OBESITY AND OLDER PEOPLE

Key Points

- The number of older people (over 65s) in Scotland is growing, and now accounts for 19% of the total Scottish population
- People in Scotland are living for longer; however, they are also experiencing more years spent in poor health
- In Scotland, 73% of people aged 65-74 and 66% of people aged 75+ live with overweight and obesity. These rates are higher than in the general adult population (62%)
- There are a number of obesity risk factors specific to older people, including: low physical activity levels, poor diet quality, and natural biological processes such as reduction in metabolic rate
- The health risks associated with obesity increase with age
- Obesity has many detrimental impacts upon older people, such as: impaired mobility, increased risk of respiratory diseases, bone and joint diseases, dementia, and a decreased number of healthy life years
- There are a number of policies in Scotland aimed at reducing overweight and obesity levels in older people; local and Scottish governments should build on them.

Key Recommended Actions

- The implementation of actions to improve food and physical activity environments to prevent weight gain across the life course
- Create a food environment which supports healthy dietary options for all, including older adults, through policy and regulation that tackles the availability, affordability and accessibility of a healthy diet
- Promote affordable and appropriate physical activity opportunities for all, including older adults
- The Scottish Government should ensure that opportunities for weight management and early detection of type 2 diabetes services are accessible to the older adult
- The Scottish Government should adopt the WHO definition of malnutrition, and should include the whole spectrum of malnutrition (including overweight and obesity) in any policies targeting malnutrition or diet in older people in Scotland

Obesity Action Scotland
Healthy weight for all

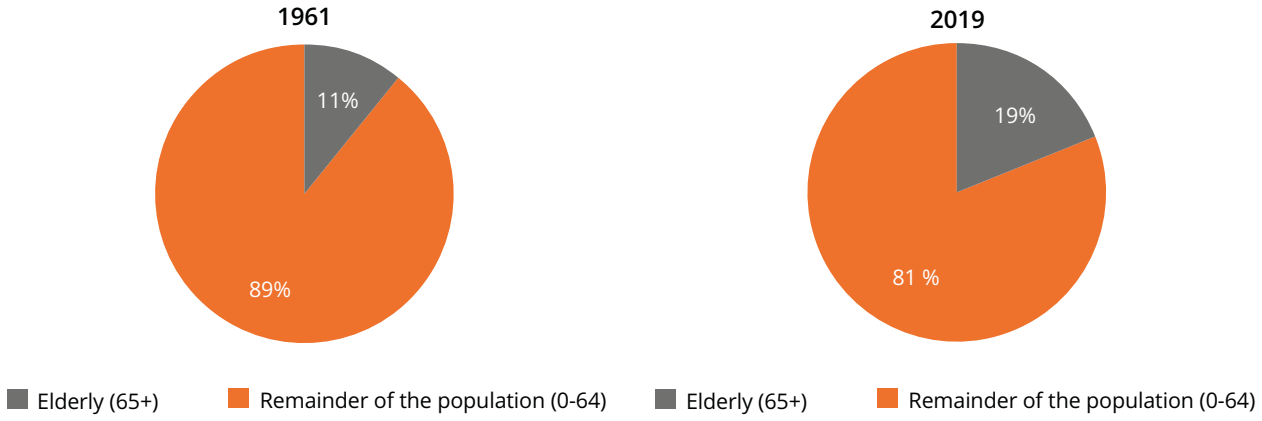
Note on data sources:

This briefing uses data from the latest available survey information, including the Scottish Health Survey 2020. As a result of the pandemic, the survey was modified in 2020, with data gathered via a self-reported telephone survey, a much smaller sample size, and some measurements from previous surveys not repeated. Survey results from previous years (2019) replace any gaps in data collection. Due to the different data collection method in 2020, the data from the 2020 survey cannot be readily compared with previous years.

As a result, this briefing features data from both the 2019 and 2020 Scottish Health Surveys.

SCOTLAND'S POPULATION IS AGEING

The Scottish population has grown each year since 2000 and hit a record high in the most recent yearly estimates – with a total population of 5.46 million.[1] The number of older people (over 65s) living in Scotland has been steadily increasing. Since 2009 the number of 65s and over has increased by 20%.[1] While in 1961 the 65+ age group made up only 11% of Scotland's population, they now make up almost a fifth (19%).[1,2]



Defining Overweight and Obesity

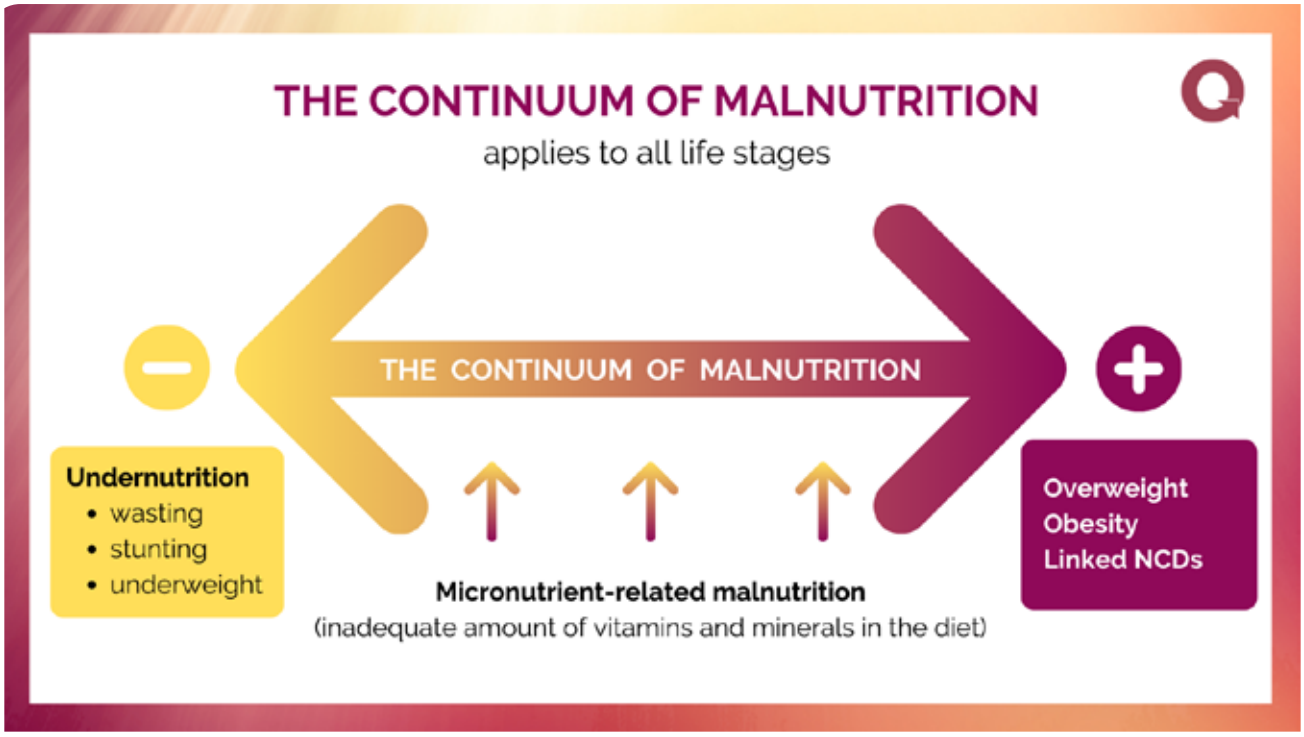
There are now 1.05 million individuals aged 65 and over living in Scotland.[2] This trend is predicted to continue, with a projected increase of a further 19% (198,000 individuals) in the over 65 age group by 2028, and by a further 14% by 2043.[1]

Life expectancy in Scotland has increased substantially since World War 2, but it has stalled in the past decade. The average is now 76.8 years for males and 81.0 years for females.[3] However, alongside this increase in longevity, as the incidence of health complications rises with age, the proportion of individuals' life spent with health concerns, ill health and disabilities is increasing.[4] Healthy life expectancy for males in Scotland is now 60.9 years, down from 61.1 years in 2009-11, and for women is 61.8 years, down from 63 years[3]. The current COVID-19 pandemic will also add to the recent setbacks in overall life expectancy.

DEFINING OVERWEIGHT AND OBESITY

Body Mass Index (BMI) is used to define overweight and obesity at population level.[5] BMI is a measure of weight in relation to height. For adults, overweight is defined as having a BMI of 25 – 29.9 kg/m^2, obesity is defined as having a BMI of 30-39.9 kg/m^2 and higher, with severe obesity as having a BMI of 40 kg/m^2 and higher.[5] In the Scottish population BMI generally increases with age until 75+. Mean BMI for those aged 65 – 74 is 28.7. This compares to national average of 27.7 for adults of all ages[6].

BMI should be interpreted carefully in older people, as natural redistribution of fat tissue, muscle degradation, and shortening of the spine can affect measurements.[7] However, BMI is still an accepted classification of nutritional status in older people.



MALNUTRITION IN OLDER PEOPLE

Appropriate nutrition is essential to health and wellbeing in all ages. Malnutrition,[1] literally meaning 'bad nutrition', is an important issue for the older population of Scotland. It is important that we recognise malnutrition as a spectrum - encompassing undernutrition and overnutrition – where micronutrient deficiencies can occur at any point. According to the World Health Organization, the term malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients.[8] Malnutrition, therefore, addresses three broad groups of conditions:

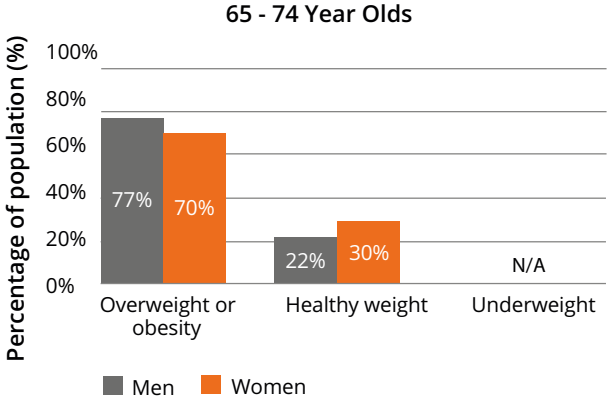
1. Undernutrition, which includes wasting (low weight-for-height), stunting (low height-for-age) and underweight (low weight-for-age)

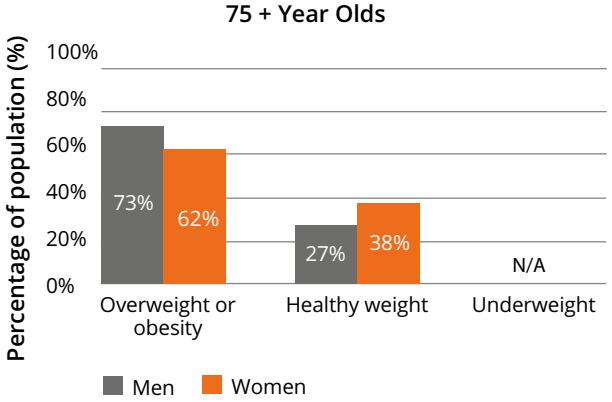
2. Micronutrient-related malnutrition, which includes micronutrient deficiencies (a lack of important vitamins and minerals) or micronutrient excess

3. Overweight, obesity and diet-related noncommunicable diseases (such as heart disease, stroke, type 2 diabetes and some cancers)

Overweight and obesity is a more prevalent issue than underweight for older people in Scotland. According to 2020 Scottish Health Survey data, an average of less than 1% of older people (over 65s) have a BMI categorising them as underweight. This is compared to combined overweight and obesity, which 77% of men and 70% of women had in the 65-74 age group, and 73% and 62% of men and women had, respectively, in the 75+ group.[9] ***Note that, due to restrictions arising from the pandemic, the 2020 survey sampled only people living at home and therefore does not include those in care homes.***

[a] For more on Malnutrition, see our position paper and blog



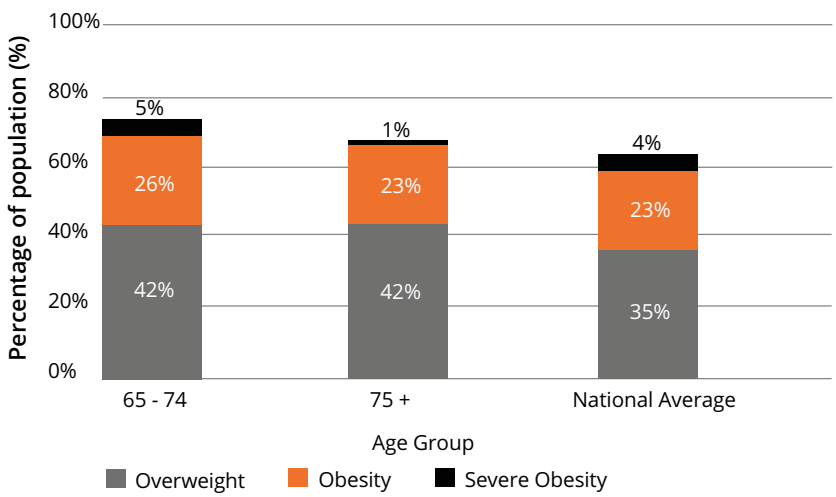


Based on data from the Scottish Health Survey 2020 [9]

PREVALENCE OF OVERWEIGHT AND OBESITY IN OLDER PEOPLE IN SCOTLAND

Within the Scottish population, the older age groups (65+) present the highest proportion of individuals living with overweight and obesity and, conversely, the lowest proportion of individuals of a healthy weight.[9] As of 2020, 73% of people in the 65-74 age group and 66% of people in the 75+ age group were living with overweight, obesity, or severe obesity (defined as a BMI of 25 or above).[6]

This was substantially higher than the national average across all age groups in Scotland, which was 62% in the same year.[6]



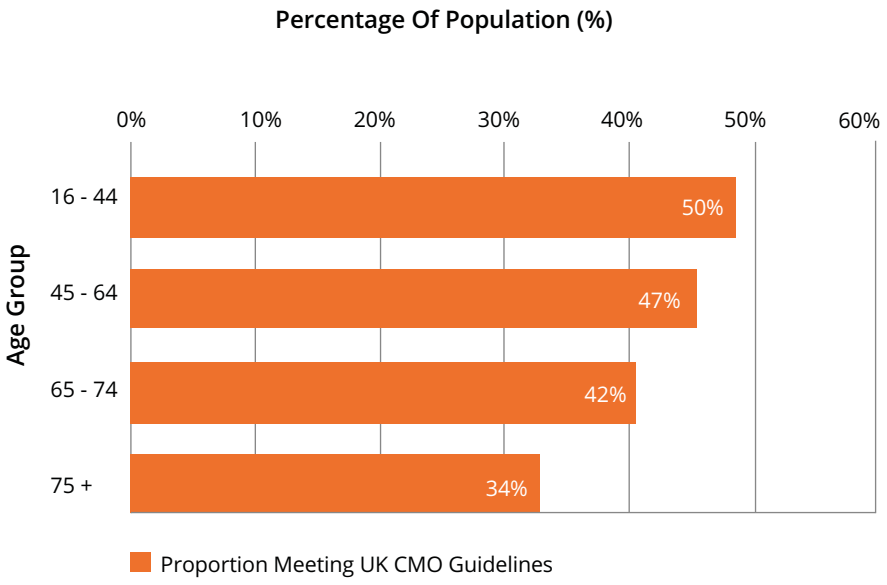
Based on data from the Scottish Health Survey 2020 [9]

Importantly, **31%** of those aged 65-74 years and **24%** of those aged 75+ are living with obesity and severe obesity. For the 65-74 age group, prevalence is higher than the 27% average of obesity and severe obesity seen across all age groups. Tackling this increasing prevalence of overweight and obesity in older age needs to be a public health and government priority, particularly as the likelihood of health complications and avoidable healthcare needs is substantial.

CONTRIBUTING FACTORS FOR OBESITY IN OLDER PEOPLE

Arriving at later life with a healthier weight will help to reduce the risk and impact of many of the diseases associated with obesity in older adults. There are a range of contributing factors for obesity in older people. These include:

Low physical activity – levels of physical activity decline with age, and the over 65s are the age group with the lowest physical activity levels in Scotland.[6] The proportion of individuals in the 75+ age category meeting the UK Chief Medical Officers' Physical Activity Guidelines was as low as 35% in 2019 and 34% in 2020, and was only 55% in 2019 and 42% in 2020 in 65–74-year-olds – see how this compared in 2020 to other age groups in the figure to the right.[31,6.] The decline seen in physical activity levels in older adults between 2019 and 2020 could be the result of the COVID-19 pandemic lockdowns.



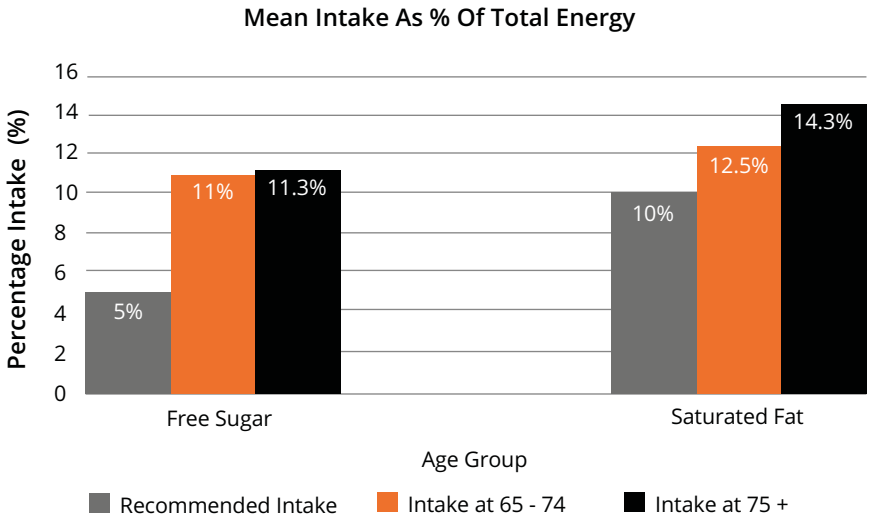
Based on data from the Scottish Health Survey 2020 [9]

Poor diet/malnutrition – A clear link is observable between diet and disease in older people. Older people are 'nutritionally vulnerable' and have specific nutritional requirements for their age, one being that daily energy requirements decrease in the older age groups.[10] Long term conditions, changes to mobility and/or cognitive capacity can impair their ability to meet these needs, and deficiencies in certain macronutrients, vitamins, and minerals are common in this age group.[10] The social aspect of eating can be transformed in later life with many older people living by themselves or in care homes. Although there is much literature regarding the role of social isolation with undernutrition[11] more work is needed to help us understand social isolation or loneliness in the elderly with overweight and obesity.

A recently published Scientific Advisory Committee on Nutrition (SACN) statement on nutrition and older adults (using National Diet and Nutritional Survey [NDNS] 2014/15-15/16 data) concluded that the NDNS data on diet, nutrient intakes and blood analytes for people aged 65+ indicates that, *'similar to all UK adults, older adults exceed maximum recommendations for intakes of saturated fat, free sugars and salt, and fail to meet recommendations for fruit and vegetables, fibre and oily fish. There is also evidence of low intakes of some micronutrients.'*[12]

Free sugar intake is recommended to be below 5% of total dietary energy intake.[12] Older people are consuming more than double this recommendation.[12] Mean intake of free sugars as a percentage of total energy was 11.3% in the 75+ age group and was 11% in the 65-74 year-old group in 2019.[12]

Saturated fat intake is recommended to be below 10% of total dietary energy intake[12] Both older age groups exceeded this according to the 2019 data – with mean saturated fat intakes (as percentage of total energy intake) of 12.5% and 14.3% in 65-74 year-old and over 75s, respectively.[12]



Low intake of important nutrients are reported in this age group, with 27% of those aged 65-74, and 33% aged 75+, having protein intakes below the daily recommendations.[12] Dehydration is associated with many chronic health conditions in older adults and SACN (2021) reported that dehydration was seen in a third of older adults admitted to hospital as emergencies.[12] In addition, the NDNS (2016-17 and 2018-19) reported that 13% of over 65s were deficient in vitamin D and 11% had red blood cell folate concentration levels indicative of anaemia.[13] Additionally, only 9% of those in the 65-74 age group and 3% in the over 75 age group were meeting the recommended daily fibre intake.[13]

Sarcopenia – is a progressive skeletal muscle disorder in which muscle mass and function significantly decreases.[14] The condition results in increased risk of falls, frailty and decreased mobility.[14] Worldwide prevalence is estimated to be between 9 and 18% in over 65s.[15] Causes of sarcopenia can also be concurrent with lifestyle causes of obesity, such as lack of physical activity/movement.[14] In some people, sarcopenia can be aggravated by coexisting overweight and obesity.[16] This is known as sarcopenic obesity.[17]

Slowing Metabolism - Our resting metabolic rate (the rate at which we burn energy when we lie down resting but are not sleeping) decreases as we grow older – causing us to use up less energy and potentially gain weight.[18] This is partly related to the loss of fat free mass as we age.

Medication - Weight gain can be a side effect of many common medications used to treat long-term conditions in older adults, such as: diabetes, arthritis, low mood, and high blood pressure.[19]

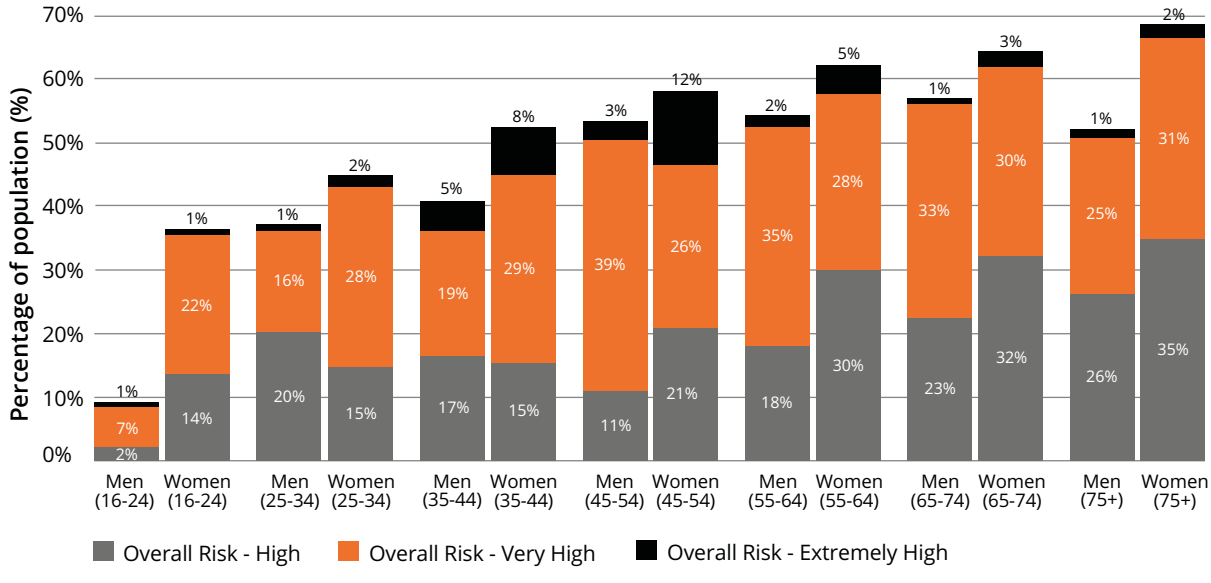
Dental health – dental and oral health discomfort leads to diets that are likely to be less balanced, more processed, higher in fat, salt and sugar, which are easier to eat[31]. This in turn can lead to a higher risk of overweight and obesity.

Inequality – those from the most deprived areas are more likely to reach old age in poorer health and die at a younger age. Type 2 diabetes and most cancers are greater in older people from the most deprived socioeconomic groups, and are more likely to die from heart disease than the least deprived[35].

A healthy, balanced diet combined with appropriate physical activity levels are, therefore, extremely important in cutting down the frequency of contributing factors and preventing overweight and obesity in older people. Encouraging a lifestyle from an early age that promotes good nutrition and enjoyable physical activity is important to support a healthier weight in older age.[20] Obesity prevention throughout the life course should be a cornerstone of health promotion for the elderly.

ADDITIONAL IMPACT OF OBESITY IN OLDER PEOPLE

The health risks associated with overweight and obesity, such as cardiovascular disease, type 2 diabetes, stroke, cancer, and respiratory disease, increase with age.[6,20] The figure below shows the proportion of individuals categorised as high risk, very high risk, and extremely high risk, based on BMI and waist circumference and age.[9] These most recent figures are taken from the 2019 Scottish Health Survey, which combined 2018 and 2019 data and calculated health risks based on both BMI and waist circumference measurements. The elderly population in Scotland present the highest proportion of individuals categorised as high and very high health risk from overweight and obesity.[6] The figures clearly demonstrate that women are at higher health risks from overweight and obesity at all ages and this increases stepwise for women with increasing age. For men the same risks are at the highest in the 65-74 age group and then decrease from 75 onward. These statistics underline the need for targeted strategies suitable for age and sex, for prevention and management through the life course to reduce the prevalence of overweight and obesity in later life and the corresponding associated health risks.



based on data from the Scottish Health Survey 2019 [31]

Obesity is related to several comorbidities which can affect all age groups – see our 'Obesity in Scotland' factsheet for this.[21] However, there are a number of additional impacts of overweight and obesity which specifically affect older people. Of particular note is type 2 diabetes in the elderly with overweight or obesity. 87% of people with type 2 diabetes have overweight or obesity.[22] There is also a strong association between increasing age with increased rates of type 2 diabetes..[23] Overall, there were 278,239 people in 2020 with type 2 diabetes in Scotland, which accounts for 87.7% of all diabetes cases. The 60-69 age group accounted for 25.9% of new type 2 diabetes cases in 2020, compared to 5.9% in the 30-39 age group. The data reports that 27.7% of the 60-69-year-old population in Scotland had type 2 diabetes in Scotland in 2020, compared to only 2.2% of those aged 30-39[33]. People with diabetes have a greater risk of many chronic health conditions and of early mortality.[23]

In our Obesity and Older Adults Evidence Overview, we found that underweight, overweight and obesity are associated with a range of physical and mental health consequences for older adults.[20] We found consistent evidence for associations between overweight and obesity on cardiovascular disease mortality, high blood pressure, coronary heart disease, type 2 diabetes, stroke, chronic conditions, disability, reduced quality of life, cognitive impairment and brain ageing.[20]

HEALTH RISKS ASSOCIATED WITH OVERWEIGHT AND OBESITY IN OLDER PEOPLE

Obesity is associated with an increased risk of: injury, need for assisted living, mobility issues, and permanent disability[24]

Overweight and obesity is associated with impaired respiratory function, breathlessness and sleep apnoea[25]

Older individuals living with overweight and obesity have a decreased number of healthy life years[4]

Obesity is associated with significant impairment to physical function in daily life, such as walking, standing/sitting, ability to lift

Multiple studies have now shown obesity in later life to be linked to an increased risk of dementia[26,27]

The physical strain of overweight and obesity in the body is associated with an increased risk of developing bone and joint diseases[28]

POLICIES SUPPORTING HEALTHY WEIGHT IN OLDER PEOPLE

A Fairer Scotland for Older People: A Framework for Action (2019)

This Scottish Government framework addresses malnutrition [b] and physical activity in the elderly in Scotland and includes the following points for action:

- **Keeping physically fit and active** – *"We will consider how agencies might improve partnership-working to further address inequalities in access to opportunities to be physically active, including inequalities relating to age"*[29]
- **Tackling and preventing malnutrition[b]** – *"We will work with health and social care partnerships and other stakeholders on practical actions to ensure malnutrition is identified and managed quickly and effectively, learning from experience in Scotland and further afield."*[29]

Active Scotland Delivery Plan (2018)

The Scottish Government's plan to support the population to be more active aims to reduce the levels of physical inactivity by 15% by 2030 in all age groups, including older adults (who are most affected by physical inactivity). They plan to action this by ***"using wide-ranging approaches that include active travel funding, support for formal sports and informal physical activity, and partnership-working across the transport, education, health and planning sectors."*** [29]

A healthier future: Scotland's diet and healthy weight delivery plan (2018)

The Scottish Government's plan to prevent and reduce obesity in Scotland includes pledges to introduce the following actions:[30]

- Change the food environment to support healthier choices and reduce the excessive consumption of food high in fat, salt, and sugar
- Ensure that individuals have access to weight management services
- Leaders in all sectors will promote healthy diet and lifestyle
- Strive to reduce dietary inequalities

Physical activity guidelines for older adults (aged 65 and over)

NHS physical activity guidelines suggest that adults aged 65 and over should[34]:

- aim to be physically active every day, even if it's just light activity
- do activities that improve strength, balance and flexibility on at least 2 days a week
- do at least 150 minutes of moderate intensity activity a week or 75 minutes of vigorous intensity activity if you are already active, or a combination of both
- reduce time spent sitting or lying down and break up long periods of not moving with some activity.[6]

[b] In this Government document malnutrition relates only to undernutrition and not the wider WHO definition. We call on the Scottish Government to use the WHO's 2020 definition of malnutrition.

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