

Sparks of inhibition

By the time many infants of depressed mothers reach 6 months of age, the electrical activity in their brains appears to have assumed a pattern similar to that documented in socially withdrawn children and depressed adults, a new study finds.

What triggers this pattern—marked by much more prominent electrical activity on the right side of the frontal lobe than on the left—remains unknown. But prior work suggests that emotions linked to social engagement spark left frontal activity, whereas feelings associated with social withdrawal strengthen right frontal activity, note Tiffany Field, a psychologist at the University of Miami School of Medicine, and her colleagues.

If the greater right frontal electrical activity seen in the babies of depressed mothers persists over time, “it may be useful as a biological marker of infant vulnerability toward an anxious or fearful disposition. . . and may in fact be an important predictor of subsequent behavioral disorders,” Field’s team writes in the May *DEVELOPMENTAL PSYCHOLOGY*.

Alternatively, a bias toward right frontal electrical activity may reflect a baby’s temporary emotional response to the presence of a depressed mother, the researchers note.

A total of 16 boys and 16 girls, all 3 to 6 months old, wore a stretchable cap containing electrodes for 3 minutes while seated on their mothers’ laps. In separate sessions, mothers—all single, low-income adolescents who were either black or Hispanic—wore electrode caps, which measured electrical activity over much of the front half of the brain’s surface.

A standard interview and questionnaire identified 17 mothers as at least moderately depressed.

Right frontal electrical activity substantially exceeded that for left frontal regions in 12 of 17 infants of depressed mothers, compared to 2 of 15 infants of nondepressed mothers. The same electrical pattern characterized 10 of 17 depressed mothers but only 3 of 15 nondepressed mothers.

Other experiments, directed by study coauthor Nathan A. Fox of the University of Maryland at College Park, find a right frontal activation bias in fearful and shy infants and preschoolers, none of whom has a depressed mother.

Family ties: Desire outweighs DNA

A scientific dispatch from the brave new world of reproductive technologies contains encouraging news about family life. The quality of parenting in families with a child conceived through in vitro fertilization (IVF) or donor insemination (DI) exceeds that observed in well-functioning families with a naturally conceived child, a team of British psychologists reports in the April *CHILD DEVELOPMENT*.

What’s more, adoptive parents display child-rearing skills equal to those of parents of children conceived with medical help, say Susan Golombok and her coworkers at City University, London. “The findings suggest that genetic ties are less important for family functioning than a strong desire for parenthood,” the researchers conclude.

Participating families consisted of 41 with an IVF child, 45 with a DI child, 43 with a naturally conceived child, and 55 with a child adopted at birth. Children ranged from 4 years to 8 years.

Parents completed interviews and questionnaires that assessed their child-rearing ability. The children’s emotional health was determined by mother and teacher ratings and by the youngsters’ descriptions of parent and peer relationships.

Concerns that DI fathers might have trouble relating to their children appear unfounded, Golombok’s team contends. However, DI parents uniformly declined to tell their children about their reproductive origins, mainly for fear of inciting the child’s anger and rejection. Future research will chart the consequences of telling or not telling children about how they were conceived, the researchers say.

MAY 27, 1995

Ebola cases on the rise in Zaire

Television news shows have used clips from the fictional hit movie *Outbreak* to dramatize the spread of the Ebola virus in Zaire. Yet the real-life Ebola epidemic remains a grim reality.

At press time, the World Health Organization (WHO) in Geneva has reported 137 cases of Ebola fever and 101 deaths from this lethal virus.

“We expect a significant increase in cases in the next 2 or 3 weeks,” says Daniel Epstein, a WHO press officer based in Washington, D.C. That jump in the number of cases will occur as people now infected with the virus begin to fall ill, he adds.

Named after a river in Zaire, the Ebola virus causes a severe disease in which victims spike a fever and hemorrhage blood. It is generally fatal.

The current epidemic started in Kikwit, a city in southwestern Zaire.

The virus cannot be transmitted through casual encounters; rather, it spreads by direct contact with infected bodily fluids, such as blood.

Although some people have raised questions about the safety of air travel, WHO downplayed the risk of contracting Ebola virus on an international flight.

“Persons with Ebola become infectious for others only when they are extremely ill and are already hemorrhaging,” the organization said in a statement. “It is highly unlikely that such persons would try to travel on an international flight and unlikely that they would be permitted to board if they did try.”

Built-in risk for teenage pregnancies

Physicians have long known that pregnant teenagers face an increased risk of delivering a premature baby. Research has chalked that threat up to a host of social and economic problems, including lack of regular prenatal health care.

The surprising results of a new study now suggest that pregnant teens from stable backgrounds, who usually get regular maternity care, also have a higher risk of delivering a premature or smaller-than-average baby.

“Becoming pregnant as a young teenager can result in an intrinsic increase in the risk of adverse outcomes of pregnancy,” conclude the authors of the study, which appears in the April 27 *NEW ENGLAND JOURNAL OF MEDICINE*.

Most previous studies focused on inner-city adolescents with many risk factors for a dangerous pregnancy.

To home in on any biological risk associated with teen births, R. H. Ward of the University of Utah in Salt Lake City and his colleagues decided to analyze the delivery records of Utah teens. Studies show that pregnant women in Utah are largely married, middle-class, and less likely to smoke or use drugs or alcohol during pregnancy.

Married Utah teens age 13 to 17 who had received adequate prenatal care were twice as likely to deliver a premature infant as similar women age 20 to 24. Teenage mothers were also at risk of having a very small baby, the authors found.

Low birthweight and prematurity increase a baby’s chances of suffering mental retardation, blindness, and other serious health disorders, says Charlotte Catz of the National Institute of Child Health and Human Development in Bethesda, Md.

“This particular study showed that even in a population where the young teenagers were married, were going to school, and had prenatal care—they still had a risk that was higher than [that of] the older women,” Catz says.

Ward and his colleagues speculate that the apparently inherent risk may result because the young mothers are still growing themselves and thus may compete with the fetus for nutrients. However, no one really knows why teens and their babies face such adverse health risks.

“We need more studies,” Catz concludes.

333