# Obesity

# Summary

## Introduction

* Overweight and obesity are terms used to describe increasing degrees of excess body fat.
* Excess weight is a significant risk factor for a number of diseases, including type 2 diabetes, cancer and heart disease, and can also affect mental health and self-esteem.
* The prevention and treatment of overweight and obesity is a central public health policy goal.

## Key issues and gaps

* Prevalence of excess weight in adults in Medway is estimated to be similar to the England average.
* Prevalence of childhood obesity in Medway is similar to the national average for both 4-5 year olds and 10-11 year olds.
* Prevalence of adult obesity (and therefore costs to the NHS and social care) are projected to rise without significant intervention.
* Obesity in adults is strongly correlated to obesity in children.
* Due to the high prevalence of overweight and obesity whole population approaches are required.
* National data and research suggests that groups at greatest health risk due to obesity are: pregnant women, women of African, Caribbean and Pakistani family origin, and people with physical and learning disability.
* National data shows that deprivation and low income is particularly related to higher prevalence of childhood obesity.

## Recommendations for commissioning

* In line with NICE recommendations CCG to commission a tier 3 children’s weight management service.
* All Medway Council and Medway CCG contracts to take obesity into account where appropriate, embedding a minimum of one KPI related to obesity (e.g., healthy catering, active travel, etc.
* Follow standard evaluation frameworks in all interventions and allocate a budget for evaluation.
* The NHS and local authority should act as exemplars in promoting healthy food and drink in their venues by adopting the Government Food Buying Standards in all food related contracts.
* As per NICE guidance all health and social care professionals should receive training on how to raise obesity related issues, and assess, discuss and take appropriate action on weight management with clients.
* All health and social care professionals should make every contact count by routinely advising on obesity related issues, including GP staff, midwives, health visitors, and school nurses.
* STP Local Maternity System weight management working group to create specialist midwifery provision to support women above a healthy weight.

# Introduction

Overweight and obesity are terms used to describe increasing degrees of excess body fat. Excess weight is a significant risk factor for a number of diseases, including type II diabetes, cancer and heart disease. Overweight and obesity can also affect mental health and self-esteem. Obesity in adults is strongly correlated to obesity in children. The prevention and treatment of overweight and obesity is a central public health policy goal.

Excess weight is caused by an energy imbalance between ‘energy in’ (food consumption) and energy expenditure (energy used by the body during activity and metabolism).[1] If there is greater energy intake than is required, the excess energy will become excess fat. However, the underlying causes of this energy imbalance, which result in weight gain, are complex. Behavioural, psychological, social, cultural and environmental factors are thought to determine the increasing prevalence of obesity seen throughout the world.

## Adult obesity classification

Overweight and obesity in adults is measured and classified using Body Mass Index (BMI) according to table 1.

**Table 1:** Classifying adults who are overweight and obesity using BMI (kg/m2) [2]

|  |  |
| --- | --- |
| **Weight classification** | **Body Mass Index** |
| Healthy weight | 18.5 – 24.9 |
| Overweight | 25.0 – 29.9 |
| Obesity I | 30.0 – 34.9 |
| Obesity II | 35.0 – 39.9 |
| Obesity III | 40.0 or more |

The BMI classifications may be less accurate in highly muscular people. For some ethnicities, risk factors for obesity may occur at a lower BMI. The Scottish guidance [3] recommends that until specific cut-offs are validated, South Asian, Chinese and Japanese individuals may be considered overweight at BMI >23 kg/m2 and obese at BMI >27.5 kg/m2. Waist measurements are also used to assess the health risks from overweight and obesity. Tables 2 and 3 detail the health risks associated with an increased BMI and waist circumference.

**Table 2:** Waist circumference classifications [2]

|  |  |  |  |
| --- | --- | --- | --- |
| **Sex** | **Low** | **High** | **Very high** |
| Male | <94 | 94–102 | >102 |
| Female | <80 | 80–88 | >88 |

**Table 3:** Health risks associated with being overweight or obese in adults on BMI and waist circumference [2]

|  |  |  |  |
| --- | --- | --- | --- |
| **Weight classification** | **Low** | **High** | **Very high** |
| Overweight | No increased risk | Increased risk | High risk |
| Obesity I | Increased risk | High risk | Very high risk |

The health problems associated with obesity are shown in table 4.

**Table 4:** Relative risks of health problems associated with obesity (Relative risk — risk measured against that of non-obese person of same age and sex)[1]

|  |  |  |
| --- | --- | --- |
| **Greatly increased risk** **(Relative risk much greater than 3)** | **Moderately increased risk****(Relative risk 2-3)** | **Slightly increased risk** **(Relative risk 1-2)** |
| Type II diabetes | Coronary heart disease | Cancer |
| Insulin resistance | Hypertension | Polycystic overy syndrome |
| Gallbladder disease | Stroke | Impaired fertility |
| Dyslipidaemia | Osteoarthritis | Low back pain |
| Breathlessness | Hyperuricaemia | Anaesthetic risk |
| Sleep apnoea | Psychological factors |  |

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## Childhood obesity classification

The [National Child Measurement Programme](https://digital.nhs.uk/services/national-child-measurement-programme/) (NCMP) measures the height and weight of children in reception class (aged 4 to 5 years) and year 6 (aged 10 to 11 years) to assess overweight and obesity levels in children within primary schools. This data can be used at a national level to support local public health initiatives and inform the local planning and delivery of services for children.

Children’s heights and weights are measured and used to calculate a Body Mass Index (BMI) centile. The measurement process is overseen by trained healthcare professionals in schools.

The method of assigning a BMI classification is different for children and adults. Defining children as overweight or obese is a complex process, given that their height and weight change at the same time. Instead of using fixed BMI thresholds to classify individuals (as used for adults), children’s BMI is categorised using variable thresholds that take into account the child’s age and sex. The National Obesity Observatory has produced a simple guide for classifying BMI in children.[4]

# Who’s at risk and why?

## Adult prevalence

According to data from the 2016 Health Survey for England, 26.2% of adults in England are obese and a further 35.2% are overweight, making a total of 61.4% who are either overweight or obese.[5] Of obese adults, just over a tenth are morbidly obese (2.9% of all adults).

Some groups of the population are more at risk of developing obesity or its complications, and this contributes to inequalities in health. Obesity prevalence is influenced by factors such as age, gender and ethnicity.

The age group most likely to be overweight or obese is age 55-64, but only by a small margin. Prevalence of overweight and obesity is above 70% among all age groups from 45 upwards. The adult age group least likely to be obese is 16-24 year olds, with 59% at normal weight and only 34% overweight or obese.[6]

Ethnic differences also exist in the prevalence of obesity and the related risk of ill health. Compared with the general population, the prevalence of obesity is lower in men of Bangladeshi and Chinese family origin, whereas it is higher for women of African, Caribbean and Pakistani family origin.[2]

People living with learning disabilities, mental health problems, or a physical disability that limits mobility have been found to experience higher rates of obesity compared with people who do not have these conditions.[2]

During pregnancy and childbirth, obesity presents a series of health risks to the foetus, the infant and the mother. Obesity in pregnancy is associated with an increased risk of serious adverse outcomes including miscarriage, foetal congenital anomaly, thromboembolism, gestational diabetes, pre-eclampsia, dysfunctional labour, postpartum haemorrhage, wound infections, stillbirth and neonatal death. There is also a higher caesarean section rate and lower breastfeeding rate in this group of women compared with women with a healthy BMI.[7] Obesity in pregnancy also increases the risk of the child becoming overweight and of developing type 2 diabetes.

The National Obesity Observatory has published several [briefing papers](http://webarchive.nationalarchives.gov.uk/20170110170114/http%3A//www.noo.org.uk/NOO_pub/briefing_papers) on obesity and health inequalities. They cover a range of topics including:

* Adult obesity and type 2 diabetes
* Obesity and the environment
* Social and economic inequalities in diet and physical activity
* Obesity and disability
* Knowledge and attitudes towards healthy eating and physical activity
* Obesity and mental health
* Obesity and ethnicity

The National Obesity Observatory has also produced [Obesity slide sets](http://webarchive.nationalarchives.gov.uk/20170110165700/http%3A//www.noo.org.uk/slide_sets) presenting key data and information on adult and childhood obesity.

## Childhood prevalence

According to data from the 2016-17 National Child Measurement Programme (NCMP), in England, 9.6% of reception age children (age 4-5) are obese, with a further 13.0% overweight. These proportions are higher among year 6 children (age 10-11), with 20.0% being obese and 14.3% overweight.[8]

The most recent publication, Childhood Obesity: A Plan for Action (2016)[9] sets out the government’s plan to reduce England’s rate of childhood obesity within the next 10 years. This document acknowledges that the burden of childhood obesity is falling hardest on those children from low-income backgrounds. Obesity rates are highest for children from the most deprived areas and this is getting worse. Children aged 5 and from the poorest income groups are twice as likely to be obese compared to their most well off counterparts and by age 11 they are three times as likely.[9]

# Level of need in the population

## Adult prevalence in Medway

The [Public Health Outcomes Framework](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/4/gid/1000042/pat/6/par/E12000008/ati/102/are/E06000035/iid/93088/age/168/sex/4) uses an indicator from Sports England’s Active Lives survey to report the percentage of adults classified as overweight and obese (excess weight). The most recent data for Medway (2016/17) indicates that 64.6% of Medway adults are overweight or obese, which is statistically similar to the national average (England: 61.3%). The percentage of adults classified as overweight and obese in Medway has decreased since 2015/16 (67.8%). This indicator is based on self-reported measures of height and weight, which may be less accurate than measured data.

## Childhood prevalence in Medway

The [NCMP Local Authority Profile](https://fingertips.phe.org.uk/profile/national-child-measurement-programme/data#page/1/gid/8000011/pat/6/par/E12000008/ati/102/are/E06000035) publishes annual overweight and obesity data for children from the National Child Measurement Programme. The most recent data for Medway (2016/17) shows that 10.2% of reception age children (4-5 years old) are obese, which is statistically similar to the national average (England: 9.6%). The prevalence of obesity in reception age children has been decreasing in Medway since 2008/09 (11.9%).

In 2016/17, 21.0% of year 6 children (10-11 years old) in Medway were classified as obese, which is statistically similar to the national average (England: 20.0%). The prevalence of obesity in year 6 children in Medway has increased since 2012/13 (17.2%).

Data from NCMP is likely to be more robust than the adult excess weight data, as the measurement process is overseen by trained healthcare professionals in schools.

# Current services in relation to need

The Medway Council Public Health Team provide a range of prevention and treatment services to tackle obesity. The team also coordinate a network of private, public, voluntary and academic sector partners, who collectively make up the Medway Supporting Healthy Weight Network. This network provides a range of interventions to tackle obesity and share the same vision: *“Working together to support all Medway residents to adopt healthier lifestyles and achieve a healthy weight”*.

A full list of interventions can be found below (as of December 2017), and for ease of presentation, have been categorised into 8 key areas. An intervention is defined as any project or initiative currently active in Medway, which has a key aim of tackling obesity, or promoting healthy eating and physical activity.

## Growing

* Medway allotments scheme
* School food growing projects

## Healthy eating

* Identification and Brief Advice (IBA) training to professionals, volunteers and champions
* Farmers markets in Rochester, Elm Court and Cliffe
* Free school meals for all years in key stage 1 and wider school food project
* Hot food takeaway planning guidance note
* Healthy start voucher and vitamin scheme
* Nursery and pre-school support project
* Medway cooks recipe programme
* Healthy cookery programme including 6 week courses, little chefs and little food explorers
* Tesco farm to fork project

## Breastfeeding

* Beside You: normalising breastfeeding campaign and setting breastfeeding policies
* Breastfeeding support from midwives, health visitors, voluntary sector and peer support network
* Unicef UK Baby Friendly Initiative: accreditation for acute and community settings
* Tongue-tie and breastfeeding support clinic

## Healthy settings

* Medway workplace health scheme

## Marketing

* A Better Medway (ABM), Change4Life and One You campaign promotions

## Physical activity

* Medway Council mass events: Medway Mile, Big Splash and Big Ride
* Active Medway Cycling Groups
* Medway Health Walks
* Nordic Walking
* Exercise Referral
* Greenspace offer of country parks, parks, green gyms and play areas
* Medway Council leisure centres
* Sport disability open day and community disability sport clubs
* Active retirement association clubs
* Bikeability in schools
* Bus routes, park and ride and concessionary bus fares
* Community activity providers (i.e. ski centre and Arethusa)
* Free swimming for under 16s and over 60s
* Gillingham FC community outreach
* School sports partnerships (Greenacre Academy and The Howard School)
* Medway Adult Community Learning activity sessions
* Medway cycling routes
* Medway Festival of Sport
* Medway mini youth games
* Sport centre open days
* Parksport
* Walk and cycle to school initiative
* Parkrun
* Daily Mile
* Community health rehabilitation services
* Scouts, brownies and cub groups

## Weight management services

* Healthy Way
* Tipping the Balance
* Tri for you and MEND (Mind, Exercise, Nutrition, Do it!)
* FitFix
* Weight Watchers
* Slimming World
* Bariatric surgery
* Orlistat prescriptions
* Community nutrition and dietetics service
* Change4Life schools club

## Workforce

* A Better Medway champions training
* Health Visiting service
* Midwifery service
* School nursing service
* Make Every Contact Count project

Information for each intervention can be found on the [A Better Medway](https://www.medway.gov.uk/homepage/48/a_better_medway) website.

# Projected service use

In 2016/17 the following number of people accessed these Public Health services:

* Medway Health Walks - 2,128
* Exercise Referral - 800
* Healthy Way: Diabetes Prevention Programme - 786
* Medway Breastfeeding Network - 413
* Tipping The Balance - 380
* Active Medway Cycling Groups - 293
* Little food explorers - 270
* Medway Cooks courses and workshops - 101
* Little Chefs - 159
* Tri for You / MEND programme - 98
* FitFix Teenage weight management programme - 41
* Start4Life and Change4Life 1-1 Clubs - 26
* Nordic Walking - 26

Projections show a steady increase in obesity rates in England until at least 2030. In England 35% of the population are expected to be obese in 2030.[10] It is therefore likely that prevalence of obesity in Medway will also increase, which will impact the number of people requiring access to services.

# Evidence of what works

A wide range of evidence-based best practice guidelines have been read and interpreted, such as the NICE guidance on weight management[11] and obesity[12]. For ease of presentation, the best practice recommendations have been categorised into 10 subject areas and summarised.

## Commissioning and contracts

* Embed the obesity agenda into all potential local authority and Clinical Commissioning Group (CCG) contracts (i.e. catering, transport)
* Follow standard evaluation frameworks in all interventions and allocate a budget for evaluation
* Ensure family-based, multi-component services are available

## Communication and community engagement recommendations

* Gather local residents’ views on priorities and recruit champions for the agenda
* Publicise interventions and services that are already underway and newly launched
* Identify barriers for taking up services and remove them where possible

## Environment

* The NHS and local authority should act as exemplars in promoting healthy food and drink in their venues
* Utilise planning powers to create places that promote a healthy lifestyle
* Ensure events promote and provide a range of healthy food choices
* Ensure buildings are designed to promote healthy lifestyles
* Promote cycling and other active travel modes and ensure suitable infrastructure is in place
* Ensure the environment around schools promotes activity and healthy eating by addressing vehicle speed, parking and driving, whilst reducing exposure to high calorie foods

## Health professionals

* All health professionals should receive training on how to raise obesity related issues, and assess, discuss and take appropriate action on weight management with clients
* All health professional should make every contact count by routinely advising on obesity related issues, including GP staff, midwives, health visitors, and school nurses
* Obesity related advice should be given at key life events by professionals, including pregnancy and child birth, long-term condition diagnosis, and treatment and recovery
* Screening should be routinely undertaken to identify people at risk, ensuring that weight management advice is given and services are signposted
* Care pathways should be modified to include routine obesity advice, support and signposting
* The NHS should support employees to be more active and lead healthier lifestyles
* Implement the Unicef Baby Friendly Initiative standards for breastfeeding in acute and community settings

## Leadership and strategy

* Ensure the JSNA and all key Health and Wellbeing Board, CCG, local authority, and partner strategies support the obesity agenda
* Ensure elected members and senior leaders in key organisations champion the obesity agenda

## Local authority

* Local assets that support the obesity agenda should be mapped and utilised
* Leisure services should offer an affordable and appropriate range of activity opportunities to all residents
* Establish links with local university colleagues to support the obesity agenda and evaluation

## Local support services

* All areas should provide a comprehensive sport system, offering a range of opportunities at different times and locations
* Ensure a comprehensive walking programme is available through supported groups, 1-1 advice, maps and signage
* Provide a comprehensive set of weight management services at all tiers for children and adults

## Schools and young people settings

* Early years settings should provide regular opportunities for active play and structured physical activity sessions
* Early years, schools and college settings should prioritise healthy food and create environments that promote physical activity
* Children and young people should learn skills to cycle through bikeability
* Head teachers and senior leaders should act as and identify further champions for the obesity agenda
* School facilities should be utilised as community assets before and after school hours
* Universal free school meals should be available in all schools, with access to free tap water for all
* Food-based and nutrient-based standards for England should be applied to all schools

## Training

* Key system leaders and local champions should receive training on the obesity agenda
* Training should be provided for fitness professionals on how to engage priority groups
* Provide training on healthy food preparation to local catering staff and managers
* Provide basic training on healthy food and wider obesity issues to early years and other front line staff working with children
* Weight management delivery staff should continue to develop their professional skills

## Workplace health

* The local authority and NHS should act as exemplars by ensuring the environment and internal policies help staff maintain a healthy weight, and offering lifestyle and weight management support to appropriate staff
* New workplaces should be designed to promote active travel
* Workplaces should provide facilities such as showers and bike racks to promote routine activity
* Champions should be identified in all workplaces to promote the obesity agenda

# User views

Resident and potential service user views are particularly important when designing and implementing new services. A recent example of this is shown in the re-design of the childhood obesity/family weight management projects, which conducted a large piece of insight work in 2014. Views of overweight children and young people, their parents, and healthcare professionals were collated. A combination of qualitative and quantitative data were collected, and resulted in a list of recommendations for the service to follow. This report identified eight barriers to professionals referring to and families accessing weight support services. Five area were recommended for change:

* Having the conversation about weight with clients
* Promoting service and facilities
* Re-framing the healthy weight issue
* Streamlining systems for consistency
* Devolving power to residents

In addition to service design insight, Medway Public Health ran a survey in 2016 and 2017 to hear from residents on how to help more local people achieve a healthy weight. In 2016, 740 people responded, sharing a range of views and ideas. The main points repeated most frequently were that we need to demonstrate how healthy eating can be achieved. Specifically, showing that it can be:

* Easy - giving people the skills, knowledge and ideas
* Quick
* Affordable - proving it can be cheaper than processed food or takeaways

Respondents were also clear that you must promote healthy eating and exercise together, and emphasis that the combination is important.

In 2017, the survey focused on male residents as they were under represented in the 2016 survey. Forty men from Medway took part in semi-structured interviews about their views and priorities with regards to healthy weight. In addition, we ran a survey that was completed by 213 males living in Medway. The following 7 areas for action were put forward:

1. Target the priority groups.
2. Give clear messages: Clearly define the key healthy weight messages for the different target markets.
3. Get the message across: Identify the most effective locations and communication vehicles through which to spread healthy weight information.
4. Educate: Develop and provide education and resources for residents.
5. Facilitate: Be a facilitator to help people have healthy lifestyles by creating opportunities and removing barriers.
6. Promote: Medway has many amenities and opportunities to help residents achieve and maintain a healthy weight, however we found a lack of awareness of what is available in parks, events, clubs, facilities, where to buy healthy food, etc.
7. Change the mindset: Look at encouraging a change of mindset and attitude.

# Unmet needs and service gaps

A tiered-based system is recommended for weight management treatment services for children, with different tiers covering different activities. Usually tier 1 includes population-wide interventions largely focused on preventing obesity; tier 2 covers lifestyle interventions; tier 3 covers specialist weight management services; and tier 4 covers bariatric surgery.[11]

While Medway currently has services available at every tier for adults, children and young people who are overweight or obese only have access to services at tier 1 and tier 2. These services are not designed to provide the multi-disciplinary, holistic support that children with higher BMIs and/or more complex physical or mental health needs may require in order to achieve a sustainable change in weight trajectory. A tier 3 children’s weight management service is therefore a service gap in Medway.

There is also currently no formal service provision for supporting pregnant women with healthy weight related issues during pregnancy.

# Recommendations for Commissioning

* In line with NICE recommendations CCG to commission a tier 3 children’s weight management service.
* All Medway Council and Medway CCG contracts to take obesity into account where appropriate, embedding a minimum of one KPI related to obesity (e.g., healthy catering, active travel, etc.
* Follow standard evaluation frameworks in all interventions and allocate a budget for evaluation.
* The NHS and local authority should act as exemplars in promoting healthy food and drink in their venues by adopting the Government Food Buying Standards in all food related contracts.
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* STP Local Maternity System weight management working group to create specialist midwifery provision to support women above a healthy weight.

# Recommendations for needs assessment work

Evidence related to the cost-effectiveness of interventions to tackle obesity is lacking in terms of the return on investment for social care.

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