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[Prevalence of and Risk Factors for Diabetic Peripheral Neuropathy in Youth With Type 1 and Type 2 Diabetes: SEARCH for Diabetes in Youth Study.](#)

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Abstract

OBJECTIVE: We assessed the prevalence of and risk factors for diabetic peripheral neuropathy (DPN) in youth with type 1 diabetes (T1D) and type 2 diabetes (T2D) enrolled in the SEARCH for Diabetes in Youth (SEARCH) study.

RESEARCH DESIGN AND METHODS: The Michigan Neuropathy Screening Instrument (MNSI) was used to assess DPN in 1,734 youth with T1D (mean \pm SD age 18 ± 4 years, T1D duration 7.2 ± 1.2 years, and HbA_{1c} $9.1 \pm 1.9\%$) and 258 youth with T2D (age 22 ± 3.5 years, T2D duration 7.9 ± 2 years, and HbA_{1c} $9.4 \pm 2.3\%$) who were enrolled in the SEARCH study and had ≥ 5 years of diabetes duration. DPN was defined as an MNSI exam score of >2 . Glycemic control over time was estimated as area under the curve for HbA_{1c}.

RESULTS: The prevalence of DPN was 7% in youth with T1D and 22% in youth with T2D. Risk factors for DPN in youth with T1D were older age, longer diabetes duration, smoking, increased diastolic blood pressure, obesity, increased LDL cholesterol and triglycerides, and lower HDL cholesterol (HDL-c). In youth with T2D, risk factors were older age, male sex, longer diabetes duration, smoking, and lower HDL-c. Glycemic control over time was worse among those with DPN compared with those without for youth with T1D (odds ratio 1.53 [95% CI 1.24; 1.88]) but not for youth with T2D (1.05 [0.7; 1.56]).

CONCLUSIONS: The high rates of DPN among youth with diabetes are a cause of concern and suggest a need for early screening and better risk factor management. Interventions in youth that address poor glycemic control and dyslipidemia may prevent or delay debilitating neuropathic complications.

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