Study examines the influence of dietary free sugar intake on dental caries

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A study investigating the relationship between free sugar intake in early childhood and dental caries at age four to six years will be presented by Stephanie Heitkonig of Royal Children's Hospital, Murdoch Children's

Research Institute and the University of Melbourne, Australia at the 100th General Session and Exhibition of the IADR, to be held in conjunction with the 5th Meeting of the IADR Asia Pacific Region. The Interactive Talk presentation, "The Influence of Dietary Free Sugar Intake on Dental Caries", will take place on Thursday, June 23rd, 2022 at 8 p.m. China Standard Time (UTC+08:00) during the "Behavioral and Social Risk Factors Associated with Early Childhood Caries" session.

Free sugar consumption was measured in children enrolled in the Barwon Infant Study at age 18-months and 4-years. The exposure, free sugar intake was quantified as continuous and binary variables indicating less than 5% of total energy intake (TEI) at 18-months and 4-years of age. The prevalence of dental caries was obtained from dental records. Multiple logistic regression estimated the effect of the exposure variables on the presence of dental caries at 4-6 years of age, adjusting for potential confounders.

Of the original birth cohort, dietary data (N=863) and dental caries data (N=368) were available. 70.4% and 36.7% participants consumed less than 5% TEI from free sugars at 18-months and 4-years, respectively. Dental caries affected 46.7% of children. In fully adjusted models, free sugar at 18-months (OR 1.74; 95% CI 1.06, 2.86 per 5% of TEI) and at 4-years of age (OR 1.43; 95% CI 0.90, 2.28, per 5% of TEI) increased dental caries risk at 4-6 years. The estimated effect of consuming less than 5% free sugars of TEI at 18-months and 4-years of age on dental caries prevalence at 4-6 years was an OR 0.71, 95% CI 0.42, 1.19 and OR: 0.61; 95% CI 0.38, 0.97 respectively. The estimated effect of lowering free sugars to less than 5% of TEI at both timepoints compared to exceeding 5% TEI at one or both timepoints, on dental caries risk at 4-6 years was an OR 0.55; 95% CI 0.33, 0.93.

The authors concluded that between 18-months and 4-years, free sugar consumption increased markedly with two thirds of children exceeding

5% of TEI at 4-years of age. Early free sugar intake increases the risk of dental caries at 4-6-years of age.

More information: Conference/talk login: iadr.secure-platform.com/2022/ … 3/sessiongallery/781

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