MESSAGES FROM THE WHOLE GRAIN SUMMIT 2017
OUTLINE

INTRODUCTION : NCD in Indonesia and Its Risk Factor

KEY GOALS AND ACTION POINTS OF VIENNA WHOLE GRAIN DECLARATION

1. Definition of Whole Gran and Whole-Grain Foods
2. Intake Recommendation
3. Sustainability
4. Promotion and Education

CONCLUSION AND RECOMMENDATION
INTRODUCTION:
NCD in Indonesia and Its Risk Factor

EPIDEMIOLOGICAL TRANSITION OF DISEASES

INFECTIOUS DISEASES → NON COMMUNICABLE DISEASES
TREND OF INFECTION DISEASES

Source: MOH RI, 2012
TREND OF NON INFECTIOUS DISEASES

Source: MOH RI, 2012

- 1995: 41.7%
- 2001: 49.9%
- 2007: 59.5%
NCD’s BECOME MORE PREVALENT IN INDONESIA

Burden of disease by cause in Indonesia, 1990-2010

Source: IHME
Cancer (%) 1.4
Renal Failure (%) 2
Stroke (%) 12.1
Coronary Heart Disease (%) 1.5
COPD (%) 3.7
Diabetes Melitus (%) 6.9
Injury (%) 8.2
Hypertension (%) 25.8

Source: National Health Survey 2013
<table>
<thead>
<tr>
<th>MODIFIABLE RISK FACTOR OF NCD</th>
<th>METABOLIC RISK FACTOR OF NCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL INACTIVITY</td>
<td>RAISED BLOOD PRESSURE</td>
</tr>
<tr>
<td>TOBACCO USE</td>
<td>RAISED TOTAL CHOLESTEROL</td>
</tr>
<tr>
<td>ALCOHOL USE</td>
<td>ELEVATED BLOOD GLUCOSE</td>
</tr>
<tr>
<td>UNHEALTHY DIETS</td>
<td>OVERWEIGHT AND OBESITY</td>
</tr>
</tbody>
</table>

Prevalence of Stunting among Under Five Years Old Children in Indonesia (Basic Health Survey, 2013)
Prevalence of Obesity among adult women (Basic Health Survey, 2013)
Prevalence of Underweight, Overweight, and Obesity among Adult (Basic Health Survey, 2013)

The rise of over nutrition exceeding under nutrition
Proportion of > 10 years old People with Low Activity Level, 2013

Source: Basic Health Survey 2013
Smoking Habit according to Provinces in Indonesia, 2007-2013

Source: Basic Health Research 2013
Unhealthy and Unbalanced Diet

Source: MOH Indonesia, 2018
KEY GOALS AND ACTION POINTS

VIENNA WHOLE GRAIN DECLARATION

A Call to Action for Increasing Whole Grain Intake

from the participants of the 6th International Whole Grain Summit in Vienna 2017
PREAMBLE

• For over three decades, repeated studies have clearly demonstrated that people eating more whole grains have reduced risks of many diseases compared to those eating less.

• This has led many countries to adopt specific recommendations for people to choose whole grain-based foods instead of refined grain-based foods.

• Yet current data suggest that whole grain intake in most countries remains well below existing recommended levels, which is a concern for long-term public health.
• 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.

• There are 4 Key Goals and Action Points declared
<table>
<thead>
<tr>
<th>Key Goals</th>
<th>Action Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Definitions</td>
<td>• Convene a global working group including key grain science groups and experts from diverse regions, to finalize a definition of whole grain and whole-grain food</td>
</tr>
</tbody>
</table>

Reach consensus on a global definition of a whole grain (raw materials) and on the definition of a whole grain food.
Definition of Whole Grain and Whole Grain Foods

• Several definitions of whole grain have been suggested by different association/forum/council: AACC, European HEALTHGRAIN Forum, US-FDA, The Whole Grains Council

• Definition of ‘whole-grain foods’ is needed both to be used in scientific publications and within the food industry.

• For the purpose of labelling of whole-grain foods, accurate definition is needed to differentiate the terminology of foods made entirely with whole grains, those where the majority of grains are whole (whole-grain rich) and foods that contain more refined grain than whole grain.
## Whole Grain Definition and Regulation in Indonesia

<table>
<thead>
<tr>
<th>There is Existing Regulations Related to the Definition of Whole Grains and Wholegrain Foods</th>
<th>The Regulations Include Requirements for Minimum Amounts of Whole Grains in Certain Foods</th>
<th>There are Labelling Requirements or Options for Wholegrain Foods</th>
<th>Regulation Allow Content Claims Related to Whole Grains</th>
<th>Regulation Do Not Allow Any Health Claims Related to Whole Grains</th>
</tr>
</thead>
</table>

Brownlee et al., 2018. Nutrients, available online
<table>
<thead>
<tr>
<th>Key Goals</th>
<th>Action Points</th>
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</thead>
<tbody>
<tr>
<td><strong>Intake Recommendation</strong></td>
<td>• Document the health evidence for a specific whole grain intake recommendation.</td>
</tr>
<tr>
<td></td>
<td>• Commission an evaluation of the economic impact on health care costs, productivity and other factors, from following such an intake.</td>
</tr>
<tr>
<td></td>
<td>• Prepare a report detailing the intake recommendation and its economic impact, that can be delivered to policy makers globally.</td>
</tr>
<tr>
<td>Area/Authority</td>
<td>Adult target</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>WHO</td>
<td>&gt;25 g/d</td>
</tr>
<tr>
<td>Australia/New Zealand</td>
<td>30g/d M, 25g/d F</td>
</tr>
<tr>
<td>EFSA</td>
<td>25g/d</td>
</tr>
<tr>
<td>Germany, Austria, Switzerland</td>
<td>&gt;30g/d</td>
</tr>
<tr>
<td>Ireland</td>
<td>-</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14g/1000kcal/d</td>
</tr>
<tr>
<td>Nordic countries</td>
<td>30g/d M, 25g/d F</td>
</tr>
<tr>
<td>Spain</td>
<td>&gt;25 g/d</td>
</tr>
<tr>
<td>UK</td>
<td>30g/d</td>
</tr>
<tr>
<td>USA, Canada</td>
<td>14g/1000kcal/d</td>
</tr>
</tbody>
</table>

Source: Dr Iain Brownlee
CSIRO Nutrition & Health Program, Australia
Newcastle Research and Innovation Institute Singapore

Buyken et al., (2018) EJCN Available online
• In addition to being a key source of energy, protein, micronutrients and phytochemicals to the diet, whole-grain cereals are an important source of different dietary fibers. Increased consumption of whole grains improves the overall quality of the diet and in particular is a good way to increase dietary fibers intake.
Whole grain and refined grain consumption and the risk of type 2 diabetes: a systematic review and dose–response meta-analysis of cohort studies

Dagfinn Aune · Teresa Norat · Pål Romundstad · Lars J. Vatten

Our results support public health recommendations to replace refined grains with whole grains and suggest that at least two servings of whole grains per day should be consumed to reduce type 2 diabetes risk.
FOOD BASED DIETARY GUIDELINES

• Grain foods are universally recognized as the basic part of dietary recommendations at the position together with carbohydrate-rich sources to provide dietary energy and other nutrients including dietary fiber. In some countries, no distinction is made between cereal types and whole grains are not generally specified.
10 Pesan Gizi Seimbang

1. Syukuri dan Nikmati Aneka Ragam Jenis Makanan
2. Banyak Makan Sayuran dan Cukup Buah-buahan
3. Konsumsi Lauk-pauk Berprotein Tinggi
4. Konsumsi Aneka Ragam Makanan Pokok
5. Batasi Konsumsi Makanan Manis, Asin dan Berlemak
6. Biasakan Sarapan Pagi Sebelum Beraktivitas
7. Minum Air Putih Yang Cukup dan Aman
8. Biasakan Baca Label Pada Kemasan Makanan
9. Biasakan Cuci Tangan Dengan Sabun dan Air Mengalir
10. Berolahraga Secara Teratur dan Jaga Berat Badan Normal

Tumpeng Gizi Seimbang
Panduan Konsumsi Sehari Hari

Indonesia Balance Nutrition Guidelines 2014
4. Biasakan mengonsumsi anekaragam makanan pokok

Makanan pokok adalah pangan mengandung karbohidrat yang sering dikonsumsi atau telah menjadi bagian dari budaya makan berbagai etnik di Indonesia sejak lama. Contoh pangan karbohidrat adalah beras, jagung, singkong, ubi, talas, garut, sorgum, jewawut, sagu dan produk olahannya. Indonesia kaya akan beragam pangan sumber karbohidrat tersebut.

There is a Food-Based Whole Grain Recommendations from Ministry of Health

There is No Suggestion for Whole Grain Food Portion Size or Amounts of Whole Grains in the Food-Based Recommendation

There is No Rationale for Increasing Whole Grain Intake as suggested by the Ministry of Health or other Agency

There is No Specific Tools, Educational Materials or Other Approaches to Increase Whole Grain Intake Provided by Ministry of Health or Other Agency

Brownlee et al., 2018. Nutrients, available online
MyPyramid Food Guidance System 1992 vs 2005

Enjoy a wide variety of nutritious foods from these five food groups every day. Drink plenty of water.

Australia

Australian Guide to Healthy Eating
# 1 Food Guide Pagoda

## Chinese Food Guide Pagoda (2016)

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Recommendations (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt</td>
<td>&lt;6g</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>25–30g</td>
</tr>
<tr>
<td>Milk and dairy products</td>
<td>300g</td>
</tr>
<tr>
<td>Soybeans and nuts</td>
<td>25–35g</td>
</tr>
<tr>
<td>Lean meats</td>
<td>40–75g</td>
</tr>
<tr>
<td>Fish</td>
<td>40–75g</td>
</tr>
<tr>
<td>Eggs</td>
<td>40–50g</td>
</tr>
<tr>
<td>Vegetables</td>
<td>300–500g</td>
</tr>
<tr>
<td>Fruits</td>
<td>200–350g</td>
</tr>
<tr>
<td>Cereals, tubers and legumes</td>
<td>250–400g</td>
</tr>
<tr>
<td>Whole grains and legumes</td>
<td>50–150g</td>
</tr>
<tr>
<td>Tubers</td>
<td>50–100g</td>
</tr>
<tr>
<td>Water</td>
<td>1500–1700ml</td>
</tr>
</tbody>
</table>

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Engage in physical activities equivalent to 6000 walking steps daily.
Japanese Food Guide Spinning Top

Do you have a well-balanced diet?

Physical Activity

Water or tea

Enjoy Snacks, Confection and Beverages moderately!

Grain dishes (Rice, Bread, Noodles, and Pasta)

5-7 SV

Vegetable dishes

5-6 SV

Fish and Meat dishes (Meat, Fish, Egg and Soy-bean dishes)

3-5 SV

Milk (Milk and Milk products)

2 SV

Fruits

2 SV

for one day

※ SV is an abbreviation of “Serving”, which is a simply countable number describing the approximated amount of each dish or food served to one person.

Japan
Singapore’s Healthy Diet Pyramid (2009)
No Data Intake of Whole Grain in Indonesia

<table>
<thead>
<tr>
<th>There is No Estimate of Whole Grain Intake Data Available for Adults</th>
<th>There is No Estimates of Whole Grain Intake Data Available for Children</th>
<th>There is No Data Available for Changes in Whole Grain Intake over Time for Adults</th>
<th>There is No Data Available for Changes in Whole Grain Intake over Time for Children</th>
<th>No Data Exist (From Market or Nutritional Surveys) on the Types of Wholegrain Foods That Are Consumed and the Proportion That They Are Consumed in</th>
</tr>
</thead>
</table>

Grains consumption data collected in the National Socio-Economic Survey consist only data from rice, glutinous rice, corn (wet and dry) and also wheat flour consumption without differentiating either whole grain or milled-grain processing.

Brownlee et al., 2018. Nutrients, available online
<table>
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<th>Key Goals</th>
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<tbody>
<tr>
<td>Sustainability</td>
<td>• Document the carbon footprint of whole grains compared to other dietary choices, in the context of growing world populations and climate change.</td>
</tr>
<tr>
<td>Reach consensus about the contributions of whole grains to sustainable diets and the health of the planet.</td>
<td></td>
</tr>
</tbody>
</table>
Can whole grain bread lower your carbon footprint?

Whole grain bread is often promoted for the health benefits it provides as a source of dietary fiber. But how many of us consider that the use of whole grain flour in bread production can lead to a lower carbon footprint?

A study published in the International Journal of Lifecycle Assessment puts the carbon footprint of whole grain bread at 6-7% lower than that of white bread. Part of the reason is that, when milling flour for white bread, around 25% of the grain – the fiber – is thrown away.

SUSTAINABLE DIET
LET’S THINK ABOUT SUSTAINABILITY
Food for thought, food to waste

• In Indonesia, food waste is generally disposed with recyclables and other waste as there is limited practice of waste sorting.

• Food waste amounting 315 kg per capita per year.

Aretha Aprilia
The Jakarta Post, November 7, 2013
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<td><strong>Promotion and Education</strong></td>
<td>4. Form ongoing partnerships working together to increase whole grain consumption and to disseminate authoritative whole grain statements and campaigns globally.</td>
</tr>
<tr>
<td></td>
<td>• Create a “how-to” kit detailing ways to create public-private partnerships (involving entities such as WHO, FAO, nutrition non-profits, disease associations, governments, etc.) and how these partners can best work together.</td>
</tr>
<tr>
<td></td>
<td>• Develop evidence-based fact sheets addressing popular myths/questions about whole grains and possible emotional appeals (tied to local cultures) to gives these facts greater impact.</td>
</tr>
</tbody>
</table>
• There is No Country-Specific, Food-Based Whole Grain Recommendations From Government Organisations
• There is Professional Group or Non-Governmental Organisation (e.g., Food and Nutrition Society) Developing Food-Based Whole Grain Recommendations
• There is possibility to create public-private partnership to increase whole grain consumption
• All efforts should be accompanied with nutrition education to consumers
CONCLUSION AND RECOMMENDATION

• NCD becomes more prevalent in Indonesia.
• Whole grains consumption could reduce the burden of chronic diseases
• Increasing intake of whole grains requires efforts from several stakeholders such as agricultural sectors, health agencies and industry to provide standard definitions of whole grains and whole-grain foods and to promote their consumption.
• Currently, there is no data available on consumption of whole-grain foods in Indonesia. National socio-economic survey should include whole grain consumption in their data collection
CONCLUSION AND RECOMMENDATION (cont.)

• Promoting regulation on food product labeling to help consumers distinguish whole grain products from those with misleading claims needs to be established.

• Consideration to incorporate whole grains into dietary guidelines and actively promote their consumption.

• Strong public-private partnerships to develop campaigns to encourage whole grain consumption and to increase the variety, availability and desirability of whole grain foods for the public.
Thank you very much

“IPB, serving and searching for the best”