

Survey Results of the 9th Airlift Squadron

Introduction

The members of the 9th Airlift Squadron at Dover Air Force Base began receiving the anthrax vaccination in the early autumn of 1998. Since that time, a number of individuals have contracted long-term illnesses and have been removed from flight status. Additionally, many other members say they have begun experiencing health problems. Such a rash of illnesses seems to be very uncommon in a flying squadron, considering the relatively healthy cross-section of people that are chosen for flight duties. Some members within the squadron point to the anthrax vaccine as the potential cause of these problems, since this is the only element in which they are aware that has changed at Dover AFB. Others argue that if the vaccine were in fact causing illnesses, then that fact would be revealed through the Vaccine Adverse Events Reporting System (VAERS). However, in conversation, many who are experiencing problems are afraid to report their symptoms to the medical community, and will not fill out a VAERS report. They have seen their peers removed from flying status (and even threatened to be removed from military service) for their recent medical problems, and are not willing to risk the same fate. The military and civilian career implications of losing flight status are so great that for many individuals, living with the problems seems to be a better alternative than reporting them. Subsequently, the number of reactions reported to the medical community is potentially much lower than what is actually being experienced.

Purpose

The purpose of this unofficial survey and report was to get a general idea of the true extent of these problems. Ideally, these consolidated survey results would either provide a basis to warrant further study and/or action, or provide assurance that nothing is really out of the ordinary. If the number of people experiencing problems (or the severity of their problems) in the 9th AS seems extraordinary, then leaders need to be aware of this information, in order to take appropriate action.

Methods

A survey (see Attachment 1) along with a cover letter was sent to the home addresses of 265 members of the 9th AS. The only squadron members who were excluded were the administrative workers who were known to have not yet received the vaccinations. The symptoms on the survey were chosen because they were either included in the DoD defined systemic reaction (see Attachment 3), or they were known to have commonly been experienced since the anthrax vaccine program started.

The responses were randomly numbered and the information loaded into a spreadsheet (see Attachment 2). Responses of “yes” were entered as a “1”, and responses of “no” were left blank. Comments were slightly condensed and entered on a separate page. See Attachment 3 for definitions and criteria used for the “probable systemic reaction” columns.

Limitations

It is obvious that this report has some limitations. First, causality cannot be established between the symptoms reported on the surveys and the anthrax vaccine because of the lack of a control group. Therefore, it would be impossible to scientifically conclude that anthrax has caused these reported symptoms, or even that the number of symptoms reported is higher than that experienced by the general population. However, question 3 in the survey, “Since beginning

the anthrax series have you started to experience any of the following symptoms?" can at least establish a temporal association between the vaccine and the symptoms.

Additionally, no medical expert was used in formulating the survey, summarizing the comments, or in any part of this process. The raw data from the surveys is presented in Attachment 2 to let readers form their own conclusions. However, some comments have been abbreviated, and on rare occasion, some comments have been excluded in the interest of conserving space. Additionally, some of the longer comments were only placed in the results section of this report, and are not in the spreadsheet. Great effort has been taken to retain the original words of the respondents.

Undoubtedly, the most subjective part is in categorizing whether respondents had a "probable systemic reaction". The symptoms described in the DoD definition of a systemic reaction have simply been used. (Please see Attachment 3 for a full discussion of the criteria applied). Additionally, assumptions used in calculations have been stated, so that anyone could verify them.

Despite these limitations, the purpose of this report (i.e. providing raw information) can still be fulfilled. Scientifically determining the cause of these illnesses, or the actual reaction rates is not in the scope or the intent of this endeavor.

Results

Out of the 265 surveys sent out, 11 were returned via postmaster (wrong address), 2 respondents had not yet begun the series, leaving 252 viable surveys. Of these, 139 (55%) were completed and returned. The results of the surveys are summarized in the following table:

Numbers below are in response to the question "From the time you received your first anthrax vaccination, have you started to experience any of the following symptoms?" (In many cases, respondents circled multiple symptoms.)

ringing in the ears	12
significant hearing loss	3
skin rashes not near injection site*	17
itchy skin*	21
numbness/loss of sensation in body parts	16
joint and/or muscle pain including arthritis*	57
loss of energy / constant tiredness*	41
recurring headaches*	26
difficulty sleeping	24
nauseous, loss of appetite, or abdominal pain*	9
severe hair loss	8
vertigo	8
balance problems / light headedness	15
short-term memory loss	34
reduced concentration	36
chills and fever immediately following vaccine*	11
other	24

*symptoms are included in the DoD definition of a systemic reaction (see Attachment 3)

For those who responded “yes” to any of the above symptoms:

41 sought treatment at flight surgeon’s clinic

17 filled out a VAERS report

23 missed more than a full day of duty

10 have not been returned to full duty

6-9 had all their nonlocal symptoms disappear within a few days

6 indicated other logical explanations for all their symptoms

81 had probable systemic reactions using DoD definitions¹ (32%**)

** percentages are calculated by assuming the 113 individuals who did not return surveys (out of 252 total) did not experience any symptoms since beginning the vaccine

¹ See Attachment 3 for full explanation. In short, the DoD definition is taken in part from the Anthrax Vaccine Immunization Program (AVIP) Agency, Office of the Army Surgeon General, Falls Church, VA, November 12, 1999, which states “Beyond the injection site, from 5% up to 35% will notice muscle aches, joint aches, headaches, rash, chills, fever, nausea, loss of appetite, malaise, or related symptoms.”

Here are some noteworthy responses when asked to describe symptoms (nearly all comments came from different surveys):

“Joint pain four days after first shot, and spread to other joints as the series continued. I now have pain in my wrists, both knees to the point of being on crutches for 3 days and I must still ice them a couple times a week. My left shoulder has recently started hurting, my lower back and neck is stiff until midday. I workout and eat well but am exhausted. The memory loss and concentration seem to go together and is hard to put into words. It is hard to stay motivated and then remember what you were working on.”

“I definitely have vertigo, light-headedness and balance problems. This is probably the worst and most concerning problem out of them all.”

“Blood work 2 months prior to vaccination shows normal but one month after I switched to ANA+. I have been diagnosed with autoimmune thyroiditis. I will require replacement thyroid hormone pills for life and a blood test every 6 months.”

“I sometimes (go) for a week or so with frequent tingling in my right fingers. In the last month and a half it’s started moving up my hand and into my elbow.”

“The most severe and frustrating is the memory loss. I will be working at my desk, need to get something, start down the hall, get half way there and not know where I’m going or what I wanted to do, etc. Also, I’ve found myself in my car going down the road, look up and try to figure out where I am, and where I’m going. It gets scary sometimes.”

“There are no logical explanations for a rash that festers, oozes, and lasts for over 2 weeks when I have never had problems with rashes before. I know what poison ivy looks like and this was not one.”

“My immune system just cannot seem to keep up anymore since I started the series. I also have problems concentrating.”

“I used to get one cold per year. Since I had the shots I’ve had 8-10 bad colds. One cold got so bad they thought I had spinal meningitis and I had to get a spinal tap.”

“I thought that maybe I was just tired from being out of shape. But I now run 3-4 miles plus strength training. My body is getting stronger muscle-wise, but why am I still tired even though my cardiovascular system is in the best shape in 10 years?”

“I have weight-lifted for years and cannot explain the pain in my left arm, which starts around my knuckle and travels up to my shoulder. And joint pain—it’s there, in my elbows and knees. Sleep loss is unexplained, too...I feel run down and it’s depressing.”

“Difficulty studying, reading or driving distances greater than 20 miles; I have to take a break and/or drink coffee or soda.”

“After driving in a car for one hour, I need to walk to relieve the pain.”

“I have had pretty much constant neck and shoulder pain for seems like 6 months with no significant injury or trauma that I can remember.”

“After my first shot my right arm shoulder joint became extremely painful. I spent 6 months off and on DNIF. I finally had to get cortisone shots in my shoulder. I even spoke with the flight surgeon about the correlation, and he said it was not possible. In order to fly I don’t complain much anymore.”

“I began to notice severe pain in my joints after any strenuous activities. For example, I was working out in the gym for 1-1/2 years before the vaccine; after the 2nd shot I began noticing the pain after a workout...that would take up to two weeks to heal or go away. I never experienced that pain before. I have stopped working out since then. Mild headaches turned into strong headaches, almost like migraine headaches.”

“Ringing (in the ears) lasts anywhere from 5 minutes to a couple hours.”

“Numbness in my fingers within one hour after getting the shot.”

“Not able to remember what I just read; having to read over and over again and then eventually losing concentration on what is being read. Things I used to enjoy doing become tasks I dread doing.”

“I now feel like I am always tired, lacking energy to do simple things like exercise, walk my dog, yard work, etc. Also have trouble with memory. Can’t remember things from one day to the next.”

“Average sleep before shot 2 was 6 hours to feel normal—afterwards at least 8 hours is needed. Can’t remember things from earlier in the day...what I ate for dinner the night before. Studies and retention have been greatly affected.”

“A simple cold took 23 days to clear up—1 month later I still have stuffiness, but I can clear my ears.”

“In general, since initiating the anthrax series, I have been ‘weaker’ and more ill than any other period in my life. I am now routinely more ill, nauseous, and lethargic with little to no physical endurance.”

“My back started feeling better. I got my next shot one-week later--I couldn’t get out of bed. Still DNIF—got almost 18 years in, told I may get an MEB (Medical Evaluation Board)”.

When asked if they sought treatment at the flight surgeon’s clinic, some respondents who circled “no” also wrote comments:

“I might lose my job”.

“I realize that I should probably report these things, but I can’t see jeopardizing my flying career over something that can probably be written off by the doc’s as either something in my head or some other cause other than anthrax—even though it all points to it.”

“I do not plan to either. Frankly, I do not trust the docs here at Dover!”

“I mentioned it to flight surgeon, and felt I was blown off.”

“I do not trust the flight surgeon’s office to have anything more than the common cold looked at. They do not have our best interests at hand”.

“Afraid of Dr. _____’s incompetence!”

“I would never see Dover’s flight doctors as I’ve seen and heard so many examples of incompetence. 15 years time in service, don’t want to risk career by making a stand against shot.”

“All symptoms have not been reported to flight surgeon in fear of the quacks DNIFing me and screwing up my flying career.”

For those who answered “yes”,

“I mentioned the problem to Dr. _____ during my annual flight physical and he did not say anything. He just ignored what I said. When I mentioned the word anthrax he just changed the subject.”

“What can they do? To them it’s a phantom pain--to me it’s a reality and I’ve never been a sick-boy.”

“After shot #4, I had a 6 inch diameter red rash on my left tricep. This rash was extremely hard to the touch and also very warm. This rash surfaced less than 3 hours after the injection. The next day, I visited the flight surgeon, who had no clue. We walked down to the chief immunologist (at _____AFB) at the hospital, who said the rash had nothing to do with the anthrax shot.”

“The flight surgeon and I tried to figure out the cause, bu(t) the Doc excused my illness under a standard answer.”

“What a joke. The doc said I had Tennis elbow. Tennis elbow! This is in my left arm and I am right-handed.”

“Flight surgeon did a thorough profile and could find no cause. I cannot attribute this to anthrax because it didn’t start after the first shot. But I cannot attribute it to anything else either.”

“Nothing you come up with will do any good. The Air Force says it is in my head.”

Regarding the VAERS reporting system:

“I was not told what a VAERS report was until I heard it from another crew member a month or so after my last injection. (I) still may or may not have filled it out. There are too many people getting screwed out of their flying career over this thing”.

“The initial VAERS report that was filled out was accomplished by public health and was not an accurate assessment of my symptoms.”

“Never heard of on(e) that I recall.”

“I wish the immunization clinic would have briefed me before my first shot of the possible implications as well as tell me to fill out a ‘VAERS’ report if I had any of the potential problems. That’s the problem, no-one knew what a VAERS report was or the problems associated with the shots. If you don’t know what a VAERS report is then you won’t fill one out.”

Analysis

Out of the 252 surveys sent out, 81 individuals fell into the category of having a probable systemic reaction. Making the very conservative assumption that the 113 individuals who did not respond to the survey did not experience any symptoms, then the systemic reaction rate for the 9th AS using the DoD definition could be upwards of 32%. (See Attachment 3 for a full explanation of the DoD definition and criteria used for categorization). This is not to say that just because someone has started to experience a symptom such as recurring headaches, that the anthrax vaccine can necessarily be blamed for these headaches. This rate only estimates how high the reaction rate could be if all 81 of these individuals had their symptoms caused by the vaccine.

Less than 11% of the people with probable systemic reactions (9 people or less) had all of their symptoms disappear within a few days. This rate is in stark contrast to DoD expectations, where it is stated that symptoms “usually” go away within a few days.

Some common symptoms were noted in the “other” category. Ten individuals indicated that they have had many more colds and/or flus this year, or that these simple colds take much longer to clear than before starting the series. Also, four individuals experienced severe heart pain or heart palpitations.

Women appeared to experience a higher systemic rate than men (although the sample size is too small to be sure). Of the twelve women who were surveyed, nine responses were received. Seven of these nine women fell into the “probable systemic reaction” category.

Only 16 of the 81 individuals with probable systemic reactions filed VAERS reports (less than 20%). Given the comments written on the surveys, the reasons for this low rate include not knowing what a VAERS report is, not knowing what symptoms are associated with a systemic reaction, and not wanting to take the career risks of exposing unreported medical problems.

Lastly, only 36 of the 81 with probable systemic reactions have sought medical attention in the flight surgeon's clinic (less than 45%). Stated reasons for not seeking medical attention include not wanting to be taken off flight status, not trusting the flight surgeons, and not believing that viable treatment exists for the problems. See the spreadsheet in Attachment 2 for a full breakdown of individual responses.

Conclusions

As mentioned in the "Limitations" section, it is impossible to draw any causality conclusions due to the lack of a control group. However, does it really take a statistical analysis to realize that something is happening to the 9th AS that is not normal? It is *not normal* for a squadron of 270 people to have so many members afflicted with strange illness and disease: 1) cellulitis with endocarditis, 2) Hashimoto's thyroiditis with ANA+ and pernicious anemia, 3) autoimmune thyroiditis and ANA+, 4) Meniere's disease, 5) active Tuberculosis with bone lesions, 6) Chronic Fatigue Syndrome with chronic bone joint pain, 7) Guillian-Barre's Syndrome (current state is complete paralysis from the neck down), 8) recurring seizures, 9) thyroiditis with severe short-term memory loss—all diagnosed in the last year. (Please note, no survey responses were received from the individuals numbered 5-8 above. Their cases are documented in Major Sonnie Bates' congressional testimony, and have been verified in conversations with them, except number 6, which happened recently). It is *not normal* that one out of four individuals in the prime of their lives started experiencing chronic joint and/or muscle pain, that one out of six flying crew members started experiencing constant tiredness and fatigue, or that one out of seven started experiencing reduced concentration—all since the anthrax shots began. It is *not normal* that 33 individuals report a loss of short term memory, or that 15 individuals should all start experiencing rashes of similar characteristics, or that 25 people should begin experiencing recurring headaches. Additionally, if it is the anthrax vaccine that is causing these symptoms, then, contrary to DoD expectations, these "bothersome" symptoms are rarely disappearing after a few days.

Furthermore, the VAERS system does not provide an accurate assessment on the safety of this vaccine, because underreporting is a serious problem. The commanders at Dover AFB should take a closer look at the overall health of the individuals in the 9th Airlift Squadron, and take immediate action to determine the cause. These efforts should ideally be conducted by a third party and in a nondisclosure manner, so members can be honest without fear of losing their flying careers or their military careers. These studies should also seek background and demographic information on the respondents to track the possibility of greater susceptibility in women and African-Americans, and to certain lot numbers. Additionally, these studies should track more symptoms than those included in the present DoD definition, such as numbness in body parts, ringing in the ears, heart problems, vertigo, and short-term memory loss.

There is something out of the ordinary happening to the 9th AS. The cause of these illnesses is not determined; however, a strong temporal association with the anthrax vaccine is present, along with the fact that many of the symptoms people are experiencing are those that are admitted possible side effects of the anthrax vaccine.

Works Cited

American Heritage Dictionary. Boston: Houghton Mifflin Company, 1985.

Bailey, Sue. "Policy for Reporting Adverse Events Associated with the Anthrax Vaccine". Memorandum for the Surgeon Generals of the Army, Navy and Air Force. 15 OCT 1999.
<<http://www.tricare.osd.mil/policy/ha99pol/clin9931.htm>>

Anthrax Vaccine Immunization Program (AVIP) Agency, Office of the Army Surgeon General, Falls Church, VA, November 12, 1999.
<<http://www.anthrax.osd.mil/oldavip/qna/SAFETY.HTM>>

Attachment 1
Anthrax Survey

1. How many anthrax vaccinations have you received? 0 1 2 3 4 5 6

2. What is your gender? M / F

3. From the time you received your first anthrax vaccination, have you started to experience any of the following symptoms?

ringing in the ears	Y / N
significant hearing loss	Y / N
skin rashes not near injection site	Y / N
itchy skin	Y / N
numbness/loss of sensation in body parts	Y / N
joint and/or muscle pain including arthritis	Y / N
loss of energy / constant tiredness	Y / N
recurring headaches	Y / N
difficulty sleeping	Y / N
nauseous, loss of appetite, or abdominal pain	Y / N
severe hair loss	Y / N
vertigo	Y / N
balance problems / light headedness	Y / N
short-term memory loss	Y / N
reduced concentration	Y / N
chills and fever immediately following vaccine	Y / N
other (please explain below)	Y / N

If you answered “yes” to any of the above, thoroughly describe your symptoms, and when you started experiencing them in relation to your numbered anthrax shots. Specify any significant diagnosis, such as an auto-immune disorder, seizures, thyroid problems, liver damage, etc. (Use the backside or a separate sheet if necessary).

4. Did you have any previous conditions that worsened when you began the anthrax series? Y / N
If “yes”, please explain.

5. In your opinion, are there any other logical explanations for your symptoms? Y / N / N/A
If “yes”, please explain.

6. If you answered “yes” to any of the above,

did you seek treatment at the flight surgeon’s clinic?	Y / N
did you fill out a VAERs report?	Y / N
have you missed more than a day of work because of this problem?	Y / N
have you been returned to full duty?	Y / N

The statements made in this paper are the express opinions of the author, and do not represent the views the Department of Defense, the Air Force or Dover AFB.

Attachment 3

The purpose of this attachment is to thoroughly explain the criteria used for three subjective entries on the spreadsheet. The “probable systemic reaction using DoD definition”, the “any combination of unexplained symptoms”, and the “all symptoms disappeared within a few days” columns required some interpretation. For the first of these columns, two official definitions were used to provide guidelines in categorizing respondents. The first definition comes from a memorandum to the Surgeon Generals of the Army, Navy, and Air Force, dated 15 OCT 1999, from the Assistant Secretary of Defense. In this letter, the DoD established a classification system to be used on the VAERS reports, stating,

Systemic reactions usually are characterized by malaise, myalgia, arthralgia, and fatigue. The individual may have generalized rash and pruritis, dyspnea, and fever. Focal swelling and itching may appear at areas other than injection site. A simple headache may last a short duration and is treatable. Chills and fever are rare. Immediate reactions are suggestive of anaphylaxis. Systemic reactions rarely occur (<0.2% injections).

The second source definition comes from a web page prepared by the Anthrax Vaccine Immunization Program (AVIP) Agency, Office of the Army Surgeon General, Falls Church, VA, November 12, 1999, which has a slightly different definition for systemic reactions:

Beyond the injection site, from 5% up to 35% will notice muscle aches, joint aches, headaches, rash, chills, fever, nausea, loss of appetite, malaise, or related symptoms. Again, these symptoms usually go away after a few days. Over-the-counter medications before or after the anthrax vaccine may help reduce bothersome symptoms.

In these two definitions, fatigue is taken to mean a loss of energy/constant tiredness, myalgia is muscle pain, arthralgia is joint pain, and pruritus is itching (American Heritage Dictionary, 1985). These definitions list significantly different reaction rates but the symptoms included were similar. Therefore, the individuals that started to experience the symptoms of muscle or joint pain, headaches, rashes, itchy skin, fever, nausea/loss of appetite, tiredness/lack of energy, or chills and fever (immediately following vaccination) since beginning the anthrax series were said to have experienced a “probable systemic reaction using DoD definition”. (On the survey, the symptoms of nausea, loss of appetite, or abdominal pain were lumped into one question. These first two symptoms are included in the official definitions, but abdominal pain is not included. There were no cases in which someone would be classified as having a systemic reaction based solely on abdominal pain.) If the respondent indicated any possible reasons other than anthrax for all of their symptoms, they were not placed in this category.

Nine other symptoms were added to the questionnaire based on personal knowledge of individuals experiencing them at Dover AFB since beginning the vaccinations. These symptoms include ringing in the ears, significant hearing loss, numbness/loss of sensation in body parts, difficulty sleeping, severe hair loss, vertigo, balance problems/light headedness, short-term memory loss, and reduced concentration. If the respondent indicated any combination of these symptoms, they were given a “1” in the last column, indicating they have experienced unexplained symptoms since beginning the vaccine series. Again, if the respondent circled

“Yes” to the question, “In your opinion, are there any other logical explanations for your symptoms?” then they were given a “0” in this column.

The last column requiring some interpretation was the “all symptoms disappeared within a few days” column. This was added because the AVIP definition of a systemic reaction on 12 NOV 99 stipulated that “these symptoms usually go away within a few days”, and that “there are no known long-term side effects to anthrax vaccine”. Unfortunately, the survey did not ask respondents to state the duration of their symptoms, so this entry became difficult to determine on a few surveys. (Most respondents did indicate the duration of their symptoms). In general, if it was unclear whether the symptoms disappeared quickly, then a “#” was entered into this column to indicate unknown duration. The exception to this was if the respondent indicated they had sought medical treatment, then it was inferred that their symptoms did not disappear within a few days.