

Behavior

## Gains and losses mostly single-digit

The fiscal year 1986 budget proposal is not bullish on social and behavioral research, but it does contain some individual funding increases.

The total budget for the Alcohol, Drug Abuse and Mental Health Administration is slated for a 4 percent cut from FY '85, to \$886 million. Research, however, would be largely spared. The President wants a 5 percent raise for drug abuse research, to \$68.5 million, and also nearly 5 percent more for alcohol-related research, to \$52.6 million. Mental health research would drop by 2 percent, to \$191 million. In a replay of an unsuccessful attempt last year, the administration wants to cut all funds for training mental health clinicians and operating mental health screening programs. St. Elizabeths Hospital, a federal mental institution in Washington, D.C., would receive \$42.4 million, a drop of about \$6 million, in a continuing effort to transfer responsibility for its financial survival to the District.

But at the National Science Foundation (NSF), support for social and economic sciences would jump 19 percent over FY '85, to \$34 million. The money is aimed

largely at promoting economics research to aid political decision-making. Cognitive science — particularly research on teaching and learning processes — and anthropological research would receive slight increases, to \$11 million and \$7.3 million respectively. As with the FY '85 budget, only 5 percent of the NSF total

would be directed toward social and behavioral work.

Cuts of about 7 percent are proposed for two institutes within the National Institutes of Health that fund behavioral research on aging and child health. Money for these projects will be divvied up after a final budget is approved. —B. Bower

Energy

## DOE: Defense up, civilian down

According to its secretary, Donald Hodel, the Department of Energy (DOE) is participating in "the government-wide goal of reducing the federal deficit." This means a proposed decrease in total authorization requested for the department from \$14.3 billion to \$12.5 billion, which translates to cuts for all activities except those related to defense needs. For example, DOE is asking for about 2 percent less for research and development (R&D) in fiscal year 1986 than in FY '85. However, within this budget, defense-related items would get an *increase* of \$140.6 million, while all others would take cuts.

Among U.S. government agencies, the DOE is the largest supporter of particle physics, nuclear physics and fusion or plasma physics. Particle physics would be cut from \$545.6 million to \$510.1 million. Part of the decrease, says Martha Hesse

Dolan, assistant secretary for administration, represents expensive items that are nearing completion such as the Tevatron II program at the Fermi National Accelerator laboratory. The proposed 1986 budget, she says, includes construction money for the Tevatron I program and the Stanford Linear Collider. It also includes R&D money for the Superconducting Super Collider. In addition, nuclear physics would take a cut of \$10 million. Magnetic fusion would be cut by \$47 million, and, Dolan says, DOE would continue to shift its emphasis toward long-term scientific goals and away from engineering problems. DOE programs in solar energy, fossil fuels and civilian reactor development would also suffer cuts. Defense production and support would increase by \$584 million, and weapons production would go up by \$338.4 million. —D. E. Thomsen

## Of berries and bison: Stone Age standards for modern diets

Reverting to old habits might not be such a bad idea, at least when they're the dietary habits of prehistoric ancestors. The ancient diets are "genetically what we are designed to eat, digest and metabolize," says S. Boyd Eaton, a physician at Emory University in Atlanta. He and anthropologist Melvin Konner suggest in the Jan. 31 *NEW ENGLAND JOURNAL OF MEDICINE* that veering from this nutritional genetic program might be why modern humans suffer from "diseases of civilization," while modern hunter-gatherers, who most closely resemble our Stone Age ancestors, do not. Other researchers, however, caution against assuming modern humans should follow ancient diets.

Physicians and nutritionists have become increasingly convinced that modern diets play a role in the development of cancer, hypertension, diabetes and heart disease. These "diseases of civilization" are among the top killers in Western society, but they are virtually unknown among the few surviving hunter-gatherer populations. For example, when diabetic Australian aborigines living near Melbourne returned to their hunter-gatherer lifestyle, their diabetic abnormalities improved greatly, according to an earlier study reported in the June 1984 *DIABETES*.

Eaton and Konner used nutrient

values for foods eaten by modern hunter-gatherers to estimate the daily nutrient intake of Paleolithic humans, who lived from the first manufacture of stone tools about 1.6 million years ago to shortly before the advent of agriculture 10,000 years ago. The researchers say the diets of these humans might provide standards for modern nutrition.

But the standards would have to be adapted to modern lifestyles. For instance, Paleolithic humans ate much more meat than nutritionists recommend today. Yet changing modern diets to include more meat could be disastrous because the wild game consumed by hunter-gatherers is much less fatty than the highly marbled cuts available in supermarkets today. Eaton suggests substituting fish and poultry for high-fat meats.

Paleolithic humans broke a fundamental rule of modern nutrition by consuming foods from only two food groups — meats and fruits/vegetables — rather than the traditional four. They ate cereal grains only rarely and dairy foods not at all. Yet because they ate lots of meat and a wide variety of vegetables, they consumed twice as much calcium and fiber and four times as much vitamin C as modern humans.

Stone Age diets also violated current cholesterol recommendations. The re-

port says the diets "must have greatly exceeded the U.S. Senate Select Committee's recommended cholesterol level." But their serum cholesterol levels were low, Eaton says, because they ate more polyunsaturated and less saturated fat.

Ancient humans ate only one-sixth the sodium in a typical American diet—only one-third the sodium recommended by nutritionists today. The dietary potassium-to-sodium ratio would have been about 16 to 1, the Emory researchers say, compared with today's recommended 1.7 to 1. A recent study suggested that high potassium intake might be worth copying as a protection against high blood pressure (SN: 1/26/85, p. 57).

Some researchers question the Emory study's findings. Anthropologist Alan Walker of Johns Hopkins University in Baltimore challenges the assumption that humans haven't had time to make genetic adaptations to dietary changes.

But both Walker and the Emory researchers say that human genes probably won't change to adapt to dietary changes implicated in diseases of civilization. "The diseases that kill us now kill us after child rearing," Eaton says, "so there's not much selective pressure to influence evolutionary change."

—D. D. Bennett