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**Description Notes**

As you know, the Veterans Administration has undertaken a study to find out whether it is possible, by the most sensitive tests known, to detect and measure dioxin in the body fat of veterans exposed to Agent Orange. That study is completed and the results are fairly definite.

Briefly 20 veterans who report that they were exposed to Agent Orange in Viet Nam and who now have trouble they attribute to that exposure volunteered to allow a surgeon to remove fat from their belly wall for the test. Three Air Force officers who have worked long and recently with Agent Orange but who have no ill effects similarly volunteered. Another 11 veterans of the Viet Nam era who were never exposed to Agent Orange agreed that surgeons could take a sample of their fat as "control" when they performed a needed operation. All these men gave informed consent for the procedure.

The 34 fat samples were tested by an independent, university chemist who used the most sensitive method known to detect and measure dioxin, the most toxic material in Agent Orange. The method, known as gas chromatography with high resolution mass spectrometry, is still experimental, delicate and temperamental. Despite difficulties with the equipment, the results are now available.

The tests show that seven of twenty veterans with Viet Nam service had dioxin in the small amounts of 3 to 89 parts per trillion in their fat. Six others had even smaller amounts and seven had no detectable dioxin at all. The three Air Force

officers, none of whom had symptoms, had 3 or 4 parts per trillion. One of the eleven controls with no known exposure to Agent Orange had 3 parts per trillion, three others had less and seven had none at all.

Environmental Protection Agency scientists using different but similar tests on eight duplicate samples have confirmed that these results are reasonable.

We can say then that there is a method to detect and measure small amounts of dioxin in body fat but that it is difficult to do. Further, it requires an operation to obtain a fat sample. The test seems to be a research tool rather than a routine procedure.

The results suggest that a veteran who had contact with Agent Orange in Viet Nam a decade or more ago may still have minute amounts of dioxin in his fat but if the test fails to detect these small amounts we cannot say that he had no such contact.

Similarly, it is unreasonable to say that the presence of dioxin in the fat means that it causes any set of symptoms or, on the other hand, that the absence of dioxin means that current difficulties are not due to it.

One thing seems certain and that is that the "ticking time bomb" idea is incorrect. The amounts of dioxin found are far too small - even if all were released a once - to cause trouble in any manner so far demonstrated. If exposure years ago to dioxin is causing trouble today, it is not due to - and it isn't predicted by - the presence of dioxin in the body fat so far as we know.