Body’s Stress Signal Stays High Longer in the Poor

Stress happens to us all, but our bodies don’t provide “equal opportunity” defense against harmful health effects: Poor people or those with little education may suffer worse health partly because of differences in their stress hormones. A vital stress hormone that surges to cope with temporary challenges dials back down much more slowly in poor adults compared to their better-off peers, a new study suggests. The study appears in the February/March issue of Psychosomatic Medicine, journal of the American Psychosomatic Society.

“Many people think a lot of a stress hormone like cortisol is bad, but we need our hormones to increase when there are demands in the environment. It’s also important, though, for the stress hormone level to go back down promptly when the threat is over,” says Felice Le-Scherban, Ph.D., of the Dornsife School of Public Health at Drexel University, who worked on the study with Allison B. Brenner, Ph.D., of the University of Michigan Institute for Social Research.

The study measured how two lab tests known to stimulate stress affected the cortisol levels of 997 adults aged 54 and older. Study participants also gave detailed information on parental education, used as a proxy for childhood socioeconomic status (SES), their own education, income, and wealth. The findings were stark. The more time across the lifespan that a person had low SES, and the lower their status (money and education), the slower their recovery time from heightened cortisol levels triggered by the stressor. So, for example, those with low SES throughout life had a 46% slower recovery rate than adults with high SES all through their lives.

Some studies have shown that poor adults respond to acute stress with less cortisol than others. But this isn’t optimal either, Le-Scherban points out. “It’s about balance and reacting optimally.” Some scientists think this blunted response suggests that the healthy stress-coping system has been worn down after having to surge so often to deal with stress. There’s strong evidence that adults with little money and education are exposed to more stress than higher-status peers, she adds. And an impaired stress system may be an important reason that low SES adults have poorer health and die sooner than others. “It’s clear that we do have an imperative as a society to reduce poverty,” she concludes.

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