SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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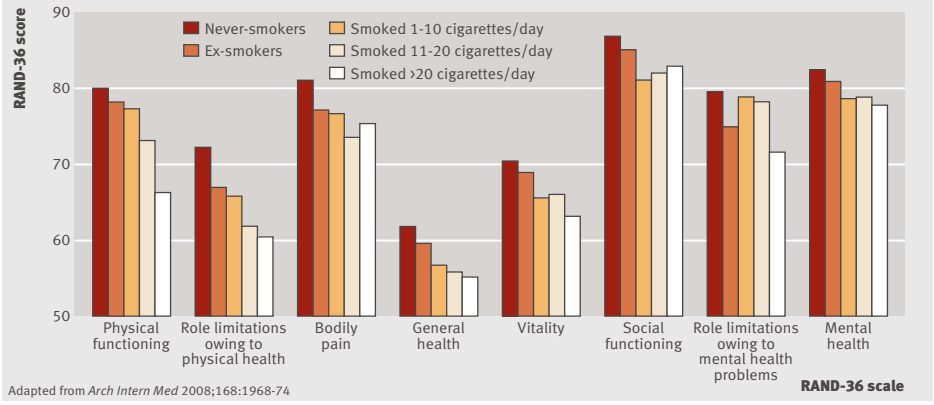
SMOKING AND QUALITY OF LIFE



Adapted from *Arch Intern Med* 2008;168:1968-74

Smokers get old before their time, then die

Heavy smokers feel old, then die young, according to a cohort study of 1658 Finnish men. People who were heavy smokers but otherwise healthy in 1974—when they were middle aged—had significantly worse physical health than non-smokers in 2000. The effect was dose dependent—the more they smoked in midlife, the worse their quality of life scores became. Heavy smokers also died 10 years before non-smokers, on average.

So how should we persuade people to quit? Admission to hospital forces patients to take a break and gives health professionals an opportunity to help them give up for good. In one systematic review, the most effective inpatient programmes increased the odds of quitting by 65% (pooled odds ratio 1.65, 95% CI 1.44 to 1.90). These interventions were intensive, sustained, and continued for at least a month after discharge. A third study in patients with heart attack also found a clear link between stopping smoking and being treated in a hospital with a formal smoking cessation programme (odds ratio 1.71, 95% CI 1.03 to 2.83). Again, simple counselling outside a formal programme did not help.

Arch Intern Med 2008;168:1950-60, 1961-7, 1968-74

First line antimalarial no longer a bitter pill for children

The combination of artemether and lumefantrine is a first line treatment for uncomplicated falciparum malaria. Combined tablets have been available since 2004, but the formulation isn't ideal for children because they dislike the bitter taste of a crushed tablet. Novartis has now developed a cherry flavoured dispersible formula, which is much easier for children to swallow. It worked just as well as the original crushed tablets in a randomised trial. More than 90% of the children given either treatment were cured of falciparum malaria within seven days and had no recurrence up to 28 days after the start of treatment (97.8% (95% CI 96.3% to 99.2%) in the group on dispersible formulation and 98.5% (97.4% to 99.7%) in controls). Outcomes were statistically equivalent, and there were few serious and no unexpected side effects in either group. Both formulations caused a minority of children to vomit (7.4% (33/447) *v* 9.3% (42/452)).

Novartis conducted their trial in various countries of sub-Saharan Africa, where *Plasmodium falciparum* is a leading cause of death and disease in young children. The 899 participants had a median age of 3 years, and most were under 6. A linked comment (doi:10.1016/S0140-6736(08)61493-2) says the new dispersible formulation is a welcome development that should help improve compliance. Dosing children with crushed tablets is inaccurate and unpalatable. New formulations have been a long time coming and the effect on public health could be substantial. "Artemether-lumefantrine is currently one of the most widely used antimalarials in Africa," it says.

Lancet 2008 doi:10.1016/S0140-6736(08)61492-0

Don't rely on the food industry to prevent obesity

In Western style capitalist economies, the food industry puts profit margins and the dividends of shareholders ahead of consumer health. Those motives will never change, and they put the industry into direct conflict with the urgent public health agenda on obesity, write two experts. Highly processed unhealthy foods and drinks are more profitable than fruit, vegetables, and water. Companies such as McDonald's and Coca Cola cannot market healthy food and drink without fundamentally undermining their business model. They improve their image by sponsoring sports, conducting research, and partnering professional associations such as the American Dietetic Association (supported by Coca Cola) instead.

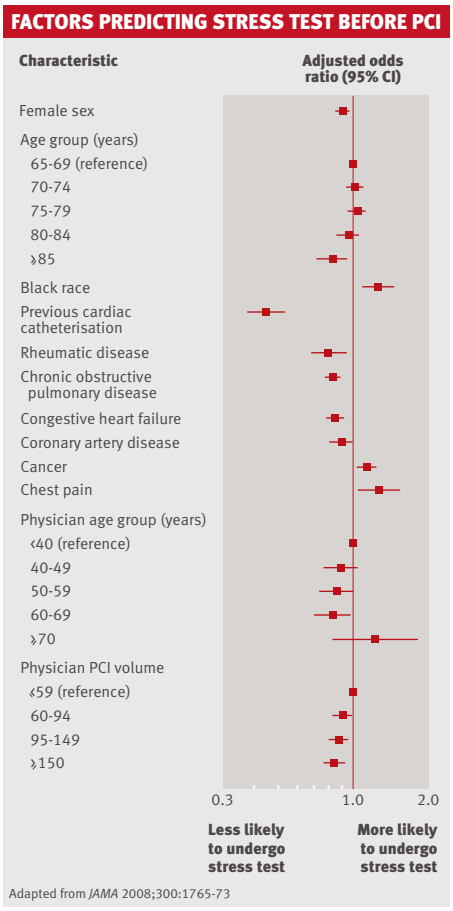
We should not depend on the food industry to treat or prevent obesity any more than we would depend on the car industry to prevent global warming, they write. We should expect (and allow) them to innovate and make a profit. The rest of us must take the lead in protecting the public. Governments can regulate and set policy, voters can elect politicians committed to action on public nutrition, individuals can buy fruit and leave pop tarts on the shelf, scientists can conduct research, professional organisations can educate. All of the above can and should purge the influence of special interests by remaining independent.

JAMA 2008;300:1808-11

US doctors ignore guidelines on stress tests before PCI

US guidelines require objective evidence of ischaemia, usually some kind of stress test, before a percutaneous coronary intervention (PCI) in patients with stable coronary artery disease. A study from the US using data from Medicare suggests that fewer than half such patients had a stress test before their PCI in 2004.

Researchers found documentary evidence of a stress test in only 10 629 out of a sample of 23 887 adults over 65 who had an elective PCI that year (44.5%). Some regions did better than others. Rates of stress testing varied between 22.1% and 70.6% across the US. Women, very old people, and those with heart failure or a previous history of cardiac catheterisation



were significantly less likely than others to be tested for ischaemia. So were those treated by experienced doctors who performed more than 150 PCIs each year. Angina was the only clinical factor associated with an increased chance of a stress test.

The low overall rates and general variation in practice matter because we know that elective PCI works best for patients with documented ischaemia associated with the coronary artery due to be dilated, say the authors. Clearer guidelines would help, adds an editorial (p 1817). So would reimbursement policies that reward evidence based practice.

JAMA 2008;300:1765-73

Monovalent vaccines—an extra weapon in the fight against polio

Monovalent vaccines against polio are making a comeback after more than 40 years of obsolescence, as international authorities look for additional tools to help eradicate polio. Widely used trivalent vaccines have failed to eradicate all strains of the virus, and two recent studies show that a new monovalent vaccine against type 1 poliovirus is probably more immunogenic. The first, a randomised trial, showed that newborn babies given the monovalent vaccine were more likely to develop antibodies against type 1 poliovirus than controls given a trivalent vaccine (55.4% *v* 32.1%; P<0.001). They also excreted fewer type 1 polioviruses in their stools after repeat vaccination at 30 days.

In the second study, researchers from Nigeria estimated the effectiveness of trivalent and monovalent vaccines by comparing the vaccination histories of patients with polio with those of matched controls. The monovalent vaccine looked to be four times more effective against type 1 poliovirus (67% (95% CI 39% to 82%) *v* 16% (10% to 21%)). The trivalent vaccine had an estimated efficacy against type 3 poliovirus of just 18% (18%, 9% to 26%).

The new monovalent vaccine may help plug a gap in the immunogenicity of current schedules, says an editorial (p 1726). But it won't be the final word. Polio is likely to persist as long as widely used vaccines remain live. Vaccine related strains will continue to be shed into the environment even if we manage to eradicate wild strains. Vaccines using inactivated viruses are available, but they are too expensive for the countries that need them most.

N Engl J Med 2008;359:1655-65, 1666-74

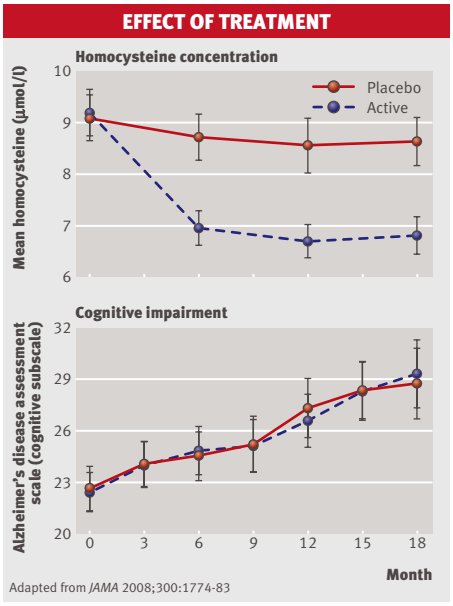
Vitamin K1 not recommended for postmenopausal women with osteopenia

Vitamin K plays a role in bone metabolism as well as clotting. Could supplements slow postmenopausal bone loss in women? Small trials that test low doses have reported mixed results, so researchers from Canada designed a more powerful trial to test the effects of a high dose (5 mg) of vitamin K1 on bone mineral density. The 440 participants were postmenopausal and had low bone mineral density but not osteoporosis. They all took calcium and vitamin D. Supplements of vitamin K1 made no difference to bone mineral density at any site over two years compared with placebo. Unexpectedly, however, women taking the supplements had significantly fewer fractures, and the difference became significant in an extension to the trial that followed up some women for four years (hazard ratio 0.45, 95% CI 0.20 to 0.98). The authors also noted a significantly lower incidence of cancers in women who took vitamin K1.

The authors stress that the negative findings for bone mineral density are more robust than the positive findings for fracture and cancers, both of which must be confirmed in adequately powered trials. For now, vitamin K1 cannot be recommended as a prophylactic against bone loss for postmenopausal women.

PLoS Med 2008;5:e196 doi:10.1371/journal.pmed.0050196

Reducing homocysteine doesn't slow progression of Alzheimer's disease



Homocysteine is an enigmatic and potentially harmful amino acid that has been linked with common disabling pathologies, such as vascular disease and dementia. A simple vitamin supplement of folate and B vitamins is enough to bring down even normal serum concentrations, but trial after trial reports disappointing results.

The latest failed to show any benefit for US men and women with mild to moderate Alzheimer's disease. A high dose supplement of folate, vitamin B6, and vitamin B12 reduced serum concentrations of homocysteine as expected but had no effect whatsoever on cognitive decline, clinical status, or behaviour compared with placebo. The authors searched for some kind of effect among multiple outcome measures including death. All they found was a significant increase in depressive symptoms in participants taking the supplements (28% (67/240) *v* 18% (30/169); P=0.02).

This isolated, unexpected, and unexplained result could have turned up by chance among the multiple comparisons. But the lack of benefit coupled with the possibility (however small) of harm mean that homocysteine lowering supplements cannot be recommended as a treatment for cognitive decline, says an editorial (p 1819). The 406 participants in the primary analysis had normal serum concentrations of homocysteine, folate, and B vitamins at the start of the trial.

JAMA 2008;300:1774-83

Cite this as: *BMJ* 2008;337:a2177