

**The New York Times**

By STEPHEN MIHM

Published: April 16, 2006

## Does Eating Salmon Lower the Murder Rate?

Most prisons are notorious for the quality of their cuisine (pretty poor) and the behavior of their residents (pretty violent). They are therefore ideal locations to test a novel hypothesis: that violent aggression is largely a product of poor [nutrition](#). Toward that end, researchers are studying whether inmates become less violent when put on a diet rich in [vitamins](#) and in the fatty acids found in seafood.

Could a salmon steak and a side of spinach really help curb violence, not just in prison but everywhere? In 2001, Dr. Joseph Hibbeln, a senior clinical investigator at the National Institutes of Health, published a study, provocatively titled "Seafood Consumption and Homicide Mortality," that found a correlation between a higher intake of omega-3 fatty acids (most often obtained from fish) and lower murder rates.

Of course, seeing a correlation between fatty acids and nonviolence doesn't necessarily prove that fatty acids inhibit violence. Bernard Gesch, a senior research scientist at Oxford University, set out to show that better nutrition does, in fact, decrease violence. He enrolled 231 volunteers at a British prison in his study; one-half received a placebo, while the other half received fatty acids and other supplements. Over time, the antisocial behavior (as measured by assaults and other violations) of the inmates who had been given the supplements dropped by more than a third relative to their previous records. The control group showed little change. Gesch published his results in 2002 and plans to start a larger study later this year. Similar trials are already under way in Holland and Norway.

What would it mean if we found a clear link between diet and violent behavior? To start with, it might challenge the notion that violence is a product of free will. "But how do you exercise that free will without using your brain?" Gesch asks. "And how, exactly, is the brain going to work properly without an adequate nutrient supply?" The belief that people choose to be violent may be irrelevant if the brain isn't firing on all cylinders. This may especially be the case for impulsive acts of violence, which are less a choice than a failure to rein in one's worst instincts.

Consider, for example, a study conducted by researchers in Finland. They tested prisoners convicted of violent crimes and found that they had lower levels of omega-3 fatty acids than ordinary, healthy subjects. Why? Omega-3's foster the growth of neurons in the brain's frontal cortex, the bit of gray matter that controls impulsive behavior. Having enough of these fatty acids may keep violent impulses in check. Violent criminals may not be the only ones who

would benefit from more fatty acids in their diet. In a recent double-blind trial, when omega-3's were given to people with a history of substance abuse, the symptoms of "anger" fell by 50 percent.

Of course, omega-3's are widely hailed these days as a miracle substance, credited with boosting health in dozens of ways. But Gesch warns against what he calls "silver bullets." The state of the evidence, he says, "doesn't allow us to pinpoint which dietary fat is responsible for changes in behavior." In his new study, he will look into whether several interdependent nutrients may play a role.

Gesch further adds that we shouldn't expect nutrition alone to banish violent behavior. "The brain needs to be nourished in two ways. It needs to be educated, and it needs nutrients. Both social and physical factors are important." Simply throwing fish and vegetables at violent criminals is unlikely to have a lasting effect on its own.

Caveats aside, there's something that many people may find unnerving about the idea of curing violent behavior by changing what people eat. It threatens to let criminals evade responsibility for their actions. Think, for example, of the infamous "Twinkie defense," in which an accused murderer's lawyer suggested that junk food was partly to blame for his client's compromised mental state. More controversial, perhaps, is the brave-new-world idea of using diet to enforce docility and conformity to the rules, a sort of state-sponsored version of that timeless parental demand to children everywhere: "Eat your vegetables."

Then again, we already live in a society in which parents have resorted to drugs like Ritalin to quell unwanted outbursts and impulsive behavior. And when you approach it from that perspective, changing what people eat may not be so radical after all.

*Stephen Mihm teaches history at the University of Georgia.*