A dramatic increase in the prevalence of overweight and obesity among children and adolescents in the European Union (EU) has occurred in the last 20 years, particularly the last 10 years. Recent surveys,\(^1\) indicate that an estimated 18% of European school children (i.e. some 14 million children out of 77 million school children in the 25 EU member states) are overweight, with an annual rise in prevalence of between 0.55% and 1.65%, i.e. more than 400 000 new cases every year. Among the overweight children, at least 3 million are estimated to be obese, and their number is rising by more than 85 000 each year. [Overweight and obesity are defined according to the criteria for children recommended by the International Obesity TaskForce (IOTF),\(^2\) based on age- and gender-specific body mass index (BMI) cut-off points equivalent to adult BMIs of 25 kg/m\(^2\) and 30 kg/m\(^2\), respectively.]

Overweight and obese children are at a raised risk of co-morbidities including type 2 diabetes, fatty liver disease, and endocrine and orthopaedic disorders.\(^1\) Overweight children enter adulthood with a raised risk of adult obesity of up to 17-fold (after adjusting for parental obesity),\(^2\) and adult obesity in turn carries an increased likelihood of metabolic and cardiovascular diseases, certain cancers and a range of other disorders including psychiatric problems.\(^4\) Even if subsequent weight loss is achieved and maintained, there is evidence that mortality rates are higher among those adults who had been obese as adolescents.\(^3\)

### Prevention approaches

If obesity could be effectively treated in childhood this might reduce subsequent disease risk and health service costs. However, effective treatment for the majority of obese children and adolescents remains elusive. Management protocols, involving behaviour modification, family support, and lifestyle change are difficult to put into practice and may require the input of multi-disciplinary professional teams.\(^5\) Lifestyle modification requires motivation and active participation by the family and young person and is a particular challenge as the child grows into adolescence. Yet obesity in adolescence is a major risk factor for adult obesity and its co-morbidities. There is an urgent need, therefore, to focus on obesity prevention.

The evidence base for effective prevention of child obesity is poor. A Cochrane systematic review conducted in 2001 found only 10 trials that were sufficiently large and of sufficient duration and quality to be included in the review,\(^7\) all of which involved children who were already overweight. Three out of the four long-term studies that combined dietary education and physical activity interventions resulted in no difference in their effect on overweight. In two studies of dietary education alone, a multimedia action strategy appeared to be effective but other strategies did not. The one long-term study that focussed on physical activity resulted in a slightly greater reduction in overweight in favour of the intervention group, as did two short-term studies of physical activity. The reviewers acknowledged the difficulties researchers face when attempting to control the relevant variables and to introduce the necessary preventive measures in a consistent, uniform manner in school or family settings.

Other literature reviews\(^8\)–\(^10\) of European and North American papers have suggested that the chances of successful prevention at the community level are increased if measures are broad-based and well integrated into children’s lives, such as:

- healthy school policies involving school cafeterias, vending machines and snack bars, plentiful school-based physical activity classes and recess activities;
- classroom health education linked to the school’s food and activity practices;
- links between school practice and home and community activities;
- prolonged interventions rather than short-term ones, involving adults and children, at school and at home;
- the involvement of all children, not just some, using techniques sensitive to the cultural, ethnic and gender characteristics of the children.

A review of interventions designed to encourage healthy eating patterns in children also suggested that a ‘whole school’ approach is better than a targeted or piecemeal intervention strategy, and that access and affordability issues need further research.\(^11\) A ‘whole school’ approach is one which integrates the various opportunities for health promotion in the school, including classroom teaching, physical activity sessions, canteen food choices and vending machine sales. It involves children, staff and parents, and can extend health promotion through school–family and school–community links.

Other investigators have suggested that hours spent watching television may be strongly associated with weight gain in childhood,\(^4\) although whether this is due to the concomitant

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In recognition that
- excess bodyweight is pandemic and affects increasing numbers of European children
- vulnerable groups are especially affected, reflecting social and ethnic inequalities
- the costs of obesity are borne by health services and by individuals, families and society
- prevention of excess bodyweight is addressed most effectively at a societal level

and believing that
- people of all ages have the right to a high standard of physical and mental health
- children have a right to protection from environments that jeopardise their health
- responsible adults have a duty to protect children from such environments
- regulators at all levels have a duty to assist in the protection of children

this meeting urges the European Commission, member state governments, relevant authorities and responsible parties to consider the options outlined below:

**European Commission options:**
- Appoint an EC public health coordinator to oversee a comprehensive cross-departmental obesity prevention strategy engaging member states, civil society and business as part of a new public health programme.
- Establish an independent public health agency to monitor progress on prevention of obesity, diabetes, cardiovascular disease and cancers, with powers to inspect the implementation of, and compliance with, prevention policies and to propose regulatory measures.
- Require health and obesity impact statements in all Commission policies (including agriculture, trade, education, media, transport).
- Introduce measures to control the marketing to children of foods with high energy density.
- Introduce a simplified food labelling scheme with clear symbols warning of high energy density, and extend food labelling requirements to include catering establishments.
- Support the development of member state nutritional targets, and the development of food standards to help industry meet those targets.
- Support the routine monitoring of children in the Community in respect of their dietary patterns, physical activity and anthropometric measures.
- Support primary research into the social and biological links to obesity and the public health strategies needed for prevention.
- Support member state initiatives to educate and inform parents and children about healthy lifestyles, and support healthy infant feeding practices and the promotion of breastfeeding.
- Review the technological need for organoleptic food additives (e.g. colourings and flavourings) used in energy-dense children's food products.
- Review the Commission's practices regarding staff childcare facilities.

**Member state governmental options:**
- Create ministerial departments in member state governments to collaborate with the EC public health coordinator and to ensure cross governmental obesity prevention strategies.
- Require health and obesity impact statements in all government policies (including agriculture, trade, education, media, transport, urban planning).
- Extend the formal monitoring of population diet, activity and anthropometric measures (height, weight, waist circumference, BMI) and include the annual sampling of child populations.
- Develop national nutritional targets, and develop food standards to help industry meet those targets.
- Conduct health audits of commercially sponsored materials for schools, clinics etc.
- Support moves to make public sector catering the 'gold standard' for healthy eating.
- Ensure that school inspection criteria include appraisals of school health programmes, including food provision, physical activity provision, health and nutrition education.
- Invest in the education of parents and children about healthy lifestyles including the value of breastfeeding of infants.
- Use public service media to promote healthy food choices and physical activity.
- Engage TV programme and computer games makers to ensure that entertainment products support healthy diets and active lifestyles.
- Provide resources to develop effective obesity management and prevention in primary health care settings, and in referral units and specialised centres of excellence.
- Encourage the distribution of fruit and vegetables to school children, e.g. from intervention stores held under the Common Agricultural Policy.

**Fiscal controls and market regulation options:**
- Consider the application of sales taxes and other fiscal measures to support national nutrition targets, e.g. adding taxes to energy-dense foods, and use the revenue from these taxes to support measures for obesity prevention and health promotion.
- Consider the application of levies to recover the production subsidies for oils, sugars and dairy fats given under the Common Agricultural Policy.
- Subsidise the distribution and marketing of fruit and vegetables to children, and review tax exemptions given to the marketing of energy-dense foods to children.
- Use public procurement contracts to encourage a sustainable and expanding market for healthier food products.
- Provide subsidies for public sector facilities that encourage physical activity, e.g. provide free school usage of swimming pools, provide low-cost child passes to activity centres.
- Consider an award scheme and vouchers for foods and activities which enhance health.

**Industry and retail sector options:**

*Food industry*
- Develop a wide range of reformulated foods which are beneficial to dietary health.
Table 1 (Continued)

- Develop healthier alternatives to confectionery, snacks and soft drinks for children.
- Reduce the use of organoleptic additives in energy-dense foods.
- Support controls on the promotion and marketing of energy-dense foods.
- Support simple and clear labelling measures to identify energy-dense foods, and to identify foods such as fruit and vegetables which should be consumed in greater quantities.
- Develop health-promoting ready-to-eat take-away and convenience foods.

**Catering industry**

- Offer child size portions of restaurant main menu items, healthy ready meals and healthy convenience foods.
- Offer all restaurant customers smaller portion options with price incentives.
- Review school meal services and reformulate to improve nutritional profile of foods offered in schools.
- Provide children and parents with school meal details, including menus and nutritional profiles.

**Retailers**

- Improve the distribution and availability of healthy food options, including fruit and vegetables.
- Ensure households in low income areas have full access to healthier food options with no price disincentive.

**All private sector employers**

- Provide healthful food and activity in staff childcare facilities.
- Review staff canteen policies, encourage smaller portions and healthier options, especially in respect of younger customers.
- Provide health education material relevant to families with children.

**Research and training options:**

- Undertake research into obesity management strategies and evaluation techniques.
- Develop the evidence base for effective prevention and monitoring of planned initiatives, including reliable and standardised base-line data on diet and physical activity.
- Introduce training standards for paediatric health professionals to cover nutrition, physical activity and obesity management and the management of co-morbidities.
- Provide in-service training for primary care workers in obesity recognition and management.
- Monitor and report on media balance and accuracy regarding health promotion.
- Provide media awareness and public relations training for public health professionals.

**Local government options:**

- Appoint a senior officer in each local authority to be responsible for integrating anti-obesity programmes and related public health measures across departments.
- Review all local policies for their obesity impact, including policies in health, education, transport, economic development, planning, urban design and retail development.
- Develop performance management measures for the promotion of physical activity and nutrition standards.
- Assess policies for children under care in health, education and social service facilities to ensure protection from environments and inducements prejudicial to the children’s health.
- Promote more and safer walking and cycling routes, pedestrian zoning and cycle parking provision, and discourage short-journey car use.
- Require planning authorities to ensure that new or relocated public services, including schools and clinics, are sited where their clients and staff can reach them by walking, cycling and public transport.
- Limit the numbers of fast food outlets in urban areas.
- Create opportunities for activity in public areas; remove obstacles to free movement.
- Ensure parks and play areas are clean, secure, safe and freely available to children, especially near areas of high-density housing.
- Ensure further play, sport, fitness and recreation facilities are available at low cost.
- Review procurement policies to encourage the market for healthier foods.
- Ensure freely available public drinking water facilities.
- Make exercise facilities widely available at low cost, and free on prescription.
- Incorporate gyms and play areas into health centres.

**School-based options:**

- Identify schools as places to set high standards for the promotion of health and well-being.
- Develop school health policies to ensure adequate pastoral care for children, with a school food and health programme developed with children, staff, parents and health professionals.
- Prohibit inappropriate food and drink marketing in schools.
- Increase media literacy training in schools.
- Develop reward schemes for choosing healthy food and activity options at school.
- Ensure parents are aware of healthier food options offered to children at school, including canteen menus and snack products on sale.
- Review the use of vending machines and the types of foods and drinks promoted in vending machines.
- Provide free, clean drinking water fountains in central locations.
- Provide adequate sports and play equipment, provide play areas and sports fields.
- Support measures to encourage safe walking and cycling to and from school, including the provision of secure cycle racks in schools and traffic-calming measures near schools.
- Offer a wide range of physical activities in schools including e.g. dance, aerobics and self-defence.
- Improve changing room facilities to improve privacy; reduce the need for changing clothes to participate in activities.
- Train teachers in social and emotional competence and anti-bullying and anti-stigma techniques.
- Encourage schools to allow their facilities to be used for after-school activities and during non-school days; make the facilities available for family and community use.
sedentary behaviour, or a tendency to consume snack foods while watching television, or the effects of advertising of energy-dense foods during television programmes, is not clear.

Furthermore, television watching may be symptomatic of other factors which encourage weight gain but which are even harder to study in controlled trials. Interventions are needed which can manipulate, for example, the relative availability of different food products in local retailers, or the level of safety in streets or parks, which might affect play activities. There have been no trials of the effects of removing local fast food outlets, or the provision of safe cycling schemes for children, in terms of reducing the prevalence or risk of obesity. Environmental risk factors, or ‘obesogens’, and the societal forces that underpin them, such as growth in road ties, such as car users, fast food companies and advertising, are not easily controlled for research purposes, although some natural variations can be exploited. These potential obesogens are widely distributed in the community, and affect the population at large. Policies concerning their appearance, modulation or removal are shaped at city, national or international level and involve interested parties, such as car users, fast food companies and advertising agencies.

Interested parties

The differing views of the interested parties, or stakeholders, may lead to challenges to the scientific basis and strength of evidence underlying policy proposals. The absence of strong evidence for obesity and overweight prevention will undermine the political will to make changes in local or national policy to alter a child’s environment. Policy-makers may find it hard to support policies which limit, for example, commercial freedom or personal choice, without having compelling evidence for the benefit of these policies. Until such evidence becomes available, precautionary activities need to be undertaken based on the best available evidence supported by a consensus of scientific opinion. In this respect, professional practitioners with expertise in child obesity and related health problems have a significant role to play.

An opportunity for the expression of expert opinion in a scientific context arose at the 13th European Congress on Obesity, held in Prague, Czech Republic (26–29 May 2004). In a workshop on childhood obesity prevention conducted by the International Obesity TaskForce and attended by 60 specialists from 17 countries and several international organisations, a series of proposals were made for action at various levels of government and by relevant non-governmental organizations (see table 1). These recommendations can be viewed as options for consideration, and reflect a precautionary approach to the problem of childhood overweight and obesity; namely, the recommendations are unlikely to raise the risk of further ill-health and are consistent with the promotion of health and well-being in the population.

Conflict of interest

The workshop was open to any person attending the Congress, without entrance charge, and was not sponsored by any commercial interest. The costs of the workshop were met from core funds of the IOTF, a section of the International Association for the Study of Obesity (IASO) and a recognised collaborating agency of the World Health Organization. IOTF and IASO operate an ethical policy which restricts donations from corporate sponsors. Authors’ conflicting interests: none declared.

Key points

- Europe is experiencing a dramatic increase in the number of overweight and obese school children.
- Treatment is not a viable option, targeted prevention is helpful but inadequate, thus public health interventions are urgently needed.
- With good evidence of effectiveness unavailable, interventions must be based on expert opinion.
- A meeting of international specialists have agreed a list of options for policy-makers.

References


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