



## Research Update • Le point sur la recherche

### Secondhand smoke, firsthand heart disease

A major prospective study shows that exposure to secondhand smoke at home or in the workplace increases the risk of a heart attack (*Circulation* 1997;95:2374-9). The study is notable for its large sample (32 046 women followed for 10 years) and because it considered a vast array of risk factors for coronary artery disease, from body mass index to family history.

The women followed are part of the Nurses' Health Study cohort, established in 1976, which comprises more than 100 000 nurses who supply detailed health information every 2 years. Other studies have looked at the risk of cancer among these women.

Women who reported occasional exposure to secondhand smoke had a relative risk of coronary artery disease (defined as a nonfatal heart attack or fatal heart disease) of 1.58 compared with those who weren't exposed, and women with regular exposure to secondhand smoke had a relative risk of 1.91. These statistics took into account the other cardiovascular risk factors. The risk of heart disease was similar among women exposed to smoke at home and those exposed at work.

According to the Boston researchers who conducted the study, "the consistency of these findings with the existing totality of evidence increases the belief that the observed association represents cause and effect." — *C.J. Brown*

### Emphysema reversed in rats

All-trans-retinoic acid reverses emphysema in rats with the disease, researchers in Washington have re-

ported (*Nature Med* 1997;3[6]). The authors suggest that treatment with this compound may be effective in people with emphysema as well.

### Viral mousetrap

Researchers have characterized the atomic structure of the external domain of the HIV surface glycoprotein (*Nature* 1997;387:426). This glycoprotein (gp41) enables the virus to gain entry to target cells. Two large fragments of the external domain of gp41 have been cocrystallized, giving the domain the appearance of an old-fashioned mousetrap. This mechanism may be the same as that used by influenza virus HA2 and Moloney murine leukemia virus.

### Anticancer agent in green tea

Drinking green tea may prevent cancer or reduce tumour size (*Nature* 1997;387:561). Green tea — preferred in many Asian cultures to Western-style black tea — contains catechins, which are believed to be anticancer agents. These compounds are destroyed in the brewing of black tea, but one is found in green tea.

### Inherited cognitive abilities

Identical twins 80 years of age or older are much more likely to have similar cognitive abilities than fraternal twins, according to a study conducted in Sweden (*Science* 1997;276:1560-3). The study lends credence to the idea that much of cognitive ability is genetically determined, even late in life. Using a statistical model, the authors estimated

that 62% of general cognitive ability is heritable, as is 55% of verbal ability, 32% of spatial ability, 62% of speed of processing and 52% of memory.

### Window-blind cords a strangulation hazard

Over 14 years, 183 children in the US have died of strangulation by a cord on a window covering, according to an epidemiologic study (*JAMA* 1997;277:1696-8). The authors suspect that the figure is low because of under-reporting. Most of the children were under 4 years of age, and most were killed on cords used for venetian blinds. Many of the strangulations involved children jumping or falling from furniture near a window. The authors recommend removing the loop from 2-cord blinds, tying down cords on hooks near the window and moving furniture away from windows with blinds.

### No unusual risk of birth defects for Gulf War children

There is no evidence of a higher risk of birth defects in children born to Gulf War veterans since the conflict, a new study has determined (*N Engl J Med* 1997; 336:1650-6). The researchers evaluated all live births that have occurred at 135 military hospitals since the conflict and analysed the rate of defects in children of veterans and in children of those not deployed during the war. They found no significant association between the mother's or father's service in the Gulf War and the risk of any birth defect or of severe birth defects in their children.