

## DC Online (Chiropractic Research)

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### Computer Exaggerates Pollution Effects

A software bug in a computer program that analyzes research data has led to an error in the reporting of research relating air pollution to mortality risks. The Health Effects Institute of Cambridge, Massachusetts released the study in June 2000; the EPA and the automotive industry funded it. Because of the error, risks associated with small-particulate air pollution were reported at approximately twice their actual value. The EPA has been considering this and other studies while formulating new regulations, which may be delayed while the agency reconsiders its position, especially since the same computer program was used by many other studies.<sup>1</sup>

1. Associated Press, June 5, 2002.

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### TV-Induced Obesity

A study published in the journal *Pediatrics*<sup>2</sup> reports that television viewing is associated with obesity even in very young children. This study of more than 2,700 ages one to four toddlers found that the higher prevalence of obesity was only associated with the numbers of hours estimated in front of the set, and whether or not the children had televisions in their bedrooms. A TV in the bedroom correlated to a higher obesity rate, even if the time reported watching it was less. Researchers are unsure why this is the case, but suspect underreporting of hours watched, or perhaps other unaccounted-for lifestyle aspects.

1. *Pediatrics*, June 2002.

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### Cholera Activation

Research from Tufts University School of Medicine suggests that cholera changes virulence as it passes through a suitable host. Something in the human intestinal tract appears to activate genes that make the germ much more active. The result is an active pathogen that is hypermobile and highly active for a period of time after it is excreted in the feces of the carrier. It is assumed that this is the reason cholera outbreaks fulminate so suddenly. Experiments in mice found that the excreted strains were up to 100 times more virulent. The activating factor is unknown.<sup>3</sup>

1. *Nature*, June 6, 2002.

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### Baby Walkers Delay Development?

A report in the *British Medical Journal*<sup>4</sup> concludes that baby walkers delay normal developmental milestones. Researchers found that children who used the devices took three to four weeks longer to crawl and walk on their own. The study involved 190 babies. Because of these findings, and injuries associated with baby walkers, the researchers discourage their use.

1. *BMJ*, June 22, 2002.

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### Viagra and Nosebleeds

British doctors report that they are seeing a number of severe nosebleeds in patients that have taken the drug Viagra. One patient was particularly unresponsive to efforts to staunch bleeding and was hospitalized for six days before doctors considered him stable enough to send home. Most of the patients with excessive bleeding also suffer from high blood pressure, which is known to make nosebleeds more likely. The doctors theorize that the drug is causing the nasal tissues to engorge, setting up the problem in susceptible individuals.<sup>5</sup>

1. *Journal of the Royal Society of Medicine*, August 2002.

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### Tea for Strong Bones

Research from Taiwan suggests that tea helps maintain bone density. Just over 1,000 subjects were questioned about their tea-drinking habits, and the results were compared to bone-density measurements. Those who habitually consumed an average of two cups of black, green or oolong tea over the past 10 years showed six-percent-higher bone density than those who rarely drank tea. The researchers think that the fluoride and flavonoid content of tea is responsible.<sup>6</sup> It also appeared that the regularity of tea consumption, not necessarily the quantity, was more important.

1. *Archives of Internal Medicine*, May 13, 2002.

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### Intensive Infant Care

A study from Dartmouth Medical School reports that the large amounts of money and energy spent treating low-birthweight infants in the United States are not improving the outcome for those babies. When compared to other countries that spend less on neonatal treatment (but more on prenatal care), the U.S. statistics are no better, and possibly worse. The U.S. has a lot of technology and about twice as many neonatologists as England, Canada, and Australia, yet the mortality rates for even the sickest and smallest newborns are no better. The researchers suggest that a greater emphasis should be placed on prenatal care and other preventive measures.<sup>7</sup>

1. *Pediatrics*, June 2002.

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### Exercise to Reduce Strokes

A study<sup>8</sup> of more than 16,000 middle-aged-to-elderly men suggests that regular exercise can significantly lower the risk of stroke. The researchers categorized the men into three fitness levels, based upon treadmill tests, and then analyzed the frequency of strokes over approximately 10 years. The men in the highest fitness group died from strokes 68 percent fewer times than the lowest group. Those in the middle group came close, with 63 percent fewer stroke-related deaths. An example of someone in the moderately-fit group might be someone that runs at least 20 minutes a day, three to five days per week.<sup>9</sup>

1. *Medicine and Science in Sports and Exercise*, April 2002.
  2. Associated Press, May 12, 2002.
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### Airline Infections

For some time now, it has been observed that airline passengers tend to contract more colds than the general population. It was thought that the recirculation of air in many airplanes was spreading the germs around to all passengers, making them sick. However, a new study suggests that this is not the reason. Researchers questioned 1,100 passengers to see if they had contracted a cold one week after their flights. The passengers had flown on two different types of planes: one that used fresh air ventilation, and one that recirculated cabin air. The fresh air group reported a 21-percent incidence of colds; the recirculated group reported 19 percent. The normal incidence in nontravelers is about three percent. The researchers conclude that the colds are probably due to other factors, such as sleep loss, stress, etc.<sup>10</sup>

1. *JAMA*, July 24, 2002.
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### Fit for Life

A study of 9,925 women by a Texas research group concludes that even though excess weight can shorten longevity, physical fitness may have a more significant effect. Using treadmill tests to determine the fitness levels of the subjects (with an average age of 43 years), the researchers tracked them for 11 years. They then compared the fitness levels of those who had died during that time period. They found that the women in the lowest of the three fitness groups died (of any cause) twice as often as those in either of the other two groups. The women judged to be "moderately fit" had been able to walk two miles in less than 40 minutes, three times a week.<sup>11</sup>

1. [www.obesityresearch.org/cgi/content/abstract/10/6/417](http://www.obesityresearch.org/cgi/content/abstract/10/6/417).
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### Obesity and Heart Failure

Empirically it seems obvious, but researchers have confirmed that heart failure is significantly more likely in the obese. Compared to normal-weight individuals, if you are obese you have twice the likelihood of developing congestive heart failure.<sup>12</sup> If you're simply overweight, the risk drops to 34 percent higher, on average. The risk appears to increase proportionally to the amount of excess weight. The study was an analysis of data from the Framingham Heart Study and involved about 5,800

patients classified by their body-mass index (BMI). A BMI of 25 to 30 is considered overweight, and a score over 30 defines obesity.

1. *NEJM*, August 1, 2002.

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#### Newborns and *E. Coli*

A study funded by the National Institutes of Health reports that newborn babies are increasingly contracting *E. coli* instead of streptococcal infections, apparently because of antibiotic use. Antibiotics given to women in labor, it is thought, are inhibiting bacteria that would normally limit *E. coli* growth. As a consequence, the *E. coli* growth is unchecked, leading to systemic infection. This is particularly worrisome, because *E. coli* can be more dangerous than streptococcus. This study compared the rates of infections in babies born from 1991-1993 to those born between 1998-2000. The overall rate of infection was similar (about nine per 1,000 births in both groups), but most of the streptococcal infections (5.9 previously, decreasing to 1.7 in the latter group) were replaced by *E. coli* infections.<sup>13</sup>

1. *NEJM*, July 25, 2002.

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