Obesity

a 21st Century Epidemic

Annual Report

of the Director of Public Health 2003

Airedale NHS

Primary Care Trust

Contents

Forward

"The growth of overweight and obesity in the population of our country - particularly amongst children - is a major concern. It is a health timebomb with the potential to explode over the next three decades into thousands of extra cases of heart disease, certain cancers, arthritis, diabetes and many other problems. Unless this time bomb is defused the consequences for the population's health, the costs tot the NHS and losses to the economy will be disastrous. No country has successfully tackled the problem of obesity. With a co-ordinated and comprehensive response from health and local authority services across government and with the co-operation of the food, sports and leisure industries it is still possible to mitigate its impact on future generations"

'On the State of the Public Health', Annual Report of the Chief Medical Officer 2002, published in July 2003

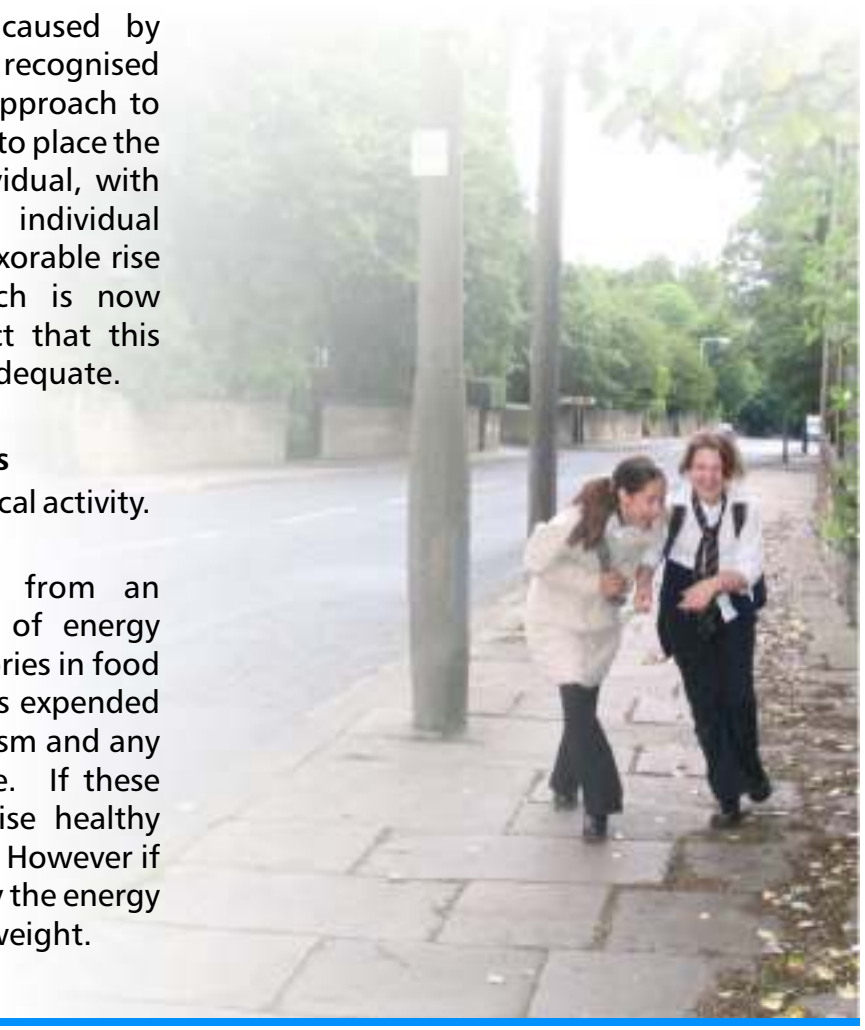
The harmful effects to health caused by overweight and obesity have been recognised for a long time. The traditional approach to dealing with this problem has been to place the responsibility firmly with the individual, with the expectation that changing individual behaviour is the solution. The inexorable rise in obesity and overweight which is now apparent is testament to the fact that this traditional approach is woefully inadequate.

There are two major determinants of weight : dietary intake and physical activity.

Overweight and obesity result from an imbalance between the amount of energy which is taken into the body as calories in food and the amount of energy which is expended during the body's normal metabolism and any physical activity which takes place. If these two balance then, in an otherwise healthy person, the weight remains steady. However if the energy intake is not balanced by the energy expended then he individual gains weight.

This report is about the prevention of obesity; it reviews the evidence for the effectiveness of various methods to increase the amount of physical activity which people take and of influencing a healthy nutritional intake. It looks at what is happening in Airedale Primary Care Trust and identifies the gaps which need to be filled by various agencies working together to stem the tide of this serious public health problem.

I chose Obesity as the theme for my first Annual Report as Airedale Primary Care Trust's (PCT) Director of Public Health because I believe that Obesity is one of the most serious public health issues facing us at the beginning of the 21st Century. As this epidemic grows stealthily and surreptitiously its effects have the potential to swamp our local health services and to reverse the current trends of improving health. We ignore this problem at our peril.



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The responsibility for any errors or omissions in this report are entirely mine.

Dr Sheila Webb
Director of Public Health
Airedale Primary Care Trust
October 2003

Chapter 1: Introduction

In 1976, a study group in the UK reported that:

"We are unanimous in our belief that obesity is a hazard to health and a detriment to well-being. It is common enough to constitute one of the most important medical and public health problems of our time" [1]

These health risks are as true in 2003 as in 1976, but we now have better evidence of the damaging and dangerous consequences of obesity.

The Health of the Nation identified obesity as a target for reduction in the early 90's and this is embedded in the government's health strategy for England 'Saving Lives: Our Healthier Nation' [2,3]. The National Service Frameworks for Coronary Heart Disease and Diabetes both include prevention chapters with obesity as an important risk factor at a population level for these diseases[4,5]. A national report was produced on the rising problem of obesity in 2001 by the National Audit Office and the National Cancer Plan identified obesity as a key risk factor in some cancers [5,6].

What is obesity?

"Obesity is a condition in which body fat stores are enlarged to such an extent that it may impair health" and obesity in adults is normally defined as Body Mass Index (BMI) more than 30 kg/metre squared [1,6].

$$\text{BMI} = \frac{\text{Weight in Kilogrammes}}{(\text{Height in metres})^2}$$

It is more difficult to assess obesity in children, than in adults, as BMI changes over growth periods and age and sex specific charts are required.

World Health Organisation Classification of Obesity for adults [3]

	BMI	Health risk for BMI
Underweight:	< 18.5	Low*
Desirable:	18.5-24.9	Average
Overweight:	25.0-29.9	Increased
Obese:	30.0-39.9	Severe
Morbid Obesity:	> 40	V Severe

*but risk of other clinical problems, some serious (WHO 1999) [3]

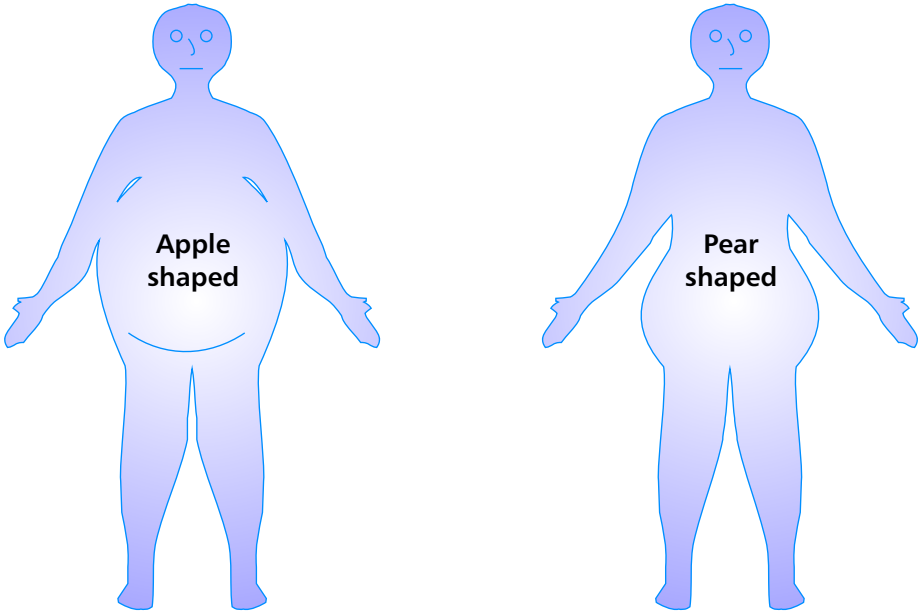
However, BMI can be misleading and coronary heart disease, Type 2 diabetes and related mortality have also been linked particularly to **central obesity** i.e. increased abdominal fat [7]. If weight is distributed particularly around the waist, more typical of obese men than women, then health risks of cardiovascular disease, hypertension and diabetes are significantly higher [7,8].

The National Audit Office Report on obesity recommended a desirable body mass index of between 20 and 25 kg/metre squared [6].

Waist hip ratio or waist circumference may be used to assess individual risk but waist circumference is more practical and WHO recommends cut off points below to indicate significant increased risk of hypertension, Type 2 diabetes and abnormal lipids which can lead to coronary heart disease [7,8,9].

Waist circumference Men:	**More than 102 cm (40 inches)**
Waist circumference Women:	**More than 88 cm (35 inches)**

Hence someone who is obese but 'apple' shaped, (with predominantly abdominal fat), may be at increased risk of type 2 diabetes and heart disease, compared to a person with a similar BMI, but who has a typical 'pear' shape.



As a person becomes more overweight and then obese, the health risks for that person increase, particularly increased risk of [1,6,8,10].

- **Overall mortality**
- **Coronary heart disease**
- **Type 2 diabetes**
- **Hypertension and stroke**
- **Some cancers e.g. cancer of the endometrium, colon, breast (post menopausal) and kidney**
- **Poor mobility, low self esteem**
- **Gall bladder disease, back pain and osteoarthritis**

Individual risk of a particular disease will vary as it depends on many factors e.g. smoking and family history, and obesity is just one of these risk factors. However, when obese people are compared to non obese people at a population level, it is possible to estimate the relative risk and Table 1 shows the relative risks estimated for different diseases.

Table 1 Relative Risk of obese compared to non obese people (from International Studies in National Audit Office Report on Obesity) [6]

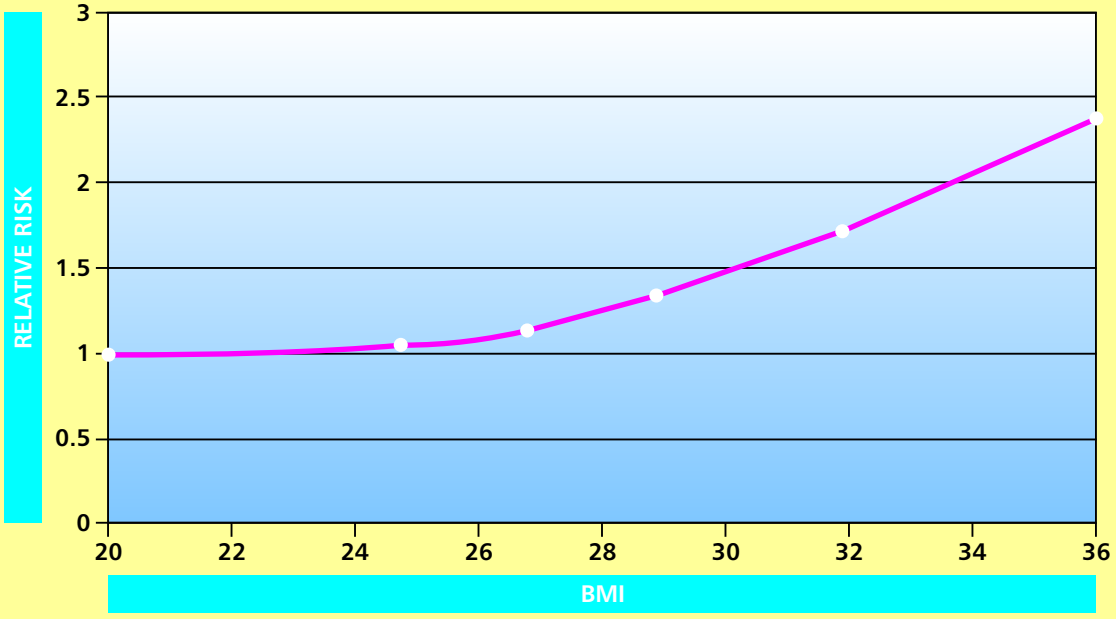
Disease	Relative Risk: Women	Relative Risk: Men
Type 2 diabetes	12.7	5.2
Hypertension	4.2	2.6
Myocardial Infarction	3.2	1.5
Colon Cancer	2.7	3.0
Gall Bladder Disease	1.8	1.8
Ovarian Cancer	1.7	-
Osteoarthritis	1.4	1.9
Stroke	1.3	1.3

Thus an obese woman has over 12 times the risk of diabetes and an obese man about 5 times the risk compared to non obese women and men. The health benefits of losing weight are well documented; for example a 10% loss of weight in an obese person of 100kg, who has other diseases such as coronary heart disease or diabetes, would result in [11].

- **Fall in more than 20% overall mortality**
- **Fall of 10mmHg in diastolic & systolic blood pressure**
- **Fall of 10% of total cholesterol**
- **Fall of 30 % triglycerides**
- **Fall of 50% in fasting glucose levels**

As body weight increases , so does the risk of dying as a result; (see graph 2)

Graph 2: The relationship between body weight, measured by BMI, and the relative risk of mortality (adapted from Manson et al 1995)[12]



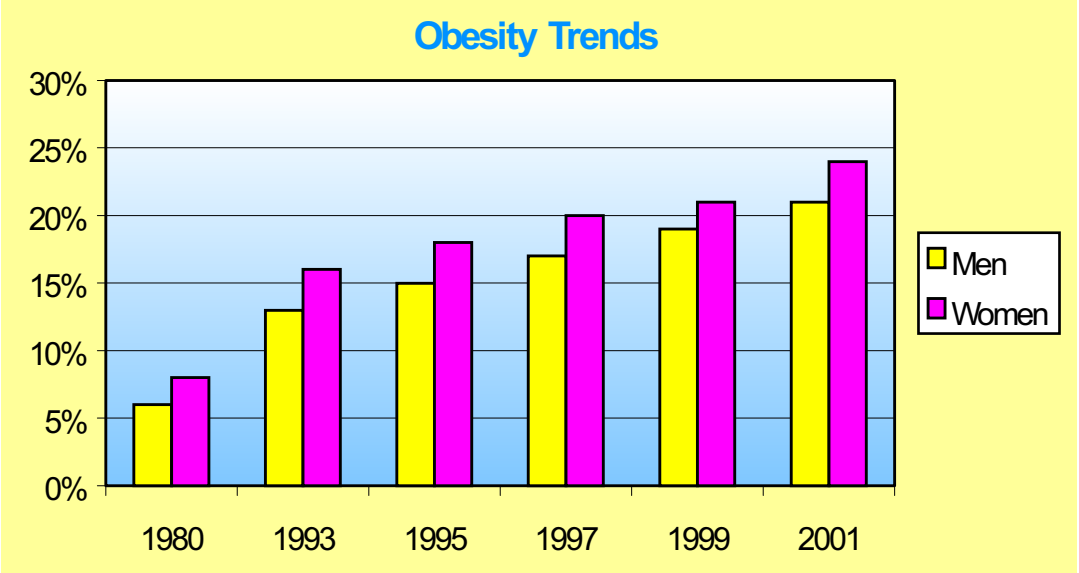
Note: This figure is based on data from a study of female nurses in the United States.
Studies for all adults implies a similar relationship between BMI and risk of mortality in men.

The National Audit Office Report on Obesity estimated that over 30,000 deaths per annum in England are directly attributable to obesity, 18 million sick days per annum are due to obesity and life expectancy is shortened by an average of 9 years [6].

The Scale of the Problem

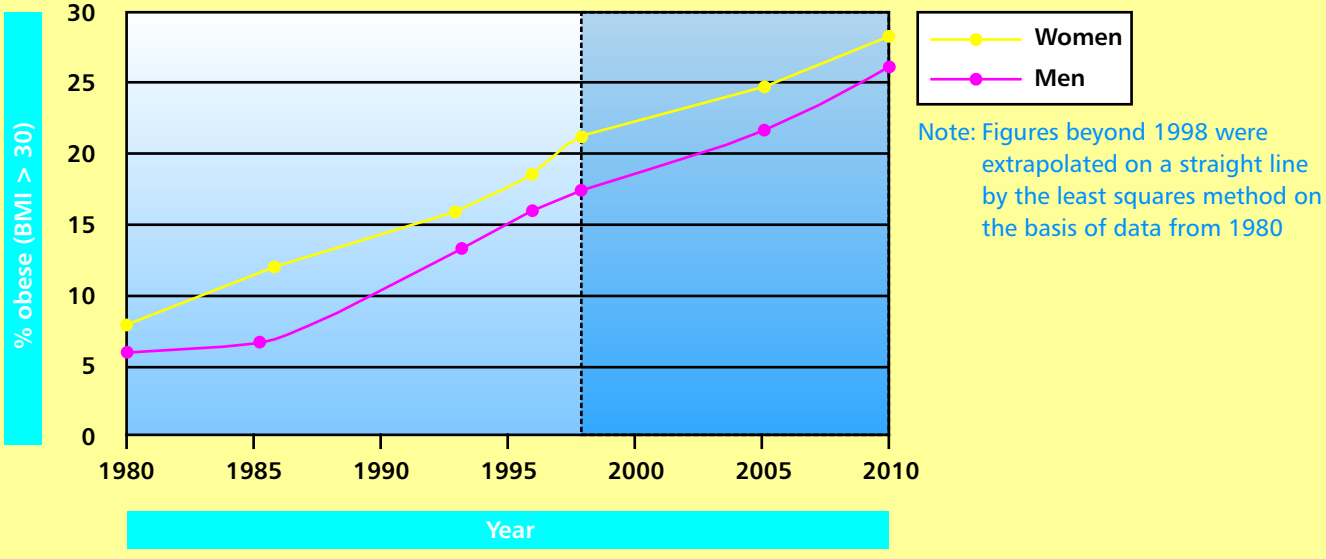
1 in 5 of the population is obese and over half of men and two thirds of women in England are overweight or obese. The trends are upwards in line with many other developed countries (see graph 3)[2].

Graph 3 Summary of Obesity Prevalence (Health Survey for England 1980 - 2001 [6,13])



If levels of obesity continue to increase at the same rate as over the last 20 years, then over 25% of the adult population will be obese by 2010 (see graph 4):

Graph 4: Trends in the prevalence of obesity amongst men and women in England extrapolated to 2010 [6]



Note: Figures beyond 1998 were extrapolated on a straight line by the least squares method on the basis of data from 1980

Obesity is a major risk factor for diabetes and coronary heart disease and the levels of Type 2 diabetes are rising across the country and levels of coronary heart disease, although falling overall, are still some of the highest in Europe, especially in more deprived areas [4,5].

Relevance to Airedale PCT?

The population of Airedale PCT is likely to have an increasing incidence of Type 2 diabetes, reflecting national and Bradford District trends, particularly in the more deprived areas and in the South Asian community[5,8]. The risk of diabetes is particularly increased by obesity, especially if a person has predominantly abdominal fat distribution [14]. Also, Standardised Mortality Rates for coronary heart disease remain higher than national average in the more deprived areas of Airedale PCT and in the South Asian community[15].

Areas of Concern

Health Inequalities

Obesity prevalence increases with age and is greatest amongst lower socio-economic groups especially women [6]. It is more prevalent in some minority ethnic groups e.g. women from Pakistani and African-Caribbean communities [16].

Who is most at risk? [16, 17]

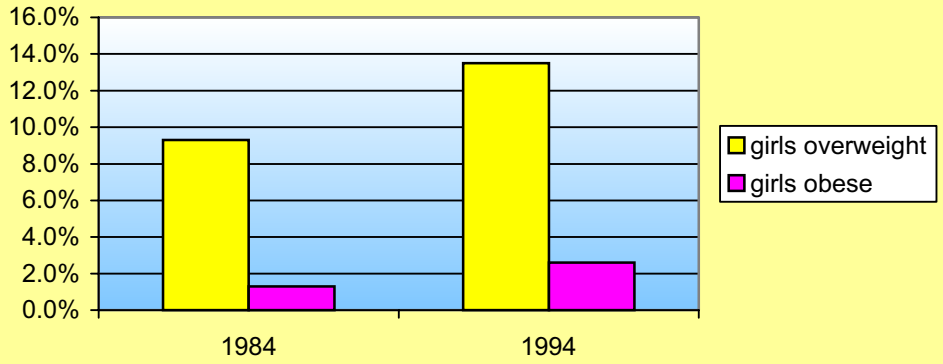
- **Some South Asian groups**
- **African and African-Caribbean women**
- **People in socially deprived areas**
- **Smokers planning to stop**
- **Previously overweight/obese people who have lost weight**
- **People with disabilities**
- **Children with one obese parent**

African and African Caribbean women in particular have increased rates of obesity and within the South Asian population Indian, Bangladeshi and Pakistani people have higher waist hip ratios, (an indicator of abdominal fat), but not obesity as defined by BMI [16,18]. However, Pakistani women do have higher prevalence of obesity, as defined by BMI [16].

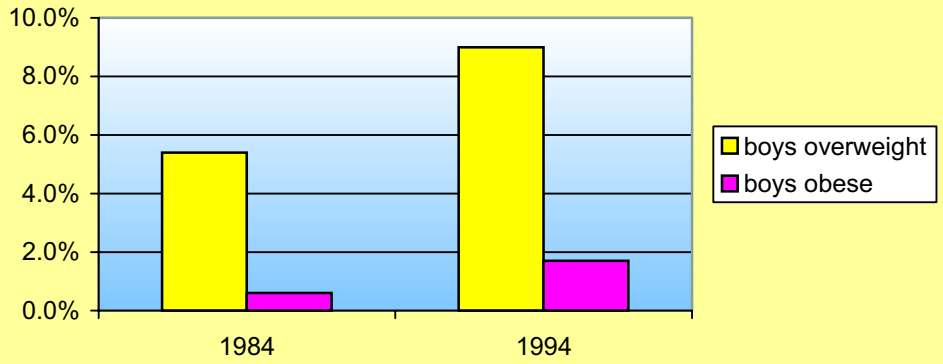
Children

In the UK, recent studies suggest prevalence of overweight and obese children amongst all ages is increasing and the proportion of children overweight aged 4 - 11 years of age increased in girls from 9.3% to 13.5% and in boys from 5.4% to 9% over the period 1984-1994, (see graphs 5 and 6)[19].

Graph 5 UK Primary School Children:Girls Obesity and Overweight Trends 1984-1994



Graph 6 UK Primary School Children: Boys Obesity and Overweight Trends 1984-1994



Additionally, more recent data from a large survey in England showed a significant rise in prevalence of overweight and obese people from 1989 to 1998, with obesity rates increasing from 5.4% to 9.2% in pre-school children over the last 10 years[20]. Children are becoming increasingly obese and this is an independent risk factor itself for adult obesity [10].

Why is obesity a growing issue?

This is largely related to two lifestyle factors [6,10].

- Energy content (especially fat) of current diet
- Increasingly sedentary lifestyle

The percentage of energy from fat in the diet has increased since the 1950's ; in part this is due to a decrease in family meals and increase in food eaten outside the family home [10]. This together with a more sedentary lifestyle has combined to cause obesity prevalence to continue to rise [6].

Approximately two thirds of the population do not meet current levels of recommended physical activity and the present generation of children spend increasing amounts of time watching TV, playing computer games [10,13]. Children are less likely to walk or cycle to school than 10 years ago[21].

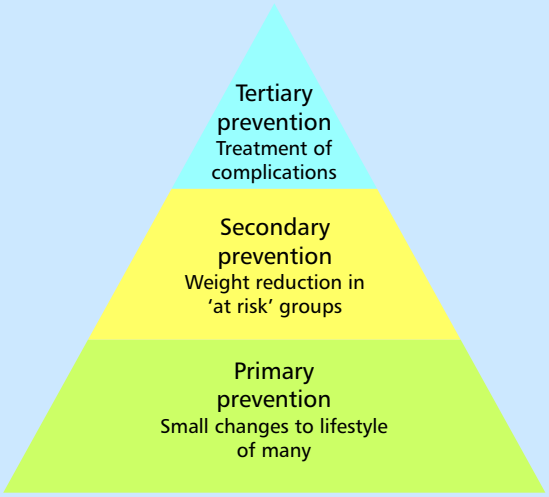
Obesity may be described as a normal response to an abnormal environment i.e. an environment where it is not easy to be physically active nor eat a healthy diet. In other words, the present environment for the population is an "**obesogenic**" or toxic environment [24,28].

Hence highlighting 'Obesity' as a public health issue, and in particular the two main determinants of obesity at a population level, namely increasing levels of healthy eating and physical activity, focuses on two of the major determinants of health.

Chapter 2: Preventing Obesity: the Evidence

Treatment of individuals who are obese reduces their health risk[6]. However individual treatment has only a marginal effect on population-wide prevalence of obesity; particularly as only a minority of obese patients who enter treatment achieve and sustain a BMI below 30 kg/m2 in the longterm [6].

Therefore the emphasis needs to be on primary prevention at a population level in order that the alarming rise in obesity trends can be reversed[23]. The 'iceberg' concept illustrates that more emphasis needs to be placed at the bottom of the 'iceberg' not at the top, where people are presenting with diseases related to obesity (figure 1)[23].



Type of patient and potential agencies involved

Diabetes, high blood pressure, cholesterol, very obese, arthritis, gallstones
(primary and secondary care)

Family history, BMI > 28 kg/m2
(GP practices, community services, private agencies, workplace, health and slimming clubs)

Whole population measures (media, health promotion, food manufacturers, public policy, advertising)

Figure 1 The iceberg of obesity Adapted from: 'Obesity and Overweight Matters in Primary Care' 2002 [23]

Prevention targeted at children and young people is a key component to any strategy to reduce prevalence rates. A recent World Health Organisation (WHO) report outlined the key factors influencing the prevalence of obesity (Table 2)

Table 2: Adapted from Chapter 5 of Summary of WHO/FAO evidence of factors that might promote or protect against weight gain and obesity [24]

Evidence	Decreases risk	Increases risk	Key Strategies
Convincing	Regular physical activity High dietary fibre intake	Sedentary lifestyles High intake of 'fast food'* Heavy marketing of 'fast food'	Active lifestyle, Limit TV and Computer Promote physical activity in school /community Restrict 'fast food' and increase healthy food choices
Probable	Home and school environments that support healthy food choices for children Breastfeeding	High intake of sugar-sweetened soft drinks and fruit juices Adverse socioeconomic conditions (especially for women)	Promote fruit & vegetables, Restrict 'fast food' and soft drinks/fruit juices at home and school Reduce marketing to children of poor quality food and drinks Promote family meals Information and skills for healthy food choices Promote breast feeding Improve socioeconomic conditions (especially women)
Possible	Low glycaemic index foods**	Large portion sizes High proportion of food prepared outside the home	Information and skills to make healthy food choices Reduce 'fast food' Promote family meals Reduce marketing to children of poor quality food

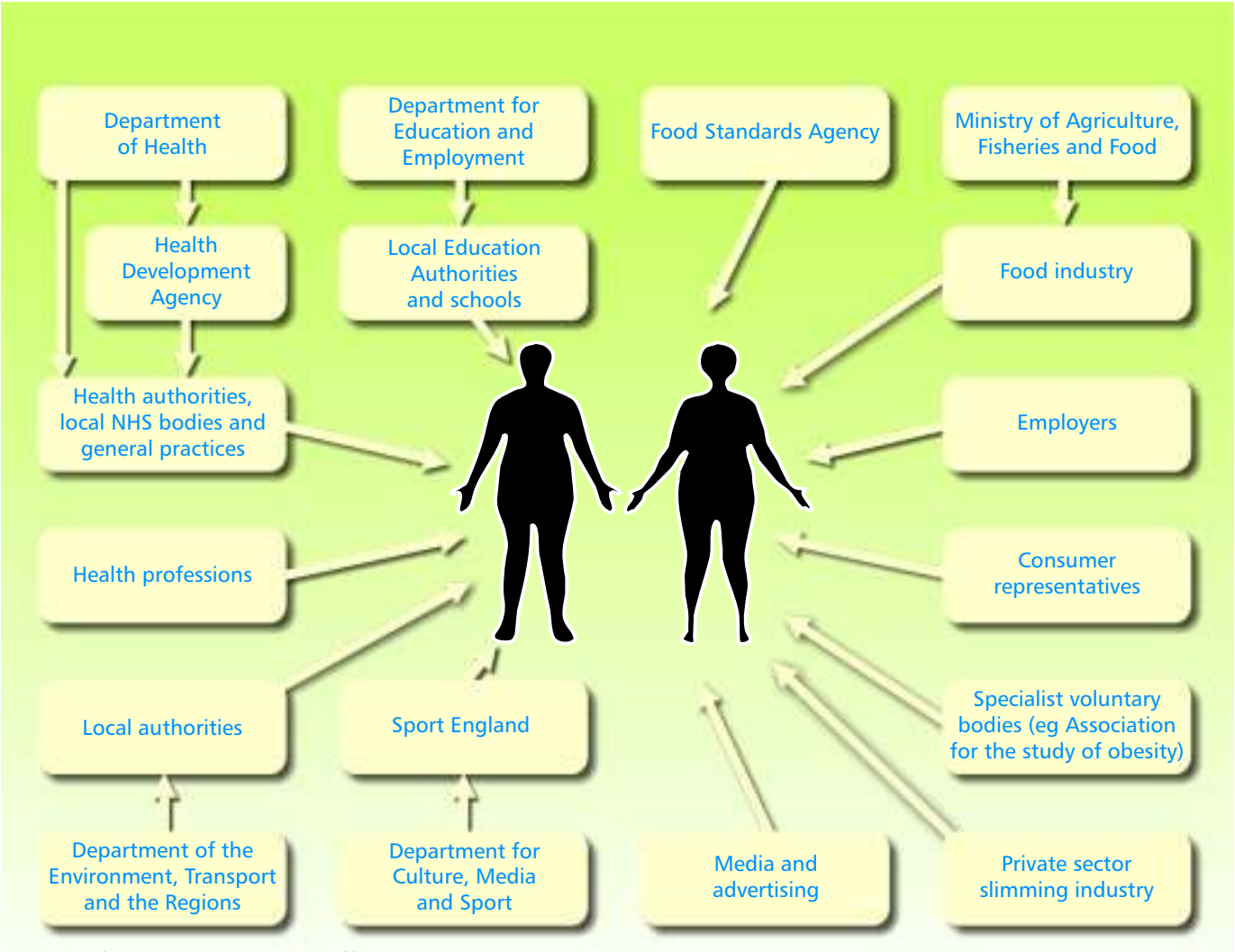
* 'Fast food' is defined here as energy-dense, nutrient poor foods e.g. packaged snacks, chocolate bars, chips etc.

** Foods with a low Glycaemic Index(GI) e.g pasta, basmati rice, porridge, bananas, apples, baked beans, chick peas, yoghurt are absorbed more slowly, giving a slower rise in blood sugar and less likelihood of hunger recurring[25].

For young children and infants, who are not exclusively breast fed, avoidance of added sugar or starches to feeding formula, and mother's acceptance of child's ability to regulate their own intake are important in preventing obesity [24].

Many organisations and groups, inside and outside the public sector, influence diet and physical activity at a national, regional and local level [2]. This is why partnership working to tackle obesity is essential (figure2)[6].

Fig 2 The Influences on Obesity in the Population



adapted from National Audit Office Report on Obesity 2000 p 32

Eight themes were identified by the National Audit Office for collaborative working to prevent obesity, the last five of which, significantly focus on children and young people [6].

1. Promoting active transport
2. Promoting more active recreation in society
3. Identifying and promoting healthy patterns of eating
4. Equipping young people for a healthy lifestyle
5. Promoting a healthy school environment
6. Promoting healthy travel to school
7. Promoting sport and physical recreation in schools
8. Promoting healthy eating in schools.

Recent evidence on prevention in children identifies the following important approaches [27]:

- Multi faceted school base programmes promoting physical activity and modification of diet especially for girls
- Multi faceted family based programmes involving parents in increasing physical activity especially in sedentary children and dietary education.

A conference on Prevention of Obesity in Bradford District in June 2003, to launch the Bradford Public Health Network, summarised the approach to prevention of obesity in three key messages [28]:

- Our environment is "obesogenic"
- It needs to be easier for people to buy and cook affordable healthy food
- It needs to be easier for people to be physically active on a daily basis.

"We live in an environment where food is everywhere and activity is discouraged" Jackie Loach Chief Community Dietitian, Speaker at the Prevention of Obesity Conference, in Bradford 2003 [29].

Bradford District Obesity Strategy

The Bradford District Obesity Strategy was drawn up in 2000 as a direct result of the National Service Framework on Coronary Heart Disease and has 3 main strands [26]:

- Healthy eating: equitable access to affordable, available and safe healthy food options across the district
- Promotion of increased physical activity across the District
- Development of evidence-based weight management guidelines.

Chapter 3:
Preventing Obesity: Food and Healthy Eating

What is healthy eating?

A healthy diet is an important element of obesity prevention. The UK Committee on Medical Aspects of food policy (COMA) working group has published a recent COMA report on cancer prevention, which endorses previous recommendations on cardiovascular disease prevention [30,31]

The COMA working group recommended, on a population basis:

- Increase fruit and vegetable intake
- Increase dietary fibre from bread, cereals(particularly wholegrain), potatoes, fruit and vegetables
- Maintain a healthy body weight (BMI 20-25 Kg/m2)
- Avoid increase in red and processed meat consumption (presently 90g/day)
- Avoid beta-carotene supplements and caution with high doses of nutrient supplements.

The 'Balance of Good Health' (Figure 3) is a food selection guide which was produced by the Health Education Authority, the Department of Health and the Ministry of Agriculture, Fisheries and Food. It is intended to help people understand the proportion and types of foods which make up a balanced diet. It is based on the Government's eight Guidelines for a Healthy Diet which are [32]:

- Enjoy your food
- Eat a variety of different foods
- Eat plenty of foods rich in starch and fibre
- Eat plenty of fruit and vegetables
- Don't eat too many foods that contain a lot of fat
- Don't have sugary foods and drinks too often
- If you drink alcohol, drink sensibly
- Eat the right amount to be a healthy weight

Figure 3 Balance of Good Health [36]

It is important to remember that it is not necessary to achieve this balance at each meal but can apply to the food eaten over a day or even a week.
The guide is relevant to most people, including vegetarians and people of all ethnic origins, except children under two years of age and people with special dietary requirements.

Alcoholic drinks are an important source of calories and their consumption contributes significantly to obesity[32,96]. The current guidelines for safe drinking are a maximum of 3-4 units of alcohol per day for men and 2-3 alcohol units per day for women[33];

How many units are in your usual drink?

What's a unit

The following measures of drink all contain one unit of alcohol

Half pint of ordinary strength larger/beer/cider (3.5% abv) = 1UNIT

A 25ml pub measure of spirit (40% abv) = 1UNIT

A small glass of wine (Many wines are 11% or 12% abv) (9% abv) = 1UNIT

How can healthy eating be achieved? (adapted from British Dietetics Association 'Food facts' [38])

- Basing meals and snacks on starchy foods such as bread, breakfast cereals, potatoes, rice, noodles, oats, pasta etc and not adding or cooking them in too much fat.
- Having at least 5 portions of fruit and vegetables each day. Beans, pulses and fruit juice count towards the total; but only once a day.
- Choosing moderate amounts of meat, fish and pulses, removing the skin from chicken, excess fat from meat and avoiding frying.
- Having 3 portions of dairy foods each day. A portion is equivalent to 1/3 pint of milk, a pot of yogurt or 25g cheese. Choosing reduced fat versions where possible, e.g. semi skimmed milk, cottage cheese etc.
- Eating foods containing fat and sugar sparingly. Choosing reduced or low fat/sugar versions.
- Try to make any changes to your diet slowly, enjoy your food and remember there are no unhealthy food, just healthy and unhealthy diets.

Health Risks

Poor diet can be a major risk factor for the development of some common cancers e.g colon cancer, as well as other chronic diseases such as coronary heart disease, stroke, type 2 diabetes and of course, obesity [10]. Improving peoples' diets, (the term 'diet ' is used here to mean the food people eat), is increasingly being recognised as an important public health measure to reduce rates of these conditions.

The key to obesity prevention is eating a healthy diet and being active enough to ensure a balance between energy in and energy out.

This is not always straightforward and Table 3 shows how easy it is to slowly put on weight; e.g. an extra 100 calories per day, (a fun sized chocolate bar or half a bag of crisps) would result in a weight gain of 5.2kg in a year[29].

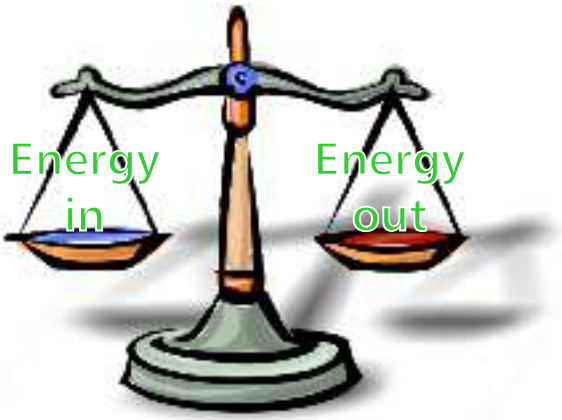


Table 3

Excess calories stored each day	Weight gain in 1 year	Weight gain in 10 years
50	2.6kg	26kg
100	5.2kg	52kg

Figures supplied by J Loach, Bradford Dietetics Department [29]

- Energy imbalance occurs if we are eating more than we burn off
- Every extra 1kg represents 7,000 stored calories
- As little as 2% discrepancy can cause substantial weight gain

Current trends

In recent years specific aspects of diet have been linked with a protective effect for certain diseases e.g high fruit and vegetable intake is linked to reduced risk of colon and other cancers as well as reduced risk of coronary heart disease and other chronic conditions. This has led to the national Five-a Day Programme for promoting increased fruit and vegetable consumption [36]. The national average for fruit and vegetable consumption is 3.7 portions for women and 3.4 portions for men portions per day and approximately one quarter of the population achieved the recommended 5 portions per day; significantly children ate less fruit and vegetables on average which is a worrying trend [13].

In England, overall energy intake, (self-reported), has not changed dramatically between 1980 and 1998 but there has been a move towards diets that contain higher proportions of fat[13]. The Joint Health Survey for England found that 38% of men and 16% of women in the 16 to 24 year old age group had diets that were considered to be significantly higher in fat and lower in fibre than the recommended levels [13].

Local information on Dietary Intake

Questionnaires have been sent to schools across Airedale PCT to young people as part of a Health Needs Assessment programme and they included questions on diet. The responses concerned with food are as follows [37]:

- 18% of 11-12 year olds and 29% 14-15 year olds do not eat breakfast on a regular basis
- 50 % of 11-12 year olds and 59% of 14-15 year olds eat 2 or less portions of fruit & vegetables per day
- 19% of 11-12 year olds and 24% of 14-15 year olds thought they were overweight.

This suggest many young people in Airedale PCT do not eat enough fruit and vegetables nor eat breakfast on a regular basis.

Areas of Concern

Health Inequalities

There are three important areas of health inequality with regard to eating a healthy diet: [10]

- Socio-economic group differences
- Black & minority ethnic group differences
- Older People

Socio-economic groups

There are inequalities in diet between those on higher and lower incomes[38]. The most striking difference is the variation in amounts of vegetables and, particularly, in the amount of fruit eaten. In the UK, average consumption is about three to four portions a day, though there are marked differences between socio-economic groups with unskilled groups tending to eat around 50% less than professional groups [39]. This inequity has also been reported in children [40].

Black and Minority Ethnic groups

The Health Education Authority found that among Black and Minority Ethnic Groups (BMEG), understanding of healthy eating messages varied widely between groups, and knowledge of foods high in complex carbohydrates, fibre, fat and saturated fat was often poor across all ethnic groups [41].

Some aspects of the traditional diet among certain groups may be perceived as being healthier than among the general population. For example, fruit and vegetable intakes may be greater, but health professionals working with these groups have raised concerns that traditional cooking methods can use a lot of fat and vegetables and are often overcooked. In addition, younger generations may eat a combination of a traditional diet and the more typically western diet [42].

Older people

Older people are frequently overlooked as a group that may be nutritionally vulnerable. The National Service Framework for Older People recognises the importance of food and nutrition for mental health, self esteem and wellbeing [43]. Difficulties in availability and accessibility of cheap healthy food applies to some groups of older people e.g. on low incomes, poor mobility, fear of crime [10].

Children

Children's fruit and vegetable consumption is falling. 'Fast foods' and sugar sweetened soft drinks are commonplace, with 'fast foods' typically containing high fat, having a have a high glycaemic index, (see Table 2 page 11) and being high in calories. These foods are increasingly served in large portion sizes[44]. All these factors in the context of an increasingly sedentary lifestyle, ensures children are at increasing risk of obesity [44].

Key Policies for Healthy Eating

The recent strategy for 'Sustainable Farming and Food' aims to have a more effective 'food chain', from production to consumption, and crucially recognises the need to [45]:

- Reconnect all elements of the food chain, especially farmers with their markets
- Strengthen links between food chain through co-operation and working together.

The Department of Health is to lead on a Food and Health Action Plan, which aims to [45]:

- Improve production, manufacture of preparation of healthier food
- Improve ease with which consumers can purchase or obtain a healthier diet
- Provide information about healthy eating and nutrition, and the acquisition of skills and behaviours for good nutrition.

Local Strategic Partnerships will need to ensure that Local Delivery Plans in the PCTs include solutions for overcoming barriers to healthy eating [45].

Other key strategies include the' Five A Day' programme for increasing fruit and vegetables, the NHS Plan commitment to improving the overall balance of the diet, the promotion of breastfeeding and reform of Welfare Food Scheme [36,45]. The Chief Medical Officer of England, has also this year urged the food industry to reduce the amount of fat and sugar in foods [86].

Features of Effective Interventions

Effective interventions need to include policies to tackle health inequalities; these include policies to target at risk groups.

Studies have shown that people on low income can describe a healthy diet as well as those on higher incomes and that although levels of knowledge about diet increase in men as income level rises, among women levels of knowledge about diet are only significantly greater among those from the highest income groups [46,47]. Improving knowledge alone is ineffective in improving people's diets, affordability and physical accessibility to foods such as fruit and vegetables have been identified as key barriers to eating a healthier diet [46,48].

For Black and Minority Ethnic Groups it is necessary both to raise awareness of the links between diet and chronic disease and to promote culturally relevant messages that take account of current dietary practices. Where traditional diets are consumed, the focus should be on reinforcing the positive aspects and might involve working with groups to develop healthier variations of traditional cooking methods in appropriate community settings[10].

Many 'older people' will also benefit from a healthy diet, such as that based on the 'Balance of Good Health', in order to continue good health and to reduce the risk of conditions such as diet-related cancers, CHD, stroke, obesity, diabetes and osteoporosis. 'Older people' do not comprise a homogenous group, however, and while many are healthy, others are frail and may require a more energy and nutrient dense diet in order to meet their nutritional requirements[10]. In developing nutritional strategies for 'older people', consideration should be given to the needs of different groups[49]. Many older people are on low incomes and those living independently may lack access to shops and public transport in some areas. They may face other difficulties in accessing a healthy diet through impaired mobility, difficulty in carrying shopping, or through fear of venturing out due to crime[10]. People living alone may not be inclined to cook, or may lack the confidence or skills to do so.

Some **principles for effective evidence based interventions** have been agreed for local strategies and are summarised in the recent Health Development Agency (HDA) report on Cancer Prevention which includes chapters on healthy eating, obesity and physical activity[10].

The evidence identifies the following key areas:

- Using proven, effective theoretical base to encourage changes in peoples behaviour, through changes in knowledge and attitudes, the development of practical skills and through improving access to a healthier diet

- Using multiple strategies which include the development of a supportive environment in which healthier choices are affordable and available and in which the culture is supportive of healthy eating

- Projects having sufficient intensity and duration e.g. community food initiatives such as food access projects take a minimum of two years to establish

- Developing interventions through participatory approaches i.e. with the involvement of potential participants especially in the community and schools.

Key settings for interventions described by the HDA Report on preventing cancer 'healthy eating' chapter are as follows:

1 **Pre-school settings:** The pre-school education or day care environment may be especially effective in improving achievement and health of the most disadvantaged children[38]. There is evidence pre-school and day care settings are appropriate settings and parental involvement may enhance the effectiveness. Successful methods have included one-to-one counselling, video or computer based teaching methods and tasting new foods [50].

2 **Schools:** Interventions in schools are more likely to be beneficial if they have the following features; adequate time and intensity, education interventions based on appropriate theory and research, family involvement, self assessment for older children, involvement of whole school environment and larger community, focus on diet alone or diet and physical activity only. This should involve the use of needs assessment with pupils, parents, teachers and members of wider community and their continued involvement in school based interventions [51].

3 **Local community projects:** There have been few rigorous evaluations of effectiveness of small scale projects but the available evidence suggests that they are more likely to be successful if they :

- Focus on diet, or diet and physical activity only
- Use the theoretical model of behaviour change [52]
- Use a range of different interventions at different levels (individual, small groups, communities) and make changes so that healthier choices are affordable and available
- Use local networks and incentives [53].

4 **Workplace:** Studies have shown work places to be effective in changing eating patterns [54] However, to be effective the following are needed [10]:

- Management support
- Employee involvement
- Screening/individual counselling
- Changes to vending machines/canteen food suited to needs of employees
- Sustainable family support for employees
- Incentives/competitions to kick off the intervention.

5 **Primary Healthcare:** Characteristics of effective interventions in primary care include [47,54,55]:

- Small group/one to one counselling
- Family counselling and education
- Target high risk groups
- Tailored to individual
- Staff training and development
- Low intensity interventions
- Self help strategies.

General practitioner (GP) based programmes can have a modest, if variable effect on health outcomes; active GP involvement improves effectiveness [56].

Summary

In order to increase healthy eating across the Airedale PCT, there needs to be effective interventions in all five areas: pre-school, schools, community projects, workplace and primary healthcare.

Chapter 4:
Preventing Obesity: Promoting Physical Activity

Recommended Physical Activity Levels

Being sedentary is a known risk factor for obesity and the current recommendations for adults are [61]:

30 minutes of moderate physical activity on at least five occasions a week

Moderate physical activity is defined as activity which makes a person feel warm and increases their heart rate and breathing, without becoming out of breath as indicated by their ability to conduct a normal conversation [57].

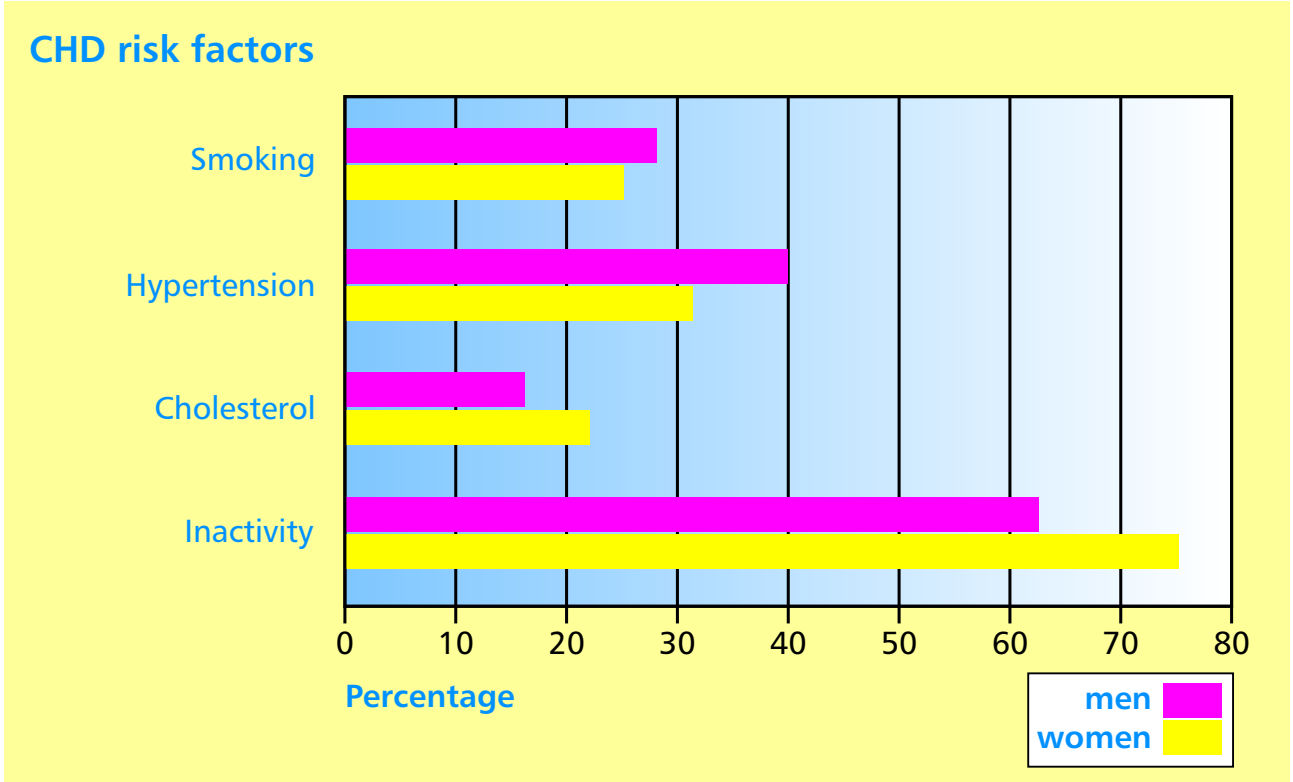
Examples of moderate intensity activity include brisk walking, cycling, swimming, dancing and gardening [57]. It is recommended that for those people who cannot achieve 30 minutes at a time, e.g. if very obese, bouts of activity of 10-15 minutes are cumulative[57,58].

The recommended level of activity for children is one hour of moderate physical activity per day [59].

Health Risks

One third of all coronary heart disease deaths are estimated to be attributable to physical inactivity compared to one fifth attributable to smoking. In addition mortality rates are double for active compared to inactive men[60, 61]. Sedentary people have double the risk of colon cancer compared to active people. There is an established link between all cause mortality and levels of physical activity; sedentary people having significantly higher all cause mortality risk[10,62]. The prevalence of inactivity in the population is much higher than other risk factors for heart disease [65a].

Prevalence of Coronary Heart Disease Factors [65a]



The overall costs to the NHS and Social Services of physical inactivity have been estimated at 1.6 billion (1996 prices) [65a].

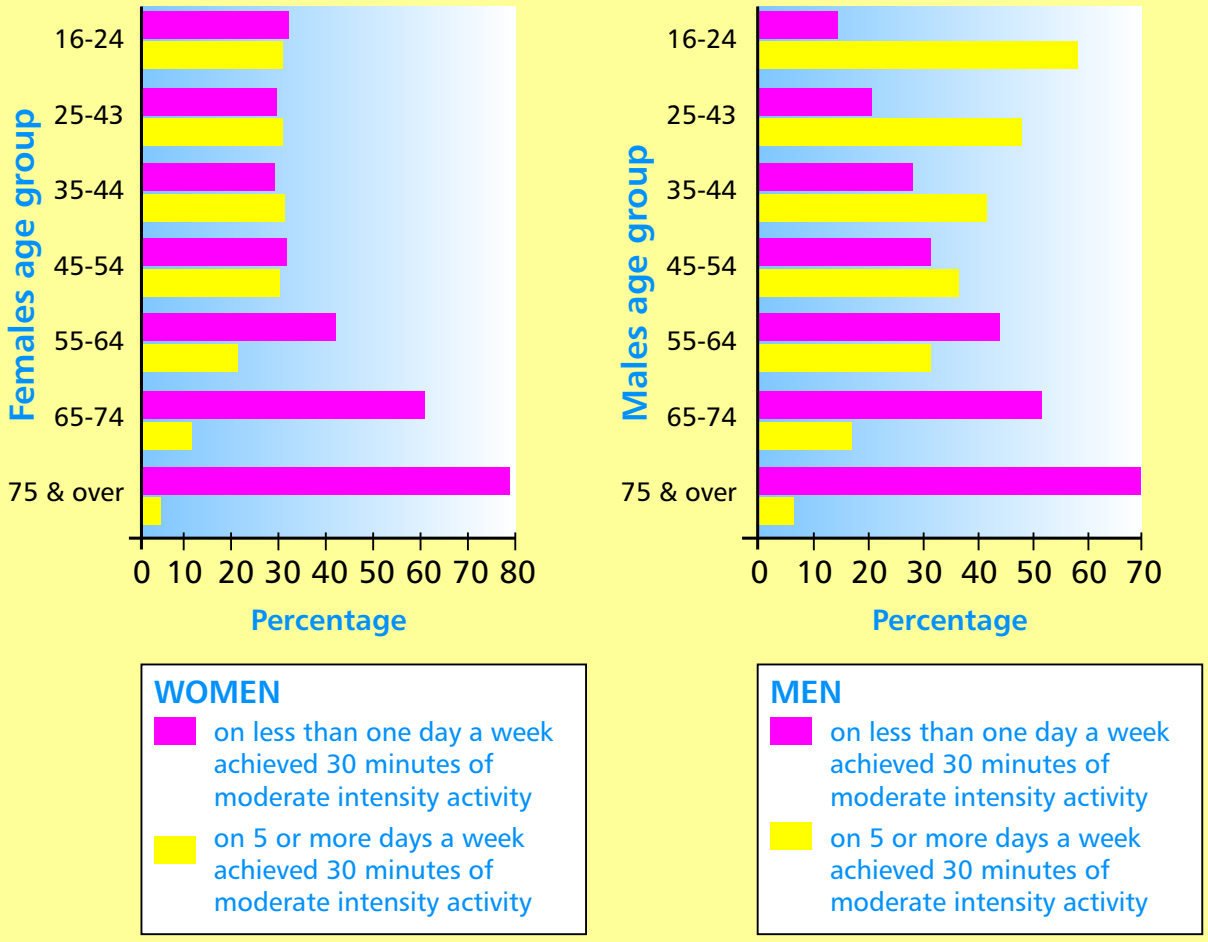
The benefits of an active lifestyle to physical and mental health are well documented and regular physical activity helps to [56,58,63] :

- Reduce overall mortality risk
- Reduce risk of cardiovascular disease (particularly coronary heart disease)
- Prevent or delay hypertension
- Prevent or control Type 2 diabetes
- Regulate body weight
- Reduce risk of osteoporosis (if weight bearing)
- Reduce risk of colon cancer
- Improve co-ordination, strength and balance in older people (hence reduces falls and fractures)
- Reduce symptoms of anxiety and depression
- Avoid social isolation (and promotes independence in older people).

Current Trends

In England only 37% of men and 25% of women actually achieve the recommended levels of activity level and hence two thirds of the population are at increased risk of dying from heart disease and other causes [13].

Current patterns of activity in England (Joint Health Survey for England 1998)[13]



Local Information on Physical Activity Levels

In a recent study of walking levels in people aged 50-70 years in Keighley, over half did less than 30 minutes brisk walking per week and nearly one third were defined as being sedentary overall i.e. less than 30 minutes of any moderate intensity physical activity in one week (actual population levels are likely to be less than this) [64].

Questionnaires sent out as part of Health Needs Assessment of young people in Airedale PCT schools in 2002 showed [37].

- 26% of young people aged 11-12 years and 39% of young people aged 14-15 years do not think they do enough exercise
- 39% of young people aged 11-12 years and 36% of young people aged 14-15 years never exercise enough to get out of breath and sweaty.

Areas of Concern

Health Inequalities

There are groups of people who are less likely to be physically active and these include [16,65b,66]:

- People living in deprived areas
- Older people
- People with disabilities
- Women
- South Asian people.

Women consistently do less activity when compared to men and within the South Asian community. Pakistani and Bangladeshi people have the lowest levels of activity, again particularly women [16].

Children in particular are increasingly watching TV and playing computer games and much less likely to walk or cycle to school [10,27]. The recommendation for children is at least one hour per day of moderate intensity physical activity but the National Diet and Nutrition Survey showed only 60% of boys and 40% of girls achieved this level of activity [40].

Any increase in activity, particularly for people who are very sedentary, needs to be encouraged

Key Policies

There has been accumulating evidence for the health benefits of physical activity over the last 20 years and in the last decade several key documents have been published identifying a sedentary lifestyle as a key risk factor including the NHS Cancer Plan, National Service Frameworks for Coronary Heart Disease and Diabetes and the NHS Plan [4,5a,5b,35]. Other examples of Government strategies which promote activity include 'A New Deal for Transport: Better for Everyone' which promotes walking and cycling and the 'Healthy Schools Initiative' which identifies activity as one of the key areas [67,68].

A Sport and Physical Activity Board has been established, jointly led by the Department of Health and Department of Culture, Media and Sport to oversee action on increasing activity with physical education, school sport and the club links programme [86].

Evidence for Effective Interventions

Different activities suit different people and common barriers to activity are [10,69]:

- lack of perceived need or motivation
- lack of time
- lack of knowledge and information
- lack of support
- lack of appropriate facilities
- negative perceptions of 'exercise'
- cost of facilities (or childcare)
- access to facilities (transport)
- lack of equipment
- cultural issues
- fear of injury or embarrassment
- not enjoyable or possible

For example, for some Black and Minority Ethnic Groups, barriers include lack of cultural appropriateness and racism, (institutional), e.g. single sex sessions can encourage South Asian women to participate [10]. For particular hard to reach groups, proactive outreach work is needed to encourage participation [10].

Effective interventions to promote physical activity include [70a]

- personal instruction
- continued support
- exercise of moderate intensity
- home based activity (not dependent on special facilities)

Ideally exercise should be incorporated into a daily lifestyle and should be enjoyable if possible i.e. walking to school, cycling to work: an active lifestyle is the key to increasing activity at a population level and walking most readily fits these criteria[10,70a]. The US Task Force on Community Preventative Services found sufficient evidence to support the following areas [63]

- community wide campaigns
- prompts to encourage stair use
- school based physical education
- social support interventions in community settings
- individually adapted health behaviour change programmes
- Creation or enhancement of access to places for physical activity combined with outreach activities

Evidence exists to support interventions in a **variety of settings** and the recent Health Development Agency report on cancer prevention identifies 5 key areas for physical activity interventions [10,70b].

1. **Schools:** appropriately designed and delivered PE curriculae can increase physical activity levels. A whole school approach to physical activity promotion has been shown to be effective and they are more effective when young people are involved. Well designed schemes include a physical and health education curriculum, extra curricular activities, links with local

communities, safe transport routes to school and evaluation of activity changes. Young women in particular need to be targeted and travel to school offers opportunities [10].

2. **Transport:** Transport offers potential for health-enhancing physical activity and there is evidence for 'suppressed demand' for walking and cycling. Main barriers to walking and cycling are outlined in Tables 4 and 5 [10, 71].

Table 4 Barriers to cycling	
Issue	% who would cycle more if issue addressed
Better /safer cycle routes	32%
More cycle routes	31%
Better facilities to park bicycles	28%
More consideration from drivers	26%

Table 5 Barriers to walking	
Issue	% who would walk more if issue addressed
Cracked pavements	32%
Safer walking to shops/local facilities	26%
Better lighting	26%
More pedestrian crossings	19%
Fewer cars on road	20%

47% of people would walk more and 67% of people cycle more if these issues were addressed[71]. Walking to work has been increased through well designed interventions, and walking and cycling can be part of the School Travel Plan [72,73]. Schemes designed to inform and motivate people to use alternative methods of travel to the car have been successful [74].

3. **Communities:** community-wide approaches to physical activity promotion have resulted in increases in activity. This needs to focus on building, strengthening and maintaining networks that provide supportive relationships for behaviour change e.g buddy systems, establishing walking groups. This can be done within new social settings or existing schools or workplaces. Linking exercise referral systems with these community based networks can support long term behaviour change [75].

4. **Workplace:** There is some evidence of effectiveness of interventions to improve physical activity and rates of walking to work. Provision of written materials are important in this [10,73].

5. **Healthcare:** healthcare interventions can increase physical activity in the short term, but long term maintenance remains a challenge. Counselling for physical activity has been shown to be as effective as more structured exercise sessions and written material produced stronger results. Exercise referral schemes show short term increases in activity but longer term impacts are less well documented. Effectiveness of such schemes is improved when staff are trained in behaviour change strategies, there is quality supervision, liaison between health and leisure service is established and community based networks offer support beyond the referral period, incorporating sustained active living [73].

Summary

In order to increase overall physical activity in the population of Airedale PCT , there needs to be effective interventions in all five key areas: school, transport, communities, workplace and healthcare.

Chapter 5: A Day in the Life of a Schoolchild

Obesity in children is rising at an alarming rate, with 23.6% of pre-school children overweight and 9.2% of pre-school children obese in 1998[22]. These pages describe the many different factors which affect children in their daily lives; before, during and after school, as a way of indicating the areas that need to be addressed if this rising trend in obesity is to be reversed.

A "Day in the Life" of a schoolchild

The many influences on physical activity and healthy eating

Before School

☆ **Breakfast at home**

What needs to change

- All children eat breakfast consisting of healthy food
- Affordable available healthy food.

How Children go to school

☆ **Walking**
Bus
Car
Cycling

What needs to change

- More walking, cycling to school
- More Walking Buses to school
- Less car use
- Improved Public transport

Present Trends in Transport to School

☆ **Less walking and cycling - more car travel**

What needs to change

- More walking and cycling
- Less car travel

On the Way to School

☆ **Traffic**
Environment
Safety
Time pressures
Public transport

What needs to change

- More Walking Buses
- Safer streets, less traffic
- Improved Public Transport

At School

- **Snacks and foods at lunchtime**
- **Vending Machines**
- **Playtime activity**
- **PE lessons**
- **Activities outside school**

What needs to change

- All schools adopt Healthy Schools Initiative
- Healthy eating choices
- More physical activity in/out of school
- Travel plans to promote walking and cycling to and from school

End of school day

- **Route home:**
  Walking, Cycling Car, Bus

What needs to change

- Increase – walking and cycling
- Increase – Walking Buses
- Less car use
- Improved Public Transport

On the way home and to school

- **Shops:**
  Newsagents and takeaways
  Availability:
  Snacks, confectionary and soft drinks

What needs to change

- Healthy food to be available, affordable and accessible to all
- Children and parents to make healthy food choices
- Reduce unhealthy food marketing especially towards children

At home at end of school day

- **Type of food eaten at end of day**
  Amount of TV/Computer viewing
  Play areas - garden/green spaces/streets

What needs to change

- Parents and children to make healthy food choices
- Affordable accessible healthy food locally

Environment in Child's street

- Play areas

What needs to change

- Safer streets, less traffic
- 20mph zones or pedestrianised areas

Spaces or places to play nearby

- Leisure Activities
  Play areas

What needs to change

- Safe play areas e.g. parks
- Leisure activities (affordable and accessible) e.g. swimming, sports clubs

Present examples of good practice within schools in Airedale PCT include the following:

- Walking Bus Aire Valley School
- Fruit Tuckshop-Worth Valley School
- Breakfast Club-Eastwood School
- Sport Clubs after school Sport Keighley

Chapter 6: What is happening across Airedale PCT to promote Healthy Eating and Physical Activity?

Many people contribute to work in the area of healthy eating and physical activity but it would be impossible to detail all of this important work. This chapter focuses mainly on the work areas involving Public Health Team members.

Healthy Eating

After much active work in previous years a **Community Food Team** was established within Airedale PCT in 2003, comprising a co-ordinator who leads the team, part- time community dietitian, food links co-ordinator and health care support worker. This team is jointly funded by the PCT, New Opportunities Fund, Neighbourhood Renewal and Bradford Vision. The team links with Airedale NHS Trust, Bradford Community Environment Project and other partners across Airedale and Bradford district, including the District Wide Food Network and the Bradford Public Health Network.

Current Community Food Team activities

The Community Food Team drew up its first '**Three Year Programme'** this year and it is part of Airedale PCT's Modernisation Plan.

Fab Fruit and Vital Veg

This project was developed to promote a positive image of fruit and vegetables to primary school children. A professional art and drama company, Arts Desire, were commissioned to undertake artwork, storytelling and drama activities in schools. Alongside these activities work was undertaken within the schools to increase the provision of fruit and vegetables. Evaluation of this project illustrated a positive change in attitude to fruit and vegetables and an increase in consumption of fruit and vegetables of 0.67 portions per child per day in the pilot schools.

Food Co-operative

Focus groups were undertaken in Braithwaite, Keighley to discuss the barriers to accessing fruit and vegetables locally. Issues that arose from these discussions included lack of local affordable produce. As a response, a food co-operative was set up in Whinfield community centre. This has been operating for nearly two years and sells fruit and vegetables to local residents twice a week . Independent evaluation demonstrated the benefit to people who use the food co-operative. Links have been made with SureStart Keighley and a local school.

Cooking Sessions at Roshni Ghar

A series of cooking sessions were set up with Roshni Ghar, a community centre for Asian women. A variety of dishes were cooked from soup to curries to banana bread. Original recipes were adapted to reduce the fat and salt content. The evaluation of these sessions were very positive with many women making changes in the home environment.

Airedale Food Network

Airedale Food Network was established two years ago to bring together key partners from statutory and voluntary sectors to look at food issues across Airedale. Working groups have been established with a focus on child nutrition, nutrition for the elderly and local food production.

Links have also been made with many community projects. A bid submitted by the Airedale Food Network to SEED (Social, Economic and Environmental Development Fund) has recently been successful and will help to develop three new food projects in Airedale including a community café based at Springfield Mill, developing the local food produce shop based at Keighley Healthy Living Network and food growing work in Keighley and district.

Oral Health Month

Working in partnership with Oral Health Promotion Department, a project was developed to promote oral health and healthy eating with older people. This involved visiting day centres across Airedale to promote key messages and the oral health team arranged dental checks. The project was welcomed with many positive comments being received.

Bradford Community Environment Project BCEP /Food Links Information Network FLINT

The Community Food Team links with the BCEP/FLINT project which is part funded by Airedale PCT. This project encourages and promotes food cooperatives, growing projects and infrastructure work around food and nutrition.

Planned activities for 2003/4

5-A-Day activities

These projects are planned to increase the access to fruit and vegetables, and to increase awareness of the health benefits of eating fruit and vegetables. These activities will focus on children and young adults.

Community Food Projects

Development of a variety of community food projects including :

Assisting in setting up a community café at Springfield Mill, Keighley. This will initially involve a small café providing healthy meals to workers in the mill with the plan to extend to the public in the future. It will also operate alongside the Russell Street project who will be offering catering training.

Assisting in developing the local food produce shop in Keighley. This project is already established one day a week at Keighley Healthy Living Network and it is planned to extend the opening hours to three days a week and capture a wider audience. Produce is presently supplied from local allotments and the kitchen garden café in Keighley.

Continuing to support existing food projects e.g. Braithwaite food co-op, Whinfield Community Centre, Braithwaite.

Assisting and supporting local projects who are addressing food issues in their community
A Breast Feeding Support Group has developed an education pack for use in schools and is identifying 'breast feeding friendly' premises. Members are planning collaborative work with Keighley Healthy Living Network and Kala Sangam to use arts to promote breast feeding.

An Airedale Food Network steering group has been set up to oversee and support these food projects.

Support and Training for community workers

Planning and arranging an accredited training programme for community workers to develop food projects in their own settings.

Developing a resource base for community members and health professionals to access food information and resources.

Work in schools

Continuing to support and develop food projects including five a day in schools.

Development of an information pack for primary schools to promote practical action for addressing healthy food in schools e.g. setting up a fruit tuckshop. To offer a pump priming scheme (financial support) to schools to support activities that promote the increase in provision of healthy food choices e.g. breakfast club.

To work with secondary schools in Airedale to develop a whole school approach to healthy food choices.

To work with and support school nurses and teachers in implementing the healthy school standards and the School Health Plans which will be developed from the School Health Needs Assessment. Chairmanship and support to 'Food in Schools Group'.

Develop weight wise pack for all primary schools, and to offer support to schools and school nurses undertaking activities. To offer the "Fab Fruit and Vital Veg" art project to three primary schools.

To work with community/youth groups to produce a new resource to use with young people to promote a positive image of fruit and vegetables. Looking at the potential for road shows to raise awareness in secondary schools.

Media

Continue working with the media to develop a communication campaign to highlight the five-a-day message to teenagers. Presently work is ongoing with Galaxy radio to develop a positive image of fruit and vegetables on and off air.

General

Organisation and development of Airedale Food Network, a forum for highlighting local food projects.

Developing an information leaflet for services available to older people living in Ilkley

Developing an appropriate intervention with the under 5's group to promote an increase in consumption of fruit and vegetables from early years

Involvement in the development of a community food directory across Bradford.

Gaps identified in Community Food work

Although much work is taking place around food, gaps in provision have also been identified. Areas for development were identified through a community food planning day, feedback from health professionals and needs assessment carried out by existing food projects.

Community Dietitics/ Nutrition Work

There is currently insufficient clinical dietetic support to the Community Food Team and existing food projects.

Population Awareness

There could be greater local involvement in the national Weight Wise Campaign of the British Dietetic Association, the purpose of which is to raise awareness of key healthy eating messages, weight management and activity.

Expansion of Existing Food Projects

Various food projects are not available comprehensively across the local population. There is the potential to expand the Five-a-Day initiative and for new opportunities for developing individuals' skills e.g cooking sessions, supermarket tours. There is also the potential for enhancing support by giving talks to a variety of community groups e.g cardiac rehabilitation.

Focus on Children

There could be closer working with school nursing to support them in implementing the School Health Plan arising from the Schools Health Needs Assessment.

There should be more support to Sure Start Keighley to enable activities concerning food and physical activity. There is potential for developing work with children's centres and with Looked After Children.

There are no local guidelines on weight management in children.

Focus on Older People

More work could be done with other agencies to ensure older people have a healthy nutrition.

Focus on Black and Minority Ethnic Groups

There is potential to develop culturally appropriate initiatives which address the nutritional needs of this group.

Working with Primary Care Teams

There is an unmet need for support in implementing PACE guidelines on weight management and promoting healthy eating e.g. through involvement in assessing needs for and provision of training for primary care professionals.

Food Policy Development

It is vital that the Community Food Team be involved in driving forward the forthcoming Department of Health Food and Health Action Plan.

Physical Activity

After much active work over a number of years the **Physical Activity Team** was established in Airedale PCT in 2003. The Team is led by the Active Communities Co-ordinator and is supported by the Public Health Team. One of its key objectives this year is to gain support and involvement from other key partners e.g. Local Authority facilities, Education, Community Groups and the Voluntary Sector. This team links to district wide initiatives including the Walking for Health Initiative and Public Health Network. Members of both the Physical Activity and Community Food teams took a pivotal role in the recent Bradford Public Health Network conference on Prevention of Obesity.

Current activities of Physical Activity Team

The **Physical Activity Three Year Programme** drawn up this year is part of the Airedale PCT Modernisation Plan. It summarises all physical activity work that is being delivered for the local population. The programme illustrates the diversity of partners that the Airedale PCT are working with, when delivering physical activity projects and demonstrates partnership commitment to funding and sharing of skills.

The **Active Communities Project**, by identifying communities' needs, aims to increase the opportunities for participation in physical activity, with the support of multi-agency assistance and existing resources.

The **WALKing for All in Keighley Project** aims to increase numbers of sedentary people walking regularly for daily journeys and for pleasure. The project involves innovative and diverse partnership working to bring communities and organisations together in order to make Keighley a more pleasant and safe environment in which to walk. This project includes regular input from a local authority planning officer and project work on healthy transport plans and walkways in Keighley. The work of the project is informed by research into the walking levels, barriers and facilitators of walking in local people aged between 50 and 70 [64].The project has been positively evaluated both formally and informally through the funders through case studies, registers, traffic enumeration and involvement with targets for School Travel Plans. The underpinning local research forms an important part of the local Public Service Agreement (PSA) target of the local authority and Bradford district health partners.

The **Exercise & Educational Programme** is in its infancy and aims to support and encourage participants to take part in appropriate physical activity as part of the self-management of their medical condition. A pilot project has taken place and evaluated very well, with both patients and health professionals, Key outcomes were weight loss, ongoing participation in activity and changes in mental well-being. This is achieved through raising awareness of the importance of physical activity, providing opportunities to take part in physical activity, discussions on local activities and showing that physical activity can be fun.

The **Falls Prevention Project's** overall aim is to deliver an education programme to older people, through older people acting as " peer mentors". Changes in behaviour, including keeping active, can decrease the risk of falling.

Healthwise Programme The Physical Activity Team delivers and develops the Healthwise programme in Airedale PCT on behalf of the Bradford District Health Development Service. The programme provides exercise sessions for all abilities in the community with emphasis also on health information and relaxation. The success of the programme has led to a further class being

set up, as a result of the positive feedback from participant questionnaires and tutor feedback. Within the South Asian community, the project has a focus group and school liaison worker networks to gain feedback, which is used to develop the group.

Seated Exercise Programme This project aims to improve flexibility, strength and stamina of sedentary older people with a view to maintaining their independence and improve health and well-being. The programme achieves this through enabling those who work with older people to teach seated and supported exercise safely and effectively. The evaluation and monitoring of these sessions is being undertaken by a Health Promotion Specialist from the Health Development Service and will influence the development of this project.

The **Physical Activity Health Month** promotes the importance of physical activity and gets the key messages out into the Airedale community. This gives the team the opportunity to promote sessions, highlight the benefits and promote the team's existence in a variety of settings, e.g surgeries and schools.

The Healthy Transport Plan is aimed at reducing car use amongst staff, visitors and patients. Travel plans will be developed for PCT premises and public transport information made available. Where possible cycle racks, lockers and shower facilities will be provided.

Bradford Encouraging Exercising People (BEEP) This service is a scheme that allows Airedale PCT GPs, nurses and other health professionals to refer patients to an exercise specialist. This may be for advice regarding appropriate exercise and/or information about sessions available locally. This scheme has an extensive evaluation and monitoring process for the patients that take part in the programme. They are asked for feedback on their programme of activity, feelings and experiences of the scheme at 3, 6 and 12 months and annually there after.

The **Expert Patient Programme** is a six week programme, being piloted at present, for people with chronic health conditions across Airedale PCT and includes sessions on physical activity and healthy eating.

Planned activities for 2003-04

Physical Activity Messages

Consistent physical activity messages will be produced in a variety of formats for presentation at conferences, meetings, protective learning time, group sessions and to nominated contacts in key public service settings e.g. GP surgeries. This information will become a resource for health professionals and community leaders to cascade throughout the community.

Physical Activity Toolkit

A toolkit is being developed which can be used to support the delivery of appropriate physical activity advice, to prepare an action plan and to know what physical activity sessions are going on in the local area. A pilot project will be set up within a healthcare setting and then, if the evaluation is positive , will be developed for other settings e.g. education and the community.

Physical Activity Directory

The Team is developing a database to hold information on physical activity sessions that are available to APCT residents. The information held will include activity name, venue, costs, time, contact name and requirements. This information will be produced in many formats such as, Intranet, Internet, floppy disc, paper and CD-ROM. The Physical Activity Team will regularly update this database.

Health Needs Assessment

The Physical Activity Team will act as a framework of support for the school nurses, teachers and pupils to address and deliver the physical activity needs identified through the School Health Needs Assessment. This project was identified as notable practice in the recent Commission for Health Improvement (CHI) review.

Community Physical Activity Projects

The aim is to support the development and delivery of physical activity projects, which have been identified by the local community groups and to assist with the sustainability of these sessions with funding support, sharing of skills and providing training for volunteers. Examples include Highfield Young Boys Project, 'Where the 'ell are we?' Walking Group, The Kirin Project for Young Women and Girls and Bingley Activity Class for Older People.

Development of Exercise and Educational Programmes

To develop the Exercise and Educational Programmes for people with chronic health problems such as diabetes or coronary heart disease, in the community together with the support of healthcare staff.

Physical Activity Team Launch

An event is planned to bring together all partners and agencies that provide physical activities within Airedale. The aim of the day is for a mapping process to begin of what activity is taking place across sectors, to identify gaps in provision and the skills available to enable the partnership working to bridge the gaps.

Training Opportunities

Through the development of the Physical Activity Three Year Plan it has been identified that there are training and skills development needs at many levels. With the support of Keighley College, an instructor/coach database will be developed in order to begin to address these needs.

Monitoring & Evaluation

A monitoring and evaluation process will be developed that can be used by all projects within Airedale PCT that deliver physical activity sessions. This data will include quantitative data (statistics) and qualitative data (more in-depth information in to behaviour change and attitudes).

Gaps in Physical Activity Work in Airedale PCT

There are gaps in provision, identified through the Physical Activity Three Year Plan. These need to be addressed, in order to tackle the health inequalities that exist in relation to physical activity.

Focus on Children

There is a lack of consistent materials to enable school nurses to adopt a systematic approach to the implementation of the School Health Plans in relation to Physical Activity.

There could be more involvement of the Physical Activity Team in school clubs, working with teachers and school nurses to benefit children and their families.

There has been little research done regarding the physical activity needs of obese children.

There is a lack of knowledge about the physical activity needs of young carers.

There is the potential to develop a stronger working relationship with youth offenders and drugs projects to provide opportunities for physical activity.

More work could be carried out with community workers working with young people, the youth services and Connexions to widen the opportunities for young people with respect to physical activity.

Focus on Women

There is the potential for closer working relationships with the key women's organisations e.g. Keighley women's Centre, Roshni Ghar.

There is insufficient local information regarding the barriers to women's participation in physical activity and needs assessment work should be carried out.

It is not known if there are sufficient opportunities for physical activity for obese women.

There is the potential to develop activity sessions for young women and girls based on local work supported by the Kirin Project.

Personal Safety training needs to be more widely available for women to encourage their participation in physical activity. This could be developed in conjunction with Keighley College.

There are currently insufficient trained people within communities to ensure the sustainability of physical activity sessions.

Focus on Older People

More could be done to promote the importance of physical activity by the provision of more appropriate opportunities for physical activity including activities in care homes and day care.

Extension of the Seated Exercise programme

Linking with the Walking from Home Project which supports isolated elders.

Further falls activity classes in conjunction with the Falls Prevention Team and Walking from Home Project.

Working with transport to highlight gaps in provision and also to raise the awareness of older people to the transport opportunities available.

Focus on the South Asian Community

There is a need to further raise awareness in this community about the importance of physical activity to health.

There should be more consultation within this community to identify suitable child care to enable participation in activity sessions e.g. Sure Start.

More culturally appropriate opportunities for physcal activity need to be provided.

There is a need to identify more community development workers and volunteers to support the development of sustainable physical activity opportunities.

Focus on the Needs of Disabled People

Little information is available about the physical activity needs of children and adults with physical and learning disabilities. Needs assessment should take place.

There should be more appropriate opportunities for people who have disabilities to be physically active, taking into account issues relating to access, appropriate equipment and support.

Primary care Staff

Not all of the PCT was covered by the successful piloted 10 week Exercise and Educational Programme . This programme needs to be extended so that more of the population may benefit.

There is a lack of resources on physical activity and specific diseases for instructors, health staff, community groups and patients to help promote and encourage participation in physical activity.

There is a need for more input from the Physical Activity Team to cardiac rehabilitation both at Airedale General Hospital and in the community.

There is a need for closer liaison with primary care nurses to look at ways of further promoting the importance of exercise for all patients, including those with chronic medical conditions.

General

Links with the BEEP Scheme could and should be strengthened.

There is no systematic assessment of training needs in relation to physical activity and healthy eating, of healthcare staff and community members.

There is no specific programme to improve local infrastructure to enable greater activity, i.e. Rights of Way, School Travel Plans and Walking Buses.

Monitoring and Evaluation

There is no systematic evaluation of physical activity classes within the community which have been developed by the physical activity team and delivered by partners.

The Wider Public Health Contribution

The Physical Activity Team and Community Food Team are part of the Airedale PCT Public Health Team. The objective of all team members is to use a public health focus in partnership with community development techniques, to address the inequalities in health within the Airedale PCT locality. Some key examples of work around promoting healthy eating and physical activity for the wider team are; the Health of Men (HOM) teams' work in youth and workplace settings, the School Needs Assessment Project which works with schools, school nurses and health visitors and Women's Health work at Roshni Ghar and Keighley Women's Centre. The Public Health team has a key role to play in the delivery of the programme of work resulting from this report.

It also needs to be acknowledged that the wider Public Health workforce within the PCT, for example practice nurses, health visitors, school nurses, general practitioners, dental staff and others, all contribute on a daily basis to addressing the public health agenda of increasing healthy eating and physical activity.

General Gaps identified

Physical Activity Team, Community Food Team and health visiting and school nursing could work more closely and the review process offers an ideal opportunity for this.

There could be closer working between the Physical Activity Team, Community Food Team and school nursing in order to support the changes in school nursing practice consequent upon the Health Needs Assessment in Schools.

As the work of the teams involved in healthy eating and physical activity has grown, there is now insufficient administrative and managerial support for them.

The teams do not have any specific funding for small scale projects for front-line workers.

Chapter 7 Obesity: A Healthy Approach to Weight Management

Guidelines on Weight Management

Treatment of obesity, although not a key factor in reducing obesity at a population level, nevertheless is important for the individual. The Bradford-wide initiative, Promoting Action on Clinical Effectiveness (PACE), completed guidelines on adult obesity in 2002 but has yet to tackle guidelines for childhood obesity locally[76]. As identified earlier BMI and sex specific Waist Circumference are used to identify people at higher health risk :

BMI greater than 30 Kg/m2

Waist Circumference in Men : More than 102 cm (40 inches)
Waist Circumference in Women : More than 88cm (35 inches)

The key messages for weight management in adults are based on the FIT and FAT messages developed as part of the PACE Guidelines drawn up from a group of over 30 professionals and users in Sept 2002 [76].

The key FIT and FAT messages are:

Healthy Eating FAT:

Frequency - How often (regular meals)
Amount- Portion sizes (reasonable)
Type- Healthy eating including 5-a-day fruit & vegetables

Physical Activity FIT:

Frequency- 5 x 30 mins per week
Intensity- moderate e.g. brisk walking
Type- cardiovascular (aerobic)

The PACE guidelines centre around using a stepped approach with most people self managing or seeking help from health professionals in primary care (levels 1 and 2). Use of drugs should be restricted, and within the current NICE (National Institute of Clinical Effectiveness)guidelines [77]:
Level 1 - self management
Level 2 - health professional
Level 3 - pharmacotherapy (using drugs)
Level 4 - specialist services (e.g. surgery).

Full details on weight management are available in the PACE guidelines and educational events have been held across all four PCTs in 2002 to initiate their implementation [84].

The Bradford PACE guidelines highlight the importance of psychological variables in the understanding of obesity. A key part of the educational events in primary care for these guidelines was a video made by a woman, who herself has been obese all her adult life. The video explains the importance of moving from a culture of "blaming" individuals for their weight problems, and moving towards understanding the reason for their problem. Motivational aspects and self efficacy is crucial in encouraging positive changes[78,79]. In order to effectively lose weight an obese person needs to [80].

- Change their behaviour
- Believe their own behaviour is important
- Perceive the consequences of their behaviour change.

Cognitive Behavioural Therapy can be a useful adjunct in obesity management[81]. Health Behaviour Change Models, in conjunction with Prochaska and DiClemente's 'Stages of Change' Model offer frameworks for assessing an obese person's readiness to change [52,82].

In overweight obese children the focus is on reducing sedentary behaviour and healthy eating only. Recently published Scottish Intercollegiate Guidelines Network guidelines on prevention and treatment of childhood obesity identify the following key areas [83]:

- Increased physical activity (at least 30 minutes moderate but preferably 60 minutes per day)
- Reducing inactivity (TV/computers)
- Healthier eating (details in SIGN document)
- For clinical use, (clinical practice), the 98th centile BMI percentile should be used to identify childhood obesity (98th centile on the UK 1990 reference charts for age and sex)
- For epidemiological use,(surveys,studies etc), 95th centile BMI percentile should be used.

Services available for Weight Management in Airedale PCT

Primary care

Weight management advice is provided in primary care and some practices run their own nutrition clinics. Referrals can be made to dieticians for more in-depth advice regarding healthy eating and to BEEP for advice and support from a fitness adviser.

Data on weight and BMI is recorded on patient records at the New Patient health check and Well Person check. It is also a part of the routine management of many chronic diseases including diabetes and coronary heart disease. Waist circumference is increasingly being measured now, especially in diabetes management.

Secondary care

Dietetics Department

The majority of referrals for patients with obesity are from primary care. Approximately 10% of referrals are for patients with obesity without other co-morbidities' 55% of referrals are for patients with diabetes and a further 10% have Coronary Heart Disease[84]. Over 70% of these last two patient groups are overweight or obese[84].

The Dietetic Department has clinical guidelines for the management of obesity. Treatment plans are negotiated with patients to meet their individual needs. Patients are offered up to six appointments initially after which, options for ongoing support are discussed.

When referred it is important that patients are interested in losing weight or at least willing to discuss management of their weight and the department now operates an 'opt' in system for patients with obesity. This system has both reduced demand slightly and has also improved the attendance rate of those patients who do want dietetic support. One of the Community Dietitians works one day per week, funded by Neighbourhood Renewal funding, to support the Community Food Team.

Psychology Department

The Department of Healthcare Psychology at Airedale NHS Trust is offering training in Health Behaviour Change (HBC). This is an interviewing approach designed to get people moving on the 'Stages of Change' cycle familiar to most health workers and based on Prochaska and DiClemente's work[52,83]. HBC derives from more specialist and time consuming 'Motivational Interviewing' and embraces the principle of collaborative working and patient empowerment[82]. These techniques are being piloted with dieticians at present in Airedale PCT and will be offered to other health care professionals at a later date. Other work with the department includes referrals for problems associated with obesity e.g. depression, low self esteem. A variety of treatments are offered including Cognitive Behavioural Therapy and counselling, and referrals are sometimes made to the Eating Disorder support groups at Keighley Health Centre.

Tertiary Care

If a person has morbid obesity (BMI >40) and fits the criteria in the PACE guidelines, surgery may be appropriate[76]. Referrals are made on an individual basis and are first authorised by the PCT Out of Area Treatment Committee.

Local Community and Voluntary groups

Many groups contribute to weight management across Airedale PCT in private gyms, church halls and other community venues.

Planned Activities for 2003/4

Health Behaviour Change training could be used with other healthcare professionals following the pilot with dietitians

Gaps in Weight Management

There is no systematic training in Health Behaviour Change available in primary care at present

It is not known how effectively the PACE guidelines for weight management in primary care.

There is potential to strengthen the links between the Community Food Team, and Physical Activity Team to support implementation of PACE guidelines.

There are no guidelines for management of obesity in children.

There is insufficient clinical dietetics support to the Community Food Team for the volume of work experienced.

Chapter 8:
Recommendations for future developments

Overall Recommendation

Strengthening of Community Food Team and Physical Activity Team

This is to strengthen the overall public health focus on increasing healthy eating and physical activity by healthcare professionals and other key people and organisations across the population of Airedale PCT. This should be done through the Modernisation Plan and Local Delivery Plan. It will require commitment across the PCT to partnership working between the Physical Activity Team, Community Food Team and others, particularly primary care teams, the local authority and voluntary sector.

Healthy Eating: Key objectives for the Community Food Team

1. Implementation of the Community Food Team's Three Year Plan. Integration of forthcoming Department of Health's Food and Health Action Plan ensuring healthy eating policies are included in the work of the Local Strategic Partnership and the Modernisation Plan.

2. Assessment of community needs using a participatory approach to identify barriers to healthy eating, focusing in particular on the needs of the different groups of older people and the black and ethnic minority population.

3. Develop a closer working relationship with school nursing to support them in implementing the School Health Plans developed from the School Health Needs Assessment.

4. Provide more support to Sure Start and develop work with children's centres and Looked After children.

5. Development of agreed, consistent key messages on healthy eating which will be used extensively in local awareness raising, providing a consistent approach on information about food and health.

6. Support for, and development of, sustainable food initiatives that address inequalities and increase healthy food choices. Projects which evaluate well will be extended to other parts of the population, to ensure that work carried out is of sufficient intensity, duration and geographical spread to make a real difference.

7. Support for primary care teams in implementing the PACE guidelines on Weight Management and promoting healthy eating. Identification of a named food/nutrition contact in each primary care team, to establish joint working.

8. Gather and share evidence based practice in relation to community food work, including the development of a resource base ('library') and food tool kits for use by community members and professional staff. Encourage and demonstrate innovative practice.

9. Work with the public, voluntary and private sectors to support them in developing policies which promote and facilitate healthy eating.

10. Work in a way which encourages multiple approaches in the community to deliver healthy eating.

11. Seek financial support for projects and submit applications when appropriate funding opportunities arise.

In order to achieve this it is necessary to establish a mainstream Community Food Team to develop an infrastructure to enable effective food work to be continued and developed across Airedale PCT.

Physical Activity: Key objectives for the Physical Activity Team

1. Implementation of Airedale PCT's Physical Activity Three Year Plan commencing with a launch day involving partners. This plan will be reviewed in relation to any recommendations from the new Government Sport and Activity Board.

2. Comprehensive mapping exercise to determine current provision of physical activity in the public, voluntary and private sector.

3. Systematic identification of the needs of those groups who suffer inequalities, particularly focusing on the needs of older people, people with disabilities, ethnic minority groups (particularly women) and those who live with disadvantage. This will include identification of barriers to and culturally appropriate opportunities for physical activity.

4. In exploring opportunities for physical activity attention, will be given to emphasizing the importance of incorporating this as part of daily living.

5. Develop the involvement of the Physical Activity Team in support of school nurses and teachers.

6. Develop closer links with the Cardiac Rehabilitation Service and BEEP.

7. Work more closely with primary care teams to support them in their work around physical activity promotion.

8. Explore the potential for working with young offenders and drugs projects, to identify opportunities for physical activity as a new focus.

9. Work closely with leisure facility providers to share ideas and contribute to the development of facilities.

10. Continue to support projects which address inequalities and increase availability of appropriate exercise sessions to meet the needs of different communities.

11. Develop work with Transport providers to eg facilitate access to opportunities for physical activity through appropriate public transport.

12. Continue to deliver the key physical activity messages, raising awareness and encouraging dissemination of information. Develop an information resource toolkit for use by community groups and health professionals

13. Gather and share evidence based practice on physical activity promotion.

14. Work with key partners to provide appropriate training for community volunteers and professionals involved in the delivery of physical activity.

15. Further develop the in-house monitoring and evaluation of projects using the Sport England Framework and explore potential for obtaining funding, to engage Leeds Metropolitan University (Health Promotion Department) in this.

In order to achieve this it is necessary to establish a mainstream Physical Activity Team to continue developing the framework for activity across the population of Airedale PCT.

Weight Management: Key objectives

- Improvement in the opportunistic measurement and recording of BMI and Waist Circumference in adults and age specific BMI in children
- Auditing PACE guidelines on obesity to ensure that they are being used appropriately in primary care
- Evaluation of the pilot project of 'Health Behaviour Change' training provided by Airedale NHS Trust and if appropriate, roll out to primary care
- Development of guidelines for management of obesity in Children

In order to achieve this the following need to occur

- Carry out an audit on the recording of data on BMI by practices
- Carry out an audit of the use of PACE guidelines on Weight Management in Primary Care
- Identify resources to support Health Behaviour Change training in primary care if evaluation satisfactory
- Development of guidelines on Obesity in Children by Children's Project Group

Conclusions

Key messages for prevention of obesity across Airedale PCT

1. Strategic commitment and partnership between Airedale PCT and other Voluntary and Statutory partners are essential to success in prevention of obesity (via the Local Modernisation Plan, Local Delivery Plan and Local Strategic Partnership)

2. Our environment (including home and work) needs to be much less "obesogenic"

3. There needs to be a clear focus on healthy eating strategies with affordable healthy food available locally

4. There needs to be a clear focus on getting more people active in may different ways, especially through an 'active lifestyle'

5. There needs to be a focus on groups at 'high risk' of obesity to address health inequalities

6. Recommendations specific to Airedale PCT need to be taken forward.

Summary of recommendations to Airedale PCT

1. Establish mainstream Community Food Team

2. Establish mainstream Physical Activity Team

3. Carry out audit of BMI recording in primary care

4. Carry out audit of the use of PACE guidelines on Weight Management in primary care

5. Identify funding to roll out the Health Behaviour Change Training in primary care

6. Development of Guidelines on the Management of childhood obesity under the auspices of the Children's Project Group

Health Improvement and addressing health inequalities are two of the key roles of a Primary Care Trust, and healthy eating and physical activity are two major determinants of health in the population[85,86]. Both need to increase at a population level. When we reverse the trend in obesity prevalence in the Airedale PCT population it will have a very significant and lasting health impact on the local population. We know what causes obesity, it is preventable and we all need to act now to stem the tide of this lethal epidemic.

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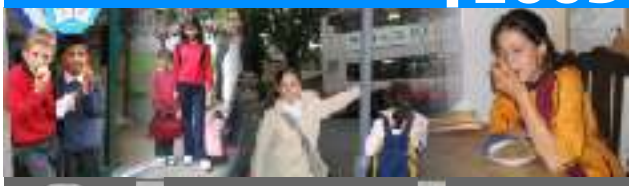

Obesity

a 21st Century Epidemic

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