Live your life
Food Insulin Index (FII)

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Estimating meal time insulin dose:
Historically carb counting = cornerstone...

Carbohydrates (carbs) digestion:
• $\uparrow$ BGL
• $\uparrow$ insulin release
• $\downarrow$ BGL

But are carbs the only fuel (macronutrient) that affects our BGLs/ insulin needs?
Are carbs the only fuel that affects our BGLs/insulin needs?

Fat & protein digestion:

- GI of a meal
- Extends BGL elevation + insulin &/or need

Types of bolus insulin

Eg Pizza isn’t covered well by a single bolus
Questions on whether other nutrients impacted BGLs led to FII research ...

- FII research investigates changes in insulin levels (rather than BGLs) after ‘food’ consumption (not just carb-rich foods)

- Main findings:
  - Some low carb foods stimulate insulin release (eg steak, cheese) FII~45
  - Differing ‘carb qty’ meals have a similar FII (~45)
FII is in *research* phase ... aim is to increase insulin dose accuracy

FII = a measure of how much insulin is released after eating foods/ mixed meals

<table>
<thead>
<tr>
<th>GI</th>
<th>FII</th>
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<tbody>
<tr>
<td>Based on post meal ↑ in BGL</td>
<td>Based on post meal ↑ in insulin levels</td>
</tr>
<tr>
<td>Only applicable to CHO-rich foods</td>
<td>Can be used to test ANY food/meal (ie low CHO)</td>
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<tr>
<td>&gt; 2000 foods tested (books, online @ glycemicindex.com)</td>
<td>~120 foods/meals tested (no lists publicly available)</td>
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<tr>
<td>Assumes only CHO influences insulin required</td>
<td>Considers effect of non-CHO foods on insulin requirements</td>
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Summary

• Continue to carb count
  - Review count accuracy + watch patterns (high protein &/or fat meals)

• FII research ...*watch this space*
Further reading ...


- **Bell K.** Thesis: Clinical application of the food insulin index to diabetes mellitus. *University of Sydney, School of Molecular and Microbial Bioscience*. 2004. [Bell K.](http://ses.library.usyd.edu.au/handle/2123/11945)