



# HEALTHY DIET, HEALTHY WEIGHT AND RESILIENCE

## Key Points

- » Emerging evidence published during the current pandemic has highlighted a relationship between obesity and COVID-19 severity and death
- » 65% of the Scottish adult population is classed as overweight, with 28% classed as having obesity. Rates of type 2 diabetes are on the rise, alongside increasing associated healthcare and wider economic costs
- » Scotland's population diet is poor and this is driving the rates of overweight and obesity. Scotland has consistently missed its dietary goals for 17 years: discretionary foods such as cakes and confectionery are consumed too often, and foods of higher nutritional quality such as fruit and vegetables, fibre and oil-rich fish are not consumed enough
- » In Scotland, we currently have an unhealthy food environment, where food high in fat, sugar and salt is heavily promoted and advertised, making it difficult for many to afford and access fresh, healthy food
- » The COVID-19 pandemic has exposed our lack of resilience to fight such outbreaks, due to our poor population health, exacerbated by our current food system and unhealthy food and social environments

- » It has highlighted the unequivocal importance of driving a focus on improving population diet and weight, in order to build a healthy population in Scotland: one that is more prepared and more resilient to any potential future outbreak

## Key Recommended Actions

- » Actions to achieve healthy weight should be central to the Scottish Government's recovery plans, ensuring everyone has access to affordable, healthy food
- » Focus and urgent action is required on obesity prevention measures, including reducing diet-related health inequalities, in order to build a more resilient population
- » The Scottish Government should seek to introduce the postponed Restricting Food Promotions Bill, widening its range to reflect the extent of action required following the pandemic

## Introduction

In March 2020, the World Health Organisation (WHO) declared COVID-19 (the disease caused by the SARS-COV-2 virus) as a pandemic. Around 80% of people with COVID-19 experience mild to moderate symptoms (most commonly fever and/or a persistent cough), with 20% developing more severe disease, requiring hospital admission and respiratory support.

Early research has highlighted several factors associated with the severity of COVID-19. These include older age, male sex, Asian and black ethnicity and certain pre-existing conditions/co-morbidities (including diabetes). Research has also emerged on obesity as a risk factor<sup>1</sup>. NHS Inform in Scotland<sup>2</sup>, Public Health England<sup>3</sup> and the US Centers for Disease Control and Prevention<sup>4</sup> are amongst those who list 'a BMI of 30kg/m<sup>2</sup> or above' in the higher risk group at risk of severe illness in COVID-19 and they are therefore advised to follow strict physical distancing measures.

Currently, 65% of the Scottish adult population is classed as overweight, with 28% classed as having obesity<sup>5</sup>. Rates of type 2 diabetes are on the rise<sup>6</sup>, alongside increasing associated healthcare and wider economic costs.

The COVID-19 pandemic has exposed our lack of resilience to fight such outbreaks, due to our poor population health, current food system and unhealthy food and social environment.

## The Scottish Diet

Scotland has been consistently missing the Scottish Government's Dietary Goals for the last 17 years<sup>7</sup>. Discretionary products (which add little nutritional value to our diets and tend to be high in calories) such as cakes, biscuits and sugary drinks make up a large component of the Scottish diet, contributing to around 20% of the fat and calories in the diet and 50% of the sugar consumed. While the Scottish diet is too high in things like calories, fats, sugar and salt, it is equally too low in healthier components such as fibre, oil-rich fish and fruit and vegetables<sup>7</sup>. The percentage of adults consuming the Scottish Dietary Goal of 5 portions of fruit and veg a day stands at 22%, whilst children consume even less at 15%<sup>5</sup>.



Many dietary components have been linked to a decreased risk of developing non-communicable diseases, for example, fruit, vegetables and oil-rich fish decrease the risk of cardiovascular disease, while fibre decreases the risk of bowel cancer<sup>7</sup>. Similarly, overconsumption of certain dietary components can increase the risk of developing diseases, for example, red and processed meat consumption can increase the risk of bowel cancer, salt can increase the risk of high blood pressure and stroke, and sugary drinks can increase the risk of developing type 2 diabetes<sup>7</sup>.

## Overweight, obesity and health conditions

We have a high prevalence of overweight and obesity in Scotland. In 2018, 65% of adults in Scotland were classed as overweight and 28% as having obesity<sup>5</sup>. In children aged 2-15, 29% were classed as at risk of overweight and 16% at risk of obesity<sup>5</sup>, whilst 22% and 10% of Primary 1 children are at risk of overweight and obesity, respectively<sup>8</sup>. Having overweight or obesity increases the risk of developing conditions and diseases such as asthma, type 2 diabetes, hypertension, heart disease, stroke and 13 different types of cancer. It also significantly increases the risk of developing type 2 diabetes: 90% of adults with type 2 diabetes also have obesity<sup>9</sup>.

## Impact of unhealthy social environments on population health

Scotland's currently high prevalence of obesity results from living in unhealthy social environments, termed "obesogenic environments", so-called as they act on individual physiology and psychology and influence individual lifestyles, promoting weight gain. In such environments, energy dense 'junk' foods are widely available, more affordable and accepted. Obesogenic environments are a powerful driver of high obesity levels in Scotland, causing unhealthy lifestyles to become the default option. To change these environments towards healthy social environments, we need to:

- » Restrict advertising and marketing of foods high in fat, sugar and/or salt (HFSS) across all digital advertising channels
- » Regulate price and in-store location promotions of HFSS foods, including, temporary price reductions, multi-buys and extra-free
- » Regulate to control portion sizes, provide smaller portions; reformulate to reduce calories, sugar and salt, and increase fruit and veg; introduce mandatory calorie labelling on menus in the out of home sector

The evidence underlying the effects of advertising, marketing, labelling and reformulation on obesity can be found in our evidence briefings on these topics<sup>10</sup>.

## The relationship between obesity and COVID-19

Early research emerging on the link between obesity and COVID-19 has shown that obesity increases the risk of COVID-19 severity and death<sup>11</sup>. People with obesity are at increased risk of severe illness from viruses and respiratory illnesses due to immune frailty<sup>12,13</sup>, increased baseline inflammation<sup>12-14</sup>, increased risk of comorbidities and impaired lung function<sup>15-17</sup>. These factors increase the likelihood of susceptibility to the novel coronavirus, diminish protection normally gained through immunisation and increase the severity of COVID-19 illness. Early clinical observations from China have found overweight and obesity to be associated with more severe complications from COVID-19<sup>18,19</sup>, with similar findings reported in France<sup>20</sup>, Italy<sup>21</sup>, United States<sup>22-25</sup> and United Kingdom<sup>26-29</sup>. See our briefing 'Obesity and COVID-19' for a more comprehensive overview of the emerging evidence<sup>1</sup>.



## COVID-19 and obesity: a double-edged sword?

Not only might obesity be a risk factor for severe complications during COVID-19, but obesity prevalence may also be exacerbated by the restrictions put in place during lockdown and the resulting social and financial situation.

Researchers in countries across the world have warned that the required lockdown measures implemented by governments to control the spread of COVID-19, including school closures, may have a detrimental effect on health and have the potential to induce weight gain. In April, it was estimated that there were 1.38 billion children either out of school or out of childcare<sup>30</sup>. Research from the US suggests that coronavirus lockdown measures are likely to double the amount of time children are out of school during the year<sup>31</sup>; summer holidays have previously been associated with unhealthy weight gain in US school children<sup>32,33</sup>, the risk

factors for which will likely be exacerbated during lockdown.

In Spain, the countries' strict lockdown measures saw children barred from leaving their homes for any reason during the first 6 weeks of lockdown<sup>34</sup>. The Spanish Study for the Study of Obesity anticipated up to a 5% weight gain in children and adolescents if tough measures were not eased<sup>35</sup>. With around 70% of Spain's families with children living in apartments, the opportunity for physical activity is diminished<sup>35</sup>.

Analysis published in the British Medical Journal warned that lockdown measures in the UK could exacerbate health inequalities between wealthier families and those that are less well-off, as well as people of certain ethnicities, those with disabilities or mental health problems<sup>36</sup>. In both Scotland and the UK, childhood obesity rates are much more prevalent in areas of high deprivation, compared to areas of low deprivation<sup>5</sup>. Health inequalities are already known to be clearly linked to obesity rates, along with food insecurity<sup>5</sup>.

### **In the current situation, where families are losing income and supermarkets are low on stock, purchasing and accessing healthy food may be more challenging, as highlighted by several reports and surveys conducted during the period of lockdown in the UK:**

- » With many people unable to continue working due to the Governments lockdown measures, loss of income and difficulty accessing food due to situations caused by the pandemic has resulted in both the exacerbation and establishment of new food insecurity. A survey by the Food Foundation found that increasing numbers of people struggled to afford or access food during the outbreak in the UK<sup>37</sup>. The number of people experiencing food insecurity in the UK was seen to have quadrupled, with adults with disabilities, children in the household, those self-isolating and Black and Minority Ethnic groups particularly at risk. Adults with income losses of more than 25% were also found to be particularly at risk, more so those who had children eligible for school meals.
- » The Trussel Trust reported that food bank usage has been forecast to increase by 20% over the next few months due to COVID-19, on top of the 20% increase already forecast prior to the outbreak<sup>38</sup>, with many food banks across the UK reporting that they were running low on essential food supplies during lockdown<sup>39</sup>. Although many had the funds available to purchase food, due to low levels of stock and supermarket restrictions on the number of items allowed to be purchased in each shop, many were prevented from being able to purchase food in the quantities required for donations.
- » The Food Foundation received data from Kantar for the week ending 22nd March 2020 (the day before full UK lockdown was put into force), which included data on sales of fruit and vegetables and consumer shopping behaviour. Frozen and tinned foods were purchased more than fresh foods, and whilst most categories saw a sales uplift, fruit, vegetables and salads saw less of an impact with people purchasing more cans, savoury carbohydrates, snacks, and frozen prepared foods<sup>40</sup>. The biggest month for grocery shopping ever in the UK was recorded in March 2020, with a sales increase of 23.3% on the previous year. Households spent £26 on average more than the previous week<sup>40</sup>.
- » Citizen's Advice Scotland found that a third of Scottish adults surveyed in March were concerned were concerned about their ability to pay for food and essentials<sup>41</sup>. This concern was higher in those of lower socio-demographic status than those of higher socioeconomic status. In April, this concern had fallen to 26% of those surveyed<sup>42</sup>. This concern was even higher in a UK-wide survey of 2038 adults by Hubbub, which found that 43% of adults worried about the cost of providing food for their household<sup>43</sup>. 7% of the sample reported having to use foodbanks for the first time



## The lockdown measures implemented by the Scottish and UK Governments to manage the spread of coronavirus have also been found to have impacted on lifestyles:

- » Obesity Action Scotland polling of 2079 adults in Scotland, carried out between 7th and 13th May, found clear indication that the coronavirus outbreak has changed the lifestyles of people in Scotland in both positive and negative ways<sup>44</sup>. The survey found that although 43% reported cooking from scratch more often and 44% purchased fewer takeaways, 54% reported eating more out of boredom, with people reporting more snacking on cakes and biscuits (49%), confectionery (47%) and savoury snacks (48%). These changes demonstrate how quickly a modified environment can change people's behaviours
- » In May, the Office for National Statistics reported that 27% of 1360 adults surveyed said that their exercise routine had been affected by lockdown measures<sup>45</sup>

Other factors include an increase of screen time, parental stress, inequality in accessing greenspace, price hikes by supermarkets due to changing supply and demand, and difficulty accessing treatment and obesity interventions<sup>30</sup>. Importantly, this period may also impact on pre-pregnancy weight-gain<sup>30</sup>.

## Building resilience for the future



The pre-COVID-19 food and social environment has led global populations to a point where they have become less resilient to public health risks such as that caused by the current pandemic. Although WHO have not yet declared obesity itself an independent risk factor for COVID-19 complications, they, and others, have identified many obesity-related NCDs, such as type 2 diabetes and heart disease, as underlying conditions that are likely to increase the severity of the disease, or increase the risk of dying from it. Public Health England in the UK and the US Centres for Disease Control and Prevention have also classed a 'BMI >30' as a risk factor in itself<sup>46,4</sup>, due to the impaired ability people with severe obesity have to fight the virus and its associated conditions. The early evidence produced by many countries has also highlighted an association between obesity and risk of hospitalisation with COVID-19, severity of the disease, and death.

The outbreak of COVID-19 has undoubtedly greatly affected, and will continue to affect, Scottish economy, with many 'out of home' businesses, such as cafes and restaurants, having to change their processes, or close. It has also put great strain on our current food system, exposed by supermarket food shortages: highlighting how important a resilient, sustainable food system is as a whole<sup>47</sup>.

Positively, COVID-19 has also presented us with an important opportunity to reprioritise and rebuild a healthy food and social environment, with healthier high streets, less marketing of junk food and to address the inequality that underlies so many health issues in Scotland and the UK, including obesity prevalence. COVID-19 has changed how much we value food as a society<sup>48</sup>: we must now grasp the opportunity to create a society that values nutritious, sustainable foods. A joined-up approach to food governance, linking health policy with all

steps of the food system, is a vital part of addressing the current siloed approach, which prevents Scotland's food system and the Scottish Government's health priorities from delivering to their potential.

## Placing actions to achieve healthy weight at the centre of the Scottish Government's recovery plans

Scotland has made no progress towards achieving its population dietary goals and has a high prevalence of overweight and obesity. With obesity linked to poorer outcomes in COVID-19 patients, and a healthy diet key in supporting immune function, any recovery plan for Scotland must prioritise healthy population weight and focus on obesity prevention.

Many issues exist in the food environment that make it difficult for the healthy choice to be the easy choice for all, and actions that aim to reduce health inequalities should be present in all prevention plans. Unhealthy food is still heavily promoted and advertised, with clear impact on consumer choice and health. In order for Scotland to grow as a resilient population, the Scottish Government must seek to introduce the postponed Restricting Food Promotions Bill<sup>49</sup>, which would restrict the promotion of HFSS foods, using the opportunity to widen its reach. Additional legislation restricting the marketing and advertising of HFSS products, such as the UK 9pm HFSS advertising watershed<sup>50</sup>, is required to support the health of the population.

The current pandemic has highlighted the unequivocal importance of driving a focus on improving population diet and weight, in order to build a healthy population in Scotland: one that is more prepared and more resilient to any potential future outbreak.



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