VETERANS AND AGENT ORANGE—REPORTS FROM THE NATIONAL ACADEMY OF SCIENCES

On March 10, 2016, a committee of the Health and Medicine Division (HMD) (formerly known as the Institute of Medicine) of the National Academies of Sciences, Engineering, and Medicine released the report “Veterans and Agent Orange: Update 2014.” VA is currently considering recommendations from the report.

VA contracts with HMD, an independent non-governmental organization, to scientifically review evidence on the long-term health effects of Agent Orange and other herbicides on Vietnam Veterans. HMD determines whether the evidence suggests a relationship between the diseases studied and herbicide exposure.

In the report, the committee changed its category of association with herbicide exposure for bladder cancer and hypothyroidism from “inadequate or insufficient” evidence to “limited or suggestive” evidence of an association. The committee also recommended that Vietnam Veterans with Parkinson-like symptoms be considered eligible for benefits under the presumption of Parkinson’s disease. For the birth defect spina bifida, this condition was changed from “limited or suggestive” evidence of an association with herbicide exposure to “inadequate or insufficient” evidence. The “Veterans and Agent Orange 2014” report is available at: http://www.nationalacademies.org/hmd/Reports/2016/Veterans-and-Agent-Orange-Update-2014.aspx

HMD has also begun its eleventh review “Veterans and Agent Orange: Update 2017.” As a part of its updated review of all potentially associated health effects based on the most recent additions to the medical and scientific literature, this biennial update will specifically highlight possible birth defects and other inter-generational health effects. Learn more about HMD’s review of intergenerational effects on page 3.

In 2015, HMD released the report “Post-Vietnam Dioxin Exposure in Agent Orange—Contaminated C-123 Aircraft,” available at http://www.nationalacademies.org/hmd/Reports/2015/Post-Vietnam-Dioxin-Exposure-in-Agent-Orange-Contaminated-C-123-Aircraft.aspx. HMD found that Reservists who were in regular, repeated contact with C-123 aircraft previously used to spray Agent Orange and other herbicides while serving as flight crew, ground maintenance crew, and aero-medical personnel may have experienced some exposure to herbicides. VA now recognizes exposure to Agent Orange for those whose military service involved regular contact with contaminated C-123 aircraft. Learn more https://www.publichealth.va.gov/exposures/agentorange/locations/residue-c123-aircraft/index.asp.
**AGENT ORANGE REGISTRY HEALTH EXAM**

The Agent Orange Registry exam is a free evaluation from which Veterans can learn about possible health problems related to their military service. Participants receive a health exam, including an exposure and medical history, a physical exam, and laboratory tests if needed. Follow-up evaluations can be conducted if a Veteran has a new health concern or a change in their health status.

Eligible Veterans include Veterans who served in Vietnam between 1962 and 1975, Veterans who served in smaller river patrol and swift boats that operated on the inland waterways of Vietnam (Brown Water Veterans), and some Veterans who served in the Korean Demilitarized Zone, Thailand, or other locations where there is documented use, storage, or testing of Agent Orange and other tactical herbicides.

Are you interested in having an Agent Orange Registry health exam? Veterans do not need to be enrolled in VA health care to participate. Contact your local VA environmental health coordinator (http://www.publichealth.va.gov/exposures/coordinators.asp) to schedule an exam. Find out more about eligibility requirements and the exam at https://www.publichealth.va.gov/exposures/agentorange/benefits/registry-exam.asp.

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**WRIISC CLINICAL SERVICES, EDUCATION, AND RESEARCH FOR VIETNAM VETERANS**

The War Related Illness and Injury Study Center (WRIISC), part of VA’s Post-Deployment Health Services (PDHS), offers clinical services, education, and research aimed at caring for Vietnam Veterans. The WRIISC is located in three cities: East Orange, New Jersey; Washington, DC; and Palo Alto, California. Below is additional information about WRIISC services.

**Clinical Care**

Multi-Disciplinary Comprehensive Clinical Evaluation: The WRIISC offers clinical evaluations for Vietnam Veterans with chronic, medically unexplained health concerns. The clinical evaluation is designed for Veterans who have had a thorough work-up by other health care providers and still have undiagnosed symptoms that are possibly related to deployment.

Vietnam Veterans can talk to their VA primary care provider about a referral to the WRIISC’s clinical program. Once referred, the WRIISC team will help determine what type of further care is necessary. Learn more about WRIISC clinical care services at https://www.warrelatedillness.va.gov/WARRELATEDILLNESS/clinical/index.asp.

**Health Education**

Group classes: The WRIISC offers group classes designed specifically for Vietnam Veterans. These classes, titled “Agent Orange: What you need to know,” are taught by experts in environmental exposures. These classes give Vietnam Veterans the most up-to-date knowledge about Agent Orange by both addressing exposure...
concerns and providing additional resources. They are offered regularly at the WRIISC locations in New Jersey and Washington, D.C. For more information about classes, visit the WRIISC website at [http://www.warrelatedillness.va.gov/WARRELATEDILLNESS/education/local-offerings/index.asp](http://www.warrelatedillness.va.gov/WARRELATEDILLNESS/education/local-offerings/index.asp).

**Research**

The WRIISC is dedicated to conducting research to improve the well-being of Vietnam Veterans with war-related health problems. WRIISC research projects cover everything from basic science and epidemiology, to human physiology, to treatment studies, implementation, and health outcomes.

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**NATIONAL ACADEMY OF SCIENCES EXPLORING POSSIBLE INTERGENERATIONAL EFFECTS OF AGENT ORANGE**

Many Veterans have been concerned about the possibility that exposure to Agent Orange could cause birth defects or other health problems in their children and in subsequent generations. To address these concerns, VA has asked the Health and Medicine Division (HMD), formerly known as the Institute of Medicine (IOM), of the National Academies of Sciences, Engineering, and Medicine to find answers.

HMD serves as an independent advisor for VA and other government agencies and organizations. VA is required by law to contract with HMD to review scientific evidence for possible connections between health conditions and exposures during military service, including exposures during service in Vietnam. HMD has reviewed the latest research findings on this issue several times, and has not found a clear association between Agent Orange exposure and intergenerational health effects.

In HMD’s most recent report, “Veterans and Agent Orange: Update 2014” (released in March 2016), a committee of experts did not find an association between Agent Orange exposure and birth defects stemming from parents of either gender. HMD’s review committee stated that they found “inadequate and insufficient” evidence of an association. HMD also reversed its opinion from earlier reports that spina bifida is potentially associated with Agent Orange exposure in either parent. The scientific evidence no longer supports an association between Agent Orange exposure and spina bifida.

VA will continue to explore the issue of Agent Orange exposure and intergenerational effects. HMD has been tasked with writing two additional reports that could help expand knowledge on this topic:

- In response to recent legislation, VA asked HMD to complete an additional report on the possible intergenerational effects of toxic exposures from military service. Although, this report will be written as part of the “Gulf War and Health” series, HMD will look at exposures from other conflicts. The committee will also recommend a strategy for studying any effects in the children of Veterans in the future. The findings should help inform those interested in Agent Orange exposure. HMD plans to publish this report in early 2019.

- VA has contracted with HMD to look at Agent Orange and Veterans health issues as a part of its eleventh review, “Veterans and Agent Orange: Update 2017,” which is scheduled for release in early 2019. This committee will look again at possible birth defects and intergenerational health effects. In particular, VA has charged the committee with looking at the possible effects from paternal (a father’s) transmission to children or later generations.

In the meantime, VA will continue to monitor and review the rapidly evolving medical and scientific literature in this field.
FINDINGS ON BLOOD PRESSURE FROM THE ARMY CHEMICAL CORPS VIETNAM-ERA VETERANS HEALTH STUDY

VA researchers have found a link between service-related occupational exposure to herbicides and high blood pressure (hypertension) risk among U.S. Army Chemical Corps (ACC) Veterans, a group of Veterans assigned to perform chemical operations during the Vietnam War.

Researchers at VA’s Post Deployment Health Services Epidemiology Program, Office of Patient Care Services, conducted the Army Chemical Corps Vietnam-Era Veterans Health Study, from which data on nearly 4,000 Veterans who served in the ACC between 1965 and 1973 were examined. The study included a survey that requested information from these Veterans on their exposure to herbicides, whether they were ever diagnosed with hypertension by a physician, and their health behaviors, such as cigarette smoking and alcohol use. To confirm self-reported hypertension, researchers conducted in-home blood pressure measurements and a medical records review for a portion of the study participants.

ACC Veterans were studied because of their documented occupational involvement with chemical distribution, storage, and maintenance during military service. This study followed a request by former Secretary of Veterans Affairs Eric K. Shinseki for VA to conduct research on the association between herbicide exposure and hypertension to gain a better understanding of whether hypertension is related to military service in Vietnam.

“This study expands our knowledge of the relationship between hypertension risk and both herbicide exposure and service in Vietnam among Veterans who served during the War by focusing on a specific group of Vietnam era Veterans who were occupationally involved in chemical operations,” said Yasmin Cypel, Ph.D., M.S., principal investigator on this study.

Self-reported hypertension was the highest among Veterans who distributed or maintained herbicides (sprayers) in Vietnam (81.6%), followed by Veterans who sprayed herbicides and served during the Vietnam War but never in Southeast Asia (non-Vietnam Veterans) (77.4%), Veterans who served in Vietnam but did not spray herbicides (72.2%), and Veterans who did not spray herbicides and were non-Vietnam Veterans (64.6%).

The odds of developing hypertension among herbicide sprayers were estimated to be 1.74 times the odds among non-sprayers, and the odds of developing hypertension among those who served in Vietnam were 1.26 times the odds among non-Vietnam Veterans.

The researchers would like to extend their thanks to all of the Army Chemical Corps Vietnam-Era Veterans who participated in this study.

To read more about the Army Chemical Corps Vietnam-Era Veterans Health Study, go to http://www.publichealth.va.gov/epidemiology/studies/vietnam-army-chemical-corps.asp. To read a summary of the published article containing findings from this study, go to https://www.ncbi.nlm.nih.gov/pubmed/27820763.

VA will review the results from this research, along with findings from similar studies and reports from the Health and Medicine Division (HMD), formerly known as the Institute of Medicine, of the National Academies of Sciences, Engineering, and Medicine, when considering hypertension as a presumptive service condition for Vietnam Veterans. To read about HMD reports on Veterans and Agent Orange, go to https://www.publichealth.va.gov/exposures/agentorange/publications/health-and-medicine-division.asp.
SKIN CONDITIONS QUALIFYING FOR PRESUMPTIVE SERVICE CONNECTION—CHLORACNE AND PORPHYRIA CUTANEA TARDA

Two skin conditions, chloracne and porphyria cutanea tarda, may be related to exposure to Agent Orange during the Vietnam War. Below is information about these conditions, including possible causes and benefits available from VA. These conditions do not appear years later. They appear within a year of toxic exposure.

Chloracne
Chloracne is a rare skin condition consisting of blackheads, cysts, and nodules. It can look like teenage acne, and may be severe and painful; however, acne forms from overactive glands in the skin that produce and release oils. With chloracne, toxic chemicals concentrate in these glands, break down slowly, and change the skin glands into cysts. Chloracne usually clears up within two years. Severe chloracne can lead to open sores and permanent scars.

Causes: Chloracne is caused by certain types of toxic chemicals, including dioxin, a contaminant found in Agent Orange. The condition can develop a few months after swallowing, inhaling or touching the chemical. People can get chloracne from an occupational or environmental exposure, but not everyone exposed to a toxic chemical like dioxin will develop chloracne. Chloracne does not develop years later.

Porphyria Cutanea Tarda
Porphyria cutanea tarda is a condition in which the skin thins and blisters on sun-exposed areas. Symptoms include blisters on the face, arms, and hands, followed by crusting and scarring, hyperpigmentation, increased hair growth on areas exposed to the sun, and liver damage.

Causes: Besides Agent Orange exposure, this skin condition can be caused by a combination of genes, lifestyle, and environmental factors. It can also run in families, although this is less common.

Presumptive Service Connection
Veterans with either chloracne or porphyria cutanea tarda qualify for presumptive service connection for health care and disability benefits if:
- The disease appears within one year of qualifying service
- It is at least 10 percent disabling

Learn more about chloracne at: https://www.publichealth.va.gov/exposures/agentorange/conditions/chloracne.asp.


Profiles of Environmental Health Coordinators and Clinicians—Helping Veterans Concerned About Exposures

VA’s environmental health registries include free medical exams for Veterans who may have been exposed to environmental hazards during military service. Veterans can have a comprehensive health exam, including an exposure and medical history, laboratory tests if needed, and a physical exam. These registries help VA understand the health of specific groups of Veterans. Registries can help Veterans become aware of their possible health problems related to environmental exposures. VA offers a variety of
Profiles of Environmental Health Coordinators and Clinicians – Helping Veterans Concerned About Exposures

registries for Veterans. The main registry offered for Vietnam Veterans is the Agent Orange Registry, but Veterans can be eligible for more than one registry.

As a part of participation in a registry, an environmental health coordinator guides Veterans through the process of getting an exam, and the environmental health clinician performs the medical evaluation. Together, the coordinator and clinician can also answer questions about health concerns related to military exposures and direct Veterans to other VA services related to exposure concerns, such as benefits services.

Below is an introduction to an environmental health coordinator and environmental health clinician, and the work they do to facilitate registry exams for Veterans:

William Kingsberry, Environmental Health Coordinator

William Kingsberry has been an environmental health coordinator at the Charlie Norwood VA Medical Center in Augusta, GA for 13 years. He has worked at VA for 28 years, after serving in the U.S. Army for 7 years.

Mr. Kingsberry receives requests for registry exams, contacts Veterans to let them know about the exams they will take, and sets up appointments for exams. He helps Veterans with the preliminary interview and worksheet needed before they start their exam.

“I explain everything to them and give them an appointment,” said Mr. Kingsberry. “I let them know what the registry is about. If they have any presumed illnesses, I’ll ask them if they know where they can file a claim. If they don’t know, I let them know, whether it is by telephone or the address to the nearest office they can go to, or I send them in the hospital where there are claims representatives.”

Mr. Kingsberry mainly helps Veterans interested in the in-person health exams with the Agent Orange Registry and the Gulf War Registry. For Veterans interested in the Airborne Hazards and Open Burn Pit Registry (an online registry with an optional in-person medical evaluation), he initially refers them to the web to complete the online portion of this registry.

Dr. Jerrold Flyer, Environmental Health Clinician

Dr. Jerrold Flyer, Associate Chief of Staff, Non-Institutional Care, at the Boise VA Medical Center has been an environmental health clinician for almost seven years. He is a 30 year Veteran of the Air Force, with multiple deployments and service in Operating Enduring Freedom.

“My main role is to perform environmental registry exams on Veterans who are requesting enrollment into a specific registry,” said Dr. Flyer. “I also serve as a resource regarding environmental exposures for both Veterans and other clinicians.” Dr. Flyer is the VISN 20 Lead Environmental Registry Clinician, and communicates information from VA’s Central Office to the lead clinicians in VISN 20. VISN 20, the Northwest Health Network, includes the states of Alaska, Washington, Oregon, Idaho, and one county each in California and Montana.

Veterans can obtain assistance from environmental health coordinators and clinicians for any of the registries from which they qualify. Other VA registries and related programs include the Ionizing Radiation Registry, Depleted Uranium Follow-Up Program, and the Toxic Embedded Fragment Surveillance Center.

VA encourages you to join a registry. To start the process, find an environmental health coordinator near you https://www.publichealth.va.gov/exposures/coordinators.asp. Learn more about all of the registries that VA offers at https://www.publichealth.va.gov/exposures/benefits/registry-evaluation.asp.

An environmental health coordinator is available at VA medical centers across the country. Find your local environmental health coordinator at https://www.publichealth.va.gov/exposures/coordinators.asp.
VA BENEFITS

VA offers health care benefits, disability compensation, and more for eligible Veterans. Dependents and survivors may also be eligible.

Health Care
Web: https://www.va.gov/healthbenefits/apply/
Telephone: 877-222-8387

Benefits
Web: http://www.benefits.va.gov/benefits/
Telephone: 800-827-1000

TDD (Hearing Impaired)
800-829-4833

eBenefits
Gateway to benefits information
https://www.ebenefits.va.gov/ebenefits/homepage

Camp Lejeune
Web: https://www.publichealth.va.gov/exposures/camp-lejeune/index.asp

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