



Trends Shaping Education 2014 Spotlight 2

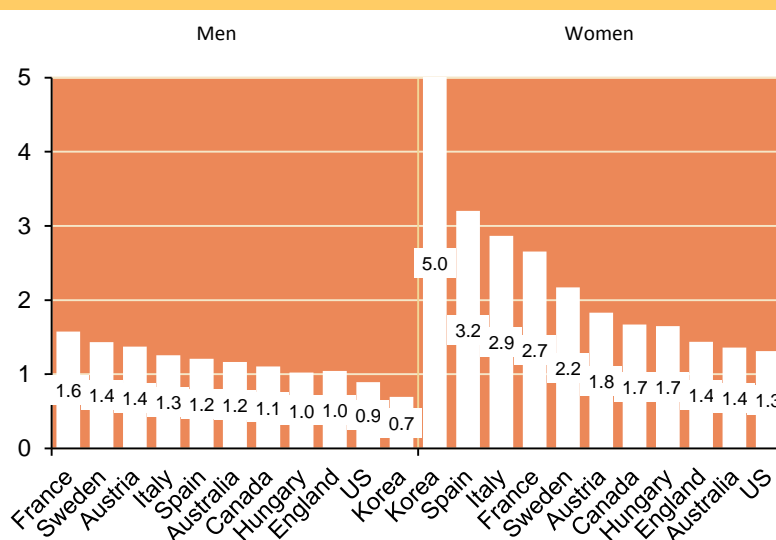
The weight of nations

The growing rate of obesity is one of the most significant health trends in OECD countries and increasingly, in Brazil, Russia, India and China, the “BRIC” countries. Perhaps surprisingly, this health trend is also strongly linked to lower educational attainment – both as a cause and as an effect.

Obesity, educational attainment and gender

Education can play a big role in reversing this unhealthy trend. Research on obesity in four OECD countries – Australia, Canada, England and Korea – found that higher rates of obesity were associated with fewer years of education. In fact, each additional year of education resulted in a lower chance of being obese. The study also suggests that youth who struggle with obesity are less likely to achieve higher education (Devaux et al., 2011).

Figure 1. Relative inequality index, overweight by education level



Note: The index shows how many times as likely to be overweight is someone at the lowest end of the education spectrum in one country, compared to someone at the highest end.

Source: OECD Obesity Update 2012, www.oecd.org/health/prevention.

Figure 1 shows the extent to which education may have a greater effect on obesity rates in women than men: poorly educated women are two to three times more likely to be overweight than those with high levels of education (OECD, 2012). The difference in obesity rates associated with additional

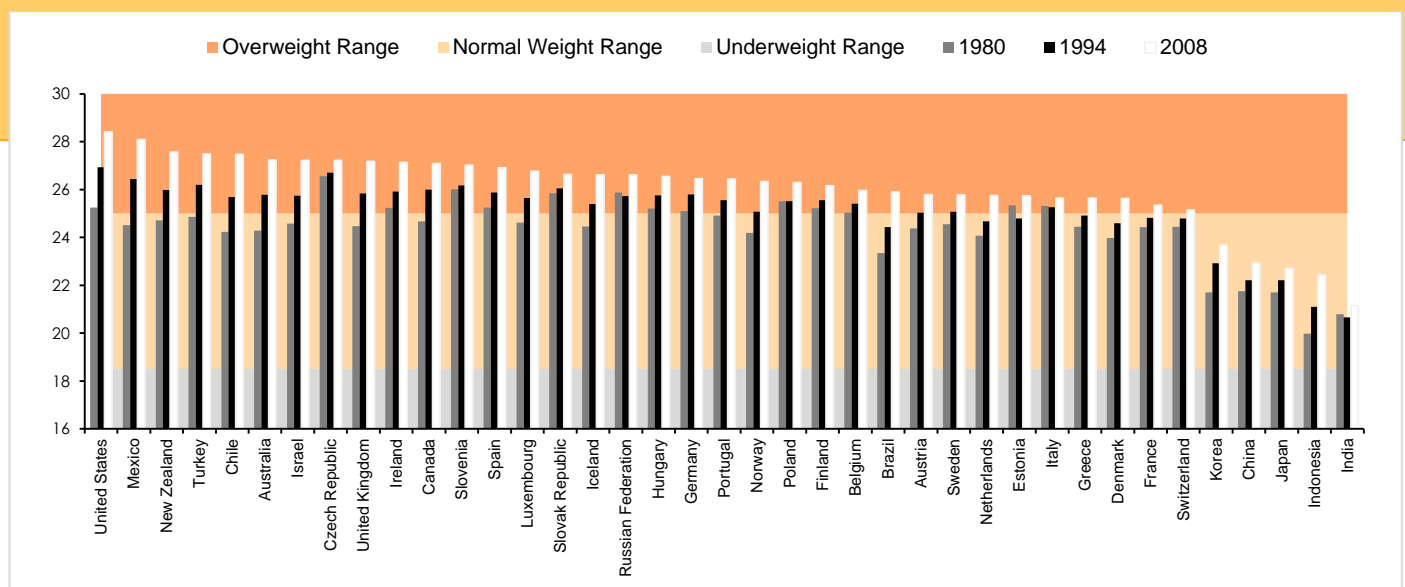
education is more marked in countries with a high level of obesity such as Chile, New Zealand and the United Kingdom than in countries with a low level of obesity, for example, the Netherlands, Norway and Sweden (OECD, 2013b).

A strong inverse relationship between education and health also exists, that is, better health can lead to more education and continued learning into adulthood.

Where are we now: Obesity overview

In 1980, fewer than one in ten adults across the OECD countries were obese, based on their Body Mass Index (BMI). Since then, the rates have doubled and even tripled for some countries: by 2008, 34 of the 39 countries in Figure 2 had an average BMI of overweight or obese. Only China, India, Indonesia, Japan, and Korea remained within the average normal BMI range.

Figure 2. Fit or fat? Average Body Mass Index (BMI) by country (1980, 1994 and 2008)



StatLink <http://dx.doi.org/10.1787/888932757998>

Note: Body Mass Index (BMI) is a calculated measure to classify adults as underweight, normal weight, overweight or obese, and is expressed as kilograms per square metre. The ranges here are underweight (<18.5), normal weight (18.5-24.99), overweight (25-30) or obese (>30).

Source: OECD (2013), *Trends Shaping Education 2013*, OECD Publishing.

The prevalence of obesity today varies from a low of 4% in Japan and Korea, to 30% or more in Mexico and the United States (OECD, 2012). Given the speed and uniformity of the trend, it is not an exaggeration to label obesity an epidemic.

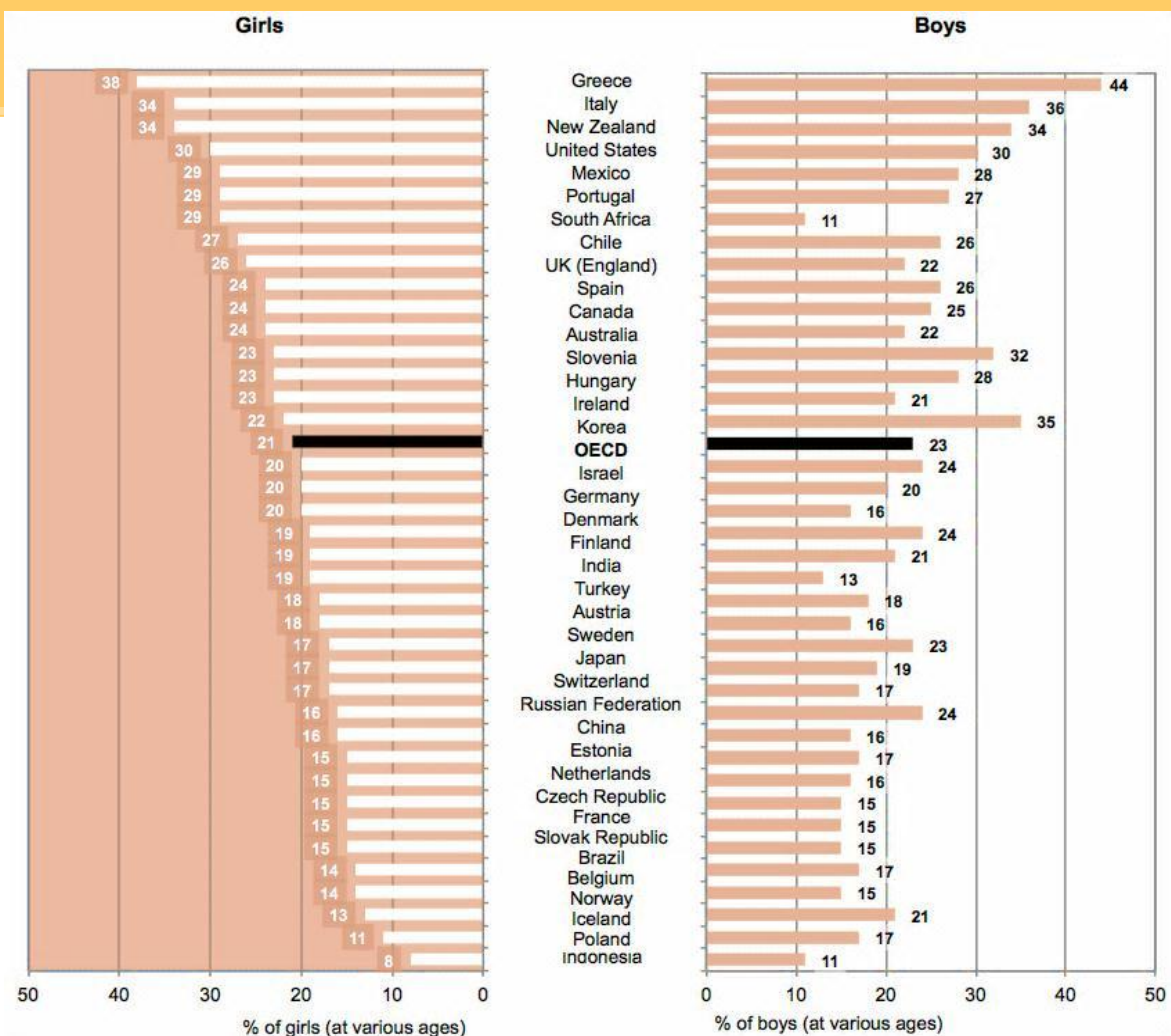
The American Medical Association officially declared obesity a disease in June 2013 (AMA, 2013).

Child obesity

Obesity now affects more children than ever before, with one in five children between the ages 5 and 19 estimated to be overweight. The figures are higher for Greece, Italy, New Zealand and the United States, where almost one in three children is overweight (see Figure 3).

Equally disturbing is the leap in child obesity rates in China, Korea and Turkey, which jumped from 10% or less to 16% or more in only three years. On average, boys carry more excess weight than girls in most countries. Exceptions include Denmark, South Africa and Turkey.

Figure 3. Measured overweight (including obesity) among children ages 5-19



Source: International Association for the Study of Obesity, 2013.

A recent study demonstrated that overweight 5-year-olds were four times as likely as normal-weight children to become obese by the time they were 14 (Cunningham, et al., 2014). Although the research does not explain why this is so, it does suggest that efforts to prevent obesity must start much earlier than they currently do and focus more on the children at greatest risk.



The positive role of education in obesity prevention

Education can play a key role in reducing obesity. As Figure 1 demonstrated, each additional year of education is associated with a lower chance of becoming obese.

Schools can have a direct effect on obesity, by instilling healthy lifestyle patterns at an early age and empowering children and their families with information and strategies to make better choices for a healthy future.

Education can also teach children important skills such as delayed gratification, moderation and critical thinking (OECD, 2007). These skills are important for self-regulation, which plays a key role in our daily functioning. Self-regulation allows us to identify when we have had enough to eat, for example, and cues us to stop. Self-regulation and critical thinking also play a role in helping children (and adults) avoid impulsive eating as a reaction to stressful situations.

Health education can teach children the consequences of risky behaviours (such as poor nutrition and a sedentary lifestyle) as well as improve their ability to gather and interpret health-related information (Grossman and Kaestner, 1997). It can also provide training and practice in approaching problems and developing strategies to cope with life situations, including ill health (Bradley and Corwyn, 2002).

Education's influence extends to positive health outcomes as well, improving psychosocial factors such as grit, self-esteem, resilience and empowerment (OECD, 2010b).

These life lessons create sustainable changes in children's tastes and lifestyles by providing a model for future well-being. Importantly, people who are future-oriented are more likely to attend school for longer periods of time and make larger investments in their health (OECD, 2007).

Influencing healthy eating behaviours in children is a Change4Life

In 2009, the UK Department of Health launched a campaign to tackle the causes of obesity. The programme focused on families with 5 to 11 year-old children and aimed to inspire a societal movement through which schools, government, the NHS, local authorities, businesses, charities, families and community leaders could all play a part in improving children's diets through eight behaviours.

A year later, the results surpassed the campaign's initial goals; the number of families that said their children were practicing all eight behaviours increased by 4%, while 6% more families said their children had adopted at least four of the behaviours.

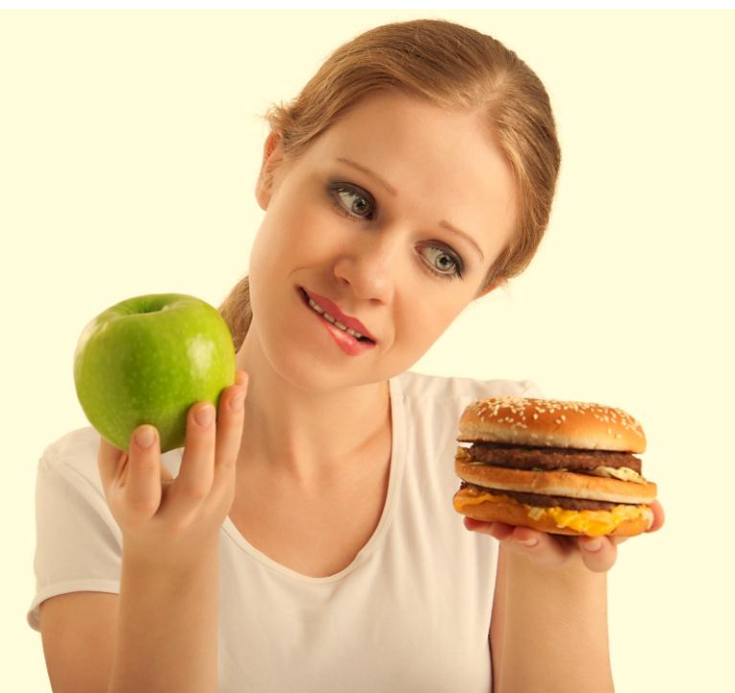
More information: www.nhs.uk/change4life

Education-based policy approaches for healthy weight

Education-based policies that focus on prevention are the most effective methodology for suppressing the epidemic, as adult obesity is influenced by weight and eating habits attained early in life. A report by the WHO, which classes the cost-effectiveness of 261 educational interventions implemented between 1994 and 2006, suggests that school-based interventions may be the preferred policy for countries that are experiencing a rapid increase in child obesity (WHO, 2013a).

The large majority of obesity prevention activities have taken place in primary and secondary schools. Many programmes combine healthy diet, physical activity and parental engagement, and have yielded improvement in knowledge, attitudes and behaviour. While school-based interventions are more costly in terms of their benefits both in the short and long term, their impact grows significantly over 70-80 years (Hassan et al., 2010).

School-based interventions can also address health inequalities across socio-economic and age groups since many of them are better tailored to specific disadvantaged populations than other types of interventions, such as work-based and mass media (Hassan et al., 2010).



One cheeseburger = 120 minutes of brisk walking

Sometimes simple changes can make a big difference. A recent study found that people consumed, on average, 100 fewer calories when menus included information on the amount of exercise needed to burn the meal's caloric value than simply the number of calories themselves (Shah et al., 2013).

This suggests that changing labelling practices to make the relationship between caloric intake and body consumption clear may resonate with children.

Beyond formal schooling

Education does not exist in isolation. Children are in school for less than half their waking hours, and families, peers, and the community all have important impacts on their choices. There are clear links between obesity and family behaviours, although the causality of these links is not clear (OECD, 2010b).

Recent research has also demonstrated that early intervention matters: overweight 5-year-olds were four times as likely as normal-weight children to become obese by the time they were 14 (Cunningham et al., 2014).

Rising enrolments in early childhood education provide an opportunity for such early intervention (see Figure 4).

High quality early childhood education and care is linked to a host of positive outcomes, including improved child well-being and learning, the reduction of poverty, and increased inter-generational social mobility. It may also be able to help instil healthy eating and physical activity behaviours.

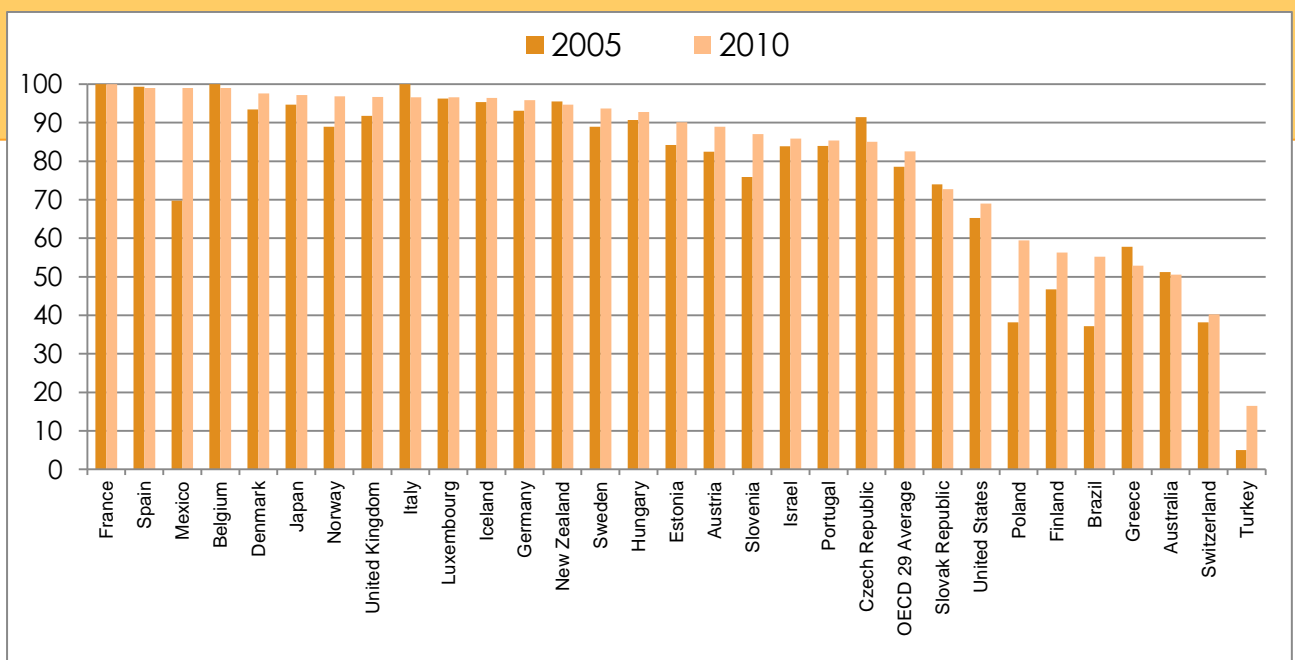
Chilean nursery school programme helps prevent child obesity

In 2008, The Pan American Health and Education Foundation funded an assessment of Chilean preschools (JUNJI) and developed a nationwide plan to improve children's diet. More than 130 000 low-income children between 6 months and 5 years of age participated, with nearly half of the 4-year-olds overweight and 13% obese.

The nursery schools served breakfast, lunch, and a snack, and provided an ideal setting to implement changes in patterns of physical activity. The study found that the programme successfully influenced the children's diet during the day; however, their families often did not continue to implement the healthy practices at home.

www.pahef.org/en/successstories/16-improving-preschool-nutrition-in-chile.html

Figure 4. Early childhood enrolments rising between 2005-2010



StatLink <http://dx.doi.org/10.1787/888932758606>

Source: Trends Shaping Education 2013, OECD data.

Social and economic costs of obesity

Obesity adversely affects future career opportunities and earning potential. Research indicates that employers prefer normal weight over obese candidates, partly due to perceived risks of lower productivity due to poor health.

Obesity's impact on employment and wages is substantial – in the United States, more than 40% of severely obese white women are unemployed compared to 30% for all women and, on average, obese people earn up to 18% less than people of normal weight (OECD, 2012). Data from the American National Longitudinal Survey of Youth demonstrates that both men and women experience a persistent obesity wage penalty over the first two decades of their careers, and that obese women are penalised more than obese men (Baum and Ford, 2004).

The concern is social as well as economic. Obesity can produce long-term adverse psychological and social outcomes as obese people are more likely to suffer from poor self-esteem, anxiety and depression. Research shows that society perceives obese people less positively, which could have an impact on perceived competence for employment, community work and public office (OECD, 2013a).

For education, it speaks to the importance of understanding the challenges that overweight and obese students are facing, physically, socially and emotionally.

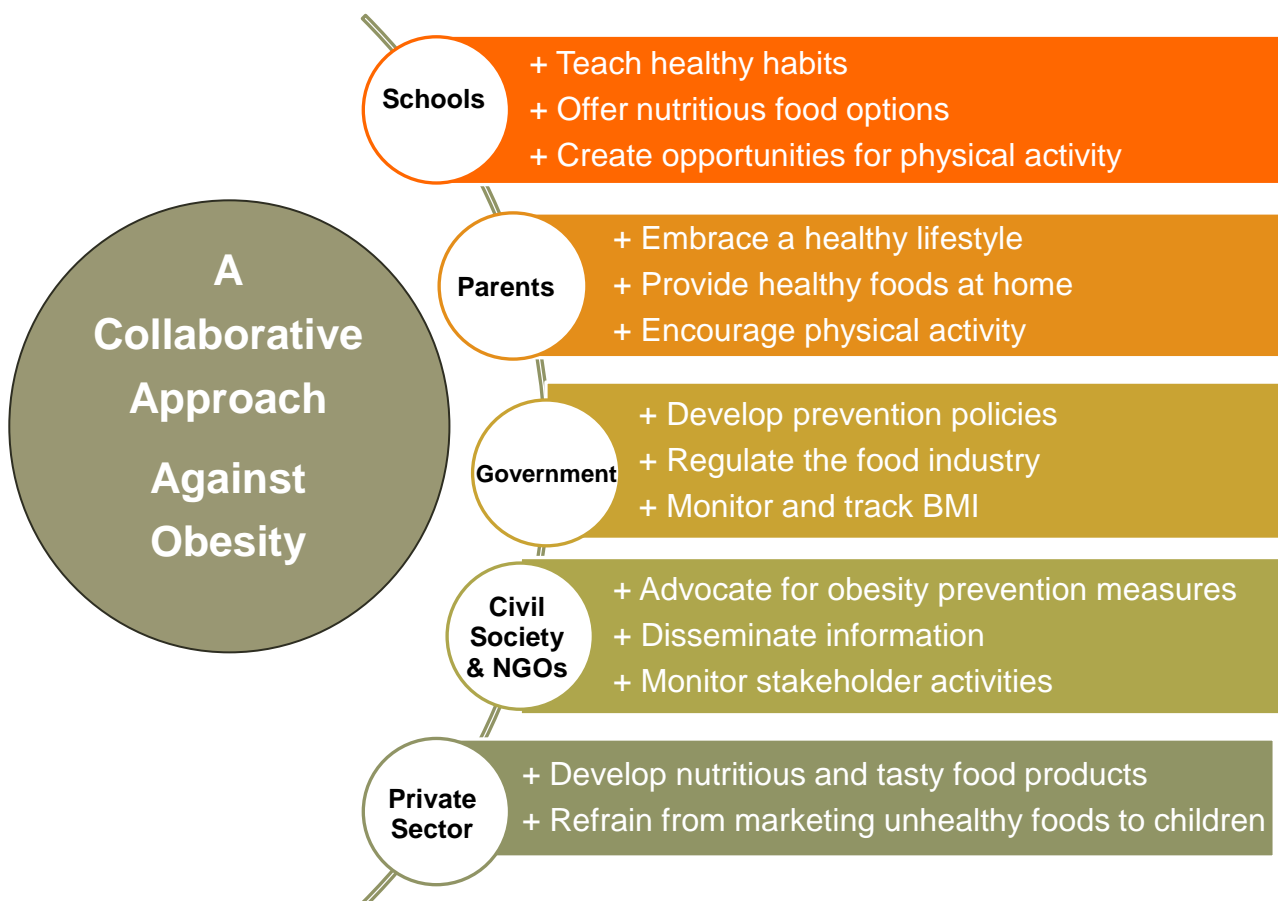
Education programmes that increase awareness of calorie consumption and obesity could have unintended consequences. For example, obesity prevention programmes can unintentionally trigger issues related to body image (University of Michigan Health System, 2012). Negative feelings perpetuate anxiety-based eating habits that could result in unhealthy weight on both ends of the spectrum – obesity and anorexia.

The task, from an educational perspective, is a complex one. Changing behaviours is difficult, and the school is only one of many influences in an individual's life. Working with families and communities is necessary, but so is working with the student directly, and following up on the impact of an intervention.



In sum

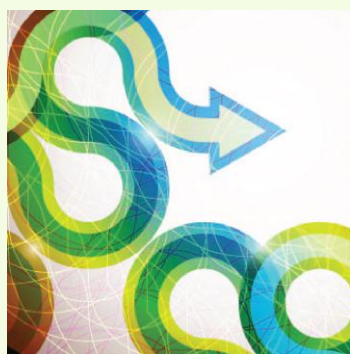
Education can play a big role in reversing increasing rates of obesity and overweight, both among children and adults. However, it cannot do so in isolation. Success in combatting this unhealthy trend is dependent on a dynamic collaboration among all stakeholders: government, schools, parents, students, civil society and the private sector. Effective solutions must thus balance the needs and priorities of key actors, while at the same time providing concrete and realistic programmes of action. A collaborative approach to combat obesity identifies key actors and the elements that they can contribute to this fight:



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For more information



Contact Tracey Burns (tracey.burns@oecd.org)

See OECD (2013), *Trends shaping education 2013*, OECD Publishing

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