Speech audiometry involves spoken word recognition, a process in which linguistic factors, such as occurrence frequency[2,3] and phonological neighborhood density[2,8] play an important role. Yet, those linguistic factors[2,8] have been rarely taken into account when establishing word lists used for standard speech audiometry, lists which date back, in France, to 1960. This study aimed to assess the influence of word frequency, phonological neighborhood and acoustic patterns on speech audiometry variability in daily ENT clinical practice.

Objectives:
This study aimed to assess the influence of word frequency, phonological neighborhood and acoustic patterns on speech audiometry variability in daily ENT clinical practice.

Methods:
Patients (n=160) underwent otoscopy, tympanometry, pure-tone and speech audiometry.

Speech Audiometry:
Percent score recognition (PC) was calculated for each spondee. PLS regression analysis was used to determine the factors influencing the percent score recognition for each word.

Discussion/Conclusion:
When taken independently from hearing loss, variability in PC was explained mostly by linguistic factors, combined with age and years of education, hence the need to consider carefully those factors when conceiving speech audiometry material.

Material & Methods:
- Patients: 160 adults (23-88 y.o., mean = 42, 85 men) underwent otoscopy, tympanometry, pure-tone (PTA) and speech audiometry.
- Speech samples were recorded from 10 spondees, taken from a standard material used in France (Fournier list), equalized in total rms level. The spectral acoustic pattern of each spondee (fig 2) was obtained from an average of 24 recordings of each word. For regression analysis was used to determine the factors influencing the percent score recognition for each word.

Results:
- PC rose significantly with word frequency (fig 4, r=0.38, p=0.005).
- The correlation between PC score and word frequency varied significantly according to age and to the number of educational years (NEY) (from 30% below 50 years old to less than 10% above 60 years old), and with the number of phonological neighbors (fig 6, p=0.07), word frequency being equivalent.

Discussion/Conclusion:
When taken independently from hearing loss, variability in PC was explained mostly by linguistic factors, combined with age and years of education, hence the need to consider carefully those factors when conceiving speech audiometry material.