

## BREAKFAST CEREALS AND DIETARY FIBRE

**Breakfast cereals (ready-to-eat breakfast cereals, muesli and oats) are a top source of dietary fibre and whole grains for Australians, while being low in kilojoules and nutrient dense.**

**In Australia, Australian Bureau of Statistics data showed breakfast cereals provided 10.6% of daily fibre intake per capita.<sup>1</sup> For Australians who consumed breakfast cereals, breakfast cereals provided 22% (adults) and 18% (children) of their daily fibre intake.<sup>2</sup>**

**Breakfast cereals also provided 40% of Australians daily whole grain intakes,<sup>3</sup> and are nutrient dense.**

**Regular consumption of high-fibre breakfast cereals is associated with:**

- improved bowel health;
- reduced risk of type 2 diabetes and cardiovascular disease; and
- improved satiety.

**Higher intakes of cereal fibre are associated with a reduced risk of premature death from cancer, cardiovascular disease, respiratory disease and diabetes.**

**People eating the most cereal fibre had a reduced risk of worsening pain from knee osteoarthritis.**

**Research suggests that the fibre from cereal foods may be more protective to our health than the fibre from vegetables.**

### Improved bowel health

The relationship between insoluble fibre and bowel health has been well established:

- Eating high-fibre wheat-based breakfast cereals helps to prevent constipation and improves bowel function (Grade A);<sup>4</sup> and
- Consuming one to three serves of high-fibre cereal foods per day is associated with reduced risk of colorectal cancer in adults (Grade C).<sup>4</sup>
- Resistant starch in some grain foods may help protect the colon<sup>5</sup> and promote a healthy gut microbiome.<sup>6</sup>

### Reduced risk of type 2 diabetes

Consuming breakfast cereals rich in whole grains and soluble fibre can improve blood glucose levels and may reduce the risk of developing type 2 diabetes:

- Regular consumption of whole grain and high-fibre breakfast cereals is associated with a reduced risk of diabetes (Grade B);<sup>4</sup>
- Consumption of high-fibre breakfast cereals, especially those high in soluble fibre, may assist in the management of hyperglycaemia in people with diabetes (Grade C);<sup>4</sup> and
- Consumption of cereal foods (especially three serves a day of whole grains) is associated with reduced risk of type 2 diabetes (Grade B).<sup>5</sup>

### Reduced risk of CVD and reduced cholesterol

The association between consuming breakfast cereals rich in soluble fibre and cardiovascular disease has been examined by several large scientific reviews. In summary:

- Regular consumption of oat-, barley- or psyllium-based breakfast cereals (cereals rich in soluble fibre) can help lower total and LDL cholesterol levels (Grade A);<sup>4</sup> and

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- Consumption of cereal foods (especially whole grains and those with fibre from oats or barley) is associated with a reduced risk of cardiovascular disease in adults (Grade B).<sup>5</sup>

## Reduced risk premature death from diet-related chronic diseases

Recent studies concluded:

- People who consumed the greatest amount of cereal fibre had a 19% reduced risk of death from all causes and a reduced risk of premature death from a range of chronic disease including cancer (15%), cardiovascular disease (18-20%),<sup>7,8</sup> respiratory disease (21%) and diabetes (34%);<sup>7</sup>
- The protective effects of whole grains may be due, at least in the main part, to its cereal fibre component;<sup>7</sup>
- Cereal fibre was more protective than the fibre from vegetables;<sup>9</sup>
- People consuming a high fibre-diet (27-35g/day) had a 23-37% lower risk of total mortality compared to those with relatively low fibre intakes (15g-17/day);<sup>9,10</sup> and
- Each additional 10g of fibre per day, lowered the risk of death from all causes by 11%.<sup>10</sup>

## Reduced risk of knee osteoarthritis

Recent research using data from two US studies concluded that eating more fibre was associated with a lower risk of painful knee osteoarthritis. In one study, the risk was 30% lower among those eating more fibre, in the other, there was a 60% reduced risk of developing the condition.<sup>11</sup>

People with the highest intakes of cereal fibre also had a 14% reduced risk of worsening of osteoarthritis knee pain.<sup>11</sup>

## Improved satiety

The totality of evidence suggests that regular consumption of high-fibre breakfast cereals is associated with improved satiety. In summary:

- Consumption of high-fibre breakfast cereals improves satiety and may reduce self-assessed hunger after a meal by up to 76%;<sup>4</sup> and
- Eating breakfast cereal high in insoluble fibre (like those with wheat bran) may result in less kilojoules consumed at breakfast and lunch, possibly due to the high satiety value.<sup>12</sup>

## Good source of fibre, whole grains and nutrient dense

- The 2011-12 Australian Health Survey (AHS) showed breakfast cereals (ready-to-eat and hot porridge styles) provided 10.6% of fibre intakes per capita for Australians two years and over, while contributing very little to kilojoules (energy 4.6%), total sugars (3.4%) and sodium (around 2%) intakes.<sup>1</sup>
  - For breakfast cereal consumers, breakfast cereals provided 22% (adults) and 18% (children) of their daily fibre intakes.<sup>2</sup>
  - Breakfast cereal consumers had higher total daily intakes of fibre (19% higher for adults, 15% higher for children) than those who ate other breakfasts.<sup>2</sup>
- A secondary analysis of the 2011-12 AHS found cereal (grain) foods to be the top source of fibre in the Australian diet, and breakfast cereals were the top source for high-fibre eaters.<sup>13</sup>
- Adults are recommended to consume at least 25-30g of fibre each day.<sup>14</sup> An average 40g serve of ready-to-eat cereal, muesli or oats contains around 4g of fibre,<sup>15</sup> with some higher fibre options containing around 13g a serve, making breakfast cereals a valuable source of this important nutrient.
- Around 85% (or more than 370) breakfast cereals on Australian supermarket shelves contained either a source, good source or excellent source of fibre according to Food Standards Australia and New Zealand criteria ( $\geq 2\text{g/serve}$ ,  $\geq 4\text{g/serve}$  or  $\geq 7\text{g/serve}$  respectively).<sup>15,16</sup>
- Breakfast cereals are important dietary sources of whole grains with more than 70% (or more than 308) breakfast cereals meeting the whole grain content claim criteria set by the Grains & Legumes Nutrition Council.<sup>15</sup>

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## References

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- 16 Australia New Zealand Food Standards Code - Standard 1.2.7 Nutrition, Health and Related Claims; 2014. (Also available from: <http://www.comlaw.gov.au/Details/F2014C01191>, accessed 13 November 2018. NB: Food businesses are required to comply with Standard 1.2.7 from January 2016).

## Interpreting evidence grades

According to NHMRC guidance, Grade A evidence is to be trusted to guide clinical practice, Grade B is to be trusted to guide practice in most situations, Grade C provides some support but care should be taken in its application, and Grade D is suggestive, where the body of evidence is weak and therefore the statement should be applied with caution.

## About the Australian Breakfast Cereal Manufacturers Forum (ABCMF)

ABCMF is committed to providing the most up-to-date information for both the Australian public and professionals, as well as correcting misinformation about Australian breakfast cereals. The ABCMF is a forum of the Australian Food and Grocery Council.

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**Connect with ABCMF for the latest information on breakfast cereals:**

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