

## DC On-Line (Chiropractic Research)

Brian Sutton, DC

### Infant Neglect and the Brain Drain

Another study<sup>1</sup> of the impact of maternal contact during infancy suggests one reason infant neglect impedes child development: brain cells seem to degenerate and die more quickly. While a certain number of brain cells are eliminated as neural circuits are established during growth, these researchers found that the cell death rate doubled in animals that lacked stimulation. The effect was especially evident in the hippocampus area of the brain. Further study is underway to examine the effects, if any, on the ultimate adult physical and social development.

1. Presented at the annual meeting of the Society for Neuroscience in New Orleans, October 27, 1997 by Mark Smith. The research was done at the National Institute of Mental Health.

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### Vitamin A to Fight Leukemia

Researchers from the Northwestern University Medical School report that retinoic acid (a derivative of vitamin A) increased leukemia survival by 20 percent in their latest study. The study compared chemotherapy patients, some of which received all-trans-retinal acid in addition to the standard treatment. All patients suffered from the promyelocytic form of leukemia. They note that instead of killing the cancer cells (the goal of the chemotherapy), vitamin A seems to make the cells "grow up and behave normally" instead of remaining in the immature, fast-growth stage typical of such cancers.<sup>2</sup>

2. *New England Journal of Medicine*, October 9, 1997.

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### Church Immunity

A Duke University researcher<sup>3</sup> says go to church for your health. His study found indications that the immune systems of church attendees are in better shape than their wayward neighbors. The research has looked at 1,700 older North Carolina adults since 1986. One parameter he measured that showed a significant difference was the level of interleukin-6, which is linked to a number of age-related diseases. There have been other scattered studies that relate religious activity (such as regular church attendance) to physiological improvements such as increased fertility.

3. Dr. Harold Koenig, reported by United Press, October 24, 1997; the study was published October's *International Journal of Psychiatry in Medicine*.

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## Antibiotic Resistance: the Eyes Have It

Doctors speaking at the American Academy of Ophthalmology<sup>4</sup> report that while antibiotic therapy has greatly reduced the incidence of optical ulcerations resulting from Pseudomonas bacteria, staph and strep infections are rising rapidly. Over a six year period such infections have increased by 50 percent. Fluoroquinolones are believed to be the antibiotic responsible for this problem, which is likely to get much worse for the following reason: Pseudomonas, staph, and strep infections can appear very similar and are difficult to diagnose differentially. Ophthalmologists, they say, will undoubtedly be diagnosing an increasing number of staph and strep infections as the more typical Pseudomonas type.

4. At the AAO meeting in San Francisco in October 1997.

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## HMO Moms

A study at the University of Washington in Seattle<sup>5</sup> has examined the outcomes of 8,000 low-risk pregnancies, comparing those covered by private insurance companies to health maintenance organizations. The researchers found that HMO patients were more likely to have an ultrasound screening, which they judged a plus. Babies of this group were also less likely to have a low birth weight. However, HMO newborns were 80 percent more likely to show signs of distress and had more medical complications. C-section rates were similar. Researchers are unsure why problems were so prevalent in the HMO group.

5. Reported at an AMA conference in Washington, DC, October 20, 1997, by Dr. Mary Aitken, now of the University of Arkansas for Medical Sciences in Little Rock.

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## Egg Killing Drugs

Scientists from Harvard's Massachusetts General Hospital say that they have finally figured out why a common cancer drug (doxorubicin) kills a woman's egg cells. While monitoring the process in mice, they discovered a set of metabolic pathways leads to apoptosis (cell suicide).

The hope is to some day find a way to intervene in one of three critical steps, either by using more drugs or some kind of gene therapy, to counteract this problem. The researchers admit that even if it were possible, it would happen in the distant future.<sup>6</sup>

6. Nature Medicine, November 1997.

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## Iron Chelators Fight Iatrogenic Deafness

Researchers at the University of Michigan think they might soon develop a drug to combat the

deafness and hearing loss side effects of antibiotic prescriptions. Physicians have long known that certain antibiotics -- including streptomycin, gentamicin, and neomycin -- damage the inner ear hearing apparatus as well as the kidney. This group found that, at least in guinea pigs, iron chelators seem to offer some protection from the drugs. Human trials will likely be conducted soon.<sup>7</sup>

7. United Press columnist Lidia Wasowicz, October 7, 1997.

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#### Vitamin C to See

A new study published in the *American Journal of Clinical Nutrition*<sup>8</sup> concludes that vitamin C offers strong protection against the development of cataracts. This project, looking at nearly 250 nurses aged 56-71, found that those who had been taking vitamin C supplements for at least 10 years showed very few signs of the visual impairment. None exhibited a lens opacity that could be classified as moderate or severe. After adjusting for weight, smoking, and a few other factors, researchers calculated that vitamin C decreases the risk of any cloudiness by 77 percent; the chance of more serious opacities is decreased by 83 percent.

8. *AJCN*, October, 1997.

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#### Creatine

Creatine, a popular supplement with athletes, is being eyed with some suspicion by a number of health professionals. No conclusive or even serious research has been done to date to show any harm, but scattered anecdotal experiences are causing some physicians and trainers to be a little more cautious. Reports of muscle tearing, cramping, and weight gains are some of the effects alleged to date. A few creatine-loading athletes are reported to have experienced liver problems. Creatine is known to build muscle bulk, though the exact mechanism is not clearly understood.<sup>9</sup>

9. Associated Press, reporting on a debate October 21, 1997, at the American Osteopathic Association's San Antonio research conference.

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#### Less Intervention Works for Non-Hodgkin's Lymphoma

A new study published in the *New England Journal of Medicine*<sup>10</sup> reports that no radiation and less than normal chemotherapy provide the same survival rate for non-Hodgkin's lymphoma patients as the standard medical treatments. The benefits, of course, are fewer side effects and lowered incidence of subsequent disease development relating to the therapies. These patients are often children and younger adults who are especially susceptible to damage from radiation. The research was done at Stanford University and involved 340 patients under the age of 21.

10. *NEJM*, October 30, 1997.

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## Ginkgo for Alzheimer's

The *Journal of the American Medical Association*<sup>11</sup> reports that a significant number of Alzheimer's patients did not decline, and some improved slightly, over a 1-year period when they took an extract made from ginkgo trees. The compound, called EGb 761, is made from the leaves, nuts, and branches of the ginkgo biloba tree. It is approved for medical use in Germany but not the United States.

One hundred and thirty-seven patients completed the double-blind, placebo controlled study. Researchers say the effects were apparent after six months of use. Researchers caution against obsessing on this news, as ginkgo also acts as a blood thinner and may cause gastrointestinal irritation. Come to think of it, maybe it would be a good substitute for aspirin.

11. *JAMA*, October 22, 1997.

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## Turkey Resistance

If you felt a little queasy after your Thanksgiving turkey meal, here's one possible explanation: a proliferation of the campylobacter bacteria. Campylobacter is more prevalent now than in the past, thanks to liberal use of antibiotics like fluoroquinolones in poultry.<sup>12</sup> The germ is blamed for up to 8 million cases of abdominal cramps, bloody diarrhea, and fever each year in the United States, as well as up to 800 deaths. There is also research that implicates it in as many as 2,000 cases per year of Guillain-Barre syndrome. Drug-resistant campylobacter is present in about 14 percent of chickens and 49 percent of turkeys, according to the Minnesota Health department.<sup>13</sup>

So, what are you having for Christmas dinner?

12. As reported by the *New York Times*, October 20, 1997.

13. Reported by the Associated Press, October 20, 1997.

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