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Mood-altering serotonin linked to combativeness, study suggests

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Low levels of the brain chemical serotonin cause people to be more combative and make money-losing decisions, a U.K. study showed.

The research, published Thursday in the journal *Science Express*, also found that chocolate, chicken soup and other foods containing the amino acid tryptophan boost serotonin, which could explain why hunger makes some people aggressive.

“There’s something to the idea of these comfort foods,” said Molly Crockett, who led the research at the University of Cambridge department of experimental psychology, said this week. “They are what they are for a reason, and serotonin may explain some of that.”

Serotonin also is regulated by antidepressant drugs, including Prozac, Zoloft and Paxil.

Crockett and colleagues asked 20 healthy volunteers to fast overnight, then gave each a protein drink. On one day they received drinks containing tryptophan. On another day they received drinks without the substance.

On both days the subjects played 48 rounds of a so-called ultimatum game in which they and another person were offered a share of money, ranging from “fair” offers of 45 percent of the cash to “most unfair” stakes of 18 percent. If they accepted the offer, both parties got paid. If they rejected it, neither was paid.

More than 82 percent of volunteers with low serotonin rejected the most unfair offers. Those same people rejected the same offers 66 percent of the time when they had normal serotonin levels, the study said.

The findings don’t mean serotonin would “make us all be nicer to each other,” because the brain is complex and levels of the chemical fluctuate in response to other stimuli, Crockett said. Low serotonin may also be good in some situations, including contact sports, she said.

The research was funded by the Wellcome Trust, the U.K.’s largest charity, and the Medical Research Council, a publicly funded organization.