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EXPOSURE TO PSYCHOLOGICAL TRAUMA AND CARDIOVASCULAR DISEASE: IMPLICATIONS FROM CLINICAL AND EPIDEMIOLOGIC RESEARCH

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To assess the association between psychological trauma and cardiovascular disease (CVD), we reviewed published studies and conducted analyses among a random sample of 2,490 Vietnam veterans. The fact that traumatic exposures are associated with posttraumatic stress disorder (PTSD) is established. However, research suggests that these exposures are related to health care utilization, disease onset, and premature death. Studies have linked these exposures to CVD, diabetes, gastrointestinal disease, and other conditions. The evidence linking CVD and trauma is strong and has been confirmed in 12 published studies involving 53,000 persons exposure to war, major disasters, and adverse childhood events. In addition, 75% of these studies were based on clinical outcomes, not self-report. Clinical research suggests that disease onset is related to the hypothalamic-pituitary-adrenal (HPA) and sympathetic-adrenal-medullary (SAM) systems, although genetic and behavioral factors cannot be ruled out. Findings indicating that victims of PTSD have higher T-cell counts and lower cortisol suggest that chronic sufferers of PTSD may be at risk for inflammatory conditions, including CVD. To further assess this we examined the association between current PTSD (n=54) and Q-wave infarctions (n=30) detected by resting electrocardiograms among a national study of veterans. Analyses indicated that PTSD was associated with infarctions (odds ratio [OR] = 6.3, p=0.017), even after controlling for intelligence, SES, race, age, personality, drug/alcohol abuse, and CVD risk factors. In addition, co-morbid PTSD that included depression and anxiety (OR=8.5, p=0.016) or anxiety (OR=7.1, p=0.023) also were significant. [PTSD with depression was marginally significant (OR=5.0, p=0.054).] However, PTSD without depression or anxiety was not significant. This study suggests that exposure to psychological trauma is linked to cardiovascular disease and that a major factor for this is the presence of co-morbid PTSD.