

Emotional Burnout Increases Diabetes Risk

Individuals with high stress may be two times more likely to develop type 2 diabetes.

REVIEWED BY SAMUEL MELAMED, PhD

Healthy individuals with high levels of stress at their jobs, may be two times more likely to develop type 2 diabetes, according to a new study published in *Psychosomatic Medicine*.

Researchers at the Tel Aviv University and the Tel Aviv Sourasky Medical Center in Israel, studied seemingly healthy employed men and women to test whether the onset of type 2 diabetes was predicted by emotional burnout, the unique affective response to combined exposure to chronic work and life stressors. The study included 677 Israelis workers who were examined between 1998 to 2003. Nearly 77% of the participants were men, and the mean age was 43 years. The employees, who worked at different companies, were pooled together from five different groups based on job type:

- senior management;
- middle management;
- professionals (including engineers, teachers, lab technicians and computer workers);
- nonprofessional workers; and
- self-employed workers.

BURNOUT ASSOCIATED WITH DIABETES

The employed men and women were followed for 3 to 5 years (mean = 3.6) and were assessed by the Shirom-Melamed Burnout Measure — a 14-item questionnaire with three subscales: emotional exhaustion, physical fatigue, and cognitive weariness.

During the follow-up period, 17 workers developed type 2 diabetes. The logistic regression results published in *Psychosomatic Medicine* showed that burnout was associated with 1.84-fold increased risk of diabetes (95% CI = 1.19-2.85) even after adjusting for age, sex, body mass index, smoking, alcohol use, leisure time and physical activity, initial job category, and follow-up duration.

When researchers looked at a subsample of 507 workers, the relative risk of diabetes was found to be

much higher, after additional control for blood pressure. Researchers said, according to data, that burned-out workers were then 4.32 times more likely to develop type 2 diabetes (95% CI = 1.75-10.67).

The burnout systems were remarkably consistent over the follow-up period, irrespective of changes in place of work and in employment status, researchers found.

COPING RESOURCES FOR STRESS

According to lead researcher Samuel Melamed, PhD, an associate professor at Tel Aviv University, it is possible that these people were prone to diabetes because they can not handle stress well. “Their coping resources may have been depleted not only due to job stress but also life stresses,” Dr. Melamed said in an e-mail interview with *DIABETIC MICROVASCULAR COMPLICATIONS TODAY*, adding, “emotional burnout may pose a risk to health. Earlier studies have found it to be associated with cardiovascular disease risk, sleep disturbances, impaired fertility and musculoskeletal pain. The finding of this study suggest that the potential damage to health may be greater than suspected, as it now may also include a risk of diabetes.”

“Physicians and the general public should be aware that emotional burnout, in addition to its impairing quality of life, may also constitute risk to health. Knowledge and implementation of stress management techniques, such as exercising, getting enough sleep, dieting and assertiveness training, may prevent burnout or reduce it before it becomes chronic, therefore reducing the risk of physical health impairment,” Dr. Melamed said. ■

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Melamed S, Shirom A, Toker S, Shapira I. Burnout and risk of type 2 diabetes: A prospective study of apparently healthy employed persons. *Psychosom Med*. 2006;68:863-869