

# **Agent Orange Review**

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#### Information for Veterans Who Served in Vietnam

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# VA to Recognize Nerve Disorder as ServiceConnected, Will Not Recognize Lung Cancer Defers Decision on Diabetes

On July 1, 1991, Secretary of Veterans Affairs Edward J. Derwinski announced that VA will soon propose rules granting service-connected disability status to certain Vietnam veterans with peripheral neuropathy, a nervous system condition that causes numbness and tingling. The neuropathy must have appeared within ten years after exposure.

VA will also propose a rule stating that there is no link between exposure to dioxin -- a contaminant found in Agent Orange -- and lung cancer. VA deferred a decision on the relationship between exposure to dioxin and the subsequent development of diabetes pending further study and analysis by the National Academy of Sciences (NAS) or a comparable independent scientific entity.

Under Public Law 102-4, the "Agent Orange Act of 1991," NAS (or a comparable organization) will review scientific and medical information regarding the health effects of exposure to Agent Orange and other herbicides used in Vietnam. The initial report of this review and of the possible association between exposure to herbicides and various diseases is anticipated in late 1992. (Several articles regarding this law were included in the April 1991 issue of the "Agent Orange Review").

Announcing his decisions, Secretary Derwinski declared, "These latest steps are a mark of progress in helping to resolve some of the lingering concerns felt by Vietnam veterans and their families. We are committed to finding as many conclusive answers as we can."

Last year Secretary Derwinski announced that Vietnam veterans who are suffering with non-Hodgkin's lymphomas or soft tissue sarcomas could receive disability benefits. These diseases, along with chloracne, a skin disorder, are associated with Vietnam service or dioxin exposure. Public Law 102-4, signed by President Bush early this year, codified the Secretary's decisions.

The July 1 announcement was prompted by findings of the Veterans' Advisory Committee on Environmental Hazards. For information about the Committee and its recent conclusions, see the following article.

# Environmental Hazards Committee Focuses on Diabetes, Lung Cancer, Peripheral Neuropathy

On May 23, 1991, the Veterans' Advisory Committee on Environmental Hazards met in Washington, D.C., to examine the relationship between exposure to herbicides containing dioxin and various medical disorders.

#### **Diabetes**

After careful consideration of available scientific evidence, including the Air Force Health Study described below, the Committee concluded that a significant statistical association between herbicides containing dioxin and subsequent development of diabetes has not been demonstrated. On the other hand, the Committee would not rule out such an association.

In their review of the Air Force Health Study, Committee members noted that there were no overall differences in the prevalence of diabetes between the Ranch Hand and comparison group. Further analysis of the groups based upon serum dioxin levels did reveal a dose response trend.

The Committee observed that the study failed to account for other factors known to be associated with diabetes, including age and obesity. Committee members noted that it was not clear whether the diabetes finding was a real effect or a statistical quirk reflective of multiple comparisons. They indicated that additional analysis of this issue was warranted.

#### **Lung Cancer**

The Committee also examined the relationship between dioxin and lung cancer. The Committee concluded that no significant statistical association exists. Members noted that many of the studies that had reported finding lung cancer had failed to take into account the important risk factor of smoking.

One of the non-scientists on the Committee, retired Admiral Elmo R. Zumwalt, Jr., disagreed with the Committee's conclusion. He argued that studies of Vietnam veterans, particularly VA's mortality study that indicated an increased proportionate mortality ratio for lung cancer among Marines, warranted favorable consideration.

#### **Peripheral Neuropathy**

The Advisory Committee also considered peripheral neuropathy. The Committee found that there was a significant

statistical association between this disorder and exposure to dioxin. The Committee qualified this opinion, stating that the association could be said to exist in the absence of exposure to chemical substances known to cause this disorder.

Committee members indicated that other risk factors that must be considered are age and whether the individual suffers from other known causes of peripheral neuropathy such as diabetes, alcoholism, or Guillain-Barre syndrome. The Committee also advised that the disorder must become manifest within ten years of the last known dioxin exposure.

#### STS, Chloracne, PCT Regulations Pending

The Committee also considered pending regulations regarding soft tissue sarcomas (STS), chloracne, and porphyria cutanea tarda (PCT). The proposed STS regulation was published in the Federal Register on February 25, 1991. (A lengthy article about the proposed regulation was included in the April 1991 issue of the "Agent Orange Review.") Taking into account the public comments received as a result of the publication, the Committee reviewed the proposed final STS rule.

The Committee accepted the Department's proposed regulation recognizing chloracne manifested within nine months of the last known exposure to Agent Orange and the finding that no significant statistical association exists between exposure to dioxin and PCT.

The Veterans' Advisory Committee on Environmental Hazards was established in March 1985, in accordance with Public Law 98-542, the "Veterans' Dioxin and Radiation Exposure Compensation Standards Act." Under that law, the Committee was responsible for advising VA on guidelines and (where appropriate) standards and criteria for the resolution of claims for VA benefits where the criteria for eligibility include

a requirement that a death or disability be service-connected and the claim of service connection is based on a veteran's exposure to an herbicide containing dioxin during service in Vietnam, or to ionizing radiation from the detonation of a nuclear device in connection with a veteran's participation in atmospheric nuclear tests or with American occupation of Hiroshima or Nagasaki, Japan, prior to July 1, 1946.

Public Law 102-4, the "Agent Orange Act of 1991," amended Public Law 98-542, to phase out the Committee's dioxin responsibilities in mid-1991.

#### Air Force Study Results Released; Suggests Dioxin Levels Link with Diabetes, Body Fat, and Cholesterol

On March 29, 1991, the Department of Air Force released study results that indicated a significant association between dioxin levels and lipid-related health indicators. Specifically, diabetes and body fat were associated with dioxin levels. Cholesterol and other related serum lipid levels also were significantly associated with dioxin.

Investigators found no evidence of a relationship between dioxin and cancer of any kind, liver disease, heart disease, kidney disease, immune system disorders, psychological abnormalities, or neurological disease.

The results were contained in the fourth morbidity report of "The Air Force Health Study, An Epidemiologic Investigation of Health Effects in Air Force Personnel Following Exposure to Herbicides." This study is examining the health of Air Force personnel who served in Operation Ranch Hand units in Vietnam from 1962 to 1971, and a comparison group who flew or maintained C- 130 aircraft during the same time period.

#### About the Review...

This issue of the "Agent Orange Review" was prepared by VA's Environmental Agents Service (EAS). The "Review" is published periodically to provide information on Agent Orange and related matters to Vietnam veterans, their families, and others with concerns about herbicides used in Vietnam. The most recent issue of the "Review" was published in April 1991.

The "Review" is prepared approximately two months prior to the publication date. This issue was written in late June/early July and does not include developments that occurred during most of July or August 1991. Comments or questions about the content of the "Review" are encouraged. Suggestions and ideas for future issues of the newsletter should be sent to Donald J. Rosenblum, Writer/Editor, Agent Orange Review, Environmental Agents Service (116A), VA Central Office, 810 Vermont Avenue, NW, Washington, DC 20420.

Requests for additional copies of this issue, should also be directed to Mr. Rosenblum. Please specify the number of copies you are requesting. A limited supply of the October

1989, May 1990, August 1990, February 1991, and April 1991 issues is also available. VA facilities should order additional copies from the VA Supply Depot.

VA updates the "Review" mailing address listing annually. If you have not been filing Federal income tax annually and have moved to another residence, we may not have the best address for you and may not be able to send you future issues of the "Review." Therefore, if this is your situation, please send your old and new addresses and Social Security number to the Department of Veterans Affairs, Data Processing Center (200/397), 1615 East Woodward Street, Austin, Texas 78772.

If you have questions about your Agent Orange Registry examination, contact the Environmental Physician or Agent Orange Coordinator at the VA medical center where you had the examination. Questions about VA benefit programs, including disability compensation, should be directed to a veterans benefits counselor at the VA facility nearest you. The telephone number can be found in your telephone book under "U.S. Government" listings.

The latest report uses actual measures of dioxin present in the blood of study participants (866 Ranch Hands and 804 comparisons) and is the first large-scale study to use accurate, individual dioxin measures. Air Force Major General James G. Sanders indicated that this is an important enhancement of the Air Force Health Study and supplements previous reports.

Currently underway is a review of the possible relationship between serum dioxin levels of fathers and the presence of birth defects in their children. According to General Sanders, that report should be completed within the next few months.

Many of the findings in the March 1991 report reveal a consistent relationship between dioxin and body fat. Principal investigator William H. Wolfe, M.D., M.P.H., offered two hypotheses to explain this relationship. In one, dioxin could cause an increase in body fat, or the level of body fat could influence the dioxin decay rate, which in turn alters physiologic outcomes, such as blood pressure, serum lipid alterations, and blood sugar levels. An alternative hypothesis involves dioxin as a direct cause of two or more of the observed endpoints, including body fat.

Unfortunately, whether dioxin causes these observed effects directly or is a step in an extended causal pathway cannot be determined from available data. Col. Wolfe indicated that additional analyses following the physical examination scheduled for 1992 may help resolve this question.

This study is part of a planned 20-year effort. Sequential questionnaires, medical record reviews and physical examinations will be conducted in 1992, 1997, and 2002 to further assess health effects.

# Agent Orange Registry Continues to Respond to Veterans' Concerns

Every month hundreds of Vietnam veterans travel to the nearest VA medical center for Agent Orange Registry examinations. The establishment of this examination program was one of the first VA actions in response to concerns raised in the late 1970's regarding the possible delayed health consequences of exposure to Agent Orange and other herbicides used in Vietnam.

Vietnam veterans who participate in this program are asked a series of questions about their possible exposure to herbicides in Vietnam. A medical history is taken, a medical examination is performed, and a series of basic laboratory tests are done. If the examining physician thinks that consultations with specialists are indicated, arrangements are made for additional examinations.

Registry participants are advised of the results of the laboratory tests and the examination during a personal interview. They also are sent a "follow-up" letter summarizing the findings.

Only veterans who had active military service in the Republic of Vietnam between 1962 and 1975 are eligible to participate in the Registry program. Registry examinations are offered at all VA medical centers. According to National Agent Orange Registry Coordinator Michelle B. Williams, approximately 215,000 Vietnam veterans have received Registry examinations. Ms. Williams indicated that the most active VA medical centers are located in Minneapolis, Minnesota, and San

Juan, Puerto Rico. Both of these stations have provided examinations to more than 6,000 Vietnam veterans. The following VA health care facilities have performed more than 3,000 Registry exams: American Lake (Tacoma), Washington; Dallas, Texas; East Orange, New Jersey: and Wood (Milwaukee), Wisconsin.

VA officials advise veterans that participation in the Agent Orange Registry does not constitute a formal claim for disability compensation. Although the results of a Registry examination may be used to support a compensation claim, a veteran must file an application for disability compensation to be considered eligible for this VA benefit program. Veterans benefits counselors, located in VA regional offices and medical centers, assist many Vietnam veterans in filing claims.

## Agent Orange Registry Data Used for PTSD Analysis

Some of the readjusmlent problems of Vietnam veterans have been attributed to post-traumatic stress disorder (PTSD). This disorder covers a host of symptoms associated with exposure to catastrophic stress. Nightmares, flashbacks, anxiety and sudden-startle reactions may occur immediately after exposure to the stress of combat. These difficulties may develop years after the original stress.

Scientists in the VA Environmental Epidemiology Service in Washington, DC, have completed a case-control study that compared demographic and military characteristics of 374 Vietnam veterans who had been diagnosed with PTSD with 373 healthy Vietnam veterans. Veterans were selected from the Agent Orange Registry.

Investigators confirmed that being wounded in Vietnam and having a combat job in Vietnam were risk factors for PTSD. Data analysis also revealed that those who had noncombat jobs but were wounded had the highest risk of PTSD.

There is no evidence that exposure to Agent Orange is related to PTSD.

The study results are tentatively scheduled for publication in the November 1991 issue of the Annals o[Epidemiology.

Vietnam veterans who are suffering with PTSD or other readjustment problems are urged to seek help from the nearest VA "vet center" or VA medical center. The location usually can be found in the U.S. Government section of the community telephone directory. Services include individual counseling, group counseling, family counseling, and community outreach and education.

#### VA "Agent Orange Brief" Fact Sheet Series Revised, Issued in July 1991

The Environmental Agents Service in VA headquarters in Washington, DC, has revised and released a series of Agent Orange fact sheets, known as "Agent Orange Briefs."

The updated "Briefs," dated July 1991, describe a wide range of Agent Orange-related matters, The following "Briefs" are currently available: (1) Agent Orange - General Information. (2) Agent Orange Registry, (3) Agent Orange Class Action Lawsuit, (4) Agent Orange - The Problem Encountered in

Research, (5) Agent Orange - Priority Treatment Program, (6) Agent Orange and Birth Defects, (7) Agent Orange and Chloracne, (8) Agent Orange and VA Disability Compensation, (9) Agent Orange and Soft Tissue Sarcomas, (10) Agent Orange and Vietnam Related Research - VA Efforts, (11) Agent Orange and Vietnam Related Research - Non-VA Efforts, (12) Agent Orange and Non-Hodgkin's Lymphomas, and (13) VA Information Resources on Agent Orange and Related Matters.

The "Briefs" were distributed widely throughout the VA system and to various State offices. Earlier versions of the "Briefs" were released in October 1988, October 1989, and September 1990.

For additional information or a copy of the revised fact sheets, contact the Agent Orange Coordinator at the nearest VA medical center or write to the Environmental Agents Service (116A), VA Central Office, 810 Vermont Avenue, NW, Washington, DC 20420.

### Class Action Lawsuit Referral Information

The Department of Veterans Affairs (VA) has received many inquiries regarding the status of claims for compensation from the Agent Orange Settlement Fund. This fund was established, by a Federal court, as a result of the settlement of a class action lawsuit ("Agent Orange" Product Liability Litigation) brought by Vietnam veterans and their families against the manufacturers of Agent Orange.

Neither VA nor any other Federal Executive Branch department or agency is directly involved in the distribution of the settlement funds. Information on this matter can be obtained by calling, toll-free 1-800-225-4712, or writing to the Agent Orange Veteran Payment Program, P.O. Box 110, Hartford, Connecticut 06104.

#### Where to Call for Help

Medical services (requests for the Agent Orange Registry examination, eligibility questions about the priority medical treatment program, copies of your VA medical records) - the Agent Orange Coordinator at the nearest VA medical center - the telephone number can be found in your telephone directory under Department of Veterans Affairs (or Veterans Administration) in the "U.S. Government" listings,

Medical services (questions about the findings of your Agent Orange Registry examination) - the Environmental Physician or other individual who conducted the examination at the VA health care facility.

Readjustment/psychological problems - the nearest VA Vet Center - the telephone number can be found in your telephone directory under Department of Veterans Affairs (or Veterans Administration) in the "U.S. Government" listings.

VA disability compensation - a veterans benefits counselor at the nearest VA regional office or health care facility,

Other VA benefits - a veterans benefits counselor,
Agent Orange Veteran Payment Program (non-VA program established as a result of the settlement of a lawsuit

against the manufacturers of Agent Orange) - 1-800-225-4712.

*Note:* Representatives of veterans services organizations, such as the American Legion, Veterans of Foreign Wars of the United States, Disabled American Veterans, and Vietnam Veterans of America, have also been helpful to many Vietnam veterans and their families.

#### **Terminology**

Some people have experienced difficulty understanding medical or technical language often used in discussions of Agent Orange-related matters. The glossary below is designed to assist readers who are having this problem. Other words may be defined in future issues of the "Agent Orange Review."

Agent Orange: an herbicide, or defoliant, used in Vietnam to kill unwanted plant life and to remove leaves from trees or bushes which otherwise provided cover for the enemy. The name "Agent Orange" came from the orange stripe on the 55-gallon drum in which it was stored.

Agent Orange Brief: a series of fact sheets designed to respond to the varied questions raised about Agent Orange. This publication, prepared by the VA Environmental Agents Service in Washington, DC, is updated annually.

Agent Orange Coordinator: the individual (nonphysician) responsible for administrative management of the Agent Orange program at each VA health care facility.

Agent Orange Registry: an examination program at all VA medical centers for Vietnam veterans concerned about the possible long-term health consequences of exposure to Agent Orange. A medical history is taken, a physical examination is performed, and a series of basic laboratory tests, such as a chest x-ray, urinalysis, and blood tests, are done. Where medically indicated, consultations with specialists are scheduled. Data gathered are consolidated and computerized to provide possible clues for future research efforts.

Agent Orange Review: the publication you are now reading. This newsletter is published periodically to provide current information about Agent Orange-related developments to Vietnam veterans on the Agent Orange Registry and other interested parties. The newsletter is published several times annually, as warranted by events. It is prepared by the .VA Environmental Agents Service in Washington, DC.

Agent Orange Veteran Payment Program: a non-VA program established, in the Federal court system, as a result of the settlement of a class action lawsuit brought by Vietnam veterans and their families against the manufacturers of Agent Orange. The initial payments were made in early 1989. Inquiries regarding this matter should be addressed to the Agent Orange Veteran Payment Program, P.O. Box 110, Hartford, Connecticut 06104. The toll-free telephone number is 1-800-225-4712.

Chloracne: a skin condition that looks like common forms of acne that affect many teenagers. VA has long recognized that chloracne is caused by exposure to substances containing dioxin. Physicians, even dermatologists, sometimes have difficulty in distinguishing chloracne from other more common skin disorders. Few Vietnam veterans have been diagnosed with chloracne.

Compensation and Pension Service: the office within the VA's Veterans Benefits Administration responsible for the development and implementation of policies regarding compensation and pension. The Compensation and Pension Service is responsible for drafting regulations implementing decisions made by Secretary Derwinski and Congress regarding service-connection for diseases or medical conditions related to Agent Orange exposure or service in Vietnam.

*Diabetes:* a disease that impairs the ability of the body to use sugar and causes sugar to appear abnormally in the urine, (Also called diabetes mellitus.) A recent Air Force Health Study suggested that there may be an association between dioxin levels in humans and diabetes. This matter is under further investigation.

*Dioxin:* technically, an organic molecule containing chlorine and two benzene rings joined through two oxygen atoms. There are approximately 75 different dioxins. Extremely small quantities of one dioxin, 2,3,7,8-tetrachlorodibenzo-paradioxin (also known as TCDD), were contained in one of the active ingredients of Agent Orange. TCDD, frequently called "dioxin," has caused a variety of illnesses in laboratory animals,

Disability compensation: monetary benefits paid monthly to veterans who are disabled by injury or disease incurred or aggravated during active military service in the line of duty and which is not a secondary effect of willful misconduct or abuse of alcohol or drugs. Service must have terminated through separation or discharge under conditions that were other than dishonorable. Benefits are related to the residual effects of the injury or disease. The amounts change occasionally through legislative action.

Environmental Agents Service: the office within the VA's Veterans Health Administration responsible for the development and implementation of medical policies and procedures regarding exposure by military veterans to possible environmental hazards, including Agent Orange.

*Environmental Physician:* the physician responsible for clinical management of the Agent Orange program at each VA medical facility.

Non-Hodgkin's lymphomas: a group of malignant tumors that aftect the lymph glands and other lymphatic tissue. These tumors are relatively rare (about three percent of all cancers that occur among the U.S. population). On March 29, 1990, Secretary Derwinski announced that VA would recognize non-Hodgkin's lymphomas as service-connected based on service in Vietnam. The final regulations implementing this decision were published on October 26, 1990.

Peripheral neuropathy: a nervous system condition that causes numbness and tingling and/or weakness. On July 1, 1991, Secretary Derwinski announced that VA will propose rules granting service-connected status to certain Vietnam veterans who suffered with this disorder within ten years of their exposure to dioxin. Publication of the proposed regulations is anticipated later this year.

Porphyria cutanea tarda (PCT): a relatively uncommon liver disturbance associated with skin changes. Exposure of some people to certain chemicals can result in the development of PCT. Some scientists have suggested that there may be a relationship between this condition and dioxin. However, at present there is no significant statistical association between PCT and dioxin exposure. On the other hand, many people who develop PCT have long suffered from chronic alcoholism.

Ranch Hand: the code name for the U.S. Air Force herbicide operations in Southeast Asia, 1961-71. It was also a nickname for the unit flying them. The ongoing Air Force Health Study of the Ranch Hand personnel is sometimes referred to as the Ranch Hand Study.

Soft tissue sarcomas: a group of approximately 25 different types of malignant tumors which arise from body tissues such as muscle, fat, blood and lymph vessels and connective tissues (that is distinct from hard tissue such as bone or cartilage). These tumors are relatively rare. On May 18, 1990, Secretary Derwinski announced that VA would recognize soft tissue sarcomas as service-connected based on exposure to dioxin. Proposed regulations regarding this decision were published on February 25, 1991. The regulations will be finalized later this year.

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Department of Veterans Affairs

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