



Making the case for tackling obesity – why invest?

Supporting references

The links in this reference sheet are intended to provide background information and evidence behind the facts in the accompanying slide set, as well as easy access to key reports and data sets.

The slide set is based on the most recent data and best available evidence. It includes systematic reviews where available, robust evidence summaries, policy documents and guidance from trusted sources. For some facts, smaller studies, economic models and evaluations of local interventions are referenced. Examples of local interventions are also included.

Slide 1. Making the case for tackling obesity – why invest?

Slide 2. Why is obesity an issue?

<p>Two thirds of adults are overweight or obese</p> <p>A quarter of 2–10 year olds and one third of 11–15 year olds are overweight or obese</p>	<p>In 2012, an estimated 62% of adults (aged 16 and over) were overweight or obese. Public Health England. Adult Weight data factsheet, August 2014</p> <p>Health Survey for England figures show that the prevalence of overweight and obesity in children aged 2–10 years, averaged over the latest three years, is around 26%. For 11–15 year olds the prevalence of overweight and obesity is around 35%. Public Health England. Child Weight data factsheet, August 2014</p>
<p>Prevalence of overweight and obesity in adults is predicted to reach 70% by 2034</p> <p>More adults and children are now severely obese</p>	<p>Prevalence of obesity and overweight in adults is around 60% and is predicted to reach around 70% by 2034. UK Health Forum. Risk factor based modelling for Public Health England. 23 October 2014</p> <p>Health Survey for England data show that between 1993 and 2012, the prevalence of severe obesity among women increased from 1.4% in 1993 to 3.1% in 2012 and among men prevalence increased from 0.2% in 1993 to 1.7% in 2012. http://www.noo.org.uk/NOO_about_obesity/severe_obesity</p> <p>Data from the National Child Measurement Programme show that in 2012/13, 2.9% of girls and 3.9% of boys aged 10–11 years were severely obese compared to 2.5% of girls and 3.6% of boys in 2006/7.</p>

	<p>Ells L, Hancock C, Copley V, Dinsdale H et al. Prevalence of severe childhood obesity in England: 2006–2013. Archives of Disease in Childhood. 2015;0:1–6.</p> <p><i>In adults, severe obesity or class III obesity refers to adults with a body mass index (BMI) 40kg/m² or more. There is no standard definition of severe obesity in children, although the 99.6th centile of the UK90 growth reference charts is often used to identify very obese children.</i></p>
<p>A high BMI....</p> <p>increases risks of heart disease, type 2 diabetes, cancer and mental health problems</p> <p>is costly to health and social care</p> <p>has wider economic and societal impacts</p>	<p>Raised BMI is a major risk factor for noncommunicable diseases such as:</p> <ul style="list-style-type: none"> • cardiovascular diseases (mainly heart disease and stroke), which were the leading cause of death in 2012; • diabetes; • musculoskeletal disorders (especially osteoarthritis - a highly disabling degenerative disease of the joints); • some cancers (endometrial, breast, and colon). <p>The risk of these noncommunicable diseases becomes greater with increasing BMI.</p> <p>World Health Organization. Obesity and overweight. Factsheet No 311. Updated August 2014.</p> <p>The many chronic and acute health disorders associated with excess bodyweight burden society not only by negatively affecting health-related quality of life but also by incurring substantial health-care costs and lost productivity.</p> <p>Wang YC, McPherson K, Marsh T, et al. Health and economic burden of the projected obesity trends in the USA and the UK. The Lancet 2011; 378: 815 – 825</p> <p>Obesity threatens the health and well-being of individuals and places a burden on public resources in terms of health costs, on employers through lost productivity and on families because of the increasing burden of long-term chronic disability.</p> <p>Butland B, Jebb S, Kopelman P, et al. Tackling obesities: future choices – project report (2nd Ed). London: Foresight Programme of the Government Office for Science, 2007.</p> <p>Body Mass Index (BMI) is calculated by dividing body weight (kilograms) by height (metres) squared. An adult BMI of between 25 and 29.9 is classified as overweight and a BMI of 30 or over is classified as obese.</p>

Slide 3. The impact of obesity

Slide 4. Obesity harms children and young people

<p>Emotional and behavioural problems</p>	<p>Childhood obesity may be associated with emotional and behavioural problems from a very young age.</p> <p>Griffiths LJ, Dezateux C, Hill A. Is obesity associated with emotional and behavioural problems in children? Findings from the Millennium Cohort Study. International Journal of Pediatric Obesity 2011;6(2-2):e423-32.</p>
<p>Stigmatisation, bullying and low self-esteem</p>	<p>Children identify very overweight children as being less popular and see fat-related teasing and bullying as commonplace.</p> <p>Rees R., Oliver K., Woodman J. & Thomas J. Children's views about obesity, body size, shape and weight: a systematic review. 2009. EPPI-</p>

	<p>Centre, Social Science Research Unit, Institute of Education, University of London, London.</p> <p>Factors associated with mental health problems in obese children include lower levels of physical activity, low self esteem, body dissatisfaction, eating disorders and weight-based teasing.</p> <p>Gatineau M, Dent M. <i>Obesity and Mental Health</i>. Oxford: National Obesity Observatory, 2011</p>
School absence due to illness	<p>A US study found that compared with adolescents of normal weight, overweight and obese adolescents had over a third more sick days annually.</p> <p>Pan L, Sherry B, Park S, Blanck HM. <i>The association of obesity and school absenteeism attributed to illness or injury among adolescents in the United States, 2009</i>. <i>Adolesc Health</i>. 2013 Jan;52(1):64-9.</p> <p>Childhood obesity was significantly associated with a lower general health score, more GP visits, more school absenteeism and more health-related limitations in a Dutch cohort study.</p> <p>Wijga A, Scholtens S, Bemelmans W, de Jongste J, Kerkhof M, Schipper M, et al. <i>Comorbidities of obesity in school children: a cross-sectional study in the PIAMA birth cohort</i>. <i>BMC Public Health</i> 2010;10(1):184</p>
High cholesterol, high blood pressure, pre-diabetes, bone and joint problems and breathing difficulties	<p>Obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance and psychological effects.</p> <p>World Health Organization. <i>Obesity and overweight</i>. Factsheet No 311. Updated August 2014.</p> <p>http://www.noo.org.uk/NOO_about_obesity/child_obesity/Health_risks</p>
Increased risk of becoming overweight adults	<p>Overweight and obese youth have an increased risk of becoming overweight adults.</p> <p>Singh AS, Mulder C, Twisk JW, van Mechelen W, Chinapaw MJ. <i>Tracking of childhood overweight into adulthood: a systematic review of the literature</i>. <i>Obes Rev</i>. 2008 Sep;9(5):474-88.</p>
Risk of ill-health and premature mortality in adult life	<p>Overweight and obesity in childhood and adolescence have adverse consequences on premature mortality and physical morbidity in adulthood.</p> <p>Reilly JJ, Kelly J. <i>Long-term impact of overweight and obesity in childhood and adolescence on morbidity and premature mortality in adulthood: systematic review</i>. <i>Int J Obes (Lond)</i>. 2011 Jul;35(7):891-8.</p>

Slide 5. Obesity harms adults

Depression and anxiety	<p>There are bi-directional associations between common mental health problems and obesity, with levels of obesity, gender, age and socioeconomic status being key risk factors.</p> <p>Gatineau M, Dent M. <i>Obesity and Mental Health</i>. Oxford: National Obesity Observatory, 2011</p>
Discrimination and stigmatisation	<p>Obese individuals face stigma and multiple forms of prejudice and discrimination. Weight bias remains persistent in settings of employment, health care, education, the media and in close interpersonal relationships. Weight bias increases vulnerability to depression, low self-esteem, poor body image, maladaptive eating behaviours, and exercise avoidance.</p> <p>Puhl, R. M. and Heuer, C. A. (2009), <i>The Stigma of Obesity: A Review and Update</i>. <i>Obesity</i>, 17: 941–964.</p>

Less likely to be employed	<p>Obese people are less likely to be in employment than people of a healthy weight.</p> <p>National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE advice [LGB9] May 2013.</p>
Increased risk of hospitalisation	<p>Above normal BMI, the relative risk of hospitalisation increases with even small increases in BMI.</p> <p>Korda R, Liu B, Clements M, Bauman A, Jorm L, Bambrick H, Banks E. Prospective cohort study of body mass index and the risk of hospitalisation: findings from 246 361 participants in the 45 and Up Study Int J Obes (Lond). 2012 Sep 18.</p> <p>Among women aged 50- 84 in England, around one in eight hospital admissions are likely to be attributable to overweight or obesity.</p> <p>Reeves G, Balkwill A, Cairns B, Green J, Beral V; Million Women Study Collaborators. Hospital admissions in relation to body mass index in UK women: a prospective cohort study. BMC Med. 2014 Mar 15;12:45.</p>
Obesity reduces life expectancy by an average of 3 years. Severe obesity reduces life expectancy by an average of 8–10 years	<p>Moderate obesity (BMI 30-35 kg/m²) reduces life expectancy by an average of three years, while morbid obesity (BMI 40–50kg/ kg/m²) reduces life expectancy by 8–10 years. This 8–10 year loss of life is equivalent to the effects of lifelong smoking.</p> <p>Dent M, Swanston D. Briefing Note: Obesity and life expectancy. Oxford. National Obesity Observatory. 2010</p>

Slide 6. Obesity harms health

<p>Heart disease Stroke Type 2 diabetes Cancer Liver disease Asthma Osteoarthritis Back pain Sleep apnoea Reproductive complications</p>	<p>Obesity is associated with an increased risk of developing a number of chronic diseases and conditions including: type 2 diabetes, coronary heart disease, hypertension and stroke, asthma, depression, metabolic syndrome, dyslipidaemia, certain cancers, gastro-oesophageal reflux disease, gallbladder disease, reproductive problems, osteoarthritis and back pain, obstructive sleep apnoea, breathlessness, and psychological distress. Most of the complications of obesity can be reduced by weight loss.</p> <p>National Institute for Health and Care Excellence. Obesity. Clinical Knowledge Summary. October 2012.</p> <p>Findings of large pooling studies used for the Global Burden of Disease 2013 show consistent risks as BMI reached more than 23 kg/m², and especially for cardiovascular disease, cancer, diabetes, osteoarthritis, and chronic kidney disease.</p> <p>Ng M, Fleming T, Robinson M et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet. 2014(384)9945:766-781.</p>
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Slide 7. Obesity harms communities

Less active population	<p>Overweight or obese adults are less likely to meet physical activity recommendations.</p> <p>Health and Social Care Information Centre. Statistics on Obesity, Physical Activity and Diet: England 2014</p>
Reduced productivity	<p>For an organisation employing 1000 people, this could equate to more than £126,000 a year in lost productivity due to a range of issues including back</p>

	<p>problems and sleep apnoea.</p> <p>National Institute for Care and Health Excellence, Workplace health. NICE advice[LGB2] July 2012</p>
Increased sickness absence	<p>On average, obese people take four extra sick days per year</p> <p>Harvey S, N. Glozier N, Carlton O. Mykletun A, Henderson M, Hotop M, Holland-Elliott K. Obesity and sickness absence: results from the CHAP study. Occupational Medicine. 2010. 60,5:362-368</p>
Increased demands on social care services	<p>Obesity is associated with the development of long-term health conditions; placing demands on social care services.</p> <p>Ham C, Dixon A, Brooke B. Transforming the delivery of health and social care. The case for fundamental change. London: The King's Fund; 2012.</p>
Severely obese people are over 3 times more likely to need social care than those who are a healthy weight	<p>Preliminary analysis of Health Survey for England combined data 2011 and 2012. Obesity Knowledge and Intelligence. PHE 2014</p>

Slide 8. Obesity does not affect all groups equally

People from more deprived areas	<p>Obesity prevalence in England is known to be associated with many indicators of socioeconomic status, with higher levels of obesity found among more deprived groups. The association is stronger for women than for men.</p> <p>Public Health England. Adult obesity and socioeconomic status data factsheet. August 2014</p> <p>Obesity prevalence in children is strongly correlated with deprivation and is highest in the most deprived areas. There is a steady rise in obesity prevalence, with increasing deprivation, for both Reception and Year 6 children. Obesity prevalence in the most deprived decile is approximately twice that among in the least deprived.</p> <p>Public Health England. Child Weight data factsheet, August 2014</p>
Older age groups	<p>The prevalence of obesity and overweight changes with age. Prevalence of overweight and obesity is lowest in the 16–24 years age group, and generally higher in the older age groups among both men and women.</p> <p>Public Health England. Adult Weight data factsheet, August 2014</p>
Some black and minority ethnic groups	<p>Prevalence of obesity is higher among women of Black Caribbean, Black African, and Pakistani ethnicities, compared to the other ethnic groups. For men, obesity prevalence is highest in Black Caribbean, White and Irish ethnic groups.</p> <p>Public Health England. Adult slide set. 2013. Adult obesity prevalence by ethnic group. Health Survey for England 2006-2010</p> <p>There is variation in obesity prevalence by ethnic group for both Reception and Year 6 children. Boys in Year 6 from all minority groups are more likely to be obese than White British boys. For girls in Year 6, obesity prevalence is especially high for those from Black African and Black Other ethnic groups. Some of these differences may be due to the influence of factors such as deprivation and, possibly, physical differences such as height.</p> <p>Public Health England. Child Weight data factsheet, August 2014</p>

<p>People with disabilities</p>	<p>Data from the Health Survey for England (HSE) show that obesity rates among adults with a long-term limiting illness or disability (LLTI) are 57% higher than adults without a LLTI.</p> <p>Gatineau, M, Hancock C, Dent, M. <i>Adult disability and obesity</i>. Oxford: National Obesity Observatory, 2013.</p> <p>Analysis of combined data from the HSE 2006–2010 shows that children aged 2–15 with a limiting long-term illness (LLTI) are approximately 35% more likely to be obese than children without a LLTI.</p> <p>Gatineau M. <i>Obesity and disability: children and young people</i>. Oxford: Public Health England Obesity Knowledge and Intelligence, 2014.</p>
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Slide 9. The costs

Slide 10. The annual costs of obesity

<p>Wider economy</p>	<p>Modelled projections suggest that indirect costs could be as much as £27bn by 2015.</p> <p>Butland B, Jebb S, Kopelman P, et al. <i>Tackling obesities: future choices – project report (2nd Ed)</i>. London: Foresight Programme of the Government Office for Science, 2007.</p> <p>There were around 15.5–16 million days of certified incapacity directly related to obesity in 2002.</p> <p>McCormick B, Stone I, Corporate Analytical team. <i>Economic costs of obesity and the case for government intervention</i>. <i>Obes Rev</i>. 2007 Mar;8 Suppl 1:161-4.</p>
<p>NHS</p>	<p>The direct cost to the NHS in 2006/07 of people being overweight and obese was £5.1bn. <i>These costs have been uprated to £6.1bn to take into account inflation.</i></p> <p><i>The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs</i></p> <p>The total Net Ingredient Cost (NIC) for drugs for the treatment of obesity was £13.3m in 2012.</p> <p><i>Health and Social Care Information Centre: Statistics on obesity, physical activity and diet, England 2014</i></p>
<p>Social care</p>	<p>Estimated annual Social Care costs* of obesity to Local Authorities is £352m. Preliminary analysis of Health Survey for England combined data 2011 and 2012. <i>Obesity Knowledge and Intelligence</i>. PHE 2014</p> <p><i>*Cost of extra formal hours of help for severely obese compared to healthy weight people.</i></p>

Slide 11. Examples of costs

	<p><i>“We spent £400k in 2013–2014 providing bariatric equipment in the community.”</i></p> <p>Medium Sized Local Authority South East</p>
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	<i>“We discovered clients who unable to climb stairs, had slept on sofas and not been able to wash properly leading to further costly medical complications.”</i> Large Local Authority Midlands
	<i>“We spent 600k per annum providing Weight management services for children and adults”</i> Medium Sized Local Authority South East
	<i>“We discovered that a heavy duty stair lifts which cater for clients up to 25 stone (160kg) can add up to 50% to the purchase and installation cost.”</i> Large Local Authority Midlands

Slide 12. The Challenges

Slide 13. Obesity is complex

Obesity is the outcome of a complex set of factors acting across many areas of our lives	The Foresight report (2007) refers to a “complex web of societal and biological factors that have, in recent decades, exposed our inherent human vulnerability to weight gain”. <i>Butland B, Jebb S, Kopelman P, et al. Tackling obesities: future choices – project report (2nd Ed). London: Foresight Programme of the Government Office for Science, 2007.</i>
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Slide 14. We may not see ourselves or our children as obese

Adults tend to underestimate their own weight	The majority of the adult obese population of Great Britain do not identify themselves as either ‘obese’ or even ‘very overweight’. Public health initiatives to tackle obesity are likely to be hampered by this lack of recognition of weight status. <i>Johnson F, Beeken R, Croker H, Wardle J. 2014. Do weight perceptions among obese adults in Great Britain match clinical definitions? Analysis of cross-sectional surveys from 2007 and 2012. BMJ Open 2014.</i> Women under-reported their weight by an average of 2.4kg while men under-reported by 1.4kg. Health Survey for England 2011. <i>Health & Social Care Information Centre. Health Survey for England - 2011, Health, social care and lifestyles. 2012.</i>
Half of parents do not recognise that their child is overweight or obese	50.7% of parents underestimate their overweight/obese children’s weight. <i>Lundahl A, Kidwell KM, Nelson TD. Parental underestimates of child weight: a meta-analysis. Pediatrics 2014;133:e689–703.</i>
The media tend to use images of extreme obesity to illustrate articles about overweight and obesity	Descriptions of body sizes in UK newspaper articles often differ from coders’ estimates, and subjects described as obese tended to represent the higher values of the obese BMI range. <i>Patterson C and Hilton S. 2013. Normalisation and stigmatisation of obesity in UK newspapers: a visual content analysis. Open Obesity Journal, 5.82-91.</i>
GPs may underestimate their patients’ BMI	Trainee and fully qualified GPs perceived overweight and obese weights as being of lower BMI and weight status than they actually are, and this was associated with a lower intention of discussing weight management with a potential patient. <i>Robinson E, Parretti H, Aveyard P. Visual identification of obesity by healthcare professionals: an experimental study of trainee and qualified GPs. Br J Gen Pract. 2014 Nov;64(628):e703-8.</i>

Slide 15. On current projections costs are likely to increase

<p>Obesity increases the risk of many serious long term conditions</p> <p>More advanced treatments</p> <p>Greater life expectancy</p> <p>Increasing obesity prevalence</p> <p>More people than ever living in ill health</p> <p>By 2030 – health care costs up by £2billion (past trend predictions)</p>	<p>Obesity increases the risk of many serious long term conditions such as psychiatric disorders, diabetes, cardiovascular, respiratory and liver disease, muscular skeletal disorders and some cancers. More advanced treatments for such diseases along with greater life expectancy and increasing obesity prevalence means that more people than ever are living in ill health. This presents significant challenges to the health and social care system.</p> <p>http://www.noo.org.uk/LA/tackling/health_social</p> <p>In the UK, past trends predict that between 2010 and 2030, the prevalence of obesity will rise from 26% to 41–48% in men, and from 26% to 35–43% in women. This equates to 11 million more obese adults by 2030, 3.3 million of whom would be older than 60. Obesity-related diseases are projected to add to health-care costs by £1.9–2bn a year in the UK by 2030.</p> <p>Wang YC, McPherson K, Marsh T, et al. Health and economic burden of the projected obesity trends in the USA and the UK. <i>The Lancet</i> 2011; 378: 815 – 825</p>
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Slide 16. The benefits of investment

Slide 17. Action on obesity can lead to:

<p>Reduced demand on health and social care services</p>	<p>Around 44% of the incidence of diabetes, 23% of heart disease and between 7% and 41% of certain cancers (for example, breast, colon and endometrial) are attributable to excess body fat.</p> <p>The cost of providing social care services for people who are housebound or have limited mobility as a consequence of these conditions is likely to rise.</p> <p>National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE local government briefings. 22 May 2013.</p>
<p>Stronger local economy</p>	<p>An estimated 16 million days of sickness absence a year are attributable to obesity. Obese people are less likely to be in employment than people of a healthy weight. The associated welfare costs are estimated to be between £1 billion and £6 billion.</p> <p>National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE local government briefings. 22 May 2013.</p>
<p>Greater social cohesion</p>	<p>Promoting sport and recreation opportunities in communities is associated not only with health benefits, but also with numerous social benefits. These include improved self-esteem, greater community identity, increased community cohesion and the development of social capital.</p> <p>http://www.noo.org.uk/LA/tackling/leisure</p>
<p>Improved local environment</p>	<p>The provision of high quality, local and accessible green space helps to address a number of agendas at local authority level including health, crime and safety.</p> <p>http://www.noo.org.uk/LA/tackling/greenspace</p>

	Tackling issues relating to car use can help progress a number of other local authority priorities including improving environmental quality and road safety. http://www.noo.org.uk/LA/tackling/transport
Reduced health inequalities	Preventing obesity can help address health inequalities <i>if interventions are of appropriate intensity and focus*</i> , as obesity is more prevalent among people from deprived communities and from some minority ethnic groups. National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE local government briefings. 22 May 2013. * Loring B, Robertson A. Obesity and inequities. Guidance for addressing inequities in overweight and obesity. 2014. World Health Organization. Regional Office for Europe.
Less people with long-term conditions	Overweight and obesity are major contributors to the burden of chronic disease in the population. The achievement of a relatively modest reduction in average BMI in the population has the potential to make a significant impact on the burden of chronic disease. Kearns K, Dee A, Fitzgerald A, Doherty E, Perry I. Chronic disease burden associated with overweight and obesity in Ireland: the effects of a small BMI reduction at population level. BMC Public Health:2014(14):1.
Less discrimination and bullying	Overweight and obese children are likely to experience bullying and stigma (Obesity and bullying: different effects for boys and girls). This can affect their self-esteem and may, in turn, affect their performance at school. National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE local government briefings. 22 May 2013.
Greater quality of life	There is strong evidence to suggest that by the time children reach adolescence, there is increased risk of low self-regard and impaired quality of life in obese individuals, particularly in the perception of physical appearance, athletic competence and social functioning. Gatineau M, Dent M. Obesity and Mental Health. Oxford: National Obesity Observatory, 2011

Slide 18 and 19. There can be added benefits:

More walking & cycling Less car travel, pollution & congestion Safer and more welcoming streets Increased social interaction Supports local business	More walking and cycling also has the potential to achieve related policy objectives: <ul style="list-style-type: none"> • supports local businesses and promotes vibrant town centres • reduces car travel, air pollution, carbon dioxide emissions and congestion • reduces road danger and noise • increases the number of people of all ages out on the streets, making public spaces seem more welcoming and providing opportunities for social interaction and children's play • provides an opportunity for everyone, including people with impairments, to experience and enjoy the outdoor environment. Public Health England. Obesity and the environment briefing: increasing physical activity and active travel. November 2013.
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<p>Regulation of fast food outlets</p> <p>Less litter and a more appealing local environment</p> <p>Reduced noise and congestion</p> <p>Improved access to healthier food</p> <p>Reduced health inequalities</p>	<p>By regulating fast food outlets</p> <ul style="list-style-type: none"> • many hot food takeaways may generate substantial litter in an area well beyond their immediate vicinity • discarded food waste and litter attracts foraging animals and pest species • hot food takeaways may reduce the visual appeal of the local environment and generate night-time noise • short-term car parking outside takeaways may contribute to traffic congestion • improving access to healthier food in deprived communities may contribute to reducing health inequalities. <p>Public Health England. Obesity and the environment briefing: regulating the growth of fast food outlets. March 2014.</p>
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Slide 20 and 21. Return on investment

<p>Birmingham ‘Be Active’</p> <p>Walk to school and cycle to work</p>	<ul style="list-style-type: none"> • Birmingham’s ‘Be Active’ programme returned up to £23 in benefits for every £1 spent in terms of quality of life, reduced NHS use, productivity and other gains to the local authority. • Getting one more person to walk to school could pay back £768 and getting one more person to cycle to work rather than by car between £539 and £641 in terms of NHS savings, productivity improvements and reductions in air pollution and congestion. <p>Public Health England. Local action on health inequalities: Understanding the economics of investments in the social determinants of health. Health Equity Briefing 9: September 2014.</p>
<p>Glasgow Health Walks</p>	<p>In 2011–2012, the Glasgow Health Walks project lead to a return of investment of £8 for every £1 spent.</p> <p>Public Health England. Local action on health inequalities: Improving access to green spaces. Health Equity Evidence Review 8. September 2014.</p>
<p>Workplace health and well-being programme</p>	<p>Middlesborough Environment City (MEC) staff health and well-being programme reduced annual sickness rate per employee from 4.23 days to 2.4 days.</p> <p>Public Health England. Workplace interventions to improve health and wellbeing Health Equity Evidence briefing 5a. September 2014.</p>
<p>Commercial weight loss programme</p>	<p>Modelled estimates of a 12 week commercial weight loss programme showed potential savings of £230 health care costs per participant over a lifetime.</p> <p>Computer modelling of the health and economic outcomes of the Weight Watchers GP referral scheme. Brown M McPherson K. Obesity Facts :The European Journal of Obesity 2009; 2 (suppl 2):115.</p>

Slide 22. Taking action

Slide 23. Whole system approach

<p>Sustained changes to individual behaviours across the whole population will require:</p>	
<p>Changes to the food, physical activity and social environments</p>	<p>Local authorities can improve the environments where people live to help them manage their weight. For example, they can:</p>

	<ul style="list-style-type: none"> • encourage 'active travel' by ensuring routes are provided for cyclists and pedestrians • encourage local retailers to offer and promote affordable fruit and vegetables • provide and promote the use of affordable leisure facilities • develop and promote local policies on healthy eating and responsible alcohol consumption. <p>National Institute for Health and Care Excellence. Preventing obesity and helping people to manage their weight. NICE advice [LGB9]. May 2013.</p>
Multiple actions across all parts of the system	<p>Tackling obesity is complex and requires action at every level, from the individual to society, and across all sectors. Obesity cannot be effectively tackled by one discipline alone and local authorities, led by public health colleagues, are ideally placed to develop co-ordinated action to tackle obesity across its various departments, services and partner organisations.</p> <p>http://www.noo.org.uk/LA/tackling</p>
Provide treatment services - accessible and appropriate, reaching all parts of population	<p>Local areas are best positioned to develop a locally tailored strategy and to create evidence-based interventions to meet the needs of their communities – in particular the needs of disadvantaged areas and groups, and the most vulnerable.</p> <p>Department of Health. Healthy Lives, Healthy People: A call to action on obesity in England, 2011</p>

Slide 24. Partnerships are key to success

Elected members	Direct, oversee, scrutinise
Local Authorities	Strategise and co-ordinate
Public Health	Analyse, evidence base, commission
Health and Wellbeing Board	Formal partnership responsibilities
CCG	Commission for health
Primary Care	Identify, advise, refer, treat
Commissioners	Long term vision
Planning and environment	Design for activity and a healthy food environment
Leisure and fitness providers	Local and affordable options for physical activity and culture
Transport	Walking and cycling networks, active travel
Health and social care	Prevention, treatment advice and care provision
Parks and green spaces	Locally accessible, safe, promote mental and physical health
Education and learning	Address bullying and increase self-esteem, also physical activity and healthy school meals

Housing	Appropriate housing
Third Sector	Varied provision and support for healthy eating, physical activity and community cohesion

Slide 25. Opportunities to influence action

Health and Wellbeing Boards	<p>Health and Wellbeing Boards bring together key commissioners from the local NHS and local government, including Directors of Public Health, to strategically plan local health and social care services.</p> <p>http://www.noo.org.uk/LA/service_planning</p> <p>http://www.local.gov.uk/health/-/journal_content/56/10180/3510973/ARTICLE</p>
Local Transport Planning	<p>Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives.</p> <p>Communities and Local Government. National Planning Policy Framework. 2012</p> <p>Public Health England. Obesity and the environment briefing: increasing physical activity and active travel. November 2013.</p> <p>http://www.noo.org.uk/LA/tackling/transport</p>
Enforcing planning guidance for new developments	<p>The National Planning Policy Framework makes it clear that local planning authorities have a responsibility to promote healthy communities. Local plans should “take account of and support local strategies to improve health, social and cultural wellbeing for all”.</p> <p>Public Health England. Obesity and the environment briefing: regulating the growth of fast food outlets. March 2014.</p> <p>http://www.noo.org.uk/LA/tackling/planning</p>
Community infrastructure levy money	<p>The community infrastructure levy is a new levy that local authorities in England and Wales can choose to charge on new developments in their area. The money raised from the community infrastructure levy can be used to support development by funding infrastructure that the council, local community and neighbourhoods want, like new or safer road schemes, park improvements or a new health centre.</p> <p>https://www.gov.uk/government/policies/giving-communities-more-power-in-planning-local-development/supporting-pages/community-infrastructure-levy</p>
Ofsted – school meal standards and how pupil premium is spent	<p>The government is providing funding to maintained primary schools and academies that is specifically targeted at improving the provision of physical education and sport.</p> <p>Ofsted. The PE and sport premium for primary schools. Good practice to maximise effective use of the funding. 2014</p>
New school meal meals for all pupils in reception, year 1 and year 2	<p>New school food standards were announced on 17 June 2014. From January 2015, all local authority maintained schools, academies and free schools set up before 2010 and created from June 2014 onwards must meet these new standards for school food.</p> <p>http://www.childrensfoodtrust.org.uk/schools/the-standards/new-standards</p>
New universal school meal	<p>The Children and Families Act 2014 places a legal duty on all state-funded</p>

for infants	schools in England, including academies and free schools to offer a free school lunch to all pupils in Reception, Year 1 and Year 2 from September 2014. Department for Education. Universal infant free school meals Departmental advice for local authorities, maintained schools, academies and free schools September. 2014
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