Grains For Health

The role of grain-based foods in a healthy diet
Presentation Overview

• What are grains and grain-based foods?
• Why are grain-based foods important?
• Refined grains vs. wholegrains
• Latest research findings re: wholegrains
• How much do we need each day?
• Enticing ways to include grains in your day
What are grains?

- Grains are the seeds of cereal plants

- Grains consist of 3 main parts:
  - Bran
    (fibre rich outer layer)
  - Endosperm
    (middle starchy layer)
  - Germ
    (nutrient rich core)
Grains we most commonly eat

- Wheat
- Rye
- Barley
- Oats
- Rice
- Corn (maize)
- Triticale
Grain-based foods

Grains are processed into products we eat every day, like:

- Breads
- Crispbreads & crackers
- Biscuits
- Breakfast cereals & muesli
- Rolled oats (porridge)
- Rice
- Pasta & noodles
- Couscous
Why are grain-based foods important?

• They are energy ‘powerhouses’:
  - Grains provide energy-giving carbohydrates to fuel our muscles, brain and other body organs

• Provide dietary fibre:
  - To help keep you regular, lower blood cholesterol levels, keep you feeling full for longer (good news for those watching their waistline) and much more
  - ‘Breads and cereals’ are the leading source of dietary fibre in the Australian diet*

*National Nutrition Survey 1995
Why are grain-based foods important?

• Provide essential vitamins & minerals:
  - B-group vitamins (thiamin, riboflavin, niacin & folate)
  - Vitamin E
  - Essential minerals like iron, zinc, magnesium and phosphorus

• Contribute protein:
  - Important for growth and repair of muscles and body tissues

• Wholegrains also provide antioxidants and phytoestrogens
Refined grains vs. wholegrains

Refined grain foods…

• Foods such as white bread, white rice and pasta are made from refined grains

• Australian white flour contains about 80% of the original grain

• White bread contains nutrients and fibre at lower levels (around 30-50%) than found in wholemeal and wholegrain products
Refined grains vs. whole grains

Wholegrain foods...
- Contain all the components of the grain - the bran, germ and endosperm
- The grains may be whole, cracked or milled
- Outer grain layers are a great source of essential nutrients & contain many protective elements
- Typical wholegrain foods include wholemeal & mixed grain breads, rolled oats, wholemeal pasta and brown rice
What about wholemeal?

• Wholemeal flour is produced by milling wholegrain to a finer texture

• Wholemeal flour contains all the goodness of the grain, therefore wholemeal foods are also wholegrain

• Wholemeal bread and rye bread are typical examples of wholemeal products
Wholemeal vs. White Bread

![Graph comparing wholemeal vs. white bread in terms of fat, dietary fibre, protein, and carbohydrate content.](image)
Wholemeal vs. White Bread

**Graph:**
- **Y-axis:** mg/100g
- **X-axis:** Riboflavin, Thiamin, Zinc, Niacin, Iron
- **Legend:**
  - White bread
  - Wholemeal bread

The graph compares the nutrient content (Riboflavin, Thiamin, Zinc, Niacin, Iron) per 100g between white bread and wholemeal bread.
Wholegrain goodness

- The protective components of grains are mainly found on the outer bran layers

- Diets high in refined grains do not protect from disease as do diets high in wholegrains

- Eating some wholegrain foods every day maximises your intake of the protective components

- It’s recommended to enjoy at least 2 serves of wholegrain foods every day
<table>
<thead>
<tr>
<th>Always/usually</th>
<th>Gender</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Men</td>
</tr>
<tr>
<td>Choose foods/beverages because they are high in fibre</td>
<td>47%</td>
<td>46%</td>
</tr>
<tr>
<td>Choose wholegrain products over those made with white flour</td>
<td>49%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Aussie shopping habits

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Attitudes and Actions Toward Health and Nutrition Choices
Research shows…

A diet high in grain-based foods (especially wholegrains), legumes, fruits and vegetables can help protect against:

→ **Heart disease**
→ **Diabetes**
→ **Some cancers**

It is also associated with better **long-term weight management**
Wholegrains and Heart Disease

- Including **wholegrains** regularly in a balanced diet can reduce the risk of coronary heart disease by **20-40%**

- This is a **significant benefit** compared to the effect that other foods have on heart health (e.g. an increase in fruit & vegetable intake reduces heart disease risk by 10-15%)

- The ‘**package**’ of fibre, antioxidants & minerals found in wholegrains work together to protect against heart disease
Wholegrains and Diabetes

- Prevalence of Type 2 diabetes has been escalating throughout the world since the mid 20\textsuperscript{th} century, when refined foods started to replace unprocessed or lightly processed foods.

- Research shows that eating \textbf{two-three serves} of \textbf{wholegrain foods} each day can reduce the risk of Type 2 diabetes by \textbf{20-30\%}.

- Fibre and the mineral magnesium found in wholegrains may account for some of the beneficial effect.
Wholegrains and Cancer

Evidence from cancer studies suggests wholegrain cereal foods and cereal fibre rich foods may protect against:

- Colorectal cancers
- Gastric cancers
- Possibly also breast, endometrial and prostate cancers

Choose wholegrain or wholemeal food options on a regular basis, as research suggests it could reduce cancer risk by as much as 40%.

The Cancer Council New South Wales recommends at least half our daily bread, cereals and pasta choices should be wholegrain.
Wholegrains and Weight Control

A recent review of the scientific literature revealed there is strong evidence that:

• A diet high in wholegrains is associated with a lower body mass index (BMI), waist circumference and risk of being overweight

• A diet high in wholegrains and legumes can help reduce weight gain

• Significant weight loss is achievable with energy controlled diets that are high in wholegrain foods
So...How much do I need?

The Australian Guide to Healthy Eating recommends we should aim to eat at least 4 serves of breads & cereals each day.
How many serves of wholegrain?

<table>
<thead>
<tr>
<th>Aim to eat at least 4 serves of grain food each day</th>
<th>A good target is to make at least half your grain foods wholegrain</th>
<th>Therefore, at least 2 serves should be wholegrain varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>4+ serves in total</td>
<td></td>
<td>2+ wholegrain serves</td>
</tr>
</tbody>
</table>
What is a serve?

1 ‘serve’ of grain-based food:
= 2 slices of bread
= 1 medium bread roll
= 4 crispbreads
= 1 cup of cooked pasta, noodles, rice
= 1 cup of porridge
= 1 1/3 cups of breakfast cereal flakes
= 2 wheat-flake or oat-flake breakfast biscuits
= ½ cup of muesli
Include some grains in your day…

**Breakfast:**
- Wholegrain, wholemeal or mixed-grain toast
- Wholemeal crumpets or English muffins
- High-fibre or wholegrain breakfast cereals
- Porridge (rolled oats)
- Muesli
- Wholemeal pancakes
- French toast (made using wholemeal bread)
- Sweet corn or baked beans
Include some grains in your day...

Lunch:

- Wholegrain, wholemeal or mixed grain sandwiches or rolls
- Stuffed wholemeal pita pockets or lavash wraps
- Vegetable soup with brown rice
- Salad containing wholemeal pasta, brown rice or bulgur
- Healthy pizza made on wholemeal or wholegrain English muffin bases
Include some grains in your day...

Dinner:
- Italian-style meals with wholemeal pasta
- Stir frys with brown rice
- Middle-Eastern dishes with couscous
- Casseroles thickened using wholemeal flour, brown rice or wheat bran
- Desserts (e.g. puddings) made with wholemeal flour
Include some grains in your day...

Snacks:

• Wholegrain crispbreads or crackers
• Muffins or biscuits made from rolled oats or wholemeal flour
• Low fat muesli bars
• Wholemeal pikelets
• Rice cakes
For further information...

Go Grains Health & Nutrition Ltd website

www.gograins.com.au