



**Obesity Action  
Scotland**

Healthy weight for all

# OBESITY IN SCOTLAND

## Prevalence, Causes and Impact

*This factsheet reports on data from 2021/22. We have produced a further 2 factsheets, reporting on data from 2019/20 and 2020/21. We are currently presenting these as a suite of complementary documents in light of the impact of the pandemic on data collection methods.*

### Note on the data included in this factsheet

**Scottish Health Survey:** Data for adults in the 2021 Scottish Health Survey is self-reported data that has then been adjusted based on a methodology adopted in England to compare self-reported and measured data. Data for children in the 2021 Scottish Health Survey is self-reported, unadjusted data. We have therefore chosen to only refer to measured P1 BMI data in this factsheet.

**Primary 1 BMI data:** The number of children included in the 2021/22 data (92%) is significantly higher than in 2020/21 (38%) due to disruptions to measurement caused by the pandemic. Data from 2020/21 were also slightly under-representative of children from the least deprived backgrounds (SIMD 5). However, the 2021/22 data highlights that the lower rates of measurement do not account for all the changes seen in this data, and it is likely that the child BMI distribution has been impacted directly by factors associated with the pandemic period.

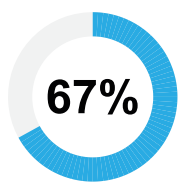
### OBESITY TRENDS

Obesity is a significant public health concern. In 2021, adult obesity prevalence was 30% and 67% of adults had overweight and obesity<sup>1</sup>.

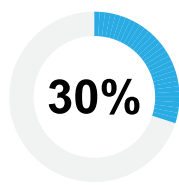
The Primary 1 BMI data shows the proportion of children at risk of overweight and obesity in Scotland. In the 2021/22 academic year, 24.1% of primary 1 children were at risk of overweight and obesity, which equates to around 6 children in a classroom of 24. The percentage of children at risk of developing obesity is now 12% which is a decrease from last year (16%)<sup>3</sup>.

The data for 2021/22 is higher when compared to pre-pandemic figures. In the last measurement before the pandemic (2019/20) 23% of children were at risk of overweight and obesity (10% were at risk of obesity). This highlights that there is still an overall upward trend in children's weight over the past two to three years<sup>3</sup>.

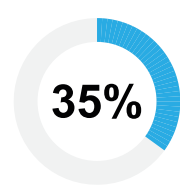
# OBESITY PREVALENCE IN SCOTLAND



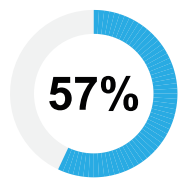
Over 2 in 3 adults (67%) have overweight including obesity<sup>1</sup>.



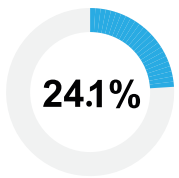
3 in 10 adults (30%) have obesity<sup>1</sup>.



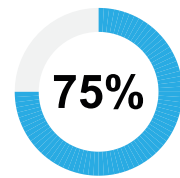
Overweight and obesity prevalence increases with age from 35% in the 16-24 age group to 75% in those aged 55-64<sup>1</sup>.



More than half (57%) of pregnant women had overweight and obesity in 2021/22<sup>2</sup>. This is highest recorded figure.



24.1% of children in Primary 1 were at risk of overweight and obesity<sup>3</sup>. This is 5.4% decrease from the previous year.



## DEFINITION OF OBESITY

Obesity describes the accumulation of excess body fat. Body Mass Index (BMI) is used to define overweight and obesity at population level. BMI is a measure of whether a person is a healthy weight for their height. For most adults, overweight is defined as having a BMI of 25 – 29.9 kg/m<sup>2</sup> and obesity is defined as having a BMI of 30kg/m<sup>2</sup> and higher<sup>4</sup>.

BMI is an effective population measure as it is relatively accurate, simple and cheap; however, there will always be exceptions to the rule for individuals, e.g. people who are very muscular or pregnant women may have a high BMI but not extra fat mass. In such individual circumstances other measures can be used to provide a more accurate assessment of healthy weight.

# GENDER

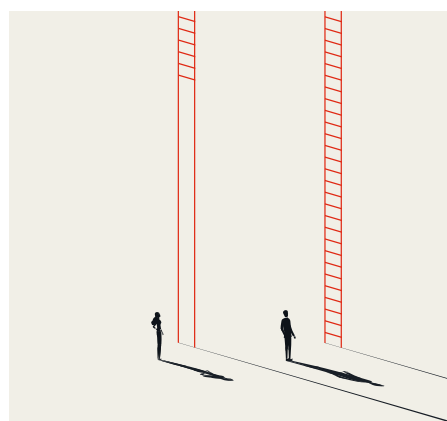
In 2021, males were more likely to have overweight (including obesity) than females. This is the case for both men and boys in primary 1. Women are slightly more likely than men to have obesity.



- » 70% of men have overweight and obesity. 29% have obesity<sup>1</sup>.
- » 60% of women have overweight and obesity. 31% have obesity<sup>1</sup>.
- » For boys in primary 1, 24.4% were at risk of overweight and obesity in 2020/21. 12.1% were at risk of obesity<sup>3</sup>.
- » For girls in primary 1, 23.9% were at risk of overweight and obesity in 2020/21. 11.2% were at risk of obesity<sup>3</sup>.

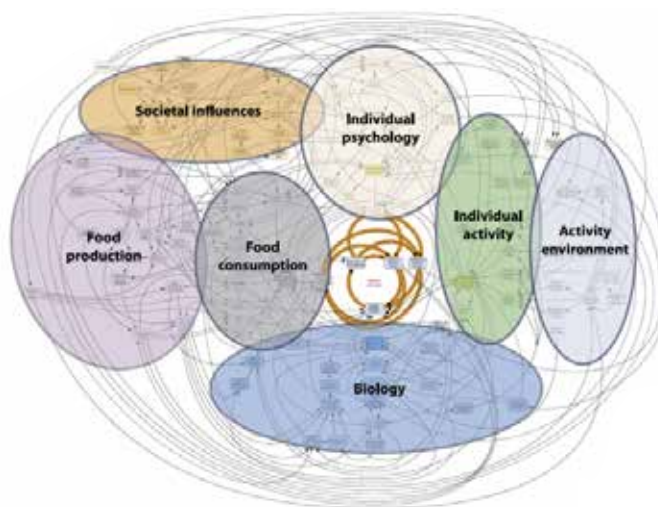
# DEPRIVATION

- » Obesity rates are higher in areas of greater deprivation. In 2021, 38% of adults in the most deprived quintile had obesity, compared to 20% in the least deprived<sup>1</sup>.
- » Children living in the most deprived areas are over twice as likely to be at risk and obesity than children from least deprived areas – 15% in the most deprived areas, compared to only 7% in the least deprived<sup>3</sup>.
- » When looking at combined risk of overweight and obesity, **29%** of children from the most deprived quintile were at risk compared to 17.6% of children from the least deprived quintile<sup>3</sup>.
- » Across all quintiles, there has been a decrease in the proportion of children at risk of overweight and obesity in 2021/22 academic year; however, the 2021/22 figures are still higher than in the last measured pre-pandemic year (2019/20), where 27.4% of primary 1 children in the most deprived quintile were at risk of overweight and obesity, compared to 17.2% in the least deprived<sup>3</sup>.



# CAUSES OF OBESITY

Obesity occurs when energy intake from food and drink is greater than the body's energy requirements over a prolonged period. An obesogenic environment is one where environmental factors play a role in diet and nutrition (as well as the amount of physical activity undertaken). These factors have a strong influence on the availability and consumption of food<sup>5</sup>. In obesogenic environments inactivity and overconsumption of energy dense foods is easy, affordable and widely accepted, making an unhealthy lifestyle the default option.



**The Foresight report<sup>5</sup> for the UK government identified 7 clusters of factors / behaviours that are contributing to obesity (termed a 'system's map'):** food consumption, food production, individual psychology, social psychology, physiology, individual activity and physical activity environment.

These clusters are interconnected, and this connectivity is important when designing/delivering interventions; it may help to explain unexpected impacts or losses of impact due to mitigating effects of different factors/behaviours<sup>5</sup>.

# IMPACT OF OBESITY

Obesity increases the risk of



**Kidney disease<sup>15</sup>**



**Type 2 diabetes<sup>6</sup>**



**Infertility in women, impotency in men<sup>11</sup>**



**Premature death<sup>16</sup>**



**13 common cancers<sup>7</sup>**



**Complications during pregnancy and birth<sup>12</sup>**



**Unemployment<sup>17</sup>**



**Cardiovascular disease<sup>8</sup>**



**Musculoskeletal problems<sup>11</sup>**



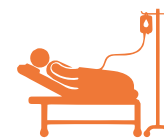
**Discrimination and stigmatisation<sup>18</sup>**



**Alzheimer's disease<sup>9</sup> and dementia**



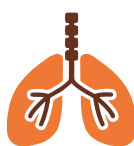
**Mental health problems<sup>13, 14</sup>**



**Increased risk of hospitalisation<sup>20</sup>**



**Gastrointestinal disorders<sup>10</sup>**



**Respiratory disorders<sup>11</sup>**



**Severe illness and death from COVID-19<sup>19</sup>**

Type 2 diabetes<sup>6</sup>, 13 common cancers<sup>7</sup>, cardiovascular disease<sup>8</sup>, Alzheimer's disease<sup>9</sup> and dementia, gastrointestinal disorders<sup>10</sup>, infertility in women, impotency in men<sup>11</sup>, complications during pregnancy and birth<sup>12</sup>, musculoskeletal problems<sup>11</sup>, mental health problems<sup>13, 14</sup>, respiratory disorders<sup>11</sup>, kidney disease<sup>15</sup>, premature death<sup>16</sup>, unemployment<sup>17</sup>, discrimination and stigmatisation<sup>18</sup>, increased risk of hospitalisation<sup>20</sup>, severe illness and death from Covid-19<sup>19</sup>

# ADDITIONAL RISKS FOR CHILDREN WITH OBESITY

There are a number of additional risks for children who have or who are at risk of obesity. These include:



- » Emotional and behavioural impacts including stigmatisation and bullying, low self-esteem, and absence from school<sup>20</sup>
- » Increased risk of having obesity in adulthood<sup>20</sup>
- » Higher risk of morbidity, disability and pre-mature death in adulthood<sup>1</sup>
- » Physical health impacts including breathing difficulties, increased risk of bone fractures, hypertension, early markers of cardiovascular disease, insulin resistance, and physiological effects<sup>20</sup>

## COST OF OBESITY IN SCOTLAND

The annual cost to the NHS in Scotland of obesity is estimated to be £600 million<sup>5</sup>. Average NHS costs for people with a body mass index of 40 kg/m<sup>2</sup> (severe obesity) are estimated to be twice those for people with a BMI of 20 kg/m<sup>2</sup> (within normal weight range).

A recently published report calculated the annual cost of adult obesity to the UK economy to be £58bn, with obesity-related ill health costing the NHS an estimated £40bn annually<sup>21</sup>.

The main costs associated with unhealthy diet and weight can be grouped into three broad categories – direct, indirect and intangible. Direct costs are generally those which relate to costs of health care services including prevention, diagnosis and treatment of conditions. Indirect costs refer to the loss of productivity on society and typically include absenteeism and premature mortality. Finally, intangible costs relate to the psychological burden on individuals and their friends and families from pain, suffering and bereavement experienced as a result of poor health from overweight and obesity<sup>22</sup>.

Evidence suggests that indirect costs are the most significant costs of obesity, accounting for almost two-thirds of total economic costs and impacts from overweight and obesity<sup>23</sup>. Such costs are broad and far reaching and highlight the importance of actions and interventions to mitigate and address them. The McKinsey Institute estimates that the cost of obesity to the UK is equivalent to 3% of gross domestic product (\$70billion)<sup>24</sup>, taking into account - loss of productivity attributable to loss of life or impaired life quality, direct health care costs, and investment to mitigate the impact of obesity.

Evidence shows that almost all obesity prevention interventions are highly cost-effective to society i.e. that savings on health care costs and improved productivity, through reduced absenteeism for example, could outweigh the costs of direct investment required to deliver the interventions, and could save the NHS \$1.2bn per



year<sup>21</sup>. A recently published report highlights significant net benefit to the UK economy of four obesity prevention policies which had either been recently implemented or are scheduled to be introduced by the UK government. These policies are the soft drinks industry levy (already implemented), in-store location promotion restrictions (implemented in October 2022) on products high in fat, salt and sugar (HFSS), restrictions on price promotions of HFSS products, and a 9pm watershed for advertising HFSS products on TV and a ban on paid-for online advertising. The report outlines that over a 25-year period, the combined net benefit of these policies is estimated to be over £76 billion<sup>25</sup>, demonstrating the significant cost that obesity has to the economy and the huge economic benefits that can be achieved when such policies are implemented. They help to rebalance the food system and ensure that the healthy option is the cheapest and most accessible option for everyone.

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