

Class 2**15%-34% Voice/Speech Impairment**

Audibility: Can produce speech of an intensity sufficient for many needs of everyday speech and is usually heard under average conditions; however, may have difficulty being heard in noisy places—such as cars, buses, trains, train stations, or restaurants

Intelligibility: Can perform many articulatory acts necessary for everyday speech and be understood by a stranger, but may have numerous inaccuracies and sometimes appears to have difficulty articulating

Functional efficiency: Can meet many demands of articulation and phonation for everyday speech with adequate speed and ease, but sometimes speaks with difficulty and speech may be discontinuous, interrupted, hesitant, or slow

Example 11-21**15% to 34% Voice/Speech Impairment**

Subject: 28-year-old man.

History: Rock-and-roll singer/songwriter; developed new onset of vocal difficulties while recording album 1 year previously. Had been singing and performing for 10 years with no prior vocal difficulties. Loss of midrange, decreased volume, breathiness, and hoarseness while singing. Diagnosed with left vocal fold polyp 3 months later. Underwent surgical excision of lesion 1 month after that. Treated for laryngopharyngeal reflux with usual medical therapy.

Current Symptoms: Breathiness; hoarseness; loss of vocal stamina; loss of volume; loss of lower range. Voice is worse in morning, with frequent throat-clearing and sensation of lump in throat.

Physical Exam: Right vocal fold mass, left vocal fold scar, reflux laryngitis, and neurolaryngologic asymmetries on stroboscopy. Excess tension in jaw and tongue, hoarseness, and decreased range while singing.

Clinical Studies: Laryngeal electromyogram: 20% decreased function of left superior laryngeal nerve. Abnormalities in electroglottogram (EGG), quasi-open quotient, air-conduction flow, minimal flow, maximum flow rate, S/Z ratio, maximum phonation time, and acoustic measurements.

Diagnosis: Persistent vocal fold mass and vocal fold scar after recent vocal fold surgery; superior laryngeal nerve paresis; laryngopharyngeal reflux disease.

Impairment Rating: 15% to 34% voice/speech impairment; 5% to 12% impairment of the whole person.

Comment: Class 2 on the basis of audibility and activities of daily living, not including work. Unhappy with his vocal progress. Totally disabled as a professional singer because of this work-related injury.

Example 11-22**15% to 34% Voice/Speech Impairment**

Subject: 46-year-old man.

History: Voice teacher/singer; involved in motor vehicle collision 4 months ago in which he screamed loudly and seat belt tightened across anterior part of neck. Experienced immediate hoarseness and throat pain. Seen for treatment of sore throat 3 days later. Negative cultures. Attempted to give two 30-minute performances 3 days after collision. Voice became hoarse, strained, and fatigued quickly. Experienced problems with pitch control. Has not performed or sung since. Does not smoke or drink. Had direct laryngoscopy and biopsy, flexible bronchoscopy, and rigid esophagoscopy.

Current Symptoms: Hoarseness; voice fatigue; pain. Unable to sing or speak extensively. Weak, strained voice. Unable to project voice.

Physical Exam: Gastroesophageal reflux disease, height disparity of vocal folds, and white, irregular, firm, vocal fold mass on laryngeal exam by stroboscopy.

Clinical Studies: Laryngeal electromyogram: left superior laryngeal nerve paresis with 50% decreased recruitment response and left recurrent laryngeal nerve paresis with 30% decreased recruitment, both from vocalis and posterior cricoarytenoid muscles. Objective voice measures: mild acoustic abnormalities including increased mean flow rate and decreased maximum phonation time. Laryngeal CT scan: normal cricoarytenoid joint and no focal lesions. Normal magnetic resonance imaging (MRI) scan with gadolinium of larynx.

Diagnosis: Infiltrating keratinizing squamous cell carcinoma of left vocal fold with evidence of focal chronic inflammatory infiltrate. Lesion was classified T2 N0 M0. Has undergone radiation therapy, reflux treatment, and voice therapy.

Impairment Rating: 15% to 34% voice/speech impairment; 5% to 12% impairment of the whole person.

Comment: May not be able to continue as a voice teacher and singer, with subsequent loss of income and life alteration. Will have to make frequent visits to physician for cancer surveillance, probably for life. Motor vehicle collision probably caused hemorrhage into previously asymptomatic cancerous tumor. Reflux was the only known risk factor in this nonsmoker. Voice became worse after surgery and radiation therapy.

Class 3
35%-59% Voice/Speech Impairment

Audibility: Can produce speech of an intensity sufficient for some needs of everyday speech such as close conversation; however, has considerable difficulty at a distance or in noisy places—such as cars, buses, trains, train stations, or restaurants—because the voice tires easily and tends to become inaudible after a few seconds

Intelligibility: Can perform some articulatory acts necessary for everyday speech and can usually converse with family and friends, but may be understood by strangers only with difficulty and often may be asked to repeat

Functional efficiency: Can meet some demands of articulation and phonation for everyday speech with adequate speed and ease, but can sustain consecutive speech only for brief periods and may give the impression of being easily fatigued

Example 11-23

35% to 59% Voice/Speech Impairment

Subject: 52-year-old woman.

History: Chronic hoarseness and dysphonia for 10 years. Gastroesophageal reflux disease for at least 10 years. Multiple laryngeal surgeries, including vocal fold polypectomy, microlaryngoscopy, excision of left vocal fold mass, and vaporization of laryngeal vocal fold varices. Initial improvement with voice therapy; deteriorated after heavy voice use in classroom. Developed recurrent vocal fold mass. Had vocal fold hemorrhage after yelling. Multiple bouts of acute laryngitis secondary to voice overuse. Recurrent vocal fold nodules that were initially treated with voice therapy. Experienced voice fatigue by Wednesday of each week. Developed severe upper respiratory infection that resulted in vocal fold hemorrhage. Vocal fold stiffness and scar secondary to recurrent vocal fold hemorrhages. Relatively asymptomatic for about a year.

Thereafter had ongoing treatment for reflux disease and underwent voice therapy. Reflux disease became more problematic. Referred to gastroenterologist for problem with gastroesophageal reflux. Considered surgical treatment of reflux disease.

Current Symptoms: Recurrent hoarseness, despite strictly adhering to antireflux treatment and voice therapy modifications.

Physical Exam: Left vocal fold scar, new right vocal fold mass (probably a cyst), evidence of reflux laryngitis, and muscle-tension dysphonia on stroboscopy. Voice hoarse, soft, and strained.

Clinical Studies: Abnormal acoustic measures, including harmonic measures and harmonic to noise ratio.

Diagnosis: Vocal fold mass and scar; muscle-tension dysphonia; reflux laryngitis.

Impairment Rating: 35% to 59% voice/speech impairment; 12% to 21% impairment of the whole person.

Comment: Direct microlaryngoscopy and excision of right vocal fold mass; left vocal fold autologous fat injection and, possibly, fat implantation for treatment of scar recommended. Rated class 3 on basis of audibility.

Example 11-24

35% to 59% Voice/Speech Impairment

Subject: 40-year-old man.

History: Recurrent sinusitis and progressive hoarseness for 2 years. Voice worse after vocal fold “polypectomy” for leukoplakia. Had septoplasty and functional endoscopic sinus surgery. No complaint of nasal/sinus disease. Speaks about 14 hours a day over loud noise. Must talk loudly or yell frequently. Is regularly exposed to car fumes, asbestos, and aerosols. Does not smoke. Rarely drinks alcohol.

Current Symptoms: Constant hoarseness. Difficulty speaking, but without pain, by afternoon. Frequently clears throat. Complains of lump in throat.