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PREVENTION OF TYPE 2 DIABETES & GESTATIONAL DIABETES BY ADDRESSING THE ROOT CAUSES OF ILL HEALTH

Position Statement: Updated 2025

(Replaces *Prevention of type 2 diabetes through reducing obesity* July 2020)

Key points

- We are concerned about the continuing rise in type 2 and gestational diabetes in the UK.
- We are particularly concerned about the growing numbers of younger people developing type 2 diabetes.
- There is an urgent need to address the widening inequalities that exist in type 2 and gestational diabetes.
- We have evolved our prevention strategy to include focus on the underlying social determinants of health – the conditions into which people are born and live that create health or ill health.
- We are also fully committed to addressing the commercial determinants of health – the production and promotion of unhealthy food.
- A range of interventions are required to address these underlying causes and action is needed from all UK Governments at every level.

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Why have we produced this position statement?

The number of people living with type 2 diabetes has rapidly grown over the past decade and continues to rise at an alarming rate. This increase is not felt equally. People in areas of higher deprivation and those from ethnic minority communities are disproportionately affected. People living in the poorest households are 2.3 times more likely to have type 2 diabetes than those with the highest household income.[1]

People of South Asian ethnicity (including Indian, Pakistani, Bangladeshi) are two to four times more likely to develop type 2 diabetes than people of White European ethnicity. Black African and Black Caribbean people are 1.5 to 3 times more likely to develop type 2 diabetes than White Europeans[2].

We are also very concerned about the numbers of children and younger adults (under 40 years) developing type 2 diabetes, which was previously seen as a condition predominantly affecting people in middle and old age.

The number of children and younger adults (under 40) developing type 2 diabetes continues to rise sharply. There has been a 39% increase in type 2 diagnoses among people under 40 in the UK since 2016/17, rising from around 120,000 to nearly 168,000 cases. This compares to a 25% increase in those over 40.[3] The unequal impact of type 2 diabetes at an earlier age is particularly stark with prevalence for children and adults under 40 being 4.2 times higher in the most deprived areas compared to the least deprived areas, and almost 6 times higher for children under 18 years[4].

The prevalence of gestational diabetes is increasing in the UK. Gestational diabetes affects approximately 10-20% of all pregnancies in the UK.[5] (This number is likely to be an under reporting due to known issues with identification and coding).

This increase is driven by a growing proportion of women at higher risk, either because of their ethnicity or increasing weight or older maternal age[6]. Pregnant women living in areas of deprivation have been found to be almost twice as likely to be diagnosed with gestational diabetes[7].Gestational diabetes also increases a mother's long-term risk of developing type 2

diabetes, kidney complications, and cardiovascular disease. It also raises the child's risk of obesity and later type 2 diabetes.[8]

As of 2025, an estimated 12.2 million people in the UK, around 1 in 5 adults, are living with diabetes or prediabetes.[9] This includes approximately 4.6 million people diagnosed with diabetes, 1.3 million undiagnosed cases and 6.3 million people with prediabetes. Within this total around 90% of those with diagnosed diabetes have type 2.[10]

No one thing causes type 2 diabetes. It is caused by a combination of factors. These include someone's genetics, age, bodyweight and where the body stores fat. The reasons someone develops it will be individual to them. However, the most significant modifiable risk factor is obesity - around 90% of people with (newly diagnosed) type 2 diabetes are living with obesity or overweight[11]. The likelihood of having all the modifiable risk factors, including living with obesity, are increased for people living in poverty, which is therefore a significant and modifiable determinant of type 2 diabetes.

Pregnant women living with obesity have also been found to be 4-8 times more likely to develop gestational diabetes[12]. Pregnant women living in areas of deprivation have also been found to be almost twice as likely to be diagnosed with gestational diabetes[13].

The UK is now the third most overweight country in the G7. Across the UK approximately 65% of adults are now living with obesity or overweight, increasing their risk of developing type 2 diabetes and other serious health conditions. The numbers of people living with obesity and overweight are rising across all society. Crucially, however, the impact of obesity is not felt equally, and it is strongly linked to socio-economic deprivation (for example, the obesity rate for women in the most deprived groups in England is 39.5%, compared to 22.4% for the least deprived[14], though the gap is not so stark in some areas of the UK and varies across age groups, and is it is also more stark for those living with obesity than overweight, which is more equally distributed.

The causes of obesity are complex, with many different contributing factors that are not fully understood. The Foresight 2007 report identified over 100 factors at play including biological, societal, psychological and economic[15].

Poverty remains the single largest determinant of health. The cost-of-living crisis has intensified food insecurity, with 14% of UK households, or around 7.3 million adults, now experience food insecurity.[16]

The amount of money that someone has in their pocket directly dictates what food they can buy. For households in the lowest income decile, 75% of disposable income would need to be spent on food to meet the UK government's Eatwell Guide costs[17]. Currently, 20% of people living in the United Kingdom live in food insecurity and experience the psychological and physiological impact created by food insecurity[18,19]. As well as being less able to afford healthy food, people in more deprived areas have less access to healthy food, are more likely to live in inadequate accommodation without the means or resource to prepare and cook healthy food, are targeted by a greater number of unhealthy food advertisements, and have significantly less access to green outdoor space.

There is also some evidence to show that even accounting for individual behaviours and factors such as obesity, there remains an independent association between poverty and risk of type 2 diabetes in some groups[20].

To truly turn the tide on the rising rates of obesity, type 2 diabetes and gestational diabetes we need to improve income, housing, employment conditions, and the local environments we live in. There is a need for policy makers to move their focus in prevention strategies from being about individual responsibility to addressing the conditions and the environment in which people live. Interventions that target individual behaviour can also compound obesity stigma, by locating the responsibility, and possible blame, with the person rather than their environment.

We need to address the way that food is produced, sold and promoted and shift industry towards a model that supports access to healthy food for everyone. As food and farming policy developments across the UK seek to promote food security and sustainability, the many potential links these policies have with providing healthy accessible diets should be integral.

No single policy intervention will be sufficient, there are numerous steps that can be taken by governments, industry and communities. This position statement sets out what needs to change.

How did we develop this position?

We developed this statement through reviewing literature and engaging with Diabetes UK Council of Healthcare Professionals and other organisations and experts working to address obesity and the social determinants of health through the Obesity Health Alliance,

Scottish Obesity Alliance, Obesity Alliance Cymru and colleagues in Northern Ireland. We also engaged with organisations who are working for social justice and to address poverty, such as Joseph Rowntree Foundation, Child Poverty Action Group and the Institute for Health Equity and drew on the published work of Professor Sir Michael Marmot and others.

What we say about this issue

A healthier vision for the UK – the changes that are needed

Reversing the rise of type 2 and gestational diabetes will require sustained interventions across a range of areas as well as addressing the related underlying social determinants to enable people to access healthier diets and live healthier lives. There is no magic bullet - none of our proposed interventions and recommendations are likely to achieve the change we need to see if enacted in isolation, but taken together, they can make a difference. UK Governments should ensure that people grow, live and work in health sustaining communities and environments and take action across all the following areas to have an impact.

We need a UK cross-government strategy to address the social determinants of health, focused on addressing poverty:

- Governments at a national and local level should adopt a health-in-all-policies approach so that the health implications of all government decisions are taken into account.
- Governments should adopt a position where health and wellbeing is seen as an equally important measure of progress as GDP currently is – striving to create a wellbeing economy with health equity.

- The UK Government (for England) should enact the socio-economic duty under Section 1 of the Equality Act 2010, as already implemented by the Scottish and Welsh Governments. Equality law is devolved to Northern Ireland, and similar legislation should be introduced there to narrow gaps in equality law and ensure a common legal basis across the UK for addressing inequalities of outcome due to socio-economic disadvantage.[21]
- Governments should take action to address climate change ensuring that strategies to do this do not exacerbate inequalities and that they recognise the heavy impact of climate change on the social determinants of health and the negative impact on food security.

We need to address child poverty and ensure everyone has the resources required for a healthy life:

- Governments at all levels must take action to ensure all families have sufficient income to prevent the poverty that is strongly associated with childhood obesity, mental health problems and increased likelihood of early onset type 2 diabetes.
- Governments should take action to increase cash-first social security payments to parents/carers of children.
- In the 2025 Budget, we welcome the commitment to uprate working-age benefits in line with inflation from April 2026. We continue to call for no real-terms reductions in any benefit elements.
- Government should commit to ensuring that the real-terms value of social security is protected. This means uprating all payments at least in line with inflation and guaranteeing that no benefit elements are subject to freezes or cuts. This includes reversing the planned reductions to the Universal Credit health-related element from April 2026.
- In the 2025 Budget, we welcome the decision to remove the 2-child limit in social security payments from April 2026, which will lift children out of poverty. But, we continue to call for a reversal of the £20 a week cut to Universal Credit.

- Barriers to social security to be removed, such as the five week wait for Universal Credit, to ensure everyone who has the right can access the social security they are entitled.
- Government should end the practise of No Recourse to Public Funds (NRPF) to ensure that everyone living in the UK can access social security and children can access free school meals.
- A comprehensive review of social security levels is needed to achieve a level that enables everyone to have an adequate standard of living, free from the constraints of poverty.
- Governments at all levels must take action to ensure families have the support they need, including:
    - Increasing and expanding Healthy Start (England and Wales) and Best Start Foods (Scotland) so that payments reflect current food prices and enable all eligible families to afford nutritious essentials.
    - We welcome the planned increase of around 10% to Healthy Start from 2026–27. This must be implemented without delay and regularly uprated to keep pace with rising food costs
    - Ensuring universal breastfeeding support programmes are accessible for all to work towards reversing the UK's low breastfeeding rates.
    - Ensuring children's centres/family hubs are accessible for all within areas of greater deprivation in order to provide vital support.
- Expand access to healthy free school meals on a universal basis, as outlined in the 10-year health plan:
    - We welcome the expansion of free school meals to all children in households receiving Universal Credit and see this as an important first phase. In the longer term, government should commit to healthy free school meals for all children on a universal basis.
    - Review and strengthen the School Food Standards to ensure they reflect current nutritional guidance.
- As outlined in the 10-year health plan, Government's should also ensure implementation and go further on:

  - Further restricting junk food advertising to children and tightening the rules in line with the updated UK Nutrient Profiling Model.
  - Banning the sale of energy drinks to children, following the recent consultation.
- Schools should follow a "whole school approach" to healthy food and physical activity, including:
  - Providing food education through all years with emphasis on health and diet sustainability rather than calorie or weight management which could unintentionally impact eating disorders.
  - Incorporating both structured and unstructured approaches to physical activity throughout the day.
  - Mandating school standards and inspections to monitor and assess the provision of food education and physical activity within schools to ensure a high level, as well as ensuring that the food served meets high nutritional standards.

We need a system that provides and promotes access to healthy food for all:

- The UK Government should work with devolved administrations to enact bold fiscal and regulatory measures that enable healthier diets through reformulation and reduced consumption of unhealthy products. This should include:
  - Implementing commitments from the 10-Year Health Plan and the 2025 Budget, such as extending the Soft Drinks Industry Levy to cover milk-based drinks and introducing the new 4.5g sugar thresholds by January 2028.
  - Commit to working with the health sector on the new Food Strategy, making sure access to affordable healthy food is at its core.
- Any measures introduced should consider their impact on inequalities in access to healthy food and seek to address this through making healthier options more accessible (including by using any revenue gained for this purpose).
- Holding industry to account is an important step to creating a healthier food environment.

- Government should ensure that all food and drink advertising and promotions promote healthier foods. The range of tactics employed by businesses in promoting unhealthy products should be both restricted and countered by a shift to promote healthier food.
- The UK Government should enforce the planned HFSS advertising and promotion restrictions from January 2026. All remaining exemptions, including 'brand-only' advertising, should be reviewed, as current plans are unlikely to fully reduce children's exposure to unhealthy food marketing.
- The Government should monitor the newly implemented restrictions on multi-buy price promotions for HFSS foods (enforced October 1, 2025).
- As outlined in the 10 year health plan, the Government should review and update the Nutrient Profiling Model used to define foods and drinks subject to advertising and promotional restrictions, based on the most up-to-date evidence.[22] In line with ongoing policy development, marketing and labelling rules should be updated using the new Nutrient Profiling Model.
- Government should ensure robust food standards are updated, maintained, and enforced across the UK in all public settings.
- The Government should, with input from the health sector, deliver on its commitment to the Healthy Food Standards and introduce mandatory data reporting and targets on the healthiness of large companies' food and drink sales.
- Front of pack traffic light labelling should be mandatory. Information on calorie and carbohydrates should be included on packaging and in the out of home sector and be clear, consistent, and mandatory across the UK allowing people to access quality nutritional information about their food and drink wherever it is purchased.
- UK and devolved governments should explore levers to reduce portion sizes for food and drink and make these reduced portion sizes consistent across retail and out of home settings, with clear labelling on what is considered a portion size.
- UK and devolved governments should commission an independent, evidence-based review of ultra-processed foods (UPFs) and their links to obesity, diabetes and other health outcomes, and, based on the findings, develop policy measures to reduce UPF consumption, particularly among deprived and high-risk groups. UK and devolved governments should review the evidence on ultra-processed foods and its impact on

health conditions and obesity, and if necessary, explore levers to reduce the consumption of these.

We need to develop environments and neighbourhoods that are conducive to good health, supporting wellbeing and enabling greater levels of physical activity:

- Governments across the UK must ensure that the planning process recognises the importance of a health promoting environment and uses all the tools across national and local government to create an environment that addresses inequalities in access to green space and supports people to live healthier lives.
- As outlined in the 10-year health plan the government should limit the proliferation of new hot-food takeaway outlets through strengthened local and national planning frameworks. Furthermore, local authorities should use the powers they have to restrict the exposure of children to adverts for unhealthy food and promote healthy food[23].
- The UK Chief Medical Officers' guidance on the levels of exercise required for good health across different ages should be supported by national and local government initiatives to improve access to exercise across all of society.
- Government, both national and local, must make a step change in the levels of investment to support active travel through the cycling and walking infrastructure.
- Local authorities should provide communal spaces that support wellbeing in every community; increasing outdoor areas are essential for exercise, relaxation and play.
- Governments should review and address the barriers to accessing green space and active travel, including safety, cost and infrastructure.
- Local authorities and businesses should expand access to bicycle schemes and repair schemes, to ensure that everyone who wants to travel by bicycle can access one. Workplace initiatives such as cycle to work schemes should be supported wherever possible.
- Governments across the UK should enact the equivalent of the Place Standard (as currently in place in Scotland) and work towards building healthy, sustainable '20-minute neighbourhoods'.

- National and regional Governments across the UK should limit the number of unhealthy food and drink outlets within areas, with particular focus on restrictions near schools and environments frequented by young people and families.
- As outlined in the 10-year health plan Governments should implement a national physical-activity and healthy living campaign and incentive-based programmes (e.g., through the NHS App or local reward schemes) should be tested to promote sustained behaviour change.
- Governments should increase the use of social prescribing to improve access to exercise, well-being, peer support and community food projects. Funding should be provided through the NHS to support this and partnerships between health, local authority and community based organisations should be facilitated.

We need to create healthy working lives:

- Government should make a commitment that National Minimum Wage rates at least keep track with inflation.
- There should be a comprehensive review of National Minimum Wage rates and they should be increased to a level that allows for an adequate standard of living
- The 2026 rise in the National Living Wage to £12.21 per hour for workers aged 21 and over is a positive step. However, younger workers remain on lower rates (£10.85 for 18–20-year-olds and £8.00 for under-18s and apprentices). While the Government has signalled plans to narrow these gaps, we urge it to move toward full age-band parity and ensure all workers aged 16 and over receive at least the independently calculated Real Living Wage.
- Government should ensure adequate rights at work and sufficient enforcement where rights are breached, in order to create fair workplaces for all.
- Employers should provide a contractual right to paid time off to attend medical appointments.
- Government should take action to ensure zero hours contract workers, and workers in the ‘gig economy’ have full employment rights and protections, including access to Statutory Sick Pay.

We need to build health creating housing:

- Government should guarantee the right for everyone to have access to high-quality, secure housing – central to this is ensuring adequate supply of local authority housing stock.
- National and local government must ensure the enforcement of housing quality standards in each of the four nations of the United Kingdom.

We need to address climate change:

- Governments must plan to develop sustainable, local high-quality food networks as part of action to address climate change. This includes addressing food deserts and ensuring people can access a sustainable diet with healthy, culturally appropriate and affordable food within local communities.
- Governments should ensure that measures to address climate change do not impact negatively on those who are already disadvantaged in society. Environmental sustainability and health equity should be pursued together.
- Government, through the new Food Strategy, should work to create better climate and food outcomes.

We need further investment in research and innovation:

- Governments should increase investment and collaboration in systems-based approaches to the prevention of type 2 and gestational diabetes.

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Evidence and analysis – the reasons why we are saying what we do

Impact of social determinants of health - how poverty increases type 2 and gestational diabetes risk and implications for social justice

- People have a right to good health, regardless of social status, and Governments have a responsibility to address factors which are obstructing that. The UK is a signatory to the World Health Organisation's Constitution, which sets out that 'the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition[24]. The UN Convention on the Rights of the Child sets out that all young people have a right to good health and health services and also the right to a standard of living that is good enough to meet their physical and social needs and support their development[25].
- Currently the economic condition of poverty is preventing people from fulfilment of this basic human right. Living in poverty has psychological and physiological impacts, which increase the risk a person will be diagnosed with type 2 or gestational diabetes.
- Latest figures show 21% of the UK population (14.3 million people) live in poverty, including 4.5 million children (31%).[26] Child poverty is at its highest since records began and projected to rise to 4.8 million by 2029 without policy change.[27], [28] Healthy life expectancy difference is now around 19–20 years between most and least deprived areas. For women: 65.1% of life in good health in most deprived vs 81.5% in least deprived; for men: 70.4% vs 84.5%.[29]
- In the 10% most deprived neighbourhoods: 19% of people are of Bangladeshi ethnicity, 31% of Pakistani ethnicity, 15% of Black African ethnicity, 14 % of Black Caribbean ethnicity and 15% of Arab ethnicity.
- People in the poorest households are 2.3 times more likely to have type 2 diabetes than those in the highest household income quintile (16% compared to 7%). A similar increased risk is found with gestational diabetes, where rates in deprived communities

are twice as high as in the most affluent areas[30]. Women in deprived areas have higher risk factors and lower screening uptake, which may lead to underdiagnosis.

- 65% of adults in England are overweight or obese (2023–24).[31] Obesity remains strongly linked to deprivation, with the North East and deprived areas showing rates near 39%.[32] Obesity rates for children living in poverty have also increased disproportionately and at a higher rate over the last 15 years, compared to children in the most affluent families[33]. Obesity prevalence is twice as high in the most deprived children and children in deprived communities are five times as likely to be living with severe obesity compared to children in the most affluent communities[34].
- The likelihood of type 2 diabetes is significantly higher for people living on a low-income, even after adjusting for factors such as Body Mass Index (BMI) and physical activity levels. A Canadian study found that living in poverty at any time during a person's lifespan increased the risk of type 2 diabetes by 26 percent, again this risk remains unchanged when factoring in weight or physical activity[35].
- Findings from the Whitehall cohort study show that only 33% of the increased risk in type 2 diabetes prevalence among the lowest occupational grades could be explained by health behaviours and BMI[36]. Evidence has shown that chronic stress (often associated with the daily experience of living in poverty) impacts on insulin resistance and can contribute to the development of insulin resistance[37]. A substantial body of medical research describes how poverty can directly cause insulin-resistant states, pre-diabetes, and, eventually, diabetes[38]. The experience of deprivation itself affects sugar intake (through physiological and behavioural mechanisms) which affect insulin resistance[39,40].
- Currently, 20% of people living in the United Kingdom live in food insecurity and experience the psychological and physiological impact of food insecurity[41,42] Evidence also shows that poverty and inequality induce a need to seek high calorie foods and that stress, and an uncertain future increases attraction to calorie dense foods[43,44].
- If you're on a lower income, you're more likely to opt for meals that have more calories per pound - these foods tend to be calorie dense, ultra-processed and nutrient poor[45].
- The House of Lords Select Committee on Food, Poverty, Health and the Environment found in their recent inquiry that for some people living on a lower income, energy costs

inhibited them from spending much time on cooking, increasing their reliance on convenience foods[46].

Child poverty and supporting a healthy start to life

In Scotland[47] and England 30%[48] of children aged 2-15 years have obesity or overweight. In Northern Ireland this figure is 26% of children[49], and in Wales this figure is almost 27%[50].

- Universal breastfeeding
    - There is growing evidence that breastfeeding gives protection against overweight and obesity in infancy[51].
    - The UK has one of the lowest levels of breastfeeding in Europe, with only 34% of babies receiving any breast milk at 6 months and less than 1% exclusively breast fed.[52] A key method to counter this is more face-to-face support[53].
- Children's centres/family hubs
    - Currently there is a lack of provision especially in areas of deprivation.
    - There is a strong evidence base on the role of parental education in tackling childhood obesity[54].
- Physical activity in schools
    - Physical activity is important in maintaining a healthy weight.
    - Sport England reports that only 47.8% of children meet the 60-minute daily activity guideline, and many do less than 30 minutes during school hours.[55]
    - Only 13% of children in Northern Ireland meet physical activity guidelines[56].
      In Wales only 18% of children meet recommended physical activity guidelines[57].
- Food education
    - Key opportunity to improve children's diets by making food education integral to school curriculums.
    - The national education curriculum differs by nation.
      There is a lack of consistency in the English food curriculum with many not meeting the requirements.[58]
- Healthy free school meals
    - Free school meals are a simple way to ensure that children are receiving at least one healthy meal a day.

- Free school meals eligibility differs by nation: Scotland and Wales offer universal provision for primary schools, Northern Ireland has generous means-tested eligibility, and England will extend eligibility to all children in households on Universal Credit by September 2026.
- In England, nearly half of food insecure families do not currently qualify for free school meals.
- Universal provision significantly reduces the current associated stigma that some children experience and increase uptake amongst those who most need free school meals[59].

A system that provides and promotes healthy food for all

- Reformulation
  - Latest NDNS data shows only 17% of adults and 9% of 11–18-year-olds meet the 5 A Day target, with average intake around 3.3–3.7 portions per day. Inequalities persist, with lowest rates in deprived groups. Average fibre intake is now 16–18g per day, leaving a gap of 12–14g from the 30g recommendation. Only 4% of adults meet the target.[60]
  - Adults should consume no more than 30g of free sugar a day, but on average in England adults eat 50g per day. Children eat even more, with teenagers aged 11–18yrs eating an average of 55g per day[61].The Soft Drinks Industry Levy (SDIL) came into effect in April 2018. The treasury announcement of the levy resulted in over 50% of manufacturers reducing the sugar content of their drinks before it came into effect[62].
  - SDIL continues to drive reformulation, between 2015 and 2024, sugar sold from drinks fell by 39.8%, and the sales-weighted average sugar content dropped by 47.4%.[63]
  - Mandatory schemes have been shown to have far greater impact. The Public Health England sugar reduction programme has had limited success in encouraging manufacturers to reformulate, achieving a 3.0% reduction across all categories in its third-year progress report[64].

  - Reformulating food to reduce free sugar and salt, and reducing portion size of food, could lead to a significant reduction in early death and long-term health conditions[65].
  - A systematic review showed positive results for reformulation and health outcomes, despite heterogeneity of studies[66].
  - A survey commissioned by Diabetes UK found that 75% of British adults want food manufacturers to reduce the amount of saturated fat, salt and added sugar in their products to make it easier for people to eat more healthily[67].
  - Food businesses have said that in order to support a reduction of HFSS products they need a level playing field so that they can remain competitive[68].
- Ultra-processed foods
  - There is an association between ultra-processed foods and poor health outcomes, including overweight, obesity and cardio-metabolic risks; cancer, type 2 diabetes and cardiovascular diseases[69, 70]. We are still reviewing this in relation to prevention of type 2 diabetes and will develop recommendations on this going forward.
  - High consumption of ultra-processed foods is linked to an increased risk of chronic diseases and mental health conditions, like diabetes and cardiovascular complications. To date, no study has identified a positive health outcome associated with UPF intake. These findings indicate that dietary patterns minimising UPF consumption could deliver significant public health benefits.[71]
- Advertising and promotions
  - British spending habits on snacks have been surveyed each year since 1974, with the most recent results from 2019. Since the survey began it is estimated that we are spending five times more on cakes and pastries, six times more on biscuits and cereal bars, seven times more on chocolate bars and twenty-three times more on crisps[72].
  - Promotions have an important impact on buying behaviours – in Britain 41% of shopper expenditure is on promoted products[73].
  - Evidence shows that products higher in sugar, or those that are 'less healthy', are more likely to be promoted through price promotions[74, 75].

- Price promotions also result in consumers purchasing more than they otherwise would[76].
- Children are classed as a vulnerable audience when it comes to advertising[77] because they lack understanding of its persuasive intent[78].
- Children are also exposed to advertising of HFSS products in other settings, including online[79].
- Products aimed at children aim to bolster sales with the use of cartoon characters, collaborating with popular brands, and misleading nutritional information[80,81,82,83].
- There is evidence which shows that those from the most deprived backgrounds are most exposed to advertising of HFSS products[84].

  A ban on junk food advertising by Transport for London contributed to a 1,000 calorie decrease (6.7%) in average weekly household purchases of energy from HFSS products[85].

- Food Standards
  - The public sector food supplies 1.9 billion meals a year at the cost of £2.4 billion[86]. Public procurement of food could be far more influential in setting high standards.
  - The World Health Organisation has urged governments to promote healthy food in public facilities arguing it could help to prevent 8 million annual deaths caused by unhealthy diets[87].
- Labelling
  - Young consumers and adults would prefer the healthier choices to be easier to identify. Front of package nutrition information is not consistent, and health nutritional claims can be misleading[88, 89, 90].
  - In order to make informed choices about food and drink, people need to know what is in the products they are consuming. Education on nutritional labelling should be accessible to all with reasonable adjustments made to meet the needs of our diverse population.
  - Evidence shows that labelling systems that include colour coding, the words ‘high’, ‘medium’, and ‘low’, and daily reference intakes are the most helpful to consumers[91].

  - Front-of-pack labelling may also play a role in encouraging manufacturers to reformulate their products.
  - Over a quarter of adults and one fifth of children eat food from out-of-home outlets at least once a week[92]. These products tend to be higher in energy, fat, sugar and salt[93]. It is therefore vital that people are informed about the nutritional content of the food and drink in these settings.
  - A Cochrane review shows that adding calorie labels to menus and next to food in restaurants, coffee shops and cafeterias could reduce the calories that people consume[94].
  - Please see our separate position statement on nutritional labelling for further information.
- Data collection
  - The 10-year health plan introduces mandatory reporting and targets for large companies, under the new Healthy Food Standards.
  - Transparency is important in encouraging good practice and businesses support this as providing a level playing field[95].
- Portion size
  - Adults in the UK eat more than the recommended amounts of calories[96] sugar[97], saturated fat and salt[98].
  - The size of portions, packages, and tableware has increased over the last 5 decades and a systematic review has shown that larger portions of food increase people's consumption. It has been suggested that eliminating larger portions from the diet could reduce average daily energy consumed by 12-16% among UK adults[99].
  - Economic analysis of different policy interventions has suggested that portion control is one of the most cost effective and evidenced based options for reducing obesity[100].
- Price
  - Healthier foods are nearly 3 times as expensive as less healthy foods, calorie for calorie[101].
  - For the most deprived households, meeting the Eatwell Guide would require 45% of disposable income, rising to 70% for families with children.[102]

Developing environments / neighbourhoods that are conducive to good health, supporting wellbeing and enabling greater levels of physical activity

- Marmot's review of 'ignored places' shows that higher rates of diabetes are found in deprived areas that have less community assets (such as access to green space, active travel initiatives, healthy high streets and good education facilities)[103].
- Living in a community with accessible green space reduces the prevalence of obesity and diabetes[104]. Studies have also found the residential location (organisation of urban space and spatial distribution of health-related resources) of individuals is a highly significant and independent type 2 diabetes predictor even after adjusting for BMI, age and ethnicity[105].
- There is a growing body of evidence that use of social prescribing is effective at improving general health and quality of life. Studies have pointed to improvements in quality of life and emotional wellbeing, mental and general wellbeing, and levels of depression and anxiety[106].
- When people in areas identified as ‘left-behind’ are asked what resources they want in their community, over half identified parks as key resource[107].
- In England over 10 million people live in areas without sufficient access to green space[108]. Almost 40% of ethnic minority people live in the most green-space deprived areas, compared to just 14% of white people. The average amount of public green space for people in the most deprived green space neighbourhoods is less than $9m^2$ (the average size of a garden shed). Children from the most deprived areas are 20% less likely to spend time outside than those in affluent areas[109].
- The 2018 Scottish Household survey reported that adults living in the most deprived areas of Scotland were less likely to have made any visits to the outdoors in the past 12 months[110]. This figure was 18% in the most deprived areas compared to 5% in the least deprived areas. Statistics also found that the most socially deprived communities are the least likely to have access to a local green space within a five-minute walk and the most likely to face an 11 minute plus walk.

- The 2019-20 National Survey for Wales reports that physical activity rates were lower among women, older adults, and more deprived areas. 33% of adults were reported as being inactive (having done less than 30 minutes of activity the previous week)[111].
- People who live within a half mile of green space (such as parks, public gardens, and greenways) have a lower incidence of fifteen diseases, including type 2 diabetes[112]. Green space reduces obesity and depression, saving the NHS more than £100 million each year in GP visits and prescriptions[113].
- Physical activity is important for preventing weight gain, maintaining and healthy weight, and maintaining weight loss[114].
- Independent of its impact on weight loss, physical activity can also reduce people's risk of developing type 2 diabetes and cardiovascular disease[115].
- Being sedentary is also independently associated with an increased risk of type 2 diabetes[116].
- Compared with inactive commuting, active commuting was found to reduce the risk of type 2 diabetes[117]. Alongside this, people who live in walkable neighbourhoods (neighbourhoods where daily service can be accessed within a 20-minute walk) have a lower incidence of pre-diabetes and diabetes[118]. 75% of people when surveyed said they would like to see more money spent on cycling infrastructure in their community[119], however currently in the UK investment in active travel (such as walking and cycling infrastructure) pales in comparison to investment on roads.[120]
- Planning process
    - Many people in the UK live within communities that are shaped and dependent on car travel[121] with little in the way of local amenities.
    - People in the most deprived areas are more likely to have less access to green spaces[122].
    - Enabling people to live more active lives, with access to healthy food is important in reducing obesity.
- Limiting the number of unhealthy food and drink outlets
    - Exposure to greater levels of takeaway outlets is associated with greater levels of obesity prevalence[123].

- People from the most deprived communities are more likely to live in neighbourhoods with more unhealthy food and drink outlets. This includes having more unhealthy online takeaway options[124].
- Many local governments are utilising different types of methods for limiting unhealthy food and drink outlets[125]. Analysis is needed to understand which options are the most effective.

Employment – Creating healthy working lives

- Evidence shows there is an association between job insecurity and diabetes risk[126]. Studies show that increased job insecurity directly increases the risk of an increased BMI[127].
- High job insecurity is also associated with an increased risk of incident diabetes compared with low job insecurity[128].
- In the Marmot Review: 10 years on, good quality work is defined as 'including job security; adequate pay for a healthy life; strong working relationships and social support; promotion of health, safety and psychosocial wellbeing; support for employee voice and representation; inclusion of varied and interesting work; a fair workplace; promotion of learning development and skills use; a good effort–reward balance; support for autonomy, control and task discretion; and good work–life balance'[129].
- Employment prospects are linked to a person's socio-economic status, with those in poverty more likely to work shift-work and work night shifts. Working longer hours has been shown to increase a person's risk of type 2 diabetes, this link is only present in people who earn at the lower end of the income spectrum[130]. Compared with day workers, night shift workers are also at a higher risk for type 2 diabetes[131].
- The 'gig economy' involves high work stress and often an effort-reward imbalance, as well as job insecurity that has been shown to have adverse effects on health. In a US study, job strain, the most widely studied form of work stress, was found to be associated with an increased risk for type 2 diabetes in middle aged and older workers independently of lifestyle factors[132].

Housing – Building health creating housing

- New evidence reinforces housing as a health determinant: cold, damp, and overcrowded homes are linked to worse physical and mental health and higher diabetes prevalence, even after controlling for BMI and behaviours.
- One study conducted amongst middle aged Black Americans found every housing condition rated fair to poor to be associated with around a doubled risk of developing type 2 diabetes[133].
- There is also a relationship between poor quality housing and poverty. In 2019/20, 46% of social renters and 33% of private renters were in relative poverty, compared to 15% of people who owned their home outright and 11% of those who have a mortgage. People who rent are more likely to be living in substandard accommodation, which negatively impacts on their health[134].
- Rates of type 2 diabetes have also been proven to be significantly higher and concentrated in areas characterised by lower incomes and crowded housing[135].
- When people living in areas of UK identified as 'left-behind' were asked what resources they want in their community over 40% said housing[136].

Climate change

Climate change heavily impacts on the social determinants for good health, like jobs, equality and access to health care and social support. Creating a more sustainable, local, healthy food system is what would ultimately lead to accessible, healthy diets.

- Climate change is already having a negative impact on food security, mainly through disrupted food production[137], which is causing considerable health burdens, especially in poorer parts of the world.
- Whilst foods like cereals, potatoes, dairy and eggs are predominantly produced in the UK, we are much more dependent on imports for our supply of fruits, grains, pulses and vegetables[138].
- The health of people in low-income and disadvantaged countries and communities is impacted the most by the climate crisis and they contribute the least to its causes.

They also pay, as a proportion of income, the most towards implementing policy responses and benefit least from those policies[139].

What will Diabetes UK do to address issues raised here?

- We are committed to addressing the underlying causes of type 2 diabetes and obesity, including the social determinants of health
- We are still learning how we can better work for social justice and address poverty and will continue to increase our knowledge and connections to do that.
- We aim to build alliances and partnerships that enable us to make a meaningful impact and effectively tackle the social determinants of health. Examples include:
    - Obesity Healthy Alliance
    - Free School Meals for All, led by the National Education Union (NEU)
    - Say Yes to Free School Meals, coordinated by Sustain
    - A campaign led by the Joseph Rowntree Foundation and Trussell Trust, advocating for an Essentials Guarantee on supporting a minimum income floor to help families afford basic necessities such as energy and food.

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