



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable Ike Skelton
Chairman, Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

We are pleased to forward the enclosed report that responds to Section 716 of the National Defense Authorization Act for Fiscal Year 2007. The law requires the Secretary of Defense to conduct a study of adverse health events of exposure to depleted uranium (DU) munitions on both soldiers and children of uranium-exposed soldiers who were born after the soldiers were exposed to depleted uranium.

To satisfy the requirement, we partnered with the Department of Veterans Affairs (VA) to contract two studies with the Institute of Medicine (IOM). The first study was a scientific literature review on the long-term health effects from exposure to DU. It evaluated the strength of the evidence between specific health effects and DU exposure. It also reviewed the health effects on children of exposed service members. IOM concluded that there is inadequate/insufficient evidence to determine whether an association exists between exposure to uranium and depleted uranium and any adverse health outcome.

The second study looked into the feasibility of conducting a comprehensive epidemiologic study on the effects of exposure to DU given the data available at this time. IOM concluded "it would be difficult to design a study to assess health outcomes of DU exposure in military and veteran populations comprehensively." They went on to explain the reason for this conclusion by stating, "Detecting a small increased risk for a given health outcome of DU exposure in military and veteran populations is not feasible in an epidemiologic study." They also stated it would require a minimal sample of more than 1 million DU-exposed people to detect a statistically significant difference in the risk of lung cancer.

The Department of Defense has a comprehensive DU biomonitoring program that has been in place since 2003. To date, over 2,500 individuals who were possibly exposed to DU have been tested; only 10 personnel have been identified with confirmed depleted uranium exposures and all have been offered medical follow-up through VA. We will continue to partner with VA to follow those with significant exposures through the Baltimore VA Depleted Uranium Follow-up Program.

We are fully committed to assuring that our Service members are protected from health hazards in a deployed environment and to providing the finest care for our sick and injured Service members.

Thank you for your continued support of the Military Health System.

Sincerely,
Ward Casscells
Ward Casscells

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable John McHugh
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable Carl Levin
Chairman, Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

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Sincerely,

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S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable John McCain
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable Ben Nelson
Chairman, Subcommittee on Personnel
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

We are pleased to forward the enclosed report that responds to Section 716 of the National Defense Authorization Act for Fiscal Year 2007. The law requires the Secretary of Defense to conduct a study of adverse health events of exposure to depleted uranium (DU) munitions on both soldiers and children of uranium-exposed soldiers who were born after the soldiers were exposed to depleted uranium.

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Sincerely,

A handwritten signature in black ink, appearing to read "S. Ward Casscells", with a long horizontal flourish extending to the right.

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Lindsey O. Graham
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable Susan Davis
Chairwoman, Subcommittee on Military Personnel
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Madam Chairwoman:

We are pleased to forward the enclosed report that responds to Section 716 of the National Defense Authorization Act for Fiscal Year 2007. The law requires the Secretary of Defense to conduct a study of adverse health events of exposure to depleted uranium (DU) munitions on both soldiers and children of uranium-exposed soldiers who were born after the soldiers were exposed to depleted uranium.

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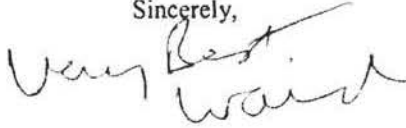
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Sincerely,

A handwritten signature in cursive script, appearing to read "S. Ward Casscells". The signature is written in dark ink and is positioned below the word "Sincerely,".

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Joe Wilson
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

FEB - 4 2009

HEALTH AFFAIRS

The Honorable Daniel K. Inouye
Chairman, Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

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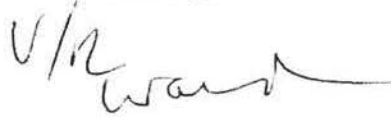
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Sincerely,

A handwritten signature in black ink, appearing to read "S. Ward Casscells", with a stylized flourish at the end.

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Thad Cochran
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable David R. Obey
Chairman, Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

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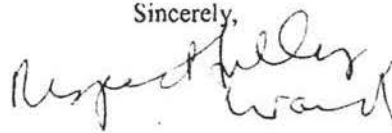
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Thank you for your continued support of the Military Health System.

Sincerely,

A handwritten signature in cursive script that reads "Respectfully, Ward". The word "Respectfully" is written in a larger, more prominent font, and "Ward" is written below it in a smaller font.

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Jerry Lewis
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

FEB - 4 2009

HEALTH AFFAIRS

The Honorable Joseph R Biden, Jr.
President of the Senate
Washington, DC 20510

Dear Mr. President:

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Thank you for your continued support of the Military Health System.

Sincerely,

Very Respectfully,
Ward Casscells

S. Ward Casscells, MD

Enclosure:
As stated



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

FEB - 4 2009

The Honorable Nancy Pelosi
Speaker of the House of Representatives
U.S. House of Representatives
Washington, DC 20515

Dear Madam Speaker:

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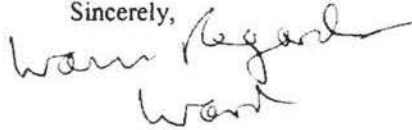
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Thank you for your continued support of the Military Health System.

Sincerely,



S. Ward Casscells, MD

Enclosure:
As stated

PS. Our pet Bear Amish is
doing well, and doing good
(Hope he stays wanted!)



THE ASSISTANT SECRETARY OF DEFENSE

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HEALTH AFFAIRS

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510

*Not Required
Instead, send to
President of the Senate!*

Dear Mr. Chairman:

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After extensive analysis and an outside review by the Institute of Medicine (IOM), we have determined that the requested study is not possible. In a report entitled, "Epidemiologic Studies of Veterans Exposed to Depleted Uranium," IOM stated, "...it would be difficult to design a study to comprehensively assess the health outcomes of DU exposures in the military and veteran populations with currently available data." In actuality, it would be virtually impossible to accomplish such a study because there was no biometric analysis of Service members within days of possible exposure. Without the results of such an analysis, we cannot determine today which Service members were exposed to low levels of DU.

Although we do not have the capability to conduct the research requested, the Department of Defense has a comprehensive DU biomonitoring program that has been in place since 2003. To date, over 2,500 individuals who were possibly exposed to DU have been tested. We will continue to partner with the Department of Veterans Affairs (VA) to follow those with significant exposures through the Baltimore VA Depleted Uranium Follow-up Program. We are fully committed to assuring that our Service members are protected from health hazards in a deployed environment and to providing the finest care for our sick and injured Service members.

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Sincerely,

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Thad Cochran
Ranking Member



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

The Honorable John P. Murtha
Chairman, Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

*Not Required,
I instead, send to
the Speaker of the House!*

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Thank you for your continued support of the Military Health System.

Sincerely,

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable C. W. Bill Young
Ranking Member

**Department of Defense
Report to Congress
Study of Health Effects of Exposure to Depleted Uranium
October 2008**

Background

Section 716 of the National Defense Authorization Act for Fiscal Year 2007 requires the Secretary of Defense to “conduct a comprehensive study of the health effects of exposure to depleted uranium munitions on uranium-exposed soldiers and on children of uranium-exposed soldiers who were born after the exposure of the uranium-exposed soldiers to depleted uranium.” The Act also defined “uranium-exposed soldiers” as “a member or former member of the Armed Forces who handled, came in contact with, or had the likelihood of contact with depleted uranium munitions while on active duty.”

To determine the best way to accomplish the study, the Department of Defense (DoD) discussed approaches with representatives of the Department of Veterans Affairs (VA) and the Department of Health and Human Services. Based on those discussions, the Assistant Secretary of Defense for Health Affairs partnered with the VA to commission two scientific reports from the Institute of Medicine (IOM). The purpose of the first report was to perform a comprehensive review of the scientific literature and to determine if there is evidence of long-term health effects associated with exposure to depleted uranium. The second report made recommendations regarding the critical elements needed for an epidemiological study on veterans and Service members and the children of veterans and Service members who were exposed to depleted uranium while on active duty.

Feasibility of a Comprehensive Epidemiologic Study

We have determined that the requested study is not possible. In a report entitled “Epidemiologic Studies of Veterans Exposed to Depleted Uranium,” IOM stated, “...it would be difficult to design a study to comprehensively assess the health outcomes of depleted Uranium (DU) exposures in the military and veteran populations with currently available data.” They give several reasons for not being able to conduct a comprehensive study. The first is “the lack of adequate and accurate exposure data.” These data must be captured soon after the exposure and attempting to conduct bioassays years after the fact will not yield significant results. Self reported history is also limited regarding its accuracy. The second reason is the number of exposed individuals that would be required to detect a small incremental change in health outcomes. They stated, “Detecting a small increased risk for a given health outcome of DU exposure in military and veteran populations is not feasible in an epidemiologic study.” They estimated that it

would require a minimal sample of more than 1 million DU-exposed people to detect a statistically significant difference in risk of lung cancer. To date, despite bioassays of over 2500 Service members who, based upon their exposure history, were determined to be the most likely to be exposed, only 10 individuals were found with confirmed DU exposures. Because of this, IOM determined that it would be difficult to design a study to assess health outcomes of DU exposure in military and veteran populations comprehensively.

IOM recommended that the Department of Defense (DoD) conduct “a prospective cohort study if future military operations involve exposure to DU.” DoD agrees and is using the current Depleted Uranium Follow-Up Program and DU policies to do this study. Individuals who are found to be exposed to DU are referred to the Baltimore VA Depleted Uranium Follow-up Program.

The Institute of Medicine Reports

IOM conducted a massive review of the scientific literature on the health effects of exposure to uranium and DU resulting in two reports released in 2000 and in 2008. All together they reviewed over 13,500 abstracts and 2,000 peer-reviewed journal articles. This made up the entirety of scientific evidence on the subject. Despite this very thorough review, they could not demonstrate even a limited relationship between exposure to uranium or DU and any adverse health outcomes including: lung cancer, leukemia, lymphoma (Hodgkin and non-Hodgkin), bone cancer, renal cancer, bladder cancer, brain and other nervous system cancers, stomach cancer, prostatic cancer, testicular cancer, nonmalignant renal disease, neurologic effects, reproductive and developmental effects, cardiovascular effects, genotoxicity, hematologic effects, immunologic effects, and skeletal effects.

Ongoing Work/Research

Although we cannot conduct the research requested, DoD has a comprehensive DU biomonitoring program that has been in place since 2003 for Operation Iraqi Freedom/Operation Enduring Freedom personnel. To date over 2,500 personnel who were possibly exposed to DU have been tested. We will continue to partner with VA to follow those with significant exposures through the Baltimore VA Depleted Uranium Follow-up Program, which is currently following some 70 DU exposed individuals.