

## DC On Line (Chiropractic Research)

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### Marijuana and Fertility

Researchers from the University of Buffalo report that cannabinoids such as THC (found in marijuana) may decrease male fertility. They have found that there are receptors on sperm that bind with these compounds. This, they say, can have three effects: interfering with acrosome reactions, which will inhibit egg penetration; causing disrupted sperm swimming patterns; and inhibiting binding to the egg.<sup>1</sup>

1. Reported to the annual meeting of the American Society of Cell Biology in San Francisco, by Herbert Schuel, professor of anatomy and cell biology.

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### Leaky Brains

Magnetic resonance imaging studies of patients contracting cerebral edema during mountain climbing or skiing expeditions suggest that altitude sickness is caused by capillary leakage into the brain. A doctor in Grand Junction, Colorado<sup>2</sup> reports that fluid infusion into the corpus callosum is visible on MRI on these patients. Previously, it was thought that the altitude sickness was caused by swelling of the brain cells. This study indicates that blood plasma exerts pressure on the brain stem that leads to a variety of neurological symptoms.<sup>3</sup>

2. Dr. Peter Hackett of St. Mary's Hospital.

3. *JAMA*, December 9, 1998.

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### Small Brain Aneurysms

Research at the Mayo Clinic in Rochester reveals that for small brain aneurysms, it is probably better to leave them alone than to risk surgical intervention. Aneurysms measuring about one-third of an inch or less showed very little inclination to ever burst in patients with no prior history of other aneurysm ruptures. Extrapolating from results of the nearly 2,700 patients studied, researchers estimate the risk of rupture at about 5/100ths of a percent. This is considerably lower than surgery's injury or stroke risk of 10 percent.<sup>4</sup> About five percent of the population will develop a detectable intracranial aneurysm.

4. *NEJM*, December 10, 1998.

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### Cool the Brain for Stroke

Two studies published in the American Heart Association's journal *Stroke*<sup>5</sup> suggest that lowering a patient's temperature immediately after a stroke greatly improves their survival chances. One study found that the survival rate increased by nearly 200 percent (out of 25 victims, 14 survived instead of the typical number of five) when cooled immediately after a severe stroke. Another study found that death rates increased greatly if a patient had a fever within 72 hours of the stroke. Researchers theorize that cooling the brain reduces swelling and lowers oxygen requirements of cells with compromised circulation.

5. December, 1998.

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#### HIV Antibodies in Urine but Not Blood

A new study of people at low risk of HIV exposure has found that even when there is no sign of the infection in their blood, antibodies can appear in many patients' urine. They found that one in every 1,000 persons with no blood infection had antibodies in their urine. The antibody they found is produced by the mucous membranes, leading researchers to speculate that although the patient had been exposed, the body had fought off the infection before it reached the bloodstream.<sup>6</sup>

6. Reuter, December 3, 1998, reporting on testing done by ClinicalReference Laboratory (CRL) in Washington, D.C.

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#### Woman's Waist Predicts Heart Disease

Researchers at Brigham and Women's Hospital in Boston found a correlation between the size of a woman's waist and how likely she is to suffer from heart disease. In this eight-year study of over 44,000 women 40-65 years old, researchers correlated episodes of heart attacks and other cardiac problems to waist and hip sizes. While weight is an important risk factor for heart problems, this study's conclusions applied also to women who may not be considered overweight. Compared to women with a waist of 28 inches or less, those measuring 30 inches had twice the risk. At 38 inches or more, the risk was three times higher.<sup>7</sup>

7. *JAMA*, December 2, 1998.

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#### Brain Reprogramming

Radiology researchers using MRI studies report that areas of the brain generally mapped for specific functions such as sight or hearing can change their programming if those senses are absent. They found, for example, that an area normally used for sight shows an increased blood flow when a blind person "reads" Braille. A person deaf since birth uses the auditory portions of the brain while lip-reading.<sup>8</sup> Recent studies suggest that such adaptations are possible not only at a very young age, but also after injuries as an adult.<sup>9</sup>

8. Reported to the annual meeting of the Radiological Society of North America, November 30, 1998, by Dr. Dean Shibata of the University of Rochester Medical Center.

9. Reported by Victoria Morgan of Vanderbilt University Medical Center, Nashville.

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### 1,300 Vaccine Injuries

Ten years ago, to lighten the financial burden of companies that manufacture vaccines, the U.S. government instituted a vaccine injury compensation program. By law, injured parties must apply to this fund before attempting to sue the vaccine maker. To date, about 1,300 families have been awarded compensation. Nearly 2,000 more have applied, but winning is no easy task -- a large legal team (including 100 governmental expert witnesses) working for the program creates a substantial legal challenge to the ordinary citizen trying to prove his or her case. The fund spends \$9.5 million a year on administrative costs, mostly for fees to its 17 lawyers.

Part of the reason these cases are hard to win for an injured family is that the burden of proof rests on them. Vaccine injuries have not been well researched, so it is extremely difficult for parents to find expert witnesses to argue that the vaccine was definitely responsible. Even if they win, the average 3 1/2 year litigation costs (many cases run more than seven years) may not offset the award, which averages a little over half a million dollars. Death settlements are capped at \$250,000. The cases are decided by special trial in the U.S. Court of Federal Claims.<sup>10</sup>

10. Associated Press, November 29, 1998.

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### Less Meat, Less Weight

Nutritionists from Cornell University report that cutting back on meat does indeed seem to help promote weight loss -- even if your total caloric intake increases. Researchers fed laboratory rats a higher calorie diet that restricted protein to five to 20 percent of calories. The rats consuming less protein gained less weight during the course of the study. This was probably because of the fact that the protein-restricted rats exhibited a faster metabolism and a higher overall energy level<sup>11</sup>.

11. *American Journal of clinical Nutrition*, December, 1998.

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### Hospital Hygiene

A study of hospital workers in Geneva finds that simple precautions designed to help prevent hospital-acquired infections are not being taken nearly as often as one might expect. Researchers spent two weeks monitoring workers on all shifts to find that they followed general hand-washing guidelines just under half the time, on average.

Nurses complied most often, 52 percent of the time, followed by nursing assistants and other health-care workers. But doctors were by far the worst offenders, scrubbing up only 30 percent of the time between patients. The statistics get worse when you look where the really sick people are: the intensive care unit. Here, the average overall compliance rate was only 36 percent.<sup>12</sup> In the United States, 90,000 people die each year from infections they get in hospitals.

12. American College of Physicians' *Annals of Internal Medicine*, January 20, 1999.

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## Environmental Autism

The National Center for Environmental Health (part of the CDC) is investigating a cluster of autism cases in Brick Township 50 miles north of Atlantic City, New Jersey. Among the 6,000 children under 11 years old, 40 have been diagnosed as autistic -- more than three times the national average. Many experts believe the syndrome is caused by some kind of toxic exposure that occurs during pregnancy. Residents of nearby Toms River have recently hired a lawyer to pursue legal action relating to a high incidence of childhood leukemia in their town. Other pointers to environmental causes of have also arisen: one California study found a 400 percent increase in autism over a recent 12-year period.<sup>13</sup>

13. Associated Press, January 18, 1999: "Autism Cluster."

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## Emergency Room Experiments

A new blood substitute was tested recently in a nationwide study under a 1996 FDA regulation change that waived inform consent for emergency room research. The product manufacturer halted the study after data on the first 100 trauma patients was reviewed when it was discovered that 24 of 52 critically injured patients had died. This rate was higher than expected. The patients were not individually told that they were involved in an experiment, though a generalized community notification (as press releases, for example) would have occurred.<sup>14</sup>

14. Associated Press, January 17, 1999.

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