

Progress against adult leukemia

Although childhood leukemia cures are one of the few truly great success stories in modern cancer research, adult leukemia has continued to be one of the swiftest and most fatal of cancers. But even adult leukemia might be potentially curable, several recent research reports suggest.

Some adult leukemia patients treated with drugs have survived disease-free for five years, three separate groups of investigators reported at the 1979 national meeting of the American Society of Clinical Oncology. And now 14 adult leukemia patients have survived eight to 35 months after receiving drugs, radiation and bone marrow transplants, Karl G. Blume and colleagues at the City of Hope National Medical Center in Duarte, Calif., report in the May 8 *NEW ENGLAND JOURNAL OF MEDICINE*.

"Thus, over a brief period, treatment has moved from palliative to potentially curative . . .," Emil J. Freireich of the Anderson Hospital and Tumor Institute in Houston writes in an accompanying editorial.

Best way to quit smoking

Cigarette smokers who quit "cold turkey" are more successful in achieving abstinence than are smokers who reduce their cigarette consumption a bit at a time, report Saul M. Shiffman and Murray E. Jarvik of the University of California School of Medicine at Los Angeles in the spring *WORLD SMOKING AND HEALTH*, an international journal of the American Cancer Society.

Shiffman and Jarvik say that the effects of withdrawal present a "major barrier" to persons attempting to quit smoking, and furthermore that continued smoking at a reduced level merely prolongs the effects' duration. The researchers used data obtained from cigarette withdrawal symptom questionnaires given four times daily for two weeks to 40 persons divided into groups of those who had quit smoking abruptly and those who were trying to quit gradually. Upon comparing the responses of the two groups the researchers found that while initial levels of symptom severity were similar, the "cold turkey" smokers experienced a notable decrease in withdrawal symptoms not shown by the other group.

Fasting counters rheumatoid arthritis

Fasting can provide temporary relief from rheumatoid arthritis, say rheumatologists at Linköping, Sweden, Regional Hospital.

Fifteen rheumatoid arthritis patients fasted for seven to 10 days while 10 rheumatoid patients served as controls. All the patients were observed during the diet period and for nine weeks thereafter. While dieting, the study subjects experienced a significant reduction in pain, joint swelling and joint stiffness compared with the control subjects, but a few days after giving up dieting, their disease symptoms returned. The results appear in a recent issue of the medical journal *LÄKARTIDNINGEN*.

CT scans and CO poisoning

Computerized tomography scans, which have revolutionized medical diagnosis, can now perform another impressive feat — determining whether carbon monoxide poisoning has left lasting brain damage. So report Yusuke Sawada and his colleagues of Osaka University Hospital in the April 12 *LANCET*.

Sawada and his colleagues performed CT scans on the brains of 21 acute carbon monoxide poisoning patients. The scans revealed abnormalities in 11 of the patients; the outcome for all but one of them was poor. The scans, however, revealed none in the other 10, for whom the outcome was good.

Treaty for high-price-tag research

Working out plans for a comet rendezvous and studying the Origin of Plasmas in Earth's Neighborhood (*OPEN*) are just two of more than 40 projects in which Japanese and American scientists plan to cooperate under an umbrella agreement signed May 1 in Washington. This treaty spells out expensive, priority non-energy research to be conducted jointly or complementarily.

In contrast to many similar-sounding bilateral agreements, the goal of this treaty is to develop a much closer working relationship between the global powers than a mere sharing of data or personnel. Described as "joint venturing," the aim is less redundancy and better coordination through dual development of individual projects. For example, in the development of space probes (an area of high interest to the Japanese), some of the equipment used or some of the scientific payloads carried aboard U.S. launch vehicles may be Japanese. And in research on chemical toxicity, experiment design might be standardized so that costly and time-consuming research performed in one country need not be repeated by the other.

Nine space-related projects have been agreed upon; another eight are being discussed. Research on recombinant DNA, interferon and other antiviral materials, alcoholism, pest control and neutron scattering are among other proposed ventures. And it is expected that when officials of the Environmental Protection Agency and its Japanese equivalent meet in October, joint programs they outline will include testing of toxic compounds, resource-conservation technology, detoxification and disposal of hazardous materials, nitrogen-oxide control and research into effects of carbon dioxide and diesel particulates.

What's wrong with nuclear power?

What exactly does "the public" object to about nuclear power? Don't expect a simple answer. More than 100 "specific" issues were identified in a study headed by Louis H. Mayo at George Washington University in Washington. Cataloged into 13 categories, these issues represent four general types of concern: operating problems (such as catastrophic accidents and releases of radiation), improper use of nuclear facilities and fuel (such as to make bombs), decisionmaking (regarding power costs and managerial competence) and long-range effects of decisions made regarding nuclear power.

The study's aim was to analyze attitudinal barriers to alternative nuclear-power systems — those that might serve as substitutes or technological advances over the light-water reactors in operation. Seven alternatives were looked at: modified light-water reactors, heavy-water reactors, light-water breeder, high-temperature gas-cooled reactors and three forms of liquid-metal fast-breeder reactors. The report found that "no one of the [alternate] nuclear systems appears to offer a clear superiority in . . . alleviating substantially more concerns than it exacerbates." What's more, the report said, "potential difficulties in gaining public acceptance of nuclear power will likely increase with the introduction of systems of greater complexity, i.e. breeders, recycling, and associated transportation and safeguards activities." The *LMBFR* faces the stiffest challenge.

With smallpox gone, what's next?

Smallpox vaccinations are a thing of the past, and the World Health Organization says they will no longer be required. WHO now will focus on other childhood killers and cripplers: water-borne diarrheas, diphtheria, whooping cough, tetanus, measles, polio and tuberculosis. The aim of its new campaign is to see that by 1990 every child is vaccinated against the latter six in its first year of life. The cost? Only \$3 per child.