Healthier reformulation of processed foods: policy opportunities

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Healthier reformulation of processed foods

- **Recommended**
  - By international health organisations

- **Precedence**
  - > 75 countries have national sodium reduction programmes

- **Effective**
  - UK salt reduction campaign: -7% in sodium in packaged foods & -15% in sodium intake

- **Equitable**
  - Wider changes to the food environment reach all population groups

A healthier reformulation programme for NZ

- **Processed foods**
  - Major contributors to NZ diets

- **Data available to develop and monitor**
  - Nutritrack & Nielsen Homescan

- **Three key policy opportunities identified**
  1. Standardised nutrition targets for fast foods
  2. Salt reduction model for NZ
  3. A sugar reduction campaign focused on children's foods

Escaron, Prev Chronic Disease, 2013
1. Nutrition targets for fast foods

<table>
<thead>
<tr>
<th>10 Fast food chains</th>
<th>12 Food groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burger King</td>
<td>Asian</td>
</tr>
<tr>
<td>Domino’s Pizza</td>
<td>Beverages</td>
</tr>
<tr>
<td>Hell Pizza</td>
<td>Breakfast</td>
</tr>
<tr>
<td>KFC</td>
<td>Burgers</td>
</tr>
<tr>
<td>McDonalds</td>
<td>Cakes</td>
</tr>
<tr>
<td>Muffin Break</td>
<td>Chicken</td>
</tr>
<tr>
<td>Pizza Hut</td>
<td>Desserts</td>
</tr>
<tr>
<td>St Pierre’s</td>
<td>Dressings</td>
</tr>
<tr>
<td>Subway</td>
<td>Pizza</td>
</tr>
<tr>
<td>Tank</td>
<td>Salads</td>
</tr>
<tr>
<td></td>
<td>Sandwiches</td>
</tr>
<tr>
<td></td>
<td>Sides</td>
</tr>
</tbody>
</table>

**n=5,468 total products**
- Adjusted linear regression
- Differences over five years
- Overall and by food group and chain

**n=1,025 products for sale 2+ years**
- Linear mixed models for random cluster effects
- Differences over five years
Serve size

Large, significant increases/decreases*

No significant change in serve size of same products available in 2+ years

Food group
- *Asian
- Beverages
- Breakfast
- Burgers
- Cakes
- *Chicken
- *Desserts
- Dressings
- *Pizza
- Salads
- *Sandwiches
- Sides
- ALL PRODUCTS
- Burger King
- *Domino’s
- *Hell Pizza
- Kentucky Fried Chicken
- *McDonalds
- Muffin Break
- *Pizza Hut
- *St Pierre’s
- Subway
- Tank

Fast food chain

Change in serve size (g)

+9 g or 5%
Sodium per serve

No significant change in sodium density across all products

Significant reduction in sodium of same products (reformulation) available in 2+ years (-22mg/100g or -7%)
Energy per serve

Significant increase in energy density across all products of +54kJ or 6%

No significant change in energy of same products available in 2+ years
1. Summary

• Serve size and energy density of NZ fast food products increased significantly over past 5 years

• Lower sodium in new and reformulated products off-set by overall increases in serve size

• **Opportunity**: Systematic monitoring and implementation of government-led targets

• Regulation and products marketed to young people should be considered
2. A salt reduction model for NZ

Reductions in the sodium content of packaged foods and other dietary sources of sodium to reduce adult population sodium intake by 30% (from 3,377 mg/day) towards optimal WHO target of 2,000 mg/day (5g salt)

- **Step One**: Develop a template for the sodium reduction model and identify data sources for input.
- **Step Two**: Estimate the mean weight of food purchased per day (g) for an individual in the population and adjust for wastage.
- **Step Three**: Estimate the mean sodium content of food groups contributing to population food purchases.
- **Step Four**: Estimate sodium intake from missing data sources including takeaways and restaurant food, fresh foods, and salt added at the table and in cooking.
- **Step Five**: Estimate total sodium consumption per day and the percentage each source contributes to the sodium intake of an individual.
- **Step Six**: Using UK model and local expertise, calculate the sodium target required for each food category (coupled with reductions from other sources of sodium) to achieve a 30% relative reduction.

Nutritrack + Homescan data
### MODEL SUMMARY

<table>
<thead>
<tr>
<th>Source</th>
<th>Current mean (mg/100g)</th>
<th>Target mean (mg/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaged food</td>
<td>1724</td>
<td>1096 (36%)</td>
</tr>
<tr>
<td>Fresh F&amp;V</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td>Fresh meat</td>
<td>152</td>
<td>152</td>
</tr>
<tr>
<td>Fresh fish/seafood</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Takeaway/restaurant</td>
<td>887</td>
<td>532 (40%)</td>
</tr>
<tr>
<td>Discretionary</td>
<td>506</td>
<td>304 (40%)</td>
</tr>
<tr>
<td><strong>TOTAL sodium</strong></td>
<td><strong>3377</strong></td>
<td><strong>2192 (35%)</strong></td>
</tr>
</tbody>
</table>

### EXAMPLE TARGETS

<table>
<thead>
<tr>
<th>Food category</th>
<th>Current mean (mg/100g)</th>
<th>Target mean (mg/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White bread</td>
<td>444</td>
<td>350 (21%)</td>
</tr>
<tr>
<td>Breakfast cereal</td>
<td>219</td>
<td>100 (54%)</td>
</tr>
<tr>
<td>Processed cheese</td>
<td>1361</td>
<td>900 (34%)</td>
</tr>
<tr>
<td>Bacon</td>
<td>1099</td>
<td>700 (36%)</td>
</tr>
<tr>
<td>Pasta sauce</td>
<td>442</td>
<td>220 (50%)</td>
</tr>
</tbody>
</table>
2. Summary

• Achieving the WHO sodium target will take considerable effort
  • Food manufacturers (reformulation)
  • Consumers (habitual change)

• **Opportunity**: Comprehensive government-led sodium reduction strategy
  1. Salt reduction targets for food manufacturers (key)
  2. Clear front of pack labelling
  3. Support for food industry
  4. Consumer awareness
3. Sugar reduction campaign

• **Aim**
  
  • Sales-weighted means and reduction targets for NZ processed foods which are major contributors to children’s total sugar intakes in NZ (informed by UK campaign)

• **Outcomes**
  
  • Sales-weighted total sugar contents & 20% reduction targets
  
  • Sales-weighted serve size and energy contents (single-serve foods/beverages) & 20% reduction targets

• **Timeframe**
  
  • Analysis by end 2018, publication early 2019

• **Opportunity:** Government-led sugar reduction campaign (child focus)
## Included food groups

**Contribution to total sugar intake of NZ children**

<table>
<thead>
<tr>
<th>Included food group (≥2% total sugar intake)</th>
<th>CNS02 (5 to 14 yrs)</th>
<th>ANS 97/98 (15 to 18 yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-alcoholic beverages</td>
<td>24%</td>
<td>27%</td>
</tr>
<tr>
<td>Sugar and sweets</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>Milk</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Dairy products</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Biscuits</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Cakes and muffins</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Bread</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Sweet spreads</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Bread based dishes</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Breakfast cereals</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Sauces and condiments</td>
<td>-</td>
<td>3%</td>
</tr>
</tbody>
</table>
Take home messages

1. **Opportunity:** Government-led healthier food reformulation

2. Healthier reformulation of NZ processed foods is feasible

3. Evidence based using NZ-specific data sets

4. Focusing on the serve size, energy, sodium and sugar contents of fast foods and supermarket products
   - Aligns with WHO recommendations and other countries
   - Will improve dietary intakes and health in NZ
   - Likely to be equitable

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Further information


https://academic.oup.com/ajcn/article/104/2/470/4564536