

dietary intake and physical activity levels. I will review recent progress in the implementation of recommended national, state and local government policies for population obesity prevention. I will argue that to optimise population obesity prevention effectiveness requires a more explicit understanding of the different actors and policies, and how they may interact at the level of the population and the individual. I will also argue that we need a greater understanding of the equity impact of these policies. A priority moving forward should be better recording and communication of existing activities in order to more rapidly spread the uptake of the most effective and equitable policies globally and at scale.

<https://doi.org/10.1016/j.orcp.2016.10.098>

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Invited talk: Critical windows in the early life origins of obesity and food preferences



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There is compelling evidence that exposure to an inappropriate nutritional environment before birth and/or in early infancy, whether it be a nutritional deficiency, nutritional excess or deficiencies of key macro or micronutrients, is associated with an increased risk of obesity and altered food preferences in the offspring. It is also clear that the consequences of this altered nutritional exposure is also dependent on the period of development during which this exposure occurs. Recent work from our group has highlighted the critical role of the suckling period for the programming of obesity and food preferences in the offspring, which opens up the potential for the negative effects of prenatal exposures to be mitigated by improved maternal nutrition during lactation. This presentation will focus on these findings and their potential implications, and describe the impact of maternal cafeteria diet on breast milk composition in our animal model.

<https://doi.org/10.1016/j.orcp.2016.10.099>

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Invited talk: What is the evidence for effective obesity prevention strategies across childhood?



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The prevalence of overweight and obesity amongst children is high. Approximately one in five children commence school already above the healthy weight range, with these rates rising once children are at school. Thus there is much scope for prevention efforts.

Most childhood obesity prevention research has been conducted with school-aged children. Strategies have predominantly been delivered within the school setting. Overall these interventions show a small positive impact on child body mass index (BMI). Interventions involving both physical activity and diet strategies appear to be more effective than interventions focusing on a single behaviour.

While considerably less research has been conducted in the early childhood population, the impact of prevention strategies appear to be greater in this age group. Strategies in the early childhood population have been delivered through a range of settings including preschools, health care and family-based settings. Overall studies suggest a positive impact with some suggestion that family-based settings may hold greatest promise.

<https://doi.org/10.1016/j.orcp.2016.10.100>

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Invited talk: Challenges of interventions in adolescents with obesity



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One in four Australian adolescents is overweight or obese, and prevalence rates in this age group have continued to increase in recent years, especially in more socially disadvantaged groups. In addition, rates of severe or morbid obesity in adolescence have more than doubled in the past two decades. Obesity in adolescence is often complicated by psychosocial distress and associated with a range of other health problems.

For all these reasons, effective prevention and treatment of obesity in adolescence should be a

major priority. However, the evidence base for interventions in this age group is more limited than for other parts of the life-course, and there are specific challenges in undertaking research with, and delivering interventions to, adolescents. Further, despite its simplistic appeal, merely delivering interventions designed originally for younger children or for adults is likely to be a failure.

Physiological maturation from early-/mid-puberty to post-puberty makes interpretation of changes in anthropometry, body composition and hormonal (insulin, reproductive hormones) levels difficult. The increased nutrient requirements of adolescence (e.g. iron, calcium, zinc) must also be factored into any dietary prescriptions/recommendations for caloric restriction.

The major psychological and social changes in this age group mean that recruitment and engagement of young people and their families (where appropriate) in intervention programs is difficult. The rapidly changing nature of e-communication and social media use, and the pervasive presence of innovative forms of marketing at this life-stage, also poses implications for intervention delivery to an audience used to sophisticated communication strategies. The increased mobility of older adolescents especially may also mean they have difficulty accessing and using intervention programs.

A further consideration is the importance of designing and delivering interventions in adolescents that promote healthy eating and activity behaviours and promote positive body image, taking into account the ubiquitous background exposure to negative messages about body image.

<https://doi.org/10.1016/j.orcp.2016.10.101>

Poster Abstracts

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Whole of Systems Trial Of Prevention Strategies for childhood obesity: WHO STOPS childhood obesity



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Background: Permanent reductions in childhood obesity are possible if the complex and dynamic causes of obesity are taken into account. The impact of previous interventions would be sustained by increased community ownership (community-built interventions); support from existing community funds (avoiding the state and federal feast/famine of prevention funding); and, building on existing community assets (systems and networks). This research works with partners to test new ways to embed best practice for obesity prevention in existing community systems (e.g. health, workplaces, local council, schools) to ensure the most efficient and effective implementation and sustainability.

Objective: This paper introduces the WHOSTOPS Childhood Obesity initiative, an NHMRC Partnership Project Grant. The goals of this grant are to; (1)