



# Effective Health Care

## Comparative Effectiveness of Treatments for Diabetic Peripheral Neuropathy Nomination Summary Document

### Results of Topic Selection Process & Next Steps

- The topic, *Comparative Effectiveness of Treatments for Diabetic Peripheral Neuropathy*, will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

### Topic Description

**Nominator(s):** Individual

**Nomination Summary:** The nominator is a patient with diabetic peripheral neuropathy who has undergone multiple toe amputations due to poor management of the condition. The nominator expresses an interest both in the improvement of symptoms for patients suffering from diabetic peripheral neuropathy and in the prevention of the condition or its progression among patients with type 2 diabetes.

#### **Staff-Generated PICO**

**Population(s):** Patients with diabetes suffering from peripheral neuropathy

**Intervention(s):** Blood glucose control, and other interventions aimed specifically at diabetic neuropathy progression or symptoms, such as lifestyle modifications, medical therapies, complementary therapies, physical therapy, electrical nerve stimulation, and surgery

**Comparator(s):** Those listed above (i.e., compared to each other), usual care

**Outcome(s):** Morbidity, disability, foot infection or ulceration, amputation, progression of neuropathy, pain, occurrence of adverse events, and quality of life

**Key Questions from Nominator:**

1. What is the comparative safety and effectiveness of treatment options to delay or reverse the progression of diabetic peripheral neuropathy?
2. What is the comparative safety and effectiveness of treatment options to improve the symptoms of diabetic peripheral neuropathy?

### Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Approximately 50% of patients with diabetes experience some degree of neuropathy. Diabetic peripheral neuropathy is associated with chronic pain, limited mobility, development of sores and ulcers, and may require amputation of one or more digits. Of these amputations, an estimated 75% are preventable through better management of diabetes and diabetic peripheral neuropathy.
- Risk factors for the development of the condition include smoking, kidney disease, and a long history of poor glycemic control.
- Prevention and delayed progression of diabetic peripheral neuropathy therefore depend on effective blood glucose control, which may be achieved through a variety of management strategies including diet modifications, exercise, and pharmaceuticals.
- In addition, symptom management may include pharmaceuticals, acupuncture, electrical nerve stimulation, and treatment of open wounds and ulcers. Surgical interventions, such as nerve decompression, may also be used to address chronic pain or to reverse the degree of neuropathy.
- A scan of evidence identified a number of RCTs and CCTs related to the treatment of diabetic peripheral neuropathy in several treatment classes. Therefore a systematic review on this topic is feasible.
- Given the prevalence of diabetic neuropathy, its associated morbidity, and the availability of recently published evidence, this topic will go forward as an AHRQ systematic review.