

I - GULF WAR ILLNESS - CLIPS

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Report Is Sharply Critical of the Pentagon's Inquiry into Ti

By PHILIP SHENON

WASHINGTON, Sept. 5 — Investigators for a Presidential advisory commission said today that the credibility of the Defense Department had been "gravely undermined" by its inquiry into the possible exposure of American troops to Iraqi chemical weapons during the 1991 Gulf war. They recommended that the investigation be taken away from the Pentagon and handed over to an outside body.

The investigators also concluded that as many as 1,100 American troops — more than double the number that had been originally reported by the Pentagon — were exposed to sarin, a deadly nerve gas, when a battalion of American combat engineers blew up an Iraqi ammunition depot in March 1991.

"The Department of Defense has conducted a superficial investigation of possible chemical and biological agent exposures which is unlikely to provide credible answers to veterans' questions," the investigators said in a statement presented today to the Presidential Advisory Committee on Gulf War Veterans' Illnesses, a panel created last year by President Clinton. "A credible review of these allegations and concerns cannot be accomplished by the Department of Defense."

The findings by the investigators, who work for the 12-member committee appointed by the White House, were an indictment of the leadership of the Pentagon, which until this year insisted publicly that it had no evidence that large numbers of American soldiers were exposed to chemical or biological weapons despite reports of mysterious, debilitating illnesses among thousands of Gulf war veterans.

The Defense Department defended its investigation of the issue, with its senior health officer, Stephen C. Joseph, telling the panel at a public hearing today that the Pentagon's internal inquiry into Gulf war illnesses had been "a major contribution to the department and, we would suggest, to the public."

The investigators' findings have not been formally adopted by the commission — that is expected to happen late this year, as the panel completes its final report — but there was no substantive criticism of the findings when they were discussed in today's hearing.

The panel is led by Joyce C. Lashof, a physician who is the former president of the American Public Health Association, and includes several other prominent scientists and researchers.

"The Department of Defense's official position has remained essentially unchanged, and that can be summarized as the three no's — there was no use, there was no exposure, there was no presence," the commission's chief investigator, James Turner, told the panel at the hearing.

"The inflexible reassertion of this position in the face of growing evidence that there were possible low-level exposures — there were chemical munitions in the Kuwaiti theater of operation, there were releases — have served to gravely undermine the credibility of the Department of Defense's internal investigation."

He said that the Pentagon team in charge of the investigation had spent too much time on scientific research that would be "more appropriately delegated to other components of the Department of Defense" and too little time in studying intelligence reports and combat logs, and in inter-

viewing veterans who say they have evidence that chemical and biological agents were released.

A member of the commission, Andrea Kidd Taylor, an occupational health consultant, said the Pentagon's handling of the issue had created "the feeling of cover-up, even if there isn't any cover-up."

In testimony before the commission, Dr. Joseph, the Assistant Secretary of Defense for Health Affairs, rejected the criticism of the Pentagon's investigation, and suggested that the internal inquiry would continue despite the recommendation today that it be handed over to an outside body.

"While we are always open to constructive criticism, let me respectfully suggest that this concern fails to recognize and appreciate the department's complete commitment to

investigating the possible causes of Persian Gulf illnesses in the context of its support for all Gulf war veterans," he said.

Still, Dr. Joseph said that the Pentagon was willing to consider new methods of investigating the issue. "If together we can work out an alternative rule of thumb for which things we should look at."

The Defense Department's credibility on the issue has been shaken in recent weeks, especially after the disclosure in June that a group of American combat engineers may have been exposed to nerve gas and mustard gas when they blew up the Kamisiyah ammunition depot in southern Iraq in March 1991.

Pentagon officials initially said they had no conclusive evidence that any American soldiers had been exposed to chemical weapons at the

**Accusations of
'a superficial
investigation' by the
Defense Department.**

depot but that 300 to 400 troops had been in the vicinity at the time of the explosion.

But based on evidence compiled by the Central Intelligence Agency, investigators working for the Presidential advisory committee said today that the number of troops who might have been exposed to nerve gas was actually about 1,100. And they reported that the evidence of the release of chemical agents at

troop Exposure to Nerve Gas

Kamisiyah was "overwhelming" and that "exposure to troops within 25 kilometers of the demolition activity should be presumed."

Despite the Pentagon's repeated assertion that it had no evidence that American soldiers were exposed to Iraqi chemical weapons, a long-classified intelligence report made public last week showed that senior officials at the White House, the Pentagon, the Central Intelligence Agency and the State Department were informed in November 1991, eight months after the demolition, that chemical weapons had been stored at Kamisiyah.

Dr. Joseph said today that it was not surprising that the reports were overlooked in 1991 since at that time, "no one was thinking about a large number of our armed forces coming back and complaining of symptoms

and illnesses following their service in the Gulf war."

Mr. Turner, the panel's chief investigator, was also critical of the Pentagon's "slow, reluctant, on-again, off-again release of information to the public." He said that it had "served to also undermine credible confidence in the Department of Defense's efforts."

James J. Tuite III, a former Congressional investigator who is the founder of the Gulf War Research Foundation and has emerged as a chief critic of the Pentagon on the issue, welcomed today's findings. He described the Defense Department's investigation of Gulf war illnesses as "dishonest and irresponsible" and said that it had been influenced by a "vested interest in the outcome of the investigation."

Sept 6th NY Times
page 22 967.

CLOSE HOLD—Material will be presented to Advisory Committee on Sept. 5th

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*Staff memo from PAC Staff
to Committee - Very critical
of DOD efforts*

Search for evidence

The U.S. government has relied on CIA and DOD internal investigations to review relevant information. CIA has been assigned responsibility for reviewing intelligence information relevant to possible CBW exposures, and performing downwind hazard modeling for possible chemical agent releases. DOD's current efforts are concentrated at PGIT, which has been assigned principle responsibility for investigating allegations of possible CBW exposures during the Gulf War, as well as other potential risk factors. A DOD Senior Level Oversight Panel, which operates parallel to PGIT, is responsible for coordinating the declassification and release of documents related to CBW and other potential risk factors.

In its Interim Report, this Committee announced its "plans to monitor closely the progress of DOD and CIA in their renewed investigations of possible CBW exposures during the Gulf War." Staff's review of these efforts leads us to conclude that although CIA has fully engaged its resources in the search for evidence relating to possible CBW exposures, PGIT has failed to capitalize on its unique position to thoroughly investigate all alleged incidents.

CIA Is Fulfilling Its Commitment to Re-examine Intelligence Related to Possible CBW Exposures. Staff can report that although limited in the scope of their review to intelligence records, CIA analysts have aggressively pursued information related to possible CBW exposures from both classified and open sources. With respect to downwind hazard modeling, staff also can report that CIA officials have been responsive to concerns about potential low-level contamination and have modified modeling assumptions and parameters to reflect these concerns. CIA completed the bulk of its work with the 2 August 1996 Report that recently was mailed to the Committee, but CIA still is reviewing information concerning the destruction of chemical agents by U.S. forces at Khamisiyah, as discussed below [CIA August 1996 Report, Copeland, McNally].

DOD Has Conducted a Superficial Investigation of Possible CBW Exposures. Since 1991, DOD has taken the public position that no U.S. troops were exposed to chemical or biological agents during the Gulf War. In response to congressional investigations in late 1993 and early 1994, DOD initiated an internal review of alleged CBW incidents. During this same time period, the Defense Science Board (DSB) established a task force to review concerns about possible health effects of the Gulf War. Relying largely on materials collected in DOD's on-going internal review, after six months of work in June 1994, the DSB concluded there was "no evidence that either chemical or biological warfare was deployed at any level against us, or that there were any exposures of U.S. service members to chemical or biological warfare agents in Kuwait or Saudi Arabia." In March 1995, DOD began a second internal review through PGIT that has adhered to this position despite new and growing evidence of low level chemical agent exposures [Blanck, DSB June 1994 Report, Koenigsberg, J.Martin, Nalls, Wallner].

PGIT staff is comprised of 12 individuals: intelligence officers, members of the Chemical Corps, pilots, chemists, physicians, and one trained investigator. Reflecting its staffing, PGIT has devoted substantial resources to literature reviews and scientific studies, rather than collecting first-hand evidence of possible CBW incidents from eye witnesses, battlefield intelligence, unit logs, diaries, and other original documents. By

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doing so, PGIT has failed to take advantage of its unique access to both classified and routine military records to investigate and help answer the public's questions about possible CBW exposures. Given CIA's findings related to Khamisiyah, however, PGIT's recent efforts have involved pursuing investigative leads [Koenigsberg, J.Martin, Moldenhauer, Nalls]. With, perhaps, this single exception, PGIT's work related to CBW incidents lacks vigor, falls short on investigative grounds, and stretches credibility.

There are, however, other possible CBW incidents that merit a thorough review and full investigation. As pointed out in the Interim Report, the automated M8A1 early warning detectors, which employ an ionization process that can react to many compounds, only could detect nerve agents and suffered an extremely high false alarm rate. Two other, more reliable, detectors also were fielded to verify chemical agent alarms: Fox reconnaissance vehicles equipped with mobile mass spectrometers and M256 kits, which employ enzymatic tests for organophosphate nerve agents as well as chemical tests for blister agents. Fox reconnaissance vehicles detected blister and nerve agents at various sites in Kuwait and Saudi Arabia, and M256 kits also confirmed the presence of chemical warfare agents during the ground war. Rather than thoroughly investigate these site-specific incidents, PGIT plans to include them in a theater-wide time/distance analysis [Koenigsberg, Lyons, J. Martin, Grass, Sullivan, Wages].

In response to questions about potential low level chemical agent exposures, PGIT first reported to the Committee in May 1996 that it had no formal, objective standard(s) against which it would measure to reach a conclusion of confirmed/not confirmed. Two months later in July 1996, however, PGIT reported it did have a standard, but the lack of a standard until so late in its tenure calls into question PGIT's entire work to that point; only a thorough re-review seemingly can remedy this situation. Moreover, PGIT's stated standard also is problematic. PGIT has adopted military CBW standards that require not only agent detections, but also physical symptoms of poisoning. Thus, PGIT continues to confuse the separate question of potential chemical agent exposure, with that of possible chemical agent health effects. The inflexible insistence on using this standard--even when assessing possible low level exposures that do not cause physical symptoms--has severely undermined PGIT's credibility on CBW issues [Koenigsberg, J.Martin].

PGIT's slow progress and DOD's erratic efforts to release information to the public have further served to erode the public's trust. To date, 5 of 54 investigations have been addressed in public through reports or in testimony before our Committee, then posted on DOD's GulfLINK Internet site; review of the remaining 49 cases is ongoing. Yet the use of GulfLINK to convey information also has undermined DOD's credibility.

In 1995, DOD established a Wide World Web site and pledged to post copies of relevant declassified documents there. Two actions by DOD have reduced the credibility of this pledge and the usefulness of this site. First, DOD officials issued instructions to declassifiers that before posting sensitive documents, they should be forwarded to PGIT "to allow the investigation Team time to begin preparation of responses on particular 'bombshell' reports" (Wallner 3 November 1995 Memorandum). Second, over 300 declassified documents were removed from GulfLINK in early 1996 and, although DOD reported to the Committee at the Denver meeting that the documents were not classified as of the meeting, these 300 items have not been reposted. Both of these actions create the impression that DOD is failing to live up to its commitments

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regarding openness, and that DOD is still withholding relevant information from concerned veterans and members of the public [Koenigsberg, Lyons, Muldenhauer, Sullivan, Wallner].

Conclusion

The government's investigations must be timely, thorough, independent, credible, and public. DOD's efforts on CBW issues have been neither timely nor thorough, and as a result many question their independence and credibility. At this juncture, it appears to Committee staff that the needed credibility can be earned only through an independent investigation by a group outside the Department of Defense. Staff suggest the Committee make three findings and adopt three recommendations as follows.

FINDINGS

- The evidence of chemical agent release at Khamisiyah is overwhelming and exposure to troops within 25 km of the demolition activity should be presumed.
- Other site-specific exposures of U.S. troops to low-levels of chemical agents cannot be ruled out.
- DOD has conducted a superficial investigation of possible CBW exposures, which is unlikely to provide credible answers to veterans' questions.

RECOMMENDATIONS

- All personnel assigned to units within 25 km of the Khamisiyah demolition activity should be notified and encouraged to enroll in VA's Persian Gulf Health Registry (Registry) or DOD's Comprehensive Clinical Evaluation Program (CCEP).
- Investigation of all reports of positive M256 kits and Fox detections should continue. Where unit logs record positive detections by either type of equipment, members of that unit should be notified and encouraged to enroll in VA's Registry or DOD's CCEP.
- Any further investigation of possible CBW exposures during the Gulf War should be conducted by a group independent of DOD.

Selected references

Blanck, Major General Ronald R., U.S.A., Commander, Walter Reed Army Medical Center. Testimony before the Presidential Advisory Committee on Gulf War Veterans' Illnesses, May 1, 1996, Washington, DC.

Central Intelligence Agency, Office of Weapons, Technology and Proliferation, "CIA Report on Intelligence Related to Gulf War Illnesses," 2 August 1996 ["CIA August 1996 Report"].

Cliff!

To: Melanne Vorseer
From: Cliff Gabriel
FAX - 6-6244

The Persian Gulf Investigation Team is one part of the Department's overall effort which includes declassification, peer reviewed research, the clinical program serving over 20,000 Gulf War veterans. The Investigation Team continues to pursue the full range of incidents and possible explanations for the illnesses experienced by our Gulf War veterans. Our responses with respect to the staff recommendations to the Presidential Advisory Committee are as follows:

- All personnel in the immediate vicinity of the Kamisiyah activity are in the process of being notified (phone calls and, as needed, registered letters) and encouraged to enroll in VA's Persian Gulf Health Registry (Registry) or DoD's Comprehensive Clinical Program (CCEP). We have already had direct contact with nearly 500, or about half of the personnel involved. Phone calls have been placed to over 900 of the personnel.
- All known reports of positive M256 kits and Fox detections are being investigated aggressively. Wherever there is substantial evidence of possible exposure, members of the affected units will be encouraged to enroll in VA's Registry or DoD's CCEP.
- As Doctor Joseph said yesterday to the Committee with respect to expanded review of chemical/biological investigation, "We welcome your suggestions as to how these efforts can be improved. The Department would be please to sit down with the Committee and discuss more intensive or extensive investigations or a mutually agreed-upon alternative framework for those investigations."

Melanne -

DoD's response to the
PAC's findings & recommendations.
The tone of this is much
better, ~~but~~ and is probably
as far as they are currently
willing to go.

Cliff

Seil

THE NEW YORK TIMES
SUNDAY, AUGUST 11, 1996

Legacy of Illness for Unit That Blew Up Bunkers

By PHILIP SHENON

WASHINGTON, Aug. 10 — After years of Pentagon denials, a group of veterans of the Persian Gulf War are offering the most compelling evidence to date that American troops were exposed to Iraqi chemical weapons, and say that nerve gas and other chemical agents have begun to ravage their bodies.

The soldiers and former soldiers were members of the Army's 37th Engineer Battalion. And unlike thousands of other Americans who have complained that they suffer from the ailments collectively described as gulf war syndrome, the men of the 37th can pinpoint the time and place that they believe they were exposed to chemical weapons: 2:05 P.M. on March 4, 1991, when the battalion blew up 33 Iraqi bunkers in the southern Iraqi desert.

The Pentagon acknowledged this spring — more than five years after the end of the war and more than four years after the United Nations made the first evidence public — that one concrete bunker probably held shells containing sarin, a deadly nerve agent, and mustard gas, a blister agent that can burn flesh. The bunkers were destroyed to keep the Iraqis from re-arming immediately after the war.

Defense Department officials say their initial review of the medical records of the battalion offers no evidence of an unusual pattern of health problems among these soldiers. While it concedes that chemical weapons were probably at the arsenal, the Pentagon has said it still has no clinical evidence the soldiers were exposed.

But the veterans of the 37th tell a different story. Many say they are sick. In interviews with 37 of the nearly 150 battalion members who were reported in the vicinity of the arsenal at the time of the explosion, 27 said they had suffered serious health problems since the war.

Their ailments, they said, include mysterious infections and rashes, serious gastrointestinal problems, fierce headaches and constant fatigue. Many have been hospitalized for unexplained ailments; some have had surgery.

"We just want to know what's wrong with us," said Christian Tullius, a veteran of the 37th from Coppas Cove, Tex., who left the Army only last month.

"We were paratroopers — elite troops, in great shape — and now we're all sick as dogs," said Mr. Tullius, 28, who has been operated on nine times for intestinal ailments since the war and had much of the muscle wall around his stomach removed.

So far, medical experts have not been able to determine a cause for the reports of illness, and have disagreed over whether the syndrome in fact has a medical basis. More than 60,000 gulf war veterans have asked for special Government health screenings to determine if they suffer from ailments related to the war.

The accounts given by members of the 37th, however, have raised concerns about the credibility of the Defense Department, which until recently insisted that it had no evidence Americans might have been exposed to Iraqi chemical or biological weapons. There is also a possibility that tens of thousands of other soldiers downwind from the explosion were exposed as well.

An investigation of the incident at the Kamisiyah arsenal, including interviews with officials at the Pentagon and a review of classified Army reports on the explosion, has shown several things:

①The Pentagon paid little, if any, attention to early reports that chemical agents might have been released at Kamisiyah, even though the United Nations investigators made the information public in at least three reports to the Security Council in 1992. The United Nations said that copies of the report were also provided immediately to the United States Government, including several Federal libraries.

②Some veterans of the 37th Battalion dispute crucial elements of the Pentagon's initial account of what happened at Kamisiyah. The Pentagon has said that according to battlefield reports, soldiers conducted an extensive inspection of the site for chemical weapons before the blast, and that detectors found no chemical agents after the explosion. Some veterans said both assertions were incorrect. They said chemical-weapon alarms went off shortly after the blast, leading many soldiers to don rubberized chemical-warfare suits immediately.

③The battalion ran short of the chemical suits, and troops were encouraged not to unwrap new suits even when chemical-gas alarms went off. The alarms went off frequently during the war — several times a week, with most dismissed as false alarms by commanders. Several soldiers said they often wore only gas masks when the alarms went off, leaving their skin exposed.

"We were just told to put our masks on and get inside the tent," said Dale Cook, a 28-year-old veteran from Fremont, Mich., who said he was suffering from kidney stones, a mysterious fungus that is causing his fingernails to drop off, rashes across much of the rest of his body and chronic fatigue that causes him to nod off at work.

Even as the Defense Department has suggested that exposure to low levels of chemical weapons does not carry long-term health risks, Pentagon officials acknowledge that in fact little is known about the long-term effects. One of the few studies ever done on the issue, a 1974 report in a Swedish research journal, said that low levels of chemical weapons could produce cancers and "chronic illnesses" of the central nervous system.

The former members of the battalion, which is based at Fort Bragg, N.C., were located through Army records and referrals by other veterans. While those interviewed are not a random sample, there still seems to be a remarkable amount of illness among a group of young men who, as paratroopers in the war, were required to be in peak physical condition.

Patrick T. Hopper of Ronkonkoma, L.I., who left the Army only a few months after the gulf war, said that he had suffered from continuous bouts of nausea since the war and knew what's inside those bunkers? that he had been rushed to a hospital he asked. "We are obviously not emergency room last month after chemical-weapon experts."

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James Stark, a 28-year-old battalion veteran who still serves in a National Guard unit near his home in Fort Scott, Kan., said he suffered from migraine headaches that last four to six hours and "totally incapacitate me — basically I tough it out until I get hit with waves of nausea and begin to vomit a lot, and then I'm forced to leave work."

Huge Explosion, And Then Alarms

The concrete bunkers at Kamisiyah, which were located about 200 miles southeast of the Iraqi capital of Baghdad, covered 20 square miles of desert. When the war ended in a cease-fire on Feb. 28, 1991, the United States and its Western allies were eager to destroy what remained of the Iraqi arsenal, so the 37th Engineer Battalion was ordered to demolish the bunkers.

The explosion was so large that it rocked the desert floor miles away and created a plume of smoke that covered hundreds of square miles. Soldiers made a videotape of the scene, and it shows a vast black cloud rising into the sky, led by several smaller explosions. The video also shows that soldiers, who were about three miles from some bunkers, were not wearing chemical-weapon suits or gas masks.

When the Pentagon made its landmark announcement in June that the 37th Battalion might have been exposed to chemical weapons at Kamisiyah, officials insisted that battlefield records showed that equipment set up near the bunkers at the time of the explosion in 1991 did not detect nerve gas or other chemical agents.

But that is not how Daniel Topolaki, a former chemical-weapon specialist with the 37th, remembers it. Mr. Topolaki, 31, a home builder who lives near Phoenix, said that his chemical alarm, an M8-A1, went off quickly after the explosion.

The M8-A1 is prone to false alarms, however. So Mr. Topolaki remembered grabbing for a handheld lab kit that is far more precise. It registered positive for nerve gas. "We went to the guys and said, 'Hey, we're not playing, this is real,'" Mr. Topolaki said. The soldiers, he said, hurriedly put on their chemical-weapon suits.

"I remember the alarms going off that day," agreed James R. Riggins, a retired major who was the executive officer of the 37th. "We were so close that it made sense to don all the chemical equipment, so we did."

Mr. Riggins said that despite the Pentagon's insistence that the bunkers at Kamisiyah had been inspected for chemical weapons before the explosion, there was, in fact, no expertise or equipment within the battalion to conduct a thorough search.

"How the hell would we really know what's inside those bunkers?" "We are obviously not chemical-weapon experts."

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Lingering Doubts And Distrust

The United Nations Special Commission on Iraq, which is charged with monitoring Iraq's compliance with the cease-fire, said its investigators first learned in October 1991 of the possibility that chemical weapons might have been released at Kamisiyah, and they were able to confirm their initial findings in a new inspection last spring.

Pentagon officials have suggested that the public reports filed by the United Nations investigators in 1992 were overlooked in the crush of other intelligence information that reached the Defense Department after the war. Senior officials said they first learned of the reports — and of the fact that sarin and mustard gas were probably stored at Kamisiyah — this year.

"We're going to follow up and further investigate," said Stephen C. Joseph, Assistant Secretary of Defense for Health Affairs. "Kamisiyah was the first clear instance in which we had something that we needed to focus on with respect to whether there was an actual exposure to chemical weapons."

Still, he said that a preliminary review of the health records suggested that veterans of the 37th were not suffering an unusual number of health problems.

The findings would tend to support larger studies that have found no evidence to support the concept of gulf war syndrome. A study released in January by the Institute of Medicine, which is affiliated with the National Academy of Sciences, found that veterans' ailments "are not the result of chemical, biological or toxin warfare, or accidental exposures to stored weapons."

Dr. Joseph said that the Pentagon would mail questionnaires to all members of the battalion to inquire about their health since the war, and that it was providing millions of dollars for new research on the effects of low-level exposure to chemical weapons.

Several veterans of the 37th, including some soldiers who are still in the Army, say they do not trust the Pentagon to carry out an honest investigation. Their concern is shared by some members of Congress.

"I believe with all my heart and soul that both the Department of Defense and the Department of Veterans Affairs are covering up the fact that our troops were exposed to chemicals and maybe biological agents," said Representative Christopher Shays, a Connecticut Republican whose staff has been investigating the health problems of gulf war veterans.

From Perfect Health To Chronic Illness

Mr. Riggins, the retired major, has remained healthy, but he said he had no question about the truthfulness of other veterans of the 37th who now say they are sick. "Some of these guys are heroes," he said. "They are John Wayne types. These are not the type of guys to make these things up."

As paratroopers, the members of the 37th Engineer Battalion were expected to be ready to drop into a desolate battlefield at a moment's notice. "They could run 10 miles, they could do hundreds of push-ups, they could carry a rucksack all day and all night," Mr. Riggins said, of the soldiers once under his command.

Yet only five years later, many of these same men say they are so weak, so ill and in such pain that they can barely function.

James D. Craig, a 29-year-old veteran of the 37th who left the Army in 1992, said that his medical record "is thicker than the Bible" since he returned from the war.

He said that he had suffered from "the whole array of gulf war symptoms — the fatigue, the sweats, the achy muscle joints."

"You feel like you're 80 years old, and you're only 29," Mr. Craig said. "It's like having the flu forever." Mr. Craig said that doctors at a local veterans hospital had diagnosed his condition as psychosomatic.

Brian Martin, a 33-year-old battalion veteran from Niles, Mich., was so disabled after his service in the gulf that the Pentagon has already agreed to provide him with full disability pay. His doctors say he suffers from chronic diarrhea, insomnia and headaches. He does not have enough energy to walk more than 200 feet before collapsing.

The military has been unwilling to concede until now that soldiers were exposed to chemical weapons "because it's such a huge black eye — they have to admit that they put us in harm's way during the war," Mr. Martin said. "I'm not out to embarrass the military. I'm not out to hurt the military. But we are sick, and we're asking the military to please acknowledge that."

forced to forfeit her pension and all military benefits. Her pension was to pay her \$1,800 per month.

Major Meeks will be prosecuted under the sodomy provision of the Uniform Code of Military Justice, the regulations that govern all military personnel.

The statute is broadly written. It says that any person who engages in "unnatural carnal copulation with another person of the same or opposite sex" is guilty of sodomy. Mr. Korb said the language could pose a problem. If the statute were read literally, Mr. Korb said, "we wouldn't have too many people left in the force. We'd probably have the chaplains and that would be it."

During an interview at Mr. Heck's office, the soft-spoken officer refused to say whether this is gay and asserted that the charges against her were false. But she did express disappointment with her fellow officers for pursuing the investigation. "I feel sorry for a couple of folks who felt it necessary to be this type of vindictive," she said. "But you can't get angry about things; you can't change. I have no control over other people's attitudes and prejudices."

If convicted of both charges, Major Meeks could be dismissed from the Air Force, sentenced to a maximum of eight years in military prison and

Air Force Major's Case Revives 'Don't Ask, Don't Tell' Debate

By The New York Times

SAN ANTONIO, Aug. 8 — After 21 years in the Air Force, Maj. Debra L. Meeks was looking forward to retirement. Her last day was to have been Feb. 28 and she had planned to enroll in cooking school.

Her culinary aspirations may have to wait. On Monday, Major Meeks, 41, will face a general court martial at Lackland Air Force Base here on charges of sodomy and conduct unbecoming an officer. Major Meeks is being represented by Michael Tigar, a professor at the University of Texas Law School and one of the lead defense lawyers in the Oklahoma City bombing case, and Peter Held, a San Antonio lawyer who spent 18 years in the Air Force

The charges against Major Meeks, filed on Feb. 8, allege that she committed sodomy over a two-year period with Pamela J. Dillard, an adult civilian who says she was Major Meeks's lover. Ms. Dillard also says Major Meeks threatened her with a gun in September 1994; that alleged action led to the charge of conduct unbecoming an officer.

Major Meeks is being represented by Michael Tigar, a professor at the University of Texas Law School and one of the lead defense lawyers in the Oklahoma City bombing case, and Peter Held, a San Antonio lawyer who spent 18 years in the Air Force

as a judge advocate. Irene Witt, a spokeswoman for Lackland Air Force Base, said Major Meeks was the only person Lackland had prosecuted for homosexual conduct over the past three years.

Under the "don't ask, don't tell" policy, homosexuals are allowed to serve in the military but must keep their homosexuality private. Commanders are permitted to initiate investigations of homosexual activity only after they receive evidence that such activity has occurred.

Lawrence Korb, who was Assistant Secretary of Defense under President Ronald Reagan and is now a

senior fellow at the Brookings Institution, said the charges against Major Meeks showed that the policy had not been accepted by many in the armed forces. "It seems they don't like gays in their midst and they will do anything to get them out of their way," Mr. Korb said.

Major Meeks, who is from Phenix City, Ala., enlisted in the Air Force in 1974. She spent two years as an airman and later joined the Reserve Officer Training Corps to pursue a college degree. After graduating from Troy State University in Alabama, she was gradually promoted up the ranks. Major Meeks, who has

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THE WASHINGTON POST

MONDAY, JULY 1, 1996

JACK ANDERSON and JAN MOLLER

When Did the Pentagon Know?

The recent announcement by the Pentagon that some U.S. soldiers in the Persian Gulf War may have been exposed to chemical weapons left several observers shaking their heads with disbelief.

At a hastily called June 21 news conference, Pentagon spokesman Kenneth Bacon asserted that "new" information about the bombing of an Iraqi bunker prompted the sudden announcement. But a senior government official—and others who have long followed the issue—say the Pentagon has known about this for almost five years.

"The Pentagon has known about it since October of 1991," the senior official told us. "[The Pentagon] wanted to low-key [the announcement]. The big questions are going to be: When did [the Pentagon] find out they had [the evidence], and how long did they have it? How come it wasn't put forward for the last five years?"

The disclosure opens up many new questions, but it also caps five years of excuses by the Pentagon that have ranged from dubious to bizarre.

Defense Department officials have steadfastly denied that exposure to chemical agents could be a cause for the mysterious Gulf War syndrome. When veterans first began complaining of unexplained symptoms, the Pentagon tried telling them it was all in their heads by blaming it on post-traumatic stress disorder. When that didn't work, the department began speculating on other possible causes including insect bites, bad food supplies, insecticides and oil-fire fumes.

At one point, and without any factual basis except the lessons learned 20 years earlier in Vietnam, officials offered up the "alcohol substitute" theory:

"No inquiry has been made on the extent of substance abuse (e.g. solvent sniffing, etc.) in a population that was abruptly deprived of alcohol," says a 1994 Pentagon report reviewed by our associate Aaron Karp. "Some troops in the Vietnam War are known to have injured themselves by ingesting RDX, a plastic explosive, and a small number of individuals were bound to have experimented with these and other substances."

As we reported last week, the timing of the Pentagon's announcement also has raised eyebrows. In fact, the Pentagon came clean only after receiving an ultimatum from a presidential commission investigating the mysterious symptoms.

A commission investigator discovered October

1991 United Nations report buried in Pentagon files revealing that chemical weapons were probably present at the Kamisiyah Ammunition Storage Depot, which was destroyed by airstrikes in the days shortly following the cease-fire. The commission threatened to release the information in early July if the Pentagon continued to stay silent. When we called Bacon the day before the announcement, he was still clinging to the official line that there is no evidence of chemical exposure in the gulf.

Fearing the information would leak out, the Pentagon decided to preempt the news media late on a Friday afternoon. "Your call was provocative," Bacon later acknowledged. "We decided with your call we should go ahead and announce it as soon as possible."

A day after Bacon told us this, however, Stephen Joseph, assistant secretary of defense for health affairs, sang a different tune in testimony before Congress. At a House subcommittee hearing chaired by Rep. Christopher Shays (R-Conn.), Joseph strongly denied that possible news leaks had anything to do with the timing of the announcement.

Although Bacon acknowledged that the Pentagon had a report of the incident as early as 1991, he said it was lost in the shuffle. "We had a report, but we have a lot of papers," Bacon said. "For whatever reason, the report resurfaced. I don't know where the report was from '91 to '95."

Yet some lawmakers who have reviewed the transcript don't believe the Pentagon was motivated by anything more than a desire to save face. "The guy [Bacon] was incoherent because he was faced with having to tell the truth," said Sen. John D. "Jay" Rockefeller IV (D-W.Va.). "He was distinctly uncomfortable [at the news conference]. . . . They've known all along. How could they possibly not have known all along?"

Brian Martin, a veteran who served in the battalion that detonated the bunkers, made a videotape of the bombings that he's been showing for years to anyone who was interested. Since the war, Martin has become seriously ill with several ailments that his doctors trace to chemical exposure in the gulf.

Martin says there is a good explanation for why the Pentagon claims no evidence exists of chemical exposure. "I knew every order given," Martin told us, "no chemical detectors [during the detonations]. They were never during the or during the fire."

LETTERS TO THE EDITOR

The FAA's Main Man

Recently, Tony Broderick, the FAA's top safety official, was forced to retire in the aftermath of the ValuJet tragedy, the handling of which by the administration has been a fiasco ["FAA Tightens Airline Maintenance Rules," news story, June 19]. It is unfortunate that a man of his capability, honesty and dedication to aviation safety is leaving. His departure is not in the best interest of the FAA, the aviation industry or the flying public. It is an untimely loss.

As a former FAA employee for 35 years and as a former FAA acting administrator, I have known Mr. Broderick personally and professionally for 18 years. He can be abrupt. He can be tough. He can be assertive. He can be opinionated. He can be outspoken on issues he feels strongly about.

Several other things about him are certain. He is a tough-minded person who has no higher concern than aviation safety. He is the single most

technically competent aviation safety expert in the FAA and possibly the world, where he is well known and highly respected among civil aviation authorities. He is honest. I have never known him to lie or even shade the truth. I have never known him to cover up anything or protect anyone not acting in the best interest of aviation safety. He has always made a point of telling me and everyone else what we needed to hear, not what we wanted to hear.

Pogo was right; the real culprits are us: a public that wants fewer taxes and a smaller, less intrusive government yet also wants an aviation safety inspector on every aircraft; a Congress that attempts to buy aviation safety on the cheap by providing too little financing and too few resources; and a bureaucracy too slow to react to a rapidly changing industry that has complacently sat back and watched it all happen. It's time to get our priorities straight. Tony Broderick was an example of what was right with the FAA. He was part of the solution, not the problem.

JOSEPH DEL BALZO
Washington



BY LARRY MORRIS — THE WASHINGTON POST

'Metro's Off-Track Bet' (Cont'd)

The June 23 *Close to Home*: "Metro's Off-Track Bet" contains several misstatements of fact concerning the proposed Metrorail extension to Dulles Airport. First, Metro did not perform the study. The state of Virginia, under the leadership of State Secretary of Transportation Robert Martinez, managed and funded this effort, with help from a policy committee of officials from Fairfax County, Loudoun County, the Airports Authority, the Northern Virginia Transportation Commission and Metro. The vote for Metrorail was unanimous.

Second, Metrorail fare box revenue cover 71 percent of operating costs (not 50), the highest cost recovery ratio of any transit system in the country. Third,

dor are many, but one inescapable fact jumps out: The area from Tysons Corner to Dulles Airport is the fastest growing commercial corridor in the region and will be severely congested by 2020. Tysons Corner is Fairfax County's downtown. In order to create and sustain economic growth, infrastructure investment must be there to support it.

Fifth, why not compare transit use at Dulles Airport with National Airport instead of Cleveland or Boston? Prior to the construction at National Airport, 15 percent of the passengers at National arrived by Metrorail, the highest in the nation. With the National terminal with its state-of-the-art connection to Metro opens

Don't Blame The Banks

Jack Anderson and Michael Binstein reached a new low, comparing bank credit cards to underworld loan sharking in their June 13 column.

Banks are neither miserly nor profligate. They are not public utilities or charities. They are for-profit companies. Before regulations were phased out in the 1980s, the interest rate that could be paid on deposits was capped. This artificially low cost of funds enabled banks to fund operations without charging explicit fees. Many consumers expressing shock at today's service charges are accruing post-deregulation earnings from higher interest rates on money market accounts and CDs.

Consumers frequently lament "but the bank's got my money." Consider a checking account in which you maintain an average monthly balance of \$500. If the bank pays you 3 percent interest and can potentially earn 8 percent from an investment of appropriate risk and liquidity to match your account, it receives a net spread of 5 percent or about \$25 per year on this account. Think of this as the amount you "pay" the bank in the absence of fees.

What do you get in return? You get a safe place for your money that also provides record-keeping, collects on checks and makes payments on

Mr. Anderson and Mr. Binstein erred credit cards for gouging consumers and leading the unwary to bankruptcy. Most people "addicted to paying plastic" are not "going broke," suggest, but rather are choosing convenience of electronic transfers over the safety of not carrying large amounts of cash and the flexibility of cash payment. VISA International estimates nearly 20 percent growth in credit card use from 1995 to 1996.

Efforts to attract college students are not a "new method for hooking junkies," but rather a sound motivational tactic. Banks are in business to win customers. Adults can prepare for mortgage and home ownership later in life by developing a responsible payment record with credit cards.

We know that banks are in business and entities in financial service. Intentions are not wholly honorable. Many existing legal means to identify, discredit and punish unsavory practices are in place. What's unsettling is the recent attacks on the sound practices of banks.

CARYN GID
SHERR

Date: 11/11/96 Time: 14:25

CClinton Pledges Further Work on Gulf War Illnesses

ARLINGTON, Va. (AP) President Clinton promised Gulf War veterans Monday the government will keep searching for an explanation of the illnesses that many of them have suffered. ``There are mysteries still unanswered, and we must do more,' he said.

During a Veterans Day observance at Arlington National Cemetery, Clinton noted 26,000 disability cases among Gulf veterans and said they all deserve full explanations for their ailments.

``I want to assure all of you that we will leave no stone unturned in our efforts to investigate these cases,' he said.

``The United States will not forget the people who have served us. We will discharge our obligations to those who served in the Persian Gulf.''

Since the end of the war in 1991, thousands of veterans have complained of health problems such as memory loss, fatigue, diarrhea and insomnia known collectively as ``Gulf War syndrome'' and attributed to chemical and biological weapons used by Iraq.

In a draft report, the Presidential Advisory Committee on Gulf War Veterans' Illnesses found no evidence of a syndrome but recommended an independent investigation.

At Arlington, Clinton placed a wreath at the Tomb of the Unknowns, standing with an ungloved hand over his heart on a sunny but cold day. Later, he led the gathering in applause for the military service of his Republican presidential challenger, Bob Dole, who lost the use of his right arm as a result of World War II wounds.

``He refused to withdraw from the world and instead dedicated his life to serving the American people,' Clinton said.

Looking out across the cemetery expanse dotted with white crosses, Clinton praised the sacrifices made by veterans of different backgrounds.

``They stand as stunning evidence that our founders were right: We are all equal in the eyes of God,' Clinton said. ``That is something we must continue to practice until we get it right.''

APNP-11-11-96 1427EST

FYI - Pam

Date: 01/09/97 Time: 15:39

GSchwarzkopf says he will open logs to Gulf War investigators

WASHINGTON (AP) Retired Gen. Norman Schwarzkopf invited Senate investigators Thursday to examine his private logs for clues about chemical weapons releases during the Persian Gulf War.

Calling suggestions of a cover-up ``ridiculous,' ' the former Gulf War commander told The Associated Press in an interview he had no evidence of chemical weapons exposure during or after the conflict. The Pentagon and other agencies are investigating whether exposure to chemical weapons may lie behind the mystery illnesses afflicting thousands of Gulf War veterans.

``There is nothing in those logs at all about chemical contamination of my troops,' ' Schwarzkopf said. He added that he told a Senate committee staff member Thursday, ``If you don't believe me, I welcome a member or members of their staff to come down to my office in Tampa and they could look through those logs to their heart's content.' '

Schwarzkopf, vacationing in Colorado, spoke by phone hours after the issue of the general's logs came up in a hearing of the Senate Veterans' Affairs Committee.

Sen. Jay Rockefeller, D-W.Va., pressed CIA witnesses on whether they knew of the logs and would ask Schwarzkopf to release them. George Tenet, acting CIA director, said he did not know of the logs but added, ``If there's information in those logs that bears on what we're trying to do, we'll try to access it.' '

The so-called executive logs were kept by an officer assigned to Schwarzkopf while the four-star Army general was in Saudi Arabia directing the coalition buildup and war against Iraq in 1990 and 1991. Schwarzkopf maintains they are his private papers, and in 1994 the Pentagon inspector general upheld that view in a dispute with federal archivists.

The logs are distinct from official records of orders and reports handled by Schwarzkopf during the war. They are also separate from a much talked-about nuclear, biological and chemical weapons log kept by the general's staff devoted specifically to reports of chemical weapons use. An eight-day gap in that log has been one of many avenues of inquiry in the growing government investigation into Persian Gulf War illnesses.

Schwarzkopf described his personal log as ``incomplete, cryptic in some cases' ' and said it was a record of private conversations, particularly sensitive discussions with foreign leaders in which he made promises and commitments that the foreign leaders asked be kept confidential.

A gruff, burly commander who presented himself as a champion of the common soldier, Schwarzkopf has been particularly angered by suggestions that he is unconcerned about the plight of ill veterans or that he served out the war in headquarters sealed from the dangers of chemical attack.

``People know me well enough to know that I'm going to take care of my soldiers first,' ' Schwarzkopf said. ``There were no reports, absolutely none, zero,' ' about release of chemical agents. ``I would have loved to have announced that we found huge caches of chemical weapons.' '

Schwarzkopf said his command headquarters was vulnerable to a chemical attack, contrary to published reports. He also discounted incidents in which Czech soldiers participating in the coalition reported sarin gas detections. U.S. followup on those reports found no evidence of the nerve gas.

``With a chemical alarm, you're going to build one that is oversensitive because you would rather the alarm go off and give you a false alarm than to err on the other side,' ' Schwarzkopf said. ``So the alarms went off all the time over there. When they did, we put our troops in protective gear and then we sent in our most sophisticated equipment.' '

Schwarzkopf said the committee staff said it would send a representative to review the logs. He also said he offered to testify.

Sen. Arlen Specter, R-Pa., the committee chairman, said continued investigation into the Gulf War issue ``is the committee's top priority.' '

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THE PRESIDENT HAS SEEN
12-16-96

Gulf War illness linked to Iraqi germ weapons

12/11/96

Gene-altered bacterium found in vets' blood

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By ED OFFLEY
A MILITARY REPORTER

Evidence exists that could link the ailments of sick Persian Gulf War veterans to Iraqi biological weapons, independent medical researchers warn.

Such weapons pose a more serious health threat than chemical agents because they are designed to spread germs throughout a wide population, including soldiers, their spouses, children and even family pets, experts say. And, they say, symptoms can appear years after exposure.

While the Pentagon has acknowledged that U.S. troops in the Gulf War were exposed to chemical agents, officials said they still are checking data on biological weapons.

Garth Nicolson, a research biochemist who has tested the blood of hundreds of sick Gulf War veterans and members of their families, said he has discovered a mycoplasma — a primitive bacterium — that had been genetically altered in many of the samples. The only logical conclusion to draw, he said, was that the germ had been deliberately manipulated for use as a weapon.

"We found very unusual infections that have genetic structures not found in the wild," said Nicolson, scientific director of the non-profit Institute for Molecular Medicine in Irvine, Calif.

Given the artificial structure of the bacterium, its widespread detection among hundreds of Gulf War veterans and their families, and Iraq's confirmed work on such weap-

ons, Nicolson said, he concluded that people are sick as a result of "invasive biological weapons."

In separate interviews, two experts in related medical fields confirmed the validity of Nicolson's research. They also shared most of Nicolson's premise that many Gulf War veterans show signs of bacterio-

logical infection and not chemical poisoning.

Whether Gulf War troops were exposed deliberately or accidentally is not clear. It is possible, for instance, that exposure occurred when biological agents were dispersed into the air as a result of allied bombing of Iraqi storage bunkers,

Nicolson and other experts said.

Nicolson and his wife, Nancy, both of whom are biomedical researchers, became interested in the issue when their daughter, an Army soldier, returned from the war with multiple ailments.

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Illness: Pentagon had no way to

From Page 1

Defense Secretary William Perry said last week there is no evidence U.S. Gulf War troops were exposed to Iraqi biological weapons. But, Perry said, "since we know that the Iraqis had the weapons, we have to continue to examine data and we cannot categorically rule it out." Earlier, the Pentagon ended more than five years of denial and admitted that thousands of soldiers in the war were exposed to chemical agents.

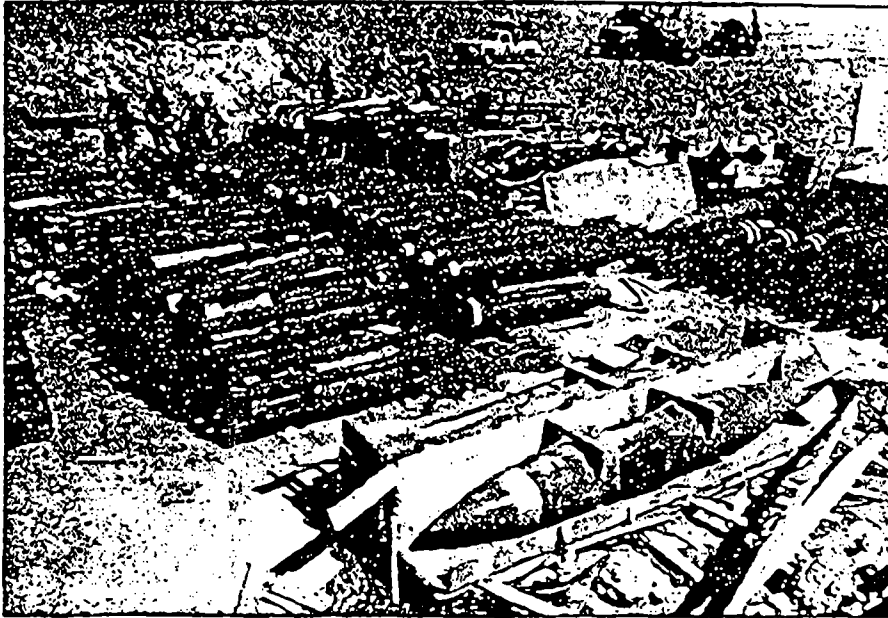
Biological warfare uses bacteriological agents that are infectious and can cause illness and death not just after initial contact but even years later, Nicolson said. Chemical warfare agents, in contrast, are chemical compounds that attack the skin and nervous system but can be washed off. They leave victims sick but not infectious.

Since the seven-week Gulf War, which began Jan. 17, 1991, tens of thousands of veterans and their family members have complained of a wide array of ailments, including memory lapses, chronic fatigue, aching joints, dizziness and benign tumors. Some veterans have reported children born with severe birth defects. The ailments are loosely classified as Gulf War syndrome. But the cause remains under debate.

Complicating the issue is the fact, discovered in 1994 during a Senate Banking Committee investigation, that even three years after the war the Pentagon had no means to detect biological warfare agents on the battlefield.

John Deutch, then-deputy secretary of defense and now head of the CIA, told a government conference in New Mexico in 1994 that the United States has "no biological detection capability deployed with any forces, anywhere," the Banking Committee noted in a report after its investigation.

The year before, according to the Banking Committee report, Deutch said that the De-



MIKE WEBER/SPECIAL TO THE

American troops examine stockpiles of captured Iraqi bombs at a storage complex near Nasiriyah. The munitions were then blown up, releasing a plume of chemical agents.

partment of Defense was "withholding classified information on the exposure of U.S. forces (in the Gulf War) to biological materials."

The report contained the results of a survey of 4,000 veterans reporting medical symptoms after serving in the Gulf War. It noted that 77 percent of their spouses and 65 percent of their children showed similar symptoms.

Since 1991, the Pentagon, Veterans Administration and a number of federal scientific organizations have studied the widespread rash of illnesses afflicting between

35,000 Gulf War veterans (the VA's estimate) and as many as 100,000 veterans and family members (the estimate by outside researchers such as Nicolson).

The Pentagon initially said veterans reporting ailments were suffering from psychological stress. Before the Pentagon admitted last week that nerve agents may have been dispersed over the battlefield, theories about the cause of the ailments included exposure to pollution from oil-field fires, reaction to experimental vaccines or parasitic infections such as leishmaniasis found in the desert environment.

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DESERT STORM DIAGNOSIS

Gulf War: Illness reported in Kuwait

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by economic sanctions.

The U.N. agency also documented a fivefold increase in reported cases of leishmaniasis between 1989 and 1992, from 2,159 cases to 12,645 per 100,000 population.

There also is evidence Iraq's infant mortality rate increased after the war. No studies have suggested a connection between the deaths and possible exposure to chemical or biological agents.

A study of Iraqi civilians comparing records before the war and in late 1991, conducted by the International Team on the Gulf Crisis, found a 380 percent increase in the mortality rate of children under 5. The survey attributed this to "a complex interaction of factors," including shortages of food and medicine, lack of clean water and poor sanitation.

The survey, funded by UNICEF, the MacArthur Foundation and other organizations, also noted epidemic outbreaks of typhoid, cholera, hepatitis, measles and tetanus throughout Iraq.

Hinshaw said a Kuwaiti physician told him an ailment mirroring Gulf War syndrome is widespread among the Kuwaiti population.

"The word is the Kuwaitis have this (illness) and the Kuwaiti government is suppressing this whole issue," Hinshaw said.

Neither the Pentagon nor Veterans Affairs Department have compared health data on Gulf War veterans and Iraqi civilians with the government of Iraq, officials said.

"There is currently no cooperation in health programs between the United States and Iraq in looking at Gulf War illness," Pentagon spokesman Bryan Whitman said yesterday.

He said the Pentagon task force on Gulf War health issues had received Nicolson's research findings and was reviewing them, along with other independent medical studies.

"We are interested in looking at all research that may help us better understand the causes of Gulf War illness," Whitman said.

Iraq's biological and chemical warfare capability never has been questioned.

U.S. military commanders during and after the Gulf War freely admitted their greatest fear was that advancing allied units might get pinned down in the Iraqi minefields and obstacle belts in Kuwait and Iraq, then slaughtered by massive attacks with chemical and biological weapons.

As for Iraqi biological warfare capability, the Pentagon and the United Nations reported after the war that Iraq possessed a sophisticated biological warfare industry by the late 1980s.

The Banking Committee probe found evidence Iraq was working on the following biological warfare agents at the time of the Gulf War.

■ **Anthrax**—An often fatal infectious disease caused by the ingestion of anthrax spores that blocks breathing and leads to fatal blood poisoning.

■ **Botulinum toxin**—Symptoms of exposure, which is often fatal, are vomiting, thirst, weakness, fever, dizziness and muscle paralysis.

■ **Other biological agents** identified include histoplasma (similar to tuberculosis), brucella melitensis (which causes damage to major internal organs), and clostridium perfringens, toxic bacteria that cause gangrene.

Iraq started in 1986 to initiate an offensive biological warfare capability, according to the U.N. special commission that investigated alleged manufacturing and storage sites beginning in 1991. U.N. inspectors said that while no explicit evidence of Iraqi biological weaponry was found, they noted that the main site was razed by the Iraqi government a week before inspectors were allowed in.

The Senate Banking Committee also discovered that from 1986 to 1989 a non-profit medical institute called the American Type Culture Collection exported to Iraq, with approval of the U.S. Commerce Department, 70 shipments of bacterial cultures that could have been used for producing biological weapons.

The newspaper Newsday on Nov. 27 reported that Joshua Lederberg, head of a U.S. scientific panel that earlier had denied any links between biological weapons and Gulf War syndrome, was a director of the American Type Culture Collection.

However, Lederberg, a Nobel

Prize-winning geneticist and former president of Rockefeller University, told The New York Times on Monday that the Pentagon had withheld key evidence from his panel, including the presence of chemical agents at the Iraqi bunker complex blown up by U.S. troops.

Lederberg said the disclosures mandate an intensified effort to determine whether low doses of nerve gas can cause long-term illnesses.

While the Nicolsons have specialized in microbiology and infectious illnesses for decades, it was their role as parents that first led them into the hunt for the source of Gulf War syndrome.

Their daughter, Sharron, served in Operation Desert Storm with the 101st Air Assault Division, which made the deepest penetration into Iraqi territory and from whose ranks many of the sick veterans have come, Nicolson said. She returned from the war with symptoms of Gulf War syndrome and has many friends who also became sick, Garth Nicolson said.

After compiling a database of common symptoms among ailing veterans, Nicolson said, he and his wife began to suspect the immediate cause was an unknown "mycoplasmic infection." Mycoplasmas, he explained, are small micro-organisms related to bacteria, some of which can aggressively invade blood cells.

Using a technique he calls "gene tracking," Nicolson in one study made a detailed analysis of the DNA structure of blood samples of several dozen sick Gulf War veterans. He found that 55 percent of the sample group were victims of an "invasive" mycoplasma that had "penetrated deeply into the patients' blood cells."

In analyzing the samples, Nicolson said, he discovered evidence of "genetic manipulation" of the mycoplasma that converted it from a relatively benign bacterium to "a much more invasive and pathogenic mechanism."

Preliminary surveys of veterans are turning up a possible pattern of infection linked to specific areas of the battlefield.

"The soldiers that were involved in the deep (attacks) in Iraq and those that were near Saudi and Kuwaiti Scud-B (missile) impact sites... may be at highest risk," Nicolson wrote in an article last May in The Townsend Letter for Doctors and Patients.

Antibiotics tailored to treat the mycoplasma have helped alleviate symptoms for many veterans, Nicolson said, but he noted that it is too early to know if the drugs will provide a permanent cure.

Joyce Riley, a civilian intensive care nurse in Houston and co-founder of the American Gulf War Veterans Association, said the group is remain-

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ing extensive reports from sick veterans who say their family members and even pets and domestic livestock also have become ill.

Riley, an Air Force Reserve captain, said she developed symptoms while on active duty in an Air Force C-130 unit during the war. But, Riley added, she did not even travel to the Persian Gulf; her air crew ferried sick and injured troops within the continental United States.

She said a former Special Forces soldier with 22 years on active duty told her last month that he called her group after military doctors could not explain why his wife and two children also were plagued with symptoms of Gulf War syndrome.

"I asked him, 'Did your pets die?'" Riley said.

"Yes," the soldier said. "How did you know?"

Riley said dead pets are common in reports the veterans association receives from the 20 to 30 sick veterans who contact it each day.

For the Nicolsons, perhaps the most startling information they have collected on Iraqi biological warfare turned up two years ago with a knock on their front door in Houston.

Nicolson said he and his wife were stunned to find an Iraqi army general standing on the doorstep. The middle-aged man in civilian clothes was sweating profusely as he handed Nicolson a letter in Arabic and introduced himself in fluent English.

"He said he was sick with the Gulf War illness," recalled Nicolson, who at the time was chairman of the Tumor Biology Department at the University of Texas M.D. Anderson Medical Center. "He wanted to talk about it to see what we knew about it." The Iraqi said he had learned of Nicolson through several of his articles in medical journals.

"He tested positive for this mycoplasmic infection," Nicolson said.

The Iraqi, who used an Iraqi diplomatic passport to travel quietly to Texas, told the Nicolsons that Iraqi President Saddam Hussein had deliberately released biological agents in southern Iraq.

"He told us there were at least 300,000 (Iraqis) dead and 1 million sick because of the release of chemical and biological weapons in southern Iraq," Nicolson said. Unofficial reports from medical colleagues at Mideast health research facilities indicate up to 25 percent of the populations of Kuwait, Jordan, southern Iraq and northern Saudi Arabia are experiencing Gulf War syndrome ailments.

"He (the Iraqi general) told us there were both chronic and acute biological agents used in the Gulf War," Nicolson said.

Mike Weber, a Fort Lewis-based soldier treated for tumors after serving with an Army unit that blew up the Iraqi weapons bunker complex now confirmed to have contained chemical agents, said recently that he recalled a radio news item picked up shortly before the ground war began. "The BBC reported Saddam Hussein threatened not only the soldiers in the Gulf but (also) their wives and babies as well," he said. "Maybe this is what he meant."

Help for Gulf War veterans



VA Puget Sound Health Care System, Persian Gulf Health Clinics:

VA Medical Center, Seattle
Dr. Stephen Hunt
(206) 762-1010, Ext. 1139
(206) 764-2140

American Lake-Medical Center, Lakewood

Dr. Testai Gabre-Kidan
(800) 581-8308
(206) 589-4058

Other sources

For civilian veterans: Information on medical exams, marital/family counseling, disability compensation, VA benefits programs — VA Persian Gulf Information Helpline, (800) 749-8387

For active-duty personnel: Defense Department Persian Gulf Hotline, (800) 796-9699

Reporting Gulf War incidents: For firsthand incidents affecting health, such as chemical agent attacks — Defense Department Incidents Hotline, (800) 472-6719

Washington Department of Veterans Affairs: General information on Gulf War health issues — (800) 562-2308, Rick Price

Internet sites and other organizations

GulfLink, official Defense Department information site for Persian Gulf War illness issues:
<http://www.dtic.dla.mil/gulfink>

Gulf War Veteran Resource Pages, volunteer, non-official home page clearinghouse for Gulf War health issues:
<http://www.gulfwar.org/index.html>

American Gulf War Veterans Association, new veterans activist organization:

3506 Highway 6 S., No. 117
Sugar Land, TX 77478-4401
Contact Dave Riddell or Joyce Riley
(281) 438-1699, office
(281) 587-5437, voice mail
(713) 438-4581, fax

Sources: Veterans Administration, Department of Defense and the American Gulf War Veterans Association

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detect biological war agents

Garth and Nancy Nicolson, who hold doctorates in biochemistry and biophysics, respectively, say a growing number of veterans and their families still are becoming sick in the years since the Gulf War ended.

Their research is supported by other experts.

Charles Hinshaw of Wichita, Kan., former president of the American Academy of Environmental Medicine, reviewed the scientific procedure Nicolson used to detect the genetically manipulated bacterium. Hinshaw said of Nicolson's work, "The scientific techniques used to identify the (bacterium) in these Gulf War veterans is valid."

Ed Hyman, a New Orleans-based specialist in kidney and urinary tract medicine who was cited by the Senate Banking Committee in 1994 for his work with sick Gulf War veterans, said that he, too, has found a bacterial link to Gulf War syndrome.

Hyman said he concluded that the ailments stem from a source that is either a bacterium that exists in the desert environment or a biological warfare agent.

"I think the best bet is (a bacterium) endemic to that region. The second-best bet is germ warfare," he said.

Hyman supported Nicolson's assertion that chemical agents such as sarin could not cause symptoms among family members of veterans.

"Once a person is damaged by sarin there's no way they can pass it on to their wife and children," he said of the veterans. "The Nicolsens are dead right about it."

The Nicolsens and Hinshaw also said they have received information from colleagues in the Persian Gulf region that the type of illness afflicting U.S. veterans is rampant among the civilian populations there, particularly in Iraq, Kuwait, northern Saudi Arabia and Jordan.

A survey of Iraqi health conditions published in March by the United Nations World Health Organization disclosed "an explosive

Common symptoms

■ These are the most common symptoms that occurred in a sample of 625 veterans from Operation Desert Storm diagnosed with Gulf War syndrome.

Aching joints	90 percent
Chronic fatigue	75 percent
Memory loss	73 percent
Sleep difficulties	72 percent
Headaches	70 percent
Skin rashes	60 percent
Concentration loss	59 percent
Depression	53 percent
Muscle spasms	52 percent
Nervousness	51 percent
Diarrhea	51 percent
Blurred vision	49 percent
Anxiety	49 percent
Breathing problems	49 percent
Chest pain	47 percent
Dizziness	46 percent
Nausea	42 percent

Source: "Chronic Fatigue Illness and Desert Storm," by Garth Nicolson, Ph.D., and Nancy L. Nicolson, Ph.D., 1995

rise" in the incidence of diseases in Iraq since the war, including cholera, typhoid, malaria and meningitis. The U.N. agency report attributes the health crisis to the deterioration of the medical system, breakdown in water and sewage treatment, and hardships caused

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Powell says allies 'nervous' over striking toxic-arms sites

THE ASSOCIATED PRESS

WASHINGTON — Allies expressed concerns about bombing biological weapons plants during the Persian Gulf War, but U.S. military commanders approved the strikes on the assurance toxins wouldn't spread over friendly troops, retired Gen. Colin Powell told lawmakers Thursday.

"This was a very difficult decision for us to make," Powell said at a Senate hearing on Persia Gulf War illnesses. "Some of my allied counterparts were a little nervous about us attacking these facilities."

In the end, based on detailed intelligence assessments of how such attacks might unfold, Powell, then the chairman of the Joint Chiefs of Staff, endorsed the strikes. President Bush then gave the go-ahead.

Strikes by U.S. and allied warplanes on Iraqi chemical and biological weapons sites in the 1991 war are part of a much broader inquiry into what may be causing the chronic illnesses afflicting thousands of Persian Gulf War veterans.

"Was it in fact a new type of, you might say, 'friendly fire' — our own bombings, our own demolitions, our own drugs, our own vaccines, our own chemicals inflicted on our troops by us that inadvertently resulted in terrible pain for a lot of people?" asked Sen. Jay Rockefeller, D-W.Va., ranking Democrat on the Senate Veterans' Affairs Committee.

Members of the committee who have sharply criticized the Pentagon's performance on the Persian Gulf War illness issue were careful to assure the popular general they were not criticizing him. Several referred to Powell as a hero. And after the hearing, members of the audience that included Per-



Associated Press

Retired Gen. Colin Powell, frustrated over lack of information from the government about how much was known during the Persian Gulf War on chemical exposures, tells a Senate committee Thursday, "If I was still in office, I would be raping and pillaging throughout the intelligence community to get to the bottom of this."

sian Gulf War veterans crowded around Powell to pose for snapshots.

Still, Powell's tone was at times defensive as, for example, when he explained the Pentagon's approval of the use of the nerve gas antidote pyridostigmine bromide even though it hadn't been approved by the Food and Drug Administration. Some sick veterans have speculated that the drug con-

tributed to their health problems.

"The suggestion that somehow I, as chairman of the Joint Chiefs of Staff, would sit in the Pentagon and approve the use of medicines for our troops that I knew at that time to be improper or injurious to our troops or put them at some risk is just not accurate," Powell said.

The Joint Chiefs had no intelligence reports that Powell could recall indicating that Iraq had stored chemical weapons at the Kamisiyah bunker complex in southern Iraq. The Pentagon now believes the site may have contained nerve gas shells at the time it was blown up in March 1991, just after the war, by an Army demolition team.

On the issue of airstrikes, Powell said that allied warplanes concentrated the campaign against Iraq's chemical and biological weapons facilities on targets in the northern half of the country, away from allied forces. In southern Iraq, allied warplanes concentrated on delivery systems such as artillery and rocket launchers.

But those planes could not always be sure what they were hitting, Powell said, especially in southern Iraq where intelligence on the whereabouts of Iraqi chemical weapons was sketchy.

"I cannot tell you, looking down on a satellite photo of a bunker, what is inside that bunker. And all the intelligence systems in the world won't tell you that," Powell said.

PHOTOCOPY
PRESERVATION

I - Gulf

me

Date: 04/24/97 Time: 14:40

GRResearcher: 'Considerable evidence' of Iraqi chemical weapons use

WASHINGTON (AP) Contrary to repeated Pentagon denials, Iraq may well have fired chemical weapons on U.S. and allied soldiers during the Persian Gulf War, a researcher who was fired from a presidential commission told lawmakers Thursday.

'Considerable evidence suggests that the Iraqi forces engaged in sporadic, uncoordinated chemical warfare during the Gulf War,' said Jonathan Tucker, now director of a chemical weapons nonproliferation project at the Monterey Institute of International Studies.

Testifying before a House committee, Tucker said the swift coalition victory in the Gulf, the breakdown of communications among Iraqi commands and a shift in the wind that would have blown poison gases back over Iraqi lines averted what could have been much larger-scale attacks.

Statements by intelligence officers and forward-deployed troops during the war, as well as operations logs and command chronologies, indicate that chemical weapons were, in fact, used, Tucker said.

In 1995 Tucker served on the staff of the Presidential Advisory Committee on Gulf War Veterans' Illnesses. As he became more skeptical of government explanations and went outside of official channels for more information, his superiors tried to stop his efforts, Tucker said, and eventually fired him from the staff. Until then, he testified, he had never received a negative performance review.

As the search for causes of the illnesses afflicting thousands of Gulf War veterans continues, Tucker's testimony represented the strongest suggestion to date that Iraq fired chemical weapons during the 1991 Gulf conflict. Among the evidence cited by Tucker:

Coalition intelligence forces intercepted Iraqi military communications indicating that Iraqi leader Saddam Hussein had authorized front-line commanders to use chemical weapons once the coalition offensive began.

Numerous military records recount chemical weapons detections by various sensors placed in the field by a coalition force keenly aware of the risk of such attacks.

A captured Iraqi military record provides what Tucker called circumstantial evidence that Iraq may have contaminated some of the burning oil wells with chemical agents. The document includes orders to Iraqi saboteurs to send a representative 'to receive the chemical preparations distributed to your units.'

Other Iraqi documents indicate the likelihood that chemical munitions were stored much more widely in Iraqi front-line areas than has been acknowledged by the Pentagon.

Earlier in the hearing before the House Government Reform and Oversight human resources subcommittee, Air Force Maj. Michael Donnelly, an ailing Gulf War veteran, said his assignment officers told him to expect that the bombing runs he made would take him over targets that included chemical weapons stores.

'The munitions we used against weapons facilities and the way that we bombed them was supposed to wipe the stuff out,' Donnelly said. 'From the evidence we have now, it obviously didn't do that.'

Donnelly speculated, though he cannot prove, that his F-16 fighter may have flown through plumes of chemical weapons thrown up by the air raids.

The Pentagon has said repeatedly that it can find no evidence that Iraq unleashed chemical weapons on coalition forces. That assertion has been backed up in recent testimony by retired Gen. Colin Powell, the former chairman of the Joint Chiefs of Staff, and retired Gen. Norman Schwarzkopf, the former Gulf coalition commander.

Bernard Rostker said the Pentagon is now devoting considerable resources to solving mysteries about what happened in the Gulf.

As for chemical weapons, the Pentagon investigation is focusing on the March 1991 destruction of an Iraqi weapons bunker at Kamisiyah, now believed to have contained nerve gas rocket shells. Of the 6,000 veterans contacted who were within a 31 miles of the demolition site, 300 have said they have some symptoms associated with Persian Gulf illnesses. These include nausea, fatigue, sleeping disorders and body aches.

The reason many veterans say there must have been wider exposure to chemical weapons than what was caused by the Kamisiyah operation is that thousands are reporting symptoms many of them soldiers who never were near Kamisiyah.

APNP-04-24-97 1453EDT

I - Sulfur

me

Date: 02/25/97 Time: 14:07

GCIA warned Army in 1991 of possible troop exposure to nerve gas

WASHINGTON (AP) The CIA warned the Army in 1991 that U.S. soldiers may have been exposed to nerve gas when they blew up an Iraqi weapons dump, but the Army failed to follow up, the Pentagon acknowledged Tuesday.

A mistake in identifying the Gulf War unit involved caused the matter to be forgotten for four years, the Pentagon said.

United Nations investigators found evidence that American troops may have been contaminated by chemical weapons during the destruction of an Iraqi weapons dump called Kamisiyah in southern Iraq in March 1991. The information was relayed to the Army by the CIA in November 1991, a Pentagon report said.

"U.S. intelligence became aware of the (U.N.) findings in November 1991, but at the time this report did not result in identification of which, if any, U.S. troops participated in demolition activities at Kamisiyah," the report said.

The Pentagon study contains portions of two CIA documents that have been placed on the Defense Department's World Wide Web site. Those documents show how clear the CIA warning was.

Much of the information contained in the Pentagon report was known previously, but it was the most detailed explanation to date of what happened at Kamisiyah and in its aftermath.

In recent months, the Pentagon has maintained that the intelligence warnings it received were not at all clear, and that they were faced with confusing and contradictory information.

For example, no one died or became seriously ill as a result of the demolition. The Pentagon study also says the Iraqis "were selective in their willingness to cooperate" in providing information about whether chemical weapons were at the site. This "led to the belief that the Iraqis were not telling the truth about chemical weapons being at the site when the demolition occurred," the report said.

Only last year did Pentagon officials acknowledge that more than 20,000 troops may have been exposed to sarin, a highly toxic nerve gas. And that came after a U.N. team revisited the site in 1996 and "conclusively identified debris ... that was characteristic of chemical munitions," the report said.

Because the Army did not follow up on the 1991 CIA report which contained a mistaken identification of the troops involved in the demolition the information was put aside for four years.

The two CIA reports were released earlier this month on the Defense Department site on the Internet.

One of the reports said U.N. investigators, inspecting a part of the Kamisiyah site, "littered with damaged and destroyed sarin-filled 122mm rockets."

A report also pointed out that the damage to the site could not have been done by U.S. aerial bombardment during the war but instead by U.S. soldiers on the ground given the discovery of an empty U.S. crate that contained charges used by American demolition teams.

The CIA report notes that the agency was sending information to the Army "in order to take appropriate action as you see fit as the risk of chemical contamination by 24th ID personnel is a possibility."

However, Pentagon officials have said the troops that conducted the demolition were the 37th Engineering Battalion, not the members of the 24th Infantry Division.

The Pentagon official in charge of the investigation into Gulf War illness issues, Bernard Rostker, said last week that a follow-up message seeking information went to the incorrect Army unit, and no further action was taken.

APNP-02-25-97 1415EST

Public & Private

ANNA QUINDLEN

Casualties Of War

Two baby boys, born many miles apart. Michael was apparently healthy except for the strange sweats that drenched his clothes and bedding. His mother thought of him as a fussy baby because he nursed so often, slept so little, and wanted to be held so much. He died in November, age five months. An autopsy showed a mitral valve defect that had caused his heart to swell several times its normal size.

Cedrick was born with spina bifida and hydrocephalus, missing an eye and an ear, his heart on the right side of his body, his trachea and esophagus connected. People gasped and turned away when they saw him in the cart in the supermarket. He is 2 and has had eight operations so far.

Two baby boys. What do they have in common? Both have fathers who served in the Persian Gulf. And therein lies a cautionary tale. It may turn out to be a story of chemical exposure and inadequate monitoring. But at the very least it illustrates how tenuous the credibility of the military has become on matters of occupational health. The rallying cry of those who believe the war in the gulf made soldiers and their dependents sick harks back to Vietnam, and the military's last large-scale effort at medical deniability. Over and over again they repeat, "Not another Agent Orange."

Michael's mother, Melanie Ayers, and Cedrick's father, Stephen Miller, both believe their sons are casualties of war. Ms. Ayers says that around Fort Bragg she knows of many miscarriages, several stillbirths and the unusual deaths of several babies, including a little girl born without a spleen and a baby boy with liver cancer. Mr. Miller, a nurse at an Army hospital in San Antonio, says he has been told that the syndrome that caused many of his son's problems is a product of either heredity or chemical or radiation exposure.

Did going to
the gulf make
soldiers sick?

He and his wife underwent genetic ing. Nothing.

Thousands of gulf war veterans themselves complain of a malady with various symptoms: persistent headaches, rashes, nausea, chronic fatigue and body aches, as though they have the worst sort of flu. Military doctors at first said their symptoms had nothing to do with the war. One man was told that his rash was age spots, his low red blood cell count a dietary deficiency, and his hacking cough a function of pollution. Others were told they were suffering from stress.

Soldiers think the answer is less mysterious. In the gulf they were given experimental drugs to combat nerve gas. Pesticides were applied to skin and uniforms. An Agriculture Department scientist, Jim Moss, has been working on research suggesting that the toxicity of the insect repellent DEET increases dramatically when combined with the nerve gas agent. Mr. Moss says he was told to drop the research; when he wouldn't comply, he was fired.

Kelli Albuck, whose husband is disabled with the symptoms of what is now called gulf war syndrome, testified before the Senate Committee on Veterans Affairs that she and other wives had developed pelvic infections and pain during sex because of semen so toxic that it causes irritation, even blistering for both husband and wife. "Shooting fire," the women call it. The Albucks, like the Ayerses and the Millers, have one healthy child, born before the gulf war. Since then, Kelli has had two miscarriages and given birth prematurely to a son with, among other ailments, cerebral palsy and spinal meningitis.

Congress recently allocated money for research into what's happening to gulf war soldiers. But the legislation specifies that the research must be farmed out to independent researchers, not done by the Defense Department. The reason is apparent: There is little confidence that the military can investigate itself, or that its conclusions would be believed.

"WHY ARE WE SICK?" read the headline on a chilling package of stories in The Air Force Times, which said that some soldiers were waiting to have children until the gulf war phenomenon had been adequately explained. And the military has some explaining to do. With warfare changing so radically, why has the Pentagon been unable or unwilling to deal quickly and convincingly with the possible effects of chemical contamination? Perhaps it will turn out that the war caused neither Michael's death nor Cedrick's birth defects. But one injury is certain, and that is the blow dealt to the military's credibility among many of its own people. □

LEVEL 1 - 1 OF 11 STORIES

The Associated Press

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December 8, 1994, Thursday, PM cycle

SECTION: Washington Dateline

LENGTH: 659 words

HEADLINE: Senator Blasts Military for Giving Gulf Soldiers Experimental Drugs

BYLINE: By CASSANDRA BURRELL, Associated Press Writer

DATELINE: WASHINGTON

BODY:

The military displayed reckless disregard for the well-being of U.S. servicemen and women by administering experimental drugs to them during the Persian Gulf War, Sen. Jay Rockefeller says.

The drugs may have caused the mysterious illnesses collectively known as Gulf War syndrome, and they probably did not protect soldiers against biological or chemical weapons, according to a 53-page report written by staff for the Senate Committee on Veterans Affairs, which is chaired by Rockefeller, D-W.Va.

"On far too many occasions, the Pentagon has shown a reckless disregard for the health and well-being of U.S. service members," Rockefeller said. "Soldiers who are exposed to dangerous substances without their knowledge or consent become veterans who do not receive the medical care and compensation to which they are entitled."

According to the report, the Pentagon did not get consent from many people taking the drugs because of a wartime waiver granted by the Food and Drug Administration. Even with the waiver, however, officials were required to warn everyone of the risk of the drugs, but they did not, the report said.

Some troops were threatened with punishment if they did not obey orders to take the chemicals, the report said. Many Gulf War veterans also were ordered to tell no one about their vaccinations.

Rockefeller compared use of the drugs during the Gulf War to gas chamber experiments involving sailors and soldiers in the 1940s, radiation experiments from the 1940s to the 1960s, LSD experiments in the 1960s and the testing of biological and chemical agents that continue today at the military's Dugway Proving Ground in Utah.

Pentagon spokesman Jim Turner declined immediate comment Wednesday, saying the department had not seen the report.

But the Defense Department has said the drugs were administered only after the Food and Drug Administration approved their use for the war.

The Associated Press, December 8, 1994

Although the drugs had not been approved for commercial marketing, they "were specifically allowed by FDA for the special military uses proposed by DoD. FDA allowed these uses because there was evidence they would be effective and no recognized alternative existed and because FDA thought the use would be safe," said Dr. Edward Martin - principal assistant secretary of defense for health affairs - during a committee hearing in May.

The most common symptoms reported by 150 servicemen and women surveyed by committee staff included fatigue, skin problems, memory loss, joint pain, headaches, personality changes, diarrhea, trouble with vision, shortness of breath, numbness, sores, bleeding and fever, the report said.

Some documents collected by the report's researchers suggest Pentagon officials understood the drugs' dangers before the Gulf War, "but these risks were ignored because of fear that Iraq would use chemical and biological weapons," said a statement from Rockefeller's office.

The report concluded that the Pentagon had no proof that the drugs were safe and effective when it provided them to troops in the Persian Gulf in 1990 and 1991 or to servicemen and women deployed to the gulf two months ago.

"There is no question that U.S. troops were not adequately protected when they were sent to the Persian Gulf, and the investigational drugs and vaccines that were meant to help them could have harmed them instead," Rockefeller said.

The report recommended the FDA deny Pentagon requests for informed-consent waivers during war or the threat of war.

It also recommended that Congress:

- Authorize a centralized database for all federally funded experiments involving human subjects.

- Require all federal agencies to declassify most documents on research involving human subjects.

- Re-establish a national commission to investigate potential human rights violations in federally funded research.

- Allow soldiers to sue the government for compensation if they are victims of inappropriate experimentation.

LANGUAGE: ENGLISH

LOAD-DATE-MDC: December 8, 1994

LEVEL 1 - 7 OF 11 STORIES

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USA TODAY

December 8, 1994, Thursday, FINAL EDITION

SECTION: NEWS; Pg. 3A

LENGTH: 471 words

HEADLINE: Report: Military knew risks of gulf war drugs

BYLINE: John Ritter

BODY:

The Pentagon knew the risks of experimental drugs and vaccines before the gulf war, but used them on troops anyway, says a Senate report out today.

The military ignored the risks, the report says, because of fears Iraq would use chemical and biological weapons.

Troops got no warning about the drugs' possible adverse effects, nor were they monitored afterward, the report says.

One drug, pyridostigmine bromide, was given in pills to 400,000 troops to protect them against nerve gas, even though military researchers weren't sure it was safe.

"These kinds of abuses must stop," says Sen. Jay Rockefeller, D-W.Va., Veterans Affairs Committee chairman. "The investigational drugs and vaccines that were meant to help gulf troops could have harmed them instead."

The report could support claims by troops suing the government over illnesses since the war. Vets report myriad symptoms now lumped together as gulf war syndrome: nausea, skin rashes, memory loss, joint pain, heart problems and liver dysfunction.

Troops were exposed to diesel fuel, depleted uranium, pesticides and oil fire smoke, but no cause or diagnosis for gulf syndrome has been accepted by the government.

The gulf war is just the latest instance of the military's apparent medical mistreatment.

"For at least 50 years," the report says, the Pentagon has "intentionally exposed" troops to potentially dangerous substances, often secretly.

In the 1940s, troops took part in gas chamber experiments. In the '50s, they were exposed to radiation. In the '60s, they unknowingly swallowed LSD.

Pentagon officials hadn't seen the report and had no immediate comment.

But in May, doctor Edward Martin, an assistant Defense secretary for health affairs, told Rockefeller's committee two drugs used in the gulf were approved for "the particular medical purposes" by the Food and Drug Administration.

USA TODAY, December 8, 1994

Martin said the drugs were given as "direct treatment" for biological and chemical warfare and not part of research.

Some gulf vets say they were exposed to chemical and biological agents, but the military says none were present.

Before the war, however, military planners were worried enough to authorize prevention. Besides pyridostigmine bromide, smaller numbers of troops got anthrax and botulism vaccines.

The report says pyridostigmine "may be more dangerous" combined with pesticides or other exposures, and the safety of botulism and anthrax vaccines hadn't been confirmed before the war.

"The studies were inadequate and insufficient in size to bring out health risks," says Tod Engsign of Citizen Soldier, a veterans advocacy group.

Joe Violante of the Disabled American Veterans says: "When the drugs weren't fully tested, when they didn't give troops the chance to make an intelligent decision, that's just unconscionable."

GRAPHIC: PHOTO, b/w, USA TODAY

LANGUAGE: ENGLISH

LOAD-DATE-MDC: December 09, 1994

LEVEL 1 - 9 OF 11 STORIES

The Associated Press

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December 7, 1994, Wednesday, AM cycle

SECTION: Washington Dateline

LENGTH: 587 words

HEADLINE: Senate Report Links Gulf War Syndrome to Vaccine

BYLINE: By CASSANDRA BURRELL, Associated Press Writer

DATELINE: WASHINGTON

BODY:

Vaccines given to U.S. troops during the Persian Gulf to protect them from possible chemical or biological weapons may be the cause of the mysterious illnesses collectively labeled "gulf war syndrome," Sen. Jay Rockefeller said Wednesday.

The Pentagon has concluded that no such weapons were used by Iraqi forces in the war. But if they had been, the drugs likely would not have protected the troops who were vaccinated, according to a 53-page report by the staff of the Senate Committee on Veterans Affairs, which is chaired by Rockefeller, D-W.Va.

The Pentagon did not get consent from many people taking the drugs because of a wartime waiver granted by the Food and Drug Administration. Even with the waiver, however, officials were required to warn everyone of the risk of the drugs but did not, the report said.

And it said some troops were threatened with punishment if they did not obey orders to take the chemicals. Many Gulf War veterans also were ordered to tell no one about their vaccinations, the report said.

Rockefeller compared use of the drugs during the Gulf War to gas chamber experiments involving sailors and soldiers in the 1940s, radiation experiments from the 1940s to the 1960s and LSD experiments in the 1960s.

"On far too many occasions, the Pentagon has shown a reckless disregard for the health and well-being of U.S. service members," Rockefeller said. "Soldiers who are exposed to dangerous substances without their knowledge or consent become veterans who do not receive the medical care and compensation to which they are entitled."

Pentagon spokesman Jim Turner declined immediate comment Wednesday, saying the department had not seen the report.

But last May Defense Department officials denied that the two drugs - Pyridostigmine and Botulinum toxoid - were used for experimental purposes.

The Associated Press, December 7, 1994

And in view of the risks associated with biological or chemical warfare agents and the lack of alternative treatments, FDA Commissioner David Kessler concluded that withholding the two drugs "would be contrary to the best interests of military personnel."

Pryidostigmine has been approved by the FDA since 1955 in treating neuromuscular diseases and has been stockpiled since 1986 as a pre-treatment for nerve gas exposure. Botulinum toxoid has been used for more than 20 years as a vaccine to prevent Botulism.

The most common symptoms reported by 150 servicemen and women surveyed by committee staff included fatigue, skin problems, memory loss, joint pain, headaches, personality changes, diarrhea, trouble with vision, shortness of breath, numbness, sores, bleeding and fever, the report said.

Some documents collected by the Senate panel's researchers suggest Defense Department officials understood the drugs' dangers before the Gulf War. "But these risks were ignored because of fear that Iraq would use chemical and biological weapons," said a statement from Rockefeller's office.

The report recommended the FDA deny Pentagon requests for informed-consent waivers during war or the threat of war.

It also recommended that Congress:

- Authorize a centralized database for all federally funded experiments involving human subjects.

- Mandate all federal agencies to declassify most documents on research involving human subjects.

- Re-establish a national commission to investigate potential violations of human subjects' rights in federally funded research.

- Allow soldiers to sue the government for compensation if they are victims of inappropriate experimentation.

LANGUAGE: ENGLISH

LOAD-DATE-MDC: December 8, 1994

I- GOLF WAR

AN ENEMY WITHIN

Gulf War vets face a medical mystery: the birth defects threatening many of their children



◀ U.S. troops were prepared, but experts say Iraq used no biological or chemical weapons.

"The doctors are amazed at what he can do with his hands," says Connie Hanson of son Jayce (nuzzling her, below, and at right).



HE IS, IN HIS WAY, A MARVEL—living proof of human adaptability and spirit. Two-year-old Jayce Hanson has no arms, yet he carries books and toys, balancing them against his body with tiny hands attached by joints to his shoulders. His legs are so bent and twisted that he cannot walk, but he can shimmy on his rump, back and forth along the floor, almost as fast as

most children move on their feet.

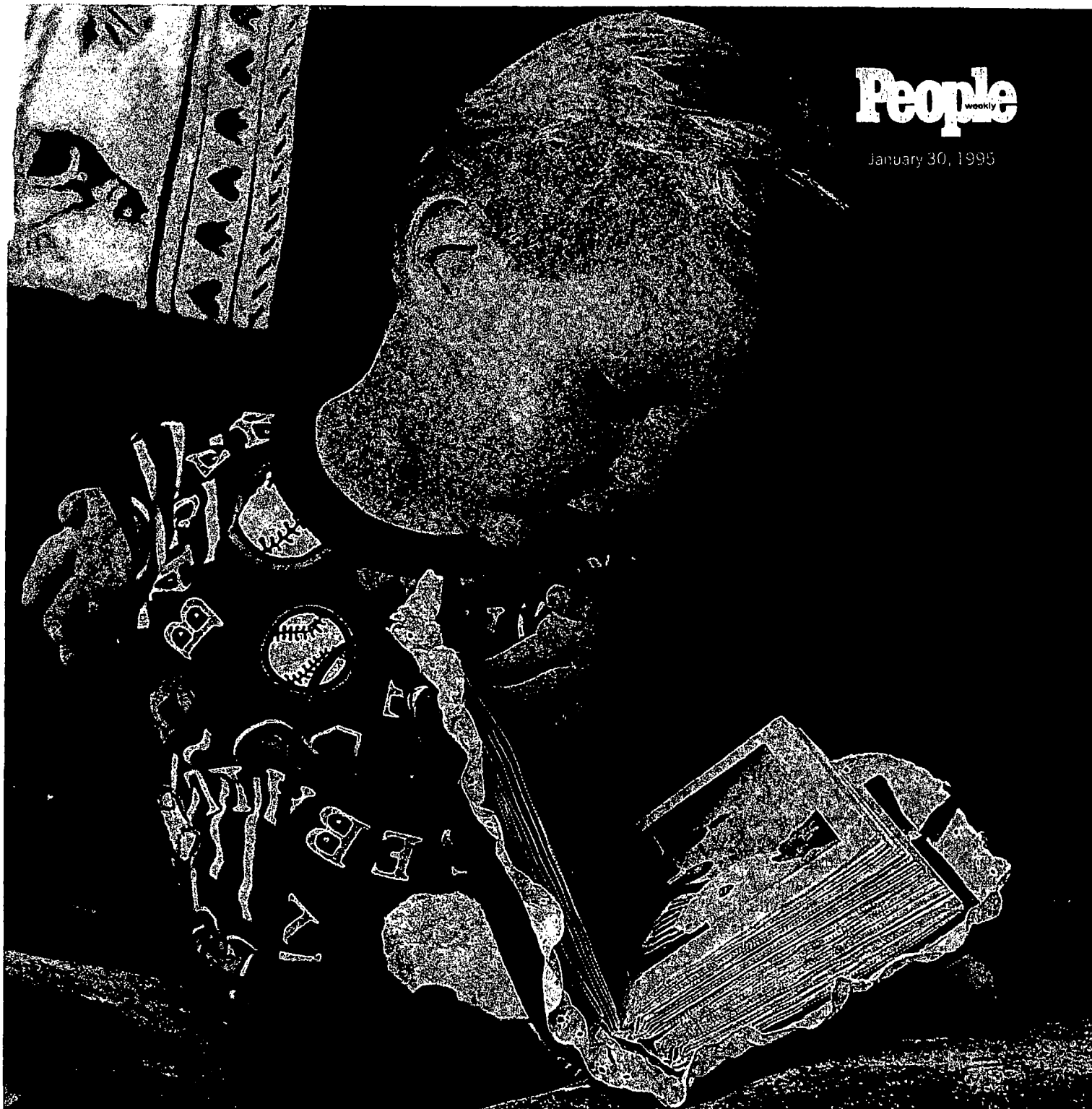
Jayce has been diagnosed with a genetic disorder known as TAR syndrome. Typically passed down by both parents, TAR stands for thrombocytopenia (a reduction in the number of platelet cells in the blood) and the absence of radius, or bone, in the arms or legs. Jayce has one of the more severe forms of this rare condition and a hole in his heart. Jayce's sister Amy, 4, had been born without the disorder.

But when Jayce was born so profoundly handicapped, surprised physicians asked his mother whether she had been exposed to any chemicals. "I said, 'No,'" recalls Connie Hanson, 30, a tall Virginian with a gentle kind of grace, "but my husband was—in the Gulf War."

Jayce's father, Paul, 31, an Army sergeant now based at Fort Bragg, N.C., was a combat engineer stationed along the Kuwaiti border with Iraq. Now he shares a common bond with dozens of other par-



January 30, 1995



ents who served in the Gulf War. Though the parents themselves have shown no symptoms of what has come to be known as Gulf War syndrome, they have had children with profound afflictions and nearly surrealistic deformities. So far no one has been able to prove—or disprove—whether the war was somehow to blame. But activists suspect that oil-fire fumes or experimental drugs like pyridostigmine bromide (a nerve-gas antidote known as PB, which was given

to soldiers) might have caused genetic mutations in soldiers' reproductive systems that may cause birth defects.

Like many of his counterparts, Paul Hanson has shown no GW symptoms—none of the inexplicable diarrhea, chronic fatigue, headaches, joint pain, rashes, memory loss or tremors. Moreover he and his wife are reluctant to blame his tour for Jayce's defects—at least before all the facts are in.

"I want Jayce to look back and be very

happy that his daddy served in Desert Storm," Connie says. Still, she concedes, "I would just like more research to be done, for the sake of future wars and for Jayce. So he knows whether he could have a child or not." Beyond that, she says with stoic resolve, "the government can't give him back his arms and legs. You just have to deal with it."

Other parents, though, feel certain that the Gulf War somehow left their children deformed. One-year-old Aman-

Photographs by Christopher Little/Outline

PHOTOCOPY
PRESERVATION

da Miedona of Chicago Ridge, Ill., suffers from microcephaly. Her head, which measures about 12 1/4 inches in circumference, is about one-third smaller than normal. "I can palm it," says her father, Troy, 24. "It's like holding a softball."

For her mother, Amanda's birth was a shock. "I thought, 'My God, is she ugly!'" recalls Michele Miedona, 22. "I kept calling her Troll Baby. She had so much black hair, and it just stuck straight up. Her eyes were on top of her head. Now that her head has rounded out and grown, she has beautiful features."

According to Dr. Peter Huttenlocher, a pediatric neurologist at the University of Chicago Medical Center who examined Amanda, her defect is a consequence of Seckel syndrome—a rare recessive genetic disorder that, if carried by both parents, commonly results in dwarfism or retardation. The Miedonas will undergo genetic tests to determine if they could be carriers. But Michele and Troy have other ideas about Amanda's condition. "There is no doubt that it was caused by the Gulf War," says Troy, now a chemical-company production operator.

Miedona served in the gulf as a helicopter crew chief and took PB pills, as well as a variety of injections, none of which fazed him at the time. "We did what we had to do," he says. But from the time he returned to the U.S. in February 1992, Miedona found himself ill almost constantly. "I vomited a couple of times a day for six months," he says. "I gained and lost 20 pounds in two days." Though he no longer vomits, his weight still fluctuates wildly, and he is still plagued with constant nausea.

In September 1992, eight months after his return, he and Michele married, and by the following May, Michele was pregnant. It was after a second ultrasound that her obstetrician told her about Amanda's small head, adding that only a chromosome-mapping test could determine whether the child would survive beyond birth. "My face turned beet-red, and my heart was beating louder than the doctor's talking," Michele remembers. "I was beyond crying."

Preparing for the worst, Troy suggested registering Amanda as a potential organ donor. But when the chromosome mapping showed no irregularity, Michele says, "I told the doctor, 'I don't want her organs promised to anyone because I think she is going to live.'"

And she did. But if Dr. Huttenlocher

"We are making her the happiest baby we can," says Michele Miedona (with husband Troy and Amanda, above). Adds Troy (below, in Iraq in 1991): "I've been sick, and I have a baby who is deformed—that's enough to convince me it was caused by the Gulf War."

has it right, Amanda's future is fraught with obstacles. The doctor has predicted that she will be hyperactive, slow in learning and in developing motor skills and that she might grow to be only three or four feet tall. Undaunted, the Miedonas have worked strenuously, with some early success, to help develop her dexterity. "We are attached to her in all meanings of the word," says Michele.

Adding to the Miedonas' concern is a recent blizzard of conflicting reports on GWS. A Pentagon study led by Nobel laureate geneticist Joshua Lederberg found "no scientific or medical evidence" that U.S. servicemen and women were exposed to any Iraqi chemical or biological agents in the Persian Gulf. And Dr. Gareth Green of Harvard University, who chaired a National Institutes of Health panel on the Persian



TARO YAMASAKI



COURTESY MIEDONA FAMILY



Gulf War's effect on soldiers' health, concurs. "We didn't find data to support any direct connection between the veterans' wartime experience and health effects on them and their children," he says, but the panel recommended that additional studies be conducted into the various afflictions. Moreover, Dr. Robert Roswell, head of the Persian Gulf Veterans Coordinating Board, says that the 3.3 percent incidence of birth defects among 29,000 vets surveyed is similar to those found in the general population.

But a report issued last month by the U.S. Senate Committee on Veterans' Affairs, then chaired by Sen. Jay Rockefeller (D-W.Va.), counters that experimental drugs—chiefly PB tablets and vaccines—were given to soldiers with no caveats about side effects. Such medications, the report asserted, might well have depressed immune systems and wrought genetic havoc.

Among the 150 veterans who were interviewed by the Rockefeller committee was Steve Miller, 35, a U.S. Army nurse at Fort Sam Houston, Texas. Miller's son Cedrick is a victim of Goldenhar syndrome, a rare and sometimes fatal disorder. Cedrick also has an extra chromosome. As a result, he was born hydrocephalic, with excess cerebrospinal fluid pressing dangerously on his brain. His spine was abnormally

curved, and his left ear and eye were missing. The left side of his jaw was smaller than the right, and he had only partial use of his thumbs. Also, Cedrick's heart was on the wrong side of his body—and his trachea and esophagus were attached to each other, which would have caused severe eating and breathing problems if the condition had been left uncorrected. "I wasn't sure if I should hope Cedrick lived or mercifully died," says his mother, Bianca, 25.

Both Miller and his wife have normal chromosomes—and have, in addition to Cedrick, a perfectly normal daughter, Larissa, now almost 5. Neither Steve



COURTESY MILLER FAMILY



ANN STATES/SABA

Steve Miller (above, with healthy daughter Larissa, 4, and with Cedrick and wife Bianca, left) doubts the government will admit that Gulf War hazards might have affected veterans' children. "It took years for them to say that Agent Orange causes cancer," he says.

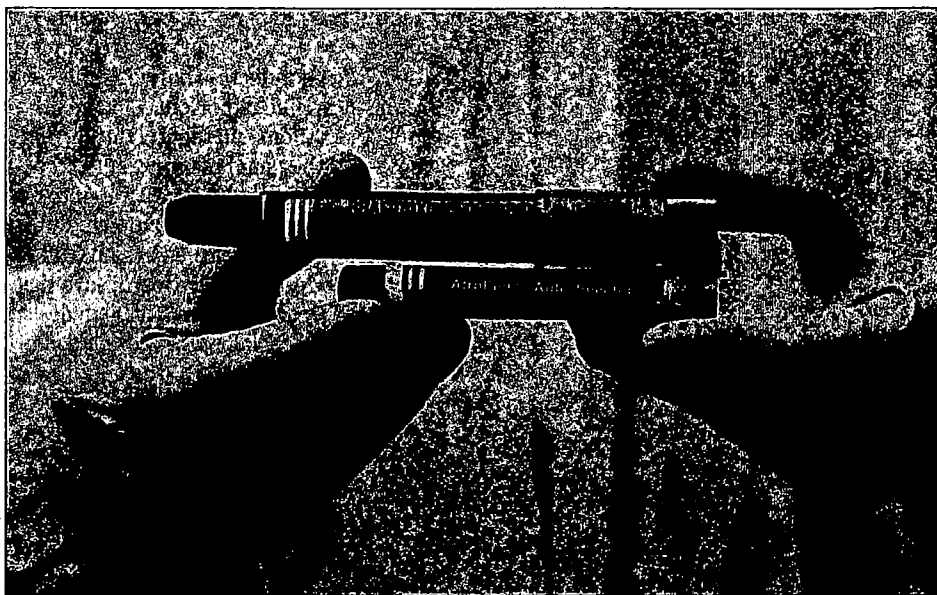
nor Bianca used drugs nor had they routinely been exposed to toxic chemicals—with one exception. While serving as a medic in the Gulf War, Miller had taken a number of PB tablets. “The Army did not tell the troops that they were experimental,” he says of the drugs. He believes the military had an obligation to do so. “I accept that I can get shot,” he says. “I enlisted. But Cedrick and Bianca didn’t.”

Cedrick, now 3 and only 20 lbs., has made remarkable progress. Surgery freed his windpipe and a shunt was inserted in his brain to drain excess fluid into his lower body. On the bleaker side, he has had enormous difficulty keeping down his food. It took Bianca a year and a half to get him to swallow a tablespoon of yogurt, and as an infant he needed to take most of his meals through a feeding tube. Cedrick will need at least five more corrective operations. Understandably, the Millers believe that the government should compensate parents for the care of GWS children—though the government has not conceded that such children exist. “If someone had sat down with us when Cedrick was born and said, ‘We are really sorry about what happened, and the government wants to correct it,’” Steve says, “we would have been perfectly happy. But it has been flat denials all the way.”

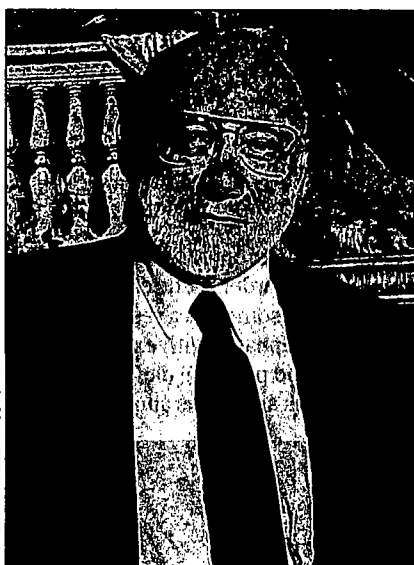
For the veterans and their families, perhaps the most frightening aspect of what has happened to them and their children is not knowing *why* it has happened. “They need answers now,” says Betty Mekdeci, founder and director of the Association of Birth Defect Children in Orlando, whose organization is surveying affected Gulf War families for defects their kids have in common. “They have to know whether it is safe for them to have more children.”

A similar conviction roused Melanie Ayers of Fort Bragg to activism. Her 5-month-old son, Michael, was dark-haired, like her husband, Glenn, and, though sickly, appeared otherwise normal. But one November night at around 3:00 a.m., his handsome features contorted as he awoke with a cry. Though his legs and arms were cold, the rest of his body was soaked in sweat. Minutes later, in his parents’ car on the way to the hospital, he died.

Michael’s killer, an autopsy showed, was an undiagnosed heart deformity, which had caused the mitral valve to



GARY BOHNSKY/SCMA



MICHELINE PELLETIER/SCMA

◀ “There was nothing we could pin down,” said Joshua Lederberg, who sought a cause for the syndrome.

▲ A number of experimental drugs and vaccines were administered to U.S. soldiers, both by pill and injection.

swell to 10 times normal size. The boy was one of 14 children of Gulf War veterans—10 of them at Fort Bragg—who have died in infancy of various causes.

“The government keeps talking about how ‘mysterious’ this is—and it’s a load of rubbish,” says British-born Melanie, 29. “If this were *E. coli* or something, this place would be a federal disaster area. But we now have 14 dead babies—and what are they doing?”

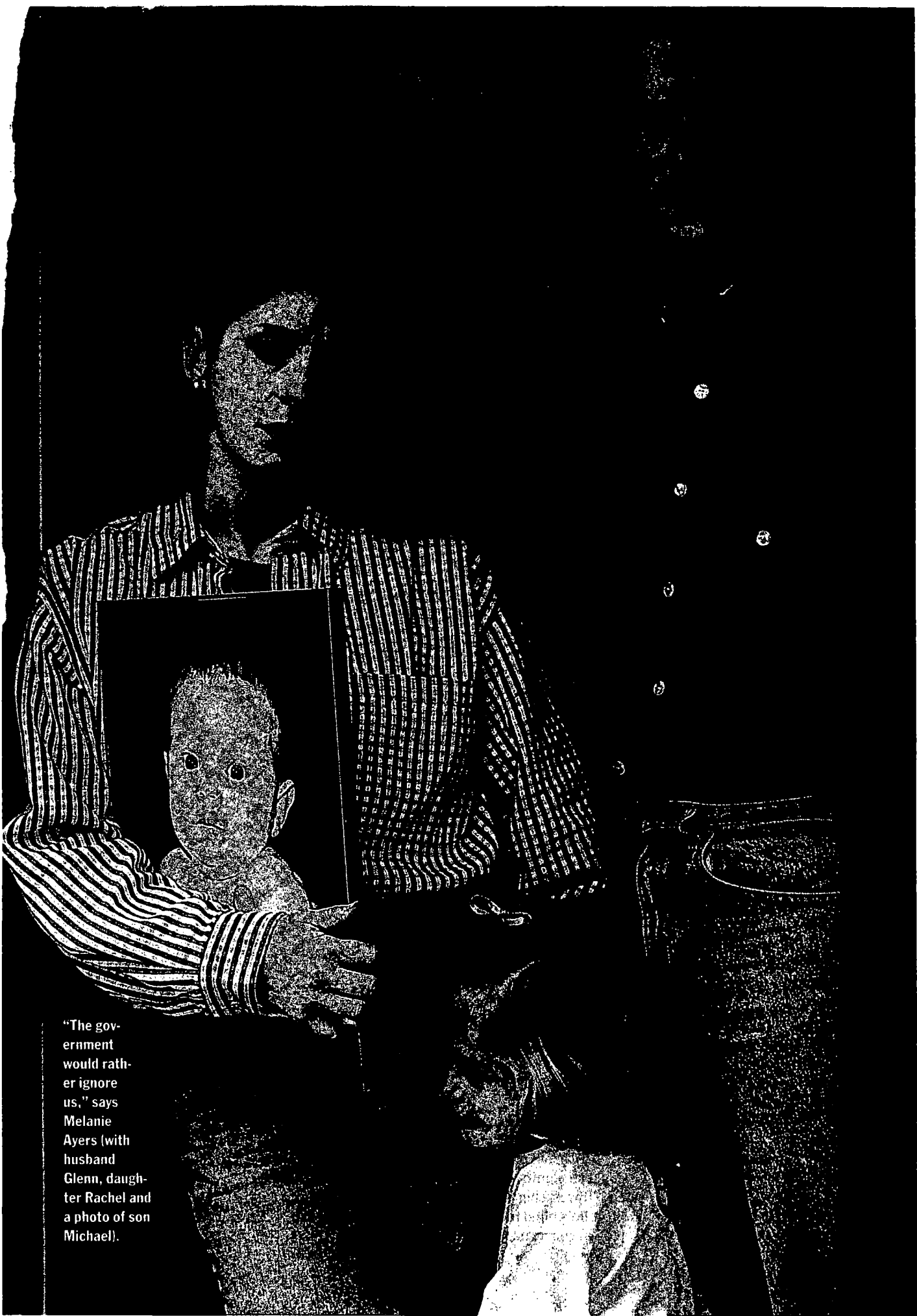
Poised and articulate, the homemaker is now a zealous crusader. As one of the leaders of an informal “Gulf War babies” information network, she has spent hours fielding phone calls and letters from veterans and their families. Most have agonizing stories to tell: of the stillborn baby whose stomach and esophagus were not connected; of a girl born with red and yellow lesions

covering her body; and of little Matthew Sullivan, 10 months old, who died in his crib of primary liver cancer, a disease more often associated with aging alcoholics. “All these kids had in common,” Ayers says, “was a daddy who went to the gulf.”

Glenn Ayers, 33, an Army major now stationed at Fort Bragg, was a battery commander who received a 10-week dosage of PB pills. Though he has displayed none of the common GWS symptoms, his wife suspects he may be harboring toxins in his body. “The obvious thing is to test my husband for exposure to radiation and chemicals,” says Melanie. “If there’s something wrong because of the war, don’t you think we should know? And if it’s genetic, there’s even more reason to know, before we try having more children.” Married in 1987 after meeting in Korea, where Glenn was stationed and Melanie was touring with a British dance company, the Ayerses have one surviving child, Rachel, 3, who is not untouched by the grief around her. “She and her friends play dolls—but all the ‘babies’ die,” Melanie says sadly. “They think that’s what babies do.”

■ RICHARD JEROME

■ GIOVANNA BREU in San Antonio and Chicago Heights and KATE McKENNA in Washington and Fort Bragg



"The government would rather ignore us," says Melanie Ayers (with husband Glenn, daughter Rachel and a photo of son Michael).

PHOTOCOPY
PRESERVATION

AM-Mrs Clinton-Vets,630

First Lady Says Gulf Veterans Are An Administration Priority

By SANDRA SOBIERAJ= Associated Press Writer=

WASHINGTON (AP) Breaking down in tears, retired Army Maj. Debra K. Stanislawski told Hillary Rodham Clinton about the chronic fatigue and headaches that set in even before the end of her five-month tour in the Persian Gulf War.

And retired Army Cpl. Kurt Kruedelbach said swelling in his joints rendered his hands useless and forced him to quit the police force.

"I have no answer for it," he told Mrs. Clinton, who sought Thursday to reassure Persian Gulf War veterans of President Clinton's interest in the research and compensation issues surrounding their mysterious illnesses.

"He asked me to spend some time looking into the concerns of Gulf War veterans and file a report on what we're doing, and what we have left to do," Mrs. Clinton told five veterans who had assembled at the Veterans Administration Hospital to detail their unexplained symptoms since serving in the 1991 war against Iraq.

"I can't carry on light conversation and, driving in a car, I get overloaded with too much information. I get confused and I get lost," said Col. Herb Smith. Smith, who served as a veterinarian in the Persian Gulf for four months, said doctors diagnosed him with bilateral destruction of the inner ear and various neurological disorders.

"These are highly skilled people charged with making life-and-death decisions," said Veterans Affairs Secretary Jesse Brown. "It would be absurd to say the problems these people are having are just in their minds."

Of the 697,000 men and women who served in the Persian Gulf, some 40,000 have listed health concerns with a VA registry established in 1992. But researchers have been unable to pinpoint what's caused the mysterious illnesses, grouped together and called Persian Gulf Syndrome. Because VA disability compensation requires a direct link between the illness and military service, it took special legislation to authorize payments to Gulf veterans.

That compensation program was fully implemented Feb. 3, almost four years after the war ended.

"We're doing all we know how to do but it's not a very satisfying feeling," said Mrs. Clinton. There are still anguishing questions about how exposure to chemicals, pesticides, biological agents and oil fires has affected Gulf veterans and their families. And, answering those questions will be vital to future military engagements, she said.

The president's budget request for fiscal year 1996 would increase Gulf Syndrome research by \$5 million to \$257 million, according to Brown.

Mrs. Clinton, who last year led her husband's ambitious campaign to overhaul the health care system, appears to be carving out a smaller, more easily managed slice of this year's health debate. Earlier this week, she visited a local hospital to underscore the importance of mammograms for older women.

"It's all part of her ongoing advocacy of health care issues," said press secretary Lisa Caputo. "As the president said in his State of the Union address, he's going to submit health care reform, but it's going to be in a step-by-step, incremental approach."

Before heading into Thursday's meeting, Mrs. Clinton charmed a group of patients in the hospital lounge. In a brief visit, she gave each of the men most of them in pajamas and wheelchairs a smile, a handshake and a long-stemmed red rose, thorns removed.

"I couldn't get here on Valentine's Day, so the roses are a little late," said Mrs. Clinton.

"You look as beautiful as ever," gushed Mark Simonson, 38, who later described himself to reporters as a Republican who rarely agrees with the first lady's views.

"I've seen you on TV on the news," said Donald Jones, 59.

Mrs. Clinton laughed. ``Well don't hold that against me.''

**** filed by:APE(--) on 02/16/95 at 16:12EST ****
**** printed by:WHPR(JEL) on 02/16/95 at 16:39EST ****

I-Gulf War Disease
C. Sandy B.
Melanne ✓
Kitty Higgins
fyi
MRC

BC-VETS-EDITORIAL op-ed:PD

U.S. should take care of Persian Gulf veterans

Knight-Ridder/Tribune News Service

(c) 1994, Philadelphia Daily News

The following editorial appeared in the Philadelphia Daily News on Friday:

X X X

Military doctors refuse to acknowledge that Persian Gulf War veterans are suffering from a mysterious malady.

This is nothing new, of course.

Military and Veterans Affairs Department doctors also denied that Vietnam veterans were suffering from exposure to Agent Orange.

So President and Hillary Rodham Clinton deserve praise for championing the cause of Gulf veterans before the court cases, protests and exposes force the government to take responsibility for them.

Tens of thousands of veterans report unexplained muscle pain, respiratory and heart problems, hair loss and memory loss.

No one knows what happened to them over there. They may have been exposed to some horrifying chemical concoction or mutant germ dreamed up by Saddam Hussein.

Whatever the cause, their government should pay for their health care and try to get to the bottom of their illnesses.

Philadelphia Daily News

**** filed by:KR-F(--) on 02/27/95 at 08:47EST ****

**** printed by:WHPR(JEL) on 02/28/95 at 08:20EST ****

PHOTOCOPY
PRESERVATION



THE PHOENIX

Volume Two, Number Three

March 1995



Next Meeting: 15 March 1995

Our next meeting will be held on Wednesday 15 March at 7:00 p.m. at VFW Post 2681, 140 Powers Ferry Road, Marietta. From Interstate 75, take Exit 112 and go East toward Roswell. Drive one block East and go left (North) onto Powers Ferry Road. The post is located on the left. Food items are available at the post. Meetings are scheduled for the 3rd Wednesday of each month. We look forward to seeing you there.

GEORGIA NEWS

"Welcome Home" New Members

We extend our "Welcome Home" to Dan Fahey, David E. Nowack, Roland Clemente, John Crowe, David C. Lee, Tad Leeds, John Chavez, Kenneth J. Stephens, Fred Willoughby, and Paul E. McInnis. We must have a copy of your DD214 (Copy 4 - Member) documenting your service on file. Once your DD214 and \$10.00 in annual dues are received, your membership certificate will be mailed to you. We now have 65 members!

We thank Gulf War Veteran Dan Scheidel, one of our founding members, with his generous contribution this month. We thank the Tides Foundation, the Toxic Times, Kenneth J. Stephens, and Paul E. McInnis for their support as well.

GWVG Elections in March

Nominations for elected officers were made during our February meeting. Elections will be held during the 15 March 1995 meeting.

Those nominated were: President, Paul Sullivan; Vice-President, Brian Atkinson; Treasurer, Dan Gardner; Secretary, Susan Atkinson. Members are asked to attend and cast their ballots at the March meeting.

Statement of Goals

The GWVG is an incorporated, non-profit veterans service organization. Our number one goal is to promote the health and welfare of soldiers who served in the Persian Gulf War.

We assist veterans with casework and referrals for claims assistance, medical treatment, readjustment counseling, and employment. We publish a monthly newsletter, "The Phoenix", and we conduct research into the causes of our illnesses.

We were not able to secure a permit to raise money in February. Therefore we are asking members and non-members to contribute. We raise money so we may assist each other with a self-help guide and with case work.

Please send in your tax-deductable contribution today so we may continue our efforts on behalf of the estimated 60,000 who need our assistance.



Gulf War Veterans of Georgia Join Unity Conference in Dallas

March 10-12

More than thirty Gulf War veteran groups from America and England have been invited to attend our first-ever national conference. Three members of the Gulf War Veterans of Georgia, Paul Sullivan, Brian Atkinson, and Dan Gardner, have arranged to attend this important organizational event. Marvin Myers, the President of the Georgia Vietnam Veterans Alliance, is also scheduled to attend. The members who are going will make a report about the conference at our March meeting.

The meeting is designed to allow Gulf veteran groups to network, share information, obtain the latest medical research, and learn about the recent developments regarding chemical weapons exposures and the chemical agent lawsuit. Groups are strongly encouraged to attend.

Gulf War veteran groups interested in attending should contact the Gulf War Veterans of Georgia or the Persian Gulf Veterans of Colorado to notify us you are attending. Please make hotel arrangements as soon as possible at the Holiday Inn in Irving, Texas at 214-399-1010. Rooms are \$55.00 per night, and a package of five meals provided by the hotel will cost \$50.00.

The conference was organized by the Persian Gulf Veterans of America, the California Association of Persian Gulf War Veterans, the Persian Gulf Veterans of Colorado, the Gulf War Veterans of Massachusetts, the Gulf War Veterans of Georgia, the Desert Storm Justice Foundation, the Operation Desert Shield/Storm Association, the Desert Storm Veterans Coalition, and the National Veterans Legal Services Program.

Vietnam War Memorial

The Roswell Vietnam War Memorial Committee will dedicate the "Faces of War" monument on Memorial Day, which will be observed on Monday, 29 May 1995 at 9:03 a.m. Gulf War Veterans and their families and friends are invited to attend.

Atlanta Vet Center Information

The Vet Center offers free readjustment and family counseling to veterans and is located at 77 Peachtree Place in midtown Atlanta. Call 404 347 7264 for free help any time.

NATIONAL NEWS CONT.**Clintons Meet With Gulf War Vet**

President Bill Clinton met with an ill veteran of the Gulf War in the White House on 22 February 1995. The same day, Hillary Clinton met with ill Gulf veterans at Walter Reed Army Medical Center.

These new, public developments show an increasing awareness of this complex issue by the White House and the Clintons' personal staffs. According to the Associated Press, President Clinton said, "When they are sick, we must do what is right. I felt we could not wait on science ... we must not and will not give up," he told ill veteran Michael Sills, who visited with Clinton in the Oval Office.

Actions by First Lady Clinton demonstrate she may be supportive of ill veterans fighting for recognition of our illnesses. She told reporters at Walter Reed that, "We want to make sure that every possible idea that anybody has is reported and investigated."

Veterans are encouraged to write directly to the White House and express their concerns about the lack of prompt medical treatment by VA doctors and the lack of cooperation by the DoD regarding the causes of the illnesses. The White House address is: 1600 Pennsylvania Avenue, NW, Washington DC 20500.

VFW Releases Study

In January, the Veterans of Foreign Wars issued a report critical of how the government is handling the issue of Gulf War Syndrome. The report, prepared by Mark Fox, a VFW legislative assistant, stated that, "a frustrating lack of data has accompanied the attempt to resolve this crisis since day one. Whether the result of a deliberate junta, or unintended ineptitude, the inability to gather or provide information relevant to a solution has been an enigma."

Specifically, the VFW report showed that 76% of those responding to a VFW survey claimed they were ill. Of those ill, 78% claimed they were exposed to the oil well fires. Of those ill, a staggering 30% claimed they were personally exposed to chemical and biological warfare agents during the Gulf War. The VFW report also cited parasitic infections and exposures to depleted uranium as affecting many of those surveyed.

The VFW found that 46 percent of those surveyed were not on the DoD or VA Gulf registries. This may result from a lack of information about the registries and/or a lack of trust in the VA and DoD.

The VFW concluded that the number claiming chemical exposure "demands that it be treated as a viable possibility." They also concluded that "Gulf War veterans are becoming ill at an alarming rate." Furthermore, "There appears to be some correlation between the illness and military branch as well as current location."

Gulf War Veterans are encouraged to contact their local VFW post and ask to speak about the illnesses. Call Mark Fox at the VFW at 202-543-2239 for a copy of the report and bring it with you.

INTERNATIONAL NEWS**UK Leader Rejects Illness Inquiry**

According to press reports from England, on 31 January 1995, British Prime Minister John Major formally refused to launch a probe into the illnesses affecting as many as 3,500 British veterans of the Gulf War.

The Prime Minister was asked to conduct the probe by Tom Clarke, the ranking Member of Parliament from the Labour Party. Clarke stated that England had a "moral responsibility" to investigate the issue. Clarke said the U.S. government recognized illnesses. Clarke is correct, as the VA has established new regulations that take into account undiagnosed illnesses.

English journalists are now taking this issue seriously. A newspaper headline in the Guardian newspaper in London stated that "Gulf Syndrome Kills Babies." Another headline in the Independent said "Tories Urged to Accept Gulf War Syndrome." The Tories are the party led by Prime Minister Major.

However, Major, responding to the request made by Clarke on the floor of Parliament, claimed "medical research has so far found no evidence of Gulf War Syndrome." Unfortunately, the British government has not yet conducted any research (or issued any reports of such research).

England does not have a Freedom of Information Act and veterans in England have not been able to obtain military documents regarding chemical weapons use, as the British Ministry of Defence cites national security concerns.

Vets in UK Open Office

On 1 February 1995, the Gulf Veterans Association established an office. Their address is c/o SSAFA Offices, 5th Floor, MEA House, Ellison Place, Newcastle Upon Tyne, England. Their phone number is 011-44-191-230-1065, and Denise Parker will staff the office from 10 a.m. until 2 p.m. Monday through Friday. Hillary Jones, a member of the Association, will participate in the National Conference scheduled for Dallas on 10 March. Jones was a Major in the British army and served as a nurse during the Gulf War.

Reference List of Exposures

The known types of exposures are: biological + chemical warfare agents, oil well fire smoke and gases, untested pyridostigmine bromide pills, pesticides, investigative anthrax and botulism vaccines, illnesses from sick Iraqi refugees and prisoners, radiation from depleted uranium, contaminated food and water, fine sand, and insect bites. If you were exposed to one of these, be sure to list it on your Gulf Registry exam, your VA claim, or during a visit with your private doctor.

DoD Continues Chemical Agent Cover Up

by Paul Sullivan, President
Gulf War Veterans of Georgia

Bronze Stars, Purple Hearts, and as many as 60,000 sick and dying Veterans. These point toward the use of chemical and biological agents during the Gulf War in 1991. If nothing else, the high number of ill veterans indicates there is a serious health problem. However, the Department of Defense denies chemical agents were present and they refuse to release most documents.

To date, the evidence of public record paints a convincing picture of chemical warfare agent usage by Iraq during the Gulf War. Not every soldier who served was exposed. However, based upon a review of the factual, verified evidence, chemical warfare agents were discovered and exposures took place in limited locations at specific times.

Reports before, during, and after the Gulf War showed that chemical agents were sold to Iraq between 1985 and 1990. Now the Gulf War Veterans of Georgia has obtained DoD documents establishing that chemical agents and munitions were present during the Gulf War in Kuwait and Iraq. These documents, when cross-referenced, independently verify each incident and point to a DoD cover-up regarding these incidents.

Unfortunately for ill veterans, the DoD has not provided any information to refute any of our evidence. The DoD said they have evidence, but they still refuse to release it. The DoD has also refused to release money earmarked for the study of possible bacterial infections related to service in the Gulf War.

Veterans can decide for themselves who is telling the truth. Here is an outline of the current evidence regarding the use of chemical agents by Iraq:

1) In September 1993, an active duty Marine (Randy Wheeler) was diagnosed by military physicians as "exposed to ... at least two biochemical agents ... during Operation Desert Storm." In September 1993, a VA Doctor diagnosed a veteran (Roy Morrow, Jr.) with "Exposure to toxic material, chemical and/or biologic in Gulf." In October 1993, a VA doctor diagnosed another veteran (William Kay) with "Persian Gulf Syndrome and Chemical-Biological warfare exposure." According to a VA doctor, there are dozens more similar chemical warfare agent diagnoses. The VA and the DoD have not rescinded these diagnoses.

2) In May 1994, U.S. Senator Donald Riegle reported that United Nations weapons inspectors discovered 28 chemical-tipped Iraqi SCUD missiles in Iraq in 1993. Riegle's report stated that American troops were told by Czech officers that chemical weapons were used by Iraq. Captured Iraqi prisoners of war told British interrogators that "substantial supplies of chemical weapons" were deployed and used in the Gulf War. Riegle's

report also quoted Deputy Secretary of Defense Deutch as having said in May 1994 that the U.S. "has no biological detection capability deployed with any forces, anywhere."

3) In August 1994, the U.S. Army sent the Gulf War Veterans a two page injury report and medical diagnosis by Colonel Michael Dunn, an Army physician and chemical warfare expert. On 3 March 1991, Dunn diagnosed a 3rd Armored Division cavalry scout (David Fisher) with chemical warfare agent exposure. Both Dunn and Fisher claimed chemical agents were inside the active Iraqi artillery bunkers in Kuwait.

4) In October 1994, Riegle released another report documenting that U.S. soldiers (James Tucker, Michael Johnson, David Fisher) were given medals for detecting or being injured by chemical warfare agents during the Gulf War. Extensive testing and retesting at the chemical agent locations confirmed their presence. Each of the soldiers listed is still in possession of their medals.

5) In January 1995, the DoD released 11 pages of General Schwartzkopf's secret nuclear, biological, and chemical incident log kept by his assistants during the Gulf War. Dozens of incidents were listed in the seven-day period covered by the log, including the "confirmation" of chemical agents by the Israeli police on 18

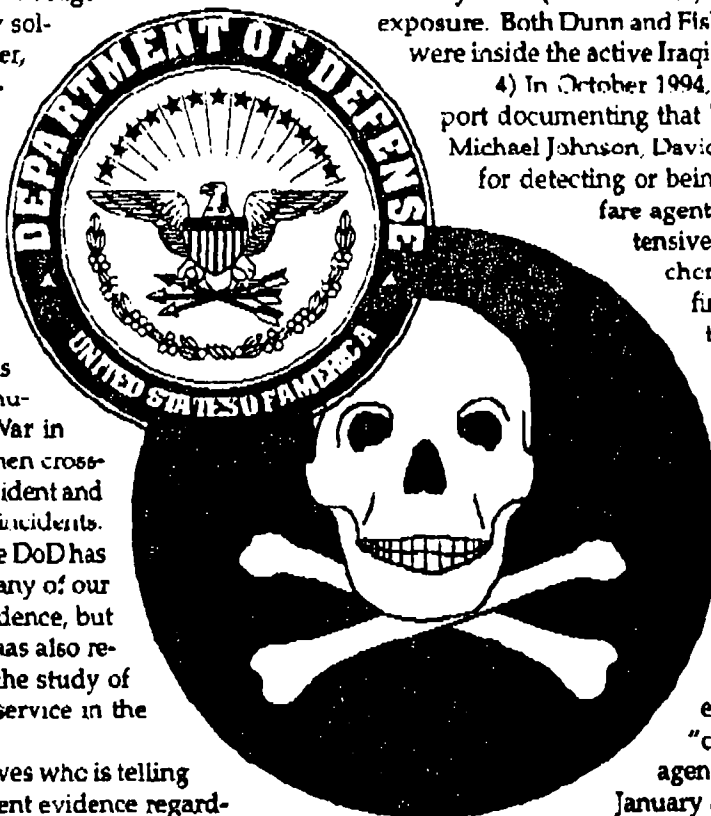
January and the injury to the soldier in the 3rd Armored Division. Reporters

and veterans both claimed the evidence was new and that the DoD had not released this earlier, as the DoD claimed.

6) In January 1995, The DoD (Lt. Gen. R.L. Neal) wrote that the DoD refused to release any more documents related to chemical warfare agent exposures. In February, the DoD press office (Jim Turner) issued five pages of a different version of the NBC log and told reporters that each of the chemical incidents cited in the NBC log were "discounted." However, the DoD issued only a statement and they did not release any documents to refute the NBC log.

7) Chemical agent incidents (obtained by the Gulf War Veterans of Georgia) document that the 1st and 2nd Marine Divisions, the Army's 24th Infantry Division, and several incidents from the NBC log are not mentioned in the Lederberg Report. The DoD refuses to discuss these Gulf War chemical incidents.

Veterans have documented proof of chemical exposures during the Gulf War. The DoD has only denials. You decide.



THE GRUNT



P.T.S.D.? ME? IF
YOU SAY THAT AGAIN I'LL
STAB YOU THROUGH THE
#3 %!* HEART WITH A
BROKEN PENCIL !!!!

P.O. BOX 100000

THE PHOENIX

Editors: Paul Sullivan and Brian Atkinson

Published Monthly by the
Gulf War Veterans of Georgia, Inc.

A Non-Profit Veterans Service
Organization Assisting Veterans of
Operation Desert Storm.



March 1995 Casualty Report

U.S. troops sent to Gulf since Aug 1990.....	1,000,000
Veterans with completed VA Gulf Registry exams.....	42,858
Veterans awaiting VA Gulf Registry exams.....	5,100
Troops on DoD Gulf Illness Registry.....	13,000
Total number of U.S. troops who may be ill.....	62,958
Number of British Troops who may be ill.....	3,500
Total of number of Coalition troops who may be ill.....	66,458
Georgia residents sent to Gulf War.....	34,400
Georgia veterans on VA Gulf Registry.....	2,600
Unofficial VA Estimate of ill U.S. troops.....	150,000
Unofficial VA Estimate of Gulf War Deaths.....	4,400

Sources: Department of Veterans Affairs Environmental Agents Service;
VA Medical Center, Atlanta, Department of Defense Public Affairs; BBC-
Radio; and Georgia Department of Veterans Services.

GULF WAR VETERANS OF GEORGIA, INC. MEMBERSHIP APPLICATION

Name: _____ SSN: _____

Address: _____ City: _____ State: _____ Zip: _____

Phone#: () _____ Work#: () _____

I am a: ☐ member of the U.S. military ☐ past member of the U.S. military ☐ military spouse ☐ military widow(er)
who served in the: ☐ Army ☐ Navy ☐ Air Force ☐ Marines ☐ Reserves ☐ National Guard ☐ Coast Guard
during the: ☐ Persian Gulf ☐ Grenada ☐ Vietnam ☐ Somalia Invasion ☐ Panama Invasion ☐ Haiti Campaign

Tour Dates and Locations:

By signing this application, the applicant agrees to pay dues of \$10.00 and to provide documentation (such as a copy of your DD214 or official orders) showing dates of service and branch of service. The applicant also agrees to abide by the bylaws of the Gulf War Veterans of Georgia, Inc.

Signature of Applicant: _____ Date: _____

Mail to: Gulf War Veterans of Georgia • Unit H-1 • 307 Adair Street • Decatur, GA • 30030

Comments: _____	Date: _____	Year: _____
Dues: \$ _____	Copy of DD214 _____	Approved by: _____
		Number: _____

Georgia Directory

Gulf War Veterans of Georgia, Paul Sullivan.....	404-377-3741
GWVG, Membership, Brian Atkinson.....	404-926-7887
GWVG, Family Concerns, Kelly Lamastus.....	404-439-8829
DoD Gulf Registry Illness Hotline.....	800-796-9699
VA Gulf Registry Illness Hotline.....	800-PGW-VETS
VA National Claims Assistance Hotline.....	800-827-1000
VA-Decatur Gulf Registry, Bruce Rooney.....	404-329-4659
Atlanta Vet Center.....	404-347-7264
Georgia Department of Veterans Services, Larry Roby.....	404-894-5213
Georgia Vietnam Veterans Alliance, Maryn Myers.....	404-458-1985
GVVA Crisis Resource Center, Atlanta.....	404-221-0755
VAMC Telephonic Assistance.....	404-329-2222
VAMC Patient Representative, Bruce Martin.....	404-321-6111
VA Central Office, Washington.....	202-273-5855

International Directory

The American Legion, HQ, Steve Robertson.....	202-861-2740
California Association of Persian Gulf Veterans.....	408-476-6684
Desert Storm Justice Foundation, HQ.....	405-348-1722
DSJF, South Carolina.....	803-327-9838
DSJF, Minnesota.....	218-258-3685
DSJF, Florida.....	813-635-3261
DSJF, Michigan.....	810-771-6741
DSJF, Texas.....	512-556-6373
DSJF, Illinois.....	618-457-2621
DSJF, Oklahoma.....	918-687-0983
Desert Storm Veterans Coalition, Nationwide (Texas).....	800-307-1330
Gulf Veterans Association, England, Paul Ash.....	011-44-670-736-283

Gulf Veterans Association Office, England.....	011-44-191-230-1065
Gulf War Babies, Mississippi.....	601-735-9206
Gulf War Support Group, South Carolina.....	803-328-0410
Gulf War Veterans of Alabama.....	205-265-7723
Gulf War Veterans of Arkansas.....	501-225-9437
Gulf War Veterans of Georgia.....	404-377-3741
Gulf War Veterans of Iowa.....	319-259-1869
Gulf War Veterans of Long Island.....	516-209-1580
Gulf War Veterans of Massachusetts.....	617-464-2442
Gulf War Veterans of Ohio.....	216-964-8920
Gulf War Veterans of Tennessee.....	615-431-9793
Richard Haines, Indiana.....	812-948-9366
MISSION, Texas.....	210-658-7870
Northwest Veterans for Peace, Oregon.....	503-636-9785
Operation Desert Storm/Shield Association, Texas.....	915-368-4667
Operation Save Us, Alabama.....	205-265-7723
Perot Group, Texas.....	214-788-3087
Persian Gulf Information Network, Inc., Tennessee.....	615-431-9793
Persian Gulf Veterans Action Network, Indiana.....	317-788-0942
Persian Gulf Veterans, Inc., Rochester, New York.....	716-385-4097
Persian Gulf Veterans of Colorado.....	303-424-6235
Persian Gulf Veterans of America, Texas.....	210-666-4409
Persian Gulf War Veterans of New York State.....	315-697-7513
Trauma After Care Trust, England.....	011-44-242-890-306
Veterans and Family Support Network, Ohio.....	216-457-0641
Veterans of Foreign Wars, HQ, Mark Fox.....	202-543-2239
Environmental Health Foundation.....	602-577-5225
Association of Birth Defect Children.....	800-313-ABDC

THE PHOENIX

Volume Two, Number Three, March 1995

Gulf War Veterans of Georgia, Inc.

Unit H-1

307 Adair Street

Decatur, GA 30030

SPECIAL INVESTIGATION

LIFE

The
Tiny
Victims
of Desert
Storm

Has Our Country ABANDONED THEM?

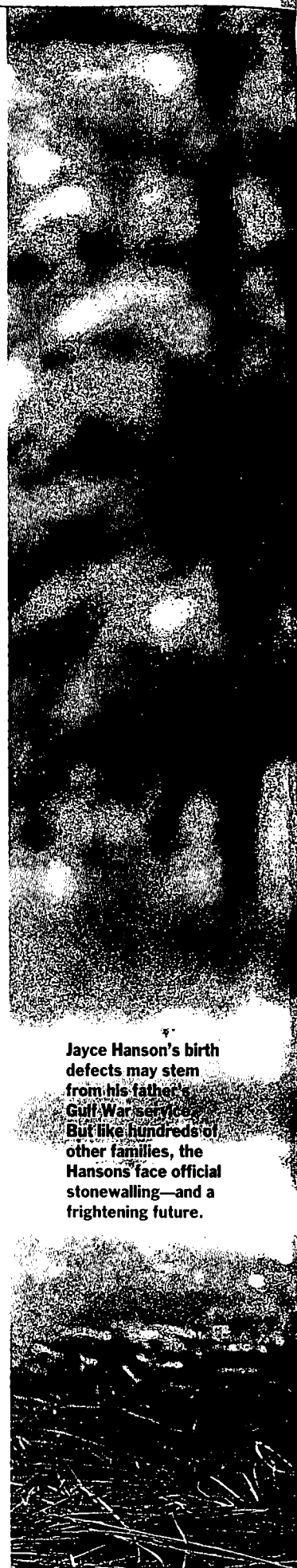
Gulf War veteran
U.S. Army
Sgt. Paul Hanson
and his son,
Jayce, age three

NOVEMBER 1995/\$3.95



When our soldiers
risked their lives in the
Gulf, they never
imagined that their
children might suffer
the consequences—or
that their country would
turn its back on them.

THE TINY VICTIMS OF DESERT STORM



Jayce Hanson's birth defects may stem from his father's Gulf War service. But like hundreds of other families, the Hansons face official stonewalling—and a frightening future.

Photography by **Derek Hudson** Text by **Kenneth Miller** Reporting by **Jimmie Briggs**





JAYCE

Flying kites with his sister, Amy, he displays a fierce determination. "He's a problem solver," says his father, Paul. Jayce suffers from a syndrome similar to that of the thalidomide babies of the 1950s. But his mother, Connie, took no drugs.

From outside, the evil that has invaded Darrell and Shana Clark's home is invisible. Set on a modest plot in a San Antonio subdivision, equipped with a doghouse and a swimming pool, the house is a shrine to the pursuit of happiness—a ranch-style emblem of the good life Darrell and 700,000 other U.S. soldiers fought for in the Persian Gulf four years ago.

Inside, the evil shows itself at once. It has taken up residence in the body of the Clarks' three-year-old daughter, Kennedy.

On a Saturday afternoon, Darrell and Shana huddle in their paneled living room. They are in their mid-twenties, robust and suntanned, but their eyes are older. Kennedy toddles about, pretending to snap pictures. You see the evil's imprint when she lowers the toy camera: Her face is grotesquely swollen, sprinkled with red, knotted lumps.

Kennedi was born without a thyroid. If not for daily hormone treatments, she would die. What disfigures her features, however, is another congenital condition: hemangiomas, benign tumors made of tangled blood vessels. Since she was a few weeks old, they have been popping up all over—on her eyelids and lips; in her throat and spinal canal. Laser surgery shrinks them, but they return again and again. They distort her speech, threaten her life. And, inevitably, they draw the stares of strangers. "When people see her," says Shana, "they say, 'Ooh, what happened to your baby?'"

Neither Shana nor her husband can answer that question conclusively, but they suspect that Kennedy's troubles have their ori-



ren scream when they get earaches? Maybe he's immune to pain. ” —CONNIE HANSON



Jayce is remarkably agile. He can feed himself marshmallows (above) or shimmy quickly across a floor. But learning to walk on prosthetic legs (far right) is terribly difficult without arms to use for balance. Jayce's mother, Connie (right),

holds up a mirror to help him with coordination. A devout Christian, she faces her family's troubles stoically. "I accept what God has given us," she says, "and try to make the best of it."



“ [The veterans] need to keep the pressure on because . . . the companies who stand



e found liable will be in there lobbying.



—ADM. ELMO ZUMWALT JR.

gins in the Gulf, where Darrell served as an Army paratrooper. During operations Desert Shield and Desert Storm, he faced a mind-boggling array of environmental hazards. Like an estimated 45,000 of his comrades, he has developed symptoms—in his case, asthma and recurring pneumonia—linked to an elusive affliction known as Gulf War syndrome. And like a growing number of Gulf War veterans, some of whom remain apparently healthy, he has fathered a child with devastating birth defects.

Researchers have been probing Gulf War syndrome since late 1991, when returning soldiers reported a spate of mysterious maladies. Conclusions have been slow to arrive. Last June the federal Centers for Disease Control (CDC) confirmed that Gulf vets were unusually susceptible to a dozen ailments—from rashes to incontinence, hair loss to memory loss, chronic indigestion to chronic pain. But in August a Pentagon study concluded that neither the vets nor their loved ones showed signs of any “new or unique illness.” Veterans’ advocates disputed that finding, as did the National Academy of Sciences’ Institute of Medicine, which declared that the report’s “reasoning . . . is not well explained.” And while there is, as yet, no absolute proof that Gulf vets’ babies are especially prone to congenital problems, patterns of defects have begun to emerge—patterns unlikely to result from chance alone.

During the past year, LIFE has conducted its own inquiry into the plight of these children. We sought to learn whether U.S. policies put them at risk and whether the nation ought to be doing more for them and their families. We also aimed to determine whether, as some scientists and veterans allege, the military’s own investigation is deeply flawed.

The future of this country’s volunteer armed forces—institutions dependent on citizens’ willingness to serve, and therefore on their trust—may rest on the answers to such questions. Certainly, soldiers expect to forfeit their health, if necessary, in the line of duty. But no one expects that of a soldier’s kids.

Lea’ Arnold was not born to a soldier, but she might as well have been: Her father went to the Gulf as a civilian helicopter mechanic with the Army’s 1st Cavalry Division. On a Wednesday morning, Lea’ lies naked in her parents’ bed, in a small house off a gravel road in Belton, Tex. A nurse looms over her, brandishing a plastic hose.

“Don’t hurt me,” wails Lea’.

“I’m not going to hurt you, sweetie,” says the nurse. “You need to peepee.”

As the nurse administers the catheter, Lisa Arnold—a sturdy woman who carries her sadness on broad shoulders—tells the story of her

“When people see her they say, ‘What happened to your baby?’” —SHANA CLARK



KENNEDY
 “Adults are worse than children as far as staring,” says mom Shana. Kennedy’s dad, Darrell, tested positive for radiation exposure, but unless his testes are dissected, no link to her condition can be proved.

daughter’s birth. “The doctor said, ‘Well, she’s got a little problem with her back.’ They let me hold her for a minute, and then they took her to intensive care.” Lea’ had spina bifida, a split in the backbone that causes paralysis and hydrocephalus, or water on the brain. She needed surgery to remove three vertebrae. “They told us that if she lived the next 36 hours, she’d have a pretty good chance of surviving. Those 36 hours . . . it’s kind of indescribable what that’s like.”

Three years later, Lea’ has grown into a redhead like her mother, with the haunted face of a medieval martyr. She cannot move her legs or roll over. A shunt drains fluid from her skull. “She tells me every night that she wants to walk,” says Richard

Arnold, a soft-spoken ex-Marine.

Richard, who had fathered two healthy children before he went to war, was working for Lockheed in the Gulf. But he bunked in the desert with the troops—and that meant swallowing, inhaling and otherwise absorbing some very dicey stuff. According to a 1994 report by the General Accounting Office, American soldiers were exposed to 21 potential “reproductive toxicants,” any of which might have harmed them as well as their future children. They used diesel fuel to keep down sand. They marched through smoke from burning oil wells. They doused themselves with bug sprays. They handled a toxic nerve-gas decontaminant, ethylene glycol monomethyl ether. They fired shells tipped with depleted uranium (see box

below). Other teratogens—materials that cause birth defects—may have been present too. One possibility is that desert winds bore traces of Iraqi poison gas (see box, page 54).

Some physicians who have treated Gulf vets believe they may be suffering from a general overload of chemical pollutants—and that their body fluids are actually toxic. (Indeed, many veterans’ wives are sick; a few complain that their husbands’ semen blisters their skin.) “It was a toxic environment,” says Dr. Charles Jackson, staff physician for the Veterans Administration Medical Center in Tuskegee, Ala. Other doctors, while agreeing that chemicals or radiation may have caused birth defects, think the vets’ ills came from a germ—an unknown Iraqi biological warfare agent, perhaps, or some form of leishmaniasis, a disease carried by sand flies.

Government scientists generally discount these theories. “The hard cold facts” are simply not there, says Dr. Robert Roswell, executive director of the Persian Gulf Veterans Coordinating Board. But one hypothesis elicits even his respect. “The one argument that does deserve further study [concerns] the combination of pyridostigmine bromide with pesticides.”

Pyridostigmine bromide—or PB—is a drug usually prescribed to sufferers of myasthenia gravis, a degenerative nerve disease. But animal experiments have shown that pretreatment with PB may also provide some protection from the nerve gas soman. The U.S. military therefore gave the drug to most Americans in the Gulf. Darrell Clark, for instance, took it, and Richard Arnold—now racked with chronic joint pain—probably did: “I took everything the First Cavalry took.”

The Defense Department may have been taking a big chance with PB. In earlier, small-scale safety trials, Air Force pilots ➤

POISON IN THE DESERT DID EXPOSURE TO DEPLETED URANIUM CAUSE ILLNESS?

Allied tanks and airplanes fired a new kind of ammunition in the Gulf War: shells jacketed with depleted uranium, a waste product from nuclear reactors. When such a shell hits an enemy tank, it heats up, incinerating the vehicle’s crew. In a 1993 report, the General Accounting Office concluded that while troops using such ordnance were unlikely to receive a radiation dose exceeding Nuclear Regulatory Commission limits, “the Army has not effectively educated its personnel in the hazards of DU contamination

and in proper safety measures appropriate to the degree of hazard.” And the safety of even low-level radiation exposure remains a subject of scientific debate. For troops salvaging shrapnel-pocked equipment, or working in areas filled with the dust and debris of tank battles, the risk may have been especially high. Nearly a million DU-tipped shells were fired during the war. Says Paul Sullivan, president of the Gulf War Veterans of Georgia: “We’re talking about tons and tons of radioactive wastes floating around.”

“ Everything we hoped for just crashed. Why us? Why Cedrick? ” —BIANCA MILLER



CEDRICK

His five-year-old sister, Larissa, must be careful when they play together: A fall could dislodge the shunt in his head and lead to brain damage. Cedrick's handicaps have left his parents, Steve and Bianca, terrified of having more children.

had reported serious side effects, including impaired breathing, vision, stamina and short-term memory. (Many soldiers would experience such symptoms during the Gulf War.) Even more alarming, PB was known to *worsen* the effects of some kinds of nerve gas (see box, page 56). Nonetheless, as war threatened, the Pentagon persuaded the Food and Drug Administration to waive its prohibition on testing a drug for new purposes without the subjects' "informed consent." FDA deputy commissioner Mary Pendergast defends that ruling: "You can't have your troops being the ones to decide whether they'll take some step to keep themselves healthy."

If PB did cause lasting problems, the reason could be the way it interacts with bug

spray. In 1993, James Moss, a scientist with the U.S. Department of Agriculture, found that when cockroaches are exposed to PB along with the common insect repellent DEET—used in the Gulf—the toxicity of both chemicals is multiplied. Moss says he pursued his experiments in spite of orders to stop. His contract wasn't renewed when it expired last year, and the researcher claims he was blackballed. (USDA Secretary Dan Glickman says Moss's "temporary appointment" was up, and Moss knew it.) Since Moss's study, two others—one by the Pentagon itself, the second by Duke University—have found neural damage in rats and chickens exposed to another chemical cocktail, this one a mixture of PB, DEET and permethrin, an insecticide. Permethrin, however, was

probably used by no more than 5 percent of U.S. soldiers in the Gulf.

Pentagon officials deny that any PB-DEET mixture could have caused birth defects in male Gulf vets' children. "I'm not aware that a male can be exposed to a chemical agent, and then two years later his sperm creates a defect," says Dr. Stephen Joseph, assistant secretary of defense for health affairs. But some chemicals, such as mustard gas, have been shown to affect sperm production for even longer periods. Clearly, further research is needed to determine whether a PB-and-bug-spray combo can behave the same way.

Amy Sgt. Brad Minns is pretty sure he didn't take PB, but he did take a vaccine meant to save his life if Iraq resorted to germ warfare. He fears that this medication caused his chronic fatigue—and that his Gulf War service ultimately blighted his baby's life at the root.

In their bungalow at Fort Meade, Md., Brad and his wife, Marilyn, list their son's tribulations. Casey was born with Goldenhar's syndrome, characterized by a lopsided head and spine. His left ear was missing, his digestive tract disconnected. Trying to repair his scrambled innards, surgeons at Walter Reed Army Medical Center damaged his vocal cords and colon, say Brad and Marilyn. (Ben Smith, a spokesman for Walter Reed, says, "A claim has been filed by the family, and until it's resolved [the case] is in the hands of the lawyers.") Now 26 months old, Casey speaks in sign language. His parents feed him and remove his wastes through holes in his belly. Otherwise, he's a regular kid, tearing about the sparsely decorated room, shoving pens, books, scraps of paper into his mouth. Marilyn follows, tugging them out again.

"He's a little terror," says Brad, with the weariest of smiles.

POISON IN THE AIR WERE NERVE AND MUSTARD GASES PRESENT, AFTER ALL?

In 1975 a landmark Swedish study concluded that low-level exposure to nerve and mustard gases could cause both chronic illness and birth defects. The Pentagon denies the presence of such chemicals during the Gulf War. But the Czech and British governments say their troops detected both kinds of gas, presumably released during allied bombing of Iraqi chemical plants. And veterans' advocate Paul Sullivan recently obtained 11 pages of a secret Defense Department log revealing that U.S. chemical alarms went off repeatedly during the war.

Pentagon spokesmen blame those alarms on faulty equipment and note that there have been no reports of massive Iraqi gas deaths near the bombed factories. But former congressional investigator Jim Tuite speculates that gases were blown straight upward, then settled miles away as fallout. And, he says, Iraqis *are* suffering health problems "similar to what we're seeing in our veterans." Ironically, much of Iraq's chemical arsenal was made by U.S. companies—80 of which face a class-action suit by 2,000 ailing vets.

“A lot of the parents have had anxieties about coming forth.”

—DR. SHARON COOPER, Womack Army Medical Center



CASEY

Born with organs out of place, he suffered further damage in surgery, says his father, Brad. Now Casey's chest has stopped growing, leading to fears that he may need an operation at some point to preserve function in his lungs.

A military policeman posted mainly at an airfield in Saudi Arabia, Brad, along with 150,000 other American soldiers, took a vaccine—on his commander's orders—against weapon-borne anthrax. A second vaccine, against botulism, was administered to 8,000 soldiers. A staff report issued last December by the Senate Committee on Veterans' Affairs concluded that "Persian Gulf veterans were . . . ordered under threat of Article 15 or court-martial, to discuss their vaccinations with no one, not even with medical professionals needing the information to treat adverse reactions from the vaccine." The Senate report noted that the particular botulinum toxoid issued "was *not* approved by FDA." Other details from the

survey: Of responding veterans who had taken the anthrax vaccine, 85 percent were told they could not refuse it, and 43 percent experienced immediate side effects. Only one fourth of the women to whom it was administered were warned of any risks to pregnancy. Of all responding personnel who had taken the antibotulism medicine, 88 percent were told not to turn it down and 35 percent suffered side effects. None of the women given botulinum toxoid were told of pregnancy risks. "Anthrax vaccine should continue to be considered as a potential cause for undiagnosed illnesses in Persian Gulf military personnel," said the report in one of its summations. And in another: "[The botulism vaccine's] safety remains unknown."

In a conference room at the Womack Army Medical Center in Fort Bragg, N.C., Melanie Ayers is addressing a support group for parents of Gulf War babies. "Sometimes," she says, "I wish I'd gone into a corner and stayed naive." Pixie-faced and preternaturally energetic, Ayers, 30, dates her loss of innocence to November 1993, when her five-month-old son died of congestive heart failure. Michael, who was conceived after his father, Glenn, returned from action as a battery commander in the Gulf, sweated constantly—until the night he woke up screaming, his arms and legs ice-cold. His previously undetected mitral-valve defect cost him his life.

After Michael's death, Melanie sealed off his bedroom; she tried to close herself off as well. But soon she began to encounter "a shocking number" of other parents whose post-Gulf War children had been born with abnormalities. All of them were desperate to know what had gone wrong and whether they would ever again be able to bear healthy babies. With Kim Sullivan, an artillery captain's wife whose infant son, Matthew, had died of a rare liver cancer, Melanie founded an informal network of fellow sufferers.

Surrounded by framed photos of decorated medics and nurses, a dozen of those moms and dads have come to share their worries, anger and grief. Kim is here. So is Connie Hanson, wife of an Army sergeant; her son, Jayce, was born with multiple deformities. Army Sgt. John Mabus has brought along his babies, Zachary and Andrew, who suffer from an incomplete fusion of the skull. The people in this room have turned to one another because they can no longer rely upon the military.

"A lot of the parents have had anxieties about coming forth with their concerns," says Dr. Sharon Cooper, the Womack ➤

POISON IN THE MIX DID PYRIDOSTIGMINE BROMIDE HURT RATHER THAN HELP?

Whether or not it proves to have caused birth defects, the way pyridostigmine bromide was used in the Gulf was highly questionable. For one thing, its effectiveness against the nerve gas soman may have been undermined by bad planning. U.S. troops (and those of several allied countries) took PB as a pretreatment for exposure to soman. But by itself, PB does nothing—it only helps the antidote to soman work better once exposure has occurred. Atropine is one of two chemicals used in the antidote, but the dose of atropine

contained in U.S. personnel antidote kits was inadequate, according to a December 1994 report by the Senate Committee on Veterans' Affairs. Worse, says the report, experiments show that PB makes animals *more* vulnerable to some nerve agents, such as sarin (the gas used in this year's Tokyo subway attacks). As it happened, sarin was one of the gases detected by chemical monitors during Desert Storm. The Pentagon says these detections were unreliable, but if there were even minute traces of sarin on the battlefield, PB may have exacerbated its effects.

“They told us that if she lived the next 36 hours, she'd have a pretty good chance



Center's director of pediatrics. Cooper is one military official who, rather than taking an adversarial stance, is dedicated to helping Gulf veterans and their families cope. Many vets speak of Army physicians who dismiss physical ailments as symptoms of stress, even as fabrication. They cite an internal report by the National Guard, leaked to the press last year, which revealed that hundreds of Gulf vets had been wrongly discharged as a money-saving measure—let go with a supposedly clean bill of health, although ongoing medical problems entitled them to remain in the service for treatment. A second report, issued by the GAO earlier this year, scores the Veterans Administration for being routinely tardy with its payments to ailing vets. "When you send a veteran off to do dangerous work, I think his complaints deserve respect," says West Virginia Sen. Jay Rockefeller. "The phrase I've used is 'reckless disregard.' There's a stark pattern of Defense Department recklessness."

For vets with afflicted babies, the runaround can be just as bad. Military doctors often ignore signs of inborn disorders, say Gulf War parents, or refuse to discuss them frankly. And when they do talk about birth defects, the doctors—and Pentagon bureaucrats—are quick to cite a statistic that drives these parents wild: At least 3 percent of American babies are born with abnormalities. To which Melanie Ayers responds: "I'd like to put my child's picture in front of them and say, 'Glance at that once in a while to make sure you're telling me the truth.'"

LEA'

Spina bifida cripples her legs. Her upper body is so weak that she can't push herself in a wheelchair on carpeting. To strengthen her bones, she spends hours in a contraption that holds her upright. Brothers Nathan (in tree) and Joey, both born before the war, are healthy. "The boys care a lot about Lea'," says her mom, Lisa. "Every time she goes to the hospital, their schoolwork suffers."



Surviving. Those 36 hours . . . it's kind of indescribable what that's like.  —LISA ARNOLD



“There’s a stark pattern of Defense Department recklessness.” —SEN. JAY ROCKEFELLER



Indeed, the truth may not be as simple as “at least three percent” implies. On a blazing Saturday afternoon, flanked by his parents, three-year-old Cedrick Miller is dangling his feet in an apartment-complex pool in San Antonio. Flossy-haired and shy, he looks younger than his age. Cedrick was born with his trachea and esophagus fused; despite surgery, his inability to hold down solid food has kept his weight at 20 pounds. His internal problems include hydrocephalus and a heart in the wrong place. But it’s clear from one look that something else is awry.

Cedrick suffers, like Casey Minns, from Goldenhar’s syndrome. The left half of his face is shrunken, with a missing ear and a blind eye. His mother, Bianca, says that when a prenatal exam showed the defects, “everything we’d hoped for just crashed. What had Cedrick done to deserve this?”

Steve Miller, a former Army medic, thinks chemicals damaged his sperm. He believes statistical evidence is at hand. “With Goldenhar’s,” he says, “we have clustering.”

Clustering is the term epidemiologists use when an ailment strikes one group of people more than others—and the phenomenon can be a key indicator that something more than chance is causing birth defects. The Association of Birth Defect Children says it has found the first cluster of defects in the offspring of U.S. Gulf veterans: 10 babies with severe Goldenhar’s syndrome, a condition that usually strikes one in 26,000, according to ABDC executive director Betty Mekdeci. (Another case has surfaced in Britain, where 600 vets complain of Gulf-related illness.) The ABDC, which has gathered data on 163 ailing Gulf War babies so far, is tracking four more possible clusters—of victims of hypoplastic left heart syndrome, of atrial-septal heart defect, of microcephaly and of immune-system deficiencies. Significantly, not one of the parents in the ABDC survey has a family history of these types of birth defects. Or as Mekdeci puts it, “There have been no relatives with funny ears.”

The difficulty in proving conclusively whether clusters are occurring is that no one—not Mekdeci, not the Pentagon—knows how many babies have been born to Gulf vets. The Defense Department’s own survey of 40,000 birth outcomes, initial results of which are due in late October, is the largest study yet, but far from complete since it relies on data only from military hospitals. The Pentagon’s Dr. Joseph says the forthcoming report will include “by far the best and most comprehensive information available.” Maybe it will, but many still question whether Defense Department scientists are really seeking the hard answers. Earlier this year Dr. Joseph told LIFE that, although trained as a pediatrician, he was entirely unfamiliar with “Goldhavers or Gold Heart—whatever.” It’s precisely that kind of response that enrages veterans with afflicted babies.

Along with the ABDC and Defense Department surveys, more than 30 other studies of Gulf vets and their children ➡

“Just about our whole world is centered around Lea,” says Lisa Arnold. Huge medical bills—and the unwillingness of insurance companies to cover preexisting conditions—force the family to live in poverty to qualify for Medicaid.

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“A millionaire couldn't care for these kids.” —LISA ARNOLD

are under way. One that is no longer ongoing, by the Senate Banking Committee, folded last year when committee chair Don Riegle retired. Of the 400 sick vets who had already answered committee inquiries, a startling 65 percent reported birth defects or immune-system problems in children conceived after the war.

Although Riegle is gone, there are a few others in Washington fighting for afflicted Gulf War families. One is Rockefeller; but in recent months he has lost clout. After last year's GOP landslide, he was ousted as chairman of the Veterans' Affairs Committee, which produced the 1994 report on PB and vaccine use in the Gulf. The new chair, Alan Simpson (R-Wyo.), plans no action "until the hard science is in," says an aide.

Then there is Hillary Rodham Clinton, the point person for an administration that, by pushing through a 1994 law mandating benefits for vets with symptoms, has cast itself as a friend of Gulf War syndrome sufferers. On August 14, at the opening session of the presidential advisory committee on the syndrome, she declared, "Just as we relied on our troops when they were sent to war, we must assure them that they can rely on us now."

Whatever White House fact finders discover, there's no guarantee that Gulf War babies will get government help. As it stands, a soldier's children receive free medical care only as long as a parent remains in the service. For parents who return to civilian life, the going can be grim. Moreover, the government's record on earlier military health grievances is hardly reassuring. Soldiers unwittingly used in radiation experiments in the 1950s, for instance, had to fight the VA for compensation until the 1980s. And Vietnam veterans claim that scientists manipulated evidence to hide the ravages of Agent Orange. "The CDC actually skewed the data," says retired Navy Adm. Elmo Zumwalt Jr., who blames his son's fatal cancer on the defoliant. Vietnam vets won a \$180 million settlement from Agent Orange manufacturers, but not until 1984. Gulf vets, says Zumwalt, "need to keep the pressure on, because in the case of Agent Orange—and I'm sure it'll occur with Desert Storm syndrome—the companies who stand to be found liable for any harmful effects will be in there lobbying."

A few Desert Storm families have been relatively lucky—the Clarks, for instance, whose daughter has been granted free treatment through November of 1996, thanks to an Air Force doctor who recommended her as a subject for study. But others have been denied insurance coverage for "preexisting conditions." They are being driven into poverty; some join the welfare line so Medicaid will help with the impossible burden. "You could be a millionaire, and there's no way you could take care of one of these children," says Lisa Arnold.

Betty Mekdeci thinks Congress should set up a special insurance fund for families like the Arnolds. "The very least we owe these folks is to provide them with a guarantee of care," she says. "I'd be glad to pay the extra taxes to do it."

"I'm angry, frustrated and sad," says Darrell Clark. "It's unfortunate that no one will speak up and say, 'Maybe we made a mistake. How can we help you get on with your lives?'"

Packed into an airplane-shaped swing at his grandmother's house in Charlottesville, Va., Jayce Hanson is getting on with his life as best he can. A cherubic, rambunctious blond, he's the unofficial poster boy of the Gulf War babies—seen by millions in *People*. Jayce is the center of attention here, too, as his father pushes the swing and a photographer snaps his picture. But since his last major public appearance, he has undergone a change: His lower legs are missing.

Now three years old, Jayce was born with hands and feet attached to twisted stumps. He also had a hole in his heart, a hemophilia-like blood condition and underdeveloped ear canals. Doctors recently amputated his legs at the knees to make it easier to fit him with prosthetics. "He'll say once in a while, 'My feet are gone,'" says his mother, Connie, "but he's been a real trouper."

During the war, Paul Hanson breathed heavy oil smoke; he stopped taking PB pills early, because they made him dizzy. Now he suffers regularly from headaches, nausea, tightness in the chest. Still, he is optimistic for his son.

"Jayce is very bright," says Paul. "He doesn't realize his limitations. But when he grows up and says, 'Why am I not like everybody else?' we'd like to be able to explain it to him." □



An airplane swing sets Jayce free.

Gulf war sequel: Claims,

The Pentagon denies that U.S. forces in the Persian Gulf war were exposed to chemical or biological agents, but there are a growing number of claims to the contrary.

By John Ritter
USA TODAY

The yellow ribbons are a fading memory, but reports that U.S. forces were exposed to Iraqi chemical and biological agents during the gulf war are mounting, despite the Pentagon's vigorous denials.

Active duty officers and enlistees, once reticent for fear of reprisals, are now signing a gulf war illness registry at a rate of 100 a week and challenging the military's position.

And this week a top official at the Department of Veterans Affairs said he lacks confidence in Pentagon assertions that troops were not exposed to biological or chemical agents.

"Despite having heard from the Department of Defense, I remain concerned about what actually happened, about exposures that either occurred or not," said Kenneth Kizer, VA undersecretary for health. "That's the area I feel most insecure about."

Even the White House has signaled impatience with progress in understanding gulf illnesses. Hillary Rodham Clinton, who made two high-profile visits with gulf vets last week and the week before, said the president has asked her to look into "what we have left to do."

But former senator Donald Riegle, whose two-year banking committee probe concluded last year that there's strong evidence troops were exposed to agents, says: "The problem is so big and the implications so serious, the professional bureaucracy at the Pentagon can't afford to acknowledge it."

"We saw this with Agent Or-

ange, where the truth can be so calamitous to reputations and careers and budgets that bureaucracies will go to great lengths not to come clean."

The Senate banking committee initially got involved because it oversees legal exports that may have military applications, such as chemical, biological and nuclear materials.

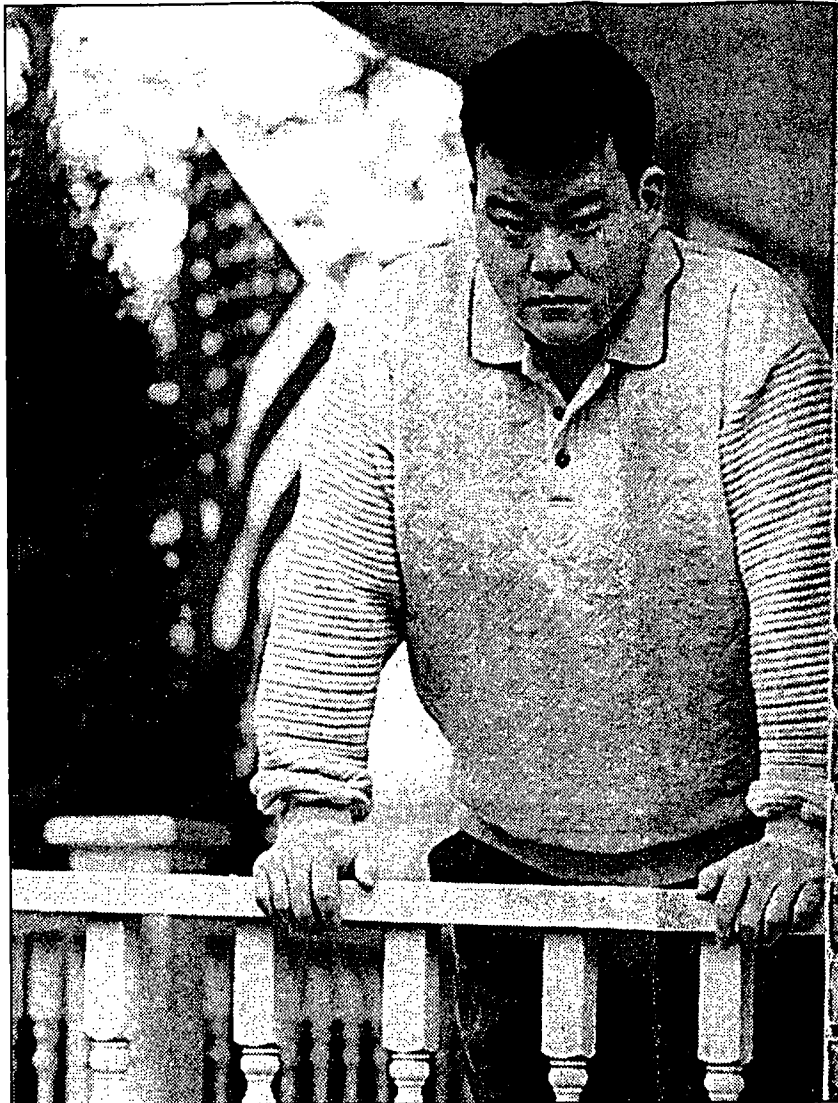
More than 50,000 gulf veterans have reported a range of ailments that include fatigue, muscle and joint pain, heart and intestinal problems, memory loss, rashes and sores. They suspect they were exposed to chemical or biological agents from Iraqi artillery and Scud missile attacks, fallout from coalition bombing of Iraqi chemical and biological targets, and exposure to munitions in Iraqi storage facilities.

The Pentagon steadfastly says troops were not exposed to chemical or biological agents. But there are many accounts to the contrary.

► An Army chemical and biological warfare specialist received a meritorious service medal for "supervising the positive identification" of mustard agent in Kuwait. The Pentagon says there were no chemical agents in Kuwait.

► Air Force battle repair mechanics say they were ordered to decontaminate F-111s returning from bombing missions of Iraqi chemical weapons plants but didn't have proper protective gear. At least 14 of them are sick.

► Members of a 5th Special Forces unit detached to Egyptian coalition forces twice confirmed the presence of a nerve agent during bombing of Iraqi



ANGRY: 'There's a lot of pressure, whether it's said or perceived,' not to speak up, says Kenneth Takasaki. He remains on active duty but says chemicals from the gulf war

chemical sites.

► A 2nd Marine Division log confirms nerve and mustard agent detections and a "large number of dead sheep," a possible indicator, military manuals say, of biological agents.

A Central Command log released in January includes entries reporting traces of nerve agents "caused by fallout from bombing" Iraqi chemical sites.

The log was just declassified in January, leaving some veterans wondering if key informa-

tion remains confidential.

The Pentagon says it has only classified its sources and intelligence gathering methods. But in a Senate hearing, officials were asked whether Iraqi chemical units were near U.S. forces and if they could attack with chemical and biological agents. The Pentagon ruled answers to those and 17 other questions were classified.

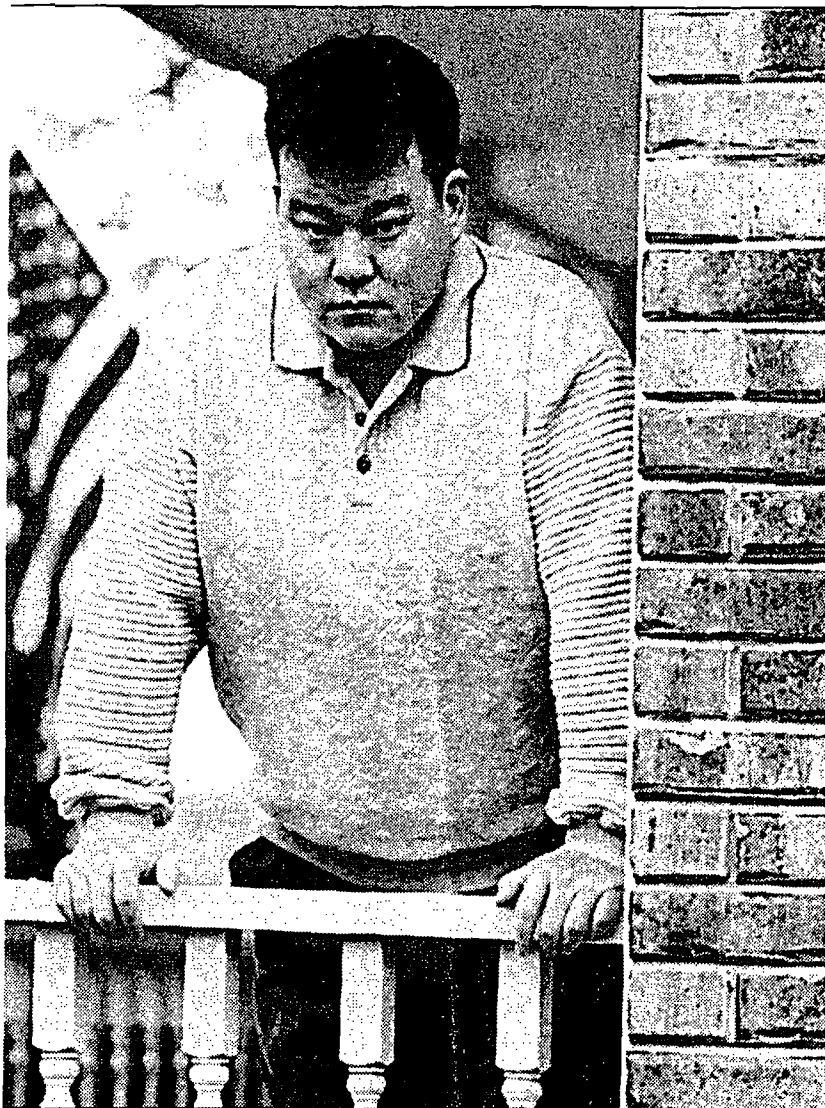
"It's becoming increasingly clear the Pentagon has not been playing straight on this is-

sue," says Kenneth Takasaki, an ex-weapons pro-grammer. Timmerman says gulf vets in a retaliation for chemical or biological attacks used small arms "threw in chest of the stu- would use a cocktail of biological agents."

Veterans claim If war chemical exposures

GULF WAR: FOUR YEARS AFTER

Claims, counterclaims



By D. Patrick Harding

a lot of pressure, whether it's said or perceived, not to speak out, says Capt. He remains on active duty but says chemicals from the gulf war made him sick.

Division log and mustard and a "large heap," a possibility of nerve agents. The Pentagon ruled answers to those and 17 other questions were classified. "It's becoming increasingly clear the Pentagon has not been playing straight on this is-

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"It's becoming increasingly clear the Pentagon has not been playing straight on this is-

sue," says Kenneth Timmerman, an expert on Mideast weapons proliferation.

Timmerman, a consultant to gulf vets in a class-action suit, says Saddam Hussein feared retaliation for a massive chemical or biological strike, so he used small quantities. He "threw in chemicals with the rest of the stuff, like a terrorist would use a car bomb."

"Our troops encountered a cocktail of chemical agents, biological agents, toxins from

“
There's natural reluctance to say (chemical agents set off alarms) because nobody wanted to ... demoralize troops.
”

— Army Lt. Col. Robert Frandsen



AP

burning chemical plants, high explosives, depleted uranium — a cocktail of stuff.”

Hundreds of gulf vets have told Senate investigators about artillery explosions and Scud missile attacks, followed by alarms and orders to don protective gear. In some instances, chemical agents were detected by more than one device using different detection techniques.

The Pentagon acknowledges thousands of chemical alarms went off, but says every one was false.

“I've got everything to gain if I can prove chemical agents were out there,” says Theodore Prociw, deputy assistant secretary for chemical and biological matters. “Budgets would go up for defensive equipment. So it's in our best interest to verify that agents were used and we've tried unsuccessfully.”

The Pentagon also says it has not found any suspicious clusters of similar symptoms reported by units that operated in the same geographic area.

“If we don't find any clusters ... it begins to push the possibility way out of the realm of probability,” says Stephen Joseph, Defense assistant secretary for health affairs.

Capt. Michael Johnson, who teaches chemical and biological warfare at the Army's infantry school in Fort Benning, Ga., received a meritorious service medal for detecting mustard gas. He confirmed his findings with mass spectrometer tests, the most sophisticated field detection method. The

Pentagon says later lab analysis found nitric acid instead.

“I'm confident to this day the systems we used detected the presence of chemical agent,” says Johnson.

Capt. Kenneth Takasaki says he is angry that the military won't acknowledge nerve gas detections by units in his Special Forces group.

“There's a lot of pressure, whether it's said or perceived,” not to speak out, he says. “My career is shot. I came out of the Persian Gulf with a Bronze Star and it doesn't mean a thing.”

Army Lt. Col. Robert Frandsen isn't sure what caused his symptoms, but doubts all the alarms he heard were false. If chemical agents set them off, “there's natural reluctance to say so because nobody wanted to ... demoralize troops.”

Scientific panels, however, have failed to confirm claims that U.S. troops were exposed to chemical or biological weapons. A National Institutes of Health panel, an Institute of Medicine panel and a Defense Science Board task force have found no basis for linking chemical or biological agents to gulf illness.

Still, critics say the military is ignoring the very people it trained in chemical and biological warfare and gave responsibility for battlefield detection.

“They say it was there,” says James Tuite, a former Senate banking committee investigator. “It's only the policymakers saying it didn't happen.”

G s ' nre vared

Iraqi chemical and biological warfare facilities

Many U.S. veterans who became ill after the Persian Gulf war say they believe they were exposed to chemical biological agents. The Pentagon says no troops were exposed, and not a single detection report was verified. and key places in Kuwait and Saudi Arabia where U.S. troops reported incidents:

Winds can spread chemical agents

The Pentagon disputes a theory that winds carried fallout from bombed Iraqi targets back over U.S. troops, causing gulf war illnesses.

WIND

1 Close to the ground, winds may be blowing in one direction...

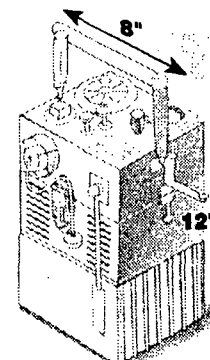
WIND

Chemical

U.S. forces sent more than 13,000 M-8 chemical agents across the desert.

► Detectors are used when heat agents are released.

► If used in a cloud of dust, air is replaced and sometimes



By Mike Haskey, AP

Detection leads to medal
Capt. Michael Johnson gets a medal for detecting mustard agent at a Kuwaiti school. But the Pentagon says it was nitric acid.

Scuds trigger alarms

Troops say chemical alarms sounded during Scud missile attacks. The Pentagon says Iraq lacked technology to arm missiles with chemical agents, but post-war U.N. teams find them.

Mechanics decontaminate jets

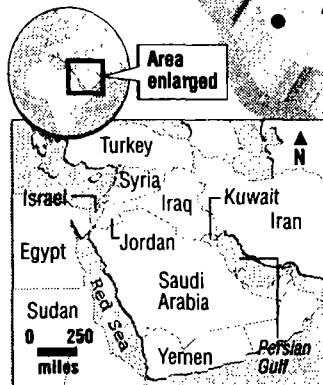
Air Force mechanics say they were ordered to decontaminate F-111 jets returning from bombing missions in Iraq without proper protective gear. More than a dozen say they are sick. The Pentagon says chemical agents would not stick to jets.

Nerve agent reported
An Army Special Forces unit detects nerve agent during first night of air war.



By John McConico, AP

Troops find dead sheep
Robert Huff, a Navy chief medical corpsman with the first troops in Kuwait, says he found hundreds of dead sheep over a large area and inside buildings, a possible indicator, military manuals say, of biological agents.



PHOTOCOPY PRESERVATION

Source: USA TODAY research

By Cliff Vancura and Mark

Schwarzkopf: 'No evidence' of chemical agents

Retired Army general Norman Schwarzkopf has not granted many interviews since he led allied forces in the Persian Gulf war, but he talked to USA TODAY about the question of whether troops were exposed to chemical or biological weapons.

Q: Do you think Iraq used chemical or biological weapons during the war?

A: No, I don't. There's absolutely no evidence that we ever ran into during the war, or anything that's come up since the war, that I know of, that says they used them.

Q: Do you think Saddam Hussein had any capability left after the bombing to deliver such weapons?

A: I hope not, because very much a purpose of the campaign was to eliminate his biological-chemical capability.

He only really had two ways



AP

SCHWARZKOPF: 'Something' happening to veterans

to do it, and one was with his artillery and the other was with his aircraft from spray tanks. We took out the air force. That's why we attacked the artillery so heavily before we ever went in on the ground.

Q: And you don't think he could have delivered them

with Scud missiles?

A: No. All the reports we had had were he was attempting the delivery capability with the Scuds but never did perfect it.

Q: Do you believe troops were exposed?

A: The only way I think it could have possibly happened would be perhaps in some kind of a storage bunker within Kuwait if there had been chemicals there. But we never had a report of anything of that sort.

Q: Not even in Iraq?

A: No. We had one report — one report — that a fellow had received burns that looked like mustard gas burns. And later that was discounted.

Q: How do you account for the reports from gulf vets?

A: I don't know. I talked to the commanding general of Walter Reed Army Medical Center and he confirmed to me that they found no indication of biological or chemical use.

There seems to be no geographical pattern whatsoever to the illness.

If it was a biological or chemical type thing you would assume that everybody within a certain geographical area would be showing symptoms. ... That's the part that throws me about the whole thing.

The only thing that has ever come up was the famous Czechoslovakian unit, and I remember exactly when that happened, OK, because of course we all panicked. And we immediately checked with every other unit in the area that had chemical alarms and none of their chemical alarms were activating at all.

Even despite that we sent the FOX (detection vehicle) in there and did surveys, chemical surveys, to make absolutely sure and they all came back negative, too. So, that particular incident, I'm quite con-

vinced it was

Q: During the war, were there any reports of chemical agents being used?

A: Of course, but I got a report that we found, just before the war, that was a nightmare scenario more than anything.

Not one of any sort of even anybody said, and I might have can't verify a single report.

Q: How does this matter affect the war?

A: I just keep on treating the way we people think we've try to come why. Obvious thing here.

...were exposed, and not a single detection report was verified. Iraqi targets U.S. troops reported incidents:



By Mike Haskey, AP

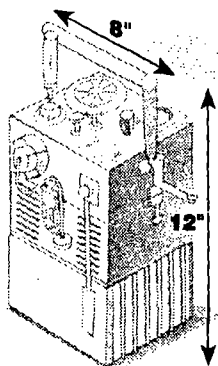
Winds can spread chemical agents

The Pentagon disputes a theory that winds carried fallout from bombed Iraqi targets back over U.S. troops, causing gulf war illnesses.

3 Wind direction can change, spreading debris over a different area

1 Close to the ground, winds may be blowing in one direction...

2 But as smoke or fumes rise...



Chemical alarm

U.S. forces scattered more than 13,000 battery-powered M-8 chemical detectors across the desert.

- ▶ Detector sounds alarm when heavy chemical agents are present.
- ▶ If used in blowing sand or dust, air filter must be replaced every day and sometimes every hour.

By Cliff Vancura and Marty Baumann, USA TODAY

e' of chemical attack

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Even despite that we sent the FOX (detection vehicle) in there and did surveys, chemical surveys, to make absolutely sure and they all came back negative, too. So, that particular incident, I'm quite con-

vinced it was a false alarm.

Q: During the war, when alarms were going off frequently, what was the reaction at Central Command?

A: Of course every time we got a report of something like that we followed up immediately, just because that was the nightmare scenario. We were more concerned about that than anything else.

Not one time did we ever get any sort of confirmation or even anybody who came back and said, yeah, we think it might have happened, but we can't verify it. There was never a single report, not one.

Q: How do you think this matter can be put to rest?

A: I just think we have to keep on treating them in every way we possibly can. And I think we've got to continue to try to come up with the reasons why. Obviously there's something here.

fo e de ect on of chemical arms

By John Ritter
USA TODAY

The Pentagon acknowledges it had no reliable system to monitor battlefield environments during the gulf war and is scrambling to develop better methods of protecting troops.

"We've learned we'd better get more serious about identifying what our soldiers are breathing," says Theodore Prociv, deputy assistant secretary of Defense for chemical and biological matters.

Military officials say U.S. forces were ill-prepared to detect biological weapons, and an effective Iraqi attack could have caused many casualties.

Troops also were exposed to pesticides, diesel fuel and smoke from oil-well fires.

"The modern military has to reconcile itself to people sincerely saying they've acquired some syndrome from military service," says Matthew Messelson, a Harvard University molecular geneticist.

"There needs to be a carefully worked out format for data collection."

The Pentagon is developing a system for medical personnel in every unit to take air samples several times a day or during suspicious events.

Air canisters would be labeled, dated and stored for later analysis, if needed.

Officials say better alarms and protective suits also are being developed. And commanders are getting better training.

Meanwhile, as the number of veterans reporting gulf-illness symptoms grows, so do calls for a fuller accounting of:

▶ How well chemical-detection equipment performed. What good were chemical weapons alarms if dust, heat, smoke and low batteries triggered hundreds of false alarms — as the Pentagon says.

"Why weren't they recalled?" Army Maj. Gus Grant wants to know.

Grant got to King Khalid Military City near the Iraqi border two weeks after the air war started and was astonished at how troops reacted to alarms.

"They were used to it, they didn't reach for gas masks," he says. "Eventually, we picked up the attitude like everyone else that it was just dust and



PROCIV: 'We'd better get more serious...'

heat."

▶ The possibility troops were exposed to fallout from bombing Iraqi targets.

Poisonous debris clouds rose, the theory goes, then winds carried them south.

Ex-Senate investigator James Tuite says satellite photos show upper air moving smoke plumes south from oil-well fires, in the opposite direction of ground winds. The same could have happened with a chemical plume, he says. "The Pentagon simply won't address high-altitude fallout."

Most experts agree with the Pentagon that contaminants would disperse at high altitude and never reach troops. Biological agents, particularly, are short-lived and perishable.

"Once you get up that high, dilution takes over," Prociv says. "The stuff becomes insignificant." But that theory has never been field tested.

▶ The possibility troops were exposed to doses too low to kill but enough to bring on delayed symptoms.

Pentagon critics use the low-dose scenario to explain why some troops got sick and others didn't. "Like when the flu hits town," says Tuite.

"Some people don't get sick, but some do — and some sooner than others."

Physician John Bailar says the Institute of Medicine panel he headed considered the low-dose issue and concluded chemical agents "would have different kinds of long-term consequences than what we were seeing in veterans. But it's not an ironclad argument."

PHOTOCOPY
PRESERVATION

I - Gulf War Disease

1995 • USA TODAY

PERSIAN GULF WAR: FOUR YEARS AFTER

war sequel: Claims, counterclaims

denies that U.S. Persian Gulf war were chemical or biological agents are a growing threat to the contrary.

ange, where the truth can be so calamitous to reputations and careers and budgets that bureaucracies will go to great lengths not to come clean.

The banking committee initially got involved because it oversees legal exports that have military applications, such as chemical, biological and nuclear materials.

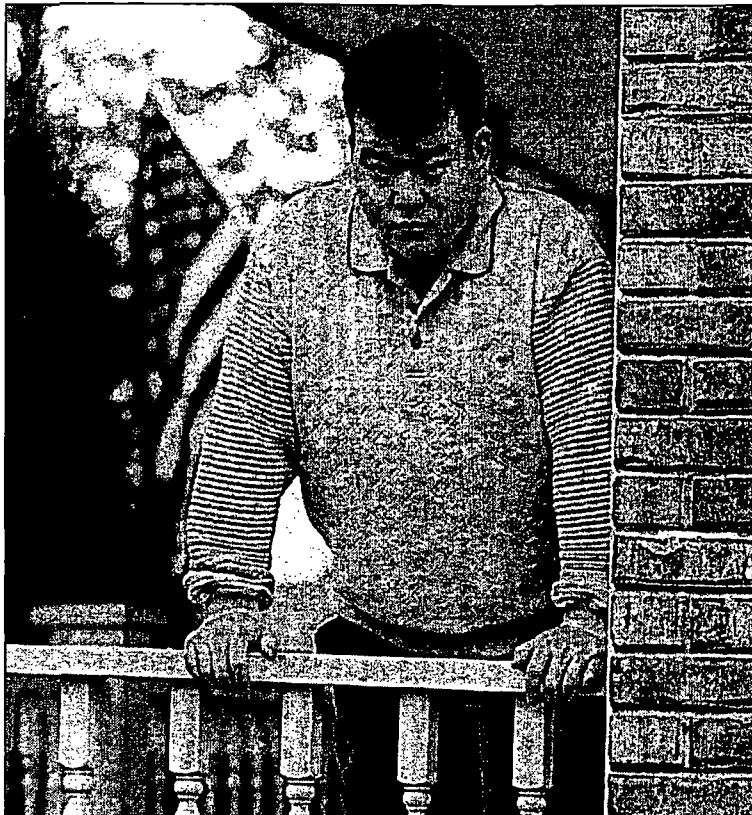
More than 50,000 gulf veterans have reported a range of ailments that include fatigue, nausea and joint pain, heart and intestinal problems, memory loss, rashes and sores. They suspect they were exposed to chemical or biological agents from artillery and Scud attacks, fallout from coalition bombing of Iraqi chemical biological targets, and exposure to munitions in Iraqi storage facilities.

The Pentagon steadfastly says troops were not exposed to chemical or biological agents. But there are many accounts to the contrary.

► An Army chemical and biological warfare specialist received a meritorious service medal for "supervising the positive identification" of mustard agent in Kuwait. The Pentagon says there were no chemical agents in Kuwait.

► Air Force battle repair mechanics say they were ordered to decontaminate F-111s returning from bombing missions of Iraqi chemical weapons but didn't have proper protective gear. At least 14 are sick.

► Members of a 5th Special Forces unit detached to Egyptian coalition forces twice confirmed the presence of a nerve agent during bombing of Iraqi



ANGRY: 'There's a lot of pressure, whether it's said or perceived,' not to speak out, says Capt. Kenneth Takasaki. He remains on active duty but says chemicals from the gulf war made him sick.

chemical sites.

► A 2nd Marine Division log confirms nerve and mustard agent detections and a "large number of dead sheep," a possible indicator, military manuals say, of biological agents.

A Central Command log released in January includes entries reporting traces of nerve agents "caused by fallout from bombing" Iraqi chemical sites.

The log was just declassified in January, leaving some veterans wondering if key information

remains confidential.

The Pentagon says it has only classified its sources and intelligence gathering methods. But in a Senate hearing, officials were asked whether Iraqi chemical units were near U.S. forces and if they could attack with chemical and biological agents. The Pentagon ruled answers to those and 17 other questions were classified.

"It's becoming increasingly clear the Pentagon has not been playing straight on this issue," says Kenneth Timmerman, an expert on Mideast weapons proliferation.

Timmerman, a consultant to gulf vets in a class-action suit, says Saddam Hussein feared retaliation for a massive chemical or biological strike, so he used small quantities. He "threw in chemicals with the rest of the stuff, like a terrorist would use a car bomb."

"Our troops encountered a cocktail of chemical agents, biological agents, toxins from burning chemical plants, high explosives, depleted uranium — a cocktail of stuff."

Hundreds of gulf vets have told Senate investigators about artillery explosions and Scud missile attacks, followed by alarms and orders to don protective gear. In some instances, chemical agents were detected by more than one device using different detection techniques.

The Pentagon acknowledges thousands of chemical alarms went off, but says every one was false.

"I've got everything to gain if I can prove chemical agents were out there," says Theodore Prociw, deputy assistant secretary for chemical and biological matters. "Budgets would go up for defensive equipment. So it's in our best interest to verify that agents were used and we've tried unsuccessfully."

The Pentagon also says it has not found any suspicious clusters of similar symptoms reported by units that operated in the same geographic area.

"If we don't find any clusters ... it begins to push the possibility way out of the realm of probability," says Stephen Joseph, Defense assistant secretary for health affairs.

Capt. Michael Johnson, who teaches chemical and biological warfare at the Army's infantry school in Fort Benning, Ga., received a meritorious service medal for detecting mustard gas. He confirmed his findings with mass spectrometer tests, the most sophisticated field detection method. The

There's natural reluctance to say (chemical agents set off alarms) because nobody wanted to ... demoralize troops.

— Army Lt. Col. Robert Frandsen



Pentagon says later lab tests found nitric acid instead.

"I'm confident to this day the systems we used detected the presence of chemical agent," says Johnson.

Capt. Kenneth Takasaki says he is angry that the military won't acknowledge nerve gas detections by units in his Special Forces group.

"There's a lot of pressure, whether it's said or perceived," not to speak out, he says. "My career is shot. I came out of the Persian Gulf with a Bronze Star and it doesn't mean a thing."

Army Lt. Col. Robert Frandsen isn't sure what caused his symptoms, but doubts all the alarms he heard were false. If chemical agents set them off, "there's natural reluctance to say so because nobody wanted to ... demoralize troops."

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Melanne Verveer

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letter from you to
the vets for this
VA publication.
VA would love for
you to do it.

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Persian Gulf Review

Vol. 2, No. 1

Information for Veterans Who Served in Desert Storm

September 1994

Secretary Brown Testifies in Support of Compensation for Persian Gulf Veterans

On June 9, 1994, Jesse Brown, Secretary of Veterans Affairs, testified before the House Committee on Veterans' Affairs, Subcommittee on Compensation, Pension and Insurance, which was considering H.R. 4386, the "Veterans' Persian Gulf War Benefits Act," introduced by Committee Chairman G.V. 'Sonny' Montgomery on May 11, 1994. This legislation would authorize VA to provide compensation on a presumptive basis to certain Gulf War veterans and provide for increased research into illnesses reported by Persian Gulf veterans.

Testimony was also provided by Chairman Montgomery, the National Academy of Sciences, the Congressional Office of Technology Assessment, the Department of Defense, the Environmental Protection Agency, and several veterans service organizations. The following is an extract of Secretary Brown's comments before the Subcommittee.

"Persian Gulf veterans are suffering. They are suffering from fatigue, memory loss, painful joints, and other physical and psychological problems. And it is VA's top priority to help them.

"VA intends to do everything possible to assist those who are suffering right now. We intend to continue to look for more scientific answers. And we intend to give veterans the benefit of the doubt on all questions about problems that may relate to service in the Persian Gulf.

"...I testified (on February 1) that VA is providing help to veterans along three tracks: immediate medical care; medical research; and disability compensation. We continue to make progress in all three areas....

"The 20,000 veterans now in the Registry have been provided a comprehensive physical examination, baseline laboratory tests, and other tests when indicated. We are closely monitoring the Registry to identify any patterns of illnesses and complaints.

"We have also established an advisory committee for scientific review of this complex issue. The committee considers issues related to the diagnosis, treatment, and research of Persian Gulf-related health conditions. Its next meeting will be in July.

"Complementing this effort will be a review by the Medical Follow-up Agency of the National Academy of Sciences. The agency will be reviewing the existing scientific, medical and other information on the possible health consequences of Persian Gulf Service.

"They will be providing their views to both VA and DoD on our efforts to develop useful information on the health concerns of Persian Gulf veterans. They will also give us their commendations on how to proceed with additional studies of these veterans. Their study is due in October 1995.

"...we had asked the National Institutes of Health to convene an independent group of experts to evaluate current scientific

knowledge on this issue, and recommend priorities for further research.

"That panel has now met. It recommended that VA send a short health questionnaire to a random, representative sample of veterans. They believe such a survey could provide a more accurate estimate of veterans' symptoms than our registry. We intend to do this. It also concluded that it was not yet possible to establish a single case definition for

'Persian Gulf Syndrome.' The members concluded that trying to establish a case definition for this illness, or these illnesses, may be misleading and inaccurate, at this point.

"It is for this reason that the legislation you are currently considering, which will allow us to compensate our veterans without such a case definition, is particularly timely and useful....

"Three VA environmental hazards research centers will be activated this Summer, and will help to accelerate our progress. Already 19 proposals, including about 150 research projects, were submitted and are undergoing peer review....

"VA is on the move! We have worked with the Department of Defense, the Department of Health and Human Services, and other agencies to help our Persian Gulf veterans. We believe that we are leaving no stone unturned....

"The Persian Gulf War was a dirty war – environmentally speaking. Our veterans were exposed to smoke from oil fires; a terribly hot, dusty climate; sand flies carrying parasitic diseases; oil fumes from various sources; depleted uranium; Chemical Agent Resistant Coating (CARC); and some may even have been exposed to chemical and biological agents.

"We are also concerned about the inoculations they received to protect them from these agents. Our soldiers were exposed to these and many other potentially toxic substances.

"As a result, our old rules about compensation must change. Our solutions must fit their problems. Their problems cannot be made to fit our solutions.

"For example, we centralized claims processing of environmental hazard exposure claims in our Louisville, Kentucky, regional office. This has allowed us to develop expertise at rating these claims, and makes it easier for us to identify common health problems among Persian Gulf War veterans.

"Additionally, we have put guidance in place for evaluating Chronic Fatigue Syndrome. We are going to add this condition to our rating schedule. And, we are preparing guidance for evaluating fibromyalgia (musculoskeletal pain with tender spots or trigger points), a condition some Persian Gulf veterans have.



Secretary Jesse Brown



Study Links Memory Loss To Nerve Gas, As in Gulf

By Philip Shenon

WASHINGTON, May 13 — The Defense Department said today that Pentagon-sponsored research had produced important results suggesting that exposure to low levels of nerve gas and some pesticides can lead to memory loss, a common complaint among veterans of the 1991 Persian Gulf war.

The Pentagon, which acknowledged last year that tens of thousands of American troops may have been exposed to nerve gas shortly after the war, cautioned in a statement that it was too early to draw conclusions from the research, which was conducted on rats. Some scientists suspect that wartime stress is more likely to be the cause of the health problems of gulf war veterans.

But one of the researchers on the study, Mark A. Prendergast, a neuropharmacologist at the Medical College of Georgia, said the tests had been designed specifically with gulf war veterans in mind. "I believe there is definitely a relevance of our data to the illnesses of gulf war veterans," he said.

The Pentagon statement was issued as the newly elected British Government of Prime Minister Tony Blair announced this week that it would approve several new research projects to determine the cause of health problems among British veterans of the gulf war, who have complained of memory loss, digestive problems and other symptoms common to American veterans.

The experiments in Georgia, which were financed with a \$380,000 grant from the Defense Department, showed that rats who were exposed to low levels of organophosphates — the family of chemicals that includes the nerve gas sarin and many pesticides — experienced brain damage similar to that found in humans with memory loss.

"I don't think it's too early to draw conclusions," Dr. Prendergast said in an interview. "The type of exposure regime that we employed in the animals and the type of exposures

in the family of chemicals that includes the nerve gas sarin and many pesticides — experienced brain damage similar to that found in humans with memory loss.

"I don't think it's too early to draw conclusions," Dr. Prendergast said in an interview. "The type of exposure regime that we employed in the animals and the type of exposures that our troops experienced in the gulf are analogous, and the types of memory deficits that we've seen in the animals and those reported by gulf war patients are extremely similar."

Dr. Frank H. Duffy, an associate professor of neurology at Harvard Medical School, said he considered the study to be an "an essential piece of the picture." He said it "establishes without question that there are long-term effects" from exposure to low levels of nerve gas. "It confirms the common knowledge of people who are working in the field, and perhaps this will give birth to more research in this area," he said.

In its statement today, the Pentagon praised the experiments as "important" and said they "expand previous D.O.D. research efforts."

But the department said "these initial findings require replication in other species, including non-human primates" before it would be possible to draw larger conclusions about the effect of nerve gas on humans.

The experiments, it said, "are non-primate, laboratory animal studies and have the limitations of all such studies when extrapolation to humans is attempted."

The Pentagon also questioned whether the experiments, in which the rats were injected with the chemicals over a two-week period, offered many clues to the health problems of the veterans. "This route of administration and duration of exposure does not parallel any known human exposures to troops," it said.

The results of the study were published in January in the journal *Psychopharmacology* but were not publicized at the time by the Defense Department.

That same month, a White House experts panel released a report suggesting that wartime stress — and not chemical weapons — was a major factor in many of the ailments reported by thousands of gulf war veterans.

Still, the White House panel called for more research on the health effects of chemical weapons, especially in light of the Pentagon's acknowledgement last year that more than 20,000 American troops may have been exposed to low doses of the nerve gas sarin after the demolition of an Iraqi ammunition depot in March 1991.

A group of scientists at the University of Texas reported earlier this year that exposure to combinations of chemicals, including pesticides and low levels of nerve gas, were probably responsible for the health

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A group of scientists at the University of Texas reported earlier this year that exposure to combinations of chemicals, including pesticides and low levels of nerve gas, were probably responsible for the health problems of gulf war veterans, an assertion immediately questioned by the Pentagon and by other researchers.

But Pentagon officials may find it more difficult to argue over the conduct and conclusions of the research done at the Medical College of Georgia since the experiments, unlike those conducted at the University of Texas, were authorized and paid for by the Defense Department.

THE FRESH AIR FUND: 1877-1997

PHOTOCOPY
PRESERVATION

Pentagon Loses Bid to Keep Report on Gulf War Secret

By TIM WEINER

WASHINGTON, June 28 — After a long struggle with the Pentagon, which wanted to keep its findings classified, the General Accounting Office plans to release a scathing critique on Monday of the Defense Department's and arms makers' claims of success for high-technology weapons in the 1991 Persian Gulf war.

The G.A.O., the investigative arm of Congress, found that the claims of success for the F-117 stealth fighter jet, the Tomahawk attack missile, laser-guided "smart" bombs and other weapons had been overstated, misleading or unverifiable.

The classified data underlying that critique are to be made public even though the Pentagon has deleted many important findings. An advance copy of the long-secret report was made available by a Government official who agreed with its findings. The New York Times reported the major conclusions reached by the G.A.O. last July, when they were still classified.

One important finding was that more expensive weapons were not necessarily better weapons. "There was no apparent link between the cost of aircraft and munitions" and "their performance in Desert Storm," the report said.

For example, the Air Force praised the F-117 fighter's ability to avoid detection. But the report said the jet's success depended in part on jamming enemy radar and on flying at night and at altitudes high above the fray — like other planes.

"The high-cost F-117 fighter and the low-cost A-10 both experienced 100 percent survivability when operating at night," the report said.

The F-117's manufacturer, Lockheed, had claimed that on the first night of the war, the plane "struck 37 high-value targets, inflicting damage that collapsed Saddam Hussein's air defense system and all but eliminated Iraq's ability to wage coordinated war." The report found that 21 of the 37 targets had been hit by coalition forces and that "of these, the F-117's missed 40 percent of their air defense targets" that night.

The Air Force claimed that the F-117's had hit 80 percent of all their targets during the war. The report found that the percentage might have been as low as 41 percent.

The Pentagon censored the report's major findings on the Tomahawk attack missile, which said the missiles "were initially believed to

be extremely successful in hitting — and therefore damaging — their targets." "However," it said, "subsequent intensive analysis shows that the hit rate was (text deleted) percent." Whatever that number may be, it is "less than generally perceived," the report said.

Weapons manufacturers' claims for product performance during the war were consistently overstated, the report found. "One target, one bomb," Texas Instruments said of its Paveway laser-guided bomb system. The Pentagon echoed that claim. But on average, the report found, it was one target, four bombs.

McDonnell Douglas called its F-15E fighter jet an "all-weather" attack aircraft. The report said the F-15E's ability to detect and identify targets through clouds, smoke and dust was very limited.

Other claims for outstanding success during the war, such as for the Patriot missile system, which was deployed against Iraqi Scud missiles, have been hotly disputed by Congressional and private analysts.

The report, which analyzed more than one million pieces of data, concluded that there had been "a pattern of overstatement" by the Pentagon and arms manufacturers on the performance of weapons systems costing tens of billions of dollars.

"There certainly were some examples of such hyperbole," Frederick Frostic, deputy assistant secretary of defense for requirements and plans, wrote in a formal response to the report. Nevertheless, the overall performance of high-technology weapons in the gulf war more than justified their existence, he said.

Another revisionist report on the gulf war, in the new issue of The Airpower Journal, a publication of the Air Force, concluded that the bombing of the Iraqi capital, Baghdad, during the war "produced little identifiable military effect."

William Arkin, who analyzed previously classified military and intelligence reports, wrote in the article, "Air war bravado over bombs dropped down elevator shafts and through doorways of Saddam's palaces and ministries notwithstanding, the true fabric of Government control remained unscathed."

His analysis showed the limitations of air power in bringing about the most important political and military objective of the war: the end of the current Iraqi regime.

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clips

THE WASHINGTON POST

Patrick B. Pexton

A Promise to Do Better Is Not Enough

In a recent letter to the Food and Drug Administration, the Pentagon asked for broad authority to distribute to U.S. civilians—during or after a domestic terrorism incident—some of the same experimental drugs and vaccines used on troops to unknown effect in the gulf war. In most cases these are drugs, or uses of drugs and vaccines, that have never been tested in a clinical trial for effectiveness or side effects and that are not at present for sale commercially.

The Pentagon is seeking not only broad authority to give out these drugs during terrorist emergencies but also to waive FDA rules meant to ensure the safest use of experimental drugs: requirements such as keeping track of who gets what drugs, proper labeling, monitoring of side effects and fully informing patients of possible complications before they give their consent.

The FDA is concerned, because as it and the Presidential Advisory Committee on Gulf War Illnesses recently documented, the Pentagon has a terrible record in using such drugs and vaccines both in Desert Storm and more recently in Bosnia.

Just before Desert Storm, the FDA allowed the Pentagon to give troops several experimental drugs and vaccines not approved for commercial sale. Among them were pyridostigmine bromide (PB), a drug believed to be effective in fending off the effects of chemical and nerve agents; botulinum vaccine and antitoxin medicine to combat biological weapons other than anthrax; and anthrax post-exposure treatments. The FDA also allowed the Pentagon to waive informed consent, in some cases making it mandatory that the troops take the pills or

vaccines without full knowledge of possible risks.

Early research suggests that the interaction of PB with wartime stress, pesticides and other hazardous materials present in Desert Storm may be a trigger for "gulf war illness." PB may have been taken by as many as 500,000 troops and botulinum vaccine by about 8,000, although some information still is classified.

After the war, the FDA, in reviewing the Pentagon's compliance with the minimal wartime conditions the agency had laid down, found that "deviations" from the rules "pointed out an underlying inability for the Defense Department to carry out its obligations" under the rules for handling experimental substances. For example, only about half of the troops surveyed by the Pentagon received required information about PB; no records were kept of troops who had adverse reactions to the PB pills; and no notation in permanent medical records was made of those who took botulinum vaccine, making it impossible to study its long-term effects.

The Pentagon, chastised, promised the FDA it would do better next time. Bosnia was that next time.

In Bosnia, the Army was authorized to dispense an experimental vaccine for tick-borne encephalitis, a disease common in the Balkans. In its recent review of that program, the FDA criticized the Pentagon for failing again to document immunizations in soldiers' permanent medical records and for touting the vaccine in handouts given to troops as "very safe and extremely effective" when the FDA never authorized such glowing language.

The FDA at last is considering rescinding its permission for the Pentagon to use some experimental drugs on troops in wartime without their consent.

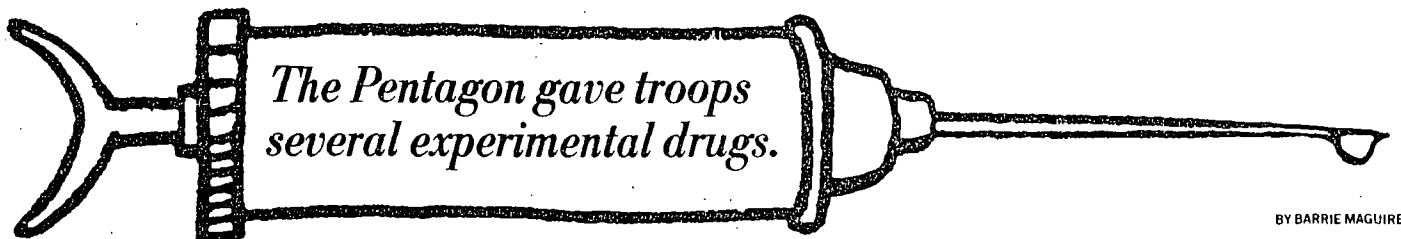
The President's Committee on Gulf War Illnesses was even more critical of the Pentagon's performance with unapproved drugs in the gulf war and Bosnia, saying the Pentagon "currently is incapable" of handling such drugs, and that its poor performance has hampered research into the causes of gulf war illness.

Against this background, the head of defense health affairs boldly is requesting from the FDA more authority to use some of these same substances not only on troops but on civilians in case of domestic terrorism involving chemical and biological weapons, with the same protocol waivers that the FDA already has noted the Pentagon is incapable of honoring.

The Department of Defense, understandably and correctly, wants as much flexibility as it can have during times of national emergency to protect troops and civilians at home from these weapons of mass murder.

But if Americans are in imminent danger of dying by the thousands from biological and chemical weapons at home, then the Pentagon and the White House should do a better job leveling with the people and Congress about the precise nature of the threat and how imminent it may be, and then begin a debate on how far the Pentagon should go in injecting itself into civilian emergency care.

The writer is a managing editor at Army Times Publishing Co.



BY BARRIE MAGUIRE

PHOTOCOPY
PRESERVATION

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July 24, 1994, Sunday, Final Edition

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HEADLINE: Triumphant in the Desert, Stricken at Home

SERIES: DIAGNOSIS UNKNOWN: GULF WAR SYNDROME, Part 1 of 3

BYLINE: David Brown, Washington Post Staff Writer

BODY: *By David Brown*

A pall of illness has descended on the veterans of the Persian Gulf War that is both as obvious and as hard to grasp as the plumes of oil smoke that became the war's most enduring visual image.

It is visible on the faces of Ben Stephens, Bobby Riley and James Simpson. They wear the haggard look of people no longer surprised at what has happened to their lives. Any substantial hope that things will get better soon also has disappeared.

Stephens, 39, says he now gets a headache any time he smells petroleum. For 13 years before the war he had been a diesel mechanic. Only since the war has the smell bothered him. His ears ring and he is constantly tired. Sometimes he falls asleep between chores on his 89-acre farm in Henryville, Ind.

Riley, 41, says he has lost 33 pounds since he returned from Saudi Arabia on Memorial Day 1991. Since then, he estimates, he has been to the doctor 200 times. He runs a molding machine in an aluminum foundry, and every day his joints hurt. His energy is gone. "There's not a man on Earth who has a better family or a better wife," he says, but he fears his condition could threaten his marriage.

This spring, Simpson, 40, gave up his job as a surveyor.

It was not because of his rashes or headaches but because, he says, he could no longer think straight. He forgot measurements and had to double- and triple-check everything. Eventually, neither he nor his boss trusted his work. Simpson now says he is on "disability leave," though his wife, Glenda, corrects him. He's just plain unemployed.

These men, telling their stories in a room at Fort Benjamin Harrison in Indianapolis, all say they are suffering from "Gulf War syndrome." What that means,

however, is unclear in every possible way.

The United States sent nearly 700,000 soldiers to Saudi Arabia in 1990 to help drive the army of Iraq out of Kuwait. The campaign was more successful and more safe -- at least for Americans -- than anybody could have imagined. Fewer U.S. troops died on the battlefield than in road accidents.

Within months of return, however, a number of veterans began to complain of illness. Fatigue was the most common complaint, followed by skin rash, headache, muscle or joint pain, loss of memory, shortness of breath, sleep disturbances and diarrhea. Most people who said they were ill had more than one complaint, a few had nearly all of them. The reports came from some active duty soldiers, but mostly from members (or former members) of the many Reserve and National Guard units that had been mobilized and sent to the Persian Gulf.

Word spread quickly of a "mystery illness," so named because these common and largely subjective symptoms usually did not lead to a clear diagnosis when the sufferers consulted physicians.

In the absence of satisfactory diagnosis and treatment, there arose an abundance of theories of what might have caused the problems: wartime stress or reentry to civilian life; smoke from burning oil wells; unusual responses to vaccines; exposure to pesticides, fuels and other substances, leading to "multiple chemical sensitivity"; rare infections; some form of chemical or biological warfare agent.

There is evidence for some of these theories. Most are almost certainly wrong. None can reasonably explain the extreme range of symptoms, which encompasses people who appear healthy and people who now must use wheelchairs.

How many people may be affected similarly is a subject of dispute.

So far, there have been no studies measuring the prevalence of illness in veterans, though several are planned. The only estimates of Gulf War syndrome's magnitude come from guesses by physicians, veterans and their advocates, and from a voluntary "registry" established by the Department of Veterans Affairs.

The registry is open to any soldier who served in the Persian Gulf during Operation Desert Shield or Operation Desert Storm. A person does not have to be ill to go to a VA hospital, fill out the registry questionnaire and get a physical examination. About one-sixth of the people on the registry, in fact, have no symptoms or complaints.

Since August 1992, roughly 24,000 former soldiers -- about 3.4 percent of those who served in the gulf -- have been interviewed and examined. Data on 17,248 of them

have been analyzed through the end of last month.

Though Reserve and National Guard troops accounted for only 17 percent of the American force in the gulf, they make up 49 percent of the people on the VA registry. (Forty-five percent were from the active-duty armed services, and the affiliation of 6 percent is unknown.)

The average age during Operation Desert Storm of the people on the registry was 31 years, older than the average age of active-duty soldiers during the war (27.4 years), and between that of reservists (30.4 years) and guardsmen (32.6 years).

As part of the registry procedure, VA physicians must list any diagnoses they can make when an examination is over. These diagnoses may not necessarily address all the symptoms a person has, or even the most severe ones. For example, a physician may diagnose a fungal skin infection in someone whose main complaint is fatigue. Nevertheless, such people are listed in the registry as having received a diagnosis.

To date, about 24 percent of people who have walked into the registry clinics with symptoms have walked out with no diagnosis of any kind. In the data analyzed through June, this amounts to 3,438 veterans.

A similar registry established by the Department of Defense for Persian Gulf veterans still on active duty contains about 100 people with undiagnosed illness. Some observers, however, say the low number does not reflect the extent of illness among active-duty soldiers who, in an era of "downsizing" in the armed forces, are said to fear for their jobs if they come forward.

Today, Gulf War syndrome has settled into both the lives of its sufferers and the mind of the public for the long haul.

It has been the subject of a dozen congressional hearings, two by the National Academy of Science's Institute of Medicine, and a three-day meeting at the National Institutes of Health. The VA is about to begin two large epidemiological studies of Gulf War syndrome, and a team of scientists from the Army, Navy and Air Force soon will start three others. A Defense Department project is reconstructing, through millions of paper records and an elaborate computer model, troop movements and weather patterns for the Persian Gulf campaign.

Around the country, support groups of Gulf War veterans have formed. Like many grass-roots networks, these are run by virtually full-time activists. Their voices belie frustration -- and, increasingly, bitterness and suspicion -- over medicine's inability to say what is wrong and make it go away.

For its part, the government is trying simultaneously to show good faith to

veterans and to protect itself from massive financial liability until more is known about the extent, and causes, of Gulf War syndrome. Whether this is a tenable position remains to be seen. There is a growing view that ill veterans should be compensated in some way even if their maladies do not fit "traditional" medical diagnoses. ✗

The problem is that it will be years before anyone knows exactly what Gulf War syndrome is, or how many illnesses it encompasses. A satisfactory explanation, in fact, may never emerge.

Despite the huge advances in medical science in the last half-century, the notion that there are "undiscovered" diseases – some afflicting thousands of people – is not nearly as far-fetched as it seems. Indeed, medicine's ability to detect, quantify and publicize information has made such discoveries more likely than ever.

In the 1970s, pediatricians in one Connecticut town saw what they considered an unusually large number of cases of juvenile rheumatoid arthritis. It turned out to be an infection called Lyme disease, caused by a previously undiscovered bacterium. Fatal illness at an American Legion convention in Philadelphia in 1976 led to the discovery of Legionnaires' disease, which scientists now know accounts for up to 5 percent of all cases of pneumonia acquired outside of hospitals. The century's biggest "new" disease, of course, is AIDS, first detected in 1981 as unusual pneumonias and skin cancers in homosexual men.

Nor are all new diseases caused by microorganisms that can be convincingly isolated and grown. A cluster of patients with muscle pain, rashes and a blood abnormality in the 1980s was especially mystifying. More than a thousand people became ill, and about 40 died. "Eosinophilia-myalgia syndrome" was eventually traced to contaminants in over-the-counter capsules of L-tryptophan, an amino acid sometimes used as a sleeping pill.

Knowledge of these illnesses originated with the observations of individual doctors or nurses. Gulf War syndrome is no different.

It is unknown where the original complaints of Gulf War syndrome occurred, but the first reported "cluster" appears to have been in the 123rd Army Reserve Command headquartered at Fort Benjamin Harrison, Ind. About 1,200 of the command's troops, in nine different units, went to the Persian Gulf and returned between June and September 1991.

Capt. Joyce Flanigan, an Army Reserve nurse who helped perform the demobilization physicals, recalled recently that many of the soldiers complained of

tiredness even though they were well rested. She also noticed two distinct types of rash. She referred a few people to an Army hospital in Fort Knox, Ky., for further evaluation.

Flanigan went off active duty in October 1991. Throughout that fall, reports of illness in the 123rd circulated. In January 1992, she was called back and sent to the 417th Quartermaster Company in Scottsburg, Ind. There, she examined a half-dozen reservists.

"That is when it all went to hell in a handbasket," she said. "They had severe joint pain, they were suffering memory loss, they were depressed. One female sergeant pulled her hair back and said, 'See this,' and she just had bald spots, clumps of hair had come out. One individual was using a cane."

In mid-March, the 123rd's unit physician, Col. Norman H. Teer, examined 48 soldiers with complaints. Several of the more clearly ill were referred to VA or military hospitals. (One was ultimately found to have viscerotropic leishmaniasis, a rare parasitic infection.) In most cases, the symptoms were vague and mild.

"These were 'type A' individuals, people who worked two jobs, coached Little League, were active and aggressive people. I thought there was probably something present, but I didn't know what," Teer recalled.

Pentagon officials learned of the illness, and in late March 1992, the surgeon general of the Army requested a formal investigation of the 123rd's "suspected outbreak" of disease.

In April, a six-person team from Walter Reed Army Institute of Research visited Fort Benjamin Harrison. Seventy-nine soldiers – out of 125 who had requested appointments – showed up for physical examination, blood drawing, and questioning about various environmental exposures during their deployment. About three-quarters were men.

The most common symptom was fatigue, reported by 71 percent of the group. Sleep disturbance was second at 57 percent, with many other problems, such as bleeding or sore gums (47 percent), cough (35 percent) and fever (13 percent) reported with less frequency. Half the people reported seven or more symptoms.

The symptoms, however, did not point to a single, or even a few, diseases. It was difficult even to know whether individuals with the same symptom had anything in common. For example, 28 soldiers reported having had skin rashes, and 13 had one at the time of the exam. But the rashes were not the same. Some were fungal, some were inflammation of the hair follicles, others were pigment loss from old infections.

The four units that together accounted for 80 percent of the soldiers examined had served in different locations in the Persian Gulf. The itineraries of individual soldiers

varied considerably. Similarly, there was no correlation between symptoms and exposure to drugs, such as anthrax vaccine, anti-malaria pills, or pyridostigmine, a medicine given to reduce the toxic effects of nerve gas. Blood tests uncovered a few abnormalities, but no more than had been seen in "control" groups of soldiers from two other forts, including one that had not gone to the Persian Gulf.

The investigators did observe one trend.

Several of the more common complaints -- fatigue, poor sleep, depression, cognitive symptoms -- had begun within a month of return to the United States. This tended to be true regardless of the month in which a soldier returned, suggesting the act of returning might itself play a role in the complaints. (The opposite pattern -- onset of symptoms around a particular date -- would suggest a common exposure in the past, with a lag before symptoms developed. This was not seen.)

The Walter Reed team said that many of the soldiers' problems, in fact, appeared to have straightforward explanations.

Muscle and bone pain, in most cases, seemed to be the result of previous injury or surgery. The rashes were "dermatological conditions found in the general population." Bleeding gums and mouth pain came from poor dental hygiene or teeth-grinding. The hair loss was male-pattern baldness. Laboratory studies specifically eliminated several infectious diseases, though two soldiers were referred for further testing for leishmaniasis.

The team found no evidence of a disease outbreak in veterans of the 123rd Army Reserve Command. It did comment, however, on a possible cause of the more subjective symptoms the soldiers had described.

"The results of our investigation suggest that stress may be significantly contributing to, if not the major cause for a large proportion of the symptoms reported," the researchers wrote in their report. "Insomnia, lassitude and fatigue, lack of motivation, forgetfulness, mood changes, irritability, feeling depressed, and diarrhea are classical physiological manifestations of stress. The timing of the onset of most of these symptoms in association with redeployment may be a reflection of the stress of homecoming more than that related to specific events in SW Asia... .

"Many [soldiers] spoke of strained or broken marriages and relationships, financial setbacks, and the adjustments that returning home has demanded. We feel that the experience of being mobilized and deployed was very stressful for them. We hypothesize that the adjustments demanded by these stresses may have been especially difficult for Reservists, many of whom may not have been prepared for the abrupt transition from civilian to military life when mobilized, and the equally sudden return to their homes and families when released from active duty."

The researchers felt obliged to note this, even though the leader of the team, Lt. Col. Robert F. DeFraithe, knew that it would not satisfy, and may cause resentment.

"Calling something stress-related -- people don't accept that as a fundamental, stand-alone reason for feeling bad," he said recently. "They don't accept it, and I don't think a lot of physicians accept it either. But it was the only thing that seemed to have a plausible association with the pattern we saw."

In the months after problems in the 123rd were noticed, reports of illness also emerged in units from Alabama, Mississippi, Massachusetts and elsewhere. Navy epidemiologists investigated a reported outbreak of illness at the Reserve Naval Mobile Construction Battalion 24 in Alabama, and, like their Army counterparts who examined the 123rd, also came up with no clear diagnosis.

The signs and symptoms of Gulf War syndrome do not fit those of a known disease. That isn't the only problem, however. There are major scientific obstacles to finding its cause even if it is a new disease.

When epidemiologists investigate an outbreak of illness -- say, an unusual number of cases of diarrhea or arthritis in a community -- one of the first things they try to do is come up with a "case definition." As the name suggests, this is a list of clinical or laboratory abnormalities that a patient must have in order to be considered part of the epidemic.

A case definition is not necessarily permanent, or even correct. It is merely a tool, though an important one. It gives researchers some idea of an outbreak's size, and it provides a finite list of patients whose lives can then be studied for some common exposure, location, job, habit, or experience that may point the way toward the ailment's cause.

The trouble with Gulf War syndrome is that its symptoms are so common that, in fact, they are found in hundreds of illnesses. In their mildest forms, the complaints also lie, in some sense, within the range of normal health.

Furthermore, the symptoms are highly subjective, a fact that does not invalidate them but that makes them exceedingly difficult to measure. How much tiredness is excessive? How severe is a headache? How does one evaluate and quantify fever when, at physical examination, the patients have normal temperatures?

Plenty of diseases have vague symptoms, and many also have unknown causes. But what every diagnosable disease has is some objective feature or cluster of features: a characteristic physical finding, an abnormal blood test, a typical X-ray appearance, a telltale microscopic appearance in tissue biopsy, a predictable clinical

course among the sufferers.

So far, at least, Gulf War syndrome has none of these.

Of course, a case definition for Gulf War syndrome could be formulated as "anyone with unexplained physical complaints who served in the Gulf War." A list of "case patients" then could be made. But it would be so all-inclusive as to be useless for the sort of detective work epidemiologists do.

Though the military, the Department of Veterans Affairs and some civilian researchers have been paying attention to Gulf War syndrome for more than two years, they are still very close to where they started.

In a curious way, however, the syndrome's resistance to easy explanation was necessary to bring researchers to their current line of inquiry. The issue, for the moment, is not what causes Gulf War syndrome. The crucial questions are even more basic.

What has been the health experience of veterans since they returned from the Persian Gulf? Have an unexpected number become ill with any kind of illness? Have an unexpected number died? Are reports of fatigue, joint pain, etc., actually more common among gulf veterans than among similar people who did not go to the gulf? What kinds of veterans report symptoms? Are they predominantly in one branch of the military? Is there a correlation between any of the symptoms and exposure?

As these questions are answered, epidemiologists, treating physicians, government officials and, most importantly, veterans will have a clearer picture of Gulf War syndrome, perhaps not as a disease but as a phenomenon.

It may turn out to be a single thing, though this seems unlikely. It may turn out to be a few rare diseases, mixed in with many common ones. It may turn out to be many common diseases, and some normal conditions, that shared experience, media attention and cultural attitude have swept under a single heading.

One of the few certainties is that it will be a long time before veterans, scientists and the public get a full and final accounting of Gulf War syndrome.

NEXT: Bickering, inertia and red tape

GRAPHIC: ILLUSTRATION, BEFORE THE ILLNESS: U.S. TROOPS RETURN HOME IN MARCH 1991 AFTER A SWIFT AND VICTORIOUS DESERT CAMPAIGN AGAINST IRAQ. ONLY AFTER THEY RETURNED DID SOME BEGIN TO FEEL SYMPTOMS THAT ARE BEING CALLED "GULF WAR SYNDROME.", TWP; PHOTO, AP; PHOTO, LUCIAN PERKINS; PHOTO, MAP, TWP

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July 25, 1994, Monday, Final Edition

SECTION: FIRST SECTION; PAGE A9

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HEADLINE: Studies Will Frame a Picture of Gulf Veterans' Problems

SERIES: DIAGNOSIS UNKNOWN: GULF WAR SYNDROME, Part 2 of 3

BYLINE: David Brown, Washington Post Staff Writer

BODY:

Over the next three to five years, the Department of Veterans Affairs and the Department of Defense are planning several large-scale studies to investigate "Gulf War syndrome."

There are several general strategies.

One is to randomly survey gulf veterans about fatigue, skin rashes, headache and other symptoms mentioned by those who say they are chronically ill as a result of war service. Another is to compare gulf veterans' overall health to that of "control" groups of soldiers who never went to Saudi Arabia. A third is to look for gross abnormalities among children born to veterans after the war, in an attempt to learn if there have been any "genotoxic" effects of the gulf campaign.

The bulk of information on Gulf War syndrome comes from the "Persian Gulf Veterans Health Registry" opened by the VA in August 1992. It contains data on more than 24,000 men and women. Not all of these people are ill. Three-quarters of those who say they are have been diagnosed with illnesses that explain at least some of their symptoms.

Though the registry is full of tantalizing information, it is not an accurate yardstick for measuring the magnitude of illness among Persian Gulf veterans. People sign up for its interview and examination voluntarily. They constitute an entirely self-selected population. Consequently, the registry can not function as an unbiased window on Gulf War syndrome, however that is defined.

Later this year, VA epidemiologists will start building such a window.

A random sample of 10,000 Gulf War veterans will be asked about symptoms and medical conditions. A sample of so-called "era" veterans, who were in the military

during Operation Desert Storm and Operation Desert Shield but did not participate in the campaigns, will be asked the same questions. The two groups will be matched for age, sex, active-versus-reserve status, and branch of military. They will, in theory, be "identical" populations except for their experience in the gulf war.

The VA does not know now if it will have the money to validate the responses by reviewing the medical records or physically examining a sample of people in both groups. Even without that, however, the study will help determine whether there's anything that sets gulf veterans apart.

A second VA study will try to answer a question that logically follows: Have an unexpected number of gulf veterans died?

Of the 696,562 military personnel who went to the gulf, by the end of last year, 2,147 were dead. (That figure does not include war casualties.) The VA is now tabulating mortality and cause of death among a matched sample of about 700,000 era veterans. Total "excess" death from any cause, or an unusual number of deaths from specific diseases (such as suicide or cancer), will give researchers clues.

Defense Will Track Seabees

Meanwhile, the Department of Defense is undertaking three major studies.

In one, epidemiologists will interview 2,250 members of Navy construction battalions (Seabees), 1,500 of whom are Gulf War veterans. Outbreaks of illness have been reported among Reserve Seabees, but this study will be of active-duty sailors only. The Seabees were chosen because they were scattered across the theater of operations and they are likely to have had a wide range of occupational exposures. They will be asked about those exposures, and environmental and geographical factors as well. Blood will be drawn from every person, and the entire group will be followed for five years.

This study will give researchers two databases: one about exposures and the other about symptoms.

If it turns out there are more symptoms among Seabees who were in the gulf than those who were not, then the epidemiologists can look for potential risk factors in the exposure data. If there is one (or a cluster) of exposures that could plausibly explain symptoms, then a "biological marker" – a toxin, an antibody – could be sought in the blood samples. That, in turn, could lead to both a diagnostic test for the illness and a clue to the cause.

The study will not be able to say how widespread Gulf War syndrome is, however. That is because there is no consensus at the moment about what constitutes a "case." Epidemiologists will not be able to estimate how many people have the problem (prevalence), or how many new cases are appearing over given periods of time (incidence).

But this does not bother them.

"I don't think the veterans give a hoot about prevalence and incidence. They want to feel better," said Cmdr. Gregory C. Gray, an epidemiologist at the Naval Health Research Center in San Diego who is heading the study. "Studies that focus on what might explain their symptoms are important. Incidence and prevalence is nice, especially if you're trying to estimate the public health impact of a disease. But at this point, it doesn't look like it's possible to get that."

A second Defense Department project will compare 350,000 active-duty servicemen and women who were in the gulf with 700,000 similar military personnel who did not go. Researchers will compare the rates of hospitalization and the "mix" of diseases found in the two groups. While this study will not address the syndrome's symptoms directly, it will give epidemiologists an idea whether Persian Gulf experience overall seems to be damaging to veterans' health.

The third study will use those same two populations to look at the disturbing report that children of some veterans are also being affected by Gulf War syndrome. As in the second study, researchers will focus on relatively unambiguous health "outcomes" rather than the vague symptoms of the syndrome. The rates of prenatal death, premature delivery and birth defects in the two groups will be compared.

A small study, similar to this last one, was done on two National Guard units from Southern Mississippi earlier this year. Some of the 287 Persian Gulf veterans had complained of an outbreak of birth defects and infections in their children. Officials from the Mississippi State Health Department reviewed the medical records of 51 babies conceived after the war.

Data from the Centers for Disease Control and Prevention (CDC) predicted five premature births in a group this size. Among the Mississippi babies there were two. Comparisons for other problems were: low birth weight, 4-6 expected and 5 observed; major birth defects, 2-4 expected and 3 observed; less significant defects, 3-5 expected and 3 observed.

The state epidemiologists did not have enough information to determine whether the babies had experienced more pneumonia, bronchitis and ear infections than expected. They did conclude, however, there was not an excess of birth defects.

Scientists 'Replay' the Campaign

Other studies will focus not on disease, but on things that may be associated with disease. The largest, also planned by the Defense Department, will allow researchers to "replay" large parts of the Persian Gulf campaign in a way scarcely imaginable in previous wars.

Mathematicians, meteorologists and environmental scientists at Aberdeen Proving Ground north of Baltimore are reconstructing wind and weather patterns for the period from the time Iraqi soldiers ignited the first Kuwaiti oil well in late February 1991 to a month after the last fire was extinguished on Nov. 6, 1991.

Congress mandated this effort when exposure to oil fire smoke was the leading candidate as a cause for Gulf War syndrome.

Few scientists now feel that way. Nevertheless, the project is going forward, not only because it is law but because aborting it would feed the growing number of conspiracy theorists who believe the federal government is concealing information about Gulf War syndrome.

The U.S. Army Environmental Hygiene Agency collected air samples from eight locations in Kuwait and Saudi Arabia starting on May 5, 1991. The amount of data is substantial: 4,000 samples tested, in some cases, for as many as 15 different chemicals, for a total of 36,000 individual measurements. This information, however, does not describe what happened in the first months of the well fires, a time when, the veterans say, smoke at ground level was much denser.

The Aberdeen team is using estimates of the volume of oil burned in those early months, as well as data on the crude's chemical composition, to calculate what was in the smoke. Chemical analysis of samples of the plume, taken by airplanes, will help verify these inferences.

A weather model, based on meteorological data from the war period, is being used to predict day-to-day levels of various pollutants. The model's accuracy can be tested by comparing the predicted readings with those recorded at the eight sampling stations. The result, they hope, will be a continuous portrait of what oil-fire contaminants touched the skin and went into the lungs of servicemen and women.

Of course, analysts will also need to know the exact locations of various U.S. forces during Operations Desert Shield and Desert Storm.

That question is being answered at Fort Belvoir in Virginia, where 20 people are working full time to record the movement of the more than 13,000 military companies that served in Saudi Arabia and Kuwait or offshore.

Despite voluminous records (troop location documents for the Army alone fill 657 boxes), it is not possible to track every individual for every day. Nevertheless, the level of precision is staggering. Ultimately, the location of every company by longitude and latitude coordinates will be known for every three-day period, and in some cases, for every day. The planned completion date is December 1995.

This computerized database could be used to determine whether there were any locations where soldiers were at higher risk for Gulf War syndrome, or whether "location-specific" risk changed over time. Perhaps most important, it could allow epidemiologists to test the possible association of other environmental exposures -- notably poison gas, which the military says was never used by either side but which some veterans say was frequently detected -- and subsequent illness.

"I'm sure that when we get done, there are going to be a lot of people interested in us," said project director Donald C. Hakenson.

GRAPHIC: PHOTO, RECREATING THE WEATHER: METEOROLOGIST FRED KIRKPATRICK, IN FOREGROUND OF PHOTO AT LEFT, WORKS ON A COMPUTER MODEL OF THE PERSIAN GULF AT ABERDEEN PROVING GROUND TO RECREATE WEATHER PATTERNS DURING THE PERIOD IN 1991 WHEN OIL FIRES WERE BURNING. AFP; PHOTO, JAMES THRESHER

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HEADLINE: Colonel Loses Ground to a Faceless Enemy

SERIES: DIAGNOSIS UNKNOWN: GULF WAR SYNDROME, Part 3 of 3

BYLINE: David Brown, Washington Post Staff Writer

BODY:

Col. Herbert Smith can measure his long slide into disability with great precision. Today, he can tear open one packet of sugar.

"A couple of weeks ago, I could tear two packs."

He says this sitting at the dining room table in his home in Ijamsville, in Frederick County. Next to him is his campaign hat, in desert camouflage and fronted with the winged insignia of his rank. A cane leans against the table.

"I can't open a soft drink can. I can't open a twist-cap bottle," he adds.

He also cannot work, cannot drive, cannot keep his balance reliably and cannot stay awake long enough to read a book. Worst of all, he cannot say what has happened to make him this way.

In the baffling spectrum of physical complaints that go under the name "Gulf War syndrome," Herbert Smith inhabits the far end where no one doubts that something very abnormal is going on.

He has been in the Army Reserve for 30 years, with five tours of active duty, one lasting four years. A veterinarian in civilian life, in the service he labored in civil affairs, medical care planning and desert survival. He and his wife, Pam, a microbiologist, have one daughter in the Navy, another in the Army. Their son was in the Army when he died in the 1985 crash of the 101st Airborne Division airplane in Gander, Newfoundland.

Smith says he is proud to be a military man and, he feels it necessary to add, has never been a complainer.

During Persian Gulf operations, he was a civil affairs officer assisting the Kuwaiti minister of health, traveling widely in the gulf, not only to Saudi Arabia and Kuwait, but to several neighboring countries as well. In May 1991, he developed influenza-like symptoms, with fever, aching joints and swollen lymph nodes. He recovered from the acute symptoms but was left with joint pain severe enough that it was hard to put on a rucksack or stand with his hands behind his back.

During the next three years, he got worse. He became unsteady on his feet and increasingly tired. He suffered frequent headaches and several times became confused and lost his way driving home from his veterinary clinic in Baltimore. Most of all, though, he was in pain. The pain came almost as soon as he exerted a muscle and when activity put pressure on a joint. In August 1993, unable to put on surgical gloves, he gave up his practice.

Throughout it all, he consulted dozens of doctors. He got extensive diagnostic work-ups at the Veterans Affairs hospitals in Baltimore and Washington. He spent three weeks at the Mayo Clinic in Minnesota and recently underwent testing at the Hospital of the University of Pennsylvania in Philadelphia.

He has damage to the vestibular system, the complicated neural structure of the inner ear that governs the sense of balance. He has an increase in bloodstream protein of the sort seen in some blood disorders or infections. He has an abnormal number of certain immune system cells. There is increased blood flow to distinct areas of his brain.

Recently Smith got what now passes for good news: an abnormal test result that seems to explain some of his symptoms.

A diagnostic instrument used only in research found an unusually rapid accumulation of lactic acid in the calf muscles immediately after exercise. Lactic acid, which cells produce when they expend energy under oxygen-deprived conditions, is what makes a person's muscles hurt after intense or prolonged exertion. This suggests Smith may have an abnormality in one of the biochemical "pathways" that govern cell metabolism. It may also explain why he hurts when he moves around.

"I'm happy to have a physiological reason to explain some of my pain," he said recently. "It's so much nicer to have something to hold onto than to hear that it's all psychological."

More tests are planned.

Though Smith does not often use the phrase "Gulf War syndrome," he believes his illness arose from his service in that campaign. He has testified at hearings on the subject before congressional committees and the National Academy of Science's Institute of Medicine. He feels solidarity – both emotional and physiological – with fellow veterans whose complaints are far milder than his own.

"A lot of the people I look at and say: 'That's where I was a year ago' ," he said.

Smith's case, however, differs from theirs in an essential way.

His medical record is a laundry list of physical impairments, abnormal lab tests, perplexing radiological studies. He has many objective signs of illness – something that most people with Gulf War syndrome do not have.

The one thing that seems clear is that Smith has a progressive neurological (and perhaps metabolic) disease that, so far, has eluded diagnosis. Despite superficial similarities, the illness may bear no relationship to the complaints voiced by thousands of other gulf veterans. It may, in short, not be Gulf War syndrome at all.

The VA's experience, in fact, suggests that many of the most serious and perplexing cases of illness among Gulf War veterans will eventually get conventional diagnoses.

The department has three medical centers – in Washington, Houston and Los Angeles – where physicians in other VA hospitals can send their difficult cases. About a hundred men and women have been evaluated so far, often spending weeks in the hospital, seeing many specialists and undergoing invasive procedures.

Doctors at the referral centers have diagnosed a case of trichinosis that was causing muscle pain and weakness, a pituitary tumor causing headache and endocrine abnormalities, several cases of inflammatory bowel disease causing diarrhea. They have also found numerous cases of major depression and post-traumatic stress disorder. Some of the diagnoses are of conditions not entirely accepted by mainstream medicine, such as "chronic fatigue" syndrome and "multiple chemical sensitivity" syndrome. Nevertheless, only one-third to one-half of the patients have left the referral centers with "diagnosis undetermined" on their charts.

"The word we would like to get out to the local medical centers is that if they use readily available diagnostic tests and medical skills, they will in the majority of cases come up with a diagnosis that explains the patient's illness," Frances M. Murphy, a neurologist and epidemiologist who headed the Washington referral center and now works at the VA's central office, said recently.

There is one scenario, however, in which Herbert Smith's case (or one like it) could turn out to be crucial to understanding Gulf War syndrome. That would be if there is a new disease lurking behind the veterans' symptoms.

When a new disease is discovered, it is almost always found in people with severe cases. Only later, after knowledge accumulates, can scientists and clinicians recognize it in mild, or even asymptomatic, cases. If it turns out something undiscovered explains Gulf War syndrome, it almost certainly will be discovered in someone like

Smith.

Most ill veterans hope for this possibility. The anguished calls for more research carry the implicit belief that a discovery is waiting to be made -- that there is a key that will unlock Gulf War syndrome. Indeed, even the term "Gulf War syndrome" suggests a common thread stitching together thousands of individual illnesses.

This is the unlikeliest of scenarios for many reasons, the most important being that new diseases are very rare. Even when one is found, it doesn't usually burst onto the scene in thousands of cases. The scenario, however, is not impossible.

Operations Desert Shield and Desert Storm involved the transport of more than 690,000 Americans to a geographical region and biological environment in which few of them had ever lived. Could some of them have encountered an "exposure" -- in this theory, most likely an infectious agent -- that found in them a particularly susceptible host?

In places where an infectious organism is endemic, native people often develop resistance. This occurs either because immunity is acquired in childhood (after mild cases), or because the disease itself drives the population to preserve genetic mutations that confer protection.

It is remotely possible Gulf War syndrome is an infectious disease that is hard to detect in Persian Gulf natives for these reasons, but which bursts into view when a large foreign population sojourns in the region. However, one of the major things going against this scenario -- other than sheer unlikeliness -- is that it wouldn't explain why the illness is found, by and large, only in Americans.

In the United Kingdom, which sent 45,000 soldiers to the gulf, 33 veterans had come forward for examination by early June. (Some advocates, both there and in the United States, say there may be several hundred people with symptoms). In Canada, which sent 2,000 troops, nine men and women have been seen and treated for what they believe is war-related chronic illness. In a recent tour of several other coalition countries, Maj. Gen. Ronald R. Blanck, commander of Walter Reed Army Medical Center, was told by national health authorities there were essentially no cases of the kind of syndrome the United States is seeing. Selective infection -- or selective exposure of any sort -- among otherwise similar non-natives is very hard to imagine.

On the other hand, it is possible the key variable lies not in the experience but in the people.

Though definitive studies have not been done, it appears Gulf War syndrome is more common in Reserve and National Guard units than in the active-duty armed services. During Desert Storm, reservists averaged 30.4 years of age, and guardsmen 32.6 years, compared to 27.4 years for active-duty soldiers.

Energy declines and physical complaints rise with age. An age difference of this magnitude could explain some of the prevalence of Gulf War syndrome in reservists and guardsmen, especially if it turns out (when the epidemiological studies are finished) that relatively few people actually have undiagnosable illness.

Some doctors believe reservists and guardsmen are particularly susceptible for another reason.

As part-time soldiers, many of whom never dreamed they would be called up and put in harm's way, these men and women suffered the most disruption to their routine and, in general, filled the lower-status jobs during the campaign. As a group they may have been less mentally prepared for the stresses of war, and consequently may be more likely to exhibit the sort of non-specific physical complaints that stress can cause.

In addition, culture can also contribute to illness, or the perception of it.

In public discussions of Gulf War syndrome, the ill and their advocates frequently cite the experience of the Vietnam War defoliant Agent Orange, along with recent revelations of unethical federally sponsored radiation research in the 1940s and 1950s, as evidence of government malfeasance. Some believe the U.S. military either caused Gulf War syndrome, is covering up its origins or is withholding information about its treatment. This climate of suspicion, in turn, may drive some people to unconsciously search for illness in their own experience.

The highly unusual and clearly demarcated nature of the Gulf War in every veteran's life also can make it loom up as a convincing cause for many subsequent events, especially bad ones.

In late April, several gulf veterans addressed an expert panel convened by the National Institutes of Health. One was Troy Albuck, a 27-year-old former Army Ranger who walked with a cane. He spoke to the hundreds of scientists and advocates gathered of his own troubles and then, with a choking voice, of his family's.

His wife had two miscarriages in the year after his return from the gulf. In a third pregnancy, she had premature labor in the fifth month, which physicians were able to stop. A son was delivered seven weeks early, with problems that required three months of intensive care, and numerous painful procedures and operations. The medical bills exceeded \$ 500,000.

The child now has vision and hearing problems, cerebral palsy and a lung condition that results from long-term use of mechanical ventilators. Albuck's wife has subsequently miscarried again.

The former soldier told the panel he believes his illness -- whatever it may be --

has spread to his wife and child.

"Their symptoms are the same, yet worse, because they did not volunteer ... They have been drafted against their will to fight as conscripts in this war against Iraq. They fight untrained, they fight unarmed and they will never receive the Purple Heart they earned and deserve," he said. "It would have been so simple if we had just gotten shot."

From an orthodox medical perspective, however, Albuck's assertion is unlikely. Far more likely is that his wife suffers from a predilection for preterm labor (which, as it happens, is also a medical mystery) and its tragic consequences.

Whatever Albuck's disease turns out to be, there is little doubt that belief plays a potent role in the perception and experience of illness.

Lt. Col. Kenneth Scott is the Canadian physician who treated the few cases of unexplained illness among his country's gulf veterans. As he looks over the border to Gulf War syndrome here, he is reminded of an experience he had several years ago in Calgary while in training to be an infectious-diseases specialist.

He wanted to know if there were any locally acquired cases of Lyme disease in southern Alberta. A bacterial infection transmitted by ticks, Lyme disease causes joint pain and, in some cases, chronic malaise and fatigue not unlike that seen in Gulf War syndrome. Lyme disease is most commonly seen on the East Coast of the United States. Scott went looking for it with the standard lab tests and was assisted by a neurologist and an arthritis specialist. An entomologist looked for the tick, *Ixodes dammini*.

During the research project – and partly as a result of well-publicized attempts to find patients, Scott thinks – there arose a group of people who believed they had undiagnosable cases of Lyme disease. A support group was formed, and eventually it had about a hundred members.

Scott and his colleagues, however, never found anything – neither disease nor tick.

"There are many people out there who believe things. But the mere believing of something doesn't make it true," he said recently. "I think this is the same type of thing that is happening with the Persian Gulf."

Scott recalled he saw Canada's Gulf War syndrome cases after a report of illness among Army reservists in Indiana appeared on Canadian television in March 1992. Of the nine patients, one had a rare kind of autoimmune arthritis called ankylosing spondylitis, and another painful compression of a spinal nerve root. The rest appeared to have chronic fatigue syndrome (CFS).

Those seven enrolled in a CFS clinic Scott oversees at the National Defense Medical Center in Ottawa. They received cognitive psychotherapy and lifestyle counseling aimed at returning them to their former levels of activity. All the veterans got well, or nearly well, Scott said, and the last was discharged from his care in April.

Unless a single, dominant diagnosis is found, the United States' resolution of Gulf War syndrome is likely to be vastly more complicated. Though virtually no American experts will say so openly, many privately make the following predictions:

In most people with severe illness — people like Herbert Smith — a diagnosis will eventually be made. Some of the diseases will be treatable, some not. More cases of leishmaniasis, the debilitating infection so far diagnosed in a dozen veterans, will be found. Many veterans will be told they have multiple chemical sensitivity, chronic fatigue syndrome or a stress-induced disorder and will seek treatments for those conditions. In thousands of people, symptoms will disappear on their own. A few people will remain mysteriously ill. A core will believe forever the government is hiding something.

Today, the possibility that there may be less to Gulf War syndrome than meets the eye is an opinion few experts are willing to entertain, at least in public.

Last month, a panel of scientists, appointed by the Department of Defense and led by Nobel-laureate biologist Joshua Lederberg, released a report on "Persian Gulf War Health Effects." The panel concluded circumspectly that "there is insufficient epidemiological evidence at this time to support the concept of any coherent 'syndrome'."

Within hours, fax machines were humming with denunciations.

"The Lederberg report is an unfortunate irrelevancy," said Rep. Glen Browder (D-Ala.). Sen. John D. "Jay" Rockefeller IV (D-W. Va.) criticized "its underlying cynical view that reported illnesses are the result of 'wide publicity'." Rep. Joseph P. Kennedy II (D-Mass.) cautioned that "we should not make the Lederberg report out to be more than it is."

Whatever its resolution, the phenomenon of Gulf War syndrome is likely to have long-term effects on the relationship between war and medicine, if on nothing else. In the low-intensity, high-tech combat of the future, military planners will have to consider risks that are harder to evaluate than a shooting enemy.

"When you deploy for war, you never think of the environment as a major hazard," Jack M. Heller, a physiologist in the U.S. Army Environmental Hygiene Agency, said recently. "Maybe in the future we'll have to be looking at existing environmental hazards, or ones that could happen."

Actually, the Army tried to do that in the Persian Gulf, Heller recalled. Scientists

were dispatched to monitor the oil well fires, even though preliminary data suggested the conflagration had little effects on the ground. It seemed like an extra-safe, forward-thinking decision.

"But all our planning, all our attempts to be proactive," he said with a weak laugh, "didn't prevent what is happening now."

GRAPHIC: PHOTO, ARMY RESERVE COL. HERBERT SMITH'S PAINFUL AND DEBILITATING SYMPTOMS BEGAN IN MAY 1991 AFTER A TOUR OF DUTY IN THE PERSIAN GULF REGION. BILL O'LEARY

LANGUAGE: ENGLISH

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