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## Response to Flachenecker et al.

## Abnormal baroreflex responses in Multiple sclerosis

Sirs: We thank Dr. Flachenecker and Dr. Reiners for their interesting comments regarding our recent paper investigating baroreflex responses in patients with multiple sclerosis (MS). Our findings are consistent with their reports [1–3], and reaffirm the concept that sympathetic vasomotor dysfunction may be present in MS patients, and should be considered when performing routine autonomic tests in these patients.

We agree with Dr. Flachencker and Dr. Reiners that in most cases the routine measurement of standing blood pressure and heart rate are adequate. However, although our technique of sinusoidal neck suction is rather complex, particularly for routine clinical use, it does have some advantages. One is that only a relatively passive co-operation is required from the patient, making it possible to apply the procedure even in patients who are unable to perform the standard cardiovascular reflex tests. Another is the ability to detect subtle autonomic dysfunction at early disease stages, even before the appearance of overt autonomic symptoms [4]. Further work is required to establish the usefulness of the method in screening for orthostatic dizziness in patients with diseases affecting the autonomic nervous system.

## References

- Flachenecker P, Reiners K, Krauser M, Wolf A, Toyka KV (2001) Autonomic dysfunction in multiple sclerosis is related to disease activity and progression of disability. Mult Scler 7:327–334
- Flachenecker P, Rufer A, Bihler I, Hippel C, Reiners K, Toyka KV, Kesselring J (2003) Fatigue in MS is related to sympathetic vasomotor dysfunction. Neurology 61:851–853

- 3. Flachenecker P, Wolf A, Krauser M, Hartung HP, Reiners K (1999) Cardiovascular autonomic dysfunction in multiple sclerosis: correlation with orthostatic intolerance. J Neurol 246:578–586
- Hilz MJ, Hecht MJ, Mittelhamm F, Neundorfer B, Brown CM (2002) Baroreflex stimulation shows impaired cardiovagal and preserved vasomotor function in early-stage amyotrophic lateral sclerosis. Amyotroph Lateral Scler Other Motor Neuron Disord 3:137–144

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