

## Television's hidden health messages

The inactivity and boredom that generally accompanies television viewing has obvious health implications. But another factor — television's subliminal message about health care and doctors — could have more serious impact, University of Pennsylvania researchers say in the Oct. 8 *NEW ENGLAND JOURNAL OF MEDICINE*.

Television characters eat, drink and talk about food an average of nine times per hour. They eat snacks almost as frequently as breakfast, lunch and dinner combined. The most prevalent beverages are alcoholic, and 36 percent of all major characters drink. On afternoon soap operas, alcohol-related episodes average six per hour. Despite this incessant eating and drinking, prime time characters are invariably healthy, sober and slim. Obesity, which afflicts 25 to 45 percent of the general population, affects only 4 percent of all television characters. Only 1 percent are portrayed as being alcoholic.

Television's world of action, danger and mayhem rarely results in pain, suffering or physical injury to main characters. Only 7 percent of all T.V. characters have medical problems that require treatment. Mysteriously, the health profession flourishes; the proportion of doctors and nurses to the general population is five times higher than in real life. Thus the typical viewer, who may wait weeks for an appointment, watches an average of 12 doctors and nurses each week on television. The male doctor is generally portrayed as a miraculous healer, symbolizing knowledge, authority and success. He has power over not only the patient's physical well-being, but his emotional and social well-being as well.

These embedded messages, because they glamorize both poor health care and the medical profession, contribute to a "live for today" attitude where the magic of medicine can cure all, the researchers say.

## Exercise and late menstruation

Onset of menstruation may be delayed by intense physical activity, according to the October *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*.

Of 38 Harvard University female runners and swimmers, the 18 pre-menarchal trained athletes began menstruation at an average of 15; in contrast, the 20 post-menarchal trained athletes began menstruation at an average age of 13. In the general population, most women reach menarche at 12.7 years. Each year of training before menarche appears to delay menstruation by about five months, report researchers from Harvard and several other institutions.

Although earlier studies showed that intense physical activity could delay menarche, they did not determine whether athletic training caused the delay — or whether late maturers were more likely to become athletes. This new research, because it compares athletes with each other and not just the general population, linked the beginning of training with the beginning of menstruation.

Intense physical activity before menarche was also found to contribute to irregular or nonexistent menstrual cycles. About 83 percent of pre-menarchal trained athletes had this problem, compared to only 40 percent of post-menarchal trained athletes.

Because the conversion of androgens to estrogens occurs in the peripheral fat, a low lean/fat ratio may be responsible for the delay or irregularity observed in the Harvard University athletes. Other variables, such as diet and stress, may also be involved.

Long-term deleterious effects appear unlikely, say the researchers. Long-range follow-up studies are needed to evaluate menstrual histories, reproductive histories and the life spans of athletic women.

OCTOBER 17, 1981

## Nuclear-fuel reprocessing ban lifted

"To correct present government deficiencies and to enable nuclear power to make its essential contribution," President Ronald Reagan announced last week a series of policy initiatives that he would begin instituting in the hope of revitalizing America's ailing nuclear industry (SN: 10/10/81, p. 228). Expected to prove most controversial is his lifting of an "indefinite" ban on the reprocessing of spent (used) nuclear fuel from commercial reactors, which Jimmy Carter had imposed four years ago.

Plutonium, produced by the fission process powering commercial nuclear reactors, is expected to be a primary fuel for breeder reactors. Plutonium is also used to make nuclear weapons. And it was his fear that terrorists might gain access to plutonium separated from spent fuel by reprocessing that prompted Carter to impose his ban on the reprocessing of reactor fuel.

Reagan said he would ask George Keyworth, his science adviser, to work with Energy Secretary James Edwards in studying the feasibility of having DOE procure plutonium for its breeder programs from commercial sources. Reprocessing might aid the nuclear industry by providing a market for the used fuel that has been accumulating. In addition, it might lower the cost of the federal breeder-reactor demonstration program, Reagan said, by offering the government a lower cost source of plutonium.

Among other proposed initiatives, Reagan has asked federal agencies to streamline nuclear regulations and licensing to cut up to eight years off the 10 to 14 years it now takes to get a new plant into operation. He also directed those agencies to push breeder development, including completion of the Clinch River Breeder Reactor project in Tennessee. Finally, he asked DOE to work with the industry and the state in resolving problems associated with developing high-level radioactive-waste disposal schemes.

## Birth rights

On the day of his adoption 34 years ago, Jim George was separated from his biological parents. Now, as he suffers from chronic myelocytic leukemia, they could save his life. He believes that if he could find them and convince them to donate bone marrow, he would be given a chance at survival that would be worth the trauma of stirring up old history.

Missouri's justice system disagrees. Unlike Kansas, Alabama, Mississippi and Pennsylvania, the state of Missouri bans the opening of birth records once adoption is complete. Only "compelling circumstances" warrant their opening, and so far, the courts have failed to find any. George's case was recently bounced from the Missouri Supreme Court back to the Kansas City juvenile court.

Physicians say that George's leukemia, characterized by an accumulation of white blood cells in the bone, spleen, liver and blood, is invariably fatal without marrow transplant from a relative. To the donor, the procedure carries no more risk than that of general anesthesia; to the recipient, there are risks of infection and rejection. Now, while the disease is in remission, is the best time to receive marrow. When the disease suddenly turns acute, transplant will no longer be an option.

"Many genetically linked problems just aren't apparent in teenage girls. And if they admitted to health problems, it would ruin the baby's adoptability," George told *SCIENCE NEWS*. Because he is only one of six million adopted persons and his leukemia one of 3,500 genetically transmitted diseases, George is convinced that he is not alone. Somewhere, he believes, others are seeking the answers that could speed diagnosis and lead to possible recovery.

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