

ILSI SEAR Aasia (www.ilsi.org/SEA Region) and GLNC (www.glnc.org.au)
Carbohydrate intakes - high, low or irrelevant? Australia - March 2013

The challenges of translating nutrition into real foods (breakfast cereals)

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Cereal Partners Worldwide (CPW):



We have been gradually reformulating our cereals over the last 5 years



In Australia & NZ, all Nestle and UNCLE TOBYS breakfast cereals are:

- At least a source of fibre
- Made with at least 25% whole grain
- Meet the Food & Health Dialogue's sodium target for cereals (400mg/100g)
- Meet the Heart Foundation's Tick nutrient criteria
- Pass Nutrient Profiling under the government's new Food Standards Code



KEY AREAS

1. The challenges of reformulating to increase or decrease specific nutrients
2. The importance of consumer value

WHAT HAPPENS WHEN WE TRY TO REFORMULATE CEREALS?

Decreasing sodium & sugar
Increasing whole grain & fibre

Added sugars: Why Don't You Just Reduce It?

- Reducing sugar \neq reduction in kilojoules/calories
- Affects taste
- Can affect "bowl life" and product quality
- Can increase product cost if using sugar replacers
- Lower sugar \neq lower Glycemic Index
- Have to reduce it by 25% in one hit to claim "less sugar"



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Sodium is not just about taste but also functionality

- Improves the palatability of some cereals but can be reduced gradually
- May perform a technical role in the product
- Reducing sodium can add significant cost



Whole Grains help reduce the proportion of refined grains but are not a direct substitute

- Can be difficult to source whole grain flours
- More expensive to use
- Reduces shelf life
- Impacts "puff", crispness and texture
- May reduce fibre or increase fat and energy
- Impact can differ depending on manufacturing process

Fibre: It's not as simple as removing starch and adding fibre in

There are 4 primary ways to add fibre to breakfast cereals:

1. Altering the grain mix to favour high fibre grains
2. Addition of natural fibre-rich sources
3. Use of novel fibres
4. Selective breeding of grains to favour higher fibre levels e.g. BarleyMAX

Fibre: The Challenges

- Is the fibre retained in the final product?



Can you use a higher fibre grain variety?

- Product taste and texture may be affected causing product clumping



Added Inulin



GI: there's no "quick fix". Finding a solution may not favour nutrient density or be obvious



GI value	55	53	69	69	75
Fibre/100g	1.5g	2.5g	8g	10.9g	13.2g
Sugar/100g	41.3g	14.5g	27g	3g	2g
Protein/100g	4.6g	19.7g	7g	12.4g	9.2g
Whole grain	?	?	53%	97%	100%

IMAGINE THE COMPLEXITIES WHEN WE TRY TO CHANGE SEVERAL THINGS AT ONCE.....!

