

Listening for Structural Speech Difficulties

Structural speech difficulties can often be identified by listening to a person's resonance when they are talking, alongside analysing any airflow errors.

RESONANCE – the modification of sound as it travels through the cavities of the pharynx, oral cavity and nasal cavity.

Hypernasality is heard when sound resonates in the nasal cavity instead of the oral cavity. A 'muffled' quality can sometimes be noted. Hypernasality can be rated as mild, moderate or severe.

Mild - evident on closed vowels /i/ /u/ e.g. zoo, three, six

Moderate - evident on all vowels e.g. 'cat' 'park'

Severe - evident on vowels and voiced consonants e.g. Bubby -> Mummy

Hyponasality is heard when sound resonates in the oral cavity instead of the nasal cavity. This is often described as a 'bunged up' quality. Hyponasality is usually caused by obstruction in the nasopharynx or nasal cavity e.g. having a cold, swollen tonsils or nasal polyps. It can be rated as mild or marked.

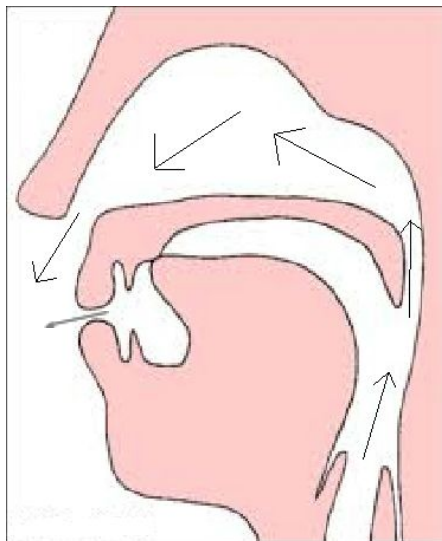
Mild - partial denasalisation of nasal consonants and adjacent vowels.

Marked - denasalisation of nasal consonants and vowels e.g. m -> b

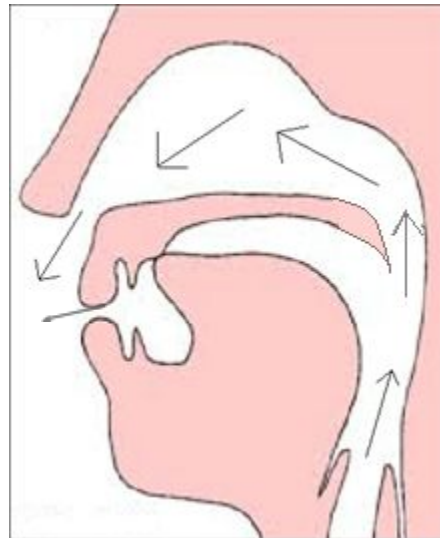
AIRFLOW ERRORS – When velopharyngeal closure is incomplete air passes through the nasal cavity. Airflow may be entirely nasal or simultaneously oral and nasal dependent on the extent of velopharyngeal closure and the force of the air.

Nasal Emission involves large puffs of air flowing through the nose as a result of a large velopharyngeal gap. This can weaken or muffle oral pressure consonants.

Nasal Turbulence is a ‘rustly’ noise heard in the nose and accompanies pressure consonants. The noise is turbulent due to a smaller velopharyngeal gap, causing greater resistance as the air flows into the nasal cavity. Nasal turbulence can be distracting to the listener.



Nasal Turbulence



Nasal Emission

Nasal/Facial Grimace is often described as a compensatory behaviour as the speaker constricts their nostrils/facial muscles in an attempt to inhibit nasal airflow. The different degrees of grimace are described below:

Mild - nasal
flare

Moderate -
nose wrinkling,
some cheek
movement

Severe -full face
involvement
including
forehead and
eyebrows

*It is important to note that the term 'nasal speech' can be used to describe a variety of abnormal airflow characteristics. Clinicians should therefore be cautious of using this term and be aware that it is most commonly used to describe hyponasal speech.