

# Causes of Voice Disorder

- \* Voice disorders could be due to functional voice disorders, pathological voice disorders, and or psychogenic voice disorders.
- \* Most voice disorders and laryngeal pathologies will have contributions from more than one etiologic factor and that there is considerable overlap among these three groupings. For example, inappropriate vocal behaviors or excessive vocal demands may generate organic pathology (e.g., polyps or nodules). Psychological trauma or excessive emotional stress may accompany the onset of spasmodic dysphonia.
- \* Any disturbances in the physiologic balance of vocal subsystems (Respiratory system, phonation system, and resonance system) may lead to voice disturbances.

## A) Functional misuse or abuse of the voice components (Respiration, phonation, resonance, pitch, loudness, and rate):

- \* Vocal hyperfunction may be characterized by intermittent periods of laryngeal area tension, as may occur when someone shouts or clears the throat[1].
- \* Functional voice disorders occur due to inappropriate respiration, inappropriate phonation, inappropriate resonance, inappropriate pitch, and inappropriate loudness.

### 1) *Reduced respiratory support (Inappropriate respiration)*

### 2) *Glottal attacks (Inappropriate phonation)*

### 3) *Glottal fry (Inappropriate phonation)*

### 4) *Functional Dysphonia*

- \* Abnormal use of the vocal mechanism despite normal anatomy. This condition can be related to stress, psychologic disturbance or habituation of compensatory techniques developed during an upper respiratory infection.

### 5) *Muscle tension dysphonia*

- \* A voice disorder resulting from excessive or unequal tension while speaking. This condition results from improper speaking technique and is commonly associated with reflux laryngitis.

### 6) *Vocal abuse and misuse*

## B) Pathological causes[2]:

### 1) Congenital:

- Laryngomalacia
- Laryngeal web
- Zenker's diverticula

### 2) Trauma:

- Vocal abuse and misuse.
- Phonation and pitch breaks
- Thermal and chemical burns
- Swallowing of sharp objects
- Gastroesophageal reflux
- Laryngopharyngeal reflux: Inflammation of the larynx caused by gastric acid irritation.
- Vocal folds contact ulcers
- Barrett's esophagus

### 3) Infections:

- Viral laryngitis
- Bacterial laryngitis
- TB
- Fungal laryngitis

### 4) Allergic laryngitis

### 5) Tumor

- Vocal nodules: Fibrotic formations on the vocal folds; commonly referred to as "nodes."
- Vocal polyps
- Reinke's edema/ polypoid degeneration: An accumulation of fluid in the vocal folds. This condition is associated with smoking and voice abuse. It may also occur with reflux laryngitis.
- Vocal cord granulomas/ contact ulcer
- Vocal cord cyst
- Laryngeal papilloma: Growths on the larynx caused by human papilloma viral infection.
- Squamous cell cancer of the larynx
- Hemangioma
- Laryngeal adenoma
- Hyperkeratosis
- Leukoplakia

## 6) Neuromuscular:

- Spasmodic dysphonia: A condition resulting in irregular voice breaks and interruptions of phonation. This is a focal dystonia of the laryngeal muscles.
- Essential tremor
- Paradoxical Vocal Folds Motion (PVFM)
- Cerebrovascular accident
- Velopharyngeal weakness
- Vocal folds paralysis
- Paralysis and Ankylosis
- Spastic Dysarthria
- Ataxic Dysarthria
- Parkinson's disease
- Myasthenia Gravis
- Vocal folds atrophy
- Vocal folds scarring
- Subglottic and tracheal stenosis
- Multiple Sclerosis
- Amyotrophic Lateral Sclerosis (ALS)

## 7) Endocrine & Age related:

- Hypothyroidism (myxedematous laryngitis)
- Sex hormone imbalance
- Pubertal changes
- Puberphonia/ Mutational Falsetto → Persistence of high pitched voice beyond the age at which voice change is expected to have occurred.
- Presbylaryngis (age-related voice changes)

## 8) Drug effects:

- Anti-histamine
- Anti-depressant
- Large Vitamine C doses

## C) Psychogenic Voice Disorders

Work cited

1. Stemple, J.C., L. Glace, and P.B. Klaben, *Survey of voice management*, in *Clinical Voice Pathology: Theory and Management*. 2000, Singular Publishing Group: San Diego, CA. p. 312-314.
2. Shipley, K.G. and J.G. McAfee, *Assessment of Voice and Resonance*, in *Assessment in Speech-Language Pathology: A Resource Manual*. 2004, Thomson Learning Inc: Clifton Park, NY.