

Childhood stress affect health years later, UW study says

Shawn Doherty
January 26, 2009

Children who spent their first years in institutions before being adopted by loving and affluent families still suffered long-term damage to their immune systems as a result of early emotional stress, according to a University of Wisconsin study posted Monday with the online [Proceedings of the National Academy of Sciences](#).

Even the health of children adopted before the age of 3 who then spent more than a decade with their new families were no better than the health of children who had spent their entire childhoods in abusive families.

"Even though these children's environments have changed, physiologically they're still responding to stress. That can affect their learning and their behavior, and having a compromised immune system is going to affect these children's health," said Seth Pollak, director of the Child Emotion Laboratory in the [UW-Madison Waisman Center](#) and a professor of psychology and pediatrics. Pollak co-authored the study with Elizabeth Shirtcliff, formerly a postdoctoral fellow at UW who is now at the University of New Orleans, and UW psychology professor Christopher Coe.

The researchers compared levels of antibodies for the common and usually latent herpes simplex virus in 155 children separated into three groups: those who lived in abusive families, those who had been adopted and those in a control group. While around two-thirds of Americans carry this virus, which causes cold sores, people with healthy immune systems keep it in check. Those with weakened immune systems have trouble suppressing the virus and produce higher levels of antibodies.

Both the physically abused adolescents and those who had been in institutions had similar, elevated levels of the antibodies compared to the control group. The study concludes that the antibody serves as a sort of "sentinel marker" -- physical proof that emotional stress can have a physical impact on children.

"From the researcher's point of view, this is a warning that these children could be vulnerable to other immune-related conditions like asthma and allergies," Coe said.

The adopted children lived in institutions in Romania, Russia, Eastern Europe and China. They were between the ages of 6 months and 7 years when they were adopted by Wisconsin families and have lived with their families here for three to 13 years.

Though they no longer live in an institution, many adopted children still suffer from weakened immune systems.

The finding might alarm some of the growing numbers of American families who have adopted children from institutions overseas. But it is not especially surprising to early childhood researchers, who over the past decade or so have found increasing evidence that emotional and physical health are intertwined.

Other studies of children have shown that family functioning and early life events can influence even the frequency of respiratory illnesses. And retrospective surveys of adults who had experienced abuse as children indicate they are more likely to develop chronic pain conditions and gastrointestinal disorders.

"Not long ago we were talking about how everything was in the mind," Pollak said. "But now the zeitgeist of what we're learning in science is that there is a real interplay between the mind and the body."

Pollak said that it has already been proved that stress can compromise peoples' immune systems. "What's new," he said, "is that we can demonstrate this in children even years after the stressful events." The study also was able to successfully use saliva to measure the levels of children's herpes antibodies, a promising technique that is much less invasive and stressful for young children than the traditional method of drawing blood samples.

If events during the first year of life have a profound impact on a person's emotional, mental and physical health later on, what can parents do who don't adopt their children until after this gap?

The main message from the study for families who have adopted or are considering adopting children, Coe said, is "to go into adoption with your eyes wide open." And, even more importantly, he said, "Love these children. Give them all the support they need."