

# Grain Foods and Legumes

An update on changes to the Australian Dietary Guidelines



In the recent review of the Australian Dietary Guidelines, a number of changes have been made to the recommendations for the intake of grains and legumes.<sup>1</sup> This factsheet provides a summary to help health care professionals understand these changes. It also provides tips on how to encourage Australians to meet the grains and legumes recommendations as well as resources for clients or patients.

## Summary

- Daily consumption of grain foods is recommended, mostly whole grain and/or high cereal fibre varieties.
- Australian adults should consume at least 6 serves of grain foods per day.
- Grain food serve sizes have decreased by up to half.
- Legume serve size has increased and differs between food groups.

## Good quality grain food choices

The grain food group includes both whole grain products such as oats and whole grain bread as well as more refined grain foods including white bread, white rice, pasta and noodles. It excludes 'discretionary foods' which are refined grain food products with high levels of added sugar, fat and/or sodium, such as cakes, biscuits, pastries and takeaway foods including hamburgers, hot dogs and pizza.

While surveys suggest people are eating less core grain foods, they are choosing discretionary grain foods more often.<sup>3</sup> On average, one third of the total grain foods eaten by Australians each day are discretionary foods. As a result Australians may be missing out on important nutrients provided by core grain foods and increasing their intake of less favourable nutrients.

It is important that Australians understand the amount and type of grain foods they need to be eating to meet the recommendations. People should choose whole grain, high fibre or low GI core grain foods most of the time and limit discretionary foods.

## Grain Food Recommendations

The review of the evidence that informed the Australian Dietary Guidelines noted that there is now stronger evidence of an association between eating grain foods and reduced risk of chronic disease, especially for whole grain foods.<sup>2</sup> Consumption of grain foods, mostly whole grain, is associated with reduced risk of type 2 diabetes, cardiovascular disease and excess weight gain. In addition consumption of high fibre grain foods is associated with reduced risk of colorectal cancer in adults.

The importance of grains in providing essential nutrients and protecting against disease is reflected in the Dietary Guidelines which continue to recommend daily consumption of grain foods. However, several key changes have been made including a 50% reduction in the serve size of grain foods and changes to the number of serves per day. In addition, whole grain and/or high fibre grain food choices are encouraged more often than previously (Table 1).

Table 1. Key changes to grain food recommendations

	Previous Dietary Guidelines (1998)	New Dietary Guidelines (2013)
<b>Guideline</b>	Eat plenty of cereals <b>preferably whole grain</b>	Eat a wide variety of ... grain foods, <b>mostly whole grain and/or high fibre varieties</b>
<b>Serve size</b>	2 slices of bread or equivalent	1 slice of bread or equivalent
<b>Recommended number of serves per day</b>		
<b>Adults</b>	4-12 serves	3-6 serves, depending on age
<b>Children and adolescents</b>	5-11 serves	4-7 serves, depending on age
<b>Infants and toddlers</b>	None specified	1½-4 serves, depending on age



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**Core grain foods – including breads, breakfast cereals, crispbreads, rice, pasta and noodles – are primary contributors of fibre, thiamin, magnesium and iron in the Australian diet.**<sup>4,5</sup>

**Non-core grain foods – grain foods high in salt, fat or added sugar, including cakes, pastries, biscuits, pies and sausage rolls.**



### Tips for helping people understand grain food recommendations

- Instead of '6 serves' think about including grain foods 3-4 times a day.
- Don't cut out core grain foods. Make good quality choices like whole grain, high fibre and low GI most of the time.
- Swap high energy, low nutrient foods to core grain foods.
- Enjoy a variety of grains to make sure you're eating different types of fibre.

## Changes to the number and size of grain food serves

Grain foods come in many different shapes and sizes so the serve sizes in the Australian Guide to Healthy Eating vary depending on the type of grain food.<sup>6</sup> The serve sizes have changed significantly from the previous version and are now based on the equivalent of one 40g slice of bread (Table 2). The minimum number of recommended serves has also changed and varies with age and gender (Table 3).

It is important to note that in many cases people will often eat more than 1 serve in a meal. For example, 2 serves of muesli to make one half cup or 2 serves of bread as a sandwich.

**Table 2. What is a Serve of Grain Food? Changes to the Guide to Healthy Eating**

Previous Dietary Guidelines (1998) 600kJ equivalents	New Dietary Guidelines (2013) 500kJ equivalents
2 slices bread (60g)	1 slice bread/flat bread (about 40g)
1 medium bread roll	½ medium roll (about 40g)
1 cup cooked rice, pasta or noodles (180g)	½ cup cooked rice, pasta, noodles, barley, buckwheat, semolina or quinoa (75-120g)
1 cup porridge (230g)	½ cup cooked porridge or polenta (120g)
1½ cup breakfast cereal flakes (40g)	¾ cup breakfast cereal flakes (30g)
½ cup muesli (65g)	¼ cup muesli (30g)
½ cup flour	¼ cup flour (30g)
	3 crispbreads (35g)
	1 crumpet (60g) or small English muffin or scone (35g)

**Table 3. Changes to the recommended number of serves of grain foods**

		Previous Dietary Guidelines (1998)	New Dietary Guidelines – Foundation Diets (2013)
	<b>Age (years) †</b>	<b>Serves per day</b>	
<b>Men</b>	19-50	5-12	6
	51-70	4-9	6
	70+	4-9	4 ½
<b>Women</b>	19-50	4-9	6
	Pregnant	4-6	8 ½
	Lactating	5-7	9
	51-70	3-7	4
	70+	3-7	3
<b>Boys</b>	2-8	3-7	4
	9-11	4-9	5
	12-13	4-11	6
	14-18	4-11	7
<b>Girls</b>	2-8	3-7	4
	9-11	4-9	4
	12-13	4-11	5
	14-18	4-11	7
<b>Infants/toddlers</b>	7-12 months	NA	1 ½*
	13-23 months	NA	4

† age group categories relate to those provided in Australian Dietary Guidelines (2013), which differ slightly to the Dietary Guidelines for Australian Adults (1998).

\* plus one 20g serve of infant cereal

# Legume Recommendations

Legumes such as beans, lentils, and peas are an important part of a healthy diet for all Australians. This is reflected in the Dietary Guidelines statement that *'Legumes provide a valuable and cost efficient source of protein, iron, some essential fatty acids, soluble and insoluble fibre and micronutrients.'* The value of legumes as a nutritious food is reflected in their inclusion in both the 'meat and alternatives' food group as well as the vegetables food group.

The review of the evidence that informed the Dietary Guidelines found that recent studies confirm the protective effect of legumes.<sup>2</sup> The strongest evidence is for links between eating legumes and reduced risk of colorectal cancer as well as eating soy foods and reduced LDL cholesterol.

## Changes to serve sizes

The serve size for legumes has increased from ½ a cup to 1 cup when legumes are eaten as a meat alternative. When eaten as a vegetable, a serve of legumes is ½ a cup.

**Table 4. What is a Serve of legumes? Changes to the Guide to Healthy Eating**

Previous Dietary Guidelines (1998)	New Dietary Guidelines (2013)
<b>Vegetables</b> ½ cup or 75g cooked dried beans, peas or lentils	<b>Vegetables</b> 75g (½ cup) cooked dried or canned beans, chickpeas or lentils, no added salt
<b>Meat and alternatives</b> ½ cup cooked dried beans, lentils, chickpeas, split peas or canned beans	<b>Meat and alternatives</b> 1 cup (150g) cooked dried beans lentils, chickpeas, split peas or canned beans
	<b>Meat and alternatives</b> 170g tofu

The Dietary Guidelines does not provide guidance on the number of serves per week for legumes. The Grains & Legumes Nutrition Council™ recommends eating legumes 2-3 times a week to reduce risk of heart disease and help manage blood glucose levels.<sup>7</sup>

## Changes to meat and alternatives group

The recommended number of serves of legumes has increased across all age groups in the 'meat and alternatives' food group. Recommendations for men have increased from 2 serves to 3 serves a day and for women from 1 ½ serves to 2 ½ serves a day. The Dietary Guidelines also encourage variety through increasing the intake of alternatives to meat, including legumes and tofu.

## Legumes for infants and toddlers

Legumes and beans are now recommended in the vegetable group for inclusion in the diets of infants and toddlers. The Dietary Guidelines note that *'Pureed and mashed vegetables, including legumes, are important in the diets for infants from around six months of age'*. Legumes are a great choice for this age group as they also help meet their increased needs for iron, zinc and protein.



*Australians need to increase grains and legumes in their diet*

Surveys indicate that Australians are not currently meeting the revised Dietary Guidelines recommendations for grains.<sup>3</sup> Many Australians are actively reducing their intake of grains and are eating only 2 serves of whole grain foods per day.<sup>3</sup>

To meet the recommendations Australians need to increase their core grain food intake by 30% and increase their intake of whole grain and high fibre grain foods by 160%.<sup>1</sup>

The Dietary Guidelines note that Australians are only eating half the recommended 5 serves of vegetables a day and not including a wide enough variety. In particular, legume intake is very low in Australia. Surveys indicate Australians eat on average less than one third of a serve of legumes per week, and only 22% of people eat legumes regularly.<sup>3</sup>

To meet the new recommendations, Australian adults need to increase their intake of legumes by 470%.<sup>8</sup>

**Table 5. Serves of vegetables, including legumes, for young children**

Infants 7-12 months old	1 ½-2 serves (20g/serve) per day
Toddlers 13-24 months old	2-3 serves (75g/serve) per day
Children 2-3 years old	2 ½ serves per day
Over 4-8	4 ½ serves per day





## Putting it all together

Including 6 serves of core grain food a day and aiming to eat legumes 2-3 times a week can easily be done as part of a balanced diet.

Eating your 6 serves of grain foods each day can be achieved by including grain foods at three meals a day or at two meals and two snacks. Grains & Legumes Nutrition Council™ recommends people enjoy grain foods 3-4 times a day, choosing whole grain or high fibre grain foods at least half the time.

	Breakfast	Snack	Lunch	Snack	Snack	Dinner	Total Grain Serves
<b>Day 1</b>	A bowl of muesli with soy milk and a banana	Handful of plain nuts	Wheatberry and quinoa tabouleh salad with grilled chicken*	Small tub of yoghurt	Stir fry salmon and vegetables with rice	1 scoop of icecream with fruit	
<b>Grain serves</b>	2	0	2	0	2	0	<b>6</b>
<b>Day 2</b>	Bowl of high fibre breakfast cereal 1 slice whole grain toast	Three whole grain crispbreads with reduced-fat cheese	A wholemeal egg and salad sandwich	Mung bean dip with toasted flat bread chips*	Thai beef salad	Fresh fruit	
<b>Grain serves</b>	2	1	2	1	0		<b>6</b>

\*recipe at [www.glnc.org.au](http://www.glnc.org.au)

Visit [www.glnc.org.au](http://www.glnc.org.au) to download recipes, fact sheets and subscribe to GLNC's e-newsletter to learn more about the benefits of grains and legumes. | For all references cited go to [www.glnc.org.au/resources/fact-sheet-references](http://www.glnc.org.au/resources/fact-sheet-references).

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### Foundation and total diets

Foundation Diets are designed to meet energy and nutrient requirements for the smallest and least active people in each age group. The total diet for taller and more active people will include additional serves. It is recommended that the extra choices mainly come from the vegetables and legumes/beans, fruit and grains (cereals) groups.<sup>6</sup>

### More information

Please use the attached tear-off sheets with clients or patients to help explain how they can meet the new Dietary Guidelines. To order additional free copies visit [www.glnc.org.au](http://www.glnc.org.au).



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