Choosing Health:
A Briefing on Nutrition, Physical Activity, and Obesity in London.

Key messages

- Obesity rates are rising rapidly in children and adults, increasing in adults by a third from 1994-96 to 2000-02.
- In 2003, obesity caused about 4,000 deaths in London, 7% of all London deaths, including 600 from heart attacks, 450 from stroke and high blood pressure, and over 300 from cancers.
- Obesity also caused around 2,700 hospital admissions of Londoners for cancer, 2,500 for angina or heart attack, 2,400 for diabetes, and 1,300 admissions for stroke or raised blood pressure in 2002/03.
- Although fewer Londoners are obese or overweight than the England average, almost three-fifths of men and half of women in London were overweight or obese.
- London's children and young people have higher levels of obesity than any other region.
- Londoners are even less physically active than the average for England: two-thirds of men, three-quarters of women, one-third of boys and half of girls in London are not sufficiently active for health.

The health divide

- Fruit and vegetable consumption in children and adults is below recommended levels – but is higher than other regions. The high fruit and vegetable diet of some ethnic groups in London hides the very poor diet of other groups, such as the Bangladeshi and Irish communities.

Action for London

- A pan-London strategy to tackle diet, nutrition and physical activity across the capital is needed. This would include transport and town planning. Legislation to prevent the advertising of unhealthy foods to children – such as the current Children's Food Bill – would be an ethical first step.
- The Healthy School should form the cornerstone of community approaches to promoting a healthy lifestyle in children. Because of widespread eligibility for free school meals in the capital, London has the highest target for achieving Healthy School status of any region: 60% of all schools, with some London borough targets exceeding 90% of all schools.
- Local strategies covering diet and physical activity need to be culturally sensitive.
- The ‘5-A-Day’ programme is too recent to show results yet. Opportunities exist for spearhead PCTs to lead the way by demonstrating an improvement together with the introduction and evaluation of personal trainer pilots.
- PCTs are now able to use the nGMS contract to target resources at those most at risk of diet-related disease using the Quality and Outcomes Framework. Appropriate advice to overweight and obese individuals in primary care and hospital settings should become a normal part of NHS practice.
Introduction – Obesity - A modern national epidemic

“On present trends, obesity will soon surpass smoking as the greatest cause of premature loss of life. It will bring levels of sickness that will put enormous strains on the health service, perhaps even making a publicly funded health service unsustainable.”

Health Select Committee, May 2004.

This Briefing, the second in our White Paper series, looks at diet, physical activity, and obesity in London.

More detailed information, data and resources can be found on the LHO website: www.lho.org.uk

Overweight and obesity – What are they and why does it matter?

Overweight and obese people are at greater risk of ill health and premature death from a number of diseases. These include diabetes, heart disease, raised blood pressure, stroke, a number of cancers, musculo-skeletal disease, altered reproductive function, respiratory disorders and reduced mental well-being. The greater the increase in body mass above the ideal, the higher the risk. Those with Body Mass Index (BMI) above 35 kg/m² have double the mortality rate of people the same age with a normal BMI. People with severe obesity have dramatically higher risks still.

- Obesity causes 8.7% of all deaths in the UK, the highest proportion for any country in the European Union.
- Obesity causes 5% of coronary heart disease (CHD) deaths in men and 6% of CHD deaths in women.
- One in eight cancer deaths in the UK is caused by overweight or obesity.
- People who are obese experience poor body image, lack of confidence, or feelings of isolation, and may experience social stigma.
- Poor diet, including obesity, causes one in three deaths from cancer and from coronary heart disease.
- Inadequate physical activity causes 37% of coronary heart disease.

Measuring levels of fatness

The scientific measure of fatness is BMI, which is calculated as weight in kilograms divided by height in metres squared.

<table>
<thead>
<tr>
<th>Normal</th>
<th>is defined as BMI between 20 and 25kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight</td>
<td>is defined as BMI between 25 and 30kg/m²</td>
</tr>
<tr>
<td>Adult obesity</td>
<td>is defined as BMI above 30kg/m²</td>
</tr>
<tr>
<td>Severe obesity</td>
<td>is defined as BMI above 40kg/m²</td>
</tr>
</tbody>
</table>

Central fatness or adiposity, excess weight concentrated in the abdominal area, is a particular risk. It is measured by the waist-hip ratio (WHR). Raised waist-hip ratio is defined as ≥0.95 in men and ≥0.85 in women.
Obesity and overweight in London

Adults

In London in 2000-02, one-fifth (20.5%) of adult Londoners were obese and an additional third (36.6%) were overweight. In 2003, waist-hip ratio was raised in 27.8% of men and 31.0% of women in London. Adult obesity in London has increased but remains slightly below the England average (Figure 1). Prevalence of overweight remained unchanged over this period. This was probably because the percentage of people changing from being overweight to obese was matched by the proportion of normal weight people who became overweight and/or because of obese young people becoming obese adults. However, obesity was less common in young adult Londoners aged 16 to 24 years than in other age groups (8.6% of men, 9.3% of women), with an additional one-fifth (21.5% of men and 18.5% of women) overweight.

Figure 1  Trend in adult obesity prevalence in London and England, 1994-96 to 2000-02

Childhood obesity

London has higher rates of childhood obesity than the rest of England (7.1% of boys and 9.7% of girls aged two to 15 years in London in 2002); a further 19.4% of boys and 19.3% of girls in this age-group were overweight.
Diet

- At least five portions of fruit and vegetables daily
- At least 18g fibre daily
- Less than 35% of energy intake to come from fat and less than 10% of energy from saturated fat
- At least two portion of fish (one oily) weekly
- Less than 6g salt daily

Physical activity

**Adults:**
A total of at least 30 minutes moderate activity at least five times a week (e.g. brisk walking or climbing stairs).

**Children and young people:**
A total of at least 60 minutes moderate activity each day.
These can be achieved through shorter bouts of at least 10 minutes duration.

Diet and nutrition

**Adults**
The 2003 Health Survey for England found that 75% of men and 87% of women in London had a low fat intake (corresponding to 83g or less daily fat intake). Fruit and vegetable intake was above average for England (mean 3.6 daily portions for men and 3.8 for women). However, only 25% of men and 29% of women ate five or more portions of fruit and vegetables per day. The higher than average intake probably reflects the diversity of London’s communities and dietary practices: London level information is likely to hide inequalities between groups within the city.

**Children and young people**
In 2002, children and young people in London had the highest fruit and vegetable consumption of any English region (mean 3.1 daily portions aged 5-15 and 16-24) but this falls short of the recommended five daily portions. The proportion of young people eating five or more daily portions of fruit and vegetables was 19% of males and 22% of females aged 16 to 24 years and 19% of boys and 17% of girls aged five to 15 years.

**Physical activity**

**Adults**
Physical activity levels in London in 2003 were the lowest for men for any region but were average for women. Only about one-third of men (32%) and a quarter of women (26%) fulfilled the current recommendations for physical activity (see box). A sedentary lifestyle is common: about two-fifths of Londoners (36% of men, 41% of women) are active for half an hour at a time less than once a week.

On average, men were active on 11.7 days in the previous four weeks, and women on 9.7 days. The most common category of activity in men was sports and exercise; walking was the second most popular activity. The main activities among women were heavy housework, sports and exercise, and walking.

Although Londoners travel by car for a smaller proportion of their journeys than in other areas of Britain, the average distance walked by Londoners fell by 15% from 1989/91 to 1999/2001. Cycle journeys by Londoners declined by 13% during the 1990s, but are now rising again.

**Young Londoners**
Among Londoners aged 16 to 24 years, 52% of men, but only 27% of women fulfilled the current recommendations for physical activity in 2002.

Only 64% of boys and 53% of girls in London aged two to 15 fulfilled the current recommendations for activity in 2002. A further 19% of boys and 25% of girls had been active for 60 continuous minutes on only one to six days in the preceding week. However, 17% of boys and 23% of girls were less active than that. Table 1 shows some details of type and levels of activity.
Table 1 Physical activity levels in London children, 2002

<table>
<thead>
<tr>
<th>Age Group</th>
<th>No sports or exercise in preceding week</th>
<th>Active play at least five days</th>
<th>Walked at least five mins on at least five days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged two to 10 years</td>
<td>Male 48%</td>
<td>76%</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Female 30%</td>
<td>65%</td>
<td>64%</td>
</tr>
<tr>
<td>Aged 11 to 15 years</td>
<td>Male 30%</td>
<td>59%</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>Female 46%</td>
<td>38%</td>
<td>71%</td>
</tr>
</tbody>
</table>


The health divide in London

Adult obesity

Gender

Fewer men are obese than women in London (18.2% of men, 22.8% of women in 2000-02). However, a higher proportion of male Londoners are overweight (42.6% in 2000-02) than female Londoners (31.3%).

Geography

The highest levels of obesity in 2000-02 were in South West (23% of men, 26% of women) and North East London (24% of women). South East London had the highest proportion of overweight adults (38%) but there are marked sex differences: the highest levels were 47% of men in South West and 35% of women in North East London (Figure 2).

Prevalence has increased in each strategic health authority area in London except for South East London, where it was almost constant between 1994-96 and 2000-02. Levels in South West London, however, doubled over that period. Adult obesity is related to social class, increasing with deprivation, particularly for women.

Figure 2 Prevalence of overweight and obese adults by sex and area, London 2000-02

Ethnicity

A national survey in 1999, when 19% of men and 21% of women in the general population were obese, found very marked ethnic differences in obesity, adjusted for age. It ranged from five to six percent among Bangladeshi and Chinese men to 18% of Black Caribbean and 20% of Irish men. The differences were larger in women: four percent of Chinese and 13% of Bangladeshi women but 22% of Irish, 33% of Black Caribbean and 34% of Pakistani women were obese.

Childhood obesity

There are few current data for London available. In 1999, when the Health Survey for England examined ethnic groups, 23% of English children and young adults aged two to 20 years were overweight or obese (24% of females, 22% of males), and 6% obese. Afro-Caribbean girls were more likely to be overweight; Afro-Caribbean and Pakistani girls were more likely to be obese. There were no social class differences. Prevalence of obesity and overweight among adolescents in inner East London in the “RELACHS” study were higher than national figures but were defined differently from the Health Survey for England so are not directly comparable.

Diet and nutrition

There are marked ethnic differences in diet. National data show fruit and vegetable consumption to be most frequent among Chinese men and women, with fruit eaten least often by Bangladeshi men and women. Four-fifths of Bangladeshi people had a low fibre intake (79% of men and 82% of women). Average fibre intake was highest among Indian men and Irish and Indian women. Low fibre intake was generally more common among the 16-34s than the over 55s, except for Indian men, where low fibre intake was more common among those aged 35-54.

Among Black and minority ethnic minority groups, Bangladeshi men ate red meat, which has a higher fat content than other meats, most often (13% of Bangladeshi men and 11% of Bangladeshi women ate red meat at least six times per week) and Indian women least often (2% of Indian men and <1% of Indian women). A high fat intake was most frequent among Irish and Bangladeshi men (22% and 21% respectively) and women (14% and 27% respectively) and least common among Indian men (11%) and Indian, Chinese and Black Caribbean women (8%, 9% and 9% respectively).

Physical activity

Men in the lowest socio-economic groups are more physically active than those in higher groups. There is little difference by socio-economic group among women. However, low educational attainment predicts higher prevalence of inactivity in both men and women.

Obesity: Estimating the preventable burden in London

The National Audit Office has estimated the burden of ill health and deaths caused by obesity in England. We have adjusted the National Audit Office’s results for London’s overall prevalence. In London for 2003, we estimate obesity caused about:

- 450 deaths and 1,300 hospital admissions for stroke or raised blood pressure
- 600 deaths and 2,500 hospital admissions for angina or heart attack
- 250 deaths and 2,400 hospital admissions for diabetes
- 1,300 hospital admissions for osteoarthritis or gout.
Evidence summary prepared by London regional staff of the Health Development Agency

Unlike tobacco, there is as yet no clear-cut strategy to tackle obesity. The HDA and the new National Institute for Health and Clinical Excellence (NICE) will be working towards guidance, due for publication early 2007.

Reducing obesity in Children

Schools

- Multi-faceted school based interventions can reduce obesity. Interventions typically include: nutrition education, physical activity promotion, reduction in sedentary behaviour, behavioural therapy, teacher training, curricular material, modification of school meals and tuck shops

Parent / family approach

- Targeting parents and children together is effective

Reducing obesity in individuals - Adults

Dietary

- Compliance with low calorie diets (1000-1500 kilocalories per day)
- Clinically prescribed very low calorie diets (400-500 kilocalories per day) are more effective for acute weight loss than low calorie diets (although these are not helpful in maintaining weight loss afterwards)
- Low fat diets combined with calorie restriction and low fat diets alone are effective
- There is conflicting evidence regarding the effectiveness of increased fibre intake

National Healthy Schools Programme

The National Healthy Schools Programme, jointly sponsored by the Department of Health and the Department for Education and Skills, is managed by the Health Development Agency. It includes the National Healthy School Standard, a national standards framework guiding the work of local partnerships between primary care trusts and local education authorities in promoting a whole-school approach to addressing specific health themes with schools.

A wide range of reasons are cited by schools for participation: to improve academic achievement; increase involvement with the local community; improve reputation and status; gain support externally; reduce behaviour problems; reduce social exclusion; and to help pupils learn how to be healthy.

The majority of schools involved opt to focus on addressing healthy eating and physical activity as the primary areas of activity. Evidence currently suggests that ‘Healthy schools’ are improving in educational attainment faster than average and are more inclusive, with good standards of care for all pupils.

The National Healthy School Programme target is for all schools with 20% or more free school meal eligibility to have achieved National Healthy School Status by March 2006. In London this equates to 1,483 of the 2,482 schools. Currently, 67% (1,659) of all London schools and 71% (1,055) of London’s target schools are working towards or have achieved healthy school status.
Physical activity

- Increased physical activity is effective in producing a modest total weight loss; diet alone is more effective than exercise alone; but physical activity and diet combined are more effective than either alone.

All

- A combination of behavioural therapy techniques in conjunction with other weight loss approaches is effective over a one year period.

- There is evidence to support the use of workplace health promotion programmes.

- There is evidence to support the improved role of health professionals i.e. GPs using reminders; shared care between primary and secondary services; training provision for health professionals and leaders of self help weight loss clinics; and the use of in-patient obesity treatment services.

Promoting physical activity in adults

- Brief advice from a health professional, supported by written material, can produce modest short-term effects; referral to an exercise specialist in the community can lead to longer term changes. Effectiveness is best for single factor interventions that focus on moderate activity, eg walking, in a sedentary population.

- Interventions in community settings also produce short-term or longer changes. Long-term effects are more likely if the intervention is based on theories of behaviour change and tailored to individual need, if it promotes moderate activity and is not facility-dependent, eg walking, or if it incorporates regular contact with an exercise specialist.

- Interventions restricted to people over 50 are effective in the short-term, whether individual or group based and using behavioural or cognitive approaches.

Physically active transport

Promotional campaigns increase the use of environmental interventions such as cycle paths. Rates of walking and cycling (and public transport use) can be increased through personalised marketing initiatives (TravelSmart).

Self-help interventions delivered in the workplace can increase walking to work. The presence of more cyclists and pedestrians is associated with a safer environment for cycling and walking. A dedicated infrastructure can increase levels of cycling and walking; the UK National Cycle Network has increased users’ self-reported physical activity levels.

Although they are associated with injury reduction, implementing 20mph zones has not led to increased street activity, nor to changes in pedestrian and cycling levels.

Transport for London - Promoting physically active transport

"Making London a walkable city – the Walking Plan for London" was launched in February 2004. This Walking Plan for London was developed by the Mayor and Transport for London (TfL) in consultation with the London boroughs and other organisations with an interest in walking, see: www.tfl.gov.uk/streets/downloads/pdf/walking-plan-2004.pdf

TfL has also set up the Cycling Centre of Excellence, responsible for delivering improvements in every aspect of the cycling environment. Their priorities are to address the needs of those already cycling and to encourage new cyclists by raising the status of cycling and removing barriers to cycling.

Good practice in improving nutrition

The 5 A DAY Scheme

5 A DAY is a Department of Health programme to increase the number of portions of fruit and vegetables consumed to at least five a day. The programme uses media campaigns, work with the food industry, partnerships, and Lottery-funded community projects in 66 of the most deprived PCTs across England. In London, nine PCTs are supported by the New Opportunities Fund and the London Region Food and Health Team.

A recent report by food think tank IDG found that the consumption of vegetables nationally was 2% less in 2004 than in 2000. The ‘5-A-DAY’ scheme needs to reverse this trend.

The National School Fruit and Vegetable Scheme (NSFVS)

Over 1,680 primary and infant schools in London (98% of LEA (Local Education Authority) maintained infant, primary and special schools) participate in the NSFVS scheme, providing a free piece of fruit or vegetable each school day to nearly 310,000 London children aged four to six years.

A national evaluation has shown that over a quarter of children and their families ate more fruit at home after their school joined the scheme; nearly half of all parents questioned thought the scheme made them more aware of the importance of fruit for a healthy diet.

Tackling obesity: What the White Paper Choosing Health says will happen

National/Government action

- Media information campaigns on the consequences, prevention and treatment of obesity
- Production of an evidence-based “weight loss” guide
- Central commissioning of research to fill gaps in existing knowledge
- Publication of discrete national delivery plans including the Food and Health Action Plan and the Physical Activity Plan
- Voluntary agreements with manufacturers to reduce salt, sugar and fat content, improve labelling of food to assist consumers, and reduce portion sizes
- Investment in initiatives to promote physical activity supported by best practice guidance
- Guidance on whole-town approaches to shifting travel from cars to other modes

Local action

- NHS accredited personal health trainers
- Cycle training for all children
- Increased provision of cycle routes
- Local Delivery Plan guidance

Schools

- Enhanced Healthy Schools scheme
- Investment to improve nutrition in school meals; inclusion in school Ofsted inspections
- Active travel plans for all schools in England by 2010
- Increased physical education at schools, with protection for school playing fields
- Increased opportunities for organised sports after school
What works to reduce health inequalities? - What we don’t know

Health Development Agency reviews have found no high quality evidence from UK literature about effective interventions to reduce obesity among specific population groups or areas.

Next steps in health intelligence

- The National Centre for Social Research is producing synthetic estimates at electoral ward level and above for adult obesity and adult and child fruit and vegetable consumption. These are modelled from responses to the Health Surveys for England. They are due for web publication in spring 2005. Synthetic estimates are useful for planning interventions for prevention and treatment services but cannot monitor local changes in prevalence.

- Booster surveys of the Health Survey for England would enable more precise local planning and evaluation if the sample size were large enough for PCT level analyses.

- When available, PCT-level prevalence estimates could be combined with the model produced by the National Audit Office to generate PCT-level figures for obesity-related mortality, morbidity, and health service usage.

- Although Local Delivery Plan requirements include recording BMI amongst the GP registered population aged 15 to 75 years (PSA10b), these data are not yet included in the nGMS Quality and Outcomes Framework (QOF). Alternative systems to extract data and make them available for analysis are currently being implemented.

Resources and further information

London Health Observatory and London Resources

*Ethnic Disparities in Health and Healthcare*
www.lho.org.uk/Publications/LHO_Publications.htm

*London health and lifestyles*
www.lho.org.uk/Publications/LHO_Publications.htm#holp


More detailed information on which this report is based is available from the LHO website:

www.lho.org.uk/HIL/Lifestyle_and_Behaviour/Obesity.htm

www.lho.org.uk/HIL/Lifestyle_and_Behaviour/DietNutrition.htm

www.lho.org.uk/HIL/Lifestyle_and_Behaviour/PhysicalActivity.htm


London Food Link is an independent membership network that provides support for local groups and projects that promote healthy, sustainably-grown food at affordable prices to local communities: www.sustainweb.org/london-bgrnd-.asp


The health legacy from London’s bid for the 2012 Olympics and Paralympics: The health impact
assessment shows that the Games would aid wider participation in sport and increased physical activity as well as expediting regeneration of an area of East London which has long been neglected: www.london2012.org

5 A Day: www.5aday.nhs.uk includes a section on activity in London.

National and regional data

Indications of Public Health in the English Regions.

Health Survey for England:
1999 – Ethnicity;
2002 – Children and young people;
2003 – Cardiovascular risk factors.
www.dh.gov.uk/PublicationsAndStatistics/PublishedSurvey/HealthSurveyForEngland/HealthSurveyResults/fs/en

Evidence, guidance, and national action

Obesity

Health Development Agency:


Diet and nutrition


5 A Day www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/FiveADay/FiveADayGeneralInformation/FiveADayGeneralArticle/fs/en?CONTENT_ID=4002149&chk=DeYbs5

Physical activity


Health Development Agency:
- Evidence review: Transport and health. (forthcoming)


About the London Health Observatory

What does the LHO do?

We provide information, data, and intelligence on Londoners’ health and health care for practitioners, policy makers and the public. We are one of nine regional Public Health Observatories in England set up in 2001 by the Department of Health. The LHO takes the national lead role in monitoring health inequalities.

Want to know more about us?

• Have a look at our website: “About the LHO” (www.lho.org.uk/AboutUs.htm) which tells you more about who’s who at the LHO and our work programme.

Got a question about health in London?

• Have a look at our website www.lho.org.uk
• Contact our enquiry service: enquiries@lho.org.uk or tel. 020 7307 2824

Looking for one of our recent publications?

• Search our website or check: www.lho.org.uk/Publications.htm

What have we published recently?

Choosing Health: A Briefing on Tobacco in London (December 2004)


LHO Briefing – Mental Health in London (November 2004)

Health in London 2004 report (April 2004, joint publication with GLA, focus on Black and ethnic minority populations)

Prevalence of Diabetes In London (October 2004)

Tobacco in London: The Preventable Burden (March 2004, joint publication with SmokeFree London)

Health Equity Audit: A baseline survey of Primary Care Trusts in England (September 2004)


Ethnic Disparities In Health & Health Care (July 2004)

Mental Health Indicators (February 2004)

The London Health Forecast. Can London’s health divide be reduced? (July 2004)

LHO Bulletin Summer 2004 (Choosing