



Loudoun Families for Children

Providing emergency placements, respite care, and mentoring to children in need of safety, stability, or on-going support

Spring 2009

Article in NY Times Reports Effects of Abuse

February 24, 2009-After Abuse, Changes in the Brain-By BENEDICT CAREY

For years, psychiatrists have known that children who are abused or neglected run a high risk of developing mental problems later in life, from anxiety and depression to substance abuse and suicide.

The connection is not surprising, but it raises a crucial scientific question: Does the abuse cause biological changes that may increase the risk for these problems?

Over the past decade or so, researchers at McGill University in Montreal, led by Michael Meaney, have shown that affectionate mothering alters the expression of genes in animals, allowing them to dampen their physiological response to stress. These biological buffers are then passed on to the next generation: rodents and nonhuman primates biologically primed to handle stress tend to be more nurturing to their own offspring, Dr. Meaney and other researchers have found. Now, for the first time, they have direct evidence that the same system is at work in humans. In a study of people who committed suicide published Sunday in the journal *Nature Neuroscience*, researchers in Montreal report that people who were abused or neglected as children showed genetic alterations that likely made them more biologically sensitive to stress.

The findings help clarify the biology behind the wounds of a difficult childhood and hint at what constitutes resilience in those able to shake off such wounds.

In the study, scientists at McGill and the Singapore Institute for Clinical Sciences compared the brains of 12 people who had committed suicide and who had had difficult childhoods with 12 people who had committed suicide and who had not suffered abuse or neglect as children.

The scientists determined the nature of the subjects' upbringing by doing extensive interviews with next of kin, as well as investigating medical records. The brains are preserved at Douglas Hospital in Montreal as part of the Quebec Suicide Brain Bank, a program founded by McGill researchers to promote suicide studies that receives brain donations from around the province.

When people are under stress, the hormone cortisol circulates widely, putting the body on high alert. One way the brain reduces this physical anxiety is to make receptors on brain cells that help clear the cortisol, inhibiting the distress and protecting neurons from extended exposure to the hormone, which can be damaging.

The researchers found that the genes that code for these receptors were about 40 percent less active in people who had been abused as children than in those who had not. The scientists found the same striking differences between the abused group and the brains of 12 control subjects, who had not been abused and who died from causes other than suicide. "It is good evidence that the same systems are at work in humans that we have seen in other animals," said Patrick McGowan, a postdoctoral fellow in Dr. Meaney's lab at McGill and the lead author of the study.

Because of individual differences in the genetic machinery that regulates stress response, experts say, many people manage their distress despite awful childhoods. Others may find solace in other people, which helps them regulate the inevitable pain of living a full life.

New Volunteer Family Approved

LFC recently added a new family to the volunteer roster. Steve and Sue live in Leesburg with their children, Amanda, Emily, and Tim. The family enjoys hiking, spending time together, and playing sports. They are also very active in their community and church.

They have already provided help with two placements and LFC is happy to have them as a resource.

April is...

Child Abuse Prevention Month- wear a blue ribbon in support of the awareness campaign.

Calendar

April 24th-Volunteer Appreciation Party, 7:00-9:30 PM at the C3 Cyber Club in Ashburn

May 12th-Monthly Board Meeting, 6:00 PM at PRCS in Leesburg

May 26th-(tent.) In-service Training with Guest Speaker, Matt Snow

Board of Director's Changes

LFC is pleased to announce that Michele G., Debbie H., and Cecilia S. have joined LFC's Board of Directors. All three women are current volunteers of the program and they each bring a diverse range of experience to the board. These three along with Debora L. (new member in October) makes a total of ten board members. The current officers are Gayle R., Chairperson; Richard R., Treasurer; and Brett B., Secretary (although Kim takes most of the minutes.) The Vice Chairperson position is currently open. Mary K. and Kelly W. also remain board members.