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CHEMISTRY

From New Orleans at a meeting of the American Chemical Society

Vitamin C lowers stress hormone in rats

Large doses of vitamin C may help alleviate the body's response to stress, according to P. Samuel Campbell of the University of Alabama in Huntsville.

Campbell and his colleagues put laboratory rats under stress by immobilizing them in a wire cylinder for 1 hour each day for 3 weeks. For 15 minutes of that hour, the researchers turned the rats upside down. "It's more of an emotional stressor than a physical stressor," Campbell explains.

Stressed rats that had received a daily dose of 200 milligrams of vitamin C showed lower blood concentrations of a hormone called corticosterone when compared to rats that didn't get the vitamin. In people, scientists have linked chronic production of a related hormone, called cortisol, to heart disease and upper respiratory infections (SN: 5/23/87, p. 325). In the new study, vitamin C also appeared to increase the rats' production of IgG, an antibody that is a measure of immune-system function.

The amount of vitamin C given to the rats would correspond to a high dose—several grams per day—in people, says Campbell. In contrast, the current recommended daily allowance is just 60 mg. The study's results, Campbell says, provide additional information for U.S. policy makers who are trying to revise nutritional guidelines to reflect vitamin doses needed for optimum health (SN: 4/19/97, p. 237).

—C.W.