Points for IOM Agent Orange Panel

Submitted by
E. R. Zumwalt, Jr., Admiral, USN (Ret.)
Chairman, Agent Orange Coordinating Council

I. New Info

A. *Agent Orange and the Vietnamese: The Persistence of Evaluated Dioxin Levels in Human Tissues.* Arnold Schecter, Vietnam and U.S. doctors, American Journal of Public Health, April 1995, Vol 85, #4, pages 516-22

--high levels of dioxin in South Vietnam, lowest worldwide in North Vietnam.

--Mother's milk samples high in south Vietnam; highest in the world

B. EPA Draft Dioxin Reassessment Document (released for public and scientific review in late 1994 and awaiting finalization from the Science Advisory Board of EPA) concludes from an extensive review of dioxins' toxicity and of human exposure that levels of dioxin found in the general U.S. population may be at or close to levels that have consequences for health. Possible consequences are increased risks for cancers, adverse reproductive and developmental effects; immune deficiencies, endocrine disruption, neurological damage including cognitive and behavioral damage from in utero exposure, and other health effects (since the dioxin levels shown in Vietnam often exceed U.S. levels, this suggests that health consequences are all the more likely to be expected in Agent Orange exposure in Vietnamese. (It also suggests that Vietnam Veterans who cam home with higher than normal dioxin levels and have continued to be exposed to U.S. dioxin sources are among those likeliest to exceed normal U.S. levels)

C. *Editorial: Agent Orange in Vietnam*, American Journal of Public Health, April 1995, Volume 85, No. 4.

"A report in this issue of the Journal provides some new data in this regard. These data come from a group of scientists who have struggled for many years usually without adequate funding, to measure dioxin levels in breast milk, adipose tissue, and blood from Vietnamese...

"The mean 2,3,7,8-tetrachloro-dibenzo-*p*-dioxin (TCDD) blood level is 6 times greater in the southern/central group than in the northern. This large discrepancy is not found for other specific congeners of the higher chlorinated dioxins or furans, although the other congeners are generally higher in concentration in the sprayed areas. Since TCDD was the major dioxin-like

contaminant in Agent Orange (a mixture of 2,4,5-trichlorophenoxyacetic acid [2,4,5-T] and 2,4-dichlorophenoxyacetic acid [2,4-D]), these findings suggest that the TCDD in 2,4,5-T may have found its way into the food chain of some Vietnamese. The elevated levels from 1984 to 1992 may reflect much higher body burdens in the past and persistence of TCDD in the environment

"Is there a plausible alternative source of elevated TCDD in southern Vietnam" In this regard, it is of interest that the mean TCDD level is adipose tissue of 15 parts per trillion (ppt) in the southern samples is three times greater than the 5 ppt found in an epidemiologic study of samples in United States...

"More precisely, at what concentrations of TCDD in blood or tissue does the risk of adverse effects increase and by how much? There is now a substantial body of animal and epidemiologic data that addresses this question, especially in the case of cancer outcomes.

"Treatment with TCDD has been associated with increased neoplasms in every animal bioassay reported in the scientific literature. These carcinogenicity models have included several species and tumors at multiple sites. Furthermore, carcinogenic effects occur at concentrations as low as 1.4ng/kg per day. The carcinogenicity of TCDD has also been reported for the Syrian Hamster--a finding of particular importance since hamsters, like humans, are relatively resistant to the acute toxic effects of TCDD.

D. American Public Health Association Advisory released April 17, 1995, 6PM (EST)

"Researchers have found that during the spraying of Agent Orange in southern Vietnam, in the 1970's, dioxin levels in human tissue were as high as 900 times greater in Vietnamese living in southern Vietnam than those living in northern Vietnam where Agent Orange was not used. Although dioxin levels are at their lowest since the war the study found that dioxin levels are now, as high as, 50 times higher in Vietnamese living in southern Vietnam than those living in northern Vietnam. These findings suggests that Vietnamese from southern Vietnam may be at a greater risk of cancers, adverse reproductive and developmental effects, immune deficiency and other adverse health effects, due to their exposure to Agent Orange.

{From "Agent Orange and the Vietnamese: The Persistence of Elevated Dioxin levels in Human Tissue." To interview the author call Arnold Schecter, MD, State University of New York Health Science Center at 607-770-8521.]

"A related editorial suggests that it is time to determine systematically the distribution and extent of dioxin-contaminated Agent Orange exposure in Vietnam and assess the health effects and seek preventive interventions. The author suggests that Vietnam may have more pressing public health problems on which to focus, but many in the United States may feel a special responsibility to join in the research to assess the health effects of dioxins in an attempt to help industrialized nations

deal with widespread contamination by dioxins and related compounds."

E. Dioxin and Health, Ed. A. Schecter, Plenum Publishing Corp, NYC, 1994

--Summarizes, in chapters written by senior dioxin scientists, what is known at this time concerning dioxin, related chemicals, and health.

F. An article on dioxins in the US food supply in *Environmental Health Perspectives* late last year, documents the amounts of dioxins and dibenzofurans ingested in food by the general US population. This also documents that the general population is exposed on a daily basis to a certain level of dioxins. It implies that epidemiology studies must compare populations with various levels of exposure, since there are currently no Americans who are not exposed to dioxins."

"Recently in an effort to explore possible mechanisms for male-mediated adverse reproductive outcomes following Agent Orange and dioxin exposure, dioxin and dibenzofuran congeners have been identified in three pooled samples of semen from American Vietnam veterans (enclosure). This study was an attempt to see if such compounds do exist in semen of American veterans and others. Dioxin transfer from male to female, with possible effect on the egg of zygote, was hypothesized by Z. Stein and M. Hatch as a possible mechanism which might possibly lead to congenital malformations in the children born to male Vietnam veterans. With exposure of women to dioxins and related compounds, there is clear evidence of reproductive and developmental damage, as demonstrated by Masuda, Kuratune, and others for Yusho in Japan, and by Rogan, Shu, Guo and others for Yu-cheng in Taiwan. There have also been related studies in the US." (Quoted from Dr. Schecter's April 6, 95 ltr to Dr. David Tollerud.)

G. Alongside the humans serving in Vietnam, there were 3895 military working dogs, almost all of them purebred German shepherds.[2] (Among the 3895, there were 64 Labrador or golden retrievers used as trackers; the other 98.3 percent were German shepherds.) These dogs served as scouts, sentries, trackers, mine detectors, and tunnel explorers. About 91% of these dogs were "intact" (uncastrated) males.

When a military working dog dies, regardless of the circumstances of death or the duty location, an autopsy is performed by a veterinarian, and a standardized set of tissue specimens and organs are sent to the Armed Forces Institute of Pathology in Washington, DC.

During the late 1980s, researchers compared autopsy records of 1167 military working dogs with Vietnam service against autopsy records of 791 military working dogs who served in the

continental U.S. and saw no Vietnam service. In a separate study, the stateside dogs were also compared to 437 dogs that died in Okinawa, because many dogs that served in Vietnam were sent to Okinawa after the war.[3]

These studies showed that dogs who served in Vietnam were about twice as likely (1.8 times as likely) to have cancer of the testicles, compared to military working dogs who served only in the states. Likewise, military dogs that died in Okinawa were about twice as likely (2.2 times as likely) to have testicular cancer as dogs who served only in the states. A separate study was then conducted, excluding the dogs who had testicular cancer. Among the non-cancer dogs, there was clear evidence of significant deterioration of the testicles in those dogs who served in Vietnam (Compared to dogs who served only in the U.S.); degeneration of the testicles, atrophy (Shrinking) of the testicles, and evidence of a below-normal ability to produce sperm."

[2] Howard M. Hayes and others, "U.S. Military Working Dogs with Vietnam Service: definition and Characteristics of the Cohort, *Military Medicine*, Vol. 159, No. 11 (November 1994), pgs. 669-675

[3] H.M. Hayes and others, "Excess of Seminomas Observed in Vietnam Service U.S. Military Working Dogs," *Journal of the National Cancer Institute* Vol. 82, No. 12 (June 20, 1990) pgs. 1042-1046.

II. Agent Orange Research

The report "Veterans and Agent Orange: Health Effects of Herbicides Used in Vietnam" by the IOM made six specific recommendations concerning required research. Under "Other Dioxin (TCDD)/Herbicide Studies" the report further stated "studies of the Vietnamese population exposed to herbicides are also possible and potentially useful." It is strongly urged that this Committee request briefings of the status of implementation of the foregoing seven recommendations since grossly inadequate progress has been made. It is further urged that this new panel satisfy itself that such research has been initiated for pursuing appropriate paths.

III. Prostate Cancer and Leukemia

A. A March 15, 1995, UPI press release datelined Sydney, Australia, announced that the Repatriation Medical Authority (RMA) recognized a link between prostate cancer and the use of Agent Orange and that the Repatriation Committee has decided to stick with its earlier decision and has made independent

regulations which will continue to allow leukemia to be accepted as related to herbicide exposure in Vietnam.

IV. Be aware of heavy lobbying of Congress and the Executive Branch by industrial corporations.

A. The Agent Orange Coverup: A Case of Flawed Science and Political Manipulation, Twelfth Report by the Committee on Government Operations, August 9, 1990 (Table of Contents attached)

B. The heavy lobbying, which led to the foregoing government interference with science, continues.

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THE AGENT ORANGE COVERUP: A CASE OF FLAWED SCIENCE AND POLITICAL MANIPULATION

TWELFTH REPORT

BY THE

COMMITTEE ON GOVERNMENT OPERATIONS

together with

DISSENTING VIEWS

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