

Reliability and normal values for measuring the skin temperature of the hand with an infrared tympanic thermometer: a pilot study.

Oerlemans HM, Graff MJ, Dijkstra-Hekkink JB, de Boo T, Goris RJ, Oostendorp RA; Allied Health Services, University Hospital Nijmegen, The Netherlands. Recording asymmetry in skin temperature between symmetric body areas is useful in monitoring diseases that alter skin temperature. This pilot study checked the reported high reliability of recording skin temperature of the hands with an infrared tympanic thermometer, provided insight into the relationship between dorsal and palmar temperature differences, and assessed the agreement between these data and normative data obtained from thermograms. Using an infrared tympanic thermometer, two independent assessors measured the temperature of 13 asymptomatic, right-handed subjects (mean age, 30 years; range, 21 to 44 years). Both test-retest and interobserver reliabilities were high. Skin temperature of the hand differed with the site where it was measured; differences between sites changed over time. The mean absolute differences in skin temperature between dorsal and palmar aspects of the hands were 0.30 degrees C and 0.25 degrees C, respectively. These data match normative values reported in the literature for infrared thermograms.