medical sciences

Heart disease and soft water

Cardiovascular deaths have been statistically linked with exposure to soft rather than hard water. Drs. Margaret Crawford, M. J. Gardner and J. N. Morris of the London School of Hygiene and Tropical Medicine studied changes in death rates in large towns in England and Wales where softening or hardening of the water supply have changed during the past 30 years.

They found cardiovascular death rates generally declined in those towns where water had become harder, and the rates increased in those towns where water had become softer. Such a correlation could not be found for noncardiovascular deaths. Although the study did not consider factors known to relate to heart disease, such as cigarette smoking, exercise and diet, the London investigators assert "it is quite unlikely that changes in these factors should have occurred concurrently with changes in water hardness. . . ."

The researchers are now conducting clinical, biochemical and pathological studies to see how soft water might actually cause or contribute to heart disease, and subsequent death. Their work is reported in the Aug. 14 LANCET.

Steroids and male physical performance

For some time certain Olympic and professional athletes have taken steroids to build muscle size and strength. Yet aside from one clinical study suggesting steroids can enhance physical training, little is actually known about the effects of steroids on men's physical performance.

Dr. C. J. Eagan of Colorado State University decided to see how steroids affect physical performance in animals. His two rat experiments indeed showed that steroids can improve it. They also suggested steroids can increase tissue building in young rats, and reduce body fat in older rats past the tissue building stage.

He is now running 43 young male beagles along a treadmill path each day and measuring their performance. Only half the beagles are on steroids. If steroids affect these dogs in the same way they affected the rats, they will easily outdistance and outlast the beagles not given the hormones.

Dr. Eagan is also looking for possible harmful side effects from the steroids. He hopes his studies will provide a basis for either tightening or broadening their clinical use in men. Most physicians support the American Medical Association stand and refuse to prescribe steroids for muscle building. Some physicians are more permissive.

Battered child and low-birth weight

Physicians have suggested that abnormalities in a child may predispose parents to batter him.

Drs. Michael Klein and Leo Stern of the Montreal Children's Hospital examined records in their hospital to see if low-birth weight was associated with increased risk of battering.

They found 51 cases of battered child syndrome in 9 years of hospital records. Of the 51 infants, 12, or 23.5 percent, were low-birth-weight infants. As only 7 to 8 percent of infants born in Quebec are low in weight, the pediatricians conclude in the July AMERICAN JOURNAL OF DISEASES OF CHILDREN, that low-birth weight may well contribute to battering.

During the earliest, most critical days of their lives, infants low in weight are usually kept in hospital premature nurseries, away from their mothers. Such a situation, Drs. Klein and Stern believe, may well predispose mothers to feel estranged from, and hostile toward, their frail and sickly infants. They suggest that more hospitals bring mothers into the premature nursery to touch and handle their babies. Early entry of the mother, the doctors feel, should also give the hospital staff clues to her ability to care for her child.

Marijuana dependence

It is generally believed that marijuana does not lead to physical dependence. But two scientists at the Southern Research Institute in Birmingham, Ala., now report evidence that repeated exposure to the active ingredient of marijuana can result in physical dependence or addiction.

Six rhesus monkeys had THC, the principal active compound of the marijuana plant, available to them for injection at will through a self-administration apparatus. None of them, during a three-week period, liked the effects of the drug well enough to begin repeated self-administration. The drug was then given automatically, four times daily for one month, with periodic increases in dose. When injections were discontinued, all monkeys showed abstinence signs, including irritability, biting and licking fingers, pulling hair, tremors, shaking and hallucinations.

According to Dr. Sukru Kaymakcalan, one of the investigators, THC was the compound at work, not a breakdown product of THC. This conflicts with reports of some other investigators that THC must first be changed in form within the body to produce a high, or other physiological effects. THC, Dr. Kaymakcalan said, also acts as a pain-killer, confirming earlier beliefs, and THC combined with morphine relieves pain more effectively than when THC or morphine is given separately.

Ear piercing—more than an ouch

Ear piercing is much in vogue now, but its complications are often not foreseen by either the piercer or pierced, Drs. Thomas Cortese Jr. and Richard Dickey report in the August AMERICAN FAMILY PHYSICIAN.

They surveyed 73 college girls who had had their ears pierced, and found that more than half had experienced one or more local complications. The difficulties included skin allergy due to metals, inflammation, infection with drainage, crusting and cyst formation. These problems are widespread enough, Drs. Cortese and Dickey feel, to warn against indiscriminate ear piercing by inexperienced or unknowledgeable persons.

In addition to being more likely to perform piercing without complications, the physician is also more attuned to factors that would rule out ear piercing. They include metal sensitivity, immunological deficiency, anatomically deformed ear lobes, hemorrhage and medical conditions such as diabetes, rheumatic fever or congenital heart disease.