

Getting a read on literacy

The level of reading skill required to hold a job and survive economically is rising rapidly. Demand for highly literate workers in the United States is outpacing the supply. Much of the responsibility for boosting literacy levels, as well as much of the blame for inadequate levels in the first place, is being placed on public schools.

But the current atmosphere of alarm over illiteracy and inadequate schooling "may be excessive," writes psychologist George A. Miller of Princeton (N.J.) University in the Sept. 9 SCIENCE. Most students with literacy problems drop out as soon as possible, he says; the schools are indeed unable to provide the special assistance they need. "For the vast majority of students, however, the schools are not failing," he contends.

This is not to deny what Miller calls the growing "semiliterate underclass," millions of mostly poor individuals with limited reading skills. Many cannot follow written instructions, take a driver's license test or answer a help-wanted advertisement. Work, when they find it, is usually temporary and poorly paid. To make matters worse, they are unable to prepare their children to succeed in school.

Research by educators and psychologists has laid a foundation for new teaching methods to counteract semiliteracy, Miller holds. Studies show reading comprehension involves more than combining letters, words and sentences into stories. Skilled readers use an array of prior knowledge to comprehend what they read, and employ various strategies to evaluate written text. Not surprisingly, no one achieves high levels of reading comprehension without many years of reading.

There are indications that some remedial programs, such as one in which seventh graders gradually learn to ask and answer questions about sections of a text, significantly improve reading comprehension. Yet it may be unrealistic to expect semiliterate adults to scale the heights of literacy, Miller says. He suggests teaching basic reading skills in the course of job-training programs. This involves "reading-to-do" — looking up information that is applied to a job task and can then be forgotten. As tasks are repeated, the reading becomes easier. Reading-to-do has proved successful in technical training courses run by branches of the military, Miller notes.

"Educators may deplore the narrowness of such training," he says, "but literacy develops by reading, studying and learning. It can develop by reading task-specific materials as well as by reading history, literature and social studies."

The AIDS delusion

Here's a new twist to the controversy over AIDS testing. A small but increasing number of people with psychiatric disorders are demanding to be tested for the AIDS virus as a result of delusions that they have contracted the deadly disease. In three cases described in the September AMERICAN JOURNAL OF PSYCHIATRY, this erroneous belief that AIDS had been contracted disappeared with successful treatment of the person's severe depression or manic depression.

The delusion of having AIDS often revolves around guilt over a sexual indiscretion, such as an extramarital affair years earlier, report psychiatrists Steven L. Mahorney and Jesse O. Cavenar Jr. of the Veterans Administration Medical Center in Durham, N.C. But the patients have no symptoms of AIDS, are not intravenous drug users and report no homosexual experiences. If testing for the AIDS virus is nonetheless conducted, the researchers note, these patients usually find a way to explain away negative results and hang on to their delusion until the underlying psychiatric disorder is addressed.

As AIDS becomes a fixture in the media and public consciousness, it may increasingly affect the delusions of people with psychiatric disorders, the investigators conclude.

Genetic basis of colon cancer

Two new studies provide the clearest picture yet of the specific chromosomal changes leading to colorectal cancer — cancer of the lower portion of the gastrointestinal tract — and the important role heredity plays in determining an individual's likelihood of getting the disease.

The two studies, described in the Sept. 1 NEW ENGLAND JOURNAL OF MEDICINE, promise no immediate improvement in diagnosis or treatment. They do suggest, however, that genetic analysis may someday identify those individuals likely to develop the disease. For now, the researchers say, the strong hereditary link confirms that first-degree relatives of patients with colorectal cancer should be especially diligent about getting screened for early evidence of the disease.

The National Cancer Institute recommends that even those individuals without hereditary risk factors should have rectal examinations annually after age 40 and colonoscopic visual exams every three years after age 50. Colorectal cancer claims the lives of about half of those afflicted.

Bert Vogelstein of the Johns Hopkins School of Medicine in Baltimore and his colleagues looked for four specific genetic alterations in 172 specimens of colorectal tumors that had progressed to various stages. Their analysis confirmed previous findings that about half of the more advanced tumors had mutated versions of the so-called *ras* gene — a gene that has often been associated with tumor formation. Other chromosomal changes were associated with intermediate stages of tumor formation. Their research suggests that colorectal cancer is often the result of a series of mutations that both trigger the *ras* gene and cripple one or more genes that normally confer cancer protection.

In many cases, however, no *ras* mutations were found, indicating that researchers have yet to find some important pieces of the cancer's genetic puzzle. Previous research has shown that environmental factors — in particular a high-fat, low-fiber diet — can influence colorectal carcinogenesis.

In the second study, Lisa A. Cannon-Albright and her colleagues at the University of Utah Medical Center in Salt Lake City did pedigree studies of 670 individuals who had at least one relative with a precancerous polyp or colonic cancer. They conclude that an inherited susceptibility to precancerous polyps and colorectal cancer is responsible for the majority of colonic cancers seen clinically. They predict that ongoing genetic and lifestyle studies will allow researchers to identify environmental and dietary factors that may help trigger cancer formation in susceptible individuals.

Marijuana, cranberries: Gaining respect

Two marginal members of the clinical pharmacopoeia received at least tentative support last week. The chief administrative law judge of the Drug Enforcement Administration (DEA) recommended the DEA reclassify marijuana to a less restrictive status that would make it available by prescription to patients with multiple sclerosis or chemotherapy-induced nausea. He called the drug "one of the safest therapeutically active substances known to man."

The DEA is expected to reject the nonbinding recommendation. A rejection would likely be appealed by groups supporting pot's reclassification (SN: 2/20/88, p.122).

And in a review of the scientific literature, appearing in the Sept. 9 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, two physicians conclude there is evidence — albeit somewhat tenuous — for the usefulness of drinking cranberry juice in preventing and treating urinary tract infections. It is unclear, however, whether the popular home remedy works by acidifying the urine, and how much juice a patient must consume to gain its therapeutic benefits.