

DC On-Line

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Research for Older Brains

Research at the Thomas Jefferson University in Philadelphia suggests that mental stimulation at a young age may help prevent brain deterioration later in life. A study of rats showed that those so stimulated lost 45 percent fewer brain cells to the aging processes. As babies, these rats were given rubber balls, running wheels and tunnels for play. The researchers believe this led to an increased capacity for growth and repair of cerebral nervous tissue.¹

1. *Nature*, April 1999.

Contaminated Beef

Scientists from the National Institute of Neurological Diseases and Stroke in Bethesda, Maryland, report that bovine spongiform encephalopathy (BSE or Mad Cow Disease) can indeed be spread to humans and other primates by ingestion of contaminated beef.² They have shown that mutated proteins move from the digestive system to the lymphatics, then to the brain and spinal cord. The researchers speculate that an early test might be developed that checks the tonsils for traces of the infective prions, though no medical treatment is available even if the diagnosis is made.

2. Proceedings of the National Academy of Sciences, April 1999.

New Test for Genetically Modified Foods

A British company has announced the development of a new test for genetic alterations of food ingredients.³ The test identifies DNA sequences unique to the genetically modified substances and is reported to be 100 times more sensitive than current commercially available products.

The test was developed in response to new regulations in Europe that require listing of all genetically engineered ingredients in restaurant foods. There is little hard evidence of any impact of such foods on a person's health, although one researcher reports an impact of genetically modified potatoes on the immune system of rats.⁴

3. *New Scientist*, March 24, 1999.

4. Dr. Arpad Pusztai of the Rowett Research Institute in Scotland.

Veterans Hospital Research Suspended

More than 1,000 research studies at the United States' largest veterans' hospital⁵ were suspended in March by the federal government. Regulators say that the hospital ignored five years of warnings about their research practices. Violations were related largely to patient protection procedures such as informed consent matters, having a non-medical person sit on the review board to represent the patients' interests, and procedures to guarantee that problems posing a risk to patients are reported promptly to the review board.⁶ The hospital and its clinics serve an area with more than one million veterans.

5. *West Los Angeles VA Healthcare Center.*

6. *Associated Press, March 24, 1999.*

Natural Vitamin E

A U.S. research information service⁷ recently reported that, at least in the case of vitamin E, natural sources are superior to synthetic. According to this report, the bioavailability of natural forms of vitamin E is about twice that of synthetic. Apparently, the natural form is retained significantly longer in body tissues after absorption.⁸

7. Veris research summary, citing studies from East Tennessee State University and Oregon State University.

8. OTC news service, April 9, 1999.

Birth Defects from Solvents

A Canadian study of 250 women concludes that common solvents found in a wide variety of work environments can lead to birth defects in humans. Half of the women had been working with industrial solvents during the first three months of their pregnancy. Thirteen of these bore children with defects such as deafness, clubfoot, neural tube defects and other major malformations. The concentration of the chemicals in many of these environments was strong enough to cause symptoms such as eye irritation, headaches or respiratory problems. Among the control group exposed to only agents not generally considered toxic, only one baby had a birth defect.⁹

9. *JAMA*, March 24, 1999.

Exertional TV

An obesity researcher from New York¹⁰ has developed a way to use television to encourage couch potatoes to exercise. His invention is called the "TVcycle," and is a stationary exercise bike that is connected to the television in such a way as to allow the television to remain on only while someone is pedaling. In a small study of youngsters 8 to 12 years old, the apparatus led to an average viewing time of one hour per week, compared to a control group that spent 20 hours.¹¹ The pedalers apparently used much of the remaining 19 hours on outdoor activities, as they lost two percent of their body fat over the 10-week study.

The TVcycles are presently waiting to be used in a larger study; none are for sale.

10. David Allison of St. Luke's-Roosevelt Hospital.

11. Associated Press, April 18, 1999.

Zinc for Infants

A study done on 1,250 low birth weight babies in India yields some very favorable statistics on zinc supplementation. Researchers supplemented their diets with one of the following: zinc alone; zinc with other minerals and vitamins; vitamins and minerals but no zinc; vitamins alone; or a placebo.

Infants who received any of the combinations including zinc were one-third less likely to die.¹² The results are attributed to immune system activity.

An unrelated meta-analysis of 17 other studies by researchers from Johns Hopkins University suggests that zinc can reduce infant diarrhea by 25 percent and pneumonia by 41 percent.

12. Reuter, April 18, 1999, reporting on a presentation to the Federation of American Experimental Biology Scientists in Washington.

Antibiotic Restricted

In an unusual move, government regulators recently ordered the popular antibiotic Trovan to be removed from general pharmacies and to be made available only in hospitals and nursing homes for use in emergencies. This move was prompted by the fact that since February of 1998, 140 patients have suffered liver damage from the drug. Six died; three others survived after a liver transplant. The drug was originally marketed for everything from minor skin infections to severe hospital-acquired infections.¹³ The FDA says the liver problems were not apparent during pre-market testing of the drug.

13. Associated Press, June 10, 1999.

Alternative Therapies for Cancer

According to a study from Canada's top cancer center,¹⁴ more than 20 percent of patients with head and neck cancer seek alternative therapies. Patients falling into this category tended to be more affluent and better educated. Eighteen percent felt that the alternative therapies helped to fight the cancer, and 24 percent reported additional relief from alternatives after undergoing conventional cancer treatment. About half of those trying alternative therapies chose herbs; ten percent tried some type of manual healing, such as chiropractic or massage.¹⁵

One of the findings surprised the researchers: patients believed that their traditional medical doctors knew more about alternative therapies than those professionals who actually rendered them (including homeopaths and chiropractors), though only eight percent were told about the alternative by their MD. According to one of the lead researchers, "I would hazard a guess that most traditional care givers, including me, are biased and the least knowledgeable about

alternative therapies."¹⁶

14. Princess Margaret Hospital, Toronto. United Press, May 13, 1999.

15. AMA's *Archives of Otolaryngology*, May 1999.

16. United Press, May 13, 1999.

Work to Quit Smoking

A new study from Miriam Hospital in Providence, Rhode Island reports that exercise may be a helpful adjunct to people trying to quit smoking. Researchers followed 281 females in a 12-week "stop smoking" program. About half the women participated in a supervised, vigorous workout program three days each week. The exercisers were nearly twice as successful in kicking the habit as those that did not. This was still the case when a followup was done a year later. More good news: women from the exercise group gained only about half as much weight after quitting.¹⁷

17. *Archives of Internal Medicine*, June 13, 1999.

Anti-Inflammatory Remarks

British researchers are starting to express reservations about the new "super-aspirin" COX-2 inhibitors.¹⁸ They suggest that these, as well as other anti-inflammatory drugs, may actually worsen conditions over the long haul. Rat studies show that although they relieve initial symptoms and inflammation, no benefit is seen in the underlying disease process in conditions for which they are often used, such as arthritis. In testing the drugs on rats for their effect on pleurisy, their experiments suggested that these drugs led to an unusually large increase in inflammation in a later stage of the disease process.

18. *Nature*, June 1999.

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