

Appendix 3 (as supplied by the authors): GRADE Basis of Recommendation decision tables

Prevention of childhood and adolescent overweight and obesity

Question: Do primary care relevant prevention interventions (behaviourally-based) in healthy weight children lead to improved health outcomes or short-term or sustained healthy BMI trajectories?		
Population: Children and youth 0 to 17 years of age who were healthy weight		
Intervention: Behaviourally-based interventions could include diet/nutrition, exercise/physical activity, diet plus exercise, social support, and lifestyle strategies.		
Setting (if relevant): Primary care, feasible to be conducted or referable from primary care.		
Decision domain	Summary of reason for decision	Subdomains influencing decision
<p>Quality of evidence (QoE) <i>Is there high or moderate quality of evidence</i></p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>QoE for benefits behavioural interventions: Very Low 90 RCTs examined change in BMI and BMI-Z score, prevalence of overweight and obesity. Intervention participants had a decrease of SMD (standardized mean difference). =-0.07 In clinical terms this translated to a decrease in BMI of 0.09 kg/m². Diet plus exercise was the only type of intervention that was effective with a decrease in BMI of 0.15 kg/m². Prevalence of obesity decreased by 1.96% (ARR), NNT is 51 (28 to 289), RR=0.9. No effects on LDL, triglycerides, SBP and DBP, increase in HDL of 0.07mmol/L, increased performance on shuttle run test. No studies on QoL. No evidence to suggest that improvements in BMI are maintained. Interventions occurring in education settings were associated with statistically significant, yet small magnitude, reductions in BMI/BMI Z (SMD = -0.09). Very small effects seen in children 6-12, and 13-18 years, but not in 0-5 year olds. There were no studies examining prevention in exclusively healthy weight children. QoE for harms of screening: insufficient evidence to</p>	<p>Key reasons for downgrading or upgrading: QoE for benefits: Risk of bias, inconsistency, indirectness, imprecision and/or reporting bias. QoE for harms: Risk of bias was unclear</p>

	<p>answer the question</p> <p>Moderate</p> <p>Two studies found no effects, one study had incidence rates of adverse effects 0.03 in year one, 0.02 in year 2 and 0.01 in year three (no details on the types of events provided), 12% were severe.</p>	
<p>Balance of benefits and harms</p> <p><i>Is there certainty that the benefits outweigh the harms?</i></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Yes, but the benefits are small.</p>	<p>Is the baseline risk for benefit similar across subgroups?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Risk of benefit could vary based on baseline weight and health status of participants</p> <p>Should there be separate recommendations for subgroups based on risk levels?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>There was no evidence to support differential recommendations for different risk groups</p> <p>Is the baseline risk for harm similar across subgroups?</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Click here to enter text.</p> <p>Should there be separate recommendations for subgroups based on harms?</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Click here to enter text.</p>
<p>Values and preferences</p> <p><i>Is there confidence in the estimate of relative importance of outcomes and patient preferences?</i></p>	<p>Literature suggests understanding barriers to limiting participation in physical activities can help shape practitioners' approaches when trying to engage patients in activities. Healthcare professionals should take responsibility for initiating and developing a supportive and empathetic relationship with the children and their parents.</p>	<p>Perspective taken: patient</p> <p>Source of values and preferences: systematic review</p> <p>Source of variability, if any: Few studies found</p> <p>Method for determining values satisfactory for this</p>

<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>		<p>recommendation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>All critical outcomes measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>Resource implications <i>Are the resources worth the expected net benefit?</i> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure</p>	<p>Costs would vary by intervention, no cost-effectiveness studies found.</p>	<p>Feasibility: Is this intervention generally available? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Click here to enter text. Opportunity cost: Is this intervention and its effects worth withdrawing or not allocating resources from other interventions? Unsure Click here to enter text. Is there lots of variability in resource requirements across settings? Yes <input checked="" type="checkbox"/> No</p>
<p>Overall strength of recommendation: WEAK</p>	<p>Weak against; some evidence for benefit of behavioural interventions but not clinically significant, no harms. Because evidence of long-term effectiveness of overweight and obesity prevention interventions has not been determined, we do not recommend universal weight prevention programs for all populations. Practitioners may consider advising individual patients, based on the family values and preferences or send families to community-based or school-based preventive interventions.</p>	
<p>Remarks and values and preference statement</p>	<p>Information on values and preferences would be helpful and currently cannot be thoroughly assessed.</p>	

Management of childhood and adolescent overweight and obesity

Question: Do weight management programs (behavioural, combined behavioural, pharmacological and surgical interventions) lead to BMI, weight, or adiposity stabilization or reduction or other positive outcomes in children and adolescents who are obese or overweight?		
Population: Children and youth 2 to 18 years of age who were overweight or obese (BMI > 85th percentile for age and sex-specific BMI or meet previously accepted criteria for overweight based on ideal body weight).		
Intervention: Behavioural (e.g., diet, exercise, lifestyle), pharmacological, surgical, complimentary/alternative, or health care system interventions		
Setting (if relevant): Primary care, feasible to be conducted or referable from primary care.		
Decision domain	Summary of reason for decision	Subdomains influencing decision
<p>Quality of evidence (QoE) BEHAVIOURAL</p> <p><i>Is there high or moderate quality of evidence</i></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>QoE for benefits behavioural interventions: Moderate</p> <p>28 RCTs examined change in BMI and/or BMI z-score (BMIz) vs no treatment controls. Intervention participants decreased BMI by 0.54 (standardized mean difference, SMD). Diet, exercise, diet plus exercise and lifestyle interventions saw decreases in SMD of 0.36, 0.43, 1.09 and 0.42 respectively. If only studies of BMI are examined (excluding studies of BMIz, n=19) decreases in BMI of 1.1 kg/m² were seen overall, decreases of 1.15kg/m² were seen in behavioural interventions and 0.86 kg/m² in pharmacological plus behavioural interventions. Prevalence of obesity was measured in 3 studies and decreased but not significantly. No effects on total cholesterol, HLD, LDL, triglycerides, decrease of 4.64 mmHg in SBP and 4.08 mmHg in DBP compared to controls. Increased measures of quality of life for intervention participants. No studies on OGTT or physical fitness. No data to assess whether weight management programs help children and adolescents who are initially overweight or obese maintain BMI, weight, or adiposity improvements after the completion of an active</p>	<p>Key reasons for downgrading or upgrading:</p> <p>QoE for benefits: Risk of bias was unclear or high in most studies which led to the downgrade</p> <p>QoE for harms: Risk of bias was unclear</p>

	<p>intervention. Four studies had some post intervention follow-up and showed no maintenance of weight loss compared to control groups. Sensitivity analysis found differences in BMI were only significant for studies at low or unclear risk of bias (and not those at high risk of bias). QoE for harms of screening: Moderate Any adverse events or serious events: none related to intervention, gastrointestinal effects in control and intervention group (1 study that compared linoleic acid to sunflower oil), withdrawal: 1 study and 1 person withdrew due to gastrointestinal complications; did not report if they were in control or intervention group.</p>	
<p>Quality of evidence (QoE) PHARMACOLOGICAL PLUS BEHAVIOURAL <i>Is there high or moderate quality of evidence</i></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>QoE for benefits pharmacological plus behavioural interventions (youth 12-18 years only; control participants had behavioural intervention): Moderate 2 RCTs, examined orlistat 120mg (3 times daily) plus diet and exercise, intervention participants decreased BMI by .43 (SMD). If only studies of BMI are examined (excluding studies of BMIz) decreases in BMI of 0.86 kg/m² were seen in pharmacological plus behavioural interventions. No effects on total cholesterol, HLD, LDL, tryglycerides, OGTT, decreases of 1.81 mmHG in DBP (only 1 RCT), no studies on physical fitness. No data to assess whether weight management programs help children and adolescents who are initially overweight or obese maintain BMI, weight, or adiposity improvements after the completion of an active intervention. QoE for harms of screening: Low Increased events but only significant for gastrointestinal</p>	<p>Key reasons for downgrading or upgrading: QoE for benefits: Risk of bias was unclear or high QoE for harms: Risk of bias unclear,</p>

<p>Balance of benefits and harms <i>Is there certainty that the benefits outweigh the harms?</i></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>events (bowel and stool problems) – ARI is 37% NNH =3</p> <p>Behavioural interventions: Benefit demonstrated, no harms. Pharmacological: Benefits demonstrated, some harms</p>	<p>Is the baseline risk for benefit similar across subgroups? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Risk of benefit could vary based on baseline weight and health status of participants Should there be separate recommendations for subgroups based on risk levels? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>There was no evidence to support differential recommendations for different risk groups Is the baseline risk for harm similar across subgroups? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Click here to enter text. Should there be separate recommendations for subgroups based on harms? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Click here to enter text.</p>
<p>Values and preferences <i>Is there confidence in the estimate of relative importance of outcomes and patient preferences?</i></p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Literature suggests understanding barriers to limiting participation in physical activities can help shape practitioners approaches when trying to engage them in activities. Parents and children were hesitant to reduce screen time; some felt it was important for social development. Disconnects were noted between what children/youth needed and what was offered by healthcare professionals. Healthcare professionals should take responsibility for initiating and developing a supportive and empathetic relationship with the children and their parents. A need for policy-level changes at all levels of government to create and maintain healthy environments was identified.</p>	<p>Perspective taken: patient</p> <p>Source of values and preferences: systematic review</p> <p>Source of variability, if any: No studies found</p> <p>Method for determining values satisfactory for this recommendation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>All critical outcomes measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>

<p>Resource implications <i>Are the resources worth the expected net benefit?</i></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Costs would vary by intervention, no cost-effectiveness studies found.</p>	<p>Feasibility: Is this intervention generally available? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Click here to enter text.</p> <p>Opportunity cost: Is this intervention and its effects worth withdrawing or not allocating resources from other interventions? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Click here to enter text.</p> <p>Is there lots of variability in resource requirements across settings? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Overall strength of recommendation: WEAK</p>	<p>Weak; evidence for benefit of behavioural interventions, with no harms, assume patient's value weight loss and increased health benefits from losing weight. Measurement of weight and height and the calculation of BMI is recommended for the purposes of growth monitoring. Weak against for combined pharmacological and behavioural interventions as there is no improved benefit over behaviour alone, increased harms compared to behavioural harms alone, although all differences except gastrointestinal are not significantly different. Strong recommendation against for children aged 2-11 years and for surgical intervention as there were no studies assessing effectiveness.</p>	
<p>Remarks and values and preference statement</p>	<p>Information on values and preferences would be helpful and currently cannot be thoroughly assessed.</p>	