EU Platform on Diet,
Physical Activity and Health

International Obesity Task Force
EU Platform Briefing Paper

prepared in collaboration with the
European Association for the Study of Obesity

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iaso

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International Obesity TaskForce

This International Obesity TaskForce (IOTF) briefing paper has been prepared in conjunction with the European Association for the Study of Obesity (EASO).

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The IOTF is part of the International Association for the Study of Obesity, a federal body of obesity research associations in 50 countries and regions including the European Association for the Study of Obesity. IASO has a formal role as a non-governmental organization in collaboration with the World Health Organization and is a registered as a charity in England.

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EASO
European Association for the Study of Obesity

Obesity in Europe

Why focus on children?

Achieving higher standards of nutrition and physical activity to improve the wellbeing and protect the health of European citizens young and old must be a major public health priority.

Rising levels of overweight and obesity among both adults and children provide a barometer reading, which signals the need to act immediately by adopting wide ranging and effective strategies to reverse the trend in overweight and obesity to prevent chronic diseases such as type 2 diabetes and heart disease.

Recent concern has focused on children and adolescents which is a rapidly growing problem in many countries; the concern is not only that young people, who are already overweight and obese, are destined to remain so throughout their adult lives with heightened risks to health, but that youngsters are already developing "diseases of old age" such as type 2 diabetes.

Surveys show overweight and obesity levels among children in Southern Europe to be higher than their Northern European counterparts as the traditional Mediterranean diet gives way to more processed foods rich in fat, sugar and salt.

Mediterranean problem

The Mediterranean islands of Malta, Sicily, Gibraltar and Crete as well as the countries of Spain, Portugal and Italy report overweight and obesity levels exceeding 30% among children aged 7-11 as illustrated in Figure 3 overleaf.

In addition England, Ireland, Cyprus, Sweden and Greece report levels above 20%, while France, Switzerland, Poland, the Czech Republic, Hungary, Germany, Denmark, Netherlands and even Bulgaria report overweight levels of 10-20% among this age group.

For teenagers (aged 13-17), seven countries indicate overweight and obesity levels above 20% with Crete peaking at 35%.

Rising trend of childhood obesity

Childhood overweight and obesity is seen to be accelerating rapidly in some countries. Rates of increase vary with England and Poland showing the steepest increases. Figure 1 illustrates rising levels of overweight, based on available data, for children aged 5-11 from seven countries in Europe. The USA is included for reference to highlight that in many countries there is a 10-15 year lag behind the USA, but nevertheless European countries are narrowing this gap.

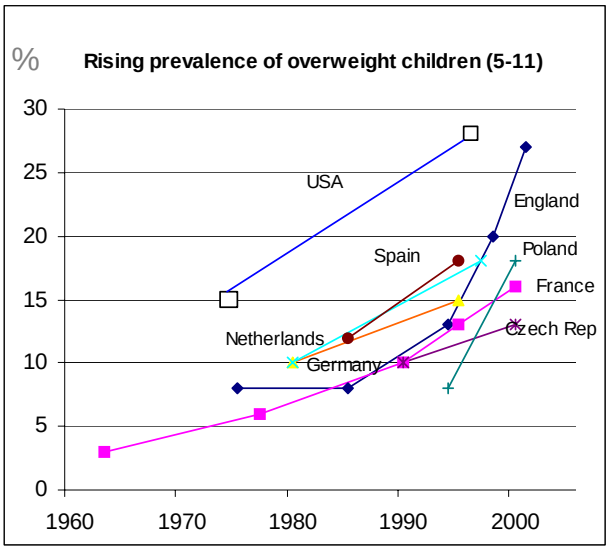

Figure 1 – Accelerating rates

400,000 more overweight children every year

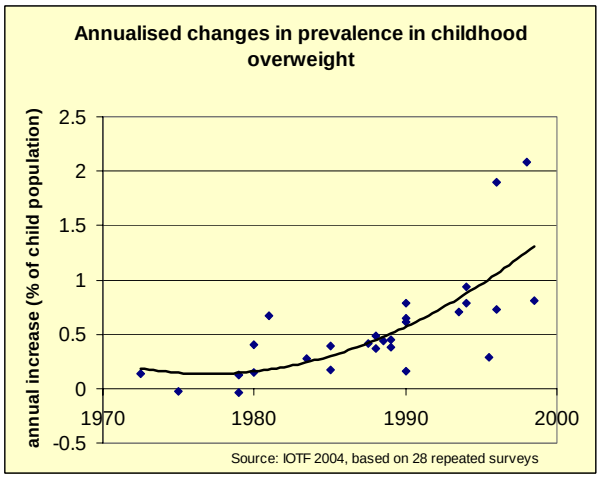

Figure 2 – Annual rate of change (revised)

The rise has been particularly marked in the recent years. IOTF estimates prepared for WHO show one in five children in Europe is overweight. An additional 400,000 children each year are becoming overweight, adding to the 14 million-plus who are already overweight, including at least 3 million obese. Figure 2 shows comparisons of population surveys over time charting annual changes in prevalence. Annual increases in prevalence of around 0.2% during the 1970s rose to up to 0.6% during the 1980s, and up to 0.8% in the early 1990s, reaching as high as 2.0% in some cases by the 2000s.

Examples of childhood overweight and obesity data in Europe

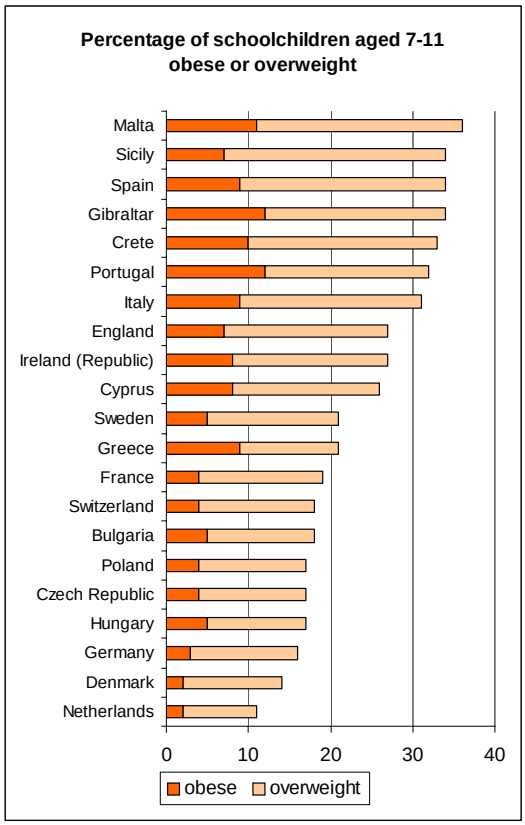

Figure 3
– Overweight and obesity in children aged 7-11

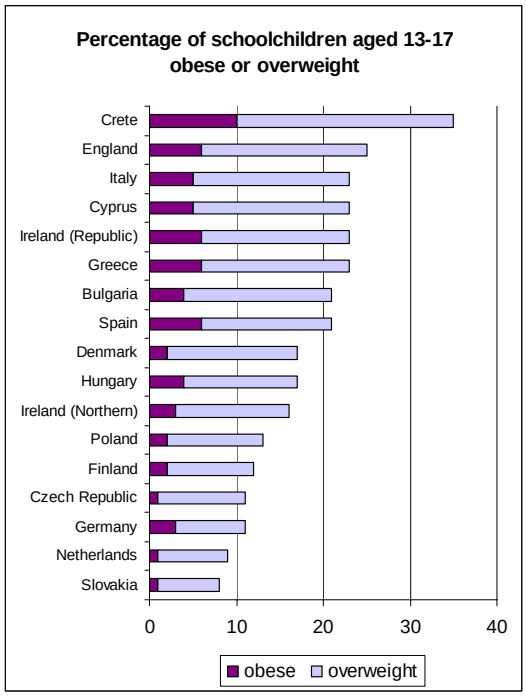

Figure 4
– Overweight and obesity in children aged 13-17

In both figure 3 and 4 data are from available surveys. Comparisons require caution as the year of survey may differ.

The IOTF involved a large team of experts in preparing its report for the World Health Organization on the global extent of childhood obesity.[1] The IOTF childhood obesity working group, co-chaired by Professors Ricardo Uauy and Louise Baur, involved the Federation of International Societies for Paediatric Gastroenterology, Hepatology and Nutrition (FISPGHAN) in preparing the report which was endorsed by the International Pediatric Association (IPA). The report will inform a World Health Organization expert consultation on childhood obesity to be held in Japan in June.

The IOTF's international standard for analysing childhood overweight and obesity data has been widely adopted.[2] It provides growth curves which relate cut-off points for different age groups to the adult categories for overweight and obesity of Body Mass Index (BMI) $\geq$25 and BMI $\geq$30. The IOTF method enables more realistic comparisons to be made between data from different countries, whereas other assessment standards often relate to *"centiles"*, which indicate an arbitrary position above a mean BMI for a particular age group in a single country.

[1] *Obesity in children and young people: A crisis in public health* - Obesity Reviews May 2004 - Volume 5 Issue s1 Page 1-104

[2] IOTF Childhood Obesity Working group - Tim J Cole, Mary C Bellizzi, Katherine M Flegal, and William H Dietz Establishing a standard definition for child overweight and obesity worldwide: international survey BMJ, May 2000; 320: 1240.

Overweight and obesity among adults

A marked trend towards increasing levels of adult overweight and obesity can be found throughout Europe, although there are variations in prevalence. Obesity rates range from 10% to 27% in men and up to 38% in women. In the United States of America, obesity stands at 28% of men and 34% of women, although this rises to as much as 50% among black women, including a very significant component of morbid obesity.

In parts of Europe the combination of reported overweight and obesity in men exceeds even the 67% prevalence found in the USA's most recent measured survey. Finland, Germany, Greece, Cyprus, the Czech Republic, Slovakia and Malta all have overweight rates which surpass that of the USA. However when judged on obesity alone, at least nine European countries have male obesity rates above 20% including Greece and Cyprus reaching 27%.

For women obesity levels vary from 10% to 26% in the Czech Republic with a significant study in Greece reporting a 38% prevalence of obesity among the women surveyed. In at least seven countries one in five women is obese.

Health risks begin rising at lower BMI levels

It is a fallacy to assume that only the extremes of obesity should be a cause for concern over health. Risks to health increase progressively from well below the standard overweight threshold; a report from the WHO's International Agency for Research into Cancer suggested that many additional cases of cancer in both men and women can be attributed to overweight including obesity.[3] Major health threats associated with overweight and obesity include dyslipidaemia, metabolic syndrome, type 2 diabetes, and cardiovascular diseases, now affecting ever younger people.

A study comparing Germany between 1985 and 2002 suggests higher rates than the USA in terms of overweight, with a recent survey suggesting 75% of German men age 25 or over were overweight or obese.[4] This figure is surpassed only in Greece where a major survey conducted in the mid-1990s suggested that 78% of men were overweight, a figure reinforced by the evidence of a more limited study which found 73% of men were overweight in the Attica region.

Table 1 provides an updated review of some of the best available estimates of overweight and obesity collated by the International Obesity TaskForce. Wherever possible the data used by the IOTF is drawn from national measured surveys, but in some cases the only data available are from self reported surveys which may significantly underestimate true prevalence. The Organization of Economic Cooperation and Development (OECD) has recently acknowledged that "estimates of obesity rates in many OECD countries considerably under-estimate the true prevalence of obesity because of reporting biases."[5]

Rising obesity prevalence

As Figure 5 illustrates, the trend data suggest obesity rates have increased in most countries and overall rates above BMI 25 indicate a continuing population shift away from the normal healthy range of body mass index. Even in those countries regarded as being favoured with lower rates of obesity, there is clear evidence of increasing trends. In France obesity in women rose from 8% to 11.3% while in men it rose from 8.4% to 11.4% in self reported surveys conducted between 1997 and 2003. In the Netherlands obesity in men rose gradually from 4.9% to 8.5% while in women it went from 6.2% to 9.3% from the late 1970s to the mid-1990s. In England its annual health survey has recorded dramatic increases from 13.2% to 22.2% in men and 16.4% to 23% in women in just 10 years up to 2003. This compares with an obesity rate of 6-7% in 1980.

[3] International Agency for Research into Cancer Handbooks of Cancer Prevention Volume 6 Lyons 2002
[4] Helmert U, Strube H. Die Entwicklung der Adipositas in Deutschland im Zeitraum von 1985 bis 2002. Gesundheitswesen 200;66:409-415
[5] Berglind Ásgeirsdóttir, OECD Deputy Secretary Obesity in OECD Countries:Trends, Economic Consequences and Possible Policy Initiatives. Speech reported on January 12, 2005

Table 1 - Overweight and obesity among adults in the European Union

		Males			Females		
Country	Year of Data Collection	% BMI 25-29.9	%BMI ≥30	Combined BMI≥25	% BMI 25-29.9	%BMI ≥30	Combined BMI>25
Austria	1999	40	10	50	27	14	41
Belgium	1994-7	49	14	63	28	13	41
Cyprus	1999-2000	46	26.6	72.6	34.3	23.7	58
Czech Republic	1997/8	48.5	24.7	73.2	31.4	26.2	57.6
Denmark	1992	39.7	12.5	52.2	26	11.3	37.3
England	2003	43.2	22.2	65.4	32.6	23	55.6
Estonia (self report)	*1994-8*	*35.5*	*9.9*	45.4	26.9	15.3	42.2
Finland	1997	48	19.8	67.8	33	19.4	52.4
France (self report)	*2003*	*37.4*	*11.4*	48.8	23.7	11.3	35
Germany	2002	52.9	22.5	75.4	35.6	23.3	58.9
Greece	1994-8	51.1	27.5	78.6	36.6	38.1	74.7
Hungary	1992-4	41.9	21	62.9	27.9	21.2	49.1
Ireland	1997-99	46.3	20.1	66.4	32.5	15.9	48.4
Italy (self report)	*1999*	*41*	*9.5*	50.5	25.7	9.9	35.6
Latvia	1997	41	9.5	50.5	33	17.4	50.4
Lithuania	1997	41.9	11.4	53.3	32.7	18.3	51
Luxembourg		45.6	15.3	60.9	30.7	13.9	44.6
Malta	1984	46	22	68	32	35	67
Netherlands	1998-2002	43.5	10.4	53.9	28.5	10.1	38.6
Poland (self report)	*1996*	*n/a*	*10.3*	n/a	n/a	12.4	n/a
Portugal (urban)	Published 2003	n/a	13.9	n/a	n/a	26.1	n/a
Slovakia*	1992-9	49.7	19.3	69	32.1	18.9	51
Slovenia (self report)	*2001*	*50*	*16.5*	*66.5*	*30.9*	*13.8*	*44.7*
Spain	1990-4	47.4	11.5	58.9	31.6	15.3	46.9
Sweden (adjusted)	1996-7	41.2	10	51.2	29.8	11.9	41.7

Age range and year of data in surveys may differ. With the limited data available, prevalences are not age standardised. Self reported surveys may underestimate true prevalence. Sources and references are available from the IOTF database. © International Obesity TaskForce, London - March 2005

* - Slovakia: IOTF estimate based on measured data.

Few countries conduct systematic measured surveys to obtain reliable nationally representative data to assess the degree of overweight and obesity in their populations. Self reported surveys tend to significantly underestimate the scale of the problem. For example the annual *Behavioral Risk Factor Surveillance System* telephone survey in the USA produced a self-reported estimate of the prevalence of obesity of 20% of adults in the same year that the National Health and Nutrition Examination Survey, using measurements obtained by trained personnel conducting a comprehensive examination, provided an estimate of 28% of men and 34% of women with a BMI≥30. The OECD acknowledges that its data sources underestimate European obesity levels.

Such differences have huge public health implications as both are national surveys, but require careful interpretation. Low response rates in many surveys also mean that results require careful analysis and routine under-estimation may lead to an inappropriate or inadequate public health policy response. There is now an urgent need to develop adequate monitoring or surveillance systems across Europe to ensure that future overweight and obesity trends are effectively assessed to obtain properly measured results, not only for height and weight, but for waist circumference which is a more effective tool for identifying abdominal obesity, with its higher risks especially among population groups with lower BMI levels.

Changes in adult overweight and obesity in selected countries

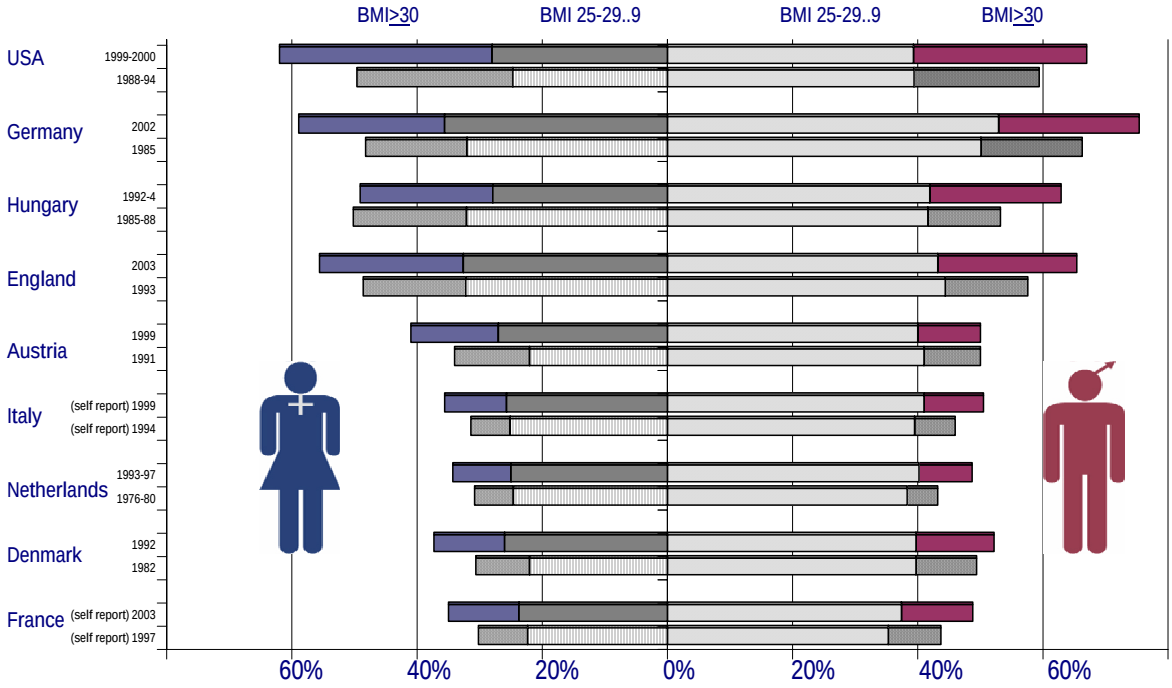

Figure 5
- Changes in prevalence of overweight and obesity in adults in selected countries

Useful www links @:

Further information, press releases, background data:
International Obesity TaskForce

www.iotf.org

For contacts with national associations for scientific obesity research:
International Association for the Study of Obesity

www.iaso.org - click on affiliates

For European information
European Association for the Study of Obesity

www.easobesity.org

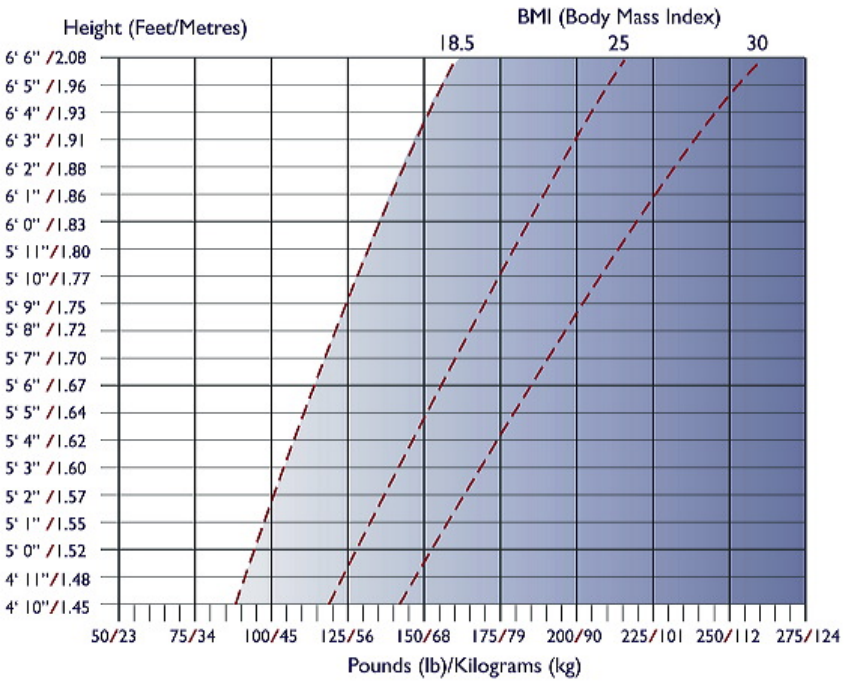

Figure 6 - BMI calculation table

Body Mass Index

This was developed in the early 19th century by the celebrated Belgian mathematician Adolphe Quetelet who used the formula BMI = kg / m^2 to aid his pioneering research on population statistics. The Quetelet Index now referred to more commonly as the Body Mass Index divides weight in kilograms by the square of height in metres.

WHO classification [1]

The World Health Organization adopted a classification to help define BMI status for adults:

BMI < 18.5 - underweight
BMI 18.5-24.9 – normal range
BMI 25-29.9 – pre-obese
BMI ≥30 – obesity

The pre-obese category is often referred to as overweight although this term technically refers to all those with a BMI of 25 or above, including the obese.

Obesity is subdivided into three further categories:

BMI 30-34.9	-	Class I
BMI 35-39.9	-	Class II
BMI ≥40	-	Class III

In addition a WHO expert group has recommended that for Asian populations in a lower "action point" of BMI ≥23 should apply in assessing weight and health status, given evidence of their vulnerability to heightened risk for related chronic diseases at lower BMI levels. [2]

[1] WHO - *Obesity: preventing and managing the global epidemic* - WHO Technical Report Series 894 Geneva 2000
[2] *Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies* – WHO expert consultation THE LANCET • Vol 363 • Jan 10, 2004