



Consuming calories and creating cavities: beverages NZ children associate with sport

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Sugar-sweetened beverages

- ▶ Contribute to energy intake, little or no nutrient benefit
- ▶ Significant impacts for health, wellbeing and inequalities
 - ▶ Obesity
 - ▶ 32.6% children overweight or obese NZ Health Survey, Ministry of Health, 2014
 - ▶ #3 in OECD OECD, 2014
 - ▶ Type 2 diabetes
 - ▶ ↑ incidence in children
 - ▶ Dental caries
 - ▶ Leading cause of hospital admissions for children
- ▶ NZ children's consumption not aligned with Food and Nutrition Guidelines



Children's and parents' opinions on the sport-related food environment

- ▶ 82 children, 10-12y
- ▶ Wellington and Porirua
- ▶ Football, netball and rugby
- ▶ Photos and focus groups



Sport in NZ

- ▶ High participation - 2/3rds involved in sport (Sport NZ, 2012)
- ▶ Important and ideal setting for health promotion (Kelly et al, 2010)
- ▶ Integral part of children's food environments
- ▶ Obesogenic (Carter et al, 2012, 2013; Kelly et al 2012)
- ▶ Lack formal policies (Carter et al, 2012, 2013; Kelly et al 2012)





Objective and method

- ▶ 74% children photographed a drink
 - ▶ 31 different drinks
- ▶ To analyse the nature of the beverages sport-playing NZ children associate with sport
- ▶ Analysed labels of 30 beverages
 - ▶ Packaging and serving sizes
 - ▶ Energy, sugars, sodium and caffeine
 - ▶ Advisory statements
- ▶ Determined pH



Alignment with:

- ▶ Food and Nutrition Guidelines for Children and Young People (2012) Ministry of Health, 2012
 - ▶ Drink plenty of **water** and include (preferably reduced or low-fat) **milk every day**.
 - ▶ **Sugary beverages** (cordials, powdered beverages, fruit drinks, carbonated drinks, sports (electrolyte) drinks and sports waters), flavoured milks and diet beverages should be **limited to less than one glass (250ml) per week in total**. Fruit juice should be limited to no more than one glass per day.
 - ▶ **Caffeine beverages** including energy drinks, are **not recommended** for children or young people; children under 13 should not consume coffee or tea.
- ▶ Relevant regulations
 - ▶ FSANZ – Food Standards Codes
- ▶ Impact on health



*of the 30 different types of drinks analysed



Packaging and serving sizes

- ▶ Serving size 200 – 1000ml
 - ▶ Limited/rec drinks 52% > 250ml
- ▶ Package size 250 – 3000ml
 - ▶ Those > 250ml, 67% = one serve
 - ▶ Most (83%) 500-1000ml

- ▶ **Regulations** (Australian Government, 2013a)

- ▶ Only average serving and packaging size required
- ▶ Average serving size determined by manufacturer
- ▶ *“should reflect a realistic portion of the food that a person might normally consume on one eating occasion”* FSANZ 2012, p.14



NUTRITION INFORMATION		
SERVINGS PER PACKAGE: 1		SERVING SIZE 1000mL
AVERAGE QUANTITY PER SERVING	%DI*	PER 100mL
ENERGY	1312kJ	131kJ
	314 CAL	31.4 CAL
PROTEIN	0g	0g
FAT, TOTAL	0g	0g
-SATURATED	0g	0g
CARBOHYDRATE	75g	7.5g
-SUCROSE	60g	6.0g
-MALTODEXTRIN	16g	1.6g
DIETARY FIBRE	0g	0g
SODIUM	431mg(18.8mmol)	43.1mg(1.9mmol)

Energy and sugars content

- ▶ 2.4 – 165kJ/100ml (all)
- ▶ 4.4 to 9.3g/100ml (limited and not recommended)
- ▶ For moderately active child (Ministry of Health, 2012)
 - ▶ 28% limited and not recommended > 10% of daily EER
 - ▶ >20% less active child
 - ▶ 40% if follow recent recommendations of >5% (mod. active)



Energy and sugars content

Drink	Serving size (ml)*	Sugars g/serve	Sugars tsp/serve	Energy/serve (kJ)	%Daily EER^
Calci Strong	250	23	6	750	4
Pumped flavoured	750	17	4	393	3
e2	800	74.4	18.5	1320	12.7
Powerade	750	43	11	969	7.4
V	250	53	13	975	9.1
Lipton's Ice Tea	500	32.5	8	565	5.6

*manufacturer-determined

^daily estimated energy requirement for a moderately active 11y male = 9900kJ



Energy and sugars content

- ▶ Large portions encourage excessive energy intake
- ▶ SSBs not as satiating
- ▶ High palatability encourage more
- ▶ Absorption hindered by sugars therefore drink more
- ▶ Regulations
 - ▶ Carbohydrate content of sports drinks and flavoured waters regulated (Australian Government, 2013b)



Sodium and caffeine content, pH

- ▶ All drinks contained sodium
 - ▶ <5mg to 110mg/100ml
 - ▶ Sports drinks in particular
 - ▶ Sports drinks not required for children unless >90mins strenuous exercise
- ▶ Caffeine
 - ▶ 4 beverages
 - ▶ Not recommended for children <13y
 - ▶ 95mg = 1 can energy drink sufficient to impact children
 - ▶ Caffeine content regulated by FSANZ (Australian Government, 2013c)
- ▶ pH
 - ▶ 69% were acidic: 2.6-3.8
 - ▶ Erosion of tooth enamel when pH<5.5



Advisory statements

▶ Regulations

- ▶ Reduced-fat milk – not for children under 2y (Australian Government, 2011)
- ▶ Sports drinks (volume and frequency of use) (Australian Government, 2013b)
- ▶ Added caffeine - 'Contains caffeine' (Australian Government, 2013c)
- ▶ Energy drinks (Australian Government, 2013c)
 - ▶ Amount of caffeine
 - ▶ Warning not for children
 - ▶ Max daily consumption (manufacturer-determined)
- ▶ 'Supplemented food' – fruit juices and sports water (Ministry for Primary Industries, 2013)

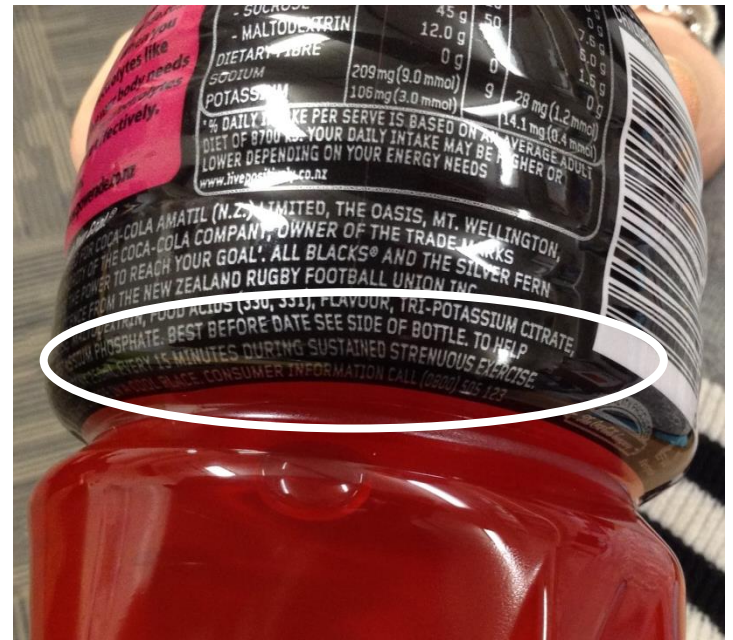
▶ One-third had advisory statements

- ▶ Milk ✓
- ▶ Sports drinks 2/6
- ▶ Caffeinated drinks ✓
 - ▶ Iced tea x
- ▶ Supplemented food ✓



Labels

- ▶ Not immediately apparent
- ▶ Small font
- ▶ On back of each product
- ▶ Labelling regulated by
 - ▶ FSANZ
 - ▶ Ministry for Primary Industries
- ▶ ‘Supplemented foods’
 - ▶ Mandatory legibility requirements



Children's feedback – focus groups and notebooks

- ▶ Energy for playing sport and improved sports performance, hydration and quench thirst

“you don't get tired as quickly and we can play longer” (Porirua, netball, girl)

“Powerade drink...it's a good energising drink before, during and after sport” (Porirua, netball, girl)

- ▶ Available at venues

“Soft drinks (and water) sold at our games”
(Wgtn, netball, girl)



Children's feedback – focus groups and notebooks

► Advertising and athlete endorsement



“A bottle of isotonic Powerade... It has been advertised many times by famous sports players and is drunk by a lot of sports players and used in many sports” (Porirua, netball, girl)

“it makes other people want to drink Powerade, ‘cos it’s like role model energy” (Porirua, netball, girl)



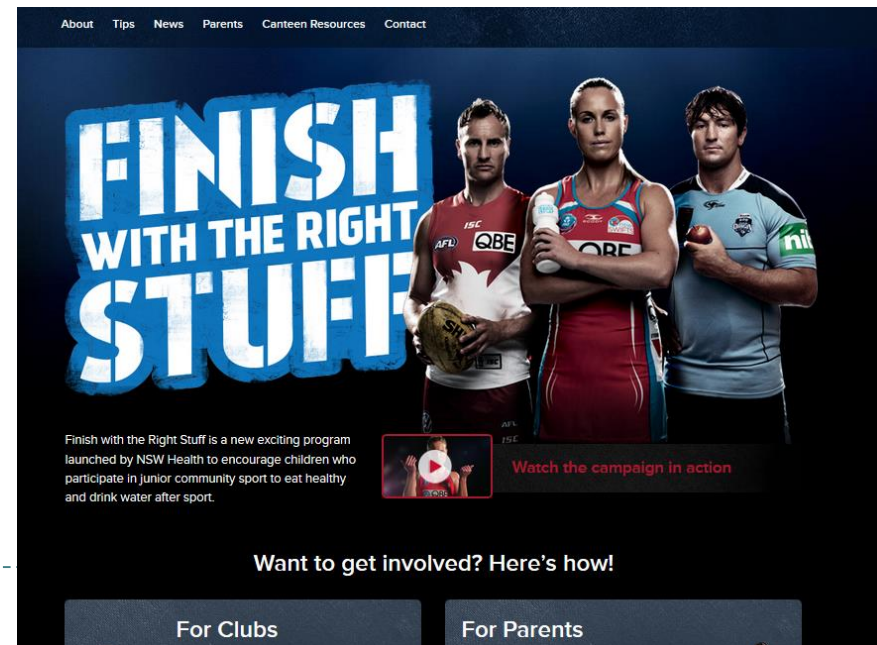
“Milo always advertises being healthy and being great for before or after games” (Wgtn, football, boy)



Sport-specific solutions

- ▶ Food policies at local clubs and grounds
 - ▶ To restrict the promotion and availability of sugary drinks
 - ▶ Normalise water consumption
- ▶ Key stakeholders
 - ▶ Sports coaches, clubs and associations
 - ▶ Local government
 - ▶ Parents

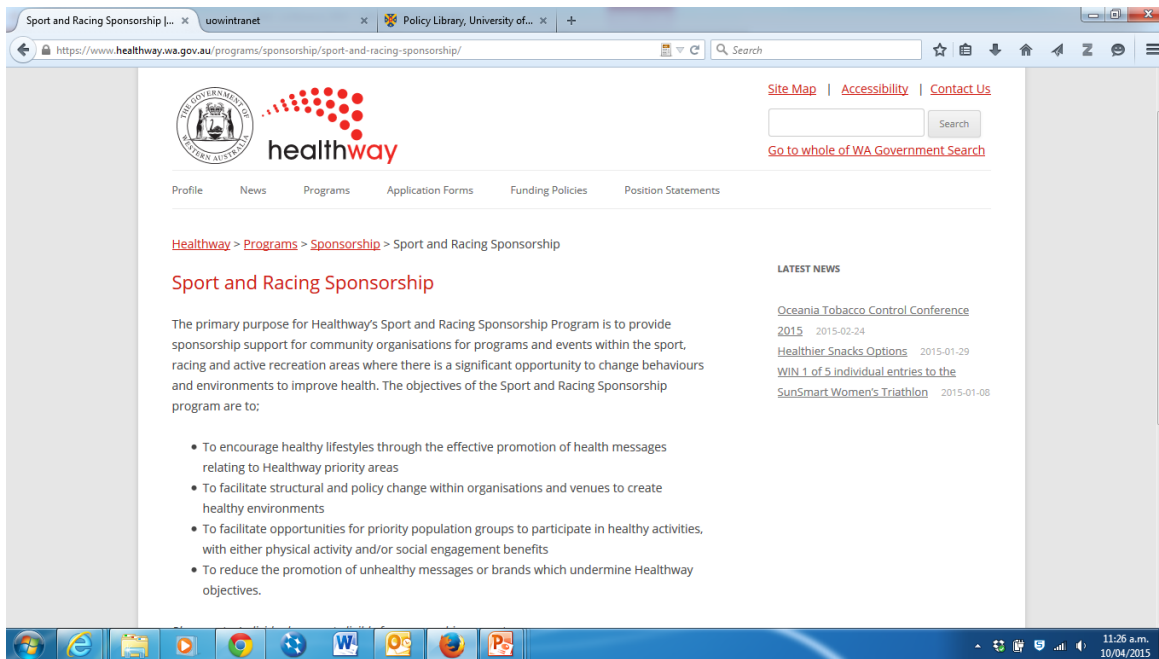
www.rightstuff.health.nsw.gov.au/site/home



Sports sponsorship replacement



<https://livelighter.com.au/>



Broad public health measures

- ▶ Regulate unhealthy food marketing
- ▶ Independent regulation of serving sizes and package size
- ▶ Taxation SSBs
- ▶ Improved labelling
 - ▶ Location and size of mandatory advisory statement
 - ▶ FOP labelling – mandatory rather than voluntary
 - ▶ Precedent
 - ▶ Milk'
 - ▶ Supplemented Foods'



Strengths and limitations

- ▶ Consumption not primary aim
 - ▶ Some photos showed children consuming
 - ▶ 31% comments confirmed consumption
- ▶ Children's took photos
- ▶ Range of children
- ▶ Local, but global availability and promotion



Conclusions

- ▶ Majority drinks do not comply with recommendations
- ▶ Consumption of one serving = substantial proportion of energy intake
- ▶ Part of sport-related diet and promoted as such
- ▶ Encourage excessive consumption
- ▶ Research to measure consumption
- ▶ Action required
 - ▶ Sport
 - ▶ Broadly
 - ▶ Comprehensive package



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