period may persist into adulthood, increasing chronic disease risk in later life. A better understanding of the underlying trajectories of sugar consumption across adolescence and early adulthood will help inform appropriate interventions for this age group. This systematic review investigated changes in intake of added sugars and sugary foods and drinks, and determinants of such changes, between the ages of 13 and 30 years.

**Methods** In accordance with the registered protocol (PROSPERO: CRD42015030126), 7 electronic databases were searched in January 2016 for longitudinal studies of diet during adolescence or early adulthood. The papers retrieved were screened for studies including multiple measures of intake of sugars or sugary foods or drinks in cohort participants between the ages of 13 and 30 years. Data from included studies were extracted and analysed using random-effects meta-analysis, by the three main nutrient and food group categories identified.

Results We identified 23 papers reporting longitudinal data on intake of added sugar or sucrose (n=5), sugar-sweetened beverages (SSBs) (n=20) and/or confectionery (n=9). Eight papers reported data from the US, with Norway, Sweden and Australia also contributing several papers. On average, we found a per-year of age decrease in added sugar or sucrose intake (−0.28% total energy intake (95% CI −0.44; −0.12)), a decrease in confectionery consumption (−0.20 servings/week (95% CI −0.41; −0.001)) and a non-significant decrease in SSB consumption (−0.15 servings/week (95% CI −0.32; 0.02)). A small number of studies reported associations between behavioural determinants (e.g. screen time and fast food consumption) and change in intake of added sugar. Only three papers reported data beyond the age of 21 which weakens applicability of these findings to the early adulthood years.

**Conclusion** This review demonstrates a decrease in added sugar intake from adolescence to early adulthood, which may suggest an opportunity to capitalise on such changing preferences with interventions to further improve dietary choices within this age range. Improved longitudinal data is needed to further develop our understanding of changes in added sugar consumption into early adulthood and determinants of these changes.

**Methods** We analysed repeated measures (23 245 person-observations) from the Whitehall II cohort study. The study recruited non-industrial civil servants from 1985 to 1988. The most recent data used in this analysis was collected in 2013. CMD was measured with the 30-item General Health Questionnaire and depression with the 20-item Centre for Epidemiologic Studies Depression scale. Sugar intake from sweet food/beverages was assessed using food frequency questionnaires. Prospective analyses included 2, 5 and 10 year follow-up periods. We modelled associations using random effects regression using Stata 14.

**Results** Cross-sectional analyses showed positive associations. In prospective analyses we found a positive association of sugar intake from sweet food/beverages with incident CMD in men and with recurrent depression in women. Men in the highest tertile of intake had a 24% increased odds of incident CMD after 5 years (95% CI: 1.02, 1.48) independent of health behaviours, socio-demographic and diet-related factors, adiposity and other diseases (fully adjusted model). Women had a 36% increased odds for recurrent depression per 30 g increment (95% CI: 1.03, 1.80) in fully adjusted models, associations using tertiles of sugar intake from sweet food/beverages were similar but not statistically significant when adjusted for diet-related factors. Notably, neither CMD nor depression predicted changes in sugar intake from sweet food/beverages.

**Conclusion** Our findings using repeated measures follow-up data over 22 years suggest an adverse effect of sugar intake from sweet food/beverages on long-term psychological health. These results add further support for public health interventions which promote reduced sugar intake to improve overall health.