editorial comments

Mental retardation and maternal smoking may be linked, according to a controlled study appearing in the April issue of *Pediatrics*. Between 1987 and 1989, researchers interviewed 621 mothers, 221 of whom had children with idiopathic mental retardation. All of the children were born between 1975 and 1976, and were 10 years of age at the time the data were collected, and they were living in the Atlanta, Ga, area.

Mothers who smoked during pregnancy were 75% more likely to give birth to a child with mental retardation than those women who did not smoke. Even when the investigators controlled for other risk factors, the incidence of mental retardation was not eliminated. Similarly, women who smoked at least 1 pack a day were more likely to have a mentally retarded child than women who did not smoke.

Despite these findings, the researchers caution that the exact relationship between idiopathic mental retardation and maternal smoking is not yet known. However, they hypothesize that smoking could "have a direct, toxic effect on the fetus; alter maternal nutriture during pregnancy; increase the likelihood of maternal complications of pregnancy, or produce fetal hypoxemia."

Morbidity and mortality related to myocardial infarction has begun to decline in the United States, thanks in part to the use of aspirin and other thrombolytic drugs.

Researchers in Minneapolis found that the risk of dying from myocardial infarction among men dropped 15% and 25% among women in 3 years. The patients had been hospitalized for coronary heart disease in 1990. The death rate was compared with that of patients who had been hospitalized in 1985 for the same condition.

Similarly, the number of patients who died within 4 weeks of their myocardial infarction dropped to 10% among men in 1990, compared with 13% in 1985, and 12% among women in 1990, compared with 15% in 1985.

The researchers credited the increased use of thrombolytic agents for the improvement in short-term survival in particular. Long-term survival, defined as 3 years, also improved. Mortality decreased from 27% to 21% among men and from 33% to 28% among women.

Complete results are published in the April 4 issue of *The New England Journal of Medicine*.

In discovering the gene that plays a role in Werner's syndrome—a rare form of accelerated aging—researchers hope that they are beginning to unlock the aging process as a whole and possibly some types of cancer.

Using positional cloning, scientists found that the predicted protein measures 1432 amino acids long. Although not an exact match, the sequence-of proteins resembles already identified DNA helicases.

Specifically, four mutations were identified. The researchers speculate that the damage done by these mutations may have some role in a metabolism defect, as well as in the development of some cancers associated with Werner's syndrome.

Before investigating any cancer link as well as whether normal persons may be carriers of the mutation, researchers must first determine if the identified protein does in fact code for a helicase related to Werner's syndrome, reports the April 12 issue of *Science* magazine.

Humans may have retained the ability to send and receive chemical messages (pheromones) via a tiny sensory pit located on both sides of the septum, according to researchers in California.

In an experiment, the results of which are scheduled to be published in the June issue of the *Journal of Steroid Biochemistry and Molecular Biology*, scientists led by David L. Berliner, MD, administered 1-second puffs of a synthetic version of a female pheromone to 20 men and 10 women. Levels of the luteinizing hormone and the follicular-stimulating hormone dropped in the male subjects only.

Besides showing that pheromones from one sex have an effect only on the opposite sex, the experiment indicated that the vomeronasal organ (VNO) does exist and is linked to the brain. The VNO has been the subject of debate, particularly regarding its existence. Although earlier research, conducted by surgeon Bruce W. Jafek, MD, at the University of Colorado, located the VNO in humans, other scientists question its existence.

Sensory scientist Charles Wysocki, with the Monell Chemical Senses Center in Philadelphia, notes that no VNO has been found among Old World nonhuman primates who share a common ancestry with humans. "You would wonder why [the VNO] should suddenly reappear in humans," he queries.

Dr Berliner counters that evidence of the existence of an active VNO in humans was also shown by earlier experiments in which wires were attached to the putative VNOs of subjects to measure the electrical impulses that occurred when puffs of skin extracts were directed at the VNO. No activity was found in the olfactory nerves; therefore, the VNO appeared to have no role in smell.

With his latest findings, Dr Berliner hopes that synthetic pheromones could be used in pharmaceutical agents as a means to control compulsive behaviors, such as eating disorders, as well as other disorders, such as premenstrual syndrome. ◆