

Taking Local Action to Address Excess Weight in Milton Keynes

Director of Public Health Report 2022



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Introduction from Vicky Head

Two out of three adults and two out of five 11-year olds living in Milton Keynes are overweight or obese. Excess weight is a major cause of ill health and death locally and disproportionately affects some of our poorest communities. We know that:

- Excess weight increases the risk of developing chronic diseases including cardiovascular disease, type 2 diabetes, cancer, and osteoarthritis. It increases an individual's risk of hospitalisation and is associated with mental health problems such as anxiety and depression¹.
- Excess body fat is a factor in nearly a quarter of deaths among people aged over 45 and now contributes to more deaths in this age group than smoking. Moderate obesity reduces life expectancy by about three years and severe obesity can shorten a person's life by 10 years. This 10-year loss is equal to the effects of lifelong smoking².
- Obesity was a factor in over 4,200 hospital admissions in Milton Keynes in 2019/20³. Obesity-related admissions in the most deprived areas of England are 2.4 times greater than in the least deprived areas⁴.
- The NHS spends around £6.5 billion a year (close to 4% of its 2022/23 budget) on treating the consequences of obesity. This is forecast to rise to £9.7 billion by 2050. The annual cost to society, including wider economic costs, is around £54 billion, roughly equal to 1-2% of GDP or the total annual funding allocated to schools in England⁵.
- Excess weight carries significant economic costs for Milton Keynes, including lost working days and economic inactivity, increased benefits payments and costs associated with NHS treatment and care⁶.

Tackling excess weight is not simply a matter of educating individuals to make healthier choices. The people who are most likely to become overweight or obese are those whose lives are shaped by work, school and social environments that promote overeating and inactivity. It is easy to feel overwhelmed by the scale and complexity of the challenge, but there are effective actions we can take locally. My report this year focuses on the important roles that partner organisations and businesses in Milton Keynes play in shaping our environment and keeping our population healthy. If we are serious about working preventatively to improve health in Milton Keynes, there is more we can do together to stop people developing excess weight and support more people to lose weight.

Vicky Head

Director of Public Health



Chapter 1: The scale of the problem

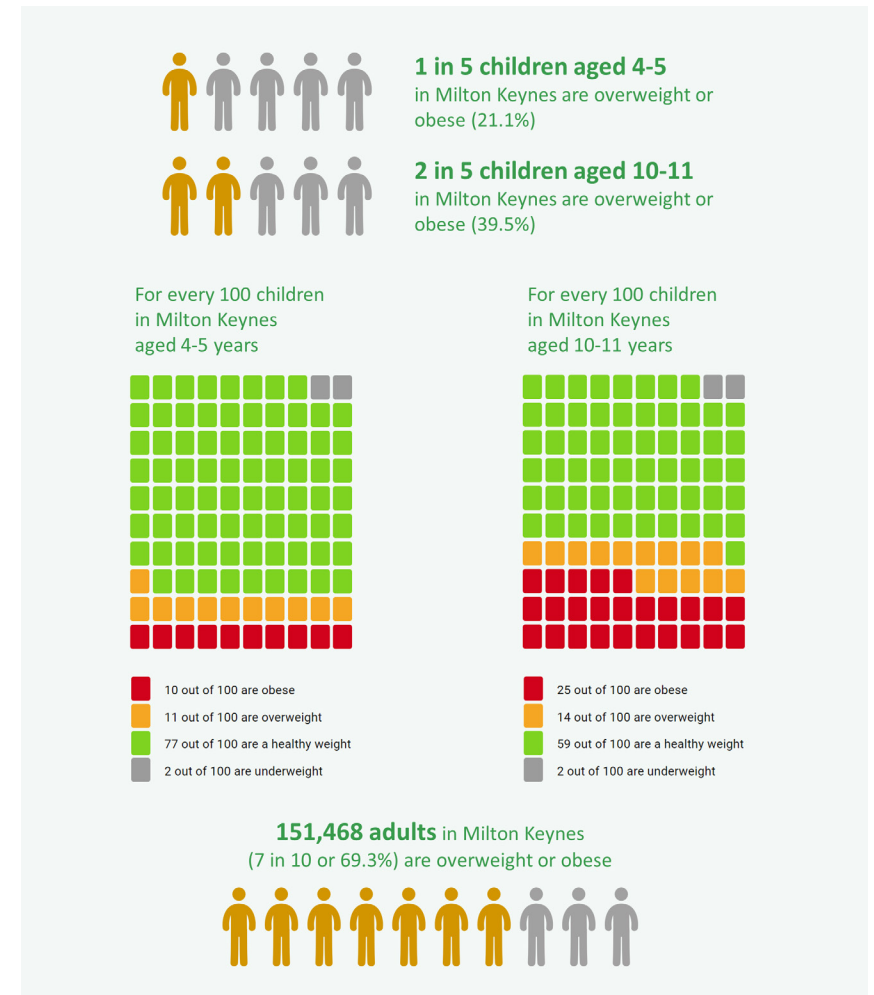
Obesity is a complex, chronic health condition with multiple causal factors impacting its development including genetics, psychological, environmental, and societal factors. Despite this, it is a commonly held belief that weight loss is solely an individual's responsibility. This can lead to weight stigma, the negative stereotyping of people based on body weight, which can cause considerable harm.

Excess weight is even more common in Milton Keynes than the England average

In Milton Keynes over 150,000 people aged over 18 are overweight or living with obesity. This equates to over two thirds of adults (69%), which is significantly higher than the England average of 64%.

21% of children aged 4-5 years old are overweight or obese which is similar to the England average of 22% for this age group. By the time children in Milton Keynes reach 10-11 years old, almost double the proportion (39.5%) are overweight or obese, which is higher than the England figure of 38%.

Figure 1: Prevalence of excess weight in Milton Keynes

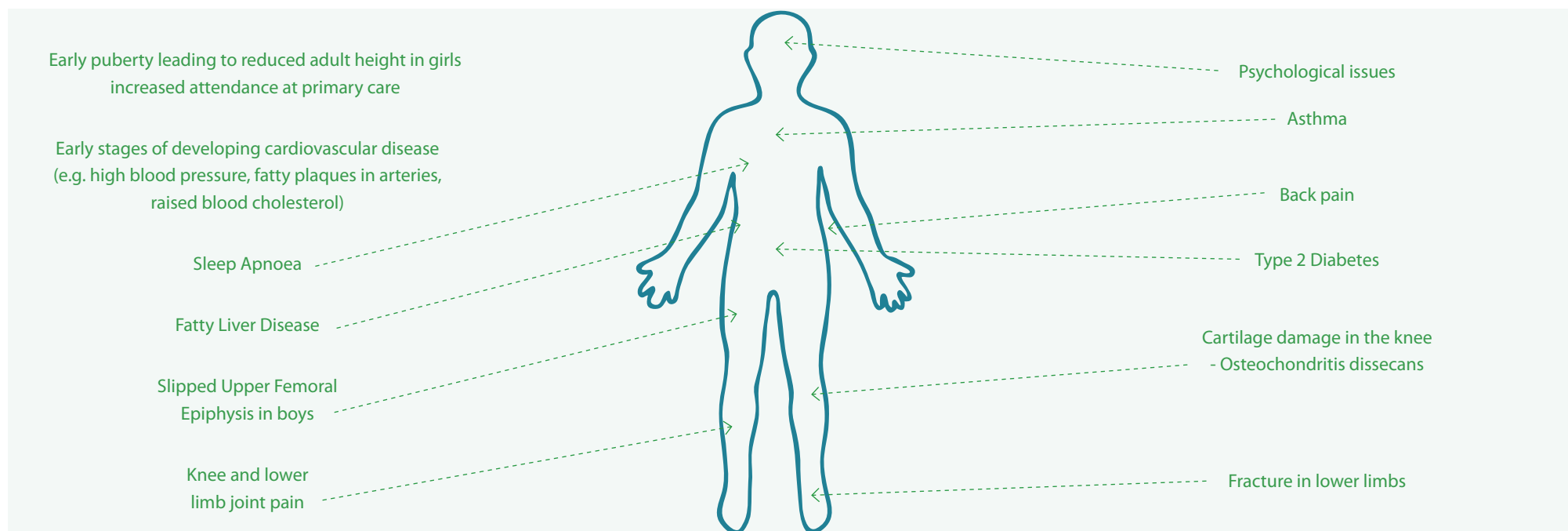


Source: Health Survey for England 2019 and National Child Measurement Programme 2021/22

Levels of excess weight for both adults and children are increasing over time⁷ and younger people are becoming obese at earlier ages and remaining obese in adulthood. Being overweight or obese in childhood has profound impacts on health and affects the quality of our children's lives, their education, and their life chances. Children who are obese or overweight are more likely to experience physical health issues⁸, including type 2 diabetes, asthma, musculoskeletal pain,

and mental health problems, such as depression (Figure 2). If children born in 2022 continue eating current diets, the projected health implications of obesity as they age are stark. By the age of 65 years 75% of those children will be overweight or obese, 1 in 3 will have diabetes and 1 in 5 will have cardiovascular disease⁹.

Figure 2: Health impacts of childhood obesity



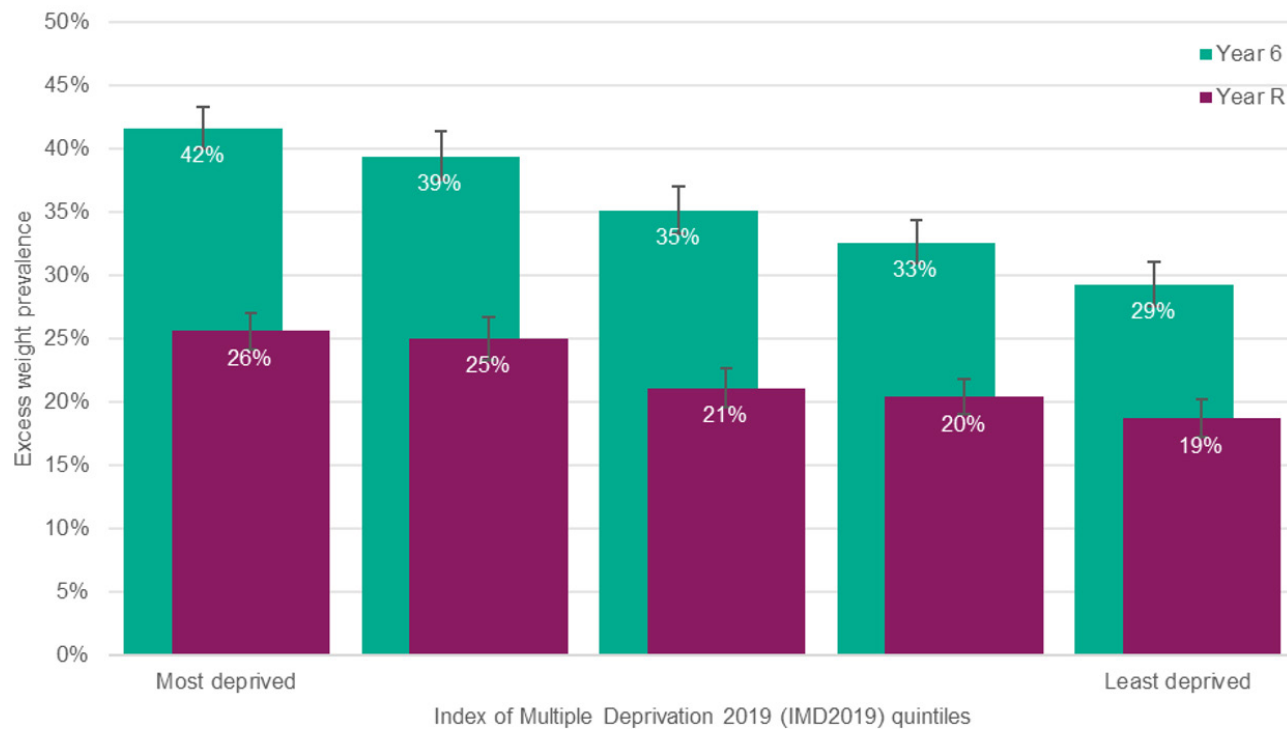
Source: Time to Solve Childhood Obesity. An Independent Report by the Chief Medical Officer, 2019

Excess weight is an important driver of inequalities in health

Excess weight can affect anyone, but it more commonly affects people living in areas of deprivation, on low incomes, those living with disabilities and some black and minority ethnic groups¹⁰. These differences in excess weight translate to worse health outcomes for people as well as contributing to health inequalities. This pattern is apparent across areas of highest deprivation in Milton Keynes, where the latest data shows that just over a quarter of children

(26%) residing in the most deprived wards are living with excess weight when they begin school (aged 4-5 years old), and this figure increases to 42% by the time they are 10-11 years old. This figure is far less in the most affluent areas, where 29% of 10-11 year olds are living with excess weight. This inequalities gap is getting bigger over time.

Figure 3: Excess weight prevalence of primary school children by deprivation quintile in Milton Keynes (2016-19 & 2021-22)¹¹.



Source: National Childhood Measurement Programme 2021/2211

Note: 2019-20 years are not included due to Incomplete/missing data during the Covid-19 pandemic

Chapter 2: The problem of scale: supporting individuals to lose weight

Free weight management programmes are available locally to support people living with excess weight. Evidence suggests they are effective for short-term weight loss and programmes can be targeted so that they help address health inequalities. Weight loss tends to be modest but even small weight reductions bring health benefits. These programmes are an important intervention to enable individuals to improve their health but on their own they will not solve the obesity problem at a population level.

Local weight management services are not used as much as they could be

The full range of free local weight management services is listed in Appendix A. The three interventions available through the NHS or commissioned by the local authority are MoreLife, the NHS Digital Weight Management Programme and the NHS Diabetes Prevention Programme.

MoreLife provide weight management services for children and young people, adults, and pregnant or recently pregnant women in Milton Keynes, Central Bedfordshire, and Bedford Borough. In 2021/22, 3,653 residents were referred (including self-referrals) to the MoreLife programme across the three local authorities and 855 people completed the programme. In terms of capacity, this service had an additional 1,300 spaces that were unused. The online component of MoreLife has unlimited capacity.

The **NHS Digital Weight Management Programme** is available on referral for people with high BMI and diabetes or hypertension. Just 65 people were referred to the NHS Digital Weight Management programme across BLMK (Bedford Borough, Luton, Milton Keynes and Central Bedfordshire) between April and July 2022. Based on this an estimated 260 people will be referred over the course of 2022, which is just over 10% of the referral target for this service. Again, as an online service, in practice this service has unlimited capacity.

The **NHS Diabetes Prevention Programme** is available on referral for people at high risk of developing diabetes. The programme has capacity to support over 13,000 people across BLMK a year. Based on current activity, it's estimated that around 9,600 residents will be referred, leaving 3,700 places unused.

More people could be supported to lose weight through these services and making the most of the available support is an important challenge. More can be done to raise awareness of MoreLife so that residents can self-refer, but referral by clinicians to all three services is critical. It can be difficult to raise the subject of weight, but training can help frontline professionals feel confident to offer brief advice, including where to get support.

Weight management services help individuals improve their health but will not solve the problem

While together these services could be supporting around 20,000 people from Milton Keynes, Central Bedfordshire, and Bedford Borough to lose weight every year, we know that over 150,000 Milton Keynes residents alone are living with excess weight. The scale of the obesity challenge means the impact of individual weight management services is limited. To have a greater impact at a population level, the most effective interventions are those which restrict less healthy food choices or provide incentives for healthy eating, such as through limits on portion sizes, reformulation of foods, restrictions on advertising or taxation. As well as promoting weight loss, these interventions are critical for preventing people – especially children – from gaining weight.

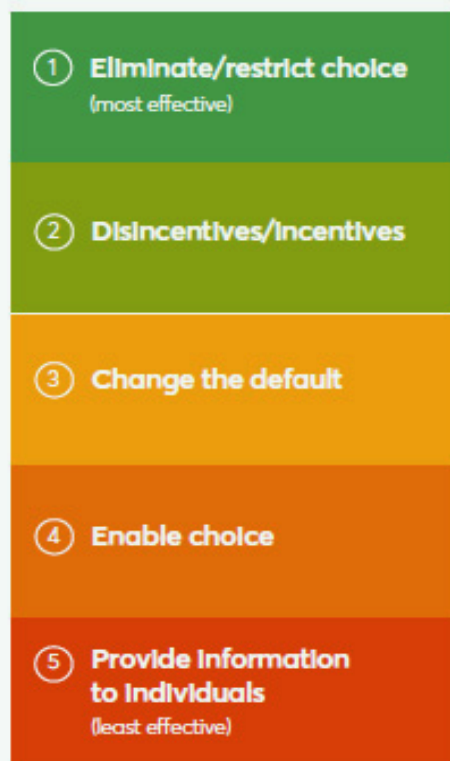
Research suggests there is a mismatch between what people think the most effective ways of addressing excess weight are, and what the evidence-base suggests is most effective (Figure 4). To have the biggest impact on excess weight, we need to shift the focus away from providing health education to individuals and focus instead on interventions that change people's default behaviours, incentivise healthier choices and even restrict or eliminate unhealthy choices.

Figure 4: Perceived and actual effectiveness of obesity interventions

How to read this chart:
 Box color represents the actual effectiveness of the interventions

 Least effective Most effective

How effective the interventions are
 (by intervention type)*



How effective they are perceived to be
 (by intervention)



Perceived as very effective

Average perceived effectiveness
 (How effective they think each intervention is at tackling obesity)

Perceived as not very effective

*These categories and associated rankings are based upon the Nuffield Intervention Ladder. Source: Nuffield Council on Bioethics. Public health ethical issues. London, Nuffield Council on Bioethics, 2007.

Source: Changing Minds about Changing Behaviours: Obesity in focus; NESTA (2021)¹²



Making progress locally:

MoreLife Weight Management Service

- Free adult and child weight management services for eligible Milton Keynes residents to support weight loss either face to face or remotely.
- Support for women during pregnancy.
- Sessions run in a fun & friendly environment, covering a range of subjects including healthy eating, physical activity, and body image to help support sustainable, long term weight loss.

Over 900 Milton Keynes residents have been supported through the MoreLife programme since 2019; however, we need more people to take advantage of the support available.

This is particularly true for people who may be at higher risk of poorer health outcomes, for example, people with a learning disability or severe mental illness, those living in areas of higher deprivation and people from minority ethnic groups. It can be difficult to raise the issue in a way that doesn't stigmatise excess weight, but training is available to support staff to do this in a sensitive manner.

Case Study



MoreLife Weight Loss Programme

For years Clive's weight has impacted his mobility, quality of life, family life and his mental health and after speaking to his local GP he realised he needed to take action.

"I've been offered encouragement and good advice, together with understanding. I have also managed to lose more weight than I expected to."

"I feel that I am confident, that I will move forward, and I will continue to make progress."

Clive

Chapter 3: We can create a healthier food environment

Many of the factors driving unhealthy weight gain are linked to the environment we live in. A variety of socio-economic factors – including income, housing, education, sale of unhealthy foods, and exposure to advertising – impact whether we can eat healthily and determine our risk of developing excess weight. Differences in the availability of affordable, healthy foods for example play a key role in driving health inequalities between people living in advantaged and disadvantaged circumstances.

Our environment makes it difficult to make healthy choices

Food environments refer to the ways in which we are exposed to food on a daily basis. Healthy food and drink choices are often not affordable, convenient, or accessible to everyone (Figure 5). Fast and processed food companies influence food choices by monopolising advertising space, using their financial power to offer appealing food promotions, including buy one, get one free offers on high calorie and processed foods. Unhealthy options often dominate the checkouts, shops and workplaces and restaurants and takeaways overwhelm us with large portion sizes, far exceeding those recommended. The density of fast-food outlets has increased significantly, particularly in areas of high deprivation.

Advertising and sponsorship are used to place brands centre stage and help them shine brightly in the minds of young people, often using cartoon characters or famous people to make unhealthy food appear attractive and part of everyday life. The UK Government has set out plans to regulate some of these practices, like restricting unhealthy food advertising online and on TV. Whilst there is a need for national regulation, there are also opportunities to intervene locally and many areas are now developing policies to restrict unhealthy advertising in these spaces and on their public transport networks.

Nationally more than one quarter (27.1%) of adults and one fifth of children eat food from out-of-home food outlets at least once a week. These meals tend to be associated with higher energy intake, higher levels of fat, saturated fats, sugar, and salt, and lower levels of micronutrients¹³. Across Milton Keynes, just 57% of adults meet the recommended '5-a-day' on a 'usual day' which is similar to the national figure of 55%.

The City Council, NHS and other public sector organisations procure food services and lease premises that sell food. They could use their buying power more effectively to encourage the production and supply of healthy food options. There can be a disconnect between the verbal message given to people, for example in a diabetes clinic, and the visual message when they then walk into a hospital shop that offers a range of sugary drinks and treats. Several NHS Trusts have set clauses for the balance and types of food on sale in food shops on their premises.



The cost of living and COVID-19 pandemic have impacted access to healthy food

The social and economic impacts of the pandemic and current financial crisis have been widespread. During the height of the COVID-19 pandemic many people faced challenges in accessing and maintaining a healthy diet and exercising. The pandemic influenced how people use their local environments and access food. More people are now working from home, and early evidence suggests that the pandemic has modified eating behaviours, with increased snack frequency and a preference for sweets and ultra-processed food rather than fruits, vegetables, and fresh food¹⁴.

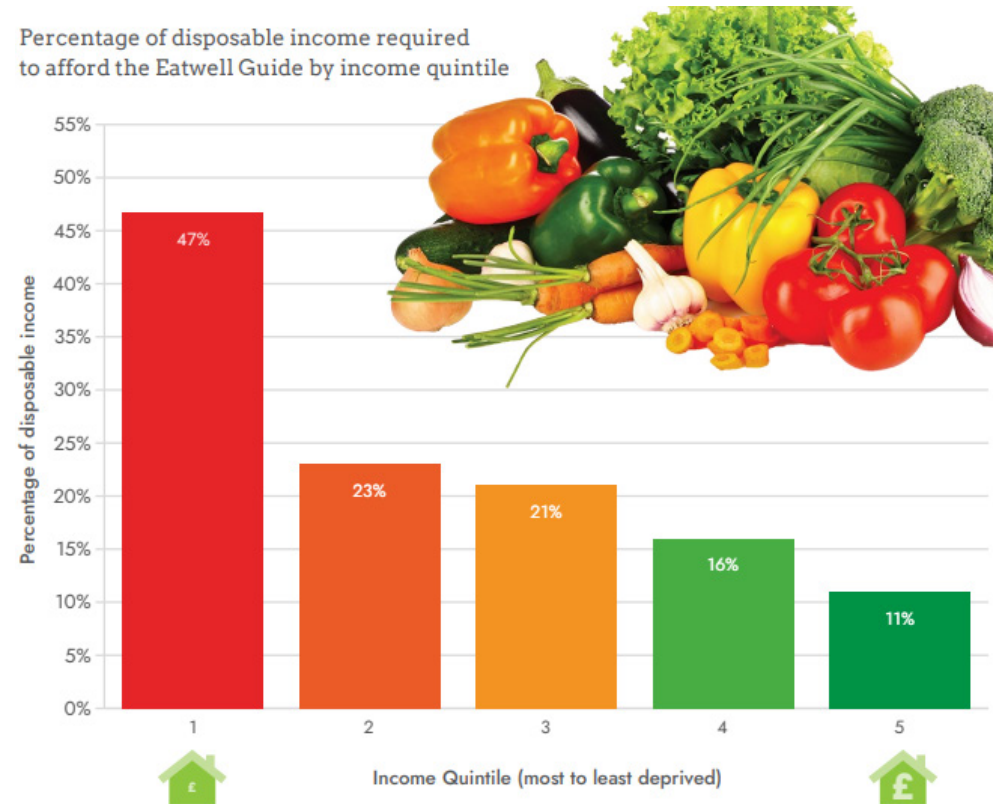
Affordability influences access to healthy foods and, for families on a lower income, a healthy diet may be unaffordable¹⁵. The poorest fifth of UK households would need to spend an estimated 47% of their disposable income on food to meet the cost of the Government's recommended healthy diet. This compares to just 11% for the richest fifth.¹⁶ (Figure 5).

Those on lower incomes are more likely to be price-sensitive when shopping and therefore more influenced by their local food offer.

Along with the economic impact of the COVID-19 pandemic¹⁷, the current cost of living crisis risks many being unable to afford essentials to maintain their health. This may cause increased stress and anxiety as families try to make ends meet. A recent ONS report highlighted that 15% of adults were worried their food would run out before they had money to buy more, and the proportion was higher among those with dependent children (25%), those who were Asian (or Asian British) (26%), "Other ethnic group" (46%) or living in the most deprived areas in England (29%)¹⁸.

Local foodbanks are seeing a dramatic increase in demand. Milton Keynes foodbanks distributed 40% more emergency food parcels (or equivalent) this year than in 2021. Over 3,200 separate households have received crisis parcels and over 1,000 households received longer-term support via the 'Top-up Shop'. Of these households, well over half have never used a food bank before. On average, around 50 new clients contact a local foodbank every week.

Figure 5: Affordability of a healthy diet



Source: Food Foundation¹⁹



Making progress locally:

Supporting vulnerable families: Holiday Activity and Food (HAF) Programmes including Summer of Play

These programmes launched in 2021 and provide activities in the school holidays for children who qualify for free school meals. Children receive at least one hot meal a day that meets the requirements of the School Food Standards.

Over 12 months, the programme has seen over 11,500 attendances across Milton Keynes.

Healthy Start Scheme: a healthy start to life

The Healthy Start Scheme is a national, means-tested scheme providing a pre-paid card to buy fruit and vegetables, vitamins and milk for low-income pregnant women, families with pre-school children and mothers under 18 years of age.

2,229 families in Milton Keynes were eligible to access the scheme²⁰ at the start of the pandemic. This figure increased by almost 18% the following year.

Current uptake of the scheme is 72%, which is similar to uptake nationally but could be higher. The Public Health team are working with partners to increase uptake.

Chapter 4: We can build active places and neighbourhoods

Neighbourhoods are places where people live, work, and play and have a sense of belonging. Research shows that the environment in which we live is linked to our health throughout our lives. For example, the design of neighbourhoods can influence how much physical activity we undertake, how we travel and move, how we socialise and make local connections, and impacts on our mental and physical health and wellbeing.

Plan: MK, the Local Plan for Milton Keynes,²¹ sets out the vision and framework for future development in Milton Keynes up to 2031. It addresses issues such as housing, the economy, infrastructure, the environment, adapting to climate change and securing good design. The plan also requires Health Impact Assessments to be submitted for certain new developments.

Milton Keynes is also developing a new Local Plan to set out the planning framework for the city until 2050. The City Council are working to embed health within this new plan, with a particular focus on how the plan can contribute to addressing physical inactivity, obesity, and inequalities. Plans for a Mass Rapid Transport scheme in Milton Keynes will also support people to live actively and help tackle excess weight.

Efforts to improve health outcomes through the planning process are also applied by taking account of access to services and facilities by walking and cycling, and by providing access to formal and informal community meeting spaces and sports facilities. The links between health, education, community and planning are highlighted in national planning policy which acknowledges the role that the planning system can play in improving health outcomes.

Active travel increases regular activity

As a society we move less than we used to. Access to safe and attractive routes for walking and cycling is important in giving people the opportunity to be active regularly, which is necessary for good physical and mental health.

Milton Keynes has over 200 miles of shared-use paths, known as Redways, which facilitates access to safe routes for cycling. The City Council enables schemes to improve access to cycling including the Santander Cycles MK Hire Scheme. The scheme started in July 2016 and has over 500 bikes at 50 locations across the city for short-term use. Almost 130,00 journeys were made in the first three years of the scheme.





Making progress locally:

MK Deal

Tackling excess weight is an area of focus for the 'MK Deal' - an agreement between the Bedfordshire, Luton and Milton Keynes (BLMK) Integrated Care Board (ICB) and the Milton Keynes Health and Care Partnerships (HCP) for local delegation of responsibility for certain health outcomes.

Introducing innovative ways to be more active:

As part of the MK Deal, Milton Keynes City Council and Milton Keynes University Hospital are working in partnership to develop and deliver a research trial to promote and incentivise physical activity amongst residents with type 2 diabetes. The scheme will test how wearable devices can record participants' movement, and how a mobile app might be used to offer tailored prompts and hints to encourage residents to be physically active.

MK Love Exploring



Space Walk

Love Exploring is a fun, free, multigenerational smartphone app that promotes walking and physical activity through its augmented reality games and guided trails. The app is family friendly, available in different locations across Milton Keynes and makes walking in Milton Keynes an adventure. It includes lots of child-friendly games to choose from including Dinosaurs, Mega Mini Beasts, and the Space Walk and

encourages users to discover new places and interesting things. The app has guided trails around Milton Keynes such as mindfulness, to street art and tree identification.

Green spaces bring physical and mental health benefits

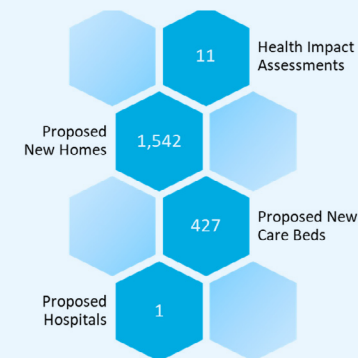
Green spaces are valued for their physical and mental health benefits and for the part they play in creating successful, balanced, and sustainable communities. Milton Keynes has always planned early and strategically for green spaces. It was built as a New Town, a model of urban development that originated from the Garden City Movement from the early 1900s, which looked to combine the amenities of urban life with easy access to nature. Today, The Parks Trust manage 6,000 acres of green spaces in the city. As Milton Keynes grows, the trust takes on new parks and green spaces from developers, so that all new areas of the city benefit from the same quality of green space and Milton Keynes remains a great place to live, work and play.

National surveys report that during the pandemic engagement with green space was important to people, but that access was not uniform across all communities. People living in areas of higher deprivation or from Black and minority ethnic groups generally have less access to adequate green space, including private gardens and public spaces. The green spaces they do access tend to be of lower quality, smaller size, and further from their homes compared to White British residents. This is referred to as “green deprivation” and the communities that experience it are more likely to have to travel longer distances for safe access to good quality green space²².

Making progress locally:

Health Impact Assessments (HIAs) for new developments

Health Impact Assessments are a means to systematically consider the health and wellbeing impacts of proposed new developments. Since July 2021, all proposed care homes, hospitals, and residential developments of 50 or more homes in Milton Keynes require a HIA. This forces developers to systematically think about the health of residents. Eleven HIAs were reviewed in the first year, which together proposed over 1500 new homes and 427 care beds, with the potential to accommodate 5000 new and existing residents.



Case Study

The City Council were consulted on the HIA for a planning application proposing the conversion and extension of an office block in Central Milton Keynes to provide 237 new flats.

The City Council identified insufficient children’s play areas in the local area as a potential negative impact on children’s physical and mental health and identified there was sufficient space in the development to provide an on-site play area. This resulted in the developer being required to provide for informal children’s play in the courtyard as a condition of receiving planning permission for the development.

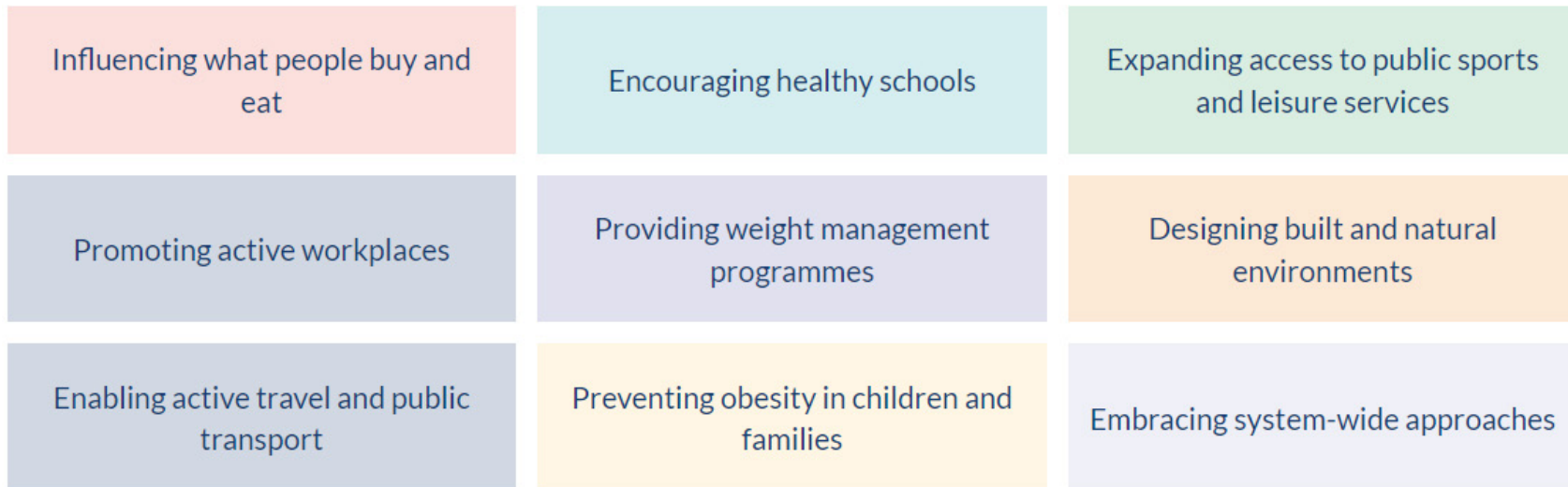
The play area will provide the children living in the flats access to outdoor play and mitigate the negative health impacts identified.

Chapter 5: Taking local action together

Multiple factors contribute to excess weight and its consequences for the health and wellbeing of our residents. A growing body of evidence suggests that excess weight cannot be tackled by a single agency. Alongside national interventions by Government, it requires a collaborative approach across organisational boundaries, making it everybody's business. Together, partner organisations and businesses in Milton Keynes play important roles in shaping our environment

and keeping our population healthy. There is more we can do to prevent people developing excess weight and to support more people to lose weight. The ambitions below set out actions that the City Council and partner organisations can take together to address the excess weight crisis and send a clear message to members, residents, and service providers that this is a priority.

Figure 6: Actions to tackle excess weight



Ambitions for change

Ambition 1

Work together to create healthy, active places to learn, work and play

- 1. Employers and service providers, including the City Council and the NHS, should make it easy to access healthy food, through the food services they procure and the businesses that sell food and drink on their premises.**
- 2. Organisations, including the City Council, should explore opportunities to limit the marketing, placement, advertising, and sponsorship of unhealthy foods.**
- 3. The City Council continues, through its planning and transport responsibilities, to make it easier and safer for residents to walk, cycle and use public transport where it is appropriate to do so, and support greater access to green spaces.**
- 4. Employers should explore options to build movement into the working day and make active forms of travel easier, attractive, and more affordable.**
- 5. System partners should ensure there is support for voluntary and community organisations to increase access to healthy food and physical activity, with a focus on families most affected by increases in the cost of living.**

Ambition 2

Work together to support more people to lose weight and keep it off

- 1. The City Council and the NHS should work together to make it easy to access all publicly funded weight management services and explore innovative approaches to increase physical activity and promote healthy weight.**
- 2. The NHS should work to increase the number of patients successfully referred to the full range of locally available weight management services.**
- 3. Health and care services should work to increase the confidence of frontline professionals to raise the subject of excess weight and offer brief advice, including where to get support.**
- 4. Employers, as part of their approach to workplace wellbeing, should promote the availability of local weight management services.**
- 5. Throughout these actions extra effort should be made to improve access to weight management services for those at higher risk of excess weight, including people with learning disabilities, people with severe mental illness, those living in areas of higher deprivation and people from minority ethnic groups.**

Appendix A: Local weight management services for adults

Intervention	Area service is available	Brief Summary
NHS Diabetes Prevention Programme	BLMK	9-12 months behavioural change programme to prevent diabetes in those at high risk. Group-based but one-to-one digital coaching also available. Click here for more information
MoreLife (Tier 2 weight management service)	Bedford Borough, Central Bedfordshire and Milton Keynes	Locally commissioned 12 week group behavioural and lifestyle interventions to reduce BMI. Programmes available for adults, pregnant women and families. Click here for more information
NHS Digital Weight Management Programme	BLMK	Nationally available 12-week digital behavioural and lifestyle intervention to reduce BMI. Click here for more information
Specialist obesity services (also known as Tier 3 and 4 services)	BLMK	Multidisciplinary services involving behavioural, medical and psychological services. Route to bariatric surgery if clinically indicated. Click here for more information
NHS Low Calorie Diet Programme pilot Click here for more information	BLMK	12-month programme with 3 months of total diet replacement followed by further 9 months of behavioural support.

Appendix B: References

1. Public Health England. [online]. Guidance: Health matters: obesity and the food environment. 2017. Available from: [Health matters: obesity and the food environment - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/health-matters-obesity-and-the-food-environment)
2. Prospective Studies Collaboration. Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies. Lancet. 2009; 373 (9669); 1083-1096. Available from: [https://doi.org/10.1016/S0140-6736\(09\)60318-4](https://doi.org/10.1016/S0140-6736(09)60318-4)
3. NHS Digital. Statistics on Obesity, Physical Activity and Diet 2021: Data tables. 2021. Available from: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/england-2021/data-tables>
4. NHS Digital. Ministry of Housing, Communities and Local Government. 2021
5. NESTA. The economics of obesity. [online]. Dec 2022. Available from: <https://www.nesta.org.uk/blog/the-economics-of-obesity/>
6. Public Health England, 2015. Making the case for tackling obesity – why invest? [online]. 2015. Available from: [Factsheet \(khub.net\)](https://www.khub.net/2015/05/21/making-the-case-for-tackling-obesity-why-invest/)
7. House of Commons Library. Obesity statistics. [online]. 2022. Available from: <https://researchbriefings.files.parliament.uk/documents/SN03336/SN03336.pdf>
8. Department of Health & Social Care, HM Government. 2018. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718903/childhood-obesity-a-plan-for-action-chapter-2.pdf
9. The Food Foundation. The Broken Plate [online]. 2022. Available from: [Home \(foodfoundation.org.uk\)](https://www.foodfoundation.org.uk/)
10. Office for Health Improvement & Disparities. Adult obesity: Applying All Our Health. 2022. Available from: <https://www.gov.uk/government/publications/adult-obesity-applying-all-our-health/adult-obesity-applying-all-our-health>
11. NHS Digital. National Child Measurement Programme 2021/2022 School Year.
12. NESTA. Changing Minds about Changing Behaviours: Obesity in focus [online]. 2021. Available from: [Changing Minds about Changing Behaviours: Obesity in focus | Nesta](https://www.nesta.org.uk/publication/changing-minds-about-changing-behaviours-obesity-in-focus)

13. Public Health England. Research & Analysis: Fast food outlets: density by local authority in England. 2018. Available from: <https://www.gov.uk/government/publications/fast-food-outlets-density-by-local-authority-in-england>
14. Public Health England. Guidance: Health matters: obesity and the food environment. 2017. Available from: <https://www.gov.uk/government/publications/health-matters-obesity-and-the-food-environment/health-matters-obesity-and-the-food-environment--2>
15. Gonzale-Monroy, C. et al. Eating Behaviour Changes during the COVID-19 Pandemic: A Systematic Review of Longitudinal Studies. Int J Environ Res Public Health. 2021.18(21):11130
16. The Food Foundation. The Broken Plate. [online]. 2019. Available from: <https://foodfoundation.org.uk/publication/broken-plate-2019>
17. Williamson, S et al. Deprivation and healthy food access, cost and availability: a cross-sectional study. Journal of Human Nutrition and Dietetics. 2017. 30 (6);791-799. Available from: <https://doi.org/10.1111/jhn.12489>
18. Office for National Statistics. The impact of winter pressures on different population groups in Great Britain: 22 November to 18 December 2022. 2022. Available from: The impact of winter pressures on different population groups in Great Britain - Office for National Statistics (ons.gov.uk)
19. Joseph Rowntree Foundation. Going under & without: JRF's cost of living tracker, winter 2022/23 [online]. 2022. Available from: [Going under and without: JRF's cost of living tracker, winter 2022/23 | JRF](#)
20. The Food Foundation. The Broken Plate [online]. 2022. Available from: [Home \(foodfoundation.org.uk\)](#)
21. Milton Keynes Council. Plan: MK: 2016 to 2031. 2019. Available from: [Plan:MK | Milton Keynes City Council \(milton-keynes.gov.uk\)](#)
22. New Economics Foundation. Escaping green deprivation. [online] 2021. Available from: <https://neweconomics.org/2021/01/escaping-green-deprivation>

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