Data diminish divorce's aftermath on kids

The emotional trauma inflicted on children by parental divorce has long drawn the attention of researchers, who note an excess of academic and behavior problems in these youngsters compared with children in two-parent families.

But those observations may tell only half the story, according to the first large-scale, longitudinal analyses of children during the years preceding and following a parental divorce. In boys at least, family conflict *before* a divorce contributes to later problems as much as the divorce itself, report sociologist Andrew J. Cherlin of Johns Hopkins University in Baltimore and his colleagues. Pre-divorce family conflict seems to have less influence on girls, but Cherlin adds that measures of girls' psychological functioning need improvement. Whereas many boys in troubled families engage in blatant misbehavior, girls may often experience elusive symptoms of anxiety or depression, he contends.

"In general, kids are hurt by family conflict whether parents are married or not," Cherlin asserts. "In the most troubled families, some children may [even] benefit from a divorce, but this only applies to the most extreme cases."

In the June 7 SCIENCE, his team presents a new look at data from national surveys conducted in England and the United States. The English project collected parents' and teachers' ratings of behavior problems, as well as achievement scores in reading and mathematics, for more than 11,600 unrelated children at ages 7 and 11. All of the children, born in March 1958, lived in two-parent families at age 7; over the next four years, 239 divorces or separations occurred.

For boys, behavior problems rose and achievement scores dipped significantly after a divorce, but these changes decreased by half when the scientists statistically controlled for behavior problems, achievement scores and measures of family difficulties before the marital split. For girls, the same pre-divorce factors accounted for about one-quarter of the achievement decrease but none of the increase in behavior problems.

The U.S. survey began in 1976 with 822 children, aged 7 to 11, who lived in two-parent families. In 1981, the youngsters and their parents again participated in interviews. During the interim, 65 divorces or separations occurred. Again, boys' behavior problems after a marital split fell by about half when the researchers took into account pre-divorce behavior problems and marital conflict. The same controls indicated that girls from divorced families displayed fewer problem behaviors than girls from intact families – a finding the scientists cannot yet explain.

Some researchers who have intensively studied small groups of children after divorce argue that many of these youngsters – especially girls – suffer emotional difficulties that emerge only in young adulthood. Cherlin's team plans to test this assertion by analyzing the latest data from the English and U.S. surveys, in which the same children have reached 16 to 23 years of age.

For now, Cherlin says, investigators should concentrate equally on how children react to troubled two-parent families and to divorce. *– B. Bower*

Large prostate? New drug provides relief

An experimental drug can help relieve urinary problems caused by a swollen prostate gland, a new study indicates. If proved safe, the drug may one day replace surgery as the standard treatment for the more serious stages of this condition, which to some degree afflicts most men aged 50 and older.

The normally walnut-sized prostate gland, just below the bladder, tends to swell as men grow older. If the enlarged gland compresses the urethra, it can restrict the flow of urine – and in some cases eventually shut down urination. Standard treatment for advanced cases involves surgically trimming the enlarged gland – a costly procedure that causes impotence in some cases.

But the new drug, finasteride, appears to provide an alternative to surgery, according to results from a year-long, placebo-controlled drug trial involving 1,645 men suffering from an enlarged prostate. The study, reported in Toronto this week at an American Urological Association meeting, showed finasteride reduced prostate size by at least 20 percent in most of the 550 men who received the higher of two experimental dosages – 5 milligrams daily.

"Our clinical data suggest that finasteride can halt progression of the disease," says Elizabeth Stoner, a researcher at Merck Sharp & Dohme, the pharmaceutical firm that developed finasteride. Stoner presented her team's data, compiled by 76 centers in North America, Australia, New Zealand and Europe.

In most men, an enlarged prostate will cause urinary symptoms to worsen over time. But after one year on finasteride, 57 percent of the treated men reported a "modest" improvement in urine flow. This suggests the drug helps reverse progressive enlargement of the prostate, Stoner says. The 550 men receiving daily placebo pills reported no such relief from urinary troubles.

Stoner's team suspects finasteride works by inhibiting an enzyme (5-alpha reductase) that converts the male hormone testosterone to dihydrotestosterone, a substance that fuels the growth of the prostate.

Finasteride "holds promise" as a new treatment for enlarged prostates, says H. Logan Holtgrewe, a urologist at Johns Hopkins University in Baltimore. However, he cautions, to sustain its effects, men would have to take the drug for the rest of their lives. Though Stoner agrees, she notes that the trial revealed just a few, mild side effects, including general weakness. Merck plans to study finasteride's long-term safety and efficacy in another trial, she adds. *– K.A. Fackelmann*

A soy sauce surprise

Compared with Americans, the Japanese face an eight-fold higher risk of stomach cancer. Some Japanese scientists have suspected that the difference traces to a diet doused with soy sauce, which contains precursors of chemicals that cause mutations in bacteria. But a U.S. research team, expecting to confirm that hypothesis in mice, has observed just the opposite. Japanese-style fermented soy sauce "exhibited a pronounced anticarcinogenic effect," they report.

Michael W. Pariza and his co-workers at the University of Wisconsin-Madison conducted two tests, each with 300 mice fed a diet laced with a stomach carcinogen. In one six-month trial, half the mice received soy sauce supplements; the controls received extra water instead. Half of each group also received water spiked with varying levels of nitrites – compounds suspected of interacting with soy sauce to form gastric carcinogens. In a second test, Pariza's team held the nitrite/plain-water supplements constant, varying only the amount of soy sauce fed to half of each group.

Among the controls, 98 percent of those surviving the first experiment developed stomach cancer, averaging nine tumors per mouse. Only 72 percent of the soy-supplemented mice developed stomach malignancies, averaging 2.5 tumors per mouse.

The second experiment revealed that the maximum cancer inhibition occurred in animals receiving the most soy sauce – about 20 percent of their diet. The nitrates did not temper soy sauce's anticancer effect, the researchers report in the June 1 CANCER RESEARCH.

Pariza's group discovered that soy sauce contains compounds with substantial antioxidant activity. Noting that many antioxidants inhibit the development of cancer, they conclude that these soy compounds may be "mechanistically linked at least in part to the anticarcinogenic effects." *– J. Raloff*