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# Tom Nolan's research reviews—30 March 2023

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### Impact of minimum alcohol pricing

In 2018 Scotland introduced a 50 pence per unit minimum price for alcohol. Studies have suggested this led to a 3% reduction in alcohol sales, but has this had any impact on death rates and reduced hospital admissions? A Scottish government funded study looked at hospital and death datasets in Scotland, using England as a control group. It found a 13.4% reduction in deaths wholly attributable to alcohol consumption and a 4.1% reduction in hospital admissions wholly attributable to alcohol consumption after minimum pricing was introduced up to the end of 2020. Larger reductions were found in more deprived areas and in males.

Lancet doi:10.1016/S0140-6736(23)00497-X

## Augmented reality

Augmentation of antidepressant treatment with a second agent is outside of my comfort zone as a GP, but it seems to be a common option offered by community psychiatrists for those with severe depression. A two-step open-label trial looked at augmentation of existing antidepressant medication with buproprion or the atypical antipsychotic aripiprazole in older people (60 years or older) with depression resistant to two or more antidepressants. It found modest improvements in psychological wellbeing at 10 weeks for augmentation with either drug, and higher levels of remission at 10 weeks compared with switching from existing antidepressant to bupropion (28.9% and 28.2% for aripiprazole and bupropion augmentation respectively, and 19.3% for switching to bupropion). However, the short follow-up, broad exclusion criteria, and lack of a placebo control group mean my comfort zone remains unchanged for now.

N Engl J Med doi:10.1056/NEJM0a2204462

#### The Last of Us

Fans of zombie-western computer game turned TV masterpiece *The Last of Us* might be a little concerned to hear that a potentially deadly candida species of fungus is spreading across the US at an alarming rate. "We don't want people who watched *The Last of Us* to think we're all going to die," one infectious disease expert reassured viewers of NBC news. In the TV show cordyceps fungal infections turn humans into zombies intent on spreading the infection by biting the uninfected. In the *Annals of Internal Medicine*, *Candida auris* is a new species of candida spreading in the US since 2016 that is causing concern because of an increase in echinocandin (such as caspofungin) resistance and a 95% rise in clinical cases in the US in 2021.

Ann Intern Med doi:10.7326/M22-3469

### Nirmatrelvir for prevention of long covid

WHO guidelines recommend the antiviral nirmatrelvir as treatment for acute non-severe covid-19 in those with the highest risk of hospital admission. If it's effective at reducing hospital admissions and deaths in this group, might it also help prevent long covid?

There are no randomised control trials to help us answer this question, but a new cohort study published in *JAMA Internal Medicine* suggests that it might. The study used databases of the US Department of Veterans Affairs to compare US veterans, all with at least one risk factor for severe covid-19 and most of whom (86%) were men, who had received nirmatrelvir for covid-19 with those who had not received treatment. Recorded rates of 10 out of 13 prespecified symptoms of long covid (such as shortness of breath and muscle pain) and sequelae of covid-19 (pulmonary embolism) were lower in those who had taken nirmatrelvir.

JAMA Intern Med doi:10.1001/jamaintern-med.2023.0743

### **Coffee Can**

Given my chronic overuse of coffee, I think if I signed up to take part in a study where I was told not to drink coffee for two days in a row, I might be tempted to sneak off to my local coffee shop in any case. Suspecting that this might happen, the authors of a new study of the acute health effects of coffee tracked participants' proximity to coffee shops. Over a two week period, participants also wore an ECG monitor to track the study's primary endpoint of mean number of atrial contractions over a 24 hour period. Although the authors found no significant difference in this outcome between days when coffee was allowed and no-caffeine days, they did find that people slept less and took more steps on days when they drank coffee.

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