

DC Online (Research)

Brian Sutton, DC

Drug Misuse and Resistance

Medical experts report that two popular antiviral drugs have now become essentially useless thanks to indiscriminate use, especially in Asia and Russia. The drugs amantadine and rimantadine exhibited activity against flu samples 89 percent of the time last year. This year, however, effectiveness has dropped to only 9 percent.¹ The drugs are sold in many countries in over-the-counter cold and flu remedies.

1. Reuters, Feb. 2, 2006, Reporting on statistics from the CDC and inter-views with Drs. Weinstock and Zuccotti of Sloan-Kettering Cancer Ctr.
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Herbal Driving

Researchers from Wheeling Jesuit University in West Virginia² report they have found a natural way to make driving safer and more pleasant: aromatherapy. Their tests showed that periodic whiffs of peppermint and/or cinnamon reduced fatigue, frustration and anxiety, and increased alertness. A previous investigation by the same group suggested similar benefits to athletes and office workers. While this study concentrated on inhaled scents, the authors say that previous research suggests a similar effect from gum and after-dinner mints.

1. Led by Dr. Bryan Raudenbush and colleagues, reported by Reuters, Feb. 1, 2006.
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Drug-Induced Dementia Symptoms

French doctors³ report there may be a significant number of elderly patients misdiagnosed with dementias, owing to side-effects from other medications. They say that anticholinergic drugs will cause confusion, memory loss and disorientation as side-effects, and that therefore, careful inquiry into current medication regimens should be made before assuming the patient is becoming mentally incapacitated due to a disease process. In their study of patients taking these medications, 85 percent could be classified as having a mild cognitive dysfunction using standard tests. There are a wide number of such drugs in use, ranging in treatments for Parkinson's disease, depression and allergies.⁴

1. From the Hopital La Colombiere in Montpellier, France. Published in the *British Medical Journal*, Feb. 1, 2006.
 2. Reuters, Jan. 31, 2006, reporting on the work of Dr. Karen Ritchie and associates.
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Antidepressants and the Immune System

Researchers from Georgetown University in Washington, D.C.⁵ report a potential link between abnormal immune responses and antidepressant drugs such as Prozac and Zoloft. Their findings suggest a communication between dendritic and T cells via the neurotransmitter serotonin. Antidepressants typically change serotonin metabolism, potentially disrupting the response to inflammations detected by dendritic cells. More investigation is likely.

1. Reuters, Jan. 27, 2006, reporting on the work of Dr. Gerard Ahern and associates.
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Exercise for HRT Side-Effects

In a new study from the University of Illinois at Urbana-Champaign⁶, researchers report that the decline in mental abilities seen in women who use hormone replacement therapy for 10 years or more may be countered by regular exercise. This study of 54 postmenopausal women combined MRI scans and mental acuity tests to quantify mental prowess. The researchers noted that HRT appeared to show a mental benefit in the short term, but the opposite became evident over a longer period of time. Exercise, on the other hand, showed both short- and long-term beneficial effects.

1. www.eurekalert.org/pub_releases/2006-01/uoia-fcc012406.php.
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Mad Venison Disease

Researchers from the University of Kentucky⁷ report they have found evidence of mad-cow-like prions in mule deer muscle that appear to be infectious. The deer were affected with chronic wasting disease (CWD), a condition related to mad cow disease. The prions from the deer meat infected specially bred mice in a laboratory setting. While no oral infective route to humans has been established, the researchers urge caution when considering eating venison that came from an area where CWD is prevalent.

1. *Science*, Jan. 27, 2006.
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Emotional Workouts

New research from the University of Texas at Austin⁸ suggests that regular exercise is not only good for one's mental outlook, but it also can come in handy if you need a quick emotional lift. Volunteers suffering from major depression who spent a single half-hour on the treadmill saw their energy and emotional state improve for a short while. The author of the study suggests exercise is one way to help cope with bouts of depression on a day-to-day basis.

1. Study led by Dr. John Bartholomew; published in *Medicine & Science in Sports & Exercise*, December 2005.
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Vertebroplastic Fractures

A review of 432 patients who had undergone vertebroplasty (a surgical procedure to stabilize fractured vertebrae) at the Mayo Clinic in Minnesota concludes that the procedure increases the risk of subsequent fractures, especially in adjacent vertebrae. About 20 percent of the patients

developed new fractures an average of 78 days after the operation.⁹

1. *American Journal of Neuroradiology*, January 2006.
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Breastfeeding for Celiac Disease

A study from the United Kingdom¹⁰ has found a correlation between breastfed babies and lowered incidence of celiac disease later in life. This analysis of multiple studies demonstrated a 52 percent lowered incidence of the disorder among individuals who were breastfeeding when gluten was introduced into their diet. One theory for this effect suggests breastfeeding prevents GI infections that somehow could eventually lead to celiac disease.¹¹

1. *Archives of Diseases in Childhood*, January 2006.
 2. Reuters, Jan. 21, 2006.
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Less Food for More Life

A paper published in the *Journal of the American College of Cardiology*¹² reports that the heart benefits from a restricted caloric intake. This study looked at 50 healthy individuals, half of whom followed a severely calorie-restricted but balanced diet for about six years. The other half consumed a typical Western diet. Those on the restricted diet (which averaged 1,670 calories daily compared to 2,445 in the other group) showed significantly improved cardiac performance (suggesting less aging) as measured by diastolic function tests. The researchers plan to continue monitoring the groups to see if other benefits emerge.

1. *Journal of the American College of Cardiology*, Jan. 17, 2006.
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Lose Sleep, Lose Brain Cells

A study of rats learning how to navigate mazes reveals how lack of sleep can impact brain growth and learning. When rats were only permitted to get half their normal amount of sleep during the four-day study, they had a harder time learning their mazes. Upon subsequent examination of their brains, researchers found there were fewer new neurons in the spatial memory area of the rats' brains compared to those who had adequate sleep. An interesting finding, however, was that the sleep-deprived rats actually did better in situations in which not memory, but other sensory clues (such as smell) led to an exit that changed location every time. Apparently in this case, a good memory was a hindrance.¹³

1. *Journal of Neurophysiology*, December 2005.
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RDA for Vitamin B₁₂ Inadequate

A study of 98 older women has led researchers from the University Hospital of Aarhus in Denmark to conclude that the recommended daily allowance of B₁₂ should be more than doubled. Their study found that a daily intake of about 6 micrograms was needed to prevent signs of B₁₂ deficiency in these volunteers. Blood markers were used to gauge the sufficiency of B₁₂ in the patients.¹⁴

1. *American Journal of Clinical Nutrition*, January 2006.

MARCH 2006