

# SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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**"If you can't get hold of oily fish, a good alternative source of omega-3 fatty acids is snake oil. Helps your telomeres. Live Longer With Snake Oil—it's official."**

See Richard Lehman's journal blog on [doc2doc.bmj.com](http://doc2doc.bmj.com)

## Controlling salt intake would save lives and cut costs

A regulatory intervention that reduced the salt intake of US adults by 3 g a day would save between \$10bn (£6.2bn; €7.1bn) and \$24bn a year in healthcare costs, through reductions in blood pressure and knock-on reductions in rates of coronary heart disease (including heart attacks) and strokes, according to recent projections. It would also save between 44 000 and 92 000 lives a year, with benefits across all age groups and in both sexes.

These estimates come from a computer simulation that made key assumptions about the link between salt intake and blood pressure, and about the cardiovascular benefits of lower blood pressure, informed by randomised trials and other published data. The assumptions were tested in a series of sensitivity analyses that confirmed the main findings: even modest reductions in salt intake achieved over the next decade or so would prevent morbidity from cardiovascular disease, prolong lives, and save money.

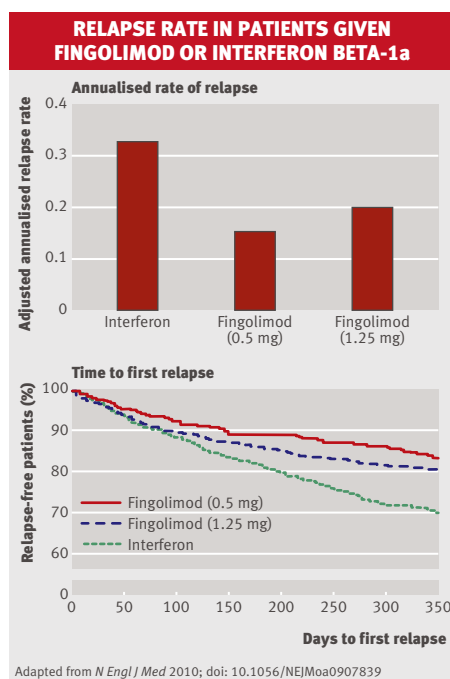
The simulations suggest that controlling dietary salt would be as good for public health as controlling obesity, reducing smoking, and giving antihypertensive drugs to everyone with hypertension.

Adults in the US eat a lot of processed foods packed with salt. The average daily intake for men was 10.4 g in 2006—almost twice the recommended allowance (maximum of 5.8 g), and well over twice the intake recommended for adults over 40, black people, and anyone with hypertension (3.7 g). The authors and a linked editorial ([doi:10.1056/nejme0910352](https://doi.org/10.1056/nejme0910352)) agree that urgent action is needed, starting with policies to control the salt content in everyday processed foods.

*N Engl J Med* 2010; [doi:10.1056/NEJMoa0907355](https://doi.org/10.1056/NEJMoa0907355)

## New pills for multiple sclerosis

Two new oral drugs for multiple sclerosis reduced the risk of relapse by more than 50% in recent placebo controlled trials. Cladribine and fingolimod target lymphocytes, depleting stocks or locking them in lymph nodes to slow the immune injury that causes disability and death in patients with multiple sclerosis. In the cladribine trial, participants given the lower dose had 57.6% fewer relapses each year than



controls (annualised rate 0.14, 95% CI 0.12 to 0.17 v 0.33, 0.29 to 0.38), those given the higher dose had 54.5% fewer relapses (0.15, 0.12 to 0.17). For fingolimod, relative risk reductions were 54% for the lower dose and 60% for the higher dose, compared with placebo. Fingolimod also reduced relapses compared with intramuscular interferon beta-1a in a third trial. All three trials were funded by industry.

These drugs are immunologically active, so infections and cancers are possible side effects. Both were associated with lymphocytopenia. Herpes infections were more common in patients given fingolimod in the head to head trial (5.5% (23/420) for the lower dose v 2.8% (12/431) for controls given interferon beta-1a). Twenty of the 884 patients treated with cladribine developed herpes zoster and 10 developed neoplasms, including melanoma, cancer of the pancreas, cancer of the ovary, and five benign uterine leiomyomas. No tumours were seen in the placebo group. An editorial ([doi:10.1056/NEJMe0912019](https://doi.org/10.1056/NEJMe0912019)) describes the side effect profile of both drugs as manageable, so long as well informed doctors and patients can weigh up the risks for themselves. Smart postmarketing surveillance will be essential.

Fingolimod and cladribine widen the choice of treatment options for patients with relapsing

remitting multiple sclerosis, the editorial says. They may also improve our understanding of the disease because they work differently from currently available drugs. Participants in these trials had longstanding disease and mean disability scores between 2 and 3 out of a maximum of 10. Both drugs slowed the progression of disability compared with placebo. Fingolimod showed no additional benefit over interferon beta-1a on the progression of disability.

*N Engl J Med* 2010; [doi:10.1056/NEJMoa0902533](https://doi.org/10.1056/NEJMoa0902533)

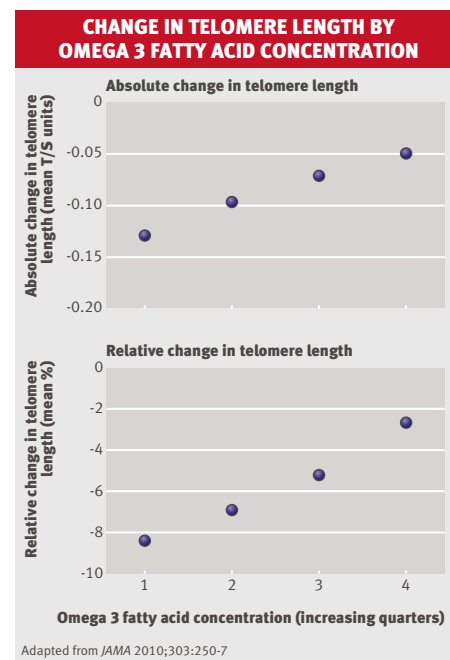
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[doi:10.1056/NEJMoa0907839](https://doi.org/10.1056/NEJMoa0907839)

## Omega 3 fatty acids linked to genomic marker of ageing

Why do omega 3 fatty acids prolong survival in people with cardiovascular disease? One team of researchers thinks the answer might have something to do with the preservation of telomere length, after their cohort study found a significant association between higher blood concentrations of omega 3 fatty acids and longer telomeres in the white blood cells of US adults with heart disease.

Telomeres are repeat DNA sequences that protect the ends of chromosomes. These caps don't replicate particularly well and tend to shorten with repeated cell divisions. Essentially, telomere length is an emerging marker for ageing.



The researchers studied 608 Californian adults over a median of six years. Those with the highest concentrations of omega 3 fatty acids at baseline had the slowest rate of telomere shortening during follow-up, even after adjustments for dozens of possible confounding factors. In the fully adjusted model, each standard deviation increase in blood concentration was associated with a 32% reduction in the odds of telomere shortening (odds ratio 0.68, 95% CI 0.47 to 0.98).

It is hard to know at this stage what these findings mean in reality, for adults with heart disease or anyone else. But these researchers think the association is worth further scrutiny. Telomere shortening is an independent predictor of illness and death in people with cardiovascular disease. *JAMA* 2010;303:250-7

## Long term opioids are a risky treatment for non-cancer pain

Increasing numbers of US adults are prescribed long term opioids for their non-cancer pain. Hydrocodone was the most popular drug in one cohort. The drug was prescribed for 46% of 9940 adults with mostly musculoskeletal problems, such as back pain. A further quarter took oxycodone.

Eighty overdoses occurred in the cohort during 42 months of follow-up. Most of them were clinically serious and six were fatal. Risk of overdose went up in line with average daily dose, from 160 per 100 000 person years (95% CI 100 to 233) in patients taking less than 20 mg of morphine equivalents a day to 1791 per 100 000 person years (894 to 2995) for those taking at least 100 mg. Those on the highest doses were around 10 times more likely to overdose than those on the lowest doses, after adjustments for multiple clinical and demographic characteristics.

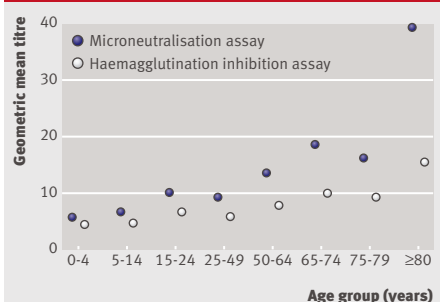
At least one health policy expert (p 123) believes that these drugs are overprescribed in the US, and that they expose people with chronic pain to unnecessary risks and have contributed to an unacceptable increase in opioid prescribing for all indications over the past decade. Opioid overdose is now a leading cause of death across the US, he writes. Prescription of opioids for non-cancer pain should be coupled with close monitoring and a clear understanding that treatment will continue only if it improves a patient's ability to function or their quality of life.

*Ann Intern Med* 2010;152:85-92

## First wave of swine flu hit children hardest

Serological surveys before and after the first wave of 2009 pandemic flu in England report incidence figures for children up to 10 times

### BASELINE ANTIBODY TITRES BY AGE



Adapted from *Lancet* 2010 doi:10.1016/S0140-6736(09)62126-7

higher than those derived from clinical sources. By September 2009, nearly a third of children in the worst hit regions of London and the West Midlands had developed neutralising antibodies to the virus, indicating infection (estimated incidence 31.6%, 95% CI 20.7% to 44.2%).

Before the pandemic, 2.8% of children under 15 already had protective antibodies (10/359 samples). The prevalence of immunity before the pandemic increased with age from 1.8% (0.6% to 5%) for preschool children to 31.3% (24.8% to 38.7%) for adults aged 80 or more.

Researchers analysed 1403 blood samples taken in 2008 and 1954 samples taken in August and September 2009, as part of an ongoing serological surveillance programme. The findings confirm that young people, particularly children, bore the brunt of the first wave of infections. Adults over 25 seemed largely unaffected, even in London and the West Midlands: the proportion of their samples showing protective antibody titres was essentially the same before and after the first wave of the pandemic.

*Lancet* 2010; doi:10.1016/S0140-6736(09)62126-7

## Some antihypertensives may be better than others at reducing risk of atrial fibrillation

Hypertension is a risk factor for atrial fibrillation. Although all antihypertensive drugs reduce the risk to some extent, a large case-control study suggests that angiotensin converting enzyme (ACE) inhibitors, angiotensin II receptor blockers, and  $\beta$  blockers may offer greater protection than calcium channel blockers.

The authors recruited 4661 patients with newly developed atrial fibrillation from a cohort of primary care patients with treated hypertension. They excluded anyone with a good reason for their atrial fibrillation, such as ischaemic heart disease or thyrotoxicosis. The 18 642 matched controls also had treated

hypertension, but no atrial fibrillation. All participants came from a well established primary care database in the UK.

After adjustments, long term treatment with an ACE inhibitor was associated with 25% lower odds of new atrial fibrillation than long term treatment with a calcium channel blocker (odds ratio 0.75, 95% CI 0.65 to 0.87). The adjusted odds ratio for angiotensin II receptor blockers was 0.71 (0.57 to 0.89) and for  $\beta$  blockers 0.78 (0.67 to 0.92).

These associations are exploratory, need confirming, and apply only to patients taking one primary antihypertensive drug with or without a diuretic, say the authors. They may not translate well to those needing more intensive treatment. The authors had no data on blood pressure or how it changed with treatment, an important limitation.

*Ann Intern Med* 2010;152:78-84

## Efforts to scale up circumcision in Africa should start with newborns

Circumcision helps protect men against HIV. Rwanda, along with other countries at the heart of the HIV epidemic, is considering how to scale up services and increase uptake. Encouraging the circumcision of neonates seemed the best option in an economic analysis that modelled the costs and benefits of circumcising babies, teenagers, and adult men.

The model predicted that circumcising baby boys would be cost saving, by preventing infections and saving money long term. Circumcision costs just \$15 (£9.3; €10.6) at this age, and the savings associated with avoiding HIV infection would have a lifetime to accumulate. Circumcising adolescents is more expensive, at \$59 a person. Even so, circumcision in adolescents looked cost effective at \$334 per quality adjusted life year gained. Like the World Health Organization, these authors defined cost effective as less than Rwanda's gross domestic product of \$355 per capita. Adult circumcision exceeded the threshold (\$613 per quality adjusted life year gained), and the authors conclude that the government should concentrate their initial efforts on newborns and adolescents, leaving adult men to a "catch up" campaign. HIV prevalence among Rwandan adults is a moderate 3%, and around 15% of men are already circumcised. A linked comment (doi:10.1371/journal.pmed.1000219) anticipates few cultural barriers to neonatal circumcision in Rwanda and says the country has a better chance than most of achieving high coverage.

*PLoS Med* 2010;7:e1000211; doi:10.1371/journal.pmed.1000211

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