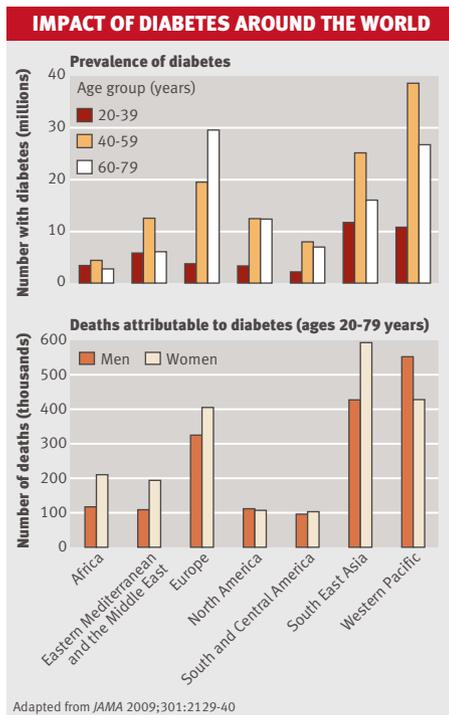


SHORT CUTS

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Type 2 diabetes is on the rise in Asia



The increasing burden of chronic diseases is considered a major global risk and could cause large financial losses in the near future owing to rising health expenditure and declining productivity. The number of people living with type 2 diabetes globally is estimated to increase from 240 million in 2007 to 380 million in 2025, with more than 60% of patients living in Asia. A review of English language literature published between 1980 and 2009 reports on the epidemiology, risk factors, and pathophysiology of type 2 diabetes in Asia.

Sharp increases in the prevalence of type 2 diabetes have been seen across the continent. In China, the prevalence increased from 1% in 1980 to 5.5% in 2001, with urban areas more affected than rural areas. The prevalence among urban adults in India increased from 3% in the early 1970s to 12% in 2000, and this increase was accompanied by a narrowing of the rural-urban gradient. Also on the rise is the prevalence of overweight and obesity, abdominal adiposity, metabolically obese phenotype, and gestational diabetes.

In Asia, people tend to be younger and have a lower BMI at onset of diabetes than people in the West. This longer duration of disease in Asian people places those with diabetes at higher risk of complications, but also of prostate, breast, endometrial, pancreatic, liver, and colorectal cancers. Population wide prevention policies and multidisciplinary care programmes should keep up with the sharply rising burden of diabetes.

JAMA 2009;301:2129-40

Acid suppressants increase the risk of hospital acquired pneumonia

People who start taking acid suppressive drugs are known to be at increased risk of community acquired pneumonia during the first month of treatment. Despite this fact, prescribing of acid suppressive drugs is on the rise in hospitals. An estimated 40-70% of hospital patients are prescribed some type of acid suppressive therapy, half of whom are first prescribed this treatment in the hospital. A prospective cohort study of 63 878 people admitted to a large medical centre over 4 years now shows that people who take these drugs during their hospital stay are at increased risk of hospital acquired pneumonia.

Acid suppressive drugs were prescribed in 32 922 admissions (52%), and hospital acquired pneumonia occurred in 2219 admissions (3.5%). The incidence of hospital acquired pneumonia was higher in patients receiving acid suppressants than among people who were not taking this class of drug (4.9% *v* 2.0%; adjusted odds ratio 1.3, 95% CI 1.1 to 1.4). In an analysis according to the type of drug used, the association between acid suppressants and hospital acquired pneumonia was significant for proton pump inhibitors (1.3, 1.1 to 1.4) but not for histamine-2 receptor antagonists (1.2, 0.98 to 1.4).

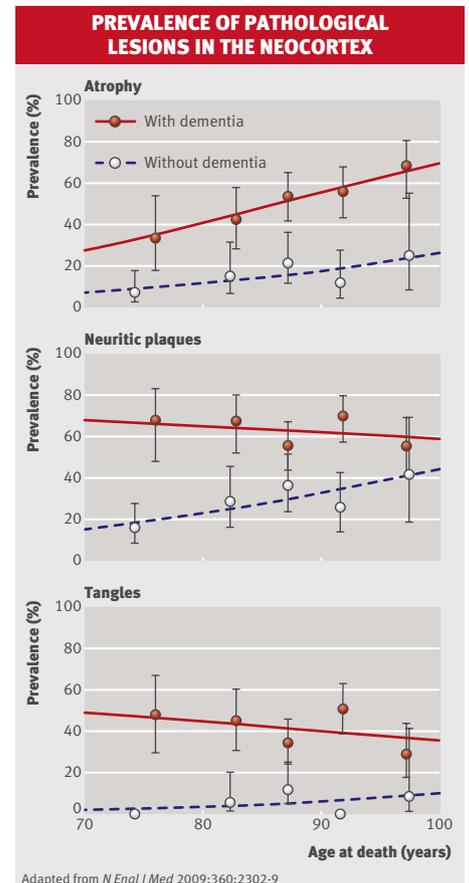
The authors call for further scrutiny in prescribing practices, particularly since no solid evidence supports the prophylaxis of stress ulcers in non-critically ill inpatients—the most common application of acid suppressants in the hospital setting—and such use of acid suppressive drugs is not endorsed by guidelines.

JAMA 2009;301:2120-8

Association between brain lesions and dementia changes with age

A population based autopsy study of 456 brains that were donated for research into cognitive function and ageing has found that the association between plaques and tangles—the neuropathological lesions of Alzheimer's disease—and clinical manifestations of dementia lessens as people grow older. In people who died aged 75 years, the association between neocortical neuritic plaques and dementia was strong (odds ratio 8.63, 95% CI 3.81 to 19.60); however, the relationship was far weaker in people who died aged 95 years (2.48, 0.92 to 4.14). A similar age dependent association was found for other pathological features of Alzheimer's disease. In contrast, cortical atrophy was associated with dementia at all ages.

These intriguing findings confirm that the diagnostic, therapeutic, and management strategies for dementia—which are currently based on research in the younger old—might not be optimal for the oldest old. One of the



most interesting and underappreciated findings emerging from this and similar studies is that some elderly people who have a high density of brain lesions indicative of neurodegenerative disease do not actually have dementia, says an accompanying editorial (p 2357-9). Research into factors that make these people resilient to the effects of brain lesions might lead to new and better treatments.

N Engl J Med 2009;360:2302-9

Evidence is equivocal for primary prevention of vascular disease with aspirin

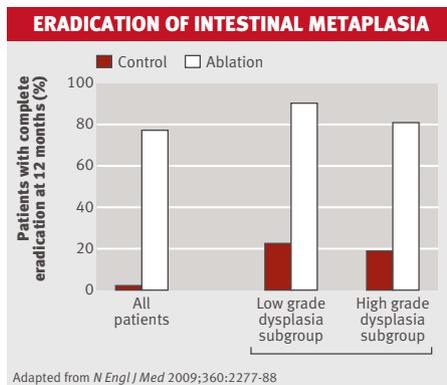
Guidelines recommend primary prevention with aspirin for people at moderately raised risk of coronary heart disease; however, it is not clear to what extent the benefits of averting cardiovascular events in people at low risk are counter balanced by the potential harms associated with the long term use of antiplatelet drugs. A meta-analysis of individual participant data from several randomised trials has confirmed that long term aspirin is useful for secondary prevention of vascular disease, but the results for primary prevention are less straightforward.

The meta-analysis assessed six primary prevention trials—a total of 95 000 people at low to average risk; 660 000 person-years of follow-up; and 3554 serious vascular events (defined as myocardial infarction, stroke, or vascular death). Aspirin did lead to a decrease in serious vascular events (0.51% aspirin *v* 0.57% control per year, $P=0.0001$), mainly owing to a reduction in non-fatal myocardial infarction (0.18% *v* 0.23% per year, $P<0.0001$). On the other hand, aspirin did not prevent stroke (net effect 0.20% *v* 0.21% per year, $P=0.4$; haemorrhagic stroke 0.04% *v* 0.03%, $P=0.05$; other stroke 0.16% *v* 0.18% per year, $P=0.08$) and did not lower mortality (0.19% *v* 0.19% per year, $P=0.7$). Aspirin did, however, increase the risk of major gastrointestinal and extracranial bleeding (0.10% *v* 0.07% per year, $P<0.0001$). We await results from ongoing trials to further inform decisions on primary prevention with aspirin.

Lancet 2009;373:1849-60

Radiofrequency ablation prevents progression of Barrett's oesophagus to cancer

In Barrett's oesophagus, the lining of the lower oesophagus is replaced by an intestinal type lining, a phenomenon known as intestinal metaplasia. A sham controlled



multicentre trial of 127 participants has tested whether endoscopic radiofrequency ablation can eradicate intestinal metaplasia in patients with Barrett's oesophagus and decrease the rate of neoplastic progression.

After one year, 77.4% of the people who had been randomised to the ablation group had complete restoration of normal oesophageal lining, compared with 2.3% of people randomised to the control group. People who had received ablation treatment were also less likely to have disease progression (3.6% *v* 16.3%) and had fewer cancers (1.2% *v* 9.3%).

Success depended on the baseline severity of Barrett's oesophagus. In patients with low grade dysplasia, complete eradication was seen in 90.5% of those in the ablation group, compared with 22.7% of those in the control group. In people with high grade dysplasia 81.0% of people in the ablation group and in 19.0% of those in the control group had complete eradication of intestinal metaplasia.

Radiofrequency ablation tops the treatment options that are currently available, says a linked editorial (pp 2353-55), but we still don't know whether the procedure should be offered to people with non-dysplastic Barrett's oesophagus.

N Engl J Med 2009;360:2277-88

A combined primary care intervention works for pain and depression

Pain is the most common physical presenting symptom outside of hospitals, and depression is the most common mental disorder. These two conditions co-occur in 30-50% of primary care patients, with an additive adverse effect on health outcomes and responsiveness to treatment. A randomised trial has compared a three step drug and behavioural intervention (12 weeks of optimised antidepressant drug treatment, followed by 6 sessions of a pain

self management programme over 12 weeks with a continuation phase for 6 months) with usual care in primary care patients with at least moderately severe depression and comorbid musculoskeletal pain in the lower back, knee, or hip that had lasted at least three months.

At one year, a clinically significant reduction in pain (that is, a reduction of 30% or more) was more likely among the people who had received the intervention than among those who had received usual care (41.5% *v* 17.3%; relative risk 2.4, 95% CI 1.6 to 3.2), as was a global improvement in pain (47.2% *v* 12.6%; 3.7, 2.3 to 6.1). A reduction of 50% or more in the severity of depression was also more common in the intervention group (37.4% *v* 16.5%; 2.3, 1.5 to 3.2). The prevalence of major depression was markedly decreased with the intervention compared with usual care (40.7% *v* 68.5%; 0.6, 0.4 to 0.8). A combined outcome of improvements in both pain and depression further favoured the intervention (26.0% *v* 7.9%; 3.3, 1.8 to 5.4).

JAMA 2009;301:2099-110

Vascular risk in footballers seems comparable with that of the general population

More than a quarter of professional players in the American national football league fit the criteria for class II obesity (BMI 35.0-39.9), despite having a high level of regular physical activity. Concerns exist over their cardiovascular health and health in general of professional players. The prevalence of risk factors found in a cross sectional study of 504 professional players has now been compared with previously published data for the general American population of the same age.

Football players were less likely to smoke (0.1% *v* 30.5%) and had a lower prevalence of impaired fasting glucose (6.7% *v* 15.5%) than the general population, but hypertension and prehypertension were more common among the players (13.8% *v* 5.5% and 64.5% *v* 24.2%, respectively). No differences were found in the prevalence of dyslipidaemia.

When the samples were combined, large body size measured by BMI was associated with increased blood pressure, low density lipoprotein cholesterol, triglycerides, and fasting glucose, and decreased high density lipoprotein cholesterol—all risk factors for cardiovascular diseases.

JAMA 2009;301:2111-9

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