Australian Health Survey (AHS)

Updating fatty acid values for the food composition database

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Outline

• Outline of the Australian Health Survey (AHS)
• Fatty acids in the AHS
• Data compilation methodology
Background

• Health Information Data Gaps
  – Nutrition
  – Physical Activity
  – Biomedical Risk Factors

The 2011/13 Australian Health Survey is being conducted by the Australian Bureau of Statistics in close consultation with Department of Health and Ageing. The National Heart Foundation of Australia has also provided additional funding for the survey.
Background

• Total of ~50 000 participants
  – 34,000 in general survey (results anticipated 2013)
  – 15,000 in Aboriginal and Torres Strait Islander survey wave (results anticipated 2014)

• 3 survey components to collect information on:
  1. General health, risk factors, use of health services
  2. Biomedical measures
  3. Nutrition and physical activity
     ▪ Supported by food composition database (AUSNUT)
Nutrition and Physical Activity component (NNPAS)

- Approximately 1/3 participants
- Physical activity, sedentary behaviour and food use questions
- Nutrition component will be the first nationally representative nutrition survey since 1995
  - Detailed food and supplement consumption information
NNPAS

• 20,000 NNPAS participants
  – 2 days of food and supplement consumption data
  – average of 30 different foods per person per day
  – includes bush foods

\[ \approx 1.2 \text{ million food consumption records} \]

• Coding foods
  – match to a food line in a specially prepared survey food composition database and supplement database (AUSNUT)
  – auto-code some foods, some manual coding by ABS/FSANZ

\[ 5000-7000 \text{ unique foods} \times 50 \text{ nutrients per food} \]

  plus supplements to be coded (10,000 registered)

  – check all records
Food Composition Database (AUSNUT)

• Nutrient database prepared by FSANZ
• The third in the AUSNUT series
• To be released when the full AHS results are released (mid 2013)
• This AUSNUT edition will include data for at least 50 nutrients for foods and supplements reported as consumed in the AHS
Food Composition Database (AUSNUT)

- Energy
- Moisture
- Protein
- **Fats**
- Cholesterol
- Carbohydrate
  - total carbohydrate, total sugars, total starch
- Ash
- Dietary Fibre
- Tryptophan

- **Vitamins**
  - vitamin A, thiamine, riboflavin, niacin, folates, vitamin B12, vitamin B6, vitamin C, vitamin E

- **Minerals**
  - calcium, phosphorus, magnesium, iron, zinc, potassium, sodium, iodine, selenium

- Alcohol
- Caffeine
Food Composition Database (AUSNUT)

Generation and compilation of nutrient data
Fat and fatty acids

- total fat
- total saturated fatty acids
- total monounsaturated fatty acids
- total polyunsaturated fatty acids
- total long chain w3 fatty acids
- total trans fatty acids
- linoleic acid ($C_{18:2w6}$)
- alpha linolenic acid ($C_{18:3w3}$)
Fatty acid data

- Based on NUTTAB 2010
  - Updated with recent values:
    - NSW Food Authority’s Trans Fatty Acid analytical program
    - FSANZ Key Foods analytical program
    - Industry data
  - Reviewed by industry and experts
- Further updated with new data from analytical program specific to the AHS
<table>
<thead>
<tr>
<th>Foods analysed for fatty acids in the AHS analytical program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast cereal, Coco Pops, original*</td>
</tr>
<tr>
<td>Milk reduced fat*</td>
</tr>
<tr>
<td>Breakfast cereal, muesli, raw*</td>
</tr>
<tr>
<td>Milk regular fat*</td>
</tr>
<tr>
<td>Breakfast cereal, Special K, original*</td>
</tr>
<tr>
<td>Mushrooms, common, fresh, raw</td>
</tr>
<tr>
<td>Butter, salted</td>
</tr>
<tr>
<td>Pasta, gluten free, cooked*</td>
</tr>
<tr>
<td>Cheese, goat</td>
</tr>
<tr>
<td>Salmon red, canned, drained*</td>
</tr>
<tr>
<td>Cheese, mozzarella</td>
</tr>
<tr>
<td>Salmon, canned, flavoured, drained</td>
</tr>
<tr>
<td>Couscous, uncooked</td>
</tr>
<tr>
<td>Salmon, pink, canned, drained</td>
</tr>
<tr>
<td>Cream cheese, regular*</td>
</tr>
<tr>
<td>Seaweed, nori, dried</td>
</tr>
<tr>
<td>Cream, regular*</td>
</tr>
<tr>
<td>Sour cream, regular*</td>
</tr>
<tr>
<td>Egg, chicken, whole, raw</td>
</tr>
<tr>
<td>Soy based yoghurt, vanilla or fruit* flavoured</td>
</tr>
<tr>
<td>Fish finger, frozen, crumbed, raw*</td>
</tr>
<tr>
<td>Tuna canned in brine, drained*</td>
</tr>
<tr>
<td>Flour, spelt</td>
</tr>
<tr>
<td>Tuna, canned, flavoured, drained</td>
</tr>
<tr>
<td>Flour, wheat, white, plain</td>
</tr>
<tr>
<td>Tuna, canned, in vegetable oil, drained</td>
</tr>
</tbody>
</table>

*Denotes a food which was analysed for TFA also
Fatty acid data

- Focus on foods that are major contributors to fatty acid intake

<table>
<thead>
<tr>
<th>Type</th>
<th>Major contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFA</td>
<td>Dairy, margarine spreads, meat</td>
</tr>
<tr>
<td>MUFA</td>
<td>Oils, spreads</td>
</tr>
<tr>
<td>PUFA</td>
<td>Oils, spreads</td>
</tr>
<tr>
<td>Long chain w3</td>
<td>Fish, seafood, meat</td>
</tr>
<tr>
<td>Trans fatty acids</td>
<td>Processed foods, deep fried foods, pastries, dairy, red meat</td>
</tr>
<tr>
<td>Linoleic acid (C18:2w6)</td>
<td>Oils, spreads</td>
</tr>
<tr>
<td>Alpha linolenic acid (C18:3w3)</td>
<td>Oils, spreads</td>
</tr>
</tbody>
</table>
Compilation methods

- All foods require a complete profile so gaps must be filled
- Use of new analytical data where possible
  - Analytical values applied to similar foods
  - Data may be borrowed from other sources
    - US Department of Agriculture
    - British food tables
    - Food labels
  - For mixed foods, focus is on primary fat contributor
- Foods with very low total fat (<0.5%) assumed to have zero fatty acids
Trans fatty acid data

- Limited availability of TFA data
- Analytical values applied to specific foods where possible
- Analytical values then applied more broadly to food categories
  - Based on categories previously defined for FSANZ 2009 TFA Review Report
Use of AHS Data

Food regulation
- Nutrition Panel Calculator (NPC)
- Food standards development and monitoring
- Food incident response

Health and other government departments
- Health policy and program development and evaluation
Conclusion

• The AHS will report updated nationally representative data on:
  – Health and nutritional status, current dietary habits, food and nutrient intakes, food composition, physical activity, sedentary behaviour

• The food composition database will provide nutrient profiles for all foods and supplements consumed in the Survey
  – Fatty acid values have been updated with recent analytical and industry data
  – Data have been reviewed by industry and experts

• AHS data will be used in:
  – Nutrition Panel Calculator (NPC)
  – Food standards development and monitoring
  – Food incident responses
  – Health policy and program development and evaluation
References

- **AHS**

For further details on AHS contact:
- ABS 1300 135 070
- [aushealthsurvey@health.gov.au](mailto:aushealthsurvey@health.gov.au)

- **NUTTAB 2010**

- **Intakes of Trans Fatty Acids in New Zealand and Australia – Review Report - 2009 Assessment**
"Bad news! More people are switching from red meat to fish!"