Study connects workplace turmoil, stress and obesity

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A new study that provides a snapshot of a typical American workplace observed that chronic job stress and lack of physical activity are strongly associated with being overweight or obese.

Unexpectedly, researchers also found that a diet rich in fruits and vegetables did little to offset the effect of chronic job stress on weight gain among the employees, who were mostly sedentary. Instead, exercise seemed to be the key to managing stress and keeping a healthy weight.

University of Rochester Medical Center researchers conducted the study of 2,782 employees at a large manufacturing facility in upstate New York, but the results could be applicable to almost any job situation in which layoffs, or lack of control at work, is a major concern.

The Journal of Occupational and Environmental Medicine published the research in January 2010.

Lead author Diana Fernandez, M.D., M.P.H., Ph.D., an epidemiologist at the URMC Department of Community and Preventive Medicine, said her study is among many that associate high job pressure with cardiovascular disease, metabolic syndrome, depression, exhaustion, anxiety and weight gain. It's time to improve corporate policies that better protect the health of workers, she said.

"In a poor economy, companies should take care of the people who survive layoffs and end up staying in stressful jobs," Fernandez said. "It

is important to focus on strengthening wellness programs to provide good nutrition, ways to deal with job demands, and more opportunities for physical activity that are built into the regular workday without penalty."

Over and over, Fernandez's team heard the same story from the upstate workers: After spending the day sitting in stressful meetings or at their computers, they looked forward to going home and "vegging out" in front of the TV. Anecdotally, researchers also discovered that when pink slips were circulating, the snacks highest in fats and calories would disappear quickest from the vending machines. Some workers said they did not take the time to eat well or exercise at lunch because they were fearful of repercussions from leaving their desks for too long.

Approximately 32 percent of adult men and 35 percent of adult women are obese in this country. When the prevalence of overweight and obesity are combined, 68 percent of adults fit the category (72 percent prevalence among men; 64 percent among women), according to a recent report in the Journal of the American Medical Association.

The upstate New York workplace mirrored the national statistics. Researchers collected baseline data from the nearly 2,800 employees, using body mass index (BMI) as the measurement for weight status. Overweight/obesity was defined as BMI greater than 24.9, and healthy/underweight was defined as less than 24.9.

They found that 72 to 75 percent of the employees were overweight or obese. Most of the study volunteers were middle-aged, white, married, highly educated (college degree or more), relatively well-paid (earning more than $60,000 a year), with an average of almost 22 years at the company.

Another important statistic: More than 65 percent of the employees said

they watched two or more hours of television per day. Among those who reported watching two to three hours, 77 percent were more likely to be overweight or obese, and those who watched four or more hours of TV a day increased their odds of obesity by 150 percent, compared to people who watched less than two hours of daily TV.

"We are not sure why TV is so closely associated with being overweight in our sample group of people," Fernandez said. "Other studies have shown that adults tend to eat more fatty foods while watching TV. But this requires more investigation."

The study dates back to 2005, amid growing concern of an obesity epidemic, when Fernandez was awarded a $3 million grant from the National Heart, Lung, and Blood Institute, a division of the National Institutes of Health, to investigate ways to influence people's dietary and physical activity at work. The company that agreed to participate in the study was involved in drastic restructuring and layoffs. In interviews the employees confided to researchers that they were "stress eating" and burned out from "doing the work of five people," researchers reported.

Stressful working conditions are known to impact health behaviors directly and indirectly. Directly, stress can affect the neuroendocrine system, resulting in abdominal fat, for example, or it may cause a decrease in sex hormones, which often leads to weight gain. Indirectly stress is linked to the consumptions of too many fatty or sugary foods and inactivity.

The research team measured psychosocial work conditions through a detailed job questionnaire. Interventions were planned and employees who worked at intervention worksites participated in a comprehensive, two-year nutrition and exercise program. This included walking routes at work, portion control in food, and stress-reduction workshops. The data comparing control groups and the groups who took part in the nutrition

and exercise program is still being analyzed, Fernandez said.

However, while analyzing baseline data investigators discovered that employees working in the most high-job-strain conditions had almost one BMI unit more of weight than people who worked in more passive areas. Researchers did not find that chronic stressors (general dissatisfaction at work) and acute stressors (being a layoff survivor, or having entire operations decommissioned) together had a larger effect on weight than when examined independently.

Diet was evaluated solely by the number of servings of fruits and vegetables a day, and probably had no influence on weight status because assessing diet in this way might not be a good measurement of quality or quantity, Fernandez said. A better way to look at diet quality might be through an evaluation of the whole diet.

In conclusion, the study suggests that workplace wellness programs should not only offer ideas on how to be healthy, but should examine the organizational structure and provide ways to minimize a stressful environment for everyone.

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