

SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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Technique matters when measuring blood pressure

Biological variation in blood pressure and random measurement errors mean that doctors and researchers often have to second guess a patient's true blood pressure from a moving target. Readings from the same person fluctuate from hour to hour, from day to day, and from place to place. Health professionals know they should base treatment decisions on averages from a series of readings, but repeat visits are time consuming and inconvenient for everyone. Averaging measurements taken at home may be the answer, say researchers. In their study of 444 hypertensive men, within person variance fell sharply with increasing number of measurements, and the effect was the same at home, in the clinic, or in a research setting. The authors write that patients can be 80% certain of their true systolic blood pressure after five home readings. The cost of monitors should be reimbursed by insurers or the state.

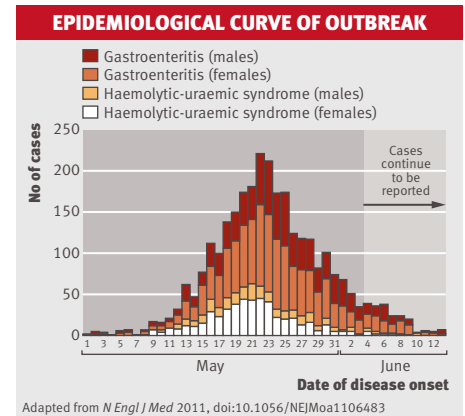
This study, along with many others, confirms that readings taken in clinics are higher

than readings taken at home. "White coat" effects are well known, but a linked commentary (pp 838-9) also blames poor training, poor oversight, and "remarkably casual" technique—cuffs applied over clothes, hurried patients slumped over desks, old equipment allowed to drift from its original calibration. Clear guidance about how to do it better, including multiple readings, has been around since 1939 and largely ignored. It's time to add measurement technique to quality assurance standards, say the commentary's authors. Only then will we begin to take measuring blood pressure seriously.

Ann Intern Med 2011;154:781-8

Germany's *E coli* outbreak characterised by virulent infection in adults, particularly women

Between 1 May and 18 June this year, 3222 cases of a particularly virulent *Escherichia coli* gastroenteritis were reported to the national public health authority in Ger-



Adapted from *N Engl J Med* 2011, doi:10.1056/NEJMoa1106483

many. Bloody diarrhoea and abdominal pain were the commonest symptoms, but a quarter of cases (810/3222) also developed haemolytic-uraemic syndrome (HUS), a dangerous complication characterised by acute renal failure, haemolytic anaemia, and thrombocytopenia. Investigators tracking the outbreak reported 39 deaths by 17 June.

The causative organism is *E coli* O104:H4, a strain that produces Shiga toxin and also has

Food, drink, sleep, and television contribute to gradual weight gain in adults

Even healthy adults with a normal body mass index gradually get fatter over time. A selection of US health professionals in three longstanding cohorts put on almost a pound (0.45 kg) a year on average in a recent analysis. Why? A careful look at the associations between changes in their diets

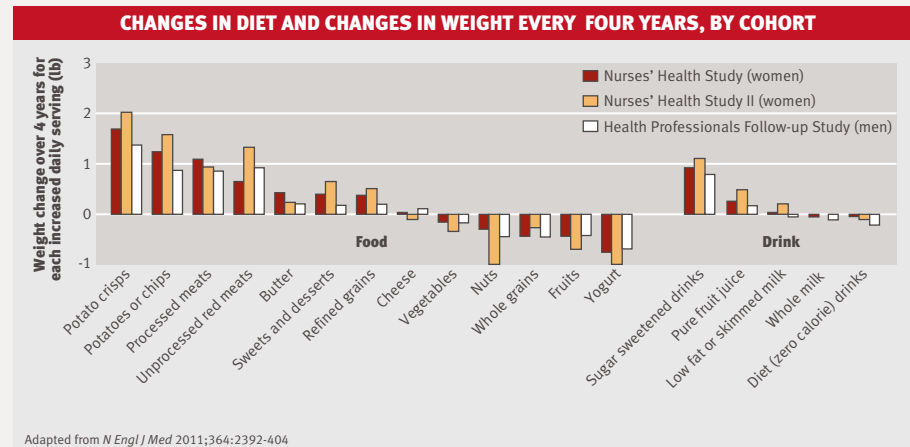
and changes in weight implicated the usual culprits. More chips, more crisps, more mash, more meat, and more sugary drinks were all associated with significant weight gain. One extra daily serving of chips alone was associated with a gain of 1.69 lb over four years (95% CI 1.30 to 2.09). Extra

servings of refined grains, unsaturated fats, puddings, and alcohol were also associated with weight gain. Extra servings of fruit, vegetables, nuts, or yoghurt were associated with a smaller but still discernible (and significant) weight loss (0.82 lb (0.99 to 0.67) for yoghurt, 0.57 lb (0.97 to 0.17) for nuts, 0.49 lb (0.63 to 0.35) for fruit, and 0.22 lb (0.34 to 0.11) for vegetables).

Men and women who took less exercise or watched more television over time got fatter than those who did the reverse. So did men and women who had too little (<6 hours) or too much (>8 hours) sleep.

These 120 877 adults were healthy, slim, and well educated. Multiple dietary and lifestyle factors seem to have had an impact on their weight trajectories during decades of follow-up in fully adjusted analyses. The current emphasis on fats, energy dense foods, and even added sugar doesn't do justice to the complexity hinted at here, say the study's authors.

N Engl J Med 2011;364:2392-404



Adapted from *N Engl J Med* 2011;364:2392-404



“Tedious work, but somebody had to follow-up 120 877 people for up to 20 years to help us understand what factors make Americans fatter by an average of 3.35 lb over 4 years”

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some rare genetic features that may account for the very high risk of HUS associated with infection, say investigators. Unusually, most cases of HUS (89%) in this outbreak were adults, particularly women. Follow-up of 59 patients who presented to one hospital in Hamburg suggests that the infection has an incubation period of around eight days, and HUS, when it occurs, follows a median of five days after the start of bloody diarrhoea. The patients who developed HUS were indistinguishable clinically from those who did not. Daily blood tests are required to make the diagnosis, say the investigators.

This outbreak began in earnest on 8 or 9 May and centred around Germany's northern states. It soon spread across the whole of Germany and to 15 other countries, including some outside Europe. Further cases are expected, say the investigators.

N Engl J Med 2011; doi:10.1056/NEJMoa1106483

When is a trial not a trial?

Seeding trials are a secretive marketing device used by drug manufacturers to increase sales of recently approved drugs. Based on a deception, they can be hard to identify, although a team of experts recently built a convincing case against a post-marketing trial of gabapentin from internal documents released during a litigation against the manufacturer, then Parke-Davis.

The STEPS trial was badly designed and poorly executed. Marketing strategists repeatedly described it as a tool to encourage prescribing among the many hundreds of investigators recruited by the company. Investigators enrolled a few patients each, often with company representatives nearby. They were inexperienced, poorly trained, and duped. Prescribing among investigators went up by more than a third after a single briefing event.

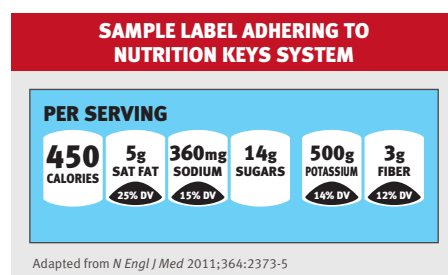
Seeding trials are a sham that deceive investigators, study subjects, and the wider public, says a linked editorial (p 1107-8) They are unethical and put vulnerable patients in harm's way for profit. Seventy three of the 2759 participants in STEPS had a serious adverse event, and three of them died.

Regulatory oversight of clinical trials has

improved since STEPS was conceived and executed, but we still have a long way to go, says the editorial, starting with smarter ethics review. Just one review board out of dozens refused to approve the STEPS protocol.

Arch Intern Med 2011;171:1100-7

Food industry criticised for pre-emptive launch of confusing food labels



Public health experts have criticised the food industry in the US for pressing ahead with its own food labelling system just months before authoritative recommendations are expected from the Institute of Medicine. Two trade associations recently launched a new system called Nutrition Keys, which gives the content of nutrients such as sugars and fats in grams and as a percentage of recommended “daily value.” This is confusing, say the experts. Shoppers spend less than a minute looking at labels on food and need something simpler and more graphic, such as the traffic light system favoured in the UK. Unhealthy nutrients are given a red, amber, or green light indicating high, medium, or low content. It takes a few seconds for shoppers to get a good idea of the nutritional value of the food they are buying. Effective food labelling is considered an important tool to help combat obesity

The timing of the industry's unilateral action is suspicious, write the experts. Why not wait for the Institute of Medicine's recommendations, due in the autumn and based on a dispassionate and scientific consideration of the evidence? Perhaps because it would suit trade organisations better to pre-empt a potentially unfavourable decision by establishing in advance food labels that are unlikely to have much impact on food choices. It wouldn't be the first time. The industry's controversial

Smart Choices labelling system was discredited after it appeared on sugary cereals such as Froot Loops and Cocoa Krispies.

N Engl J Med 2011;364:2373-5

Intensive management of screen detected diabetes looks promising, but not proved

Aggressive control of cardiovascular risk factors reduces mortality among adults with longstanding type 2 diabetes. Does it work better for patients who are diagnosed through screening and treated earlier? An ambitious trial from Europe has so far failed to find a conclusive answer. Among 3055 adults diagnosed through screening in the UK, the Netherlands, and Denmark, a comprehensive package of treatments, targets, education, monitoring, and feedback reduced cardiovascular events, including deaths, by a non-significant 17% when compared with usual care (7.2% v 8.5%, hazard ratio 0.83 (95% CI 0.65 to 1.05)). It had no discernible impact on all cause deaths over five years (6.2% v 6.7%, hazard ratio 0.91 (0.69 to 1.21)).

Primary care practices screened adults aged between 40 and 69 using a combination of risk scores and blood tests (fasting glucose concentration, glycated haemoglobin concentration, glucose tolerance tests). Those meeting World Health Organization criteria for type 2 diabetes had a mean age of 60 and mean glycated haemoglobin concentration of 7%.

Patients receiving usual care achieved better than expected control of glycaemia and risk factors such as smoking, blood pressure, and blood lipid concentrations. All participants had fewer than expected cardiovascular events. Both factors contributed to the inconclusive result, says a linked comment (doi:10.1016/S0140-6736(11)60819-2), and we should be encouraged that usual care turned out to be too good in the end, thanks to new guidelines and a push for quality improvement that emerged during the trial. The authors remain hopeful that a definitive result will emerge with longer follow-up. Outcomes began to look better for intensively treated patients after about four years.

Lancet 2011; doi:10.1016/S0140-6736(11)60698-3

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