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## Nasal Resonance in Speech Sounds

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## NASAL RESONANCE IN SPEECH SOUNDS

JOSEPH P. KELLY

A special phonophotographic camera makes possible the photographing of nasal resonance together with a time line. On the basis of these photographs, it is shown that each vowel has a specific nasal element in its resonance, the duration of which varies directly with the closeness of the vowel. It is shown further that the duration of nasal resonance in vowels phonated by individuals with badly nasal voices is greater than in vowels phonated by those having superior voices. Study is made of the nasalizing influence of nasal consonants when combined in syllables with consonants. Nasal resonance is shown to have no relation to the pitch at which a sound is uttered, but to be directly related to the size of the mouth opening employed. The frequency of the sound issuing from the nose during vowel phonation is shown to be identical with that of the sound issuing from the mouth. The intensity of sound from the nose during such phonation is shown to vary for each vowel and for different types of voices. Evidence is presented toward the conclusion that the nasal cavities resonate specific frequencies for each vowel.

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 PERNICIOUS ANEMIA: A STUDY IN  
PSYCHODIETETICS

M. F. FRITZ

Psychodietetics deals with the relationship between diet and mental behavior. A number of diseases now definitely attributed to dietary defects or deficiencies cause mental symptoms. An outstanding example of this is pernicious anemia. Mental symptoms were mentioned by Addison who first described the malady in 1855. However, its psychological aspects have frequently been overlooked, even by physicians. There are important legal implications, e.g. wills. Description of blood findings and mental disorders. Importance of the fact that the mental symptoms may precede the typical blood picture. Description of nervous involvement. Treatment by dietary methods, liver, hog's stomach, etc. Prognosis, particularly with reference to the mental symptoms. Bearing upon psychological theory. The need for certain precautions in psychotherapy.

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