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Impact of early life experiences on late life cognitive outcomes ... and other research

Tom Nolan reviews this week's research

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Early life circumstances and dementia

Dementia rates vary considerably between different ethnic groups. Recent research estimated that black people in the UK are 22% more likely to be diagnosed with dementia than white people. A cross-sectional study of 1634 black and 7381 white participants in a nationally representative survey of adults over 50 years old in the US looked at early life circumstances as a possible contributing factor to these differences. In the US, state sponsored school segregation led to many black students having shorter school days, shorter school years, and less access to educational resources, and was only outlawed in 1954. This study estimated that school segregation was associated with between 28.8% to 39.7% of the racial disparities in cognition, and that over 80% of the differences in cognitive impairment seen between black and white participants was associated with differences in early life circumstances.

JAMA Intern Med doi:10.1001/jamainternmed.2024.1132

Active surveillance for localised prostate cancer

The 2021 NICE guidelines recommend offering active surveillance for localised prostate cancer and lower risk features (Cambridge Prognostic Group 1 and 2). A new multicentre cohort study set in North America followed 2155 men with low risk localised prostate cancer who were put onto an active surveillance protocol. The 10 year rate of metastasis was 1.4% (95% CI 0.7% to 2%) and prostate cancer-specific mortality was 0.1% (0 to 0.4%). For context, overall mortality was 5.1% (3.8% to 6.4%) over the same period. These rates are much lower than you'll find quoted in the NICE guideline (2% risk of death from prostate cancer at 10 years, for example), but this may in part be due to differences in active surveillance protocols. In this study patients had confirmatory biopsies leading to 23% having the prostate cancer grade reclassified.

JAMA doi:10.1001/jama.2024.6695

Statins in the over 85s

A target trial emulation study compares outcomes in a real world population who are exposed to an intervention with a control group. One such study set in China has found that people aged 85 years or over without a prior diagnosis of cardiovascular disease had lower rates of cardiovascular disease events over a five year period when prescribed statins than did controls: a 4.4% risk reduction (95% CI 1.4% to 7.5%). With this type of study, however, residual confounding can result in important differences between the treatment and control groups (such as in diet and lifestyle factors), which could mean that those who started statins were always going to be less likely to be diagnosed with cardiovascular disease.

Ann Intern Med doi:10.7326/M24-0004

A picture of health

The home page of the *New England Journal of Medicine* currently has a "before treatment" and "after treatment" photo on it that puts every private hair loss clinic advert you've ever seen to shame. Five people with autoimmune polyendocrine syndrome type 1 (APS-1) were treated with the Janus kinase (JAK) inhibitor ruxolitinib. All five had remission of symptoms of the rare disease, which include oral candidiasis, nail dystrophy, gastritis, enteritis, arthritis, Sjögren's-like syndrome, urticaria, thyroiditis, and (as so dramatically demonstrated in the photographs) alopecia.

N Engl J Med doi:10.1056/NEJMoa23126

Renal function and hypertension in kidney donors

I'm not sure what level of evidence I'd need to persuade me to donate a kidney. Randomised controlled trials aren't going to happen, but good quality prospective cohort studies would probably be enough to put my mind at ease about the long term risks. A multicentre cohort study of 924 living kidney donors and 396 non-donors looked for differences in blood pressure, estimated glomerular filtration rate (eGFR), and albuminuria between the two groups after seven years. In the donor group eGFR dropped by a mean of 32 mL/min/1.73 m^2 in the donor group after nephrectomy—as you might expect—but, rather than then declining at the same rate as non-donors, it fell by 1.4 mL/min/1.73 m^2 (95% CI 1.2 to 1.5) less per year than non-donors. Blood pressure was similar in both groups at the end of the study.

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