From: Vietnam Veterans of America - Texas State Council [tscsec@vvatsc.org]
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To: 0000 TSC 3Sec
Sub: Dementia Update And Heart Defibrillators & Pacemakers

TO All Texas Chapters as per request of TSC President Kerwin Stone:
FROM: John A Miterko, Veterans Advocate, Austin TX

Dementia
Update: Increased Risk Tied to AO Exposed Vietnam Vets

Exposure to the herbicide Agent Orange has been tied to a significantly increased risk for dementia in Vietnam War veterans, new research shows. Investigators at the University of California, San Francisco, found that veterans who had been exposed to Agent Orange had nearly a twofold increased risk of developing dementia compared to veterans who had not been exposed. "This is important because the risk of dementia increases with age, and Vietnam veterans are now getting old enough to start developing dementia," study investigator Deborah Barnes, PhD, MPH, University of California, San Francisco, and the San Francisco VA Health Care System, told Medscape Medical News. The study was published online January 25 in JAMA Neurology.

Agent Orange is a powerful herbicide that contains the toxin dioxin. It was used during the Vietnam War by US forces to defoliate trees, shrubs, and crops that provided cover and food to opposition forces. Exposure has previously been linked to neurologic disorders, including Parkinson's disease, and metabolic disorders, including type 2 diabetes and systemic amyloidosis. The investigators note that the link between Agent Orange exposure and incident dementia diagnosis is unclear. To investigate, the researchers analyzed Veterans Health Administration data on 316,351 veterans (mean age, 62 years), including 38,121 (12.1%) who were presumed to have been exposed to Agent Orange. The prevalence of most conditions, including Parkinson's disease, diabetes, and amyloidosis, was similar at baseline among veterans with and those without Agent Orange exposure.

After adjusting for demographic variables and comorbid conditions, veterans who had been exposed to the defoliant were nearly twice as likely as unexposed peers to be diagnosed with dementia during follow-up (5.0% vs 2.5%), with an adjusted hazard ratio of 1.68 (95% CI, 1.59 – 1.77). In addition, veterans who were exposed to Agent Orange were about 15 months younger when they were diagnosed with dementia than unexposed veterans (mean age at dementia onset, 67.5 years vs 68.8 years). Previous reports have found that Agent Orange exposure may be associated with increased risk for a variety of medical conditions, including some cancers, Parkinson disease, hypertension, and diabetes mellitus, Barnes said. "This study does not show that the cause of dementia is related to Agent Orange, but further research should continue," she told Medscape Medical News.

Commenting on the findings for Medscape Medical News, Paul Rosenberg, MD, Division of Geriatric Psychiatry and Neuropsychiatry, John Hopkins University School of Medicine, Baltimore, Maryland, said, "The methods are robust, and the study is very large," and it does show a "meaningful increase" in dementia risk associated with Agent Orange exposure. However, Rosenberg also noted that dementia risk is "notably affected by healthy lifestyle factors, including exercise, diet, stress management, involvement in cognitively stimulating activities, and sleep. None of these can be well assessed by these databases, and it is possible that veterans exposed to Agent Orange also have less healthy habits later in life.

"The mechanisms by which Agent Orange might affect dementia risk are really interesting," Rosenberg said. They include long-lasting stores of dioxin in fat, affecting diabetes risk; direct effects on pituitary hormones and neurotransmitters, including dopamine; and enhancement of oxidative stress. "The authors did an excellent job outlining these possibilities," he added. The association with Agent

Orange is "particularly interesting because, in general, there aren't many environmental exposures associated with any dementia except Parkinson's," Rosenberg said. The take-home lesson, he said, is that veterans who were exposed to Agent Orange "should be extra vigilant about early signs of cognitive impairment" and should see their primary care clinician if they think they have them.

Also weighing in on the study for Medscape Medical News, Heather Snyder, PhD, vice president of medical and scientific operations for the Alzheimer's Association, noted that earlier data reported by Barnes and her colleagues at the 2019 Alzheimer's Association International Conference found similar associations, "but a notably lesser effect size." "In that report, veterans with Agent Orange exposure documented in their health records were found to be 20% more likely to be diagnosed with dementia," Snyder said.

Snyder said one limitation of the current study is that Agent Orange exposure is treated as a "yes/no consideration, whereas exposure level would have varied between individuals, depending on location, duties, and duration in Vietnam. "It's also important to note that the study population was 98% men, and all were Vietnam-era veterans. Therefore, these data aren't generalizable to the general public and may only have implications for veterans who served in Vietnam and were exposed to Agent Orange," said Snyder. Medscape | Megan Brooks | February 1, 2021 ++]

**********END DEMENTIA ARTICLE**********

Heart Defibrillators & Pacemakers
Apple's iPhone 12 Impact

In electrophysiology we treat heart rhythm problems, such as when the heart becomes irregular, when it gets fast or when it gets slow. There are various ways to treat heart rhythm problems. If the heart rhythm gets very slow and it is not treatable with changes in medications then a pacemaker is needed. What a pacemaker does is keep the heart beating at the proper rate and from beating too slow. It also will only activate if it is needed, it is not shocking people all the time.

An implanted defibrillator is a bigger device. It is there to prevent death from a cardiac arrest. The device shocks the heart if it needs to be shocked, because of a life-threatening rhythm disturbance from the lower chambers of the heart. It can correct this rhythm. Because it has a pacemaker built into it, a defibrillator also has the capability of stimulating the heart like a pacemaker, to help stop fast rhythms, at times, and to prevent the heart from getting too slow. At any time, electrical fields or strong magnetic fields can influence the devices. People who work in power plants, or near alternators of cars, can be affected because they are exposed to heavy magnetic fields. People with pacemakers and defibrillators who use arc welding devices and other kinds of heavy energy that involve magnetism or electricity tend to have problems.

Cardiologists at Henry Ford Health System in Detroit say they discovered that the iPhone 12 has the ability to deactivate implantable cardiac devices when held too close to a person's chest. Apple's iPhone 12 series features a strong magnet to help maximize charging, which can cause issues with cardiac devices, according to a press release from Henry Ford. The health system says the phone's magnet can turn off heart defibrillators and can cause a pacemaker to deliver electrical impulses that could drive heartbeats out of sync. More than 300,000 people in the U.S. get one of these devices implanted every year, according to Henry Ford.

Cardiologists with the health system tested out their theory by holding an iPhone 12 close to a patient's chest. "When we brought the iPhone close to the patient's chest the defibrillator was deactivated," said Dr. Gurjit Singh, Henry Ford Heart & Vascular Institute cardiologist, in a press release. "We saw on the external defibrillator programmer that the functions of the device were suspended and remained suspended. When we took the phone away from the patient's chest, the defibrillator

immediately returned to its normal function." Their findings were published in the medical journal HeartRhytm in January and drew the attention of the FDA, the Association for the Advancement of Medical Instrumentation and Apple. Apple followed up by publishing the following warning on its website:

iPhone contains magnets as well as components and radios that emit electromagnetic fields. All MagSafe accessories (each sold separately) also contain magnets—and MagSafe Charger and MagSafe Duo Charger contain radios. These magnets and electromagnetic fields might interfere with medical devices.

Though all iPhone 12 models contain more magnets than prior iPhone models, they're not expected to pose a greater risk of magnetic interference to medical devices than prior iPhone models.

Medical devices such as implanted pacemakers and defibrillators might contain sensors that respond to magnets and radios when in close contact. To avoid any potential interactions with these devices, keep your iPhone and MagSafe accessories a safe distance away from your device (more than 6 inches / 15 cm apart or more than 12 inches / 30 cm apart if wirelessly charging). But consult with your physician and your device manufacturer for specific guidelines.

Consult your physician and medical device manufacturer for information specific to your medical device and whether you need to maintain a safe distance of separation between your medical device and iPhone or any MagSafe accessories. Manufacturers often provide recommendations on the safe use of their devices around wireless or magnetic products to prevent possible interference. If you suspect iPhone or any MagSafe accessories are interfering with your medical device, stop using your iPhone or MagSafe accessories.

We provide more information on safety at Important safety information for iPhone in the iPhone User Guide.

Henry Ford says Singh and his coworkers plan to do a more comprehensive study of various brands of defibrillators and pacemakers and testing them against the magnet in the iPhone 12 and other devices. Singh and Henry Ford Health System advises that anyone who has an iPhone 12 or phones with magnetic cases or devices containing magnets should keep it at least 6 inches away from their chest at all times. [Source: ABC 10 News | WXYZ Staff | February 5, 2021 ++]

**********END Heart Defibrillators & Pacemakers Report**********

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