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VIBRATORY PERCEPTION THRESHOLD IN THE LOWER EXTREMITIES. NORMATIVE VALUES

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SUMMARY

Objective was to obtain normative values for the vibratory perception threshold (VPT) in the lower extremities and study the dependence of VPT on various physiological factors.

Thirty healthy volunteers: 10 men and 20 women entered in the study.

The VPT for 8, 16, 31.5, 63, 125, and 500 Hz were estimated on the right and left external malleolus using the B&K vibration threshold meter, modified type 1800, and the threshold tracking method. The applied static force could not be controlled. The measurements were repeated twice.

VPTs expressed as mean ± SD were as follows: 8 Hz 109±3.4 dB, 16 Hz 112±4.1 dB, 31.5 Hz 116 ±6.2 dB, 63 Hz 116± 8.4 dB, 125 Hz 117± 8 dB, 250 Hz 125±9.3 dB, and 500 Hz 136±13.1dB. A nomogram was constructed with reference ranges of VPTs for individual frequencies, from which the profile of vibratory perception thresholds can be seen. Moreover, a global index was calculated as a sum of VPTs for individual frequencies. Its reference value was 840±52 dB and it varied in repeated measurements by up to 9 %. No statistically significant difference of VPTs between the right and left side and between the 1st and 2nd examination was found. A tendency to the increase of VPTs with age was observed, which in males reached statistical significance for frequencies 16, 31.5, 63, and 125 Hz.

Key words: palestesiometry, vibratory perception threshold, lower extremities, normative values

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