

Voice Diagnostic Guidelines

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Synopsis (Litterature/references)

▶ Subjective Complaints

- ▶ Reflux Symptom Index (RSI)
- ▶ Voice Related Quality of Life VRQL
- ▶ Voice Handicap Index VHI
- ▶ Other

▶ Vocal fold movements

- ▶ High Speed films
- ▶ Stroboscopy
- ▶ Narrow Band Imaging (NBI)
- ▶ Glottal Area Waveform (GAW)

▶ Acustical Analysis

- ▶ Jitter
- ▶ Shimmer
- ▶ Formants
- ▶ Overtones
- ▶ Phonetograms
- ▶ Register
- ▶ Vibrato
- ▶ Others

▶ Airflow

- ▶ Mean Flow Rate (MFR)
- ▶ Air flow measurements
- ▶ Lung Function
- ▶ Peak flow
- ▶ Listeners test
- ▶ Environmental Aspects
 - ▶ Others

Hjerne skade gammel artikel
Douglas Roth allergi og stemmebånd
HUSK artikel erlangen manglende evidens

Reflux Score

DR. JAMIE KOUFMAN'S CLINICAL INDICES :: www.VoiceInstituteofNewYork.com

The Glottal Closure Index (GCI)

How do the following affect you?	0 = No Problem 5 = Severe Problem						GCI
	0	1	2	3	4	5	
Speaking takes extra effort	0	1	2	3	4	5	
Throat discomfort or pain after using your voice	0	1	2	3	4	5	
Vocal fatigue, voice weakens as you talk	0	1	2	3	4	5	
Voice cracks or sounds different	0	1	2	3	4	5	

If the GCI is 10 or greater, the patient has a glottal closure problem such as atrophy, scarring, paresis, paralysis, or striking-zone pathology, e.g. polyp or other neoplasm.

The Reflux Symptom Index (RSI)

How do the following affect you?	0 = No Problem 5 = Severe Problem						RSI
	0	1	2	3	4	5	
Hoarseness or a problem with your voice	0	1	2	3	4	5	
Clearing your throat	0	1	2	3	4	5	
Excess throat mucous or postnasal drip	0	1	2	3	4	5	
Difficulty swallowing food, liquids, pills	0	1	2	3	4	5	
Coughing after you ate or lying down	0	1	2	3	4	5	
Breathing difficulty or choking episodes	0	1	2	3	4	5	
Troublesome or annoying cough	0	1	2	3	4	5	
Sensations of a lump in your throat	0	1	2	3	4	5	
Heartburn, chest pain, or indigestion	0	1	2	3	4	5	

If the RSI score is 15 or greater, the patient has a 90% chance of having respiratory reflux by ISFET pH monitoring.

The Reflux Finding Score (RFS)

Pseudosulcus	2 Present				
Ventricular obliteration	2 Partial		4 Complete		
Erythema/Hyperemia	2 Arytenoids (only)		4 Diffuse		
Vocal fold edema	1 Mild	2 Moderate	3 Severe	4 Polypoid	
Diffuse laryngeal edema	1 Mild	2 Moderate	3 Severe	4 Obstructing	
Posterior commissure hypertrophy	1 Mild	2 Moderate	3 Severe	4 Obstructing	
Tiger-stripe post-cricoid edema	2 Present		4 Severe		
Thick endolaryngeal mucus	2 Present				
Granuloma/Granulation	2 Present				
Reflux Finding Score					

Voice Analysis

Maximum Phonation Time

Hz DB (110/220 Hz)
(220/440 Hz)

Phonetogram

Upper limit Hz / DB

Lower limit Hz / DB

Register transition max Hz / DB

Register transition min Hz / DB

Maximum intensity Lower register: Hz / DB

Maximum intensity Upper register: Hz / DB

Electroglottography (EGG)

(with/without simultaneous HighSpeed

)

Regular curve:

Irregular curve:

Closing factor:

Overtone analysis (Sygyt®)

Vibrato, comments:

Formants (1, 2, 3, 4) Comments:

Register transitions: Hz

Stability, comments:

Speaking frequency measurement

Counting "1-10": Hz / DB

Operavox (app):

VHI (Voice Handicap Index)

VQOL (Voice Quality of Life)

Cough form (in case of cough problems)

Voice Institute of New York Chronic Cough Form

Is your main problem COUGH? _____ ; For how many years? _____.

When your cough began, had you had a respiratory infection, cold, the flu, or other illness? _____.

Had a chest x-ray within the last two years? _____; Normal? _____.

Do you have a pulmonologist (lung doctor)? _____.

Are you on blood pressure medicine? _____; Which? _____.

Koufman Chronic Cough Index (KCCI) (R= Reflux, N= Neurogenic)

Please circle "Yes" or "No" for all ten questions (no maybes)

Do you awaken from a sound sleep coughing violently, with or without trouble breathing? YES NO

Do you have choking episodes when you cannot get enough air, gasping for air? YES NO

Do you usually cough when you lie down into the bed, or when you just lie down to rest? YES NO

Do you usually cough after meals or eating? YES NO

Do you cough when (or after) you bend over? YES NO

Do you more-or-less cough all day long? NO YES

Does change of temperature make you cough? NO YES

Does laughing or chuckling cause you to cough? NO YES

Do fumes (perfume, automobile fumes, burned toast, etc.) cause you to cough? NO YES

Does speaking, singing, or talking on the phone cause you to cough? NO YES

R _____ | _____ N

Now, add the two columns up to derive the Reflux-to-Neurogenic ratio

High Speed Film Analysis (4000 frames/second)

Recording made at Hz and dB.

Movement patterns

Regular / Irregular (Mark appropriate) Comments:

Right Vocal fold movements:

Left Vocal fold movements:

Mucosa evaluation, comments:

Kymography

Regular / Irregular (Mark appropriate) Comments:

Right Vocal fold movements:

Left Vocal fold movements:

Phonovibrogram

Right vocal fold: Regular / Irregular (Mark appropriate)

Left vocal fold: Regular / Irregular (Mark appropriate)

Closure deficit of the rear larynx: + / -

Segmentation analysis

	Front:	Middle:	Rear:
Open Quotient: % % %
Single movements:			
Right Vocal fold: Comments:	Reg. / Irreg.	Reg. / Irreg.	Reg./ Irreg. (Mark appropriate)
Left Vocal fold: Comments:	Reg. / Irreg.	Reg. / Irreg.	Reg./ Irreg. (Mark appropriate)
Overlapping: Comments:	++ / + / -	++ / + / -	++ / + / - (Mark appropriate)
Movement quality:			
Closing speed:	comment:		
Flexibility:	Front:	Middle:	Rear:
Acoustical signal:	Regular / Irregular	(Mark appropriate)	
Possible further analysis in Operavox app.			
<u>Quantitative Glottal Area Waveform measure in seldom cases</u>			
<u>(Glottal Analysis Tools®: 183 parameters)</u>			

Quick Instruction in Voice Hygiene

- ▶ Position
 - ▶ Normal
 - ▶ Correction
 - ▶ Other
- ▶ Accents of the diaphragm
 - ▶ Correction
 - ▶ Training
 - ▶ Other
- ▶ Intonation pattern
 - ▶ Normal
 - ▶ Hard
 - ▶ Soft
 - ▶ Other
- ▶ Resonance
 - ▶ Jaw
 - ▶ Tongue
 - ▶ Other