



the FOUNDATION *for*
PERIPHERAL NEUROPATHY

Fiscal Year 2021 Defense Appropriations Request Including “Peripheral Neuropathy” among the eligible disorders in the Peer Reviewed Medical Research Program

Appropriations Bill: Fiscal Year 2021 Defense Appropriations Act

Account: Defense-Wide Research and Development, Defense Health Programs, RDT&E, Congressionally-Directed Medical Research Programs

Line: Peer Reviewed Medical Research Program

PE Number: none required for CDMRP

Request: In the report accompanying the FY21 Defense Appropriations Act, include “peripheral neuropathy” among the disorders and conditions eligible for research funding under the Peer-Reviewed Medical Research Program (PRMRP).

Provision in FY20 Bill: None

Background:

Peripheral neuropathy refers to the many conditions that involve damage to the peripheral nervous system, the vast communication network that sends signals between the central nervous system (the brain and spinal cord) and all other parts of the body. Peripheral nerves send many types of sensory information to the central nervous system (CNS). Best known are the signals to the muscles that tell them to contract, which is how we move, but there are different types of signals that help control everything from our heart and blood vessels, digestion, urination, sexual function, to our bones and immune system. The peripheral nerves are like the cables that connect the different parts of a computer or connect the Internet. When they malfunction, complex functions can grind to a halt.

An estimated 30 million people in the United States have been estimated to have some form of peripheral neuropathy, but this figure may be significantly higher—not all people with symptoms of neuropathy are tested for the disease and tests currently don’t look for all forms of neuropathy. Neuropathy is often misdiagnosed due to its complex array of symptoms.¹

The disabling symptoms of peripheral neuropathy include:

- Poor balance
- Numbness in hands and feet
- Significant mobility problems
- Pain (sometimes severe)
- Sleep difficulties
- Tremors
- Muscle wasting and weakness

Connection to Military Service

Peripheral neuropathy is common among the veterans community, particularly those diagnosed with diabetes, hepatitis C, and HIV. Cancer patients who have undergone chemotherapy treatment commonly develop peripheral neuropathy. The U.S. Department of Veterans Affairs (VA) presumes veterans' early-onset peripheral neuropathy is related to their exposure to Agent Orange or other herbicides during service when the disease appears within one year of exposure to a degree of at least 10 percent disabling by VA's rating regulations.ⁱⁱ

A study of 249 Gulf War Veterans also concluded that “wartime exposure to combinations of organophosphates (Ops) and other cholinesterase-inhibiting chemicals (including nerve agents, pesticides, insect repellents, and pyridostigmine bromide) produced variants of chronic organophosphate-induced delayed polyneuropathy (OPIDP) in Gulf War veterans.”ⁱⁱⁱ

Justification

While the Congressionally-Directed Medical Research Program (CDMRP) currently studies combat-induced peripheral nerve injury through the Peer Reviewed Orthopaedic Research Program, it does not fund research for many forms of peripheral neuropathy through the PRMRP. As our veterans population continues to age, peripheral neuropathy will grow in prevalence, and new breakthroughs are needed to treat this population, as well as current members of the U.S. Armed Forces who contract the disorder. Including “peripheral neuropathy” among the conditions eligible for study at the PRMRP will significantly augment the amount of limited research that DoD currently funds, and will greatly accelerate our research community’s efforts to find a cure for this debilitating condition.

ⁱ Peripheral Neuropathy Fact Sheet, National Institute of Neurological Disorders and Stroke, updated August 16, 2018, <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Peripheral-Neuropathy-Fact-Sheet>

ⁱⁱ Peripheral Neuropathy and Agent Orange, Department of Veterans Affairs,

https://www.publichealth.va.gov/exposures/agentorange/conditions/peripheral_neuropathy.asp

ⁱⁱⁱ Self-reported Exposure to Neurotoxic Chemical Combinations in the Gulf War: A Cross-sectional Epidemiologic Study”, Robert W. Haley, MD; Thomas L. Kurt, MD, MPH, *Journal of American Medical Association*, January 15, 1997.