****American Academy of Neurology (AAN)

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**Exercise and diet can reduce neuropathic pain and help
regenerate nerve fibers in patients with impaired glucose
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Exercise and diet can reduce neuropathic pain and
help regenerate nerve fibers in patients with impaired glucose tolerance ("Prediabetes"), according to research that will be presented at the American Academy of Neurology 58th Annual Meeting in San Diego, Calif., April 1 - 8, 2006.

Impaired glucose tolerance is found in 40 percent of patients with idiopathic neuropathy (nerve damage with no identified secondary cause). Impaired glucose tolerance neuropathy (IGTN) is characterized by loss of nerve fibers in the skin, and is painful. It is thought that IGTN represents the earliest stage of diabetic neuropathy. Prior research indicates diabetic neuropathy does not improve with currently available
treatment. Patients with impaired glucose tolerance are at risk for developing diabetes, a risk which can be reduced with a program of diet and exercise counseling. To test whether this same program could improve IGTN, a research team led by Dr. A. Gordon Smith and Dr. Rob Singleton studied 32 patients over the course of one year while they received individualized dietary and exercise counseling.

They found that the number of nerve fibers (measured by taking a small skin biopsy) improved by approximately one third, although patients with the worst loss of nerve fibers in their extremities did not improve. Overall, patients had reduced pain and better functioning of their sensory nerves.

"These findings indicate diet and exercise counseling for
patients with impaired glucose tolerance neuropathy may result in nerve regeneration," said the study's lead author A. Gordon Smith, MD, of the University of Utah. "This finding is significant because it suggests the earliest stage of prediabetic nerve injury may be reversible."

This study was supported by the ***National Institutes of Health.***

The American Academy of Neurology, an association of more than 19,000 neurologists and neuroscience professionals, is dedicated to improving patient care through education and research. A neurologist is a doctor with specialized training in diagnosing, treating and managing disorders of the brain and nervous system such as Alzheimer disease, epilepsy,
multiple sclerosis, Parkinson disease, and stroke.

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