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Even with contact thermodes, the heat pain threshold cannot be considered as a physiological constant given in °C. It is clearly dependent on the physical characteristics of the thermode and the measurement procedures. We will give some examples of our experience. We recently changed from Marstock type thermodes (used also in the study under discussion) to a more advanced model with the same surface area (6 cm^2). Because of the different characteristics of these thermodes that is, the isolation layer between the Peltier elements and the thermode surface) an average lowering of the thresholds of about 1·5°C occurred.[2] The heat pain thresholds of three age groups measured at the lateral dorsum pedis were 44·9(1·5)°C (17–29 years), 44·8(1·9)°C (30–44 years) and 45·7(1·2)°C (45–63 years). These values are still considerably higher than those given by Bowsher. We think that there may be two reasons.

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Table 1 Mean warmth and heat pain thresholds (°C) in normal feet

Age (mean)	17–30 (22·1)	31–45 (35·1)	46–60 (54·1)	61–74 (68·7)
Number	28	28	28	28
Warmth threshold (SD)	36·75 (3·22)	37·65 (2·89)	37·75 (2·88)	39·4 (4·03)
Heat pain threshold (SD)	41·5 (2·7)	41·75 (2·4)	43·0 (3·3)	43·1 (2·5)

Table 2 Mean (SD) warm thresholds, warm-cold limen, and heat pain thresholds (°C) in neurogenic pain conditions

	Painful diabetic neuropathy	
64 Patients:	Warm-cold Limen (SD): 19·0 (8·8)	Heat pain threshold 46·6 (2·6)
Median age: 54	unpaired *t* test: $p < 0.000001$	$p < 0.00001$
28 Controls:	Warm-cold Limen (SD): 6·1 (2·65)	Heat Pain Threshold: 43·0 (3·3)
	Postherpetic neuralgia	
39 Patients:	Warm Threshold (SD): 40·8 (0·9)	Heat Pain Threshold (SD): 45·8 (0·5)
Median age: 69·5	paired *t* test: $p < 0.000001$	$p < 0.00003$
39 Controls:	Warm Threshold (SD): 35·4 (0·3)	Heat Pain Threshold (SD): 43·1 (0·5)
	Central post-stroke pain	
38 Patients:	Warm Threshold (SD): 40·5 (0·8)	Heat Pain Threshold (SD): 43·8 (0·4)
Median age: 64	paired *t* test: $p < 0.000001$	$p = 0.02$
38 Controls:	Warm Threshold (SD): 33·5 (0·4)	Heat Pain Threshold (SD): 42·7 (0·45)
	Painful diabetic neuropathy	
64 Patients:	Warm-cold Difference (SD): 19·0 (8·8)	Heat Pain Threshold: 46·4 (2·6)
Median age: 54	unpaired *t* test: $p < 0.000001$	$p < 0.00001$
28 Controls:	Warm-cold Difference (SD): 6·1 (2·65)	Heat Pain Threshold: 43·0 (3·3)
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Disturbances of C-fibre-mediated sensibility in lumbosacral disc disease

I was interested to read the communication by F Strian *et al.*[1] There is difficulty, however, in accepting that heat pain threshold is lowered in the foot *contralateral* to the sciatic root compression, rather than raised in the foot *ipsilateral* to the lesion (as is the warmth threshold).

With JA Campbell, AW Chan, G Leijon and T Nurmikko, thresholds to most somatosensory modalities have been measured, by the method of limits, at five body sites on each side in a large number of volunteers, as well as in patients with neurogenic pain conditions. In the case of the foot, a Marstock Peltier thermode measuring 25·0 × 50·0 mm (12·5 cm^2) was applied just below the medial malleolus, where the skin is neither thickened nor hairy. Our results for warmth and heat pain in (1) the normal foot; (2) the diabetic foot, (3) postherpetic neuralgia, and (4) central post- stroke pain ("thalamic syndrome") are shown in table 1. In cases 3 and 4, comparison is made (paired *t* test) with the unaffected mirror-image area on the other side of the body, while in (2) age-matched normal subjects were used (unpaired *t* test). Our results suggest that while there is a large rise in the warmth threshold (average about 6°C), or twice this for the warm-cold limen, on the affected side, there is only a very small (average about 2°C), but significant, rise in the heat pain threshold, also on the affected side.

Strian *et al* used a thermode measuring 6 cm^2. With J Giewald, we have performed experiments using both large (12·5 cm^2) and small (1·3 cm^2) thermodes, and found that while warmth thresholds vary according to the surface area of the thermode, heat pain thresholds do not. We find the ipsilateral mean (SD) heat pain threshold of 48·1 (1·6)°C[1] unaccountably high compared with our normal thresholds (see table 2) and those found by others, and would suggest that the ipsilateral heat pain threshold in the patients of Strian *et al* may be raised.

It would be helpful to know how many of their 9 patients had L5 root lesions and how many S1; where on the foot they measured heat pain thresholds for the two roots; and whether there is any difference according to site, in both patient population and control subjects—although it must be admitted that our own results on the unaffected side of postherpetic neuralgia patients suggest that site makes little difference.

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1 Strain F, Lautenbacher S, Karlbauer G, Galfe G. Disturbances of C-fibre-mediated sensibility in lumbrosacral disc disease. *J Neurol Neurosurg Psychiatry* 1991;54:1013–14.

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