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ASA ANNUAL MEETING

FOR RELEASE:  
Saturday, October 17, 2009

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### **STUDY SHOWS PTSD IS A RISK FACTOR FOR INCREASED MORTALITY RATE IN VETERANS ONE YEAR AFTER SURGERY**

New Orleans — A study presented at this year's American Society of Anesthesiologists Annual Meeting offers evidence that veterans with post-traumatic stress disorder (PTSD) have a lower survival rate post-surgery than their veteran peers at one year, even if the surgery is done years after completion of their service.

“This study is the first of its kind, with groundbreaking findings,” said the study's lead author, Marek Brzezinski, M.D., Ph.D., San Francisco VA Medical Center and University of California, San Francisco. “The magnitude of the detrimental effect of PTSD diagnosis on postoperative mortality is unexpectedly large — greater than that of diabetes, which is an established risk factor for patients undergoing surgery.”

PTSD impacts a significant portion of the veteran population, including 15 to 31 percent of Vietnam War veterans and 20 percent of veterans returning from Operation Iraqi Freedom and Operation Enduring Freedom.

#### **About the Study**

In this retrospective epidemiological study, a query of the Veterans Health Systems and Technology Architecture (VistA) database at the San Francisco VA Medical Center was used to identify male patients undergoing major non-cardiac, non-emergency surgeries between 1998 and 2008. A total of 1,792 male veterans matched the inclusions criteria during the study period. Of those, 129 patients (7.8 percent) had a previously established diagnosis of PTSD already on the day of surgery.

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Patients with a diagnosis of PTSD at the time of the surgical procedure were on average seven years younger than patients without the diagnosis (59.2 vs. 66.3, respectively,  $p < 0.001$ ). Additionally, a diagnosis of PTSD at the time of surgery was associated with significantly increased prevalence of cardiac risk factors.

Despite the significantly younger age, patients with PTSD experienced an increased one-year postoperative mortality rate. The one-year mortality rate for patients with PTSD was 25 percent higher compared to patients without the diagnosis of PTSD (8.5 percent vs. 6.8 percent, respectively). The salient finding of the study was that PTSD remained a significant and independent risk factor for increased mortality after taking into consideration the patient's age, and other pre-existing medical conditions such as heart disease, high blood pressure, diabetes, high cholesterol, smoking and depression. After adjustment for co-existing disorders and age, the odds of a veteran with PTSD dying within one year were 2.2 times greater than the odds for a veteran without the diagnosis.

"PTSD was recognized by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III) beginning in 1980, and as with any psychiatric disorder, it may go undiagnosed. Therefore, we can only speak to the impact on the diagnosed population studied," said Dr. Brzezinski. "The study exposes the need to consider potential treatments to help reduce risk in the veteran PTSD population. The number of veterans returning from our current conflicts with PTSD who require surgical treatment is expected to increase in the future."

Dr. Brzezinski's research group is currently conducting a prospective epidemiological study looking at the effects of PTSD on perioperative outcome that builds on the current study and that tries to expand the understanding of the mechanisms underlying the unexpected and large effect of PTSD on mortality. In addition, Dr. Brzezinski is in the process of preparing a study to examine the potential protective effects of medical therapy in patients with PTSD undergoing surgery in an attempt to identify a potential solution.

### **The American Society of Anesthesiologists**

*Anesthesiologists: Physicians providing the lifeline of modern medicine. Founded in 1905, the American Society of Anesthesiologists is an educational, research and scientific association with 43,000 members organized to raise and maintain the standards of the medical practice of anesthesiology and improve the care of the patient.*

*For more information on the field of anesthesiology, visit the American Society of Anesthesiologists Web site at [www.asahq.org](http://www.asahq.org). For patient information, visit [lifelinetomodernmedicine.com](http://lifelinetomodernmedicine.com).*

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