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[Mediators of diabetic neuropathy: is hyperglycemia the only culprit?](#)

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Abstract

PURPOSE OF REVIEW: Diabetic peripheral neuropathy (DPN) is a disabling, highly prevalent complication of both type 1 and type 2 diabetes mellitus (T1DM and T2DM). Large clinical studies support the concept that, in addition to hyperglycemia, components of the metabolic syndrome (MetS) may underlie the pathogenesis of DPN, especially in T2DM. This review will present the evidence supporting the MetS and its individual components as potential causal factors for the development of neuropathy.

RECENT FINDINGS: In addition to poor glycemic control and duration of diabetes, components of MetS such as dyslipidemia, obesity, and hypertension may have an important impact on the prevalence of DPN. Obesity and prediabetes have the most data to support their role in neuropathy, whereas hypertension and dyslipidemia have more mixed results. Nonmetabolic factors, such as genetic susceptibility, age, height, sex, smoking, and alcohol, have also been highlighted as potential risk factors in peripheral neuropathy, although the exact contribution of these factors to DPN remains unknown.

SUMMARY: DPN is a chronic and disabling disease, and the accurate identification and modification of DPN risk factors is important for clinical management. Recent data support a role for components of the MetS and other risk factors in the development of DPN, offering novel targets beyond hyperglycemia for therapeutic development.

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