

# VOICE DOSIMETRY IN 92 CALL CENTER OPERATORS

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**Abstract\* - The voice is a primary work tool for call center operators, but the main risk factors for voice disorders in this category have not yet been clarified. This study aimed to analyse the vocal behaviour in call center operators and to search for correlations between the daily voice dose and self-perceived voice-related handicap.**

**Ninety-three subjects (25 males, 68 females, aged 24-50) underwent ambulatory phonation monitoring during a working day and were administered a general questionnaire (concerning smoking habits, symptoms, extra-work activities) and the Voice Handicap Index questionnaire (VHI).**

**The recorded vocal doses showed wide inter-subject variability, both at work and during non-work hours. The mean percentage phonation time (PT) during work was 14.74 and ranged from 4 to 31%. The average voice amplitude was higher in subjects with longer phonation time and higher F0. This finding indicates that “intensive talkers” also tend to use a higher voice volume.**

**The VHI score (mean 13.6 ± 12.2) was not related to the number of work hours, indicating that work time is not a critical factor in causing the perception of voice fatigue. The mean PT was 87.5 minutes (range 17-186 minutes) and was not correlated with age, gender, number of work hours, symptoms, extra-professional voice use and VHI scores. The mean amplitude was significantly higher in subjects with longer PT (p < 0.001). PT during work was related to the number of work hours, but no correlation was found between the PT of the whole recording day and the number of work hours.**

**In conclusion, our study demonstrates that the number of work hours and the percentage PT are not statistically related to the perception of voice disturbances.**

**Our data show that “safety” limits of vocal load in the call center setting cannot be clearly defined.**

**In analogy with previous findings on teachers, we postulate that constitutional and psycho-emotional**

**features might be relevant risk factors for the development of voice pathologies.**

**Keywords – voice dosimetry, occupational voice, voice handicap index**

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\*Full paper withheld by authors' request.



**Session V:**  
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