Are some people born to worry?

Current research indicates that some of us are, in fact, born with a temperament that leads us to be inhibited and anxious children and young adults.

Jerome Kagan of Harvard University and Nathan Fox from the University of Maryland have been looking at the relationship between temperament in infancy and a tendency toward worry and anxiety in adolescence. They find that about 15 to 20% of infants are classified as highly reactive, that is, they get upset when exposed to anything unfamiliar. These highly reactive and upset infants have grown up to be more anxious as adults.

Kagan and Fox initially observed the responses of 4-month-old babies who were exposed to novel stimuli for 45 minutes. Some babies were calm as the stimuli were presented. Others, the high-reactives, showed increased heart rate, blood pressure and motor behaviors as well as more fussing and crying. The children were tested again throughout their development into adulthood. As early as age 7, the high-reactive children showed more anxiety symptoms than low-reactives. As teenagers, while many of the highly reactive had learned to minimize the outward appearance of anxiety, they were more likely to perform like clinically anxious adults on laboratory tasks.

This highly reactive, anxiety-prone temperament has been related to high activity in the amygdala, the part of the brain involved in emotional functions, including fear. High-reactives also show a thickening in the prefrontal cortex, which is involved in inhibition of signals from the amygdala.

But is biology really destiny in this case? Not necessarily. Kagan and Fox have found that some high-reactives have learned to adapt and manage their tendencies toward anxiety and display positive behavioral outcomes like conscientiousness and carefulness. While temperament may represent the cards we are dealt, it’s still up to us to play those cards.

Content contributed by Dr. Rosemary Krawczyk.

Psychological Frontiers is produced by the Psychology Department at Minnesota State University, Mankato. I’m Dr. Dawn Albertson.


Resources: