

Gene clues to manic depression emerge

A gene that helps create a predisposition to manic depression, at least in a substantial minority of cases, apparently lies along a short stretch of chromosome 18, scientists report in the June 21 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES.

"We find reasonable evidence for a gene that partially affects about one-quarter to one-third of manic-depressive cases," asserts Wade H. Berrettini, a psychiatrist at Thomas Jefferson University in Philadelphia.

Berrettini and his coworkers recruited 22 white, multi-generational families, each with at least six members diagnosed with manic depression. Of 395 participants in the study, 167 suffered from manic depression or, in a small number of cases, recurring depression without mania (periods of elation and frenzied, sometimes self-destructive activity).

Psychiatrically ill members of eight families displayed an increased number of genetic changes at the same location on chromosome 18, the researchers assert. This region is marked by enzymes that snip DNA samples at precise spots.

Probably many genes, some in particular combinations, boost the risk of manic depression, Berrettini holds. Thus, he finds it unsurprising that chromosome 18 changes showed no relation to manic depression in a majority of families.

The chromosome 18 area tagged by Berrettini's team contains about 100 genes, but the scientists cite two of those as good candidates for involvement in manic depression. One gene regulates a protein involved in readying certain brain cells to receive chemical messages. The second gene mediates some of the body's hormonal responses to stress, which often go awry in depression and manic depression.

Earlier reports connecting manic depression to defects on chromosome 11 (SN: 2/28/87, p.132) and on the X, or 23rd, chromosome (SN: 3/28/87, p.199) failed to receive support in follow-up studies. However, two other preliminary family investigations — one conducted at Indiana University School of Medicine in Indianapolis and the other at the National Institute of Mental Health in Bethesda, Md. — have linked the same chromosome 18 markers to manic depression, Berrettini says.

"I'm optimistic that our finding will hold up," he adds.

Memory of elderly takes cultural turns

Cultural expectations about aging may affect memory in the elderly to a greater degree than researchers often assume, according to a study in the June JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY.

Becca Levy and Ellen Langer, both psychologists at Harvard University, recruited 30 residents of Beijing, China, 30 deaf people in the United States who communicate with American Sign Language, and 30 hearing U.S. volunteers. Half of each group consisted of younger people, age 15 to 30, and half consisted of older adults, age 59 to 91.

Younger adults in the three groups performed similarly on four memory tasks and received higher average scores than older adults. Older Chinese, however, outperformed their deaf U.S. counterparts, who in turn scored higher than elderly hearing U.S. participants. Older Chinese also reported more positive attitudes toward aging than the older deaf group, which regarded aging more positively than the older U.S. hearing group.

Surprisingly, the researchers add, memory scores for older and younger Chinese did not statistically differ.

These findings support the idea that a "deaf culture" exists outside mainstream U.S. culture, the scientists assert.

"It is possible that in the United States, negative stereotypes about how old people cognitively age, to which [hearing] individuals starting at a young age are exposed, become self-fulfilling prophecies," Levy and Langer contend.

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Debate over 'cold' surgery heats up

Prostate cancer will be detected in 200,000 men this year. Radical prostatectomy, or removal of the prostate gland, remains the most widely chosen treatment, though some studies show that this aggressive approach may only be beneficial for young men with fast-growing tumors (SN: 6/5/93, p.367). Radiation therapy, used alone or in conjunction with prostatectomy, is the second choice. Still others will consider cryosurgery, a relatively new treatment that uses liquid nitrogen to freeze and kill cancer cells.

Cryosurgery is attractive to patients who like the idea of a less invasive treatment. Indeed, the procedure is being performed with increasing frequency in the United States.

According to CryoMedical Sciences in Rockville, Md., some 4,000 cryosurgeries for prostate cancer have been performed in the United States in the last 2 years. The company manufactures cryobiological tools.

"Cryosurgery is very promising in properly selected patients," says Michael Naslund, director of the Maryland Prostate Cancer Center in Baltimore.

The procedure is appealing because it involves minimal cutting, short recuperation time, little pain afterwards, and only a local anesthetic. Radical prostatectomy, on the other hand, is a major operation followed by weeks of recuperation and pain, not to mention occasional incontinence and an estimated 30 percent risk of impotence. But cryosurgery does have side effects, including a 60 percent risk of impotence within the first year after surgery.

William Catalona, chief of urology at Washington University School of Medicine in St. Louis, believes that the promising results of cryosurgery are too preliminary to be trusted. "Because of aggressive marketing, patients view this as modern, space-age treatment," he says. "In the long run, they're going to find out they made a big mistake."

Cancer of the prostate spreads throughout the gland, tending to concentrate at the top. But Catalona says cryosurgery often fails to remove all of the cancer. This might not be a problem for men in their 70s and 80s, whose slow-growing tumors may not be detectable before they die of other causes. But men in their 40s and 50s who undergo cryosurgery may suffer recurrences 10 years later, he points out.

Cryosurgery isn't for everyone, Naslund points out. "Radiation does a poor job of killing [prostate] cancer," he says. "Cryosurgery is a good alternative to radiation, but not if you're a good candidate for radical prostatectomy."

SIDS and infant sleep position

In the 1960s, pediatricians told mothers to put children to sleep on their stomachs. But 30 years ago, researchers had yet to study or even recognize the deadly phenomenon now known as sudden infant death syndrome, or SIDS.

Now, a coalition of federal and private organizations is calling for a 180° reversal — literally — of that earlier advice to mothers. At a June 21 press conference in Washington, D.C., the coalition launched a national education campaign dubbed "Back to Sleep." The campaign urges parents to put their children to sleep on their backs or sides.

The initiative is based partially on data from the May PEDIATRICS illustrating a 50 percent reduction in SIDS cases in countries that adopted policies encouraging these sleeping positions. A baby is more likely to die sleeping on its stomach because the airway may become blocked in this position, notes Marian Willinger of the National Institute of Child Health and Human Development. In addition, if the prone position is coupled with an increase in the infant's body temperature — either because of swaddling clothes or a heated room — the risk of death increases further.

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