

Obesity epidemic may be flattening out - but no time for complacency say experts

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(PhysOrg.com) -- The prevalence of childhood obesity might be stabilising in developed countries, but there is still much to be done to combat this major threat to health, according to a Seminar co-authored by Professor Debbie Lawlor of the Department of Social Medicine in an upcoming issue of The Lancet.

In 2010, more than 40 per cent of children in the North American and eastern Mediterranean [World Health Organisation](#) (WHO) regions, 38 per cent in Europe, 27 per cent in the western Pacific and 22 per cent in southeast Asia are predicted to be overweight or obese.

Recent data suggest that the increase in [childhood obesity](#) in the USA, the UK and Sweden might be abating and that childhood [obesity rates](#) could be stabilising in these high-income settings, however, it is still too soon to be certain about these data.

Lifestyle interventions such as diet and exercise should always be first-line therapy, with drug treatment used rarely and [weight-loss surgery](#) a last resort, say the [report's](#) authors, Professor Debbie Lawlor (University of Bristol), Dr Sue Kimm, (University of New Mexico) and Dr Joan Han, (National Institutes of Health).

Data up to 2006 show that prevalence of childhood obesity doubled or trebled between the early 1970s and late 1990s in Australia, Brazil, Canada, Chile, Finland, France, Germany, Greece, Japan, the UK and the USA.

The authors said: “The obesity epidemic is probably the result of our evolutionary legacy interacting with our technologically advanced and consumerist society.”

Taking in more calories than are expended (whether by eating too much, exercising too little, or a combination of both) is, the authors estimate, responsible for around 90 per cent of cases of child obesity. Conditions such as endocrine diseases, congenital and acquired hypothalamic defects, genetic syndromes, and use of drugs affecting appetite (though rare) should also be considered during assessment of child obesity, and the authors estimate these scenarios account for the other 10 per cent of cases. Other drugs such as antipsychotics, anticonvulsants, blood-pressure drugs and antihistamines can also cause weight gain and should be considered as a possible cause when a child has had recent excessive weight gain.

Childhood obesity can adversely affect almost every organ system and often has serious consequences, including hypertension, abnormal blood fats, insulin resistance or diabetes, fatty liver disease, and psychosocial complications. Results of one study showed that being overweight or obese between ages 14 and 19 years was associated with increased adult mortality (from age 30 years) from various systemic diseases. Serious

orthopaedic complications of childhood obesity are tibia vara (Blount's disease or adolescent bowing of the legs); however, paradoxically, obesity might have some beneficial effect on bone mineral density.

Prevention, especially in the young, is universally viewed as the best approach to reverse the rising global prevalence of obesity. Such measures can be instituted at individual, household, institutional, community and health-care levels. For very young children, the carer rather than the child should be targeted. At a household or family level, encouragement of parents to offer appropriate food portions, foster physical activity, increase activities of daily living, and keep sedentary behaviours to a minimum are viewed as basic measures of prevention.

One policy that is debated in the USA is removal of vending machines from schools to curb availability of energy-dense snack foods. However, a US national survey showed that snack foods from vending machines contributed only 1.3 per cent of total daily calories from snacks, whereas snacks at or from home contributed 69.1 per cent. In 2007, the British Government introduced legislation to give parents the results of their child's measurements. Existing evidence is unclear as to whether surveillance or screening of childhood obesity will be valuable for prevention.

For treating children that are already obese, the authors say: "Non-pharmacological approaches should be the foundation of all obesity treatments, especially in children, and should always be considered as first-line therapy."

One review concluded that family-based, lifestyle interventions with a behavioural programme aimed at changing diet and physical activity and thinking patterns provide significant and clinically meaningful decreases in obesity in both children and adolescents in the short-term and long-term. Some guidelines, such as those in the UK, emphasise behavioural

strategies that do not specify actual caloric intake. Yet results of a randomised trial of behavioural treatment without specified calorie limits showed no significant effect on body-mass index (BMI).

Promotion of increased energy expenditure for weight reduction has not received the same attention as have dietary prescriptions. But the authors note that interventions to decrease sedentary activity, such as restriction of television viewing, have been examined and are promising. Strategies to change diet-related behaviour include the traffic-light system initially developed by Epstein and colleagues (where foods to stay away from are labelled red, foods that should be eaten in moderation yellow, and foods that are ok at all times green). Motivational interviewing, as advocated by the American Heart Association, can be especially useful in parents who feel they are not ready for change.

The authors add: “Residential summer camps for obese adolescents have short-term effectiveness, but long-term effects remain unknown. Internet intervention for obese adolescents has been examined, without promising results.”

Drug treatment has been assessed in obese children, with several studies on the weight-loss drugs orlistat and sibutramine. Both drugs have a number of side effects. When used with lifestyle interventions, both drugs show slight improvement versus lifestyle alone. The authors say: “Although evidence exists for slight effectiveness of orlistat and sibutramine when combined with lifestyle intervention, treatment with these drugs is associated with more adverse effects than is lifestyle intervention alone.”

The authors suggest a very conservative approach to drug therapy, arguing it should only be used for children in the highest 5 per cent of BMI who have substantial complications of obesity and have failed on lifestyle interventions.

They say: “The risks of bariatric surgery are substantial, and long-term safety and effectiveness in children remain largely unknown. Therefore, surgery should be reserved for only the most severely obese (BMI ≥ 50 kg/m², or ≥ 40 kg/m² with important co-morbidities), and even then, considered with extreme caution.”

The authors conclude that no evidence-based, clinically meaningful definition of childhood obesity has been established. Calorie intake and activity recommendations need to be reassessed and better quantified at a population level because of the modern sedentary lifestyles of children. For individual treatment, the currently recommended calorie prescriptions might be too conservative in view of evolving insight into the ‘energy gap’.

They say: “Despite remaining challenges, glimmers of hope can be seen. Recent statistics suggest that prevalence of childhood obesity might be stabilising in developed countries. All past efforts made towards prevention and treatment of obesity, though not of notable individual effect in trials, might still have contributed collectively to this trend.

“The increased attention that has been directed to obesity by the media might have helped to raise public awareness of energy balance. Expansion of food-product availability and more informative food labelling by the private sector might have helped the consumer to make better choices.

“We cannot wait to delineate the complex causal web of the [obesity epidemic](#). Unravelling of even one thread might allow an important degree of prevention. Efforts to prevent obesity should continue at all levels, with the goal of an outcome that is greater than the sum of its parts. These efforts should be made in tandem with an increased commitment to more robust research. We expect that the next 10 years will be a time of new discoveries and collective societal actions that will

help to eliminate this scourge of the new millennium.”

Provided by University of Bristol

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