

Identifying and Caring for Veterans with Multiple Sclerosis

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Research studies document the relationship between illnesses and war for Soldiers and Veterans deployed to a war zone. Persian Gulf War Veterans (1990-1991) were exposed to challenging work and living environments, some of which included dangerous contaminants, with potential and documented exposures to chemical warfare agents [1].

Between 1990 and 1991, almost 700,000 troops were deployed to the Gulf War operational area. An estimated 175,000 to 250,000 of those Veterans have Chronic Multi-Symptom Illness (CMI), also known as Gulf War illness (GWI) [2]. A 2017 study of 224 post-911 Veterans deployed to Afghanistan and Iraq documents that 97.2% of participants experienced one or more potentially toxic exposures related to symptoms of CMI [3]. In 2021, a third follow-up study to the original VA Longitudinal Health Study of Gulf War Era Veterans included over 6,300 Veterans who self-reported both mental and physical health outcomes over a 19-year period; findings indicate an increase in chronic disease [4], replicating a trend. Other neurological conditions of unknown etiology have been reported among Veterans, and research is ongoing.

Multiple Sclerosis

Multiple Sclerosis (MS) is a chronic autoimmune-related disease that impacts the central nervous system (CNS) and can result in extreme cognitive or physical disability and/or neurological deficiencies [5, 6]. With MS, the CNS attacks the fatty myelin sheath covering of the neuron and interrupts the electrical signals between neurons in the brain. MS impacts individuals differently; com-

mon symptoms include tingling in the legs, gait changes, pain, visual changes, and cognitive changes [7].

MS prevalence rates are hard to estimate. Prior to 2019, there were approximately 400,000 persons living with MS in the United States [8]. A 2019 nationwide study funded by the National Multiple Sclerosis Society and overseen by the Multiple Sclerosis Prevalence Workgroup found that up to 913,925 adults aged 18 years and older were diagnosed with MS in the United States for a case rate of 363 per 100,000 [8]. The researchers included 2008-2010 medical records claims from seven databases and health systems, one of which included 8.5 million adult enrollee claims from the VA dataset. However, VA estimates were not calculated separately. Hittle and coauthors report that population-based estimates for the prevalence of MS in the United States reveal a more "racially and ethnically diverse" distribution [9]. The highest MS prevalence rates are White persons, then Black persons, persons of other races, and Hispanic individuals [9].

VA Veterans

Currently, the VA does not have a listing of all Veterans in the country with MS, where they live, diagnosis, and where they get care. There are more than 28,000 MS cases reported annually to the Department of Veterans Affairs [10]. The VA conservatively estimates 56,000 Veterans with MS utilizing Veterans Health Administration (VHA) services, including Community Care, which is paid for by the VHA (personal communication, Vicki Johnson, VA Medical Center, Fayetteville, North Carolina). Approximately 637,790 Veterans lived in North Carolina

according to the 2017–2021 American Community Survey estimates [11]. In 2022, the VA served 947 Veterans with MS from North Carolina (personal communication, Vicki Johnson). There were at least 1,500 Veterans with MS in North Carolina in 2019 [9]. The National MS Society partnership with the VA between 2019 and 2011 identified 1,468 Veterans served through their MS Navigator Program. Ninety-one North Carolina Veterans were served in the same four-year time frame, with a total of 592 interactions, meaning they were helped more than once and/or were helped with more than one resource (personal communication, Vicki Kowal, National MS Society, June 5, 2023).

Veterans and MS Diagnosis

Research that investigates the association between illness and war among Veterans is difficult to conduct. One challenge involves obtaining a retrospective detailed review of a person's prior military service areas and related possible exposure, and another is the determination of which persons are diagnosed with MS [12]. There is no definitive research evidence to document a relationship between MS and Gulf War service, MS and radiation exposure, MS and Agent Orange, and MS and exposure to depleted uranium [12]. In other words, there is no definitive evidence that combat-related exposure is related to an increased risk of developing MS.

Two studies document a positive relationship between MS and exposure to toxins during the Afghanistan and Iraq wars, but the evidence remains conflicting. Wallin and colleagues' 2014 investigation of the link between the risk of developing MS and combat exposure in the US military used a large cohort of Gulf War-era Veterans who were defined as "service-connected" for MS [13]. The results

indicate 1,841 incident cases of definite other demyelinating disease (ODD), and MS was identified in 1,454 incident cases among 1,786,215 nondeployed personnel and 387 incident cases among 696,118 deployed [13].

Williams and colleagues studied newly diagnosed MS cases among active- and Reserve-duty Service Members and among other beneficiaries of the Military Health System between 2007 and 2016. They assessed whether combat zone deployment among Service Members was correlated with higher MS rates when compared to nondeployed personnel. Compared to active-duty Service Members who were not deployed, the research team found that combat-zone-deployed active-duty Service Members experienced a 22.4% higher rate of MS, but no specific toxic exposure was assessed [14].

What's Next in Serving Veterans?

Additional studies are warranted to further explore the relationship between the long-term impact of toxic exposure and MS diagnosis for Veterans. It can take years post-deployment for a Veteran to exhibit physical and mental health symptoms related to toxic exposure. Cutting-edge bipartisan policy changes are only part of the solution. The Sergeant First Class Heath Robinson Honoring our Promise to Address Comprehensive Toxics (PACT) Act signed into law on August 9, 2022, provides the most significant expansion of benefits and services to Veterans who were exposed to toxins in more than three decades [15]. As of August 5, 2023, 37,940 North Carolina PACT Act-related claims had been received, out of 843,448 total PACT claims received; of those, 16,832 NC PACT Act claims were granted and 14,974 new VA enrollees were connected to the PACT Act [16]. This increase in new VA enrollees is encouraging; however, future initiatives

are needed to further support Veterans who have been exposed to toxins and who are living with MS. NCMJ

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