

Language

Janet Raloff reports from Toronto at the American Speech-Language-Hearing Association's annual meeting

Who recovers in a family of stutterers?

Stuttering is known to run in families at rates higher than in the general population. Kenneth Kidd at Yale University's Department of Human Genetics suspects a predisposition to stuttering may be passed on within a family's gene pool. As part of the Yale Family Study of Stuttering, he and colleagues have been examining the incidence of stuttering — and its spontaneous recovery (without therapy) — within the immediate families of 310 adult stutterers. Only adults were included in the group of 1,857 relatives (the original 310 stutterers — referred to as "probands" — were omitted), because when spontaneous recovery occurs, it usually appears before one's 18th birthday.

Robin Seider, one of Kidd's co-workers, reported that roughly 14 percent of the subjects' parents, siblings or children had at one time stuttered themselves for at least six months. Of these, 51 percent had recovered, with females doing best: 66 percent recovery versus 46 percent for males.

More interesting, the same-sex siblings were more likely to persist in stuttering than were opposite-sex siblings. Specifically, brothers of male stutterers were three times as likely to persist as to recover, while other males (fathers, brothers of female subjects, and sons) shared an equal chance of persisting or recovering. Sisters of female subjects were twice as likely to persist in stuttering as to recover, while mothers, sisters of male relatives, and daughters were half as likely to persist in stuttering. The data also suggested females have a greater chance of recovering in preschool years while males are more likely to recover later. In fact, 18 percent of the males recovered after age 18, while only 4 percent of female stutterers did. Finally, the study showed that stuttering onset occurred significantly earlier for females who would ultimately recover.

The Yale team is not yet speculating on causes for these differential recovery patterns within stuttering families.

Stutterers face diminished job prospects

Stutterers looking for jobs should focus on large companies, according to results of a survey of 644 employers assessing their attitudes toward stuttering. Employers in the largest firms surveyed were least likely to believe that stuttering is a handicap to promotion or employment, and least likely to advise stutterers to seek jobs where little speaking was required. Melanie Hurst of the Burwell Center in Carrollton, Ga., and Eugene Cooper of the University of Alabama in Tuscaloosa studied a wide range of company sizes. They found that although only 30 percent of the employers believed stuttering interfered with job performance, 85 percent thought stuttering decreased employability. Roughly half of those responding to the question on promotions believed stuttering handicapped one's chance of advancement, and 58 percent of the employers admitted being uncomfortable around stutterers.

... as do those speaking black English

In a study of 100 southwestern personnel managers recruiting secretaries, six black college women were randomly sent to apply for advertised jobs using equivalent bogus letters of recommendation and job experience. Half spoke black English dialect, half did not, during secretly tape-recorded job interviews. According to Sandra and Francis Terrell of North Texas State University, interviewees speaking black English "were given shorter interviews and fewer job offers" than standard-English speakers. When job offers were made, black-English speakers "were offered positions paying significantly less money than standard-English speakers," they said. Results, the Terrells say, suggest children who are encouraged to speak black English to reinforce their cultural identity had better learn standard English too or risk being handicapped in the job market.

Biomedicine

Joan Arehart-Treichel reports from Dallas at the American Heart Association's 55th Scientific Sessions

Listening to the blood surf

To American novelist Irwin Shaw, the "liquid surf" of one's blood is simply a metaphor. Not so to Rutgers University cardiologist John B. Kostis and his colleagues. They have used the sound of blood flow to design a new test for coronary artery disease (the narrowing of arteries that supply the heart).

The test is called an "acoustical signal enhancement method." A sensitive microphone is strapped to a patient's chest. It listens to the flow of blood through coronary arteries during diastole (the instant during which the heart rests between beats and is silent). The sounds of blood flow are recorded, amplified and fed into a computer, which analyzes the frequency component of the sounds — that is, the number of sound waves per second. Higher frequencies (high-pitched sounds) indicate narrowed arteries; lower frequencies (low-pitched sounds) indicate healthy arteries. The New Brunswick, N.J., scientists tested the method on 42 subjects with healthy coronary arteries and on 33 who were already known, by conventional diagnostic techniques, to have narrow coronary arteries. Acoustical measurements from patients with narrow arteries showed a preponderance of higher frequencies, whereas measurements from subjects with healthy arteries revealed mostly lower frequencies.

At present, exercise stress testing is the major noninvasive method for diagnosing coronary artery disease. The major invasive method is angiography (where catheters are threaded into coronary arteries, dye is injected and the arteries are visualized with X-rays.) The acoustical signal enhancement method promises to enhance results from exercise stress testing and thereby spare many patients the risk and expense of angiography.

Obesity and lipoproteins

One of the reasons obese people are at an increased risk for coronary heart disease is because they have too many low density lipoproteins in their blood, report Artero Kesaniemi of the Veterans Administration Medical Center in San Diego and Scott M. Grundy of the University of Texas Health Science Center at Dallas. LDL is dangerous because it seems to deposit some of its cholesterol on arterial walls, producing hardening and narrowing of the arteries, which in turn may cause a heart attack.

Kesaniemi and Grundy studied the levels of LDL in six obese subjects and in six nonobese ones. They tagged LDL molecules in the subjects' blood with radioactive material. By periodically taking blood samples from the subjects and measuring the amount of radioactivity in them, the scientists determined the rate by which tagged LDL molecules were being used by the subjects' bodies. Because the body manufactures LDLs as fast as they disappear, the researchers were able to calculate the subjects' LDL production rates. They found the obese subjects produced significantly more LDLs than the nonobese ones did.

Echoes from newborns

In two-dimensional echocardiography, a transducer sends sound waves into the chest, then receives the waves as they bounce off the heart; a computer builds the echoes into an image of the heart. Now James B. Seward and colleagues at the Mayo Clinic in Rochester, Minn., have found that the technique is replacing in many instances the riskier, more expensive one of cardiac catheterization, where catheters are threaded through blood vessels into the heart to measure heart function.

Seward and his team studied the impact of two-dimensional echocardiography on the clinical management of 35 newborns with congenital heart disease. The technique correctly identified congenital heart disease in all of them. Physicians caring for the 35 patients then decided that only 14 of them (40 percent) needed cardiac catheterization as well, either to confirm the diagnosis or to help treat their heart malformations.