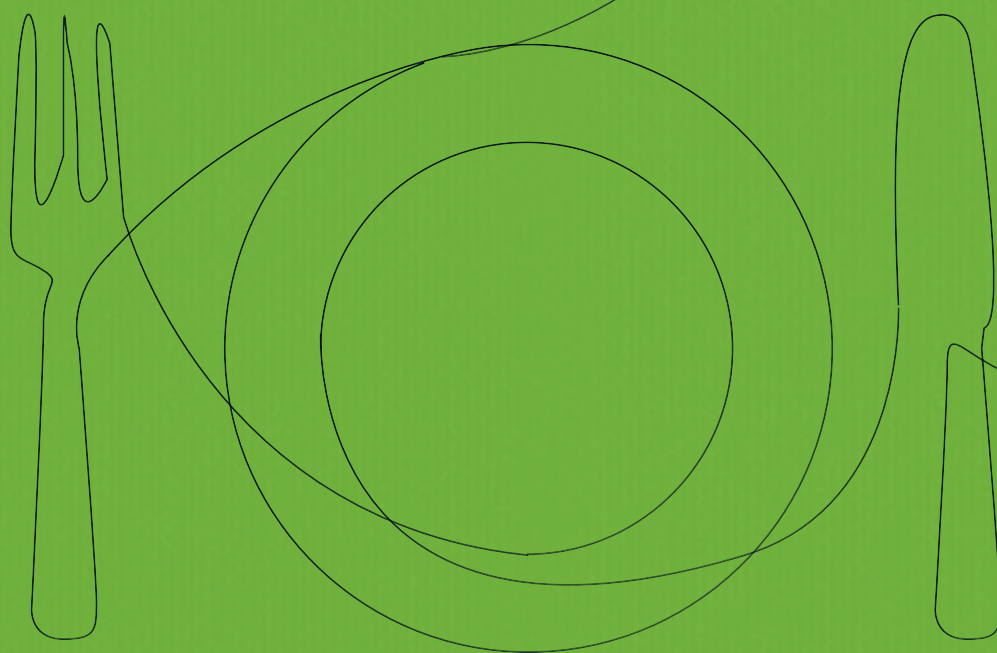


# food policy for the future



A population based approach to  
CVD prevention: promoting healthier  
eating in Cheshire and Merseyside



# Prevention of Cardiovascular Disease at Population Level

- More than 4 million people in the UK are currently affected by Cardiovascular Disease (CVD), mainly coronary heart disease and stroke.
- Approximately 80% of premature CVD is preventable<sup>1</sup>
- Although CVD death rates are declining, they remain significantly higher in Merseyside and Cheshire than the English average. Over 25% of deaths within Merseyside are due to cardiovascular disease and over 50,000 years of life are lost prematurely each year<sup>2</sup>
- CVD prevention is possible by medicating individuals and by achieving changes in whole populations. Increasing scientific evidence shows that intervening at a population level to reduce CVD risk factors can be more effective and cost effective than intervening at the individual level<sup>3</sup>
- Preventing CVD at the population level requires legislative, regulatory and voluntary changes to establish effective policy and health enhancing environments<sup>1</sup>
- As a CVD health charity, Heart of Mersey focuses on improving nutrition and controlling tobacco. This means taking an upstream, population based approach, to promote policies and initiatives which support healthier diets and reduce tobacco use.

## Heart of Mersey

Merseyside and Western Cheshire, in comparison with the rest of England, have long suffered disproportionately from cardiovascular disease. CVD is the biggest contributor to health inequalities in the region. To address this Heart of Mersey was established in 2003 to coordinate a strategic approach to preventing the high rates of CVD and associated health inequalities in the region. HoM works in partnership with a wide range of partners to achieve its aims and is England's largest regional CVD prevention programme. Whilst seeking to improve health within the sub region, HoM also operates at national and international policy levels, with a significant reputation in European Public Health.

## CVD and Burden of Disease

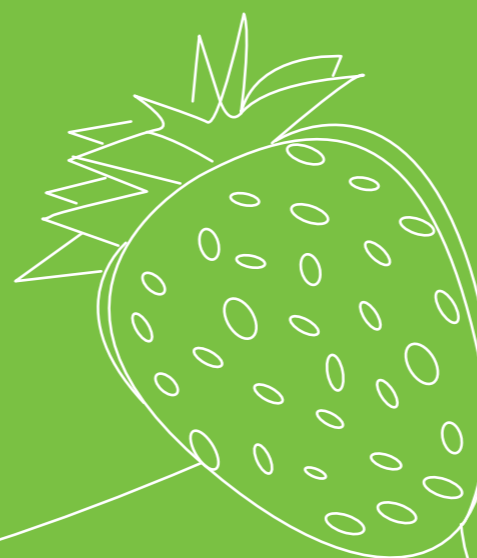
Cardiovascular disease (CVD) is the collective term for all diseases affecting the circulatory system (heart, arteries, and blood vessels). CVD includes coronary heart disease (about 50%), stroke (about 25%), and all other diseases of the circulatory system. CVD damage generally follows reduced blood flow to the heart, brain or body caused by atheroma and thrombosis.

## Globally

CVD is the leading cause of death, accounting for 50% of deaths in Europe at an estimated cost to the EU economy of 200 billion euros each year<sup>4</sup>. A large number of preventable diseases are associated with CVD including obesity, hypertension, Type 2 diabetes and some cancers. Major noncommunicable diseases such as these account for approximately 85% of deaths and 70% of the disease burden in the European Region<sup>5</sup>. Crucially, 80% of heart disease, stroke and Type 2 diabetes and 40% of many common cancers could be avoided if major risk factors were eliminated<sup>6</sup>.

## UK Figures

More than 4 million people in the UK are currently affected by CVD, costing approximately £30 billion annually. In 2007, CVD accounted for approximately 160,000 deaths<sup>1</sup>. CVD is also a major cause of premature death, accounting for almost a third of premature deaths in men and over a fifth in women in 2007<sup>7</sup>. Although CVD death rates are declining they are higher in the UK than in many other parts of the developed world and they remain significantly higher in Merseyside and Cheshire than the English average. Furthermore, a recent flattening of the previous decline in coronary heart disease mortality rates may represent an early warning sign that trends are changing<sup>8</sup>.



## Health Inequalities

Premature death rates for CVD are up to six times higher in lower socio-economic groups. Individuals living in areas with the worst deprivation indicators and experiencing the worst health also have much lower than average life expectancy. For men it accounts for 35% of the gap in life expectancy and 30% for women<sup>1</sup>. The mortality rate for CVD in the most deprived areas of the Heart of Mersey area is three times higher than the rate in the least deprived areas. The absolute gap in premature mortality due to CVD between England and Heart of Mersey has narrowed by 12% between 2002-04 and 2006-08, however the relative gap increased by 2%<sup>2</sup> (NB). Therefore despite improvements in premature mortality from CHD, there are still significant improvements to be made to reduce the inequitable levels of CVD within the Cheshire and Merseyside population.

**NB Mortality rates are monitored to show how the gap between different areas changes over time. The absolute gap indicates that over time HoM has seen a reduction in CVD rates, however, when compared to the reduction in England the relative gap between HoM and England as a whole has increased slightly.**

## Non-communicable Chronic Diseases (NCDs)

Chronic illness as a result of NCDs is a growing concern within the UK. CVD is just one of a number of NCDs where diet is a key risk factor. An unhealthy diet can also contribute to the onset of obesity, diabetes and many common cancers.

- Obesity is a risk factor for CVD. Almost 2 in 3 adults in the UK are overweight or obese and 1 in 3 children are now also overweight or obese<sup>9</sup>
- Diabetes prevalence has nearly doubled since 1996; currently 2.6 million people in the UK have diabetes<sup>10</sup>. Diabetes can increase the future risk of heart disease and stroke
- Cancer is the second biggest cause of death as a result of chronic illness, accounting for approximately 33% of deaths in the UK (CVD accounts for 42% of deaths)<sup>11</sup>
- Hypertension: The Health Survey for England 2006, records 31% of men and 28% of women having high blood pressure, and this increases to over 50% in the elderly
- A small drop in mean systolic blood pressure of 2mmHg could save up to 14,000 lives each year<sup>12</sup>.

## Merseyside and Western Cheshire

The Heart of Mersey area covers a population of almost 2 million people. Over 25% of deaths within the Heart of Mersey area are due to cardiovascular disease and over 50,000 years of life were lost prematurely during 2006-08 (the number of years lost was approximately 50% more for men than women). Coronary heart disease was the biggest contributor to premature life lost from CVD (55.9%); in contrast stroke accounted for 18.7%.

In Merseyside and Western Cheshire in 2008-09, the prevalence of adult obesity was 11.2%, exceeding both regional (10.8%) and national levels (9.9%). In 2008, over 10.5% of Merseyside children in reception years were obese (compared with 9.6% nationally), and a further 14.0% were overweight (13.2%). Furthermore, for children in Year 6 there is an increase in the Heart of Mersey area of levels of children who are overweight and obese, increasing from 24.5% in reception year to 35% in year six in 2008-09. This consistently exceeds the trend for the England average (from 22.8% to 32.6%)<sup>2</sup>.

## Economic Costs of CVD

The wider costs of cardiovascular disease to the NHS and the UK economy are approximately £30 billion annually. In 2006 the cost of CVD to the UK healthcare system contributed to 48% of total costs. Reducing population CVD risk by just 1% would generate healthcare savings in England and Wales of over £250 million per year<sup>13</sup>. It is estimated that costs of CVD events in areas of high deprivation are over three-fold higher than in areas of low deprivation.

Analysis of the government's Foresight programme shows that nearly 60% of the UK population could be obese by 2050 if trends continue<sup>14</sup>. The main burden will be additional CVD. The economic burden of this obesity epidemic will increase direct healthcare costs seven fold, with the wider costs to society and business estimated to reach £45.5 billion.

## Potential Health Gains from CVD prevention

Conversely, it is estimated that 70,000 premature deaths in the UK could be avoided each year if UK diets matched nutritional guidelines. This is over 10% of current UK mortality. The economic health benefits of meeting national nutritional guidelines have been estimated to be as high as £20 billion each year<sup>15</sup>.

## Diet and CVD

Diet is inextricably linked to CVD. Cholesterol and blood pressure are two key modifiable CVD risk factors; they are powerfully influenced by diet and can be substantially reduced with a major impact on CVD.

- Reducing salt consumption by 1g per day lowers blood pressure and reduces CVD deaths by 5%. **Reducing the average daily UK salt intake from 8.5g to 6g per person could prevent approximately 20,000 CVD deaths a year**<sup>16</sup>
- Reducing dietary saturated fat by 1% of energy decreases cholesterol and reduces CVD deaths by 2%. Reducing average UK intake from the current 14% to 7% (as in Japan and elsewhere) would save over 10,000 lives in the UK<sup>1</sup>
- Eliminating industrially produced trans fatty acids (IPTFAs), as successfully done in Denmark and elsewhere would reduce cholesterol and prevent over 7,000 CVD deaths<sup>17</sup>.

Saturated fats are a major public health concern in the UK. Intakes for both adults<sup>18</sup> and children are averaging at around 14% of food energy, well above the government maximum recommended amount of 11%<sup>19</sup> and the 7% achieved by Japan.

There is particular concern for **children**, because the atheroma process begins in childhood and builds up with age and poor diet<sup>20, 21</sup>. Over 20% of obese children already have raised blood cholesterol levels and signs of early atherosclerosis<sup>22</sup>. Protecting the health and wellbeing of children through improved food and nutrition is key to the current crisis in UK children's diets which has been compared to a time bomb which must be defused.

## Public Health Policy

Over recent years we have seen a number of positive developments with regard to the public health nutrition agenda to improve the nation's diet. These have included voluntary reformulation from industry to reduce salt, saturated fat and trans fats in food. The Food Standards Agency have launched a number of national awareness campaigns on saturated fat and salt consumption, and many retailers have adopted the clear and simple traffic light food labelling scheme. New school food standards have been introduced to greatly improve the nutritional quality of school meals<sup>23</sup>. These advances have already translated to some improvements in the nation's diets, for example the UK average salt consumption within the population has fallen from 9.5g per day to 8.5g per person per day<sup>24</sup>.

However improvements are not happening fast enough. The ideal salt intake for adults is only 3g per day, and much less for children.<sup>1</sup> The UK is falling behind many other countries in the EU and across the world. For example trans fats have been eliminated from food production in Denmark, Switzerland, Austria and some US States. In Finland salt intake has been halved to less than 7g per day, and in countries such as Japan saturated fat contributes to only 7% of energy intake. More progressive targets in relation to key dietary goals, supported by policy and legislation will lead to large and rapid falls in CVD.

In June 2010, the National Institute for Health and Clinical Excellence (NICE) produced comprehensive evidence based guidance for the prevention of cardiovascular disease at population level. It sets out a national framework for action, which is to be achieved through policy to reduce CVD at a population level. This requires government, government agencies, industry and key non-governmental organisations to work together to develop policy that will bring about change.

## Key NICE policy recommendations include:

### Protecting the health and well-being of children

Children should be protected from junk food advertising. Furthermore, public sector organisations and venues that are used frequently by children and supported by public money should not take sponsorship or encourage product placement from companies associated with high fat, sugar and salt products (junk food). Public monies that are used to procure food and drink must ensure that a range of affordable healthy options are available.

### Accelerating the reduction in salt consumption

Development of progressive salt reduction targets to support a further reduction in levels of salt in common processed foods produced in the UK. The NICE targets are an average adult intake of only 6g per day by 2015, and only 3g per day by 2025.

### Reducing saturated fat consumption and eliminating trans fats

Producers, manufacturers and caterers need to reformulate products to substantially reduce saturated fat content. Legislation may be required and also to ensure elimination of trans fats. Legislation should ensure that IPTFA concentration levels in the fats and oils used in food manufacturing and cooking do not exceed 2%. Partnership working with Local Authority Food Enforcement Officers is needed to monitor levels of trans fats in restaurants, takeaways and fast food outlets.

### Ensuring public health outcomes are an explicit part of the Common Agricultural Policy

Future CAP reform has the opportunity to move population diets in a much healthier, sustainable direction by reorientation of subsidies. This will protect health by increasing the availability of unsaturated fats and oils, fruit and vegetables, and cereal products for human consumption.

### Empower Local Authorities to limit fast food outlets

Support owners and managers of takeaways and other food outlets to improve the quality of the food they provide and preparation techniques. Where there is a high density of takeaways and other food retail outlets in specific areas (e.g. close to the school ground) Local Authorities should be empowered to influence future planning permission for food retail outlets.

### Heart of Mersey strongly welcomes the guidance and the approach taken by NICE

Making policy recommendations which take into account 'upstream' factors such as food production will lead to changes within the whole population. Interventions to address CVD must take place at both the population and individual levels. National policies are a potentially powerful mechanism for enabling environmental changes; these may include voluntary action, regulation and legislation by intervening at the population level to change the food environment and make the 'healthier choice become the easier choice'<sup>25</sup>.

### In strong support of the NICE policy goals and recommendations, the Heart of Mersey Food and Nutrition Programme has set the following objectives:

#### Overarching Aim:

To improve the Cheshire and Merseyside population's health through improved environments that support healthier diets

#### Objectives:

##### Phase 1

1. Protect the health and wellbeing of children and young people, by encouraging supportive environments that have a positive effect on healthy food and drink consumption
2. Accelerate the reduction in the average dietary salt intake to achieve maximum intakes of 6g in adults by 2015 and ensure children's salt intake is correspondingly lower
3. Reduce the average intake of dietary saturated fat to well below current intakes
4. Advocate for legislation to eliminate industrially produced trans fatty acids in UK food.

##### Phase 2

1. Reduce the average intake of dietary saturated fat to 7% of total energy intake
2. Reduce the average dietary salt intake to less than 3g per day in adults by 2025.

### Heart of Mersey will continue to collaborate with partners across Cheshire and Merseyside, the UK and Europe to further develop policy in support of this NICE guidance.

The key aim is to improve the food environments and thus substantially reduce the burden of CVD and associated health inequalities. A key stage in this process will be the development of a new food and nutrition strategy for Heart of Mersey followed by an action plan with identified partners.

For further information about Heart of Mersey or the NICE Public Health Guidance PH25 'Prevention of Cardiovascular Disease at Population Level' please see:

[www.heartofmersey.org.uk](http://www.heartofmersey.org.uk)  
[www.nice.org.uk](http://www.nice.org.uk)



<sup>1</sup> National Institute for Health and Clinical Excellence. 2010. *Prevention of Cardiovascular Disease at Population Level*. London: NICE.

<sup>2</sup> Knowsley Public Health Intelligence Team. *Heart of Mersey Cardiovascular Disease Intelligence Report 2010*.

<sup>3</sup> McKinlay JB. Paradigmatic obstacles to improving the health of populations: implications for health policy. *Salud pública Méx.* [online]. 1998, vol. 40, no. 4 [cited 2007-01-17], pp. 369-379. Available from: [http://www.scielo.org/scielo.php?script=sci\\_arttext&pid=S0036-36341998000400010&lng=en&nrm=iso](http://www.scielo.org/scielo.php?script=sci_arttext&pid=S0036-36341998000400010&lng=en&nrm=iso). ISSN 0036-3634

<sup>4</sup> European Heart Network. 2008. *European cardiovascular disease statistics 2008*. Brussels: European Heart Network.

<sup>5</sup> WHO Europe. 2004. *A strategy to prevent chronic disease in Europe. A focus on public health action. The CINDI Vision*. Denmark: WHO Regional Office for Europe.

<sup>6</sup> World Health Organisation. 2005. *Preventing Chronic Diseases. A Vital Investment*. WHO.

<sup>7</sup> Allender.S, Peto.V, Scarborough.P, Kaur.A, Rayner.M. 2008. *Coronary Heart Disease Statistics*. London: British Heart foundation.

<sup>8</sup> O'Flaherty M et al. Coronary heart disease mortality among young adults in Scotland in relation to social inequalities: time trend study. *BMJ*. 2009; 339

<sup>9</sup> Cross Government Obesity Unit. 2008. *Healthy Weight, Healthy Lives: A Cross Government Strategy for England*. London: Department of Health and Department of Children, Schools and Families.

<sup>10</sup> Diabetes UK. 2010. *Diabetes in the UK 2010 Key statistics on Diabetes*. Available from: <http://www.diabetes.org.uk/Professionals/Publications-reports-and-resources/Reports-statistics-and-case-studies/Reports-statistics-and-case-studies/Reports-Diabetes-in-the-UK-2010/>

<sup>11</sup> World Cancer Research Fund/American Institute for Cancer Research. 2007. *Food Nutrition and Physical Activity and the Prevention of Cancer: A Global Perspective*. Washington DC: AICR.

<sup>12</sup> Health Survey for England 2006. *Cardiovascular Disease and Risk Factors. Summary of Key Findings*. Information Centre for Health and social Care.

<sup>13</sup> National Institute for Health and Clinical Excellence. 2010. *Prevention of Cardiovascular Disease. Costing Report Implementing the NICE Guidance*. London: NICE.

<sup>14</sup> Foresight. 2007. *Tackling Obesity: Future Choices – Project Report (2nd Ed)*. London: Government Office for Science.

<sup>15</sup> The Strategy Unit. *Food Matters Towards a Strategy for the 21st Century*. 2008. London: The Cabinet Office.

<sup>16</sup> Joint FSA/DoH analysis extrapolated for the Strategy Unit (unpublished); quoted in the Cabinet Office (2008), *Food Matters Towards a Strategy for the 21st Century*. Reduction in average deaths to reducing salt intakes from 9g to 6g.

<sup>17</sup> Mozaffarian. *BMJ* 2010;340:c1826 available from: [http://www.bmj.com/cgi/content/full/340/apr15\\_1/c1826](http://www.bmj.com/cgi/content/full/340/apr15_1/c1826)

<sup>18</sup> Henderson .L, Gregory. J, Irving. K, Swan. G. 2003. *National Diet and Nutrition Survey: Adults aged 19 to 64 years. Volume 2: Energy, protein, carbohydrate, fat*. London: The Stationery Office.

<sup>19</sup> Gregory J, Lowe S. 2000. *National Diet and Nutrition Survey: Young people aged 4 -18 years. Volume 1: Report of the diet and nutrition survey*. London: The Stationery Office.

<sup>20</sup> Frontini. MG, Srinivasan. SR, Xu .JH, Tang. R, Bond. MG, Berenson. G. Utility of non-high-density lipoprotein cholesterol versus other lipoprotein measures in detecting subclinical atherosclerosis in young adults (The Bogalusa Heart Study). *Am.J.Cardiol.* 2007 Jul 1;100(1):64-68.

<sup>21</sup> Berenson. GS, Srinivasan. SR, Bao. W, Newman .WP,3rd, Tracy. RE, Wattigney. WA. Association between multiple cardiovascular risk factors and atherosclerosis in children and young adults. The Bogalusa Heart Study. *N.Engl.J.Med.* 1998 Jun 4;338(23): 1650-1656.

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<sup>23</sup> Heart of Mersey. 2009. *Good Fats, Bad Fats II: Progress on the fats agenda 2006 -2009*.

<sup>24</sup> FSA Salt Campaign Toolkit available at: [http://www.salt.gov.uk/hidden\\_salt.html](http://www.salt.gov.uk/hidden_salt.html)

<sup>25</sup> Lewis. B, Rose. G. Prevention of coronary heart disease: putting theory into practice. *J R Coll Physicians London*. 1991. Jan; 25(1):21-

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