

The War Related Illness & Injury Study Center: A Resource for Veterans, Providers, Researchers

www.warrelatedillness.va.gov

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Post-Deployment Health Services (10P4Q)

August 9, 2016

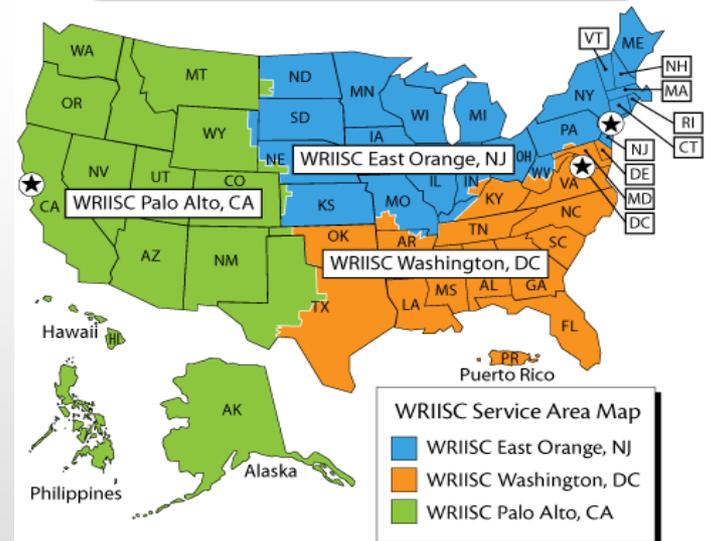
Overview of the Program

- WRIISC is a National VA Post-Deployment Health Resource (Public Law 105-368)
- The WRIISC develops and provides post-deployment health expertise to Veterans and their health care providers through clinical programs, education and risk communication, and research
- The first two WRIISC sites were established in 2001; one in Washington, DC, the other at the East Orange, NJ.
- A third WRIISC site, to provide wider coverage and easier access for Veterans, was authorized and became operational in Palo Alto, CA in 2007
- Effective 2016, the WRIISC was re-aligned under Patient Care Services, Post-Deployment Health (PDH) Services

Patient Care Services
(10P4)

Post Deployment Health
Services (10P4Q)

War Related Illness
and Injury Study
Center



War Related Illness & Injury Study Center (WRIISC)

- The WRIISC (pronounced “risk”) is a National Program in three locations (CA, DC, and NJ)
- It has four main focus areas: Research, Clinical, Education, and Risk Communication
- WRIISC provides expert “second opinion” consultations on issues related to post-deployment health
- WRIISC provides clinical evaluations for Veterans with difficult to diagnose and/or treat conditions and deployment related exposure concerns from all conflict eras
- Primary Care Physicians complete an “IFC War Related Illness” consult request in CPRS
- A Webinar series is part of our efforts to educate the VA Provider community

WRIISC Accomplishments (FY15)

Clinical

- Completed over 2,500 patient interactions, addressing concerns via phone and email
- 790 consults from VA providers, with eConsult or in-person evaluations completed
- Served >1000 Veterans in complementary and integrative medicine services
- >98% of Veterans who completed the WRIISC comprehensive evaluation said the WRIISC providers listened and respected them

Education (FY15/FY16 to date)

- 28 webinars were given to providers, with ~6500 attendees
- 2 MyVeHu presentations with >1400 viewings
- Training for Veterans: clinical education classes for Veterans led by WRIISC providers on environmental exposures and general health and well-being
- WRIISC Website: easy access to information on post-deployment health issues, factsheets, and WRIISC Advantage Newsletter, >127,000 unique page views
- WRIISC Newsletter: 3 published per year, circulation > 3,000 per issue

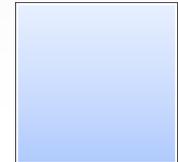
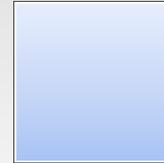
Research

- Funding: The WRIISCs managed more than \$25 million in research funding
- Publications: 54 peer-reviewed articles were published

Data/Dashboards/Measures

■ Clinical

- Track WRIISC clinical activity
- Characterize post-deployment health concerns - *WRIISC Intake Packet*
- Develop follow-up measures from providers, social workers, and emerging case-management system
- Collect Veteran and provider satisfaction data
- Record additional services provided by WRIISC: Behavioral health assessments, brain imaging, sleep studies, pulmonology assessments, etc.
- Monitor the demand and usage of Complementary and Integrative Medicine (CIM) Services, including individual and group acupuncture, chair and mat yoga, qigong health, education sessions, telehealth yoga and yoga meditation services



■ Education

- Continue to tabulate wide range of educational activities and numbers of individuals provided with post-deployment healthcare information
- Survey providers to assess the impact of training on clinical care



■ Research

- Continue to pursue the understanding of post-deployment healthcare issues, successfully compete for external funding, and collaborate with research partners



Issues

- WRIISC is a specialty service that specifically addresses the unique post-deployment needs of Veterans
- The landscape is changing – Veterans are living longer with more post-deployment health concerns
- The WRIISC is in position to increase coordination of clinical care, disseminate educational elements, and manage research of post-deployment health issues
- Veterans need and appreciate high-quality post-deployment health services

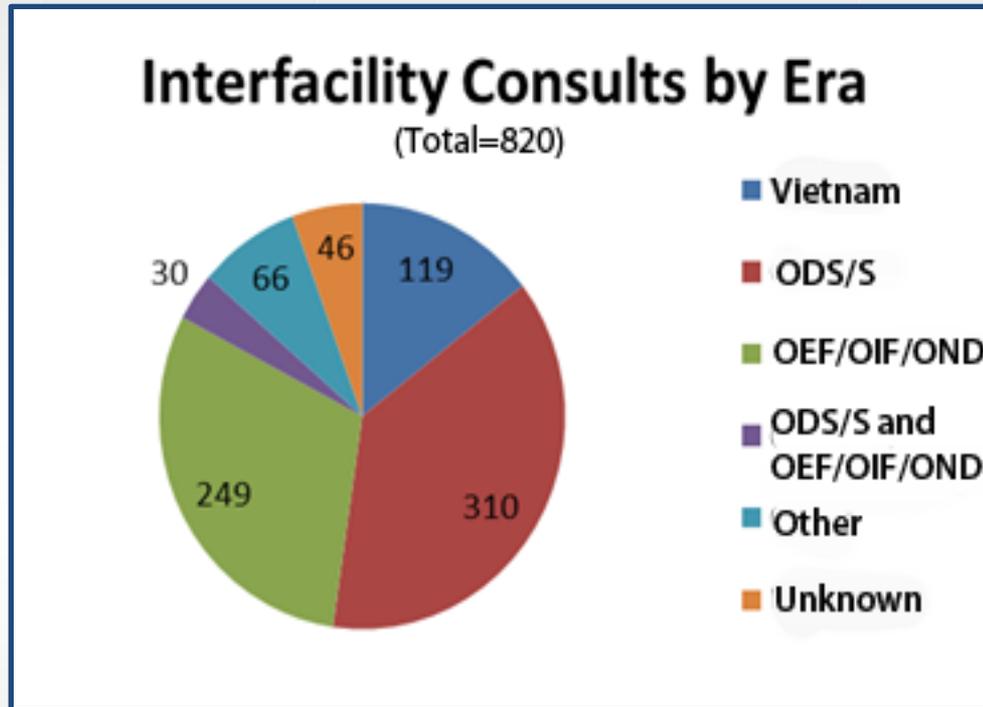
8/9/2016

Presented by the **War Related Illness and Injury Study Center (WRIISC)**
Post-Deployment Health Services, Office of Patient Care Services

The WRIISC focus on Operations Desert Shield/Storm: Defining Gulf War Illness & Developing Treatments

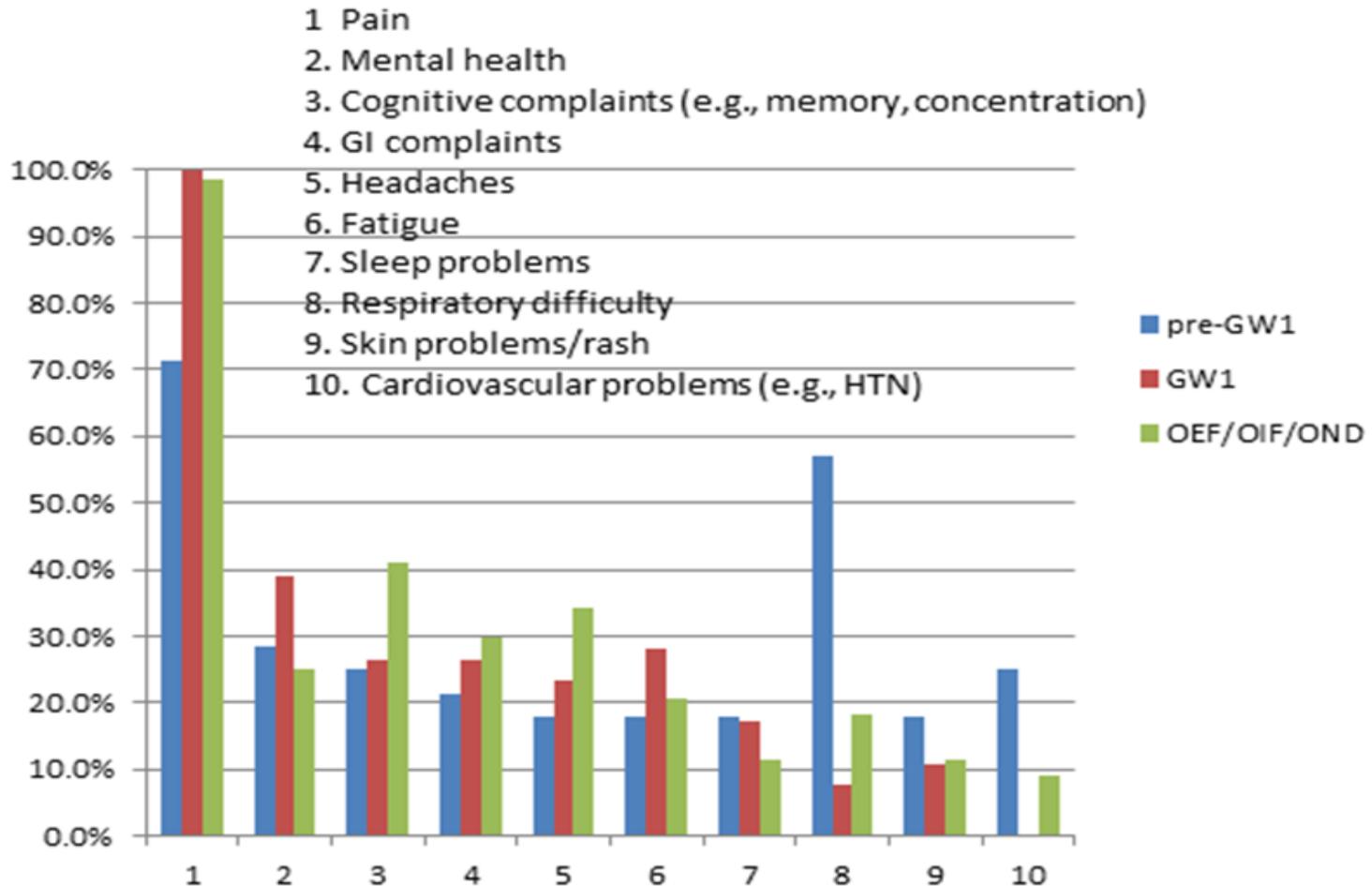
WRIISC Consult Services

In FY2015 the WRIISC received 820 Inter-facility Consults



41% of WRIISC Consultations are for ODS/S Veterans

Top 3 Symptoms of Veterans Presenting to the WRIISC program - FY 2013



Presented by the **War Related Illness and Injury Study Center (WRIISC)**
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Webinar Outline – 7/12/2016 for VA/non-VA Clinicians

- Operations Desert Shield / Storm (ODS/S)
 - Conditions during deployment
 - Possible deployment exposures
- Common Symptoms
- Defining Gulf War Illness
- Possible biological origin of symptoms
- Treatments Strategies & VA Resources
- Gulf War Illness Research

Operation Desert Storm/Desert Shield (ODS/S) Timeline

1990

- August 2: About 100,000 Iraqi troops invade Kuwait, initiating the Gulf War.
- August 7: U.S. launches Operation Desert Shield. First U.S. troops arrive in Saudi Arabia. US Naval forces were strengthened and 2100 Marines sent to area on aircraft carrier
- November 29: U.N. Security Council Resolution 678: Iraq to withdraw from Kuwait by Jan. 15, 1991

1991

- January 12 : U.S. Congress passes a joint resolution authorizing the use of military against Iraq
- January 16: Operation Desert Storm announced; January 17: air war commences (2:38 am local time)
- January 18: Iraq launches SCUD missiles on Israel. U.S. deploys Patriot missiles
- January 22:: Iraqi troops begin blowing up oil wells in Kuwait, oil well fire smoke becomes a problem
- February 24: Ground war begins, U.S./Coalition forces invaded Iraq and Kuwait at 4 am Baghdad time
- February 25: Iraqi SCUD missile strikes U.S. barracks, Dhahran, Saudi Arabia, killing 28 U.S. troop
- February 26: Saddam Hussein orders the Iraqi withdrawal from Kuwait. About 10,000 retreating Iraqi troops were killed when Coalition aircraft bombs their vehicles (Highway of Death)
- February 27: U.S. Marines and Saudi Arabian troops entered Kuwait City. U.S. Army then engaged the Iraqi Republican Guard in several tank battles in Iraq, also known as the Battle of Medina Ridge
- February 28: Saddam Hussein surrenders, U.S. President George H. W. Bush announces ceasefire
- March 10: Explosive charges at Kamisiyah weapons depot detonated, producing large cloud, ? sarin
- March 17 to June 13: U.S. troops participating in ground war returned home
- April 1991-Present: Operations Northern/Southern Watch, Operations Vigilant Warrior, Vigilant Sentinel, Desert Strike, Operation Iraqi Freedom, Operation New Dawn, etc.

Living Conditions During War Prep

- U.S. service members in the 1991 Gulf War region were stationed for months in isolation in a bleak desert environment
- Few amenities and arduous and austere conditions - not conducive to good health
- Weather was initially extremely hot and humid; changed to cold and damp by the time the war began
- Some housed in crowded warehouses

Living Conditions (cont'd)

- Diet of prepackaged meals (local produce and goods were quickly put off-limits for health reasons after many GI problems)
- Military sanitation - latrines and communal washing facilities
- Sand flies and insecticides were pervasive
- Exposed to a wide range of hazardous materials
- Administration of pyridostigmine bromide (PB) tabs variably enforced

Casualties

- 293 U.S. service members killed
 - 148 combat-related (35 due to friendly fire)
 - 145 non-combat deaths
- Estimated 20,000 – 35,000 Iraqi soldiers killed; 75,000 wounded
- Civilian fatalities
 - 1000 Kuwait civilians killed; 600 missing
 - ~3500 Iraqi civilians killed by bombings
 - Estimates of 100,000 more Iraqis from the war's other effects (economic, sanitation, etc.)

Overview of Exposure Concerns

Weapons

Bullets, explosions (IED), shrapnel, chemical warfare agents, biological warfare agents, depleted uranium

Local Environment

Smoke (Oil well fires, burning trash and human waste), poor ambient air quality (dust, smog), local food (bacteria, viruses), bites (insects, spiders, etc.), harsh weather (heat, cold), contaminated water (biological or toxic chemical)

Preventive, therapeutic treatments

Pesticides, PB tablets, vaccinations

Occupational agents

Diesel, kerosene, gasoline, jet fuels, hydraulic fluids, paints, solvents

Operation Desert Shield/Desert Storm

Possible Exposures

- CARC Paint
- Chemical and Biological Weapons
- Depleted Uranium
- Harsh living conditions
- Incoming fire, explosive events
- Industrial solvents and chemicals
- Infections
- Injuries, musculoskeletal wear and tear
- Oil Well Fires, Smoke, and Petroleum
- Loud noises
- Pesticides
- Physical and Mental Stressors
- Pyridostigmine Bromide
- Sand, Dust, Airborne Particulate Matter
- Vaccinations

REF: WRIISC Clinical Reports

Presented by the **VA War Related Illness and Injury Study Center (WRIISC)**

Possible ODS/S Chemical Weapon Exposures

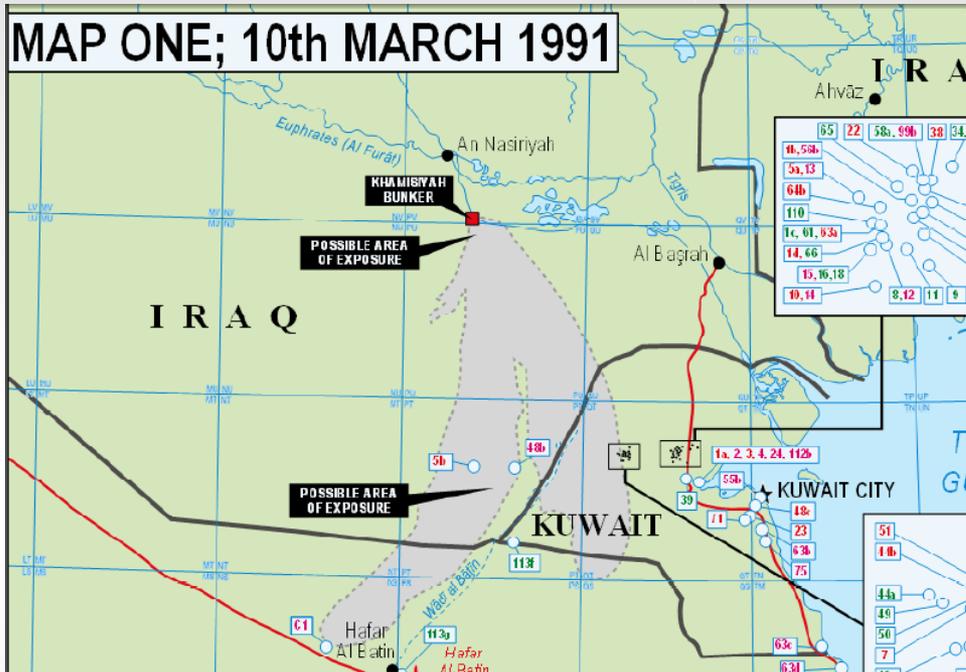
Many chemical alarms sounded, troops told to put on MOPP suits as protection – feared life threatening attacks

- Anecdotal reports of isolated chemical weapon exposures to nerve agents however no cases of acute poisoning were documented
- U. S. destroyed ammunition depot in Khamisiyah containing Sarin and Cyclosarin nerve agents
 - DoD notified 100,000 Veterans that that may have been exposed to low levels of chemical agents
- No specific tests available to detect sarin or cyclosarin exposure

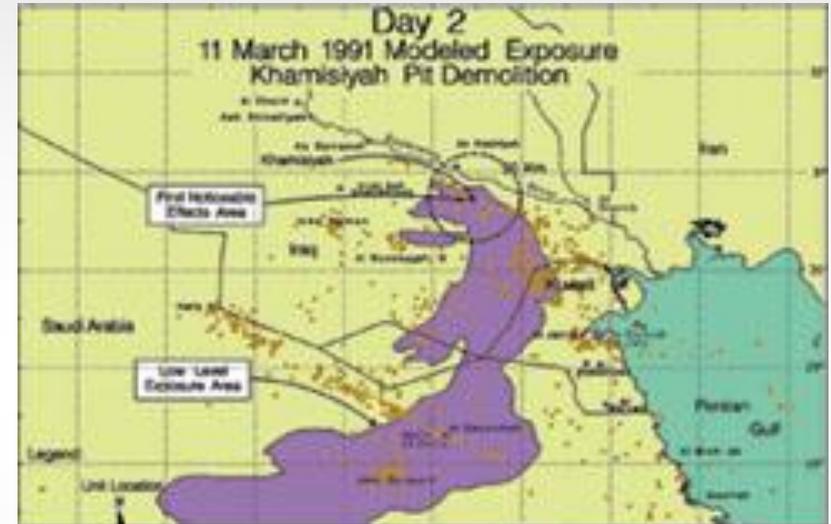


Initial Cloud from Khamisiyah Explosion

Model of Sarin Exposure from Khamisiyah



DGIA Ministry of Defense, UK, 2004



Models of chemical exposure were developed using data supplied by NRL from the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS). COAMPS, which generates high resolution numerical models of the atmosphere, is an analysis-nowcast and forecast tool applicable for any given region of the earth.

Other Exposures to Anti-cholinesterase Agents

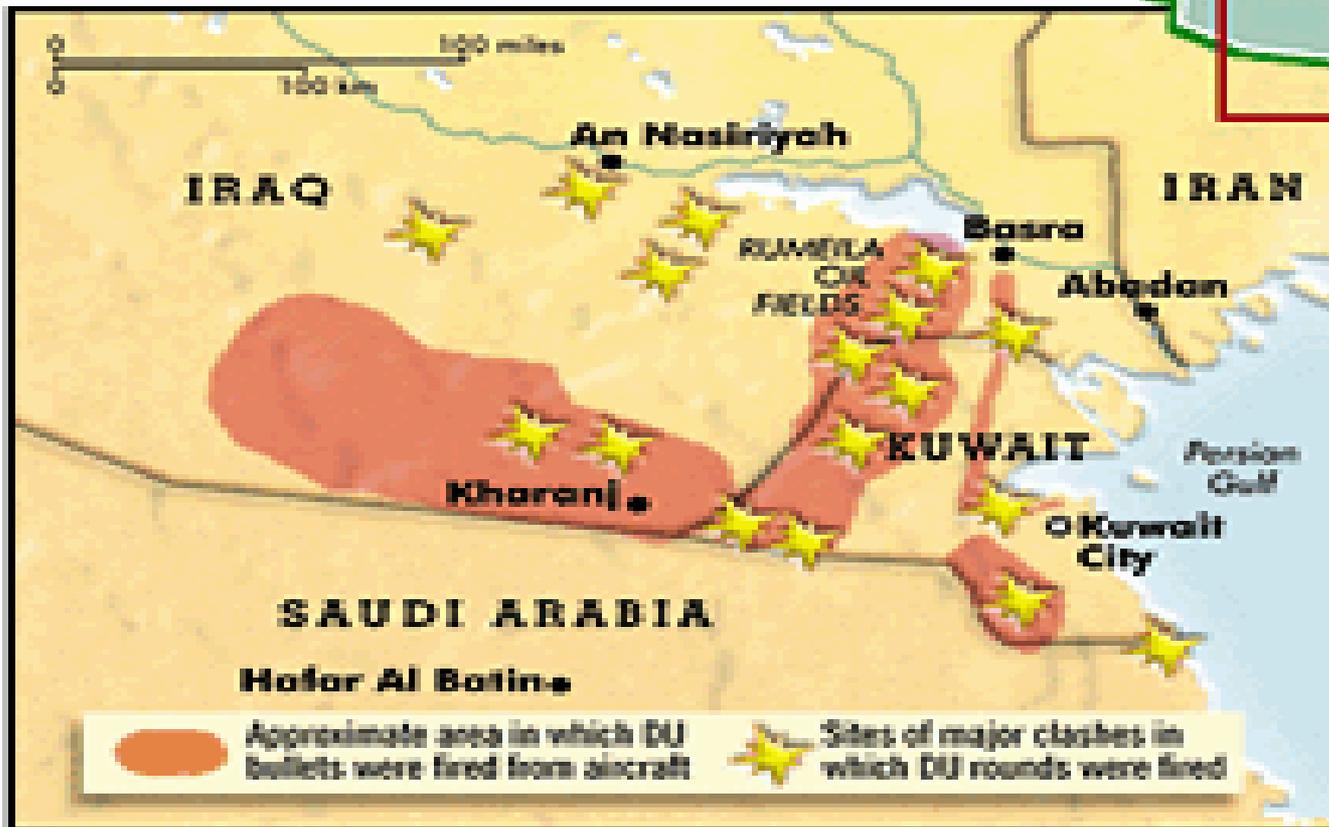
- Insecticide spray cans, unofficial flea collar use
- Other pesticides applied by trained personnel
- Pyridostigmine Bromide (PB) tablets (peripheral action)
 - Used as pretreatment for exposure to nerve agents
 - ~250000 U.S. troop took PB at least once
 - Some troops experienced acute GI and urinary problems
- Clothing treated with permethrin (not anti-AChE)

Depleted Uranium (DU)

- Used by U.S. Military for armor and piercing projectiles – less than 50% of radioactivity of natural uranium (U235 is about 0.3%: mostly U238 – 4.5 billion year half life)
- Veterans may be exposed when:
 - A DU armored vehicle hit by friendly fire - splits into small fragments and bursts into flames
 - Inhalation of DU dust particles or imbedded shrapnel in tissue at time of explosion
 - Rescue and salvage teams may be exposed to DU dust and airborne particles
- Minimal health risk from radiation
- Potential for heavy metal toxicity from embedded DU fragments – no known adverse health effects to date
- The DU Follow-up Program can test levels of DU in the urine (Baltimore, Maryland)

Where depleted-uranium munitions were used during the Gulf War

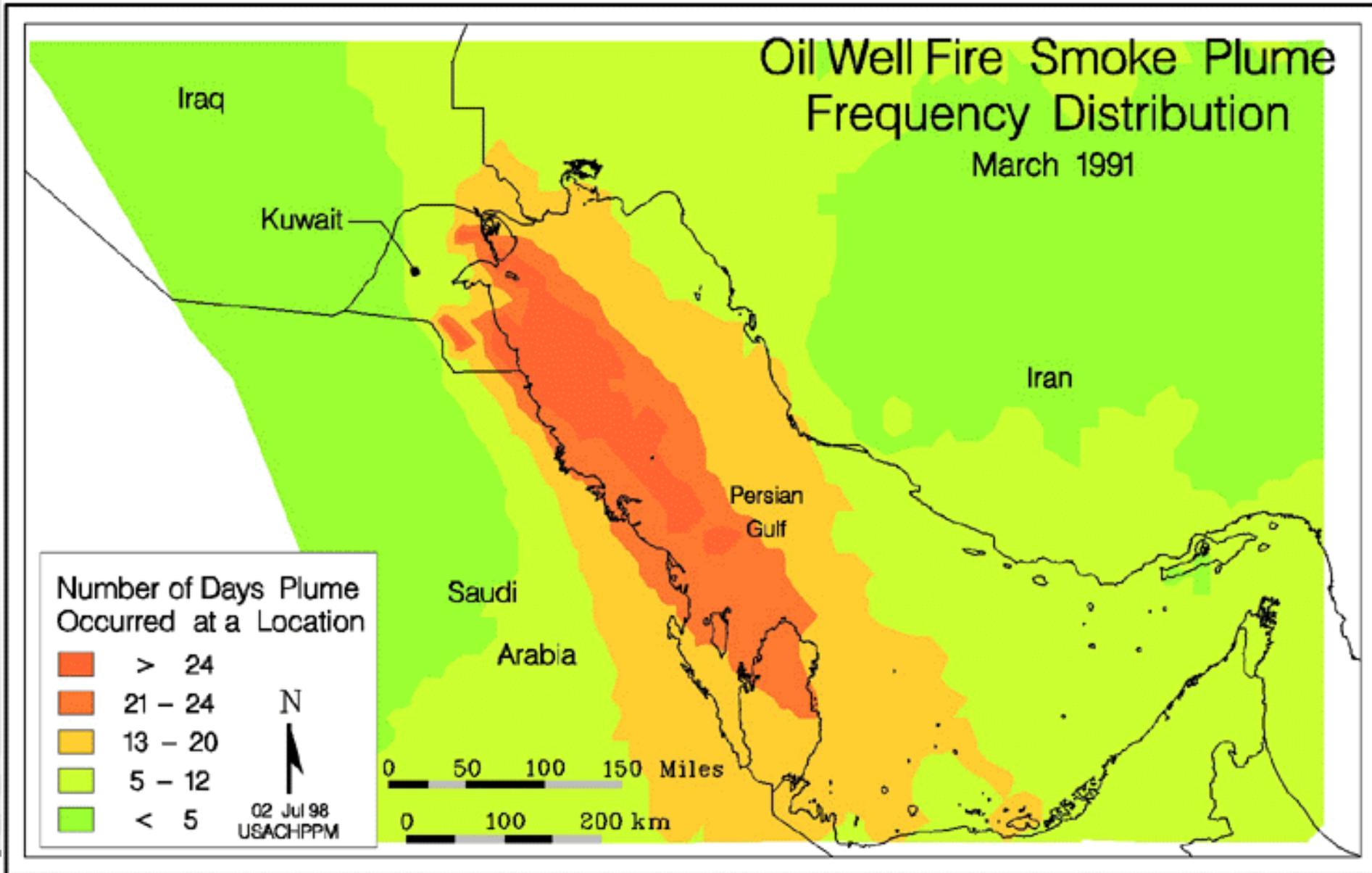
Some 320 tons of the substance was used in high-density tank rounds and smaller-caliber, aircraft-fired bullets, according to the US Department of Defense. Experts are debating its impact on the environment and human health.



Source: Defense Department

Respiratory Exposures in ODS/S

- Burn pits
- 700 Kuwaiti oil wells set on fire by Iraqi army
(beginning 1/22/1991, all out about 11/1991)
 - Many veterans describe black nasal discharge and mucous, skin rashes, shortness of breath
 - Worsening of existing respiratory conditions (asthma, bronchitis) or provoke respiratory tract irritation
 - No specific tests for this type of exposure
- Exposure to particulate matter - sand & dust storms, vehicle exhaust, emissions from local industries, construction sites and farming
- Exacerbated by tobacco/nicotine use



Gulf War Oil Well Fire Smoke Registry & Airborne Hazards and Open Burn Pit Registry

- The U.S. Department of Defense Gulf War Oil Well Fire Smoke Registry (OWFSR)

<https://registry.csd.disa.mil/registryWeb/Registry/OWFSR/DisplayAbout.do>

- Airborne Hazards and Open Burn Pit Registry

<https://veteran.mobilehealth.va.gov/AHBurnPitRegistry>

Possible Exposures to Infectious Agents in ODS/S, OEF, OIF, OND

- Episodes of severe diarrheal illnesses
 - ETEC (enterotoxigenic E. coli) and Shigella
- Continuing episodes of diarrhea
 - Intestinal parasites common in Iraq & Afghanistan
- Amoebic, giardia exposures
- Leishmaniasis
- Q-fever, sand-fly fever, malaria, TB
- Mycolplasma fermentans (Popular Science)

Most Frequent Symptoms, Affected Systems of Veterans from ODS/S

Frequency of Symptoms of 53,835 Participants in VA Registry (1992–1997)

Symptoms

▪ Fatigue	20.5
▪ Skin rash	18.4
▪ Headache	18.0
▪ Muscle and joint pain	16.8
▪ Loss of memory	14.0
▪ Shortness of breath	7.9
▪ Sleep disturbances	5.9

Percentage

Systems

▪ Musculoskeletal and connective tissue	25.4
▪ Mental disorders	14.7
▪ Respiratory system	14.0
▪ Skin and subcutaneous tissue	13.4
▪ Digestive system	11.1
▪ Chest pain	3.5

SOURCE: Murphy
et al., 1999

Symptoms of fibromyalgia

Presented by the **VA War Related Illness and Injury Study Center (WRIISC)**

Results of Iowa Study

3,695 Veterans of ODS/S

Symptoms, % Prevalence

	GW Veterans	Non-GW Veterans
Fibromyalgia	19.2	9.6
Cognitive Dysfunction	18.7	7.6
Alcohol Abuse	17.4	12.6
Depression	17.0	10.9
Asthma	7.2	4.1
PTSD	1.9	0.8
Sexual Discomfort	1.5	1.1
Chronic fatigue	1.5	0.3

Iowa Persian gulf Study Group, 1997

Gulf War Registry

- The Gulf War Registry (GWR) helps VA understand the post-deployment health of ODS/DS, OIF, & OND Veterans
- GWR participants receive health exam and data is collected for research
- More information at:
www.publichealth.va.gov/exposures/gulfwar/benefits/registry-exam.asp

2012-2013 VA Follow-up Study on 30,000 Gulf War Veterans

- 44% still reported symptoms consistent with unexplained multi-symptom illness
- Deployed Veterans continue to report:
 - Joint stiffness and chronic pain (fibromyalgia?)
 - Fatigue (chronic fatigue syndrome?)
 - Gastrointestinal – (irritable bowel syndrome?)
 - Respiratory concerns (shortness of breath, asthma, respiratory concerns)
 - Skin rashes
 - Sleep issues (insomnia, loss of circadian rhythm, waking during the night)
 - Mental Health (Depression, anxiety, mood changes)
 - Cognitive dysfunction and memory complaints

Dursa EK, Barth SK, Schneiderman AI, Bossarte RM, 2016

Gulf War Illness

Institute of Medicine Report

- Difficult to come up with a single case definition (diagnosis) for Gulf War Veterans Illnesses because of the many symptoms, some of which are not shared by all and lack of definitive cause
- Chronic Multisymptom Illness (CMI) is found in groups other than Gulf War Veterans – Gulf war illness under the “umbrella” of CMI
- There are no clinically validated tests or questionnaires for diagnosing CMI
- Institute of Medicine (IOM) recently recommended using the term “Gulf War Illness” and the VA decision is pending
- Provided 2 definitions for diagnosis and research purposes: The Centers for Disease Control (CDC) and Kansas definitions



Defining Gulf War Illness

CDC Definition

1. ≥ 6 months duration
2. ≥ 1 symptom from ≥ 2 categories
 1. Fatigue
 2. Musculoskeletal
 3. Mood & cognition

From Helmer/Shadiack presentation

Kansas Definition

1. Onset since 1990
2. Moderate or Multiple Symptoms in 3 of 6 complexes
 1. Fatigue/Sleep
 2. Pain
 3. Neuro/Cognitive/Mood
 4. Gastrointestinal
 5. Respiratory
 6. Skin
3. Absence of Exclusion Criteria

Gulf War Illness Findings

No Identified Diagnostic Entity

- **Somatic Medical** - normal x-rays of joints
- **Neurological** -
 - Peripheral electrophysiological abnormalities
 - Normal MRI, PET scans
 - Abnormal SPECT, MR spectroscopy
- **Psychiatric** –
 - depression
 - neuropsychological dysfunction – borderline
- **Possible relation to other conditions**
 - chronic fatigue syndrome, fibromyalgia, multiple chemical sensitivity, TBI (traumatic brain injury – especially from blasts)

Possible Explanations for Symptoms

- Idiopathic Small Fiber Neuropathy
 - Seen in many conditions such as diabetes, post-herpetic neuralgia
 - Associated with Chronic Regional Pain Syndrome and many other nerve pain conditions
- Autonomic Nervous System Disruption
 - Parasympathetic nervous system – (less relationship to symptoms)
 - Sympathetic nervous system – (sympathetic nervous system-predominant dysautonomia has been suggested to be responsible for fibromyalgia, irritable bowel syndrome, chronic fatigue syndrome)
 - (Martínez-Martínez et al., "Sympathetic nervous system dysfunction in fibromyalgia, chronic fatigue syndrome, irritable bowel syndrome, and interstitial cystitis: a review of case-control studies.". J Clin Rheumatol, 2014)
 - Tardive Sympathetic Dysautonomia (TSD) (Ashford hypothesis)
 - Symptoms usually occur after return from combat zone (tardive)
 - Not a dystrophy – more likely an excess of connections, which would be very difficult to demonstrate with routine testing
 - Provides a model for understanding “Gulf War Illness”

Treatments Strategies for Symptoms of Gulf War Illness – IOM Report

- According to the IOM, first step is to identify Gulf War Veterans with typical symptoms and bring them into VA health care system
- Utilize a team approach to provide comprehensive care for CMI and other symptoms (personalized, patient-centered care, PD-PACT team, WRIISC program as models)
- There is no single therapy to manage the health of veterans with CMI however there are many effective approaches to reduce symptoms



Treatment Recommendations from the 2013 IOM Report – Focus on CMI

Symptom	Treatment
Chronic Pain	NSAIDs, SNRIs & tricyclic med., pregabalin for central neuropathic pain, radio freq. ablation for LBP, acupuncture for LBP and headache. Aspirin, acetaminophen for acute pain – no narcotics (JJC also recommends topiramate for neuropathic pain, obesity)
Fatigue	CBT, graded exercise (see WRIISC handout), improve sleep patterns, CPAP when needed, minimize medication usage.
Sleep Disorders	Prazosin for PTSD-related nightmares, good sleep hygiene, CBT, exercise, acupuncture, mind-body approaches (JWA rec trazodone, melatonin)
Gastrointestinal Disorders	Treat the predominant symptom - Tricyclic or SSRI medication, relaxation and stress mgmt along with CBT or interpersonal therapy
Depression	CBT, interpersonal therapy, exercise, acupuncture for mild, antidepressants for moderate, other med or ECT for severe

Primary Care, GWI, and VA resources

- Without an “expert” GWI clinic, care is still accessible in the VA
- PCP to manage endocrine, pain, sleep, establish an interdisciplinary care team and provide appropriate follow-up care
- Sleep clinic to rule out apnea and assist in restorative sleep
 - Teach basic sleep hygiene principles,
 - Consider melatonin – up to 30 mg qHS
- Rehab/PT/chiropractic/acupuncture to help with pain management
- Cardiology for autonomic dysfunction if needed
- Pulmonary or Cardiology for shortness of breath
- GI Clinic for management of Irritable Bowel Syndrome (IBS)
- Dermatology for management of skin problems
- Endocrine for complex endocrine management, metabolic disorders
- Comorbid conditions management as needed
- De-emphasize psychological issues, but monitor for PTSD, depression, and suicide risk

GI Clinic for Management of IBS

- Stabilize bowel function
 - Recommend minimize stimulant laxatives
 - Recommend use of bulk agents (e.g., psyllium, etc.)
 - Minimize opiates due to negative effects on gastric motility
- Vary use anti-depressants based on anti-cholinergic side-effects
 - Anti-cholinergic agents slow down GI motility but impair memory function
 - Cholinergic agents increase GI motility and are used to treat dementia
 - Nortriptyline – moderate anti-cholinergic effects (avoid amitriptyline)
 - Doxepin – high anti-cholinergic, anti-Histamine-1, beneficial for sleep
 - Duloxetine - SNRI - low anti-cholinergic activity
 - Glycopyrrolate – anti-cholinergic, but does not cross blood-brain barrier

WRIISC and Research on ODS/S Veterans

- The WRIISC conducts research projects which seek explanations for the condition referred to as Gulf War Illness
- The WRIISC conducts research projects which specifically address the clinical issues suffered by ODS/S Veterans
- The WRIISC collaborates with any researchers who wish to recruit Veterans for research, particularly ODS/S

WRIISC Funded Research on Diagnosis and Treatment Development for Veterans of ODS/S

(arranged alphabetically by PI)

WRIISC Investigator	Protocol Title
Bayley, PJ (PI), Mahoney, LA (Co-I)	Treating Chronic Pain in Gulf War Illness
Falvo, MJ (PI) Falvo, MJ (Co-I)	Post Exertion Malaise in GWI: Brain, Autonomic and Behavioral Interaction Mitochondrial Dysfunction and Gulf War Illness
Helmer, DA (Co-PI)	Development of Dietary Polyphenol Preparation for Treating Veterans with Gulf War Illness
McAndrew, LM (PI)	Problem Solving Therapy for Gulf War Illness
McAndrew, LM (PI), Helmer, DA (Co-I), Bayley (Co-I)	WRIISC as a Model of Care for Chronic Multisymptom Illness
Serrador, JM (PI)	Use of a Portable Stimulator to Treat GWI
Reinhard, M (PI)	CAM for Sleep, Health Functioning and Quality of Life in Veterans with GWVI
Wylie, GR (PI)	Examination of Cognitive Fatigue in Gulf War Illness Using Functional Magnetic Resonance Imaging

Now Recruiting

Do you suffer from
chronic pain?



Study Location:

- The VA Palo Alto Health Care System, including Community Based Outpatient Clinics

Study Frequency & Duration:

- 1 day / week
- 10 weeks
- Follow-up interviews at 18, 26, & 34 weeks

\$250 compensation for completing entire study

For more information, please contact the Study Team at:
(650) 665-0159



You may be eligible for a non-drug study involving group Yoga or a support group for chronic pain if you:

- have chronic pain **and**
- served in the military in 1990-1991, regardless of deployment

Eligible Veterans will receive 10 free treatment sessions.



U.S. Department of Veterans Affairs

TREATMENT STUDY FOR GULF WAR ILLNESS

Do you have:

- Muscle/joint pain?
- Fatigue?
- Trouble concentrating?
- Trouble remembering?

Study Details:

Seeking Veterans who served in Operation Desert Storm/Operation Desert Shield and have symptoms of Gulf War Illness. If you qualify and choose to take part, you will:

- ▶ Receive either Problem-Solving Treatment or Health Education
- ▶ Meet with a Study Provider for 12 one-hour weekly phone sessions
- ▶ Fill out 2 questionnaire packets
- ▶ Complete 2 telephone interviews about your views on Gulf War Illness
- ▶ Be paid for participating in this study.

Location:

This study takes place at the VANJHCS at East Orange, NJ:
War Related Illness and Injury Study Center
VA NJ Health Care System
385 Tremont Avenue, 11th floor
East Orange, New Jersey 07018
Principal Investigator: Lisa McAndrew, PhD

VANJHCS IRB
JULY 13 2015
APPROVED



Desert Shield and Desert Storm Veterans with fatigue, or trouble concentrating

Department of Veterans Affairs



There is a non-medication research study enrolling now. For more info call 202 745 8000 x55769 or GW.CAM@va.gov

Department of Veterans Affairs

Elizabeth Melnikoff, MSW
Research Coordinator
202-745-8000, ext. 5-5769
E-mail: elizabeth.melnikoff@va.gov



Please call the War Related Illness & Injury Study Center and ask about the "PROBLEM-SOLVING STUDY."

800-248-8005



Visit the WRIISC website for information on all actively recruiting studies.

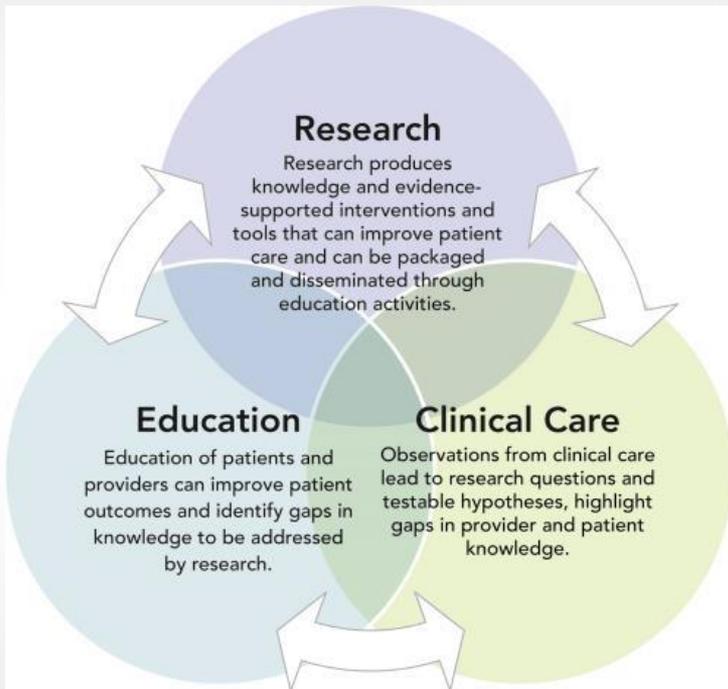
<http://www.warrelatedillness.va.gov/research/volunteer/>

How Can the RAC Assist?



- 1. Support a PDH Services and WRIISC initiative to develop a VHA Directive for post-deployment health services**
 - Within this support, recognize WRIISC as a distinct and integral service
- 2. Within this recognition, ensure that the WRIISC has adequate personnel and funding**
 - Funding to support the clinical, educational, and research offerings provided and supported by WRIISC
- 3. Designate the WRIISC program and other relevant entities as post-deployment health champions**

Actions to Address Barriers, Access, Care, Research



- Expand post-deployment healthcare services, including PDH Services and WRIISC, in collaboration with the Post-Deployment Integrated Care Initiative (PDICI), to provide integrated services to post-deployment Veterans, including entry into an overarching registry database
- Increase clinical support for providers and post-deployment health services
- Develop further training for providers
- Expand research activities and support for research of investigators addressing post-deployment healthcare issues

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Visit our website at:
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