, London

Cite this as: *BMJ* 2025;389:r601
http://doi.org/10.1136/bmj.r601
Published: 03 April 2025

Vitamin D for multiple sclerosis ... and other research

Tom Nolan reviews this week's research

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Vitamin D shines in treatment for early multiple sclerosis

There are so many studies published about vitamin D—about a dozen each day—it's hard to keep up. One that stands out is a double-blind randomised controlled trial of high dose vitamin D in people with early signs of multiple sclerosis. An acute first episode such as optic neuritis or transverse myelitis with typical findings on imaging is known as clinically isolated syndrome typical for multiple sclerosis (CIS). In the trial 316 people with CIS and a vitamin D level below 100 nmol/L were randomised to receive 100 000 IU colecalciferol or placebo every two weeks. After two years, the rates of disease activity—a clinical relapse or new signs on magnetic resonance imaging (MRI)—was observed in 60.3% of the vitamin D group and 74.1% of the placebo group (hazard ratio 0.66 (95% confidence interval 0.50 to 0.87)).

JAMA doi:10.1001/jama.2025.1604

Getting prepped for once yearly PrEP

The PURPOSE 1 and 2 trials have previously found that 6-monthly dosing of lenacapavir-based HIV pre-exposure prophylaxis (PrEP) was highly effective at reducing HIV infection in high risk populations. A phase 1 study has started assessing the potential for once yearly PrEP: 40 participants in North America, mostly white men with no comorbidities, received intramuscular lenacapavir and had the drug's blood concentrations monitored over the course of a year. Median lenacapavir levels compared favourably with those found in the PURPOSE trials, paving the way for larger, more detailed trials.

Lancet doi:10.1016/S0140-6736(25)00405-2

A comforting nudge

"Do you think this patient will be alive six months from now?" A cluster randomised trial asked intensivists this question (and made them record their justification in patients' notes) to see if this low cost nudge would lead to reduced length of hospital stay for patients in intensive care. In theory, nudging clinicians to consider and discuss comfort-focused care in addition to intensive care, where appropriate, could lead to shorter hospital stays. This didn't materialise, but there was a small increase in the number of patients discharged to a hospice in the nudge arm of the study.

JAMA Intern Med doi:10.1001/jamainternmed.2025.0090

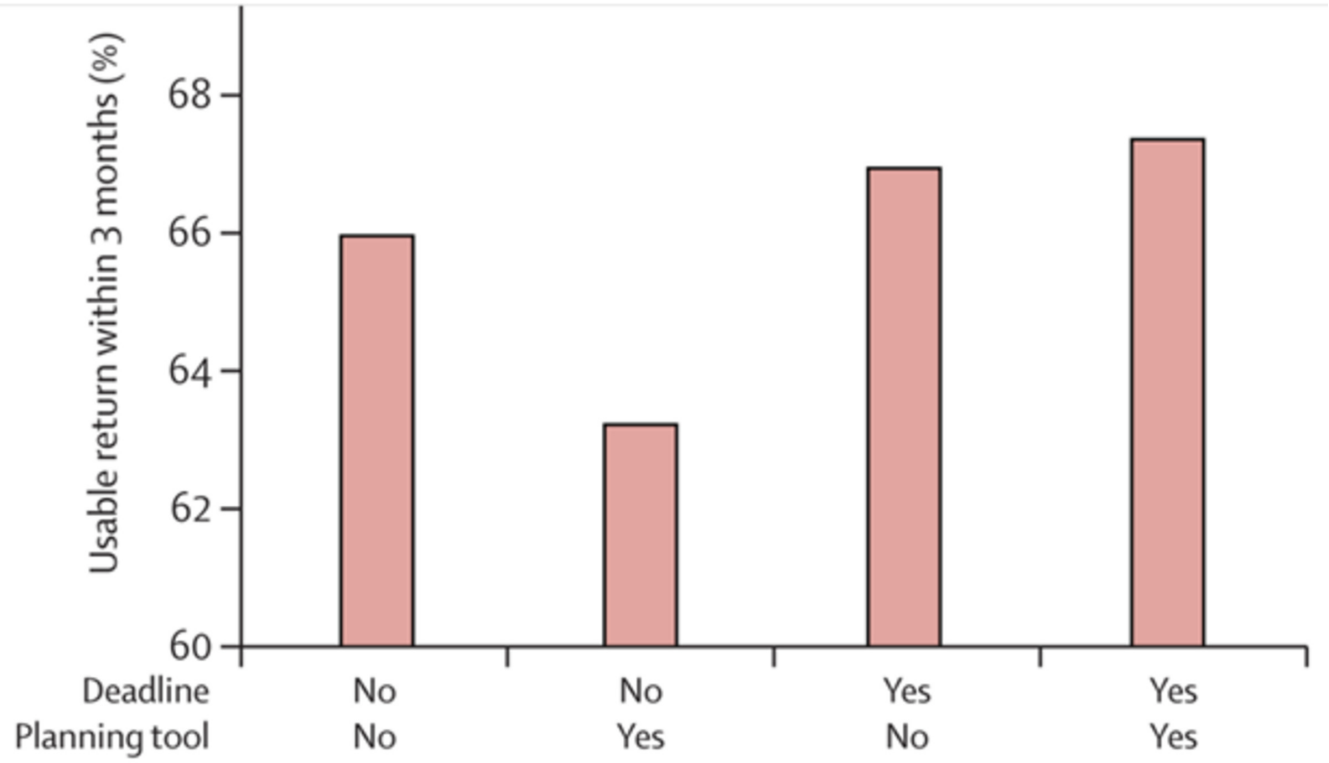
A new AID for type 2 diabetes

There are promising findings from the first randomised control trial of automated insulin delivery (AID) for people with type 2 diabetes. The trial recruited 319 adults with type 2 diabetes who were receiving multiple daily insulin injections and allocated them to switch to an AID or to continue their current treatment. Those allocated to the AID had an average 0.9% reduction in HbA1c at 13 weeks, compared with a 0.3% reduction in the control group, with those with higher baseline HbA1c tending to see the largest reductions. Most (93%) in the AID group continued using the system for the 13-week duration of the trial.

N Engl J Med doi:10.1056/NEJMoa2415948

Deadline day

"I don't need time. I need a deadline," the jazz composer Duke Ellington once said. Perhaps inspired by this, the bowel cancer screening programme in Scotland added a sentence to faecal immunochemical test (FIT) invitation letters asking people to return it before a deadline of one, two, or four weeks. This led to faster FIT returns, fewer reminder letters being sent out, and "marginally higher" return rates at three months—from 66% to 68% with a two-week return deadline. Those sent a letter with a planning tool and no deadline were less likely to return their FIT kits (see figure).



| Usable FIT return within 3 months, by planning tool and deadline status

Lancet doi:10.1016/S0140-6736(24)02813-7

Competing interests: None declared.

Provenance and peer review: Not commissioned; not peer reviewed.