

Vascular surgical society of great britain and ireland: analysis of cold provocation thermography in the objective diagnosis of the hand-arm vibration syndrome.

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BACKGROUND: The hand-arm vibration syndrome (HAVS) is the commonest prescribed disease in the UK. Presently the diagnosis is subjective and the need for an objective investigation to support the diagnosis has been highlighted. This study analyses the potential of cold provocation thermography (CPT) to fulfil this role. METHODS: CPT was performed in ten controls (five men, five women; median age 35 (range 24-78) years) and 21 patients with HAVS (20 men, one woman; median age 45 (range 29-81) years). With an infrared camera, a precooling (PC) image was taken and then, following hand cooling in water at a temperature of 5 degrees C for 1 min, further rewarming images were taken every minute for 10 min. RESULTS: Patient finger tip temperatures were significantly cooler than control temperatures at all time points ($P < 0.01$, Student's t test). The following Table shows the sensitivity, specificity and PPV of CPT. CONCLUSION: CPT provides strong objective evidence to support the clinical diagnosis of HAVS.