

Effects of interpretive nutrition labels on consumer food purchases: the Starlight randomised controlled trial

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National
Science
Challenges

HEALTHIER
LIVES

He Oranga
Hauora

bode³

DIET 
Dietary Interventions:
Evidence & Translation



THE UNIVERSITY OF
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NEW ZEALAND

INFORMAS

Benchmarking food environments

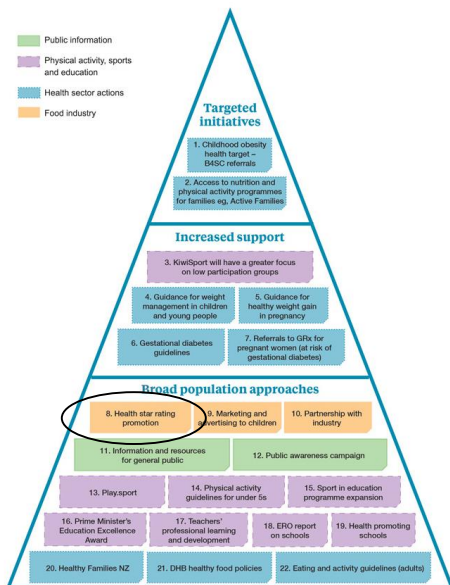


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Interpretive FOP nutrition labels are a common policy recommendation

	Target population	Strength of evidence*	DALYs saved	Gross costs† (A\$ million)	Net cost per DALY saved‡ (A\$ million)
Unhealthy food and beverage tax (10%) ⁶⁷	Adults	4	559 000	18.00	Cost-saving
Front-of-pack traffic light nutrition labelling ⁶⁷	Adults	5	45 100	81.00	Cost-saving
Reduction of advertising of junk food and beverages to children ⁶⁸	Children (0-14 years)	2	37 000	0.13	Cost-saving

The childhood obesity plan



REPORT OF THE COMMISSION ON

ENDING CHILDHOOD OBESITY



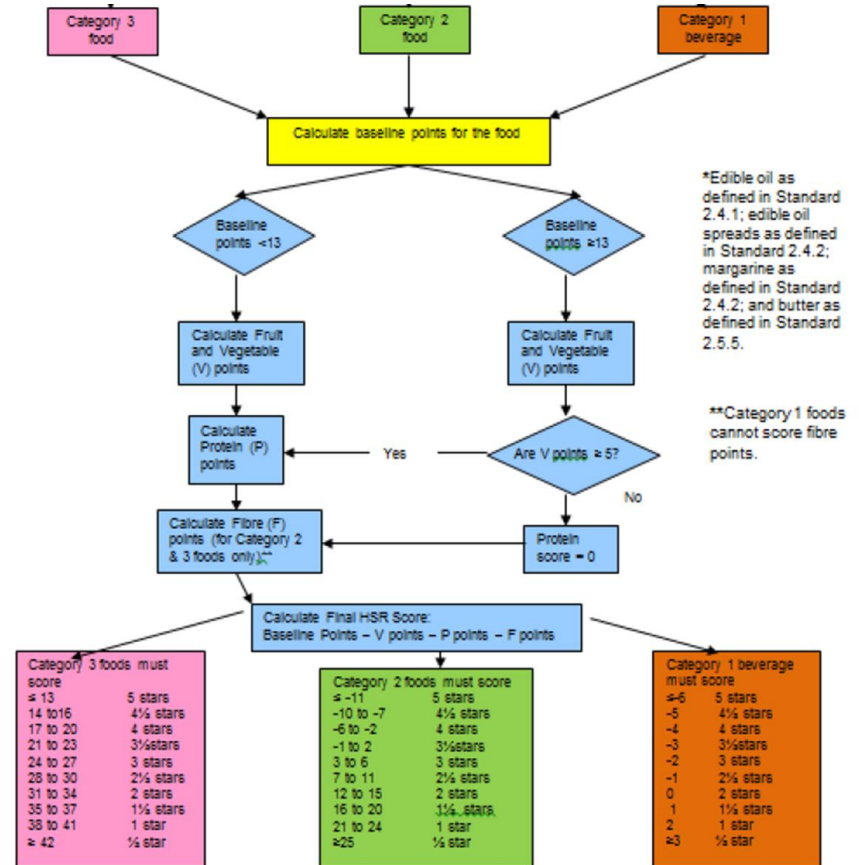
- 1.6 Implement a standardized global nutrient labelling system.
- 1.7 Implement interpretive front-of-pack labelling, supported by public education of both adults and children for nutrition literacy.

Traffic Light Labels (TLL)



All measures per 100g	LOW a healthier choice	MEDIUM most of the time	HIGH eat occasionally
Sugars	5g or less	5.1g - 15g	More than 15g
Fat	3g or less	3.1g - 20g	More than 20g
Saturates	1.5g or less	1.6g - 5g	More than 5g
Salt	0.3g or less	0.31g - 1.5g	More than 1.5g

Health Star Rating (HSR) label



Starlight RCT

What effects do interpretive nutrition labels have on the healthiness (FSANZ nutrient profiling scoring criterion – NPSC) of consumer food purchases?

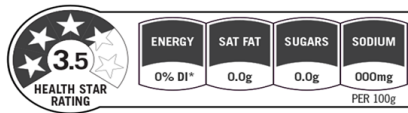


Study design

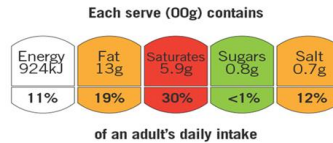
Registration and 1-week run-in

Randomisation

HSR



TLL

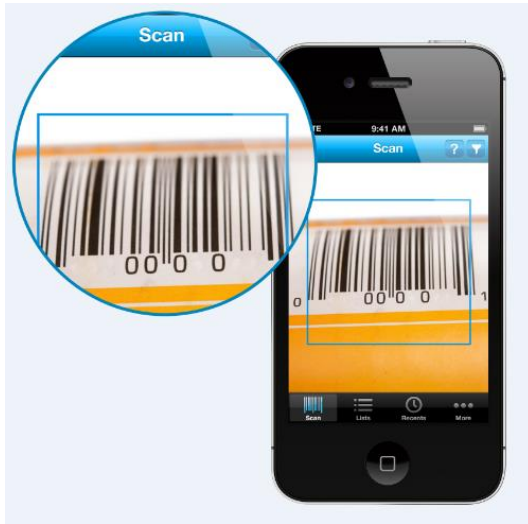


NIP

NUTRITION INFORMATION		
Serving size: 100g (40 ml)		
Serving size: 100 ml		
	Avg. Quantity Per Serving	Avg. Quantity Per 100 ml
Energy	269 kJ (64 Cal)	1790 kJ (427 Cal)
Protein	0.4 g	2.5 g
Fat - total	0.2 g	1.5 g
- saturated	0.1 g	0.6 g
Carbohydrate	14.9 g	99.2 g
- sugars	12.1 g	81.0 g
Sodium	0.2 g	1.5 g

1-month follow-up of all packaged food purchases

Intervention delivery



No SIM 11:59 am

< Scan for Label

Yoplait Vanilla

Each serve (125 g) contains

Energy 476 kJ	Fat 3.6 g	Sat Fat 2.4 g	Sugars 12.8 g	Salt 0.1 g
5.0 %	5.0 %	10.0 %	14.0 %	2.0 %

of an adult's daily intake

OTHER CHOICES

Meadow Fresh Live Lit... ☐ ☒ ☒ ☒ ☒

Clearwater's Cream To... ☐ ☒ ☒ ☒ ☒

Piako Gourmet Yoghurt ☐ ☒ ☒ ☒ ☒

Scan for Label Add to List Send List

Consent & baseline data collection

The diagram illustrates the sequence of screens for the FoodSwitch application: 1. Trial Introduction, 2. Consent Form, and 3. Initial Survey. Arrows indicate the flow from one screen to the next.

Screen 1: FOOD LABEL TRIAL

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HEALTH INNOVATION
THE UNIVERSITY OF AUCKLAND

FOOD LABEL TRIAL

Your involvement will help us to provide better food health information for everyone NZ

Thank You

NEXT

Screen 2: Consent

results.

I confirm that I have not used the FoodSwitch application before and that it is not currently installed on my smartphone. I will not install the application for the duration of the study.

I understand all of the above and agree to take part in the study ☐

I agree to the Terms & Conditions for use of the Study Application. ☐
[Terms & Conditions](#)

I wish to receive a copy of the results (if you leave this unchecked, the results will not be sent to you). ☐

I agree to take part in a sub-study looking in more detail at my use of the smartphone application ☐

Screen 3: Initial Survey

Date of Birth - -

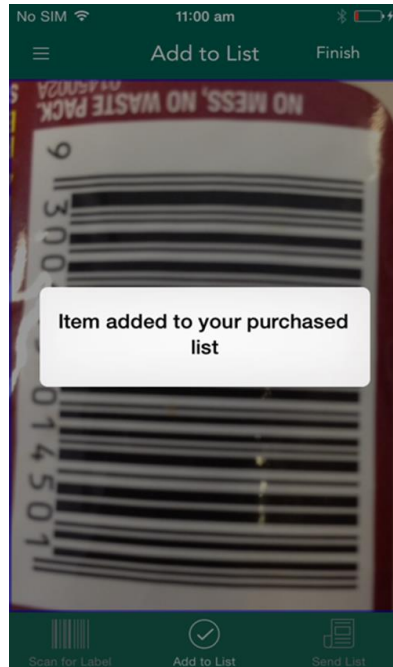
Your gender: ☐ Male ☐ Female

Which ethnic groups do you belong to (Select all that apply):

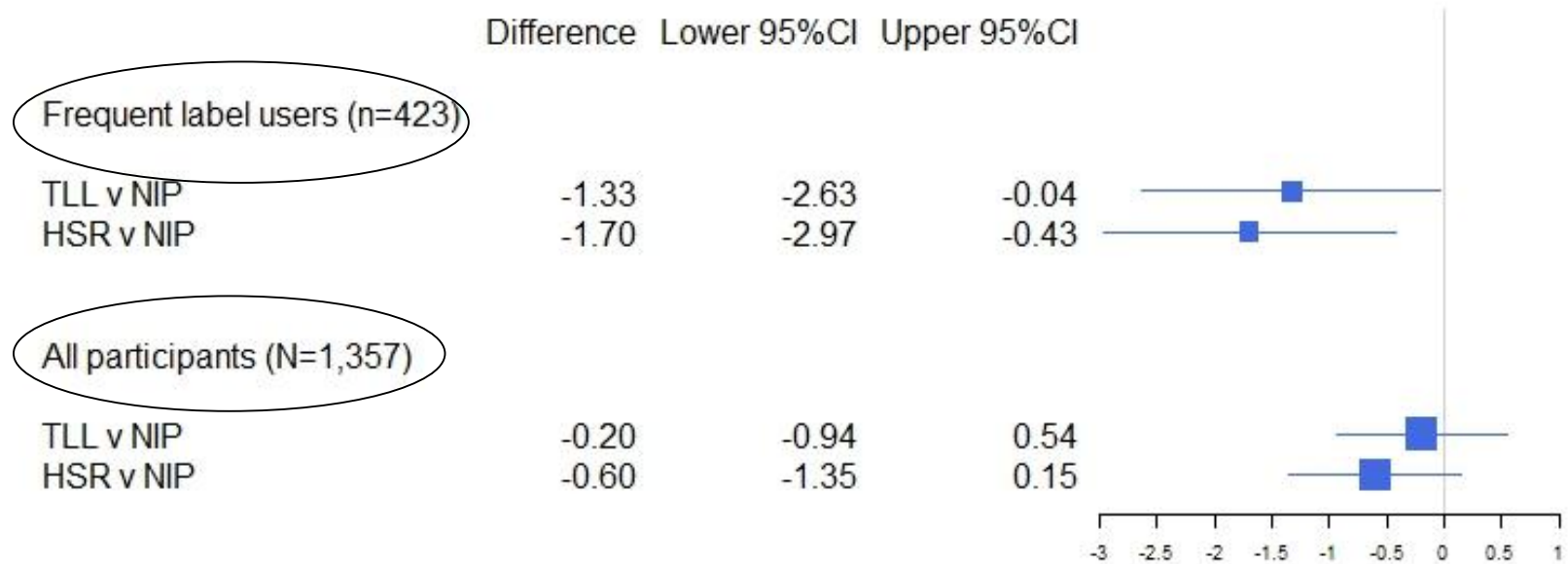
- ☐ New Zealand European
- ☐ Maori
- ☐ Name/s of your iwi (tribe or tribes)
- ☐ Samoan
- ☐ Cook Island Maori
- ☐ Tongan
- ☐ Niuean
- ☐ Chinese
- ☐ Indian
- ☐ Other

Please state

Food purchasing data collection



Healthiness of food purchases



Self-reported label usefulness

(TLL and HSR compared to NIP)

- Participants randomised to HSR and TLL significantly more likely to report that they found the assigned labels **useful**; **easy** to understand; **bought different foods** as a result of viewing the labels; and their nutrition **knowledge** improved as a result of using the labels in the app (all p-values <0.001)
- No difference between TLL and HSR groups (all p-values >0.05)

Strengths and weaknesses

Strengths

- Randomised, blinded, controlled, large, real-world setting

Weaknesses

- Limited use of intervention, use of app as surrogate for on-pack labelling, incomplete reporting of purchases

Take home messages

- At the relatively low level of use observed in this RCT, interpretive front-of-pack nutrition labels had no significant effect on population food purchases
- However shoppers find interpretive labels more useful and easier to understand than non-interpretive labels (NIP)
- Amongst a small subgroup of frequent label users, interpretive labels may assist in making healthier food choices