Wheat Bran
Superior Fibre for Digestive Health

Fibre intakes are inadequate across the whole UK population, making this one of our few endemic nutrient deficiencies. As a result, the numbers experiencing digestive discomfort and constipation are high\(^1\). Abdominal discomfort, with or without constipation, negatively affects general wellbeing and quality of life (see Figure 1). Digestive problems have been found to be associated with higher stress levels, lethargy, low mood and subdued wellbeing\(^2\).

In addition to personal suffering, treatment for chronic constipation attracts significant healthcare costs. Estimates are that constipation accounts for as much as 10% of the clinical workload of both hospital specialists and GP’s, and 14% of UK medication budgets\(^5\).

In the UK, stool weights are reported to be around 106g/day – much lower than the optimum of 150g/day\(^6\) required for healthy colonic function, suggesting a clear need for increased fibre intakes.

Around 43% of the UK population report suffering from digestive discomfort\(^3\), 44% report bloating and 29% report slow digestive transit and/or constipation\(^4\).

What is Digestive Health?

Normal digestive health is difficult to define, but should feel comfortable, not bloated or sluggish, and should be without symptoms of constipation (passing of irregular, hard stools or straining). Insoluble dietary fibres, like the natural wheat bran found in Kellogg’s All-Bran, provide bulk to the stools and help to move food through the digestive system.

As fibre passes through the digestive tract it absorbs water and adds to the volume of waste. A large, soft mass is much easier to move along the digestive tract and pass out of the body\(^7\). Fibre also acts as food for intestinal bacteria, allowing them to thrive and increase bacterial mass, which ultimately ends up in stools\(^8\).

Not All Fibres are Equal

All fibres will have an effect on faecal output, but some fibres are more effective than others. A meta-analysis of more than 100 studies found wheat bran to be the most effective fibre at promoting laxation\(^9\). In fact, there is a direct cause and effect relationship between the consumption of natural wheat bran fibre, and the increase in stool bulk and intestinal transit time. The European Food Safety Agency (EFSA) has passed two health claims for wheat bran in relation to these intestinal functions\(^7\).
How Much Fibre is Recommended?

Eight out of ten adults in the UK aged 19 and above fail to eat enough fibre with average intakes of just 18g/day (17g/day as a male and 20g/day for females)\(^\text{16}\). The EFSA on-packaging intake for fibre is 25g/day\(^\text{12}\), a significant increase for most people. Increasing fibre intake remains the core feature of lifestyle advice for individuals with symptoms of digestive discomfort\(^\text{13}\). In terms of wheat bran, studies suggest that an increase of as little as 5g per day can begin to reduce symptoms associated with sluggishness and digestive discomfort\(^\text{14}\), and the EFSA health claims for transit and stool bulk assume intakes of 10g wheat bran per day\(^\text{15}\).

How Can Wheat Bran Help?

Wheat bran is the outer coating, or husk, of the cereal grain. Digestive comfort is linked to overall positive wellbeing, and constipation has been associated with mental health problems, reduced energy levels and lower mood\(^\text{2}\). Interventions to boost fibre intakes using natural wheat bran (usually Kellogg’s All-Bran) have shown that within a few days, ratings of fatigue, stress, physical tiredness, sluggishness, mental tiredness, daily bowel activity, bloating and feeling fat all improve significantly\(^\text{2, 11}\). In addition, the American Society for Nutrition recently undertook a comprehensive literature review and concluded that there is reasonable evidence that consumption of foods rich in cereal fibre and wheat bran is associated with reduced levels of obesity, Type 2 diabetes and cardiovascular disease\(^\text{20}\). The benefits of increasing wheat bran intake appear to extend well beyond digestive health.

Selecting Foods High in Fibre and Wheat Bran

The fibre content of foods is usually listed on the nutrition panel on food packaging. The EFSA has set guidelines that state that foods that contain at least 3g fibre/100g can be labelled as a source of fibre, and those with 6g/100g or more can be labelled as high fibre. Looking for these claims labelling can be a quick and easy way to identify the fibre content of a food product, as well as checking the nutrition panel for more detailed information. Wholegrain foods are sometimes mistakenly assumed to be high in fibre, which is often not the case. A comparison of wholegrain cereals with fibre contents more or less than 3g fibre/100g shows that individuals who usually choose wholegrain cereals with more than 3g fibre/100g consume 42% more fibre at breakfast and 14% more total dietary fibre compared to those usually choosing wholegrain cereals with a lower fibre content\(^\text{17}\). Looking for a high fibre flash or checking the nutrition panel is the only reliable way to judge a food’s fibre content.

**TABLE 1: EASY SWAPS TO BOOST FIBRE AND WHEAT BRAN INTAKE**

Compared to current intakes, the UK population would benefit from an average increase in fibre and wheat bran intake of at least 5-10g each day.

<table>
<thead>
<tr>
<th>INSTED OF</th>
<th>TRY</th>
<th>INCREASE IN FIBRE INTAKE PER TYPICAL SERVING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornflakes</td>
<td>All-Bran Original</td>
<td>10.1g</td>
</tr>
<tr>
<td>White spaghetti</td>
<td>Wholemeal spaghetti</td>
<td>6.6g</td>
</tr>
<tr>
<td>Standard Breakfast Biscuits</td>
<td>All-Bran Breakfast Biscuits – Original</td>
<td>3.0g</td>
</tr>
<tr>
<td>Multi-grain flakes</td>
<td>All-Bran Flakes</td>
<td>3.0g</td>
</tr>
<tr>
<td>Puffin rice</td>
<td>Rice Krispies Multi-grain Shapes</td>
<td>2.2g</td>
</tr>
<tr>
<td>White bread</td>
<td>Wholemeal bread</td>
<td>2.8g/2 slices</td>
</tr>
<tr>
<td>Rich Tea biscuits</td>
<td>Digestive biscuits</td>
<td>0.6g/2 biscuits</td>
</tr>
</tbody>
</table>

Swapping white for wholemeal varieties of pastry, all breads, scones and flour is likely to increase fibre intakes.

**REFERENCES**


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