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IN BRIEF

RISK FACTORS

Marijuana increases risk of prediabetes

An analysis of data from the Coronary Artery Risk Development in Young Adults (CARDIA) study has revealed that using marijuana during young adulthood results in an increased risk of prediabetes, but not diabetes mellitus, by middle adulthood. The study included data from >3,000 individuals who did not have prediabetes or diabetes mellitus at CARDIA examination year 7. Participants were asked to self-report their marijuana use throughout the study and underwent a follow-up examination at least once over the subsequent 18 years (up to CARDIA examination year 25). At the end of the follow-up period, the participants who reported a lifetime use of marijuana of ≥ 100 times had an increased risk of prediabetes compared with those who reported never using marijuana.

Original article Bancks, M. P. *et al.* Marijuana use and risk of prediabetes by middle adulthood: the Coronary Artery Risk Development in Young Adults (CARDIA) study. *Diabetologia* doi:10.1007/s00125-015-3740-3

DIABETES

Hyaluronan is involved in the development of T1DM

Autoimmune insulinitis in patients with type 1 diabetes mellitus (T1DM) is characterized by deposits of hyaluronan (an extracellular matrix polysaccharide) in the islets of Langerhans. However, it was unclear what role, if any, these deposits had in the disease. New research has demonstrated the hyaluronan deposits are associated (both temporally and anatomically) with the development of insulinitis in the DO11.10xRIPmOVA mouse model of T1DM. Treating these mice with 4-methylumbelliferone (which inhibits hyaluronan synthesis) prevented the mice from developing diabetes mellitus. The treatment prevented the accumulation of hyaluronan and increased the numbers of FOXP3⁺ T regulatory cells. The researchers suggest that as 4-methylumbelliferone is already approved for treating biliary spasm, it could be repurposed to prevent the development of T1DM in at-risk individuals.

Original article Nagy, N. *et al.* Inhibition of hyaluronan synthesis restores immune tolerance during autoimmune insulinitis. *J. Clin. Invest.* doi:10.1172/JCI79271

NUTRITION

Modelling effects of different trans fatty acids policies on death from coronary heart disease

Using data from the National Diet and Nutrition Survey, the Low Income Diet and Nutrition Survey, the Office of National Statistics and other published studies, a team of researchers modelled the effects of a total ban on trans fatty acids in processed foods, improved labelling of trans fatty acids and a ban on trans fatty acids in restaurants and takeaways. They found that a total ban could prevent or postpone ~7,200 deaths from coronary heart disease over a 5-year period, and reduce socioeconomic inequalities in deaths from coronary heart disease. The other policies were approximately half as effective as the total ban. The researchers suggest that continuing to rely on industry to voluntarily reduce levels of trans fatty acids could have negative health and economic consequences.

Original article Allen, K. *et al.* Potential of trans fat policies to reduce socioeconomic inequalities in mortality from coronary heart disease in England: cost effectiveness study. *BMJ* doi:10.1136/bmj.h4583