Shorts
briefed by Jule Klotter

Amish & Mennonite Genetic-Based Illness
Pediatrician D. Holmes Morton, director of the Clinic for Special Children (Strasburg, Pennsylvania), investigates genetic-based diseases found among the Amish and Mennonites. Because members of these Anabaptist religions marry within their communities, the incidence of genetic-based illness is very high. Dr. Morton's work has given parents an understanding of many illnesses that disable and kill their children and, in some cases, provided protocols for preventing severe damage.

Over 30 genetic conditions have been identified among the Amish. Glutaric aciduria type 1 (GA-1), for example, resembles cerebral palsy. Children show no signs of the disease until they contract a cold or respiratory infection. The infection triggers a build-up of glutarate in the brain, leading to permanent paralysis of the arms and legs. Morton first became aware of the high occurrence of GA-1 among the 25,000 Amish in southeastern Pennsylvania in 1988. At that time, some children had untreatable severe paralysis, but Morton managed to help those with milder paralysis by using a treatment that includes a restricted-protein diet. Morton also performed genetic testing on his patients' siblings. By identifying those with the same genetic mutation before symptoms occur, Morton prevents their paralysis by giving them immediate hospital care when they contract a respiratory infection. During the crisis, children receive IV glucose and fluids, anticonvulsants, and little protein to prevent the build-up of glutarate and thereby protect the basal ganglia from damage.

Maple Syrup Urine Disease (MSUD) is another genetic disorder that affects children in these communities. MSUD, a genetic disorder common among the Mennonites, is caused by the lack of an enzyme used to break down the amino acids valine, leucine, and isoleucine. By alerting parents to the early signs of the disease and implementing treatment, Morton has prevented severe brain damage and death in affected children.

Morton's willingness to work with children in their community and visit their homes, instead of requiring them to travel to a big-city hospital, gained the enthusiastic cooperation of the Amish and Mennonite communities. The Clinic for Special Children, which Morton co-founded and directs, is supported primarily by auctions held in Amish and Mennonite communities throughout Pennsylvania and by outside private contributions. Clinic fees are very reasonable; families pay $50 for a test that costs $450 at a university hospital. In addition to money, Amish and Mennonite people donate blood samples so that Morton can track genetic-based diseases. Within a few years, Morton and his colleagues hope to create a microchip that contains DNA information for all genetic diseases known to affect the Amish and Mennonites. Then, they will be able to tell which genetic conditions affect a child, before disability and death occur, by comparing a single drop of an infant's blood to the chip.


Bladder Problems in Women
Women are more likely to have problems with urine storage (urgency, frequency, discomfort, and/or incontinence) than men. While these problems are not life-threatening, they can be embarrassing and burdensome, and they can negatively affect a woman's quality of life. The May/June 2006 Journal of Midwifery & Women’s Health has an excellent article by Katharine K. O'Dell, CNM, and Lisa C. Labin, MD, on overactive bladder, urge incontinence, and stress incontinence. Overactive bladder refers to a sudden, painless urgency to void urine that is unrelated to infection or other pathology. Frequency (voiding at less than two-hour intervals) and nocturia (voiding more than two times at night) are also signs of an overactive bladder. When involuntary urine loss accompanies this feeling of urgency, it is called urge incontinence. Urinary urgency and frequency have been associated with thyroid abnormalities, diabetes, and estrogen depletion. Stress urinary incontinence is the involuntary loss of urine with exertion, such as coughing, sneezing, laughing, lifting, or exercise.

The article includes several treatments for overactive bladder and urge incontinence. Using a voiding diary to keep track of consumed liquids and a schedule to help retrain the bladder improves symptoms in at least 50% of women, according to a Cochrane evidence review. Bladder control can be affected by drinking too much, too little, and/or by certain foods or drinks that irritate the bladder. O'Dell and Labin recommend drinking six to eight cups of liquid evenly spaced throughout the day. They refer readers to the Interstitial Cystitis Association website (www.ichelp.org) for information about foods and drinks that irritate the bladder. Retraining the bladder involves regular, timed voids, gradually increased by 15 to 30-minute increments, to teach the bladder to hold increasing amounts of urine. Herbalist Kathleen Maier suggests beginning with a scheduled void every 60-90 minutes, then gradually lengthening the time between voids until reaching every four hours. O'Dell and Labin emphasize that women need to understand that retraining takes time so that they do not become discouraged.

The authors offer some strategies for dealing with sudden urges to urinate. Self-distraction, such as counting backward from 100 by sevens or thinking about something else, and self-talk (e.g., “Calm down. I can wait.”) may help a woman defer voiding until the urgency has passed and/or her scheduled time to void occurs. Also, relaxing and breathing while squeezing the pelvic muscles five times may stimulate reflex bladder relaxation. Pelvic muscle exercises can also help women with overactive bladder and/or urge incontinence. The authors say, “One regimen involves a goal of ten pelvic muscle contractions, held for five seconds, pulsed for five seconds, and followed by full perineal rest for 20 seconds between contractions.” Pharmaceuticals that target muscarinic cholinergic receptors of the parasympathetic nervous system...
can be prescribed for women who do not respond to these measures. However, the authors note, “Medication alone is not enough: in one study, only 18% of patients continued bladder medication for more than six months.” These drugs have several common side effects, including dry mouth, constipation, digestive upset, tachycardia, blurred vision, headache, sleep disturbances, and cognitive effects.

Stress incontinence occurs when pelvic floor muscles that support the urethra or the urethra itself are not strong enough to counteract pressure from the abdomen and bladder. For those with weak pelvic floor muscles, exercising the muscles using voluntary contractions is an effective way to decrease stress incontinence. Losing excess weight may also be helpful.

Both urge and stress incontinence improved by up to 60% in overweight women who lost five percent to 15% of their weight, according to a study by L.L. Subak and colleagues (J Urol. 2005;174:190-5). Intravaginal support devices, such as tampons and vaginal pessaries, provide support for the urethra and decrease stress incontinence. A urethral insert, such as Femsoft, is another option. Women using any of these inserts must watch for signs of irritation and infection that may occur with their use. Oral estrogen has no effect on stress urinary incontinence. One pharmaceutical may provide relief for stress incontinence: duloxetine (Cymbalta), a serotonin and norepinephrine reuptake inhibitor that has already been approved for use in the treatment of depression and diabetic neuropathic pain. Duloxetine reduced stress incontinence episodes by 50%, compared to a 27% reduction in the placebo group. However, side effects led 24% of the duloxetine group to stop taking the medication (compared to four percent in the placebo group).

Maier K. “Menopause Naturally.” (Lecture at SE Women’s Herbal Conference, Black Mountain, NC; September 2005).

Cesarean Deliveries

“Can a 29% cesarean delivery rate possibly be justified?” asks Robert Resnik, MD, in his editorial for Obstetrics & Gynecology (April 2006). The number of cesarean deliveries has increased from 5.5% of US births in 1970 to 29.1% in 2004, according to the National Center for Health Statistics. Although a cesarean can be life-saving, this high percentage of cesarean deliveries is puzzling, given that vaginal delivery usually requires less medical intervention, has a faster recovery rate, and is associated with better maternal-child bonding. Resnik attributes the rise to the use of electronic fetal heart rate monitoring (EFM), which started in the 1960s, and to the increase in malpractice lawsuits shortly thereafter.

At its onset, EFM was promoted as a way to prevent cerebral palsy and decrease the risk of intrapartum fetal death (a rare event). Cerebral palsy was primarily attributed to intrapartum asphyxia (lack of oxygen during labor and delivery); but doctors have since learned that birth asphyxia in full-term babies accounts for only six to seven percent of the children born with cerebral palsy. Resnik says, “...although most labors are followed with EFM, there has been no reduction in the incidence of cerebral palsy over the last three decades.” A Cochrane review of 13 randomized clinical studies found that concerns about abnormal fetal heart rate patterns, shown by EFM, led to a 40% increase in the cesarean delivery rate. However, use of EFM did not result in fewer cases of cerebral palsy, fewer admissions to neonatal intensive care, or fewer perinatal deaths.

The “zero-tolerance legal environment and expectation for a perfect outcome every time” have encouraged some obstetricians to turn to cesareans at the least sign of trouble. Links between vaginal deliveries and stress urinary incontinence and uterine and vaginal prolapse are other justifications for cesarean deliveries – although several factors other than vaginal deliveries contribute to pelvic floor dysfunction. Scheduling convenience and some mothers’ mistaken belief that cesareans are less painful also have a part in cesarean’s popularity.

Cesarean deliveries have several complications of their own, some of which are just beginning to be understood. Like other major surgeries, cesarean delivery has the risk of infection and hemorrhage. “Massive hemorrhage requiring transfusion occurs in five percent to six percent of cesarean deliveries,” Dr. Resnik writes. “Furthermore, the prevalence of hysterectomy secondary to hemorrhage is ten times greater after cesarean delivery versus vaginal delivery.” In addition, women who have a cesarean have an increased risk of abruptio placenta, placenta previa, and placenta accreta. The more cesareans that a woman has, the higher the risk for placenta abnormalities in subsequent pregnancies. In abruptio placenta, the placenta separates from the uterine wall in a pregnancy of 20 weeks or later. It may also separate during labor and before delivery. This separation causes severe hemorrhaging that threatens the lives of mother and baby. Placenta previa refers to a placenta that implants abnormally so that it blocks the opening to the cervix. It can also cause hemorrhaging. Placenta previa is associated with placenta accreta, a condition in which the placenta invades the uterine muscle. Referring to the American College of Obstetricians and Gynecologists Evaluation of Cesarean Delivery (2000), Resnik states: “Patients without a uterine scar and placenta previa have a 4.5% risk of placenta accreta, but patients with a uterine scar and placenta previa have an estimated risk for accreta of 24% to 38%.” The incidence of placenta accreta was about one in 29,000 deliveries between 1960 and 1970. Now, the incidence of placenta accreta is one in 533 births, according to a 2005 analysis by University of Chicago researchers. Placenta accreta involves excessive blood loss and usually requires a hysterectomy. Resnik says,