



Welcome to the latest issue of the weekly Obesity Knowledge Update from Public Health England. This bulletin highlights new research relating to obesity and its determinants.

If you do not wish to receive further Obesity Knowledge Updates, please [click here to unsubscribe](#). You will continue to receive other Obesity Intelligence emails (notification of new resources etc.).

- [UK and Ireland - 8](#)
- [International - 35](#)
- [Systematic reviews - 4](#)

UK and Ireland

[A randomised controlled study shows supplementation of overweight and obese adults with lactobacilli and bifidobacteria reduces bodyweight and improves well-being.](#) Michael DR, Jack AA, Masetti G, Davies TS, Loxley KE, Kerry-Smith J, Plummer JF, Marchesi JR, Mullish BH, McDonald JAK, Hughes TR, Wang D, Garaiova I, Paduchová Z, Muchová J, Good MA, Plummer SF. *Sci Rep.* 2020 Mar 6;10(1):4183. doi: 10.1038/s41598-020-60991-7.

[Adult obesity and mid-life physical functioning in two British birth cohorts: investigating the mediating role of physical inactivity.](#) Pinto Pereira SM, De Stavola BL, Rogers NT, Hardy R, Cooper R, Power C. *Int J Epidemiol.* 2020 Mar 6. pii: dyaa014. doi: 10.1093/ije/dyaa014.

[Body Mass Index \(BMI\) and Work Ability in Older Workers: Results from the Health and Employment after Fifty \(HEAF\) Prospective Cohort Study.](#) Linaker CH, D'Angelo S, Syddall HE, Harris EC, Cooper C, Walker-Bone K. *Int J Environ Res Public Health.* 2020 Mar 3;17(5). pii: E1647. doi: 10.3390/ijerph17051647.

[How valid are projections of the future prevalence of diabetes? Rapid reviews of prevalence-based and Markov chain models and comparisons of different models' projections for England.](#) Bevan G, De Poli C, Keng MJ, Raine R. *BMJ Open.* 2020 Mar 3;10(3):e033483. doi: 10.1136/bmjopen-2019-033483.

[Neighbourhood greenspace influences on childhood obesity in Sheffield, UK.](#) Mears M, Brindley P, Baxter I, Maheswaran R, Jorgensen A. *Pediatr Obes.* 2020 Mar 4:e12629. doi: 10.1111/ijpo.12629.

[A weight management programme for fathers of children aged 4–11 years: cultural adaptation and the Healthy Dads, Healthy Kids UK feasibility RCT.](#) Jolly K, Griffin T, Sidhu M, Adab P, Burgess A, Collins C, Daley A, Entwistle A, Frew E, Hardy P, Hurley K, Jones L, McGee E, Pallan M, Sun Y, Young M, Morgan P. Southampton (UK): NIHR Journals Library; 2020 Feb.

Associations of adverse childhood experiences with educational attainment and adolescent health and the role of family and socioeconomic factors: A prospective cohort study in the UK. Houtepen LC, Heron J, Suderman MJ, Fraser A, Chittleborough CR, Howe LD. PLoS Med. 2020 Mar 2;17(3):e1003031. doi: 10.1371/journal.pmed.1003031.

The effect of local unemployment on health: A longitudinal study of Irish mothers 2001-2011. Briody J, Doyle O, Kelleher C. Econ Hum Biol. 2020 Feb 13;37:100859. doi: 10.1016/j.ehb.2020.100859.

[\[back to top\]](#)

International

Overweight and obesity status from the prenatal period to adolescence and its association with Non-alcoholic fatty liver disease in young adults: cohort study. Cantoral A, Montoya A, Luna-Villa L, Roldán-Valadez EA, Hernández-Ávila M, Kershenobich D, Perng W, Peterson KE, Hu H, Rivera JA, Téllez-Rojo MM. BJOG. 2020 Mar 7. doi: 10.1111/1471-0528.16199.

A precision medicine approach to develop and internally validate optimal exercise and weight loss treatments for overweight and obese adults with knee osteoarthritis. Jiang X, Nelson AE, Cleveland RJ, Beavers DP, Schwartz TA, Arbeeve L, Alvarez C, Callahan LF, Messier S, Loeser R, Kosorok MR. Arthritis Care Res (Hoboken). 2020 Mar 7. doi: 10.1002/acr.24179.

Baseline Habitual Physical Activity Predicts Weight Loss, Weight Compensation, and Energy Intake During Aerobic Exercise. Höchsmann C, Dorling JL, Apolzan JW, Johannsen NM, Hsia DS, Martin CK. Obesity (Silver Spring). 2020 Mar 6. doi: 10.1002/oby.22766.

Evidence for Protein Leverage in Children and Adolescents with Obesity. Saner C, Tassoni D, Harcourt BE, Kao KT, Alexander EJ, McCallum Z, Olds T, Rowlands AV, Burgner DP, Simpson SJ, Raubenheimer D, Senior AM, Juonala M, Sabin MA. Obesity (Silver Spring). 2020 Mar 6. doi: 10.1002/oby.22755.

Associations of appetitive behaviors in 7-year-old children with their cardiometabolic health at 10 years of age. Warkentin S, Santos AC, Oliveira A. Nutr Metab Cardiovasc Dis. 2020 Jan 21. pii: S0939-4753(20)30023-5. doi: 10.1016/j.numecd.2020.01.007.

Feasibility of Social-Network-Based eHealth Intervention on the Improvement of Healthy Habits among Children. Benítez-Andrades JA, Arias N, García-Ordás MT, Martínez-Martínez M, García-Rodríguez I. Sensors (Basel). 2020 Mar 4;20(5). pii: E1404. doi: 10.3390/s20051404.

Analysis of correlation between liver fat fraction and AST and ALT levels in overweight and obese children by using new magnetic resonance imaging technique. Pirimoğlu B, Sade R, Polat G, İşlek A, Kantarcı M. Turk J Gastroenterol. 2020 Feb;31(2):156-162. doi: 10.5152/tjg.2020.18594.

Breastfeeding and childhood obesity: A 12-country study. Ma J, Qiao Y, Zhao P, Li W, Katzmarzyk PT, Chaput JP, Fogelholm M, Kuriyan R, Lambert EV, Maher C, Maia J, Matsudo V, Olds T, Onywera V, Sarmiento OL, Standage M, Tremblay MS, Tudor-Locke C, Hu G; ISCOLE Research Group. Matern Child Nutr. 2020 Mar 5:e12984. doi: 10.1111/mcn.12984.

Individual and social predictors of smoking and obesity: A panel study in Germany. Monfared IG, Harttgen K, Vollmer S. SSM Popul Health. 2020 Feb 13;10:100558. doi: 10.1016/j.ssmph.2020.100558.

Effect of probiotics on obesity-related markers per enterotype: a double-blind, placebo-controlled, randomized clinical trial. Song EJ, Han K, Lim TJ, Lim S, Chung MJ, Nam MH, Kim H, Nam YD. *EPMA J.* 2020 Feb 7;11(1):31-51. doi: 10.1007/s13167-020-00198-y.

Change in drink purchases in 16 Australian recreation centres following a sugar-sweetened beverage reduction initiative: an observational study. Boelsen-Robinson T, Orellana L, Backholer K, Kurzeme A, Jerebine A, Gilham B, Chung A, Peeters A. *BMJ Open.* 2020 Mar 4;10(3):e029492. doi: 10.1136/bmjopen-2019-029492.

Possible Modifiers of the Association Between Change in Weight Status From Child Through Adult Ages and Later Risk of Type 2 Diabetes. Bjerregaard LG, Wasenius N, Nedelec R, Gjørde LK, Ängquist L, Herzig KH, Jensen GB, Mortensen EL, Osler M, Overvad K, Skaaby T, Tjønneland A, Sørensen TIA, Järvelin MR, Eriksson JG, Sebert S, Baker JL. *Diabetes Care.* 2020 Mar 5. pii: dc191726. doi: 10.2337/dc19-1726.

Economic evaluation of surgical treatment of obesity. Rodicio Miravalles JL, Alonso Fernández J, Moreno Gijón M, Rizzo Ramos A, Turienzo Santos E, Sanz Álvarez L, Rodríguez García JI, González González JJ. *Cir Esp.* 2020 Mar 2. pii: S0009-739X(20)30025-7. doi: 10.1016/j.ciresp.2020.01.001.

A cross-sectional study of obesogenic behaviours and family rules according to family structure in European children. Stahlmann K, Hebestreit A, DeHenauw S, Hunsberger M, Kaprio J, Lissner L, Molnár D, Ayala-Marín AM, Reisch LA, Russo P, Tornaritis M, Veidebaum T, Pohlabein H, Bogl LH. *Int J Behav Nutr Phys Act.* 2020 Mar 5;17(1):32. doi: 10.1186/s12966-020-00939-2.

Health related quality of life associated with extreme obesity in adolescents - results from the baseline evaluation of the YES-study. Felix J, Stark R, Teuner C, Leidl R, Lennerz B, Brandt S, von Schnurbein J, Moss A, Bollow E, Sergejev E, Mühlig Y, Wiegand S, Holl RW, Reinehr T, Kiess W, Scherag A, Hebebrand J, Wabitsch M, Holle R. *Health Qual Life Outcomes.* 2020 Mar 5;18(1):58. doi: 10.1186/s12955-020-01309-z.

Association of Intensive Lifestyle Intervention, Fitness and Body Mass Index with Risk of Heart Failure in Overweight or Obese Adults with Type 2 Diabetes Mellitus: An Analysis from the Look AHEAD Trial. Pandey A, Patel KV, Bahnson JL, Gaussoin SA, Martin CK, Balasubramanyam A, Johnson KC, McGuire DK, Bertoni AG, Kitzman D, Berry JD; Look AHEAD research group. *Circulation.* 2020 Mar 5. doi: 10.1161/CIRCULATIONAHA.119.044865.

Deceptively unhealthy foods targeting parents and children. Kiefner-Burmeister A, Burmeister JM. *J Health Psychol.* 2020 Mar 5;1359105320903485. doi: 10.1177/1359105320903485.

Impact of change in bedtime variability on body composition and inflammation: secondary findings from the Go Red for Women Strategically Focused Research Network. St-Onge MP, Campbell A, Zuraikat F, Cheng B, Shah R, Berger JS, Sampogna RV, Jelic S. *Int J Obes (Lond).* 2020 Mar 5. doi: 10.1038/s41366-020-0555-1.

Trends in US adults with overweight and obesity reporting being notified by doctors about body weight status, 1999-2016. Hansen AR, Rustin C, Opoku ST, Shevatekar G, Jones J, Zhang J. *Nutr Metab Cardiovasc Dis.* 2020 Jan 24. pii: S0939-4753(20)30018-1. doi: 10.1016/j.numecd.2020.01.002.

Text Message Behavioral Intervention for Teens on Eating, Physical Activity and Social Wellbeing (TEXTBITES): Protocol for a Randomized Controlled Trial. Partridge SR, Raeside R, Singleton AC, Hyun K, Latham Z, Grunseit A, Steinbeck K, Chow C, Redfern J. JMIR Res Protoc. 2020 Feb 18;9(2):e16481. doi: 10.2196/16481.

Effectiveness of the Fun for Wellness Web-Based Behavioral Intervention to Promote Physical Activity in Adults With Obesity (or Overweight): Randomized Controlled Trial. Myers ND, McMahon A, Prilleltensky I, Lee S, Dietz S, Prilleltensky O, Pfeiffer KA, Bateman AG, Brincks AM. JMIR Form Res. 2020 Feb 21;4(2):e15919. doi: 10.2196/15919.

Efficacy and Safety of Sinetrol-XPur on Weight and Body Fat Reduction in Overweight or Obese Adults: A 12-Week, Randomized, Double-Blind, Parallel, Placebo-Controlled Trial. Park SJ, Sharma A, Bae MH, Sung HC, Kim NK, Sung E, Lee HJ. J Med Food. 2020 Mar 4. doi: 10.1089/jmf.2019.4649.

Biobehavioural approaches to prevention and treatment: A call for implementation science in obesity research. Kaiser KA, Carson TL, Dhurandhar EJ, Neumeier WH, Cardel MI. Obes Sci Pract. 2020 Jan 22;6(1):3-9. doi: 10.1002/osp4.384.

Recruitment and reach in a pragmatic behavioral weight loss randomized controlled trial: implications for real-world primary care practice. Befort CA, Kurz D, VanWormer JJ, Ellerbeck EF. BMC Fam Pract. 2020 Mar 3;21(1):47. doi: 10.1186/s12875-020-01117-w.

Oakland's sugar-sweetened beverage tax: Impacts on prices, purchases and consumption by adults and children. Cawley J, Frisvold D, Hill A, Jones D. Econ Hum Biol. 2020 Feb 21;37:100865. doi: 10.1016/j.ehb.2020.100865.

Epidemiology of Non-alcoholic Fatty Liver Disease in North America. Arshad T, Golabi P, Henry L, Younossi ZM. Curr Pharm Des. 2020 Mar 2. doi: 10.2174/1381612826666200303114934.

Promoting self-control in overweight and obese children. Vite Sierra A, Negrete Cortés AJ, Cavita Castro CA. Nutr Hosp. 2020 Mar 3. doi: 10.20960/nh.02658.

Social Determinants of Overweight and Obesity Among Children in the United States. Yusuf ZI, Dongarwar D, Yusuf RA, Bell M, Harris T, Salihu HM. Int J MCH AIDS. 2020;9(1):22-33. doi: 10.21106/ijma.337.

Perspectives of adolescents with severe obesity on social Media in Preparation for weight-loss surgery: a qualitative study. Parks EP, Finnerty DD, Panganiban J, Frasso R, Bishop-Gilyard C, Tewksbury CM, Williams NN, Dumon KR, Cordero G, Hill DL, Sarwer DB. BMC Pediatr. 2020 Mar 2;20(1):96. doi: 10.1186/s12887-020-1992-7.

Obesity, overweight and risk for cardiovascular disease and mortality in young women. Dikaïou P, Björck L, Adiels M, Lundberg CE, Mandalenakis Z, Manhem K, Rosengren A. Eur J Prev Cardiol. 2020 Mar 2:2047487320908983. doi: 10.1177/2047487320908983.

The Modelled Population Obesity-Related Health Benefits of Reducing Consumption of Discretionary Foods in Australia. Lal A, Peeters A, Brown V, Nguyen P, Tran HNQ, Nguyen T, Tonmukayakul U, Sacks G, Calache H, Martin J, Moodie M, Ananthapavan J. Nutrients. 2020 Feb 28;12(3). pii: E649. doi: 10.3390/nu12030649.

Moderators in a physical activity intervention for adolescent girls. Robbins LB, Ling J, Wen F. Pediatr Res. 2020 Mar 2. doi: 10.1038/s41390-020-0818-5.

Effects of screen time and playing outside on anthropometric measures in preschool aged children. Schwarzfischer P, Gruszfeld D, Socha P, Luque V, Closa-Monasterolo R, Rousseaux D, Moretti M, ReDionigi A, Verduci E, Koletzko B, Grote V. PLoS One. 2020 Mar 2;15(3):e0229708. doi: 10.1371/journal.pone.0229708.

"On a Positive Path": School Superintendents' Perceptions of and Experiences With Local School Wellness Policy Implementation and Evaluation. Asada Y, Hughes A, Read M, Schwartz M, Schermbeck R, Turner L, Chriqui J. Health Promot Pract. 2020 Mar 2:1524839920907559. doi: 10.1177/1524839920907559.

Comparison of incidence rates and risk factors of heart failure between two male cohorts born 30 years apart. Ergatoudes C, Hansson PO, Svärdsudd K, Rosengren A, Östgärd Thunström E, Caidahl K, Pivodic A, Fu M. Heart. 2020 Feb 29. pii: heartjnl-2019-316059. doi: 10.1136/heartjnl-2019-316059.

[\[back to top\]](#)

Systematic reviews

Investigating the relationship between reward sensitivity, impulsivity, and food addiction: A systematic review. Maxwell AL, Gardiner E, Loxton NJ. Eur Eat Disord Rev. 2020 Mar 6. doi: 10.1002/erv.2732.

Measurement Methods Used to Assess the School Food Environment: A Systematic Review. O'Halloran S, Eksteen G, Gebremariam M, Alston L. Int J Environ Res Public Health. 2020 Mar 3;17(5). pii: E1623. doi: 10.3390/ijerph17051623.

The association between dietary inflammatory index and risk of central obesity in adults: An updated systematic review and meta-analysis. Farhangi MA, Vajdi M. Int J Vitam Nutr Res. 2020 Mar 4:1-18. doi: 10.1024/0300-9831/a000648.

Promotion of Healthy Nutrition and Physical Activity Lifestyles for Teenagers: A Systematic Literature Review of The Current Methodologies. Villasana MV, Pires IM, Sá J, Garcia NM, Zdravevski E, Chorbev I, Lameski P, Flórez-Revuelta F. J Pers Med. 2020 Mar 1;10(1). pii: E12. doi: 10.3390/jpm10010012.

[\[back to top\]](#)