

## Connecting Stress Disorders with Life-Threatening Infections

*Multiple stress disorders, but most strongly post-traumatic stress disorder, increase the risk for serious infections.*

The poor physical health of individuals with post-traumatic stress disorder (PTSD) is presumed to occur through the stress-related compromise of multiple physiological systems producing an excess of somatic complaints and bona fide medical illnesses. Researchers using Swedish registries followed 144,919 individuals with stress-related disorders (PTSD, acute stress reaction, and adjustment disorder and other stress reactions), 184,612 unaffected siblings, and 1,449,190 age- and sex-matched general-population controls and examined associations of these stress disorders with subsequent risk for life-threatening infection (e.g., sepsis, endocarditis, meningitis).

In a mean 8-year follow-up, incidence per 1000 person-years for people with stress disorders, siblings, and general population controls was 2.9, 1.7, and 1.3. After adjustment for confounding variables, greater risk for life-threatening infections was associated with stress disorders (hazard ratios: compared with sibling group, 1.47; compared with general population, 1.58) and with PTSD specifically (HRs, 1.92 and 1.95, respectively). Risk was higher in younger individuals and lower in patients receiving selective serotonin reuptake inhibitors in the first year after stress disorder diagnosis.

### COMMENT

The heightened risk for medical illness (e.g., cardiac disease, diabetes) in PTSD has been ascribed to dysregulation of the hypothalamic-pituitary-adrenal axis, resulting in increased noradrenergic tone and heightened inflammation. Although inflammation and immune function affect many medical illnesses, their role in susceptibility to infection is more direct. This analysis points strongly to disturbed immunologic dysfunction in PTSD. Despite the small increased rates of these infections, the HRs were fairly similar in the comparisons with full siblings (which would partially control for genetic and shared environmental effects) and the general population, implicating the unique effect of traumatic stress in the pathway from PTSD to life-threatening infection. As other non-PTSD stress disorders had similar effects, our distinctions among these disorders might be more one of quantitative severity than qualitative difference. — **Peter Roy-Byrne, MD**

Dr. Roy-Byrne is a Professor in the Department of Psychiatry and Behavioral Sciences at the University of Washington, Seattle.

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