The evidence: evaluating the effectiveness of interventions

Prof Cliona Ni Mhurchu, on behalf of DIET Programme team

National SCIENCE Challenges
HEALTHIER LIVES
He Oranga Hauora

bode^3

DIET
Dietary Interventions: Evidence & Translation

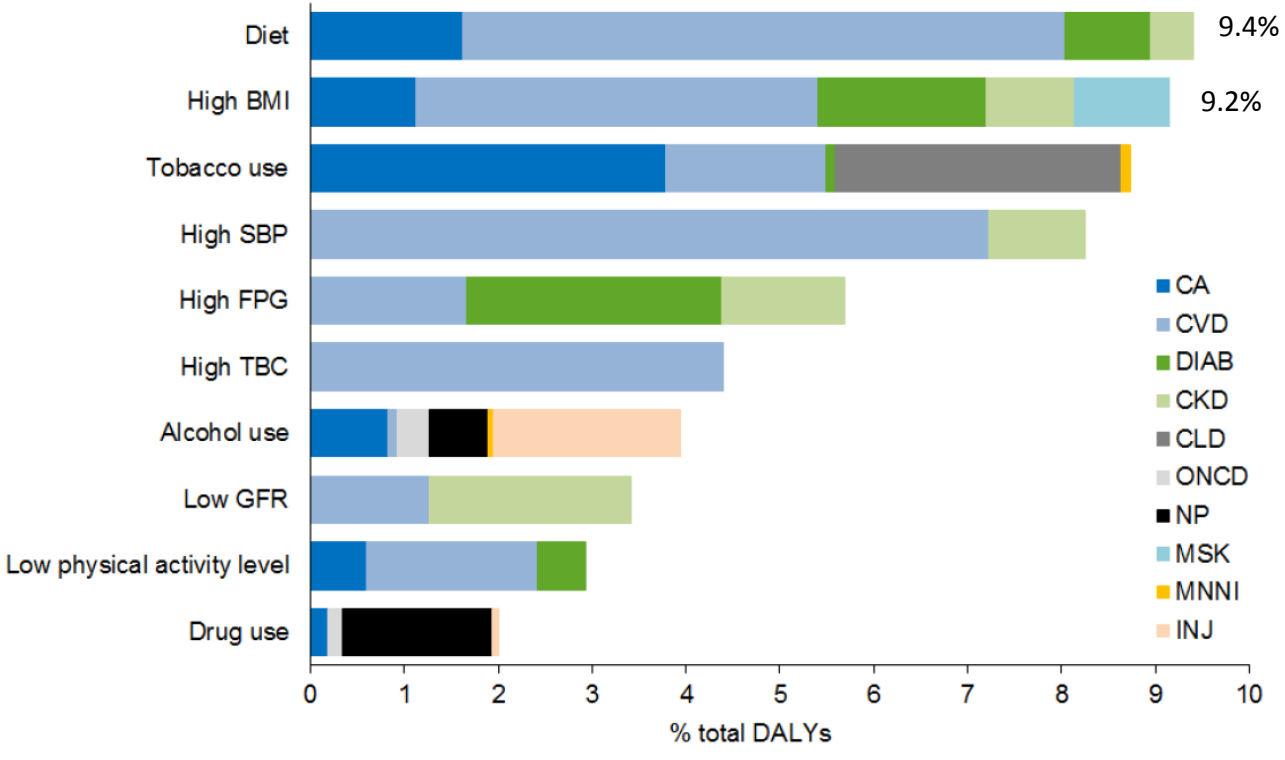
THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

INFORMAS
Benchmarking food environments

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND
SAPERE AUDE

Diet-related burden of disease

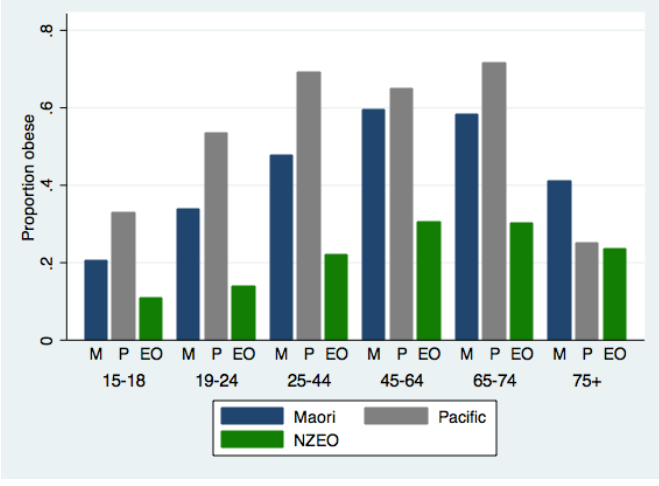
Figure 19: Health losses caused by selected risk factors (% total DALYs), 2013



Ministry of Health, Burden of Disease Report 2016

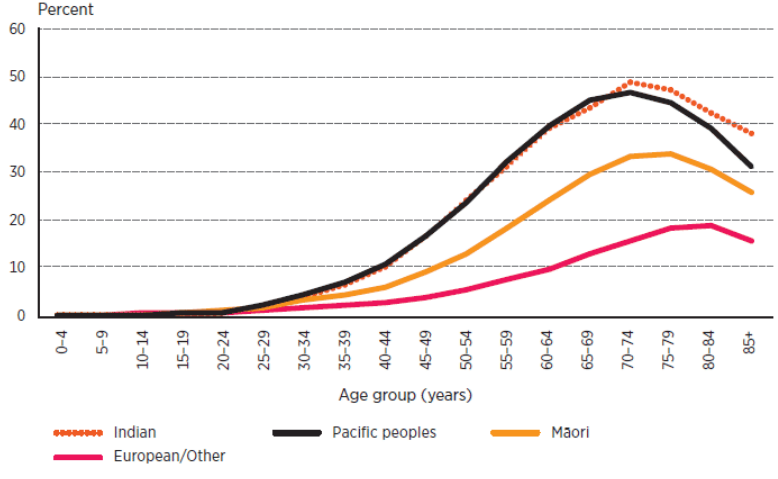
Burden of disease by ethnicity

Prevalence of obesity



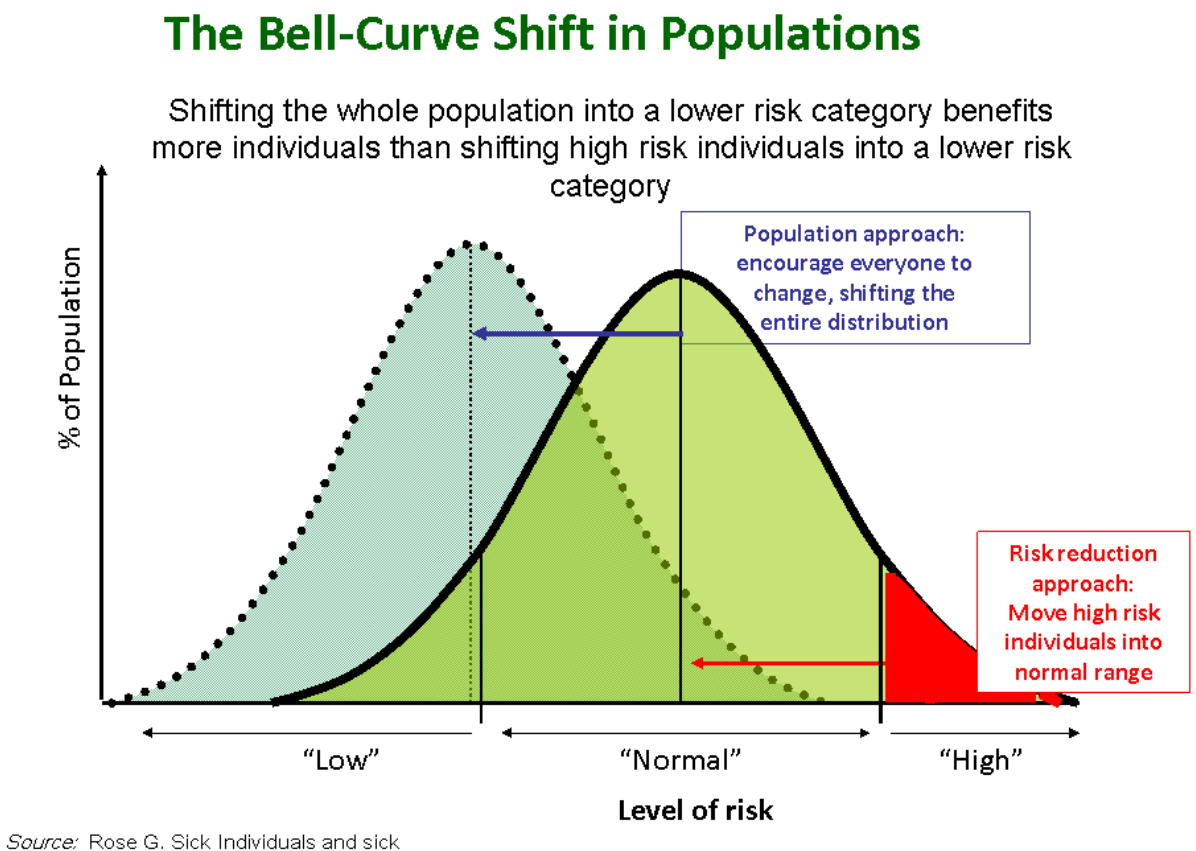
University of Otago and Ministry of Health. 2011. A Focus on Nutrition: Key findings of the 2008/09 New Zealand Adult Nutrition Survey

Prevalence of diabetes



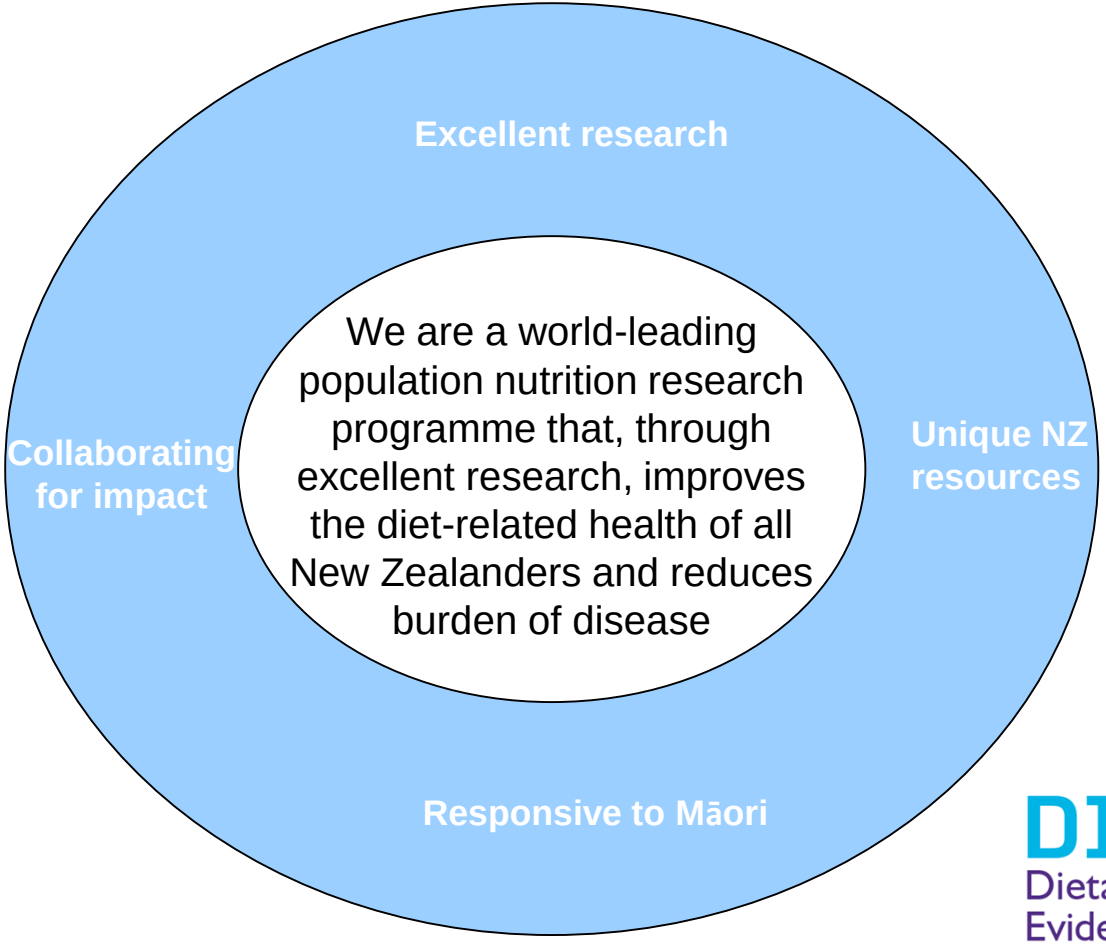
Ministry of Health, Health and Independence Report 2015

Improving population diets



Source: Rose G. Sick Individuals and sick populations. *Int J Epidemiol.* 1985; 12:32-38.

Our vision



DIET
Dietary Interventions: Evidence & Translation

DIET team 2013-18

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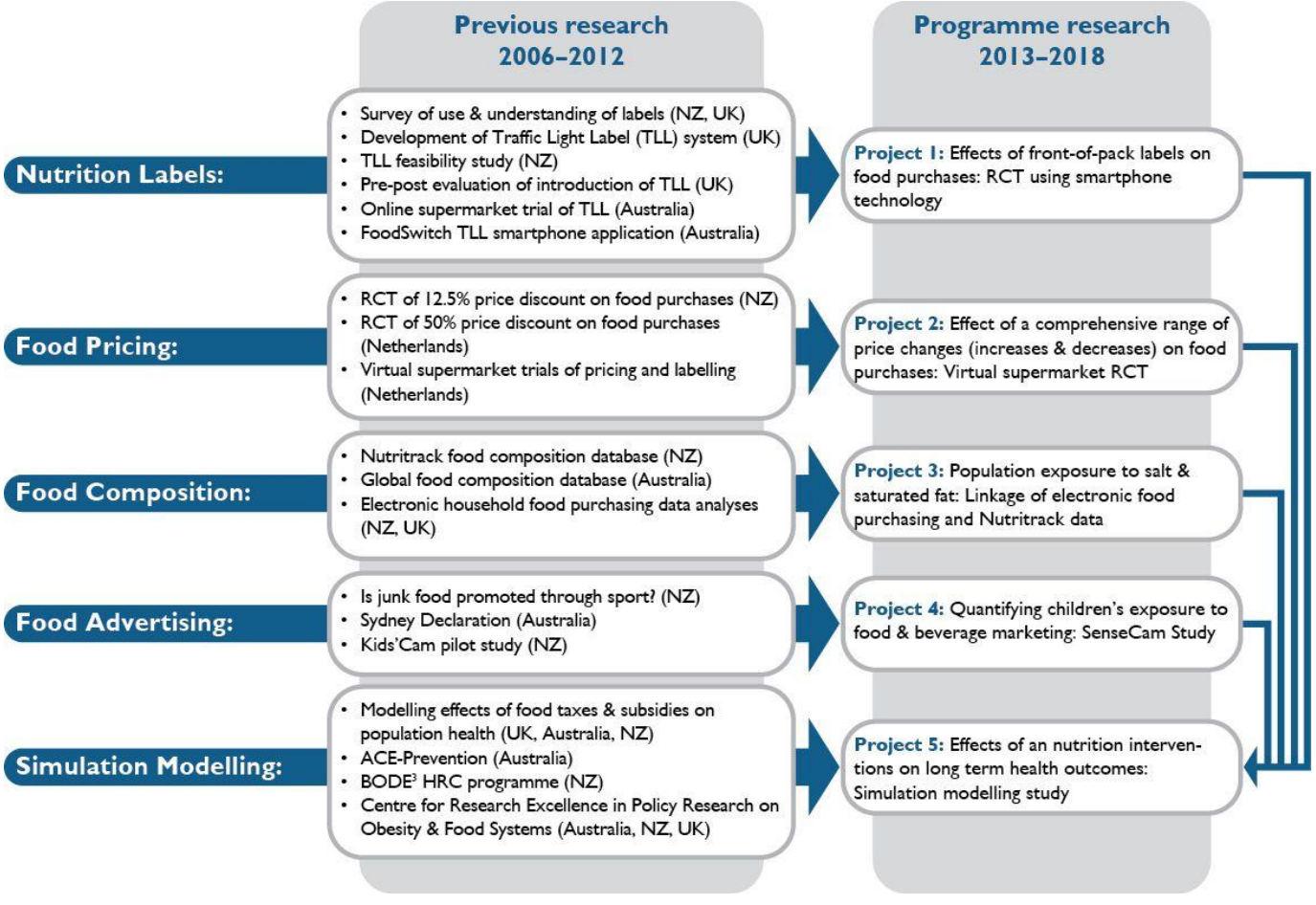
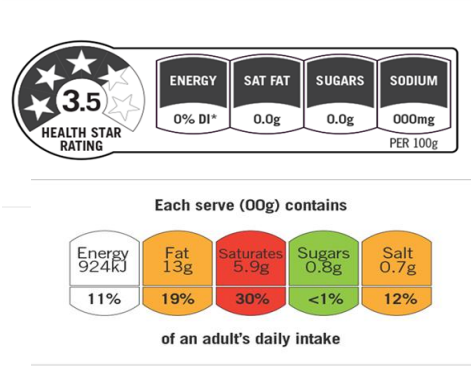
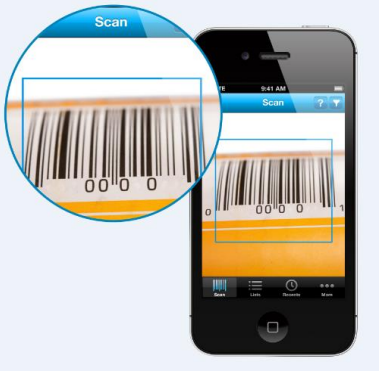
DIET research objectives



Effects of interpretive nutrition labels on food purchases: Starlight RCT





- 1,357 NZ household shoppers who owned smartphones
- Randomised to different labelling formats for 4 weeks
- Smartphone captured food purchase data (280,000 packaged food purchases)

Effects of price changes on food purchases: Virtual Supermarket RCT

- 1,038 NZ household shoppers did up to 5 grocery shops over 5 weeks in a Virtual Supermarket (4,258 shopping occasions total)
- Each shopping occasion was randomly allocated to a set of price changes reflecting F&V subsidy, SSB tax, sugar tax, salt tax, saturated fat tax, or control (no price changes)

NZ food composition and reformulation opportunities: Nutritrack

4 supermarket chains

20 fast food chains

Food purchases
(2,500 NZ households)

Products (n)	2012	2013	2014	2015	2016	2017	2018
Supermarket foods	8,440	13,406	14,191	14,436	15,370	14,913	15,190
Fast foods	2,310	2,940	2,945	3,055	3,589	4,752	4,500
Cumulative total	10,750	27,096	44,232	61,723	80,682	100,347	120,037

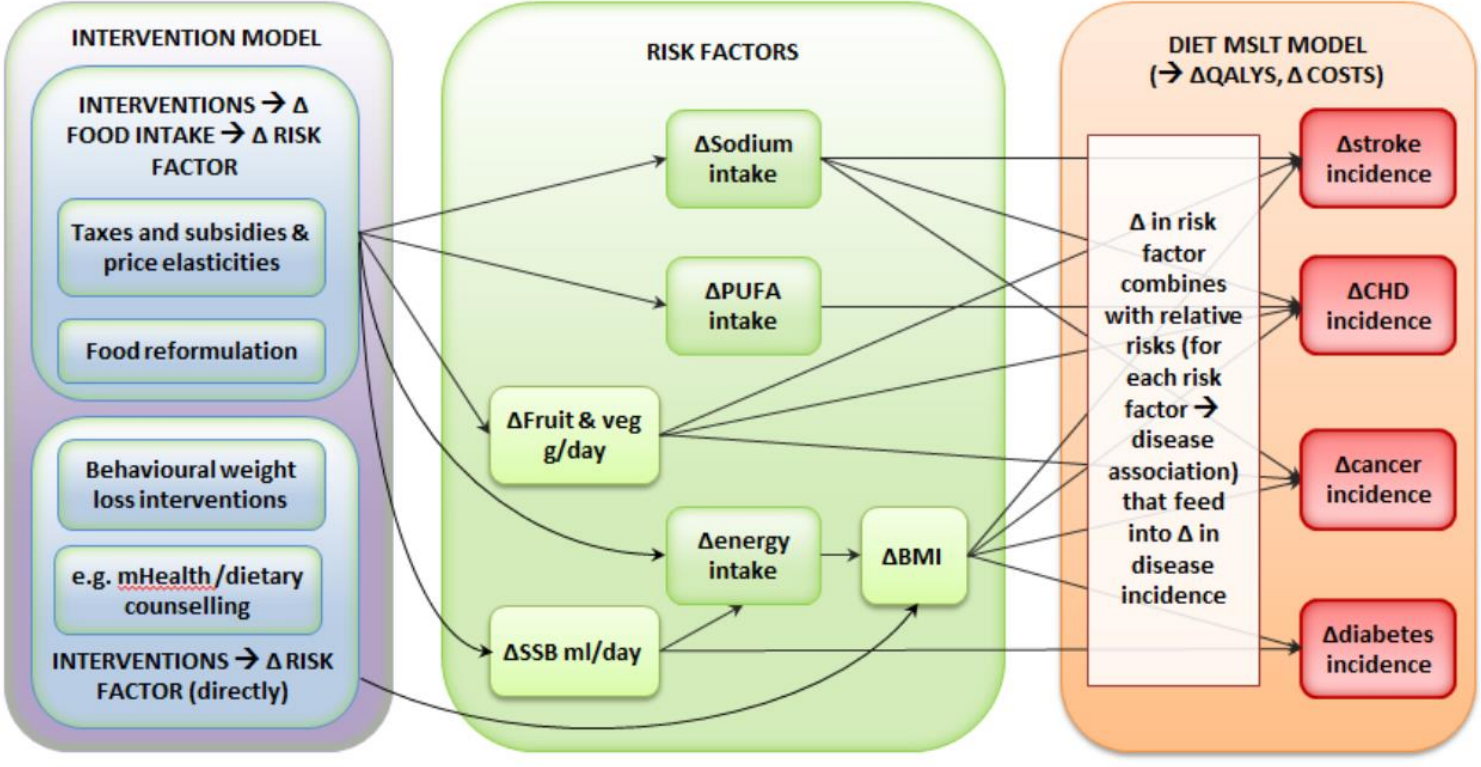
- Food labelling, ingredient and composition data 2012-17 (*n*~120,000)
- Linked with NZ household food purchasing data 2012-17 (Nielsen Homescan panel)

Children's exposure to food marketing: wearable camera study

Kids'Cam

- 168 NZ children aged 11-13 years
- Wore automated cameras and GPS devices for 4 days (2 weekdays & 2 weekend days)
- Cameras captured images automatically every 7 seconds (~1.5 million images collected)

Effects of dietary interventions on population health: BODE^3 models



Take home messages

1. Front-of-pack nutrition labels have no significant effect on population food purchases but may influence industry to create healthier foods
2. Taxing foods based on salt, saturated fat and sugar content leads to healthier consumer food purchases
3. A government-led NZ food reformulation programme is feasible and could lead to meaningful (and equitable) improvements in population diets
4. NZ children are exposed frequently, across multiple settings, to the marketing of unhealthy foods. Current voluntary standards do not protect our children sufficiently

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