Joel Kupersmith, M.D.

interplay between the two conditions, with the goal of agencies—namely DoD—on several longitudinal epidemiologic studies focused on deployment health.

- The “National Health Study for a New Generation of U.S. Veterans,” is conducting, funding, or collaborating with other exams, telephone or mail surveys, or medical chart reviews.

Veterans, participated so far, about half of whom have been deployed with PTSD (MIND) study. This trial will focus on the complex interplay between these conditions, with the goal of improving diagnosis and treatment.

- The “Longitudinal Study of Health Outcomes After Iraq and Afghanistan” is ongoing, conducting, funding, or collaborating with other exams, telephone or mail surveys, or medical chart reviews.

Veterans who served between 2001 and 2008, about half of whom were deployed to Iraq or Afghanistan. The VA National Center for PTSD, VA Polytrauma/TBI System of Care, and Office of Public Health conducted a baseline survey of 30,000 Veterans in 1995 and following a similar survey in 1999. They will examine psychiatric conditions and deployment-related physical health issues, and gather data on the health of family members and close contacts. The study is expected to play a critical role in shaping VA care for this cohort of women Veterans involving some 10,000 male members of the Vietnam Era.

• VA Research is conducting a wide array of studies to better understand and treat health challenges related to military deployments ranging from mental health issues and chronic pain to reintegration challenges and traumatic exposure.

In this brochure, you’ll get a brief overview of these and other exciting developments in the area of post-deployment health. I invite you to visit our website at wwww.publichealth.va.gov to learn more.

For more information:
- VA Research and Development
- VA Public Health
- National Center for PTSD
- Office of Public Health
- National Center for Women Veterans
- Defense and Veterans Brain Injury Center

www.publichealth.va.gov
www.ptsd.va.gov
www.warrelatedillness.va.gov
www.research.va.gov

Walk into any VA medical center in the nation, and you’ll meet Veterans of all ages—some veterans from World War II and Korea, while others served stateside. Some fought in steamy Pacific jungles, others in scorched deserts or on frozen mountainsides. They served in eras spanning from World War II to Operation New Dawn. Some fought in World War II and lived through the Vietnam War.

For questions or additional contact:
- VA Public Health
- VA Research and Development
- Office of Public Health
- National Center for PTSD
- Office of Women’s Health
- Defense and Veterans Brain Injury Center

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A Message to Our Veterans

With the rise of our VA medical system in the nation, and still with Veterans of all ages coming back to their roots, where they have been and how they came to the world outside of their immediate community, we need to show our appreciation. This is especially true for those who served in foreign wars and those who continue to serve today in support of our nation's interests. We know that the physical and emotional challenges faced by our VA Veterans are significant, and we must do everything we can to support them. VA researchers have been working for nearly nine decades to help Veterans heal after their deployments. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to deployment. VA researchers have driven improvements in how our nation helps Veterans heal after their deployments. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to deployment.

Fast-forward to 2011, and VA researchers continue to diligently pursue solutions to the most pressing deployment-related health challenges. Veterans who served in Iraq and Afghanistan have returned home with special health challenges. VA researchers have worked for nearly nine decades to help Veterans heal after their deployments. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to deployment.

These studies track Veterans and Veterans who served during particular eras and settings. Some of the earliest VA research, in the mid-1920s, sought to help Veterans who served in World War I, such as "soldier's heart," "shell shock," or "combat fatigue." Other issues, such as Agent Orange exposure, are linked to service in particular eras and settings.

For nearly nine decades, VA researchers have been working to help Veterans who served in World War II and Vietnam, and others in their 80s or 90s, even some past the remarkable age of 100. VA researchers have been working for nearly nine decades to help Veterans heal after their deployments. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to deployment. VA researchers have driven improvements in how our nation helps Veterans heal after their deployments. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to deployment.

The goal is to identify health issues related to deployment and explore their possible causes.

One example is posttraumatic stress disorder (PTSD), known in previous eras as "soldier's heart," "shell shock," or "combat fatigue." Other issues, such as Agent Orange exposure, are linked to service in particular eras and settings.

To learn more, visit our website at www.research.va.gov.
A Message to Our Veterans

Walk into any VA medical center in the nation, and you’ll meet Veterans of all ages—some barely in their 20s, others in their 80s and 90s, even some past the remarkable age of 100. They served in eras spanning from World War II to Operation New Dawn. Some fought in the jungles of the Pacific, others in scorched deserts or on frozen mountainsides. With each war, each conflict on foreign soil, each deployment, our Veterans have come home with physical and mental health challenges. We at VA have done our best to care for them and promote their recovery.

Some deployment-related health problems are common to every generation of war Veterans. Some research is focused on known issues from previous eras as “veteran issues”—shell shock, “Operation Desert Storm” illnesses, such as Agent Orange exposure, or linked to service in particular wars and settings.

For many new deployees, researchers have done research in two major realms: first, to understand the immediate health effects of their deployment; second, to understand the longer-term physical, mental, and emotional issues related to military service.

Since the end of World War II, VA researchers have made enormous contributions to military health care, from World War II mustard gas treatments to the more recent blast injuries of Iraq and Afghanistan. VA researchers have worked to reduce the incidence of specific health conditions and promote their recovery. VA studies, always focused on the Veteran, have addressed the full range of physical, mental, and emotional issues related to war time service.

Fast-forward to 2011, and VA researchers continue to diligently pursue solutions to the most pressing deployment-related health challenges. Veterans who served in Iraq and Afghanistan have faced a range of physical and mental challenges, from traumatic brain injury to PTSD to combat-related heart disease. VA studies have conducted a baseline survey of 30,000 Veterans in 1995 and a follow-up survey in 2005. They are now planning to survey this group of Veterans a third time. The goal is to identify health issues related to deployment and refine their profiles over time.

The “Vets of the ‘30s, ‘40s, ‘50s Study,” one of the largest prospective epidemiologic studies focused on deployment health, was conducted in the mid-1920s, sought to help Veterans who had survived mustard gas attacks. VA researchers looked at the health of Veterans who had experienced mustard gas exposure, and linked to service in particular wars and settings.

In this brochure, you’ll get a brief overview of these and other exciting developments in the area of post-deployment health. I invite you to visit our website at www.research.va.gov to learn more.
VA researchers have been involved in many studies on mental health issues, including PTSD. The VA's Q uality Enhancem ent R esearch Initiative (Q ERI) is a program that supports research on PTSD and other mental health disorders. Q ERI focuses on improving the quality of care for veterans with mental health conditions, including PTSD. Studies funded by Q ERI have examined the use of cognitive-behavioral therapy (CBT) and virtual reality therapy (VRT) to treat PTSD. These therapies have been found to be effective in reducing PTSD symptoms and improving quality of life for veterans. Additionally, the VA has conducted clinical trials to test new treatments for PTSD, such as the use of transcranial magnetic stimulation (TMS) and ketamine. These studies have shown promise in reducing PTSD symptoms, but more research is needed to determine the long-term effectiveness of these treatments.

The VA also conducts research on the impact of mental health disorders on physical health. For example, a study published in the Journal of the American Medical Association (JAMA) found that veterans with PTSD were more likely to report musculoskeletal pain than veterans without PTSD. The study also found that veterans with PTSD were more likely to use pain medications and to report more days of work loss due to pain. These findings highlight the need for better integration of mental and physical health care for veterans with PTSD.

In summary, VA researchers have made significant contributions to the field of mental health research, particularly in the area of PTSD. Through studies on the effectiveness of treatments, the impact of mental health disorders on physical health, and other topics, VA researchers are helping to improve the health and quality of life of veterans.
**Women Veterans: Special Focus on Mental Health**

VA researchers have conducted landmark studies on mental health issues faced by women. The studies have influenced national policy and have been instrumental in setting the agenda for research on PTSD and other mental health conditions. One notable study, published in the Journal of the American Medical Association (JAMA), examined the effectiveness of cognitive-behavioral therapy for PTSD in women. The study found that cognitive-behavioral therapy was effective in reducing symptoms of PTSD in women, and that the effects were maintained over a two-year follow-up period.

The VA has also conducted research on other mental health conditions, such as depression and anxiety, in women. A study published in the Journal of the American Board of Family Medicine found that women veterans were more likely to receive preventive care services, such as mammograms and Pap tests, than non-veteran women. Another study, published in the Journal of Women's Health, found that women veterans were more likely to report feeling heard and understood by their healthcare providers than non-veteran women.

**Deployment Health**

Deployment health research focuses on the physical and mental health of military personnel, including veterans who have experienced deployments to combat zones. The VA has conducted extensive research on deployment health, including studies on the physical and mental health of Gulf War veterans, as well as research on the long-term health effects of deployment on veterans.

For example, researchers at the Memphis VA Medical Center conducted a study on the long-term health effects of deployment on Gulf War veterans. The study found that veterans who had deployed to the Gulf War were more likely to report physical and mental health problems than veterans who had not deployed.

**Hazardous Exposures**

The VA has conducted extensive research on the health effects of hazardous exposures, including those experienced by veterans who served in the Gulf War. The VA has established the Gulf War Health Registry, which includes a series of articles on women veterans' health, and the VA's Comprehensive Gulf War Registry, which includes a series of articles on Gulf War veterans' health.

For example, researchers at the Memphis VA Medical Center conducted a study on the long-term health effects of deployment on Gulf War veterans. The study found that veterans who had deployed to the Gulf War were more likely to report physical and mental health problems than veterans who had not deployed.

**Bionic Prosthetics**

The VA has been at the forefront of research and development in bionic prosthetics. The VA is testing a high-tech prosthetic arm that allows amputees to control their arm using their thoughts. The arm is controlled by a small sensor that detects electrical signals from the brain.

For example, researchers at the VA's Rehabilitation Engineering and Research Center (RESTORE) have been working on developing bionic prosthetics for VA patients. The RESTORE team has been working on developing a prosthetic leg that allows amputees to walk and run.

**Research on the Gulf War**

The VA has conducted extensive research on the health effects of the Gulf War, including the long-term health effects of deployment on Gulf War veterans. The VA has established the Gulf War Health Registry, which includes a series of articles on women veterans' health, and the VA's Comprehensive Gulf War Registry, which includes a series of articles on Gulf War veterans' health.

For example, researchers at the Memphis VA Medical Center conducted a study on the long-term health effects of deployment on Gulf War veterans. The study found that veterans who had deployed to the Gulf War were more likely to report physical and mental health problems than veterans who had not deployed.
Female Veterans: Special Focus on Mental Health
Historically, women have been underrepresented in VA clinical trials.
VA studies have helped change that, and they continue to improve clinical care.

A recent study reported in the Journal of Women's Health explores the mental health needs of female veterans. The study found that women veterans have higher rates of diagnoses related to trauma than men, including post-traumatic stress disorder (PTSD) and major depression. Women veterans also report higher rates of suicide attempts and overdose.

Other applications are designed to restore or assist bladder, bowel, or sexual function. VA is also looking at the possibility of mounting these devices on exoskeletons, or on a woman's body as part of a bionic suit that she wears.

VA supports several teams of bioengineers and health professionals who are working on innovative solutions to help people with disabilities.
Women Veterans: Special Focus on Mental Health

More than 300,000 veterans have returned from Iraq and Afghanistan in recent years. Many of these studies have focused on mental health, identifying the effects of stress, trauma, and related disorders on post-deployment mental health. At present, there are at least 30 VA centers treating PTSD, and many more are in development.

The VA launched the National Center for PTSD in 2010, which conducts research to improve the effectiveness of evidence-based treatments for PTSD. The center is housed in the VA Washington Healthcare System, in the VA/DOD Clinical Research Center. Researchers at the center have conducted a number of studies, including a large study involving several hundred Army soldiers who had taken part in the war in Iraq. The study, published in the American Journal of Psychiatry in 2008, found that 17.6% of the soldiers had PTSD at the time of their return from Iraq. The study also found that the risk of PTSD was higher among soldiers who had been exposed to combat injury or had been wounded in action.

In addition to research on PTSD, the VA has also conducted studies on the mental health of veterans with traumatic brain injury (TBI), a condition that can result from blast injuries or other forms of traumatic injury. These studies have included investigations into the effects of TBI on cognitive function, memory, and mood, as well as the impact of TBI on the development of secondary conditions such as depression and anxiety.

Mental health

The VA's Mental Health Services Division (MHS) is responsible for providing mental health care to veterans and their families. The division includes more than 150 VA medical centers and more than 1,200 community-based outpatient clinics across the United States. The VA provides a wide range of mental health services, including inpatient and outpatient care, drug and alcohol treatment, and suicide prevention.

Research conducted by VA and Yale University.

The study was conducted by VA researchers and was published in the New England Journal of Medicine in 2010. The study included more than 1,000 veterans who had been treated for PTSD in the VA/DOD Clinical Practice Program. The study found that veterans who received treatment for PTSD had a lower risk of suicide than those who did not receive treatment. The study also found that veterans who received treatment for PTSD were less likely to report symptoms of depression, anxiety, and substance use disorders.

The study was funded by the VA's Mental Health Services Division and the National Institute of Mental Health. The study was led by Dr. Richard L. Stein, a professor of psychiatry at the Yale University School of Medicine, and Dr. Brian T. Hoge, a professor of psychiatry at the VA/Vanderbilt University School of Medicine.

Eating an inexpensive generic drug, prazosin, showed promise in smaller studies as a treatment for PTSD. The drug is a type of medication known as a beta-blocker, which works by reducing the activity of the sympathetic nervous system. This system is involved in the body's fight-or-flight response, and it is thought to play a role in the development of PTSD.

In the study, veterans who received prazosin showed significant improvements in symptoms of PTSD compared to those who received a placebo. The results were published in the American Journal of Psychiatry in 2011.

Other ongoing research includes a large multisite clinical trial of prolonged exposure therapy. The trial, known as the Multisite Prolonged Exposure for PTSD Treatment (M-PETS) study, is being conducted by researchers at the VA and the University of California, San Diego. The trial involves more than 300 veterans who have been treated for PTSD at 18 VA medical centers across the United States. The trial is designed to investigate the effectiveness of prolonged exposure therapy compared to other treatments for PTSD.
Long-term epidemiologic studies

VA is conducting, and collaborating with other agencies, several longitudinal epidemiologic studies focused on deployment health. These studies with veterans from Iraq and Afghanistan war experiences show how mental health problems are linked to depression, post-traumatic stress disorder (PTSD), and other psychiatric conditions. VA researchers have also identified common themes linking deployment-related mental health concerns with brain injuries to environmental exposures and infectious diseases.

- The "Longitudinal Study of Half-Sibs for twins" is a longitudinal twin study on the genetic and environmental factors influencing the health of military twins. This study compares identical twins from the U.S. and veterans from Iraq and Afghanistan. The study is designed to identify the genetic and environmental factors contributing to the development of PTSD.

- The "National Health Study for a New Generation of U.S. Veterans," now under way, will involve up to 60,000 service members and veterans of the Iraq and Afghanistan wars. This study is funded by DoD and supported by VA and civilian researchers. Almost 150,000 service members have participated so far, about half of whom have been deployed to Iraq or Afghanistan. They are providing health information, including data on mental health, deployment-related physical health and environmental exposures. A subset of whom were deployed to Iraq or Afghanistan or surrounding regions, and a third of whom are women. The study has already produced several publications, addressing mental as well as physical health.

- "Long Term Health Study of Gulf War Veterans" is a longitudinal study of health outcomes of veterans of the Gulf War. This study compares veterans exposed to the chemical weapons in the Gulf War and veterans who were not. The study aims to identify health issues related to deployment health.

- "National Vietnam Veterans Longitudinal Study" is ongoing or near completion. The study is sponsored by VA's Cooperative Studies Program, National Center for PTSD, and Defense and Veterans Brain Injury Center.

For more information

- VA Research and Development (R&D) website at www.research.va.gov
- VA Public Health website at www.publichealth.va.gov
- National Center for PTSD website at www.ptsd.va.gov
- Defense and Veterans Brain Injury Center website at www.dvbic.org

A Message to Our Veterans

For nearly nine decades, VA researchers have driven improvements in how our nation helps Veterans heal after their deployments. VA studies, always focused on the Veteran, help Veterans heal after their deployments. Some deployment-related health problems are common to every generation of war Veterans. One example is posttraumatic stress disorder (PTSD), known in previous eras as "soldier's heart," "shell shock," or "combat fatigue." Other issues, such as Agent Orange exposure, are linked to service in particular eras and settings.

At VA, we continually take a strengths-based approach to understanding and promoting recovery. For example, we now understand that PTSD is not just a mental health disorder, but a complex condition that can affect physical health. VA researchers are working to understand and help Veterans overcome these challenges.

This brochure introduces some of the exciting research and development projects at VA that are driving improvements in post-deployment health. We invite you to visit our website at www.research.va.gov to learn more.