

# Meaningful PTSD symptom decrease may lower type 2 diabetes risk

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Jeffrey Scherrer, Ph.D., is a professor of family and community medicine at Saint Louis University. Credit: Ellen Hutti/Saint Louis University

Research from Saint Louis University finds treatment for Post-Traumatic Stress Disorder (PTSD) that leads to an improvement in symptoms was associated with a 49 percent lower risk of incident type 2 diabetes.

The study, "Clinically Meaningful PTSD Improvement and Risk for Type 2 Diabetes," by Jeffrey Scherrer, Ph.D., professor in Family and Community Medicine at SLU, was published online Aug. 21 in *JAMA Psychiatry*.

"Some long-term chronic health conditions associated with PTSD may be less likely to occur among patients who experience clinically meaningful [symptom](#) reduction either through treatment or spontaneous improvement," Scherrer said.

PTSD affects up to 12 percent of civilians and nearly 30 percent of the veteran population. Those with PTSD are at risk for other [health issues](#) and improvement in PTSD symptoms is associated

with parallel improvements in depression, emotional well-being, sleep, blood pressure and general physical health.

PTSD is associated with an increased risk of type 2 [diabetes](#), which may be explained by the high prevalence of obesity, glucose dysregulation, inflammation, metabolic syndrome and depression among those diagnosed with PTSD versus those without PTSD.

This retrospective cohort study reviewed Veterans Health Affairs medical record data from 2008 to 2015. The researchers randomly selected 5,916 cases from among a veteran patient population aged 18 to 70 who had more than two visits to PTSD specialty care between 2008 and 2012. The patients were followed through until 2015.

After applying [eligibility criteria](#), 1,598 patients with PTSD and free of diabetes risk were available for analysis.

Clinically meaningful symptom reduction is a decrease of 20 points on the PTSD Checklist score. The research found the results were independent of numerous demographic, psychiatric and physical comorbidities. The sample was 84.3 percent male, 66 percent Caucasian and 22 percent African-American. The mean age of the patients was 42.

The association was also independent of the number of PTSD psychotherapy sessions used.

"In patients with only PTSD, clinically meaningful PCL decrease is associated with lower risk for diabetes and in patients with PTSD and depression, we found improvement in PTSD was coupled with a decrease in depression," Scherrer said. "Thus decreased risk for type 2 diabetes appears to follow large PTSD symptom decrease and in patients with both PTSD and depression, improvement in both conditions may be necessary to reduce risk for type 2 diabetes."

"Surprisingly, clinically meaningful PTSD improvement was not associated with a change in BMI and A1C values." A prospective study is needed to advance research, Scherrer says, due in part to the limitations of medical record data. Such a study could determine if large decreases in PTSD checklist scores are associated with improved [insulin resistance](#) and reduced inflammation.

### Take-aways

- The observational study examined whether veterans who experienced a greater reduction in symptoms of posttraumatic stress disorder (PTSD) had an associated lower risk of developing type 2 diabetes.
- The analysis included medical records from almost 1,600 veterans who received PTSD specialty care and had repeated completion of the PTSD Checklist as part of their treatment at the VA.
- Patients with versus patients without clinically meaningful improvement in PTSD symptoms had a 49 percent lower risk for type 2 diabetes over a 3-6-year follow-up period.
- In patients with PTSD and depression, improvement in both conditions was associated with [lower risk](#) for diabetes.

**More information:** Jeffrey F. Scherrer et al, Association Between Clinically Meaningful Posttraumatic Stress Disorder Improvement and Risk of Type 2 Diabetes, *JAMA Psychiatry* (2019).  
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Provided by Saint Louis University

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