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Alzheimer’s drug for MS
A drug used to treat dementia in Alzheimer’s disease improves cognition and memory in multiple sclerosis patients with mild cognitive impairment, according to findings presented at the annual meeting of the American Academy of Neurology (San Francisco, April 24-May 1, 2004). About 50% of patients with multiple sclerosis have some cognitive impairment. The initial study showed that, compared with placebo, the donepezil group showed greater improvement on the verbal memory function test and had a smaller reduction in cognitive deficits.

Anti-rejection drug in transplants
An inhaled version of cyclosporine effectively prevents chronic rejection in recipients of lung transplants, according to a study at the University of Pittsburgh. 11% of patients who took the drug died during the study, compared with 47% of those who did not. Newly implanted lungs are particularly vulnerable to rejection, with only 45% of lung recipients surviving 5 years, compared with 75% in other major organ transplants. “It makes good sense to apply the immuno-suppressive agent right to the location where the problem exists”, said Ed Garrity, director of lung transplants at Loyola University Medical Center.

SARS returns to China
Severe acute respiratory syndrome (SARS) re-emerged in China last week, prompting the screening of passengers at airports and train stations. The infection is thought to have originated in a 26-year-old woman who worked in a SARS laboratory in Beijing. Once infected, she then passed the disease on to her mother, who died last week. China’s health ministry say that a nurse who treated the lab worker also has the infection, she then passed the disease on to her mother, who died last week. Singapore and Hong Kong, who treated the lab worker also has the infection, according to findings in Cell (April 30, 2004). In mice, Nkx2-5 deficiencies caused underformed and detiorating atrioventricular (AV) nodes. Also, mice without Nkx2-5 had a growth factor called BMP-10 being overexpressed. This mismatch between the underformed AV node and the overgrown heart muscle affected the electrical working in the heart, causing sudden failure.

Gene that controls cholesterol
Researchers have identified a gene that controls the concentration of low density lipoprotein (LDL) cholesterol in mice, according to a report in Proc Natl Acad Sci USA (April 2004). Pcsk9 decreases the number of LDL receptors that remove the cholesterol from the blood, thereby increasing the amount in circulation. Mice on high cholesterol diets had reduced Pcsk9 expression, compared with those fed normal diets. When the gene was inserted into a virus that grows inside liver cells, the mice developed extremely high cholesterol levels. Pcsk9 protein had no effect in mice with no LDL receptors, indicating that the protein directly affects the receptors. The findings should be important for human beings too since mutations in the PCSK9 gene lead to hypercholesterolaemia.

Testosterone for HIV women
Testosterone replacement could benefit women infected with HIV, suggests a report in Arch Intern Med (April 26). Researchers gave testosterone patches to HIV-infected women with low concentrations of the hormone. After 6 months, compared with controls, the women had improved muscle strength and function. They did not report any side-effects such as changes to hair, voice, or metabolism. The investigators say that such treatment could be studied in other women who have weight loss associated with serious illness.

Immune disease in children
Juvenile dermatomyositis (JDM), a rare autoimmune disease, could be caused by mothers’ cells that persist in children’s bodies, say researchers in J Immunol (2004; 172: 5041–46). Most children with JDM inherited the HLA gene from their mothers, and were more likely than their healthy siblings or controls to have maternal cells in their blood. Furthermore, these chimeric cells are active, and they provoke attacks against the child’s body. “Our study suggests a mechanism for the disease, and deepens our understanding of autoimmune disorders in general”, say the investigators.

African science gets $20 million
The Bill and Melinda Gates Foundation is to donate US$20 million over the next 10 years to aid science-policy-related activities three African academies. The money is also to be used to fund collaborative workshops and symposia. The aim is to incorporate scientific evidence and thinking into health-care decision-making.

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Hernia surgery
Open surgery is better than laparoscopic surgery for hernias, according to findings in N Engl J Med (2004; 350: 1819–27). For operations on groin hernias in the USA, laparoscopic surgery resulted in more recurrences and complications. Operations by less experienced surgeons were more likely to cause recurrence for laparoscopic, but not open, surgery. “Men with a hernia that has never been repaired before should undergo an open repair”, conclude the researchers. However, for recurrent hernias, the numbers in the study were too small to make recommendations.

Corn syrup and diabetes
Corn syrup might be a cause of type 2 diabetes in the USA, according to a study in Am J Clin Nutr (2004; 79: 774). The study of American diets over the past century has shown a substantial increase in processed carbohydrates, especially corn syrup. The number of cases of type 2 diabetes and obesity has also risen in parallel. However, Audrae Erickson, president of the Corn Refiners Association, says the report is misleading since diabetes rates are also rising in other countries with little or no corn syrup in their diets.