Letters to the Editor

A New Test to Study Diabetic Autonomic Neuropathy

Dear Sir,

In *Diabetologia* (1980) 19: 433–438, Sundkvist et al. introduced a new test to study diabetic autonomic neuropathy based on biphasic heart rate changes after tilt up.

We compared heart rate changes after passive head up tilt and *active* standing up (Van Brederode, *Diabetologia* (1980) 19: 321). We found that in healthy subjects $+70^\circ$ tilt elicited a gradual heart rate rise starting after about 1.5 s. Standing up resulted in the well-known biphasic heart rate rise, with a short latency to cardioacceleration (0.5 s), a peak around 10 s and a trough around 20 s. We think that the discrepancy can be explained by the fact that Sundkvist tilted his subjects in 2 s to 90° , whereas we tilted in 5 s to 70° . We think that the heart rate changes Sundkvist found could be an artefact due to involuntary muscle contractions during the rapid head up tilt.

We think that a comparison of the heart rate response to active and passive changes of posture are useful in the study of diabetes, but that this new test needs further evaluation.

Yours sincerely,

W. Wieling, J. F. M. van Brederode, and C. Borst

W. Wieling, M. D.

Department of Internal Medicine
Binnengasthuis, Academic Hospital
Grimburgwal 10
1012 GA Amsterdam
The Netherlands