

Este estudo publicado em 2014 mostra o efeito da dieta na neuropatia periférica de camundongos. Para isto foi utilizada dieta especial da Research Diets, bem como equipamentos de analgesia da IITC e sistema Biopac para avaliarem as velocidades de condução nervosa motora e sensorial.

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Research Article

Effect of High-Fat Diet on Peripheral Neuropathy in C57BL/6 Mice

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Objective. Dyslipidemia may contribute to the development of peripheral neuropathy, even in prediabetics; however, few studies have evaluated vascular dysfunction and oxidative stress in patients with peripheral neuropathy. **Methods.** Using high-fat diet (HFD-) induced prediabetic C57BL/6 mice, we assessed motor and sensory nerve conduction velocity (NCV) using a BIOPAC System and thermal algnesia with a Plantar Test (Hargreaves' method) Analgesia Meter. Intraepidermal nerve fiber density and mean dendrite length were tested following standard protocols. Vascular endothelial growth factor-A (VEGF-A) and 12/15-lipoxygenase (12/15-LOX) were evaluated by immunohistochemistry and Western blot, respectively. **Results.** HFD-fed mice showed deficits in motor and sensory NCV, thermal hyperalgesia, reduced mean dendrite length, and VEGF-A expression in the plantar skin and increased 12/15-LOX in the sciatic nerve ($P < 0.05$ compared with controls). **Conclusion.** HFD may cause large myelinated nerve and small sensory nerve fiber damage, thus leading to neuropathy. The mean dendrite length may be a more sensitive marker for early detection of peripheral neuropathy. Reduced blood supply to the nerves and increased oxidative stress may contribute to the development and severity of peripheral neuropathy.



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