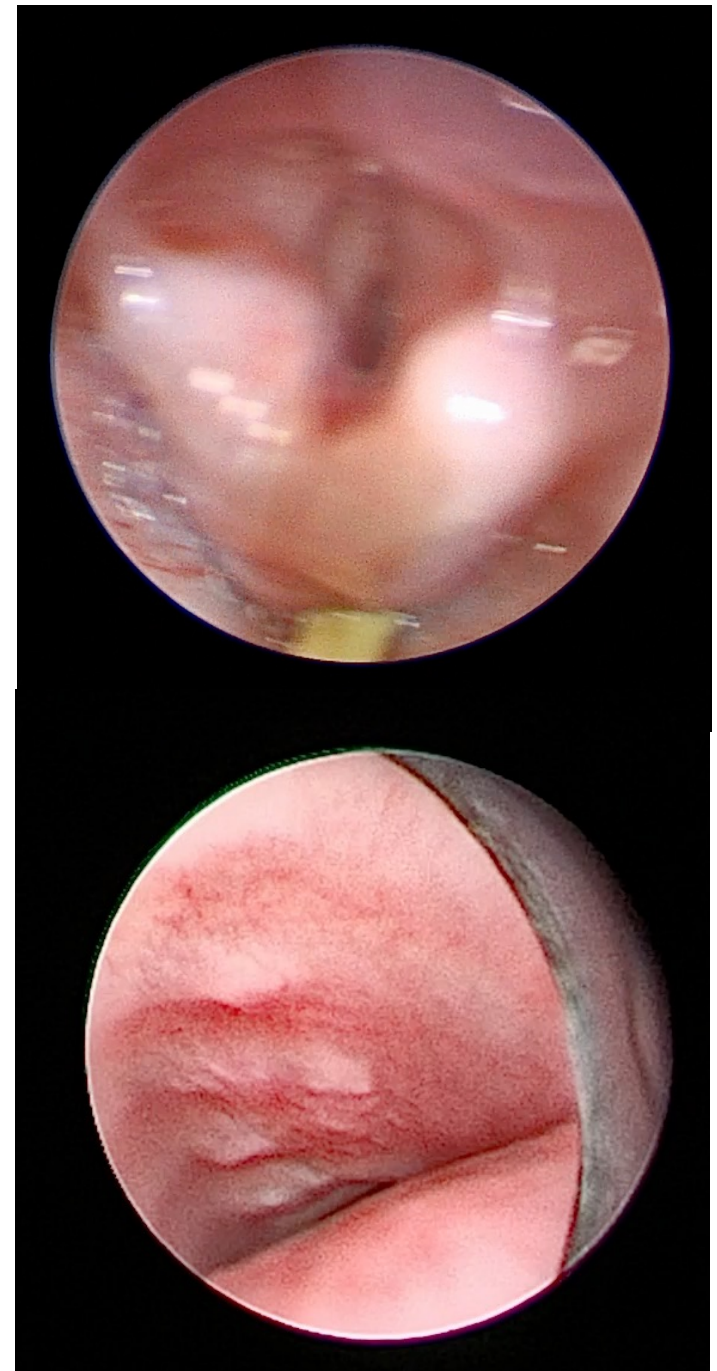
# Tracheo-esophageal fistula



# Airway lesions (n of 12 over 3 years)

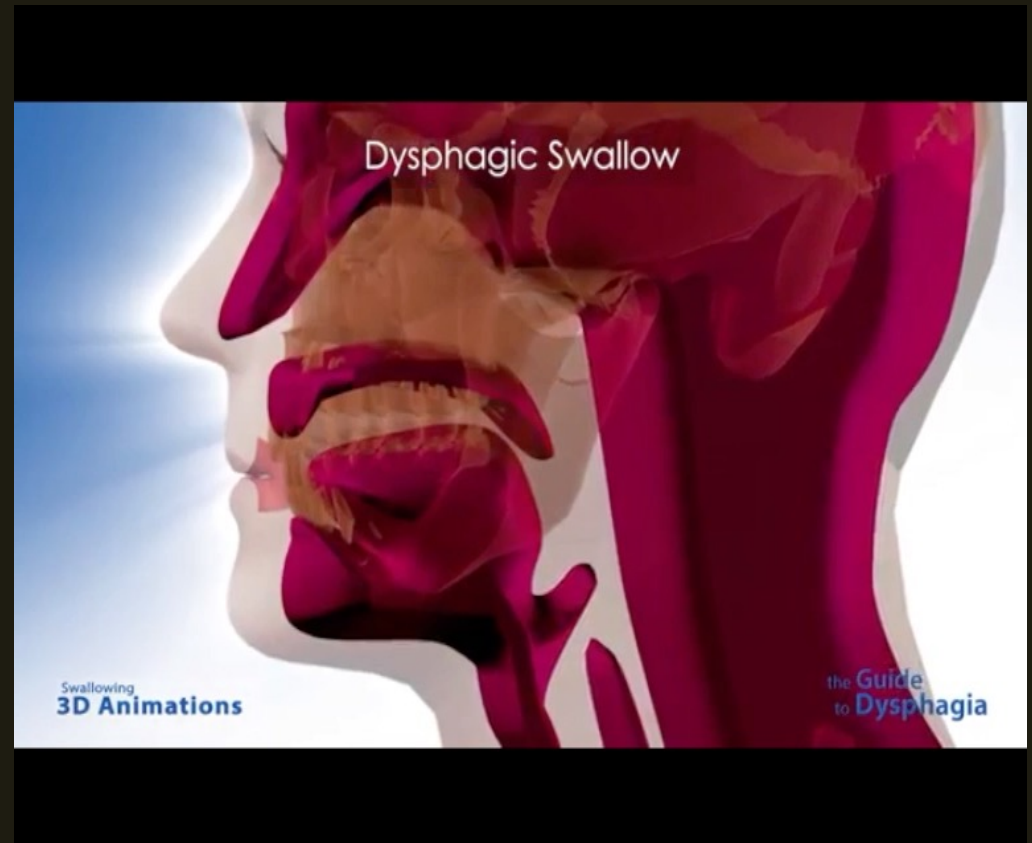
Condition	N
Tracheomalacia	8
Subglottic stenosis	3
Laryngeal cleft	2
Laryngeal paralysis	3
Bronchomalacia	3

No clear detail on the degree of freedom of oral feeding, dependence on certain thicknesses or supplemented by tube feeding and for how long.



# Swallowing dysfunction (SwD)

Any difficulty of *swallowing initiation or interruption of the food's* journey from and beyond the oropharynx until it reaches the cricopharyngeal sphincter

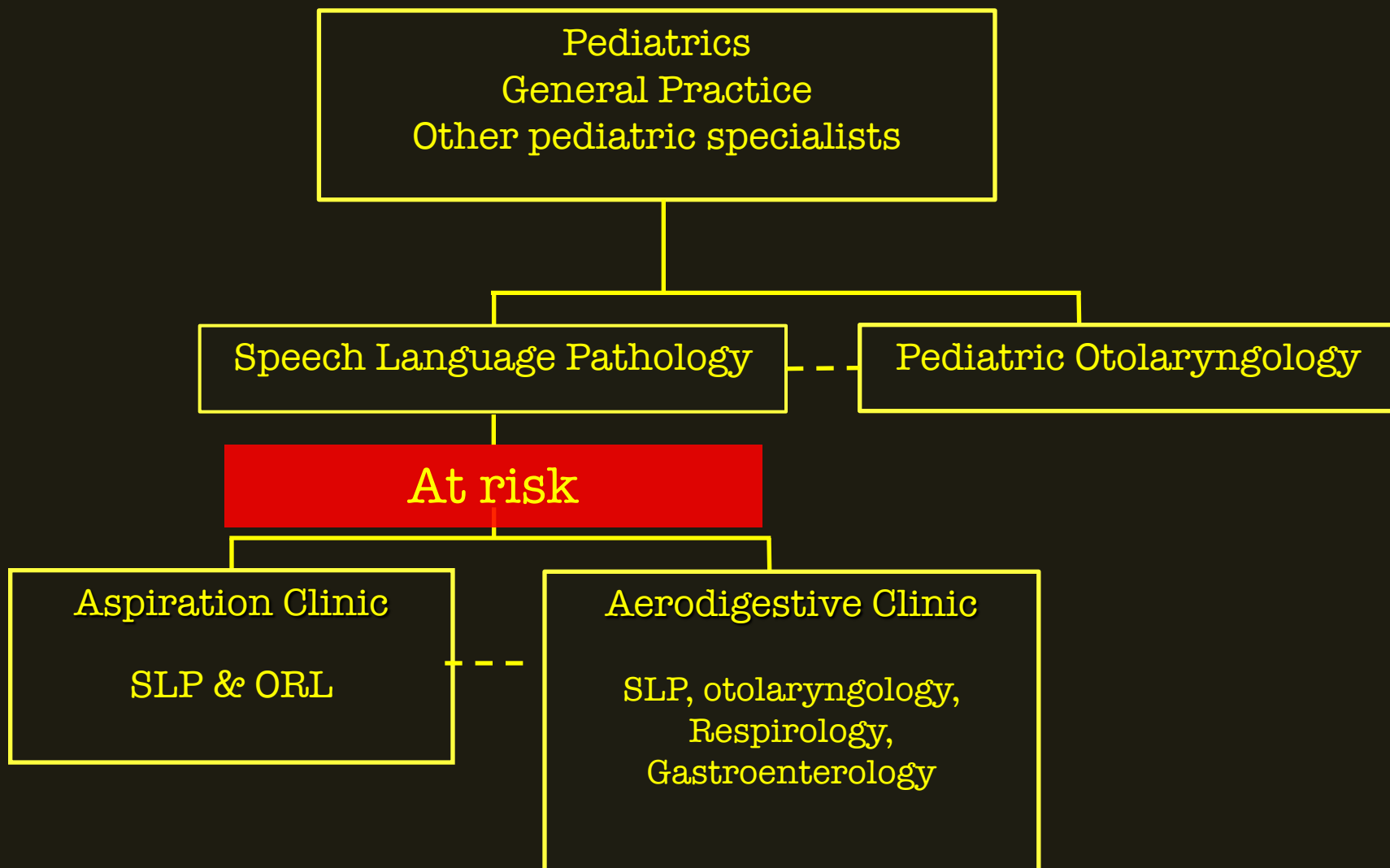


# Commoner appearance

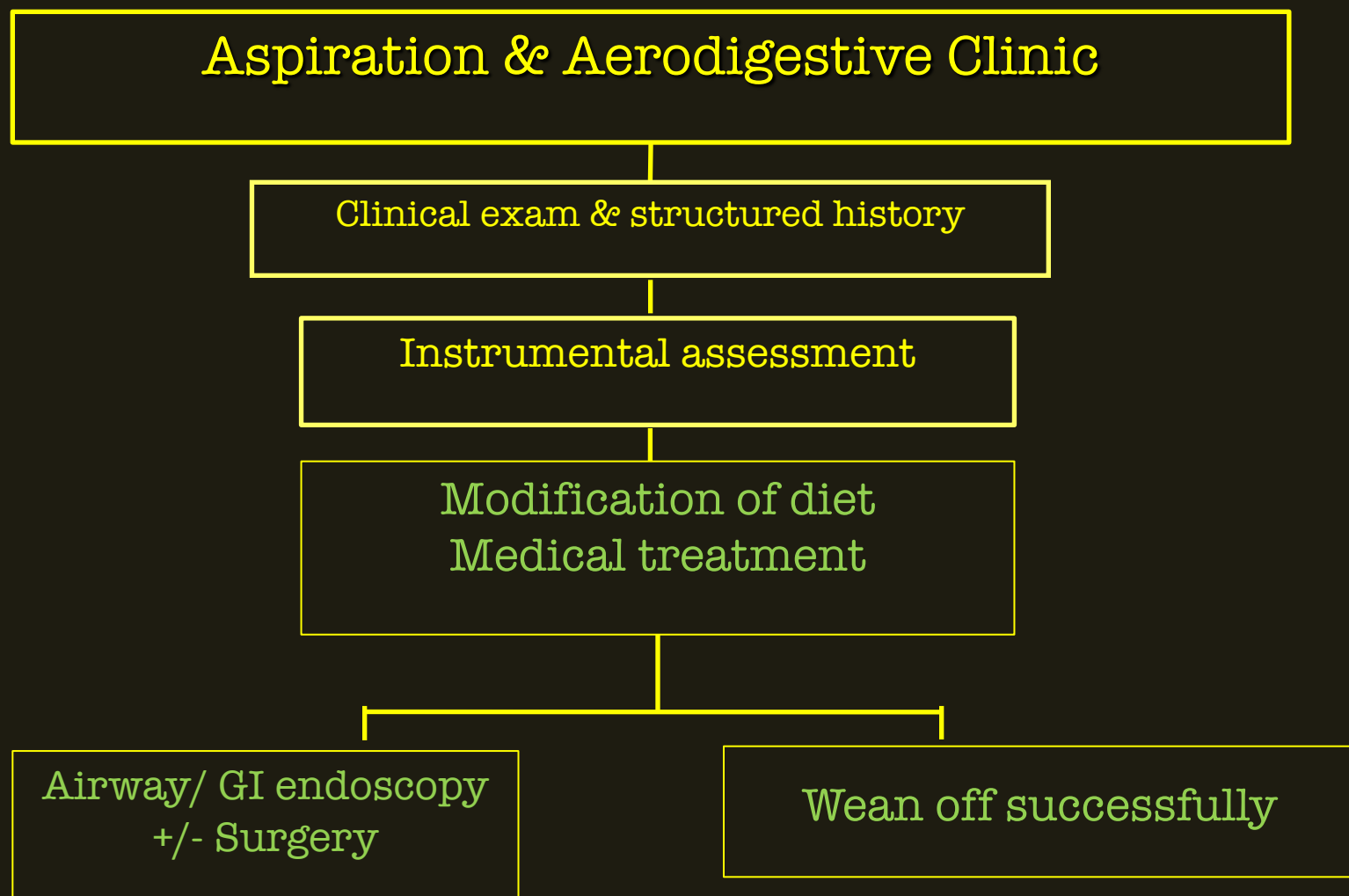




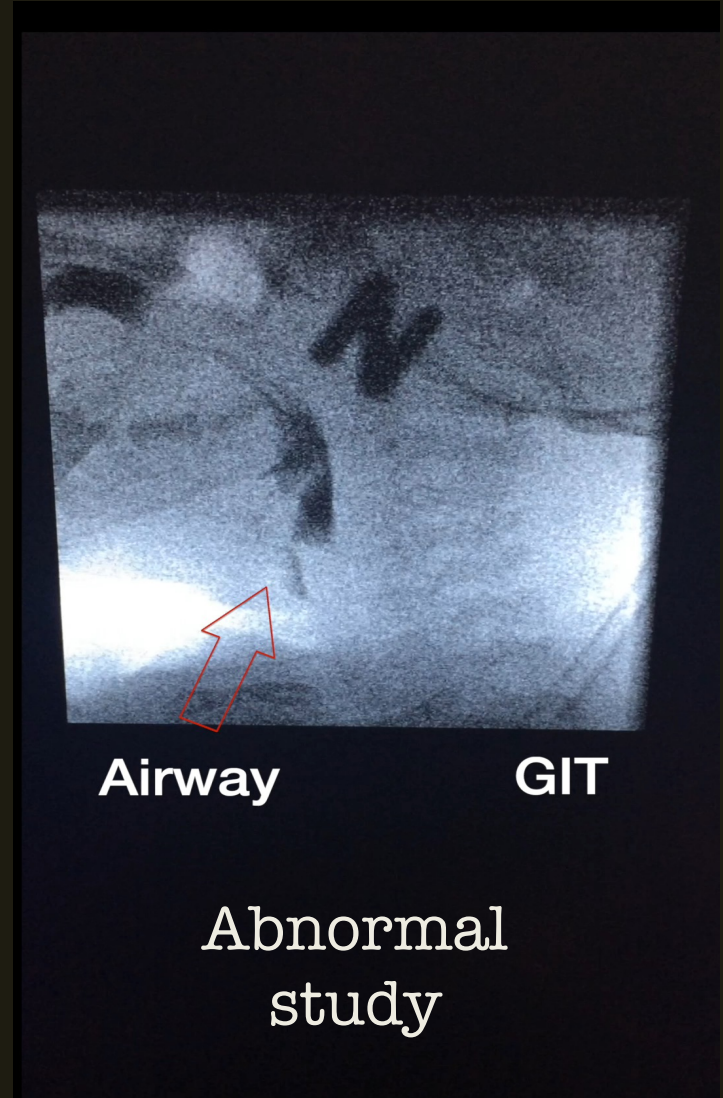
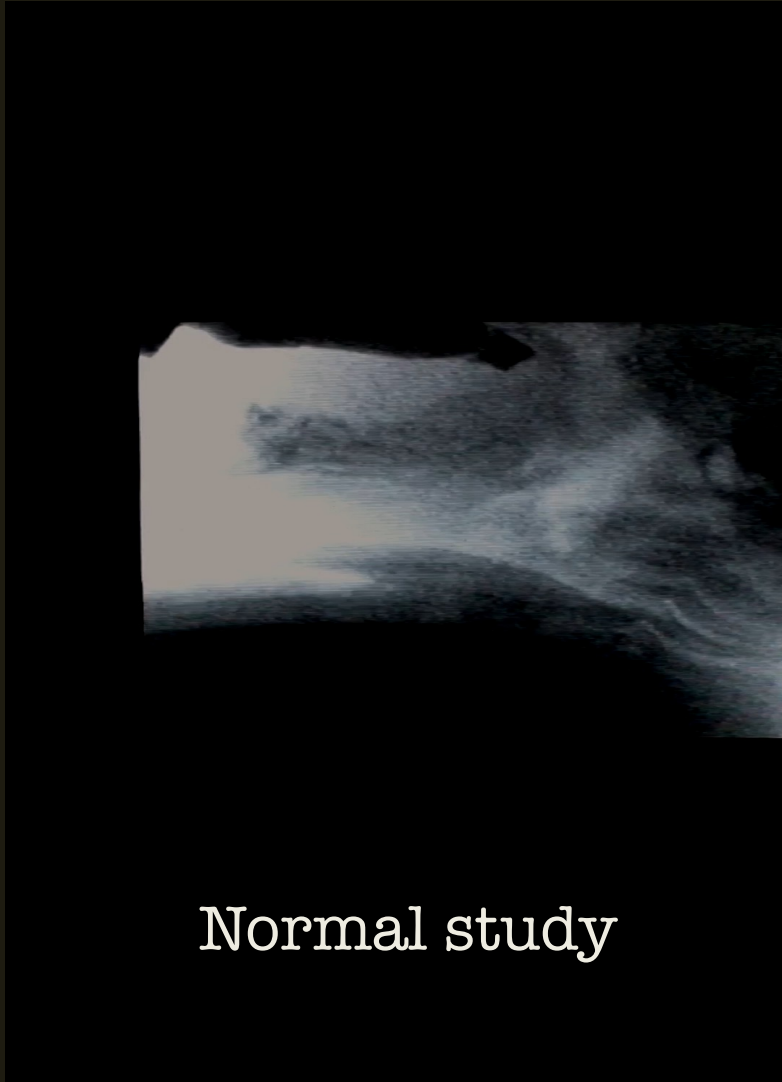
# Referral path



# General management pathway



# Examples of VFSS

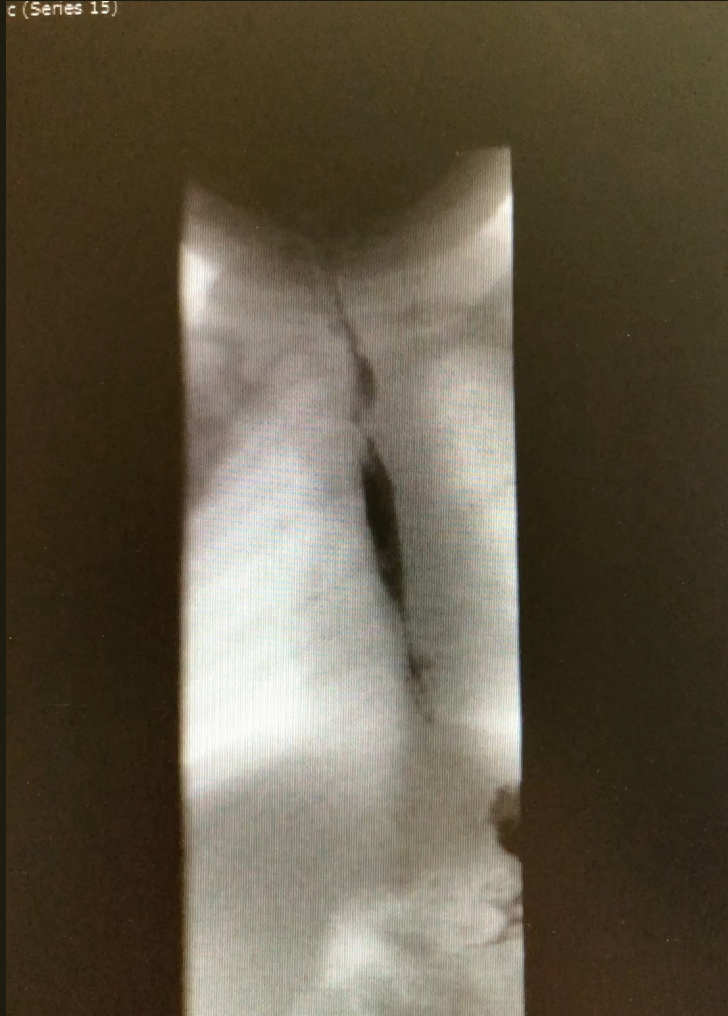


# Esophageal dysphagia



# Esophageal dysphagia

c (Series 15)



# FEES

- Outpatient clinic
- Less adopted than VFSS
- Mostly in the specialized centers



# Airway Abnormalities

Findings*	N
Laryngomalacia <sup>5</sup>	31
Laryngeal cleft (Type 1) <sup>6</sup>	29
Subglottic Stenosis <sup>7</sup> One grade 3	8
Anterior larynx	8
Tracheomalacia	4
Bronchomalacia	4
Laryngeal mobility disorder	9

75 patients with  
abnormalities  
(63%)

Olney, D. R. et al., Laryngomalacia and its treatment. Laryngoscope (1999)

Benjamin, B. and Inglis, A. Laryngeal cleft classification, Ann. Otol. Rhinol. Laryngol. (1989)

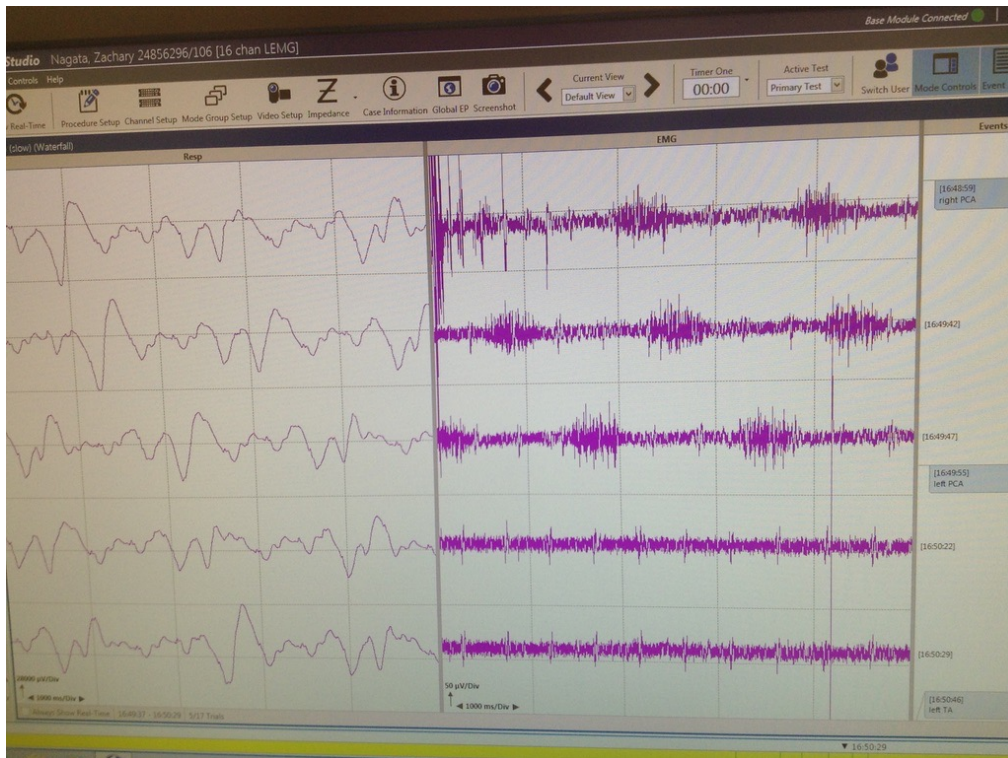
Myer, C. M., O'Connor, D. M., and Cotton, R. T., Grading of subglottic stenosis Ann. Otol. Rhinol. Laryngol. (1994)

# Laryngeal paralysis

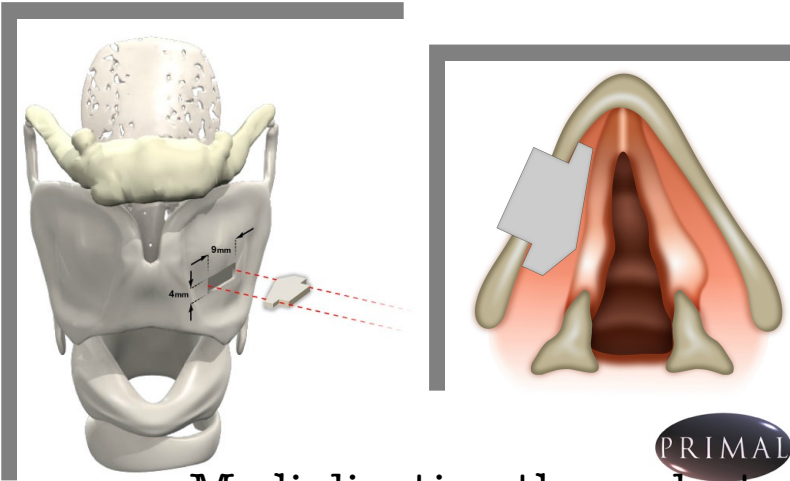


# EMG – Unilateral laryngeal paralysis (no stridor)

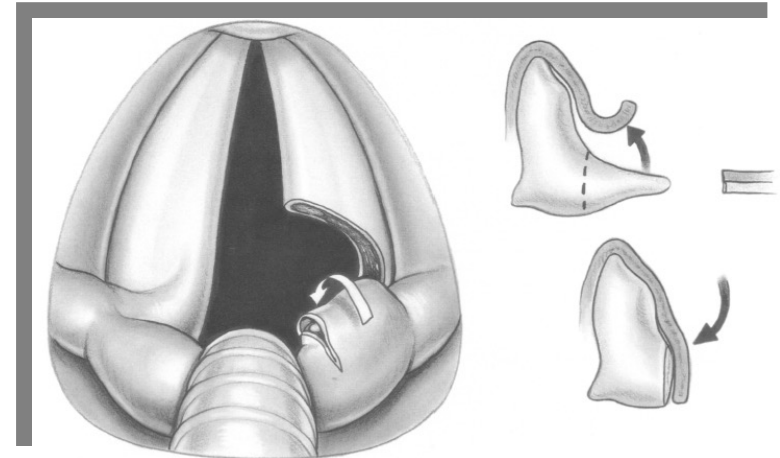
Rt Posterior cricoarytenoid Rt normal (4); Lt no MUP (2)



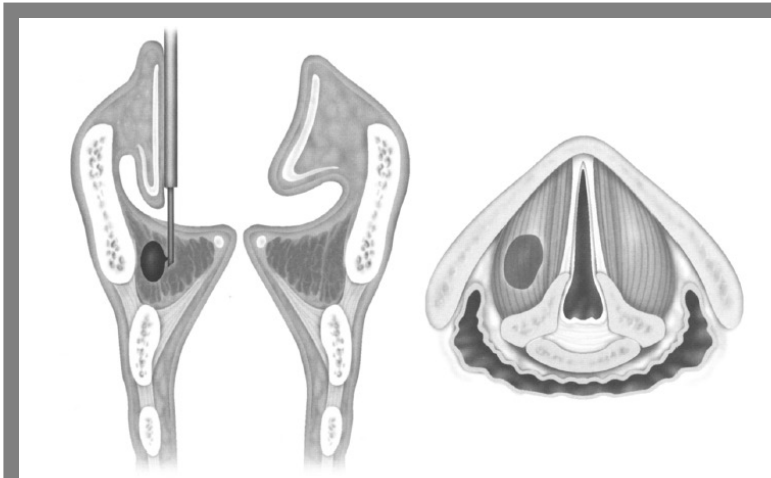
# Surgical treatment



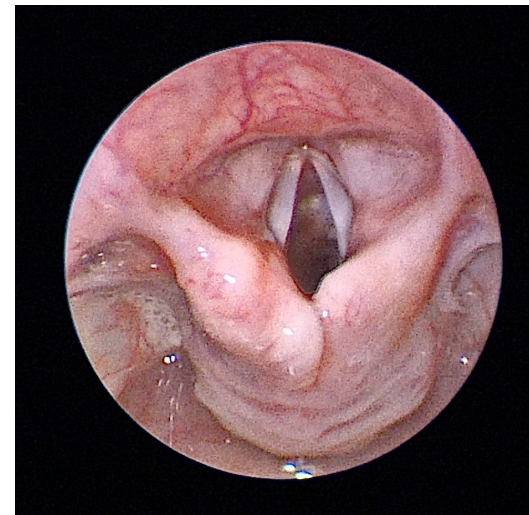
Medialization thyroplasty



Cordotomy with partial arytenoidectomy



Injection laryngoplasty<sup>1</sup>



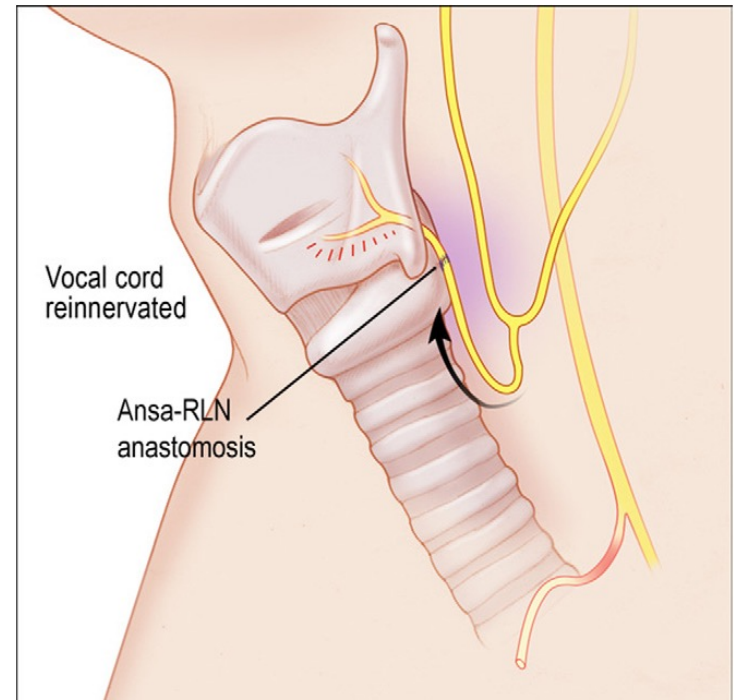
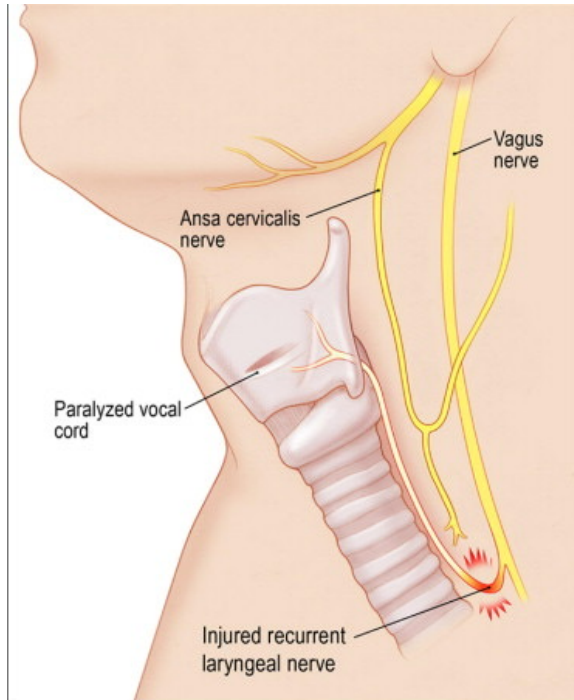
<sup>1</sup>Tucker HM. Operative Techniques in Otolaryngology-Head and Neck Surgery 1999; 10: 279-285

<sup>2</sup>Benninger et al. Operative Techniques in Otolaryngology-Head and Neck Surgery 1999; 9: 224-229

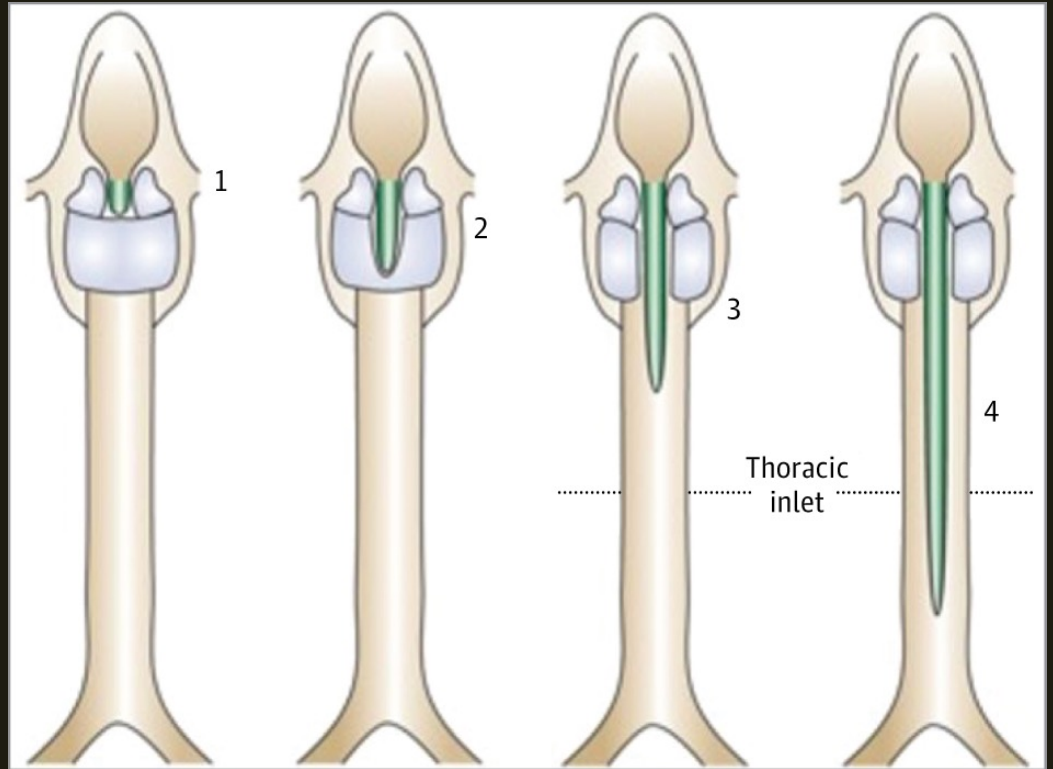
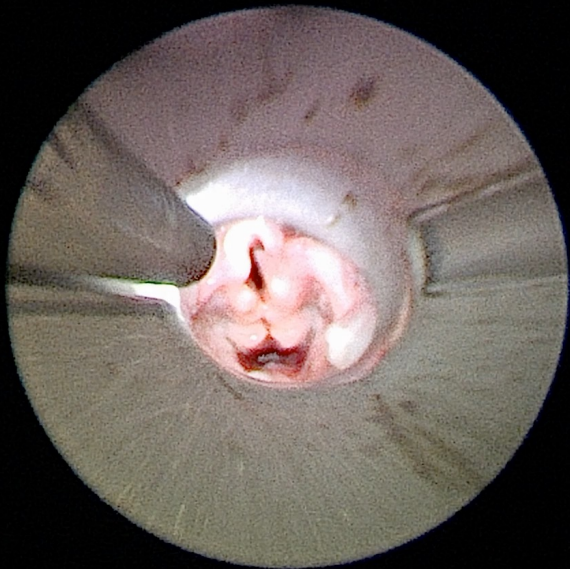
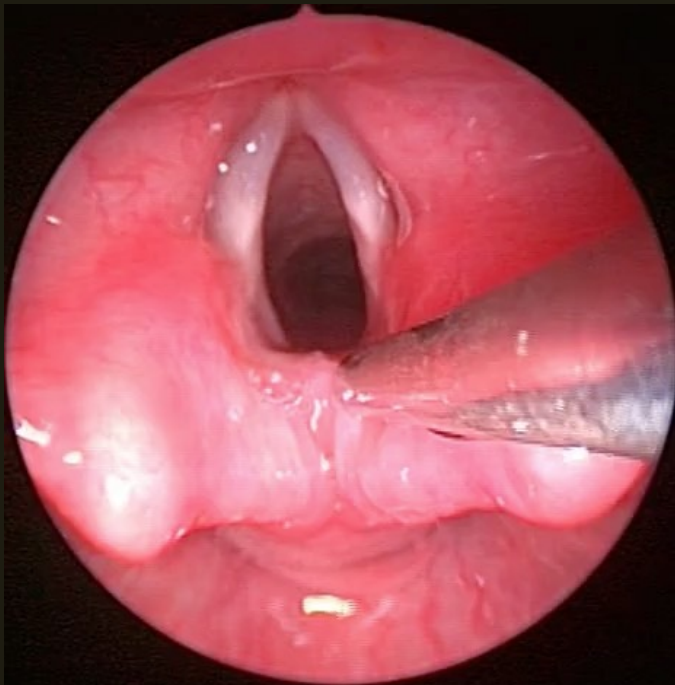
# Laryngeal Reinnervation

Dinesh K. Chhetri, Joel H. Blumin,

DOI:<https://doi.org/10.1016/j.otot.2012.06.003>



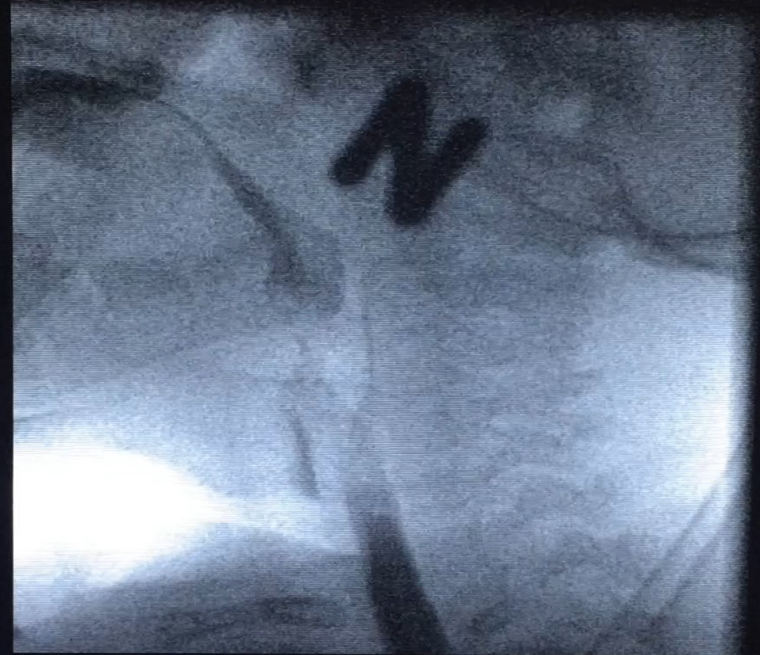
The laryngeal cleft



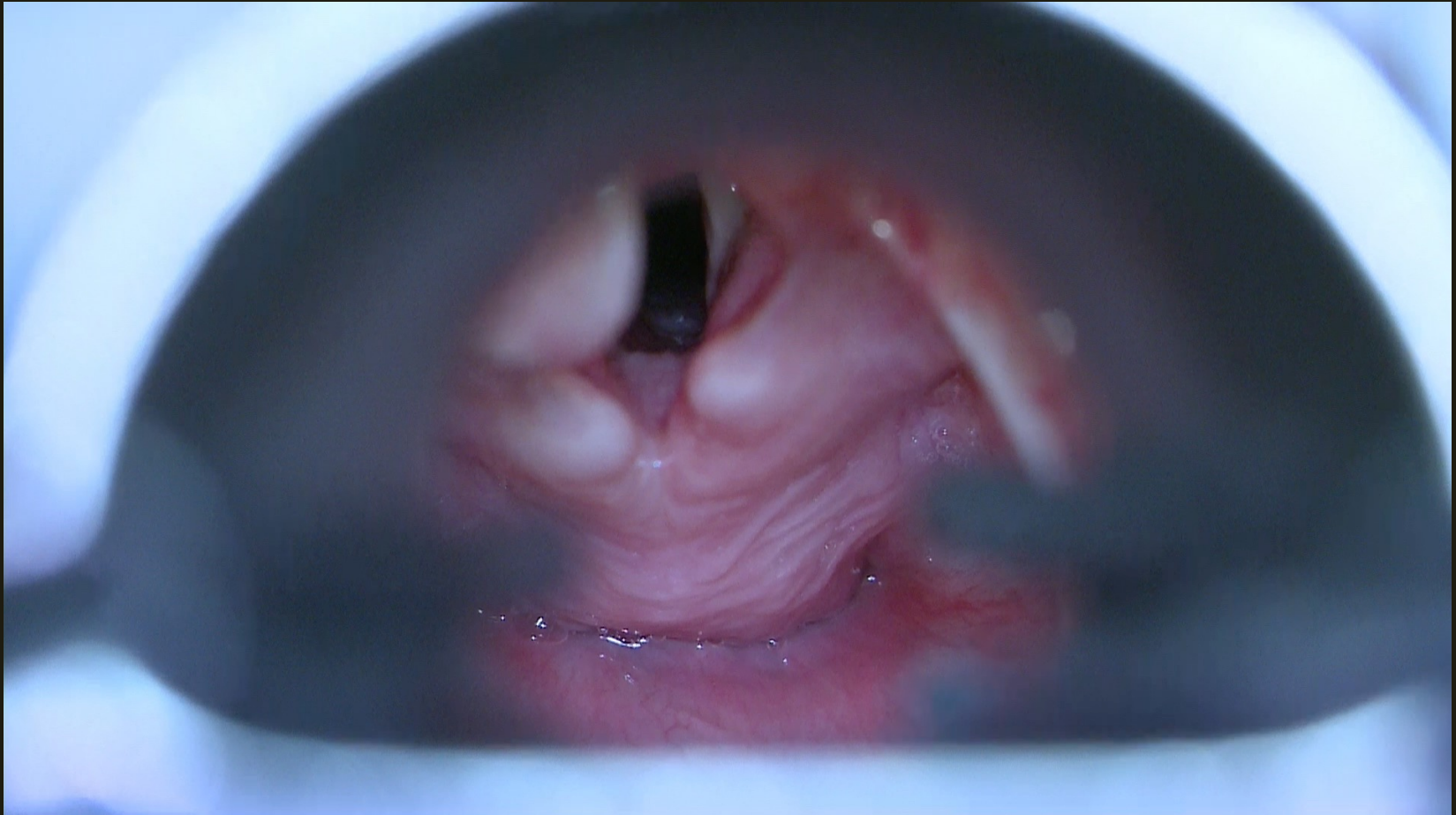
Normal study

FEEES

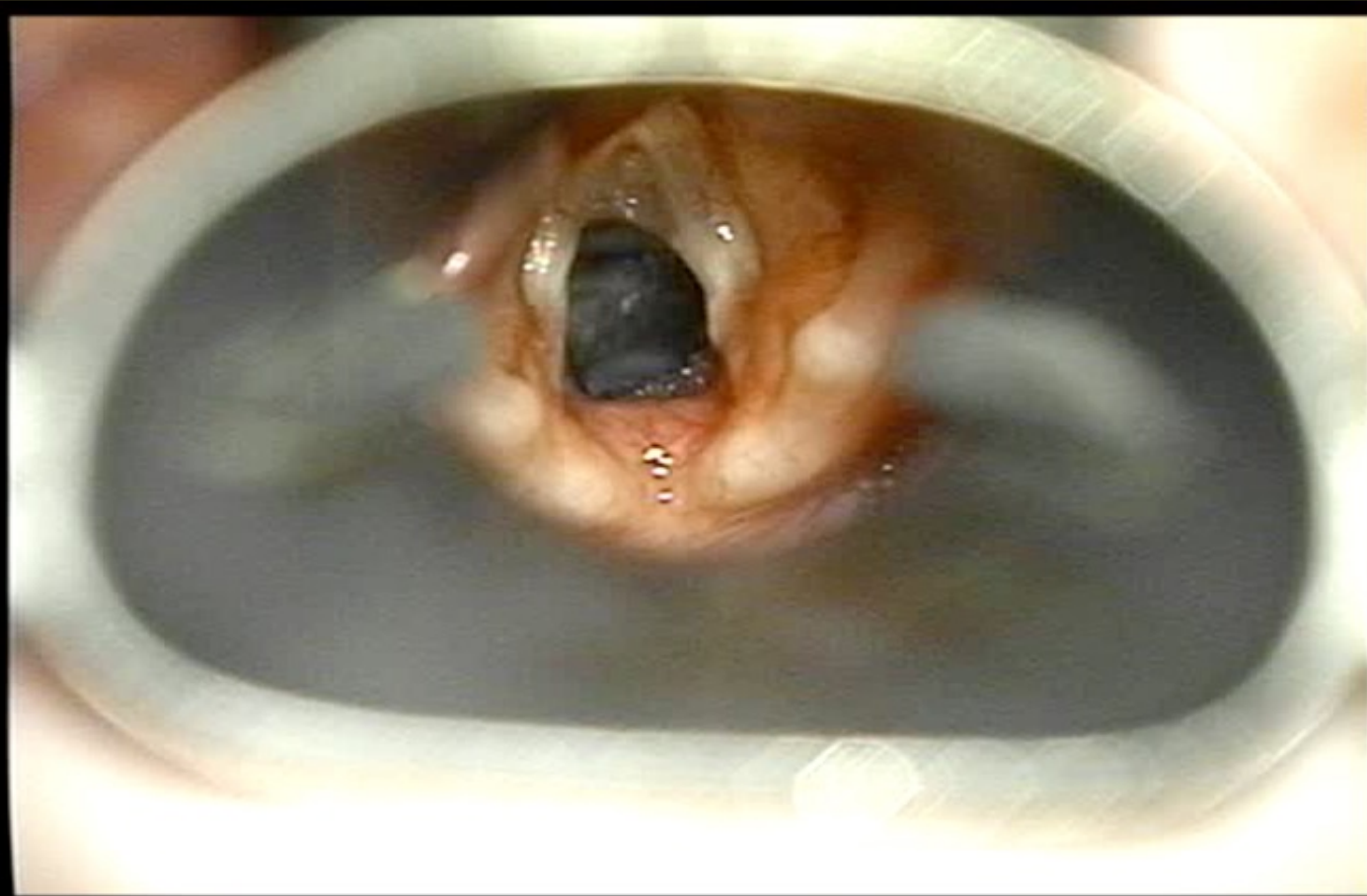
Abnormal study



# Technique of endoscopic repair

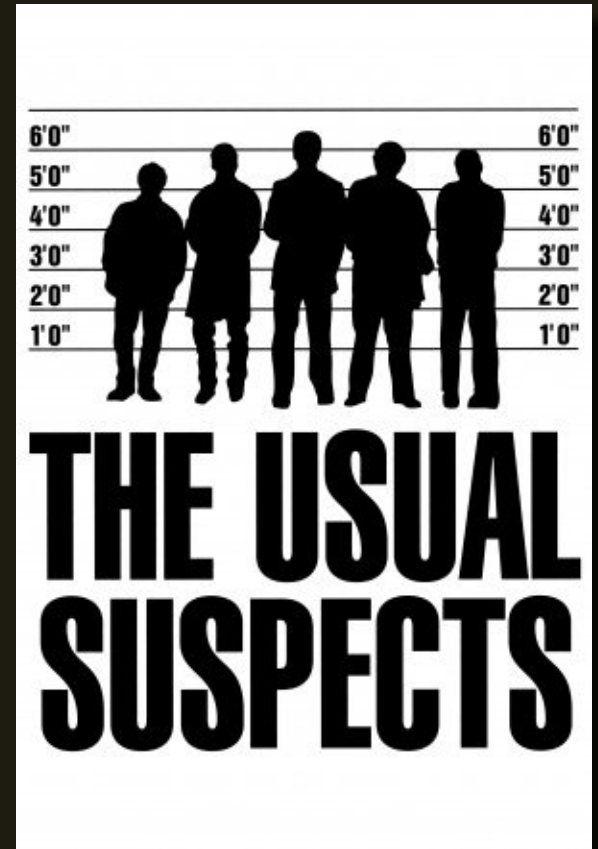


# Injection augmentation or laryngoplasty





Laryngomalacia,  
Supraglottoplasty &  
Swallowing  
Dysfunction



# Strong evidence

- There is an association with LM ( $\geq 50\%$ )

Thompson Laryngoscope 2007, Cooper JAMA OHNS 2014, Simmons Laryngoscope 2015

- SwD impacts daily life and parental emotions

Thottam Laryngoscope 2016

# Supraglottoplasty



# Wrap up

- Symptoms and causes of airway and swallowing problems overlapp
- Dysphagia, of various types, improve but the evidence on conditions, type, effectiveness, timeline is lacking
- A multidisciplinary practice is best suited due to the various systems affected

# In memory of Wendy Johannsen MSLP



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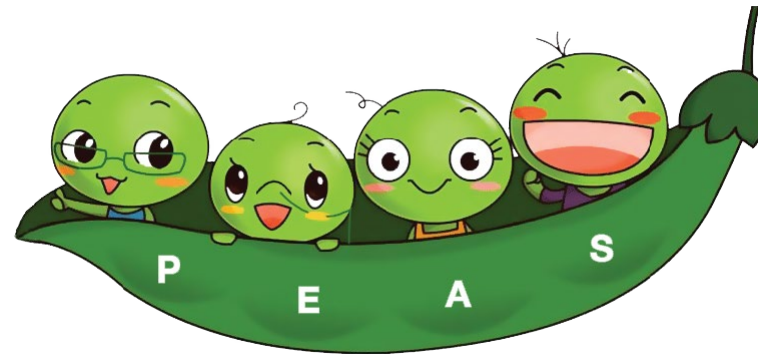
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# Questions & Comments?

# Thank you!



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# 30 Min Percolator (optional)

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