

Alteration of voice (hoarseness, aphonia, dysphonia)

Mechanism: Disruption of vocal fold vibration or closure - the cause is mucosal (edema), neural (vagus nerve paresis), muscular, structural, and respiratory. The brainstem coordinates phonation and respiration during speech.

Syndromes:

Dysphonia - manifests as an impaired voice quality.

Aphonia - represents a complete loss of voice.

Vagus nerve paresis - leads to hoarseness and disruption of the protective function of the larynx.

Red flags:

- hoarseness combined with dyspnea requires urgent exclusion of airway obstruction.
- hoarseness > 3-4 weeks (smoker/drinker → laryngoscopy).
- dysphonia with dysphagia/dysarthria (suspected ALS).

Examination:

History + ENT examination and laryngoscopy, brain MRI in the absence of ENT findings, possibly EMG if ALS is suspected.

- **Treatment:** Directed at the cause:
Acute laryngitis - hydration, inhalation, voice rest.
- **Functional dysphonia** - voice therapy (effective also preventively).
- **Reflux** - PPIs only with confirmed reflux.
- **Benign lesions** - voice therapy; if unsuccessful, microlaryngeal excision.
- **Vocal fold paresis** - voice therapy, injection augmentation, medialization surgery.
- **Spasmodic dysphonia** - botulinum toxin.
- **Laryngeal carcinoma** - surgery/radiotherapy/chemoradiation according to stage.

Onset	Children	Adults
Acute	viral laryngitis (most common), vocal overuse, laryngeal inflammation	acute laryngitis (most common), vocal overuse (frequent), intubation
Subacute	nodules, papillomatosis	reflux laryngitis, post-surgical paresis, muscle tension
Chronic	chronic nodules, congenital web	laryngeal carcinoma, spasmodic dysphonia, Parkinson/ALS, hypothyroidism

Explanatory notes: ALS - amyotrophic lateral sclerosis, PPI - proton pump inhibitors., ENT – ear-nose-throat speciality