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Drugs to help adults stop vaping ... and other research

Tom Nolan reviews this week's research

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Vaping cessation

Over the past year we've seen various trials that assess vaping as an intervention for smoking cessation. Now we have smoking cessation drugs being studied as interventions to help people stop vaping. Cytisinicline, a plant based alkaloid that targets nicotinic acetylcholine receptors, has been available in the UK since the start of this year. One hundred and sixty non-smokers who use nicotine vapes were randomised to either cytisinicline 3 mg three times a day for 12 weeks or placebo (both groups received behavioural support). Participants were asked to set a quit date seven to 14 days after the start of treatment. Some 31.8% of those in the cytisinicline group, and 15.1% in the placebo group had stopped vaping between nine and 12 weeks (odds ratio, 2.64; 95% CI, 1.06 to 7.10). However, by 16 weeks the gap between the groups had narrowed.

JAMA Intern Med doi:10.1001/jamainternmed.2024.1313

ZOE team celebrates its METHOD

ZOE, which offers personalised nutrition programmes, is celebrating publication of the METHOD study in *Nature Medicine*. It's "like winning the Oscars of the science world" beams their chief scientist. A blog describing the study reads like a TED talk transcript: "In a nutshell, and this bears repeating: ZOE works." The study randomised 347 people. The participants were recruited from the ZOE mailing list, a newsletter called *Empowered Gut*, and by emailing people who have already taken part in nutritional research studies. They were allocated to receive either an 18 week app based personalised dietary programme (PDP), which included assessing the microbiome and individual postprandial glucose and triglyceride responses to foods, or general advice on cardiometabolic health. After 18 weeks, those in the PDP group had lower triglycerides than controls (-0.21 mmol/L (95% CI = −0.33 to −0.10) versus -0.07 mmol/L (95% CI = −0.15 to 0.02)) but no significant difference between the groups was seen when it came to the other primary endpoint, LDL-C concentration. Some results for secondary outcomes favoured the ZOE PDP method, including weight, waist circumference, energy levels, and sleep, whereas others, such as hip circumference, blood pressure, and glucose, did not differ between the groups.

Nat Med doi:10.1038/s41591-024-02951-6

Halo effect in giant cell arteritis

Many of my days at medical school were spent playing the computer game *Halo* on the Xbox, when perhaps I should have been learning about the diagnostic accuracy of the halo sign (among many other things) instead. The British Society for Rheumatology's 2020 guideline on diagnosis of giant cell arteritis (GCA) puts the sensitivity of the halo sign on ultrasound at 74%. A new study of 165 people with a high clinical suspicion of GCA found that using ultrasound as a first line investigation could avoid temporal artery biopsy, being positive in 54% of those clinically diagnosed with GCA. This supports the suggestion in the guideline that a positive ultrasound in someone with a high index of clinical suspicion (>50 pre-test probability) means a temporal artery biopsy can be avoided. The guideline also indicates that a negative ultrasound in those with a low likelihood of disease (<20% pre-test probability) can effectively rule out GCA.

Ann Intern Med doi:10.7326/M23-3417

Safety of outpatient appointments

We hear a lot about the dangers of being admitted to hospital: "the safest place for you is at home" must be one of the most used slogans in the emergency department, although it might not work so well on a poster. But do patients face similar risks from the outpatient department? Researchers assessed the notes of 3103 outpatients in Massachusetts, who had an average of four appointments each over a year. Seven per cent of patients (95% CI, 4.6% to 9.3%) were judged to have had at least one adverse event. Most of these (63.8%) were adverse drug events, followed by healthcare associated infections (14.8%), and surgical or procedural events (14.2%). Of the adverse events, 23.2% were deemed preventable.

Ann Intern Med doi:10.7326/M23-2063

Large infarcts and thrombectomy

Three hundred and thirty three people with large anterior circulation infarcts who were assessed within 6.5 hours of symptom onset were randomised to either endovascular thrombectomy or usual care. The trial was stopped early because other studies had already reported a benefit for thrombectomy. Improvements in levels of disability were seen after 90 days, and deaths from any cause were lower in the thrombectomy group (36.1% versus 55.5%, adjusted relative risk, 0.65; 95% CI, 0.50 to 0.84).

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