

# Endocrine Society experts examine how diabetes harms body's smallest blood vessels

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The Endocrine Society issued a new Scientific Statement today examining how diabetes damages the body's smallest blood vessels as well as how the condition affects the body's natural repair processes designed to protect the eyes, kidneys, nerves and other organs.

Despite extensive research into the widespread effects of high [blood sugar](#) on the small [blood vessels](#) that make up the body's microvascular system, these complications continue to plague millions of individuals who have diabetes.

One of the most common complications - diabetic peripheral neuropathy - is a common form of nerve damage that causes loss of feeling in the hands, feet and legs. It affects about 21 percent of individuals 40 and older who are diagnosed with diabetes, according to the Society's [Endocrine Facts and Figures Report](#). One in three individuals with diabetes has an eye complication called [diabetic retinopathy](#), and 34.5 percent have some form of [diabetic kidney disease](#).

"The latest research shows that maintaining tight control over [blood sugar levels](#) and blood pressure can help to reduce the risk of complications such as diabetic retinopathy," said Eugene J. Barrett, M.D., Ph.D., of the University of Virginia in Charlottesville, Va., who chaired the task force that developed the Scientific Statement. "The issue is these goals also can put individuals at elevated risk for dangerous episodes of [low blood sugar](#), called hypoglycemia, or cardiovascular complications. Healthcare providers need to balance the competing goals

and consider the individual patient's needs to develop an appropriate treatment plan."

In addition to the three primary microvascular complications, the statement authors examined the current understanding of conditions such as dementia. Scientific evidence suggests individuals who have diabetes and peripheral nerve issues may be at greater risk of developing microvascular complications in the brain. Improved understanding of how diabetes harms the brain's tiny blood vessels may help to avert cognitive decline and dementia that some individuals experience.

"Although research is gradually improving our understanding of the microvascular conditions related to diabetes, it is disappointing that these complications continue to compromise the quantity and quality of life for people with diabetes," Barrett said. "By understanding and building on current research findings, we hope the future will bring new preventative approaches and treatments that will be effective for future generations."

**More information:** The statement, "Diabetic Microvascular Disease: An Endocrine Society Scientific Statement," will be published online in the Society's *Journal of Clinical Endocrinology & Metabolism* at [academic.oup.com/jcem/article- ... 0.1210/jc.2017-01922](https://academic.oup.com/jcem/article-abstract/58/12/01922/4588888) . The statement will be published in the December issue of *The Journal of Clinical Endocrinology & Metabolism*.

Provided by The Endocrine Society

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