Transitioning from refined grain to wholegrain as part of a sustainable diet

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Healthgrain Forum
• **Network** of universities, institutes and industries interested in grain and grain-based products.

• **Vision:** Whole grain and high fibre grain-based foods assist consumers in health maintenance, help reduce health care costs and provide added value for companies in the production chain from farm to fork.

• **Aim:** to formulate priorities for research and communication activities to increase consumers’ intake of protective components in whole grains.

[https://healthgrain.org/](https://healthgrain.org/)
All of the grain must be present in wholegrain products.
Whole grains shall consist of the intact, ground, cracked, flaked or otherwise processed kernel after the removal of inedible parts such as the hull and husk. The principal anatomical components - the starchy endosperm, germ and bran - are present in the same relative proportions as they exist in the intact kernel.
Grain processing removes nutrients

Bran and germ are retained, so whole grain flours have:

↑ Fibre
↑ vitamins & minerals
↑ phytochemicals
↑ protein
↓ carbohydrate

Only wholemeal flours contain all the parts of the grain.
Increasing consumption of whole grains will improve health of EU citizens

Time is too short to provide a full overview on the recognized health benefits of consuming whole grain products in stead of refined grain products, but....
Whole grain and health benefits

- Risk on Cardiovascular Diseases
- Risk on a diversity of cancers, like colorectal cancer
- Risk on diabetes type 2
- Risk on obesity

- Increases dietary fiber intake
- Improves gastrointestinal function and health
- ......
Whole Grain ↓ all-cause mortality

Benisi-Kohansal et al. (2016) Advances in Nutrition 7 1052-1065

Dose response relationship
# Eat Lancet Recommendations

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Macronutrient intake grams per day (possible range)</th>
<th>Caloric intake kcal per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole grains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice, wheat, corn and other</td>
<td>232</td>
<td>811</td>
</tr>
<tr>
<td>Tubers or starchy vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potatoes and cassava</td>
<td>50 (0–100)</td>
<td>39</td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All vegetables</td>
<td>300 (200–600)</td>
<td>78</td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All fruits</td>
<td>200 (100–300)</td>
<td>126</td>
</tr>
<tr>
<td>Dairy foods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole milk or equivalents</td>
<td>250 (0–500)</td>
<td>153</td>
</tr>
<tr>
<td>Protein sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef, lamb and pork</td>
<td>14 (0–28)</td>
<td>30</td>
</tr>
<tr>
<td>Chicken and other poultry</td>
<td>29 (0–58)</td>
<td>62</td>
</tr>
<tr>
<td>Eggs</td>
<td>13 (0–25)</td>
<td>19</td>
</tr>
<tr>
<td>Fish</td>
<td>28 (0–100)</td>
<td>40</td>
</tr>
<tr>
<td>Legumes</td>
<td>28 (0–100)</td>
<td>284</td>
</tr>
<tr>
<td>Nuts</td>
<td>50 (0–75)</td>
<td>291</td>
</tr>
<tr>
<td>Added fats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsaturated oils</td>
<td>40 (20–80)</td>
<td>354</td>
</tr>
<tr>
<td>Saturated oils</td>
<td>11.8 (0–11.8)</td>
<td>96</td>
</tr>
<tr>
<td>Added sugars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All sugars</td>
<td>31 (0–31)</td>
<td>120</td>
</tr>
</tbody>
</table>
Whole grain consumption EU

* Figures from Germany are left out because of non-realistic high intakes for infants (> 100 g/d)
Global transition in grains:
From refined to whole grains
Global transition in grains: From refined to whole grains
Key Message

• A transition from products based mainly on refined grain to products mainly based on whole grains will improve health of Europeans.

• .... and matches the recommendations of the EAT-Lancet Commission report.
Whole Grain Initiative

Basis:
To increase whole grain intake, efforts cannot be limited to one or two stakeholders, but must be addressed using the combined efforts of all parties involved in the food supply chain. For this reason, more than 200 renowned experts and leading stakeholders, representing more than 35 countries, came together at the 6th International Whole Grain Summit, 13-15 November 2017 in Vienna, Austria, with the common goal of creating a collective action plan to increase whole grain intake worldwide, for the health and well-being of all people.

As an output of this Whole Grain Summit the VIENNA WHOLE GRAIN DECLARATION reflects the experts’ consensus on the principal goals that must be addressed, and the actions that must be taken in order to increase whole grain intake.

To carry out the action points necessary to meet the key goals, Whole Grain Summit participants agreed to work together on a global “Whole Grain Initiative” and to initiate international working groups.

Goal:
• World-wide interdisciplinary collaboration driven by principles of
  – engagement,
  – sharing knowledge, information and resources,
  – transparency and inclusivity
  to increase the whole grain intake worldwide.

• To act as overarching counterpart for policy makers and donor organisations.
DECLARATION OF KEY GOALS AND ACTION POINTS

Four key goals must be met to drive whole grain acceptance and product availability, and to create and execute appropriate communication and education programs. Using the World Café discussion process, Whole Grain Summit participants identified the following goals and specific action points that will help achieve them:

1. Definitions
   Reach consensus on a global definition of a whole grain (raw materials) and on the definition of a whole grain food.

3. Sustainability
   Reach consensus about the contributions of whole grains to sustainable diets and the health of the planet.

2. Intake Recommendation
   Reach consensus on recommended quantitative whole grain intake, backed up by both health and economic research.

4. Promotion and Education
   Form ongoing partnerships working together to increase whole grain consumption and to disseminate authoritative whole grain statements and campaigns globally.
Whole Grain Initiative

- International Working Group on Whole Grain Definition(s)
- International Working Group on Whole Grain Intake Recommendation(s)
- International Working Group on the Economic Evaluation of Increased Whole Grain Intake
- International Working Group on Best Practices for Public-Private Partnerships
- International Working Group on Fact Based Whole Grain Information

http://www.wholegraininitiative.org/en/