

## Evidence review: Nutrition-related chronic disease prevention interventions A review of the effectiveness of various universal population health promotion nutrition interventions for adults



### THE ISSUE

Poor nutrition is a leading risk factor for chronic diseases such as heart diseases, diabetes and cancer<sup>1</sup>. Most Canadians are not eating well<sup>2</sup>.

Together, we can make the healthy choice the easy choice for Albertans, which can reduce the risk of chronic diseases.

### ABOUT THIS REPORT

This evidence review aims to support individuals and organizations with planning or priority setting for actions that promote healthy eating and prevent chronic diseases.

## KEY FINDINGS

- Taxes and subsidies, changes to the food environment, trans-fat regulations, and multi-component interventions\* are effective in changing nutrition intake and behaviour.
- Interventions should be included as part of multi-component strategies to increase positive impact on nutrition outcomes.

## SUGGESTED ACTIONS

- Support the development of regulatory and fiscal food & nutrition policies led by municipal, provincial and federal governments.
- Lead and/or collaborate to promote the adoption of policies and initiatives to improve the food environments using effective interventions identified in the report.
- Plan interventions using evidence informed best practices. This includes conducting a situational analysis specific to the context of targeted population or community.
- Incorporate evaluation into planning to measure intended outcomes and unintended effects, which strengthens the evidence base for practice.
- Explore opportunities to complement existing knowledge and skill building interventions with environmental interventions that makes it easier for individuals to implement changes.
- Explore targeted population health interventions to support the needs of those at higher risk of chronic diseases.

\*Multi-component strategies include a combination of: changes to the food environment, actions to promote healthy eating by changing the food norms and actions to enable informed food choices, such as labelling.



## SUMMARY OF INTERVENTIONS REVIEWED

Thirteen interventions were identified through the evidence review search strategy and examined for their impact on changes to nutrition outcomes such as knowledge, attitude, behaviours, and clinical indicators.

Conclusion statements were formulated based on each intervention's effectiveness, impact on health equity, and unintended consequences. Read the full report (page 8) for details on how conclusion statements were derived.

Conclusions	Interventions & effect on nutrition outcomes
<p><b>Recommended</b></p> <p>(Consistent evidence; benefits outweigh harm)</p>	<p><i>Leads to behaviour change</i></p> <ul style="list-style-type: none"> <li>• Fiscal policy (taxes or subsidies on food &amp; drink)</li> <li>• Pricing interventions in vending machines and food/grocery stores</li> <li>• High proportion of healthy foods in vending machines</li> <li>• Multi-component or environmental interventions in workplaces</li> <li>• Mass media campaigns as part of a multi-component strategy</li> <li>• Mandatory regulations to limit industrially produced TFA content in foods (will be implemented in Canada in 2018)</li> <li>• Education interventions for individuals with risk factors</li> </ul>
<p><b>Suggested</b></p> <p>(Promising evidence; benefits outweigh harm)</p>	<p><i>Leads to behaviour change</i></p> <ul style="list-style-type: none"> <li>• Menu labelling as part of a multicomponent strategy</li> <li>• Multi-component interventions in food/grocery stores</li> <li>• Multi-component interventions in post-secondary settings</li> </ul>
<p><b>Not suggested</b></p> <p>(Lack of evidence to support – mixed evidence or no direct evidence available)</p>	<ul style="list-style-type: none"> <li>• Point of purchase information at vending machines and food/grocery stores to shift purchases as a sole intervention.</li> <li>• Education interventions for sustained behaviour changes for general population (without risk factors)</li> <li>• Community gardens for nutrition related outcomes</li> <li>• Collective kitchens for nutrition related outcomes</li> </ul>
<p><b>Not recommended</b></p> <p>(Consistent evidence on ineffectiveness; risks outweigh benefits)</p>	<ul style="list-style-type: none"> <li>• Financial incentive programs for sustainable weight loss</li> <li>• Community gardens to reduce the prevalence of household food insecurity</li> <li>• Collective kitchens to reduce the prevalence of household food insecurity</li> </ul>



## METHODS

Ninety systematic reviews (SR) published between January 2010 and April 2016 were identified and reviewed for their effect on nutrition outcomes. The strength of each SR was determined using a quality appraisal tool. The literature synthesis and conclusion statements were reviewed by content experts to ensure accuracy in their interpretation and synthesis.

## REFERENCES

1 GBD 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risk or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. 2017 Sept 16;390(10100):1345-1422.

2 Statistics Canada. Fruit and vegetable consumption, 2015. Health Facts Sheets, 82-625-X. Ottawa: Statistics Canada; 2017 [cited 2018 March 19]. Available from: <http://www.statcan.gc.ca/pub/82-625-x/2017001/article/14764-eng.htm>



**For the full report, visit: Nutrition-related Chronic Disease Prevention Intervention**