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All-Bran

## Wheat Bran Fibre – helping to reduce digestive health issues during Ramadan

Fasting during the holy month of Ramadan involves changes in eating patterns and meal timings, which may challenge the regular function of the digestive tract. It is generally acknowledged that unpleasant side effects are commonplace during Ramadan<sup>1,2</sup> due to the disruption in eating habits, however there is little data on the prevalence and severity of these symptoms. One common problem reported during Ramadan is poor digestive health accompanied by an increase in the occurrence of constipation.<sup>3,4</sup> Choosing foods rich in wheat bran fibre is a simple, effective approach that could bring significant improvement to digestive health during periods of fasting in Ramadan.

### Impact of fasting on fibre intakes

Fibre intakes are often inadequate in the diets of people living in the Arab Gulf. For example, in KSA, average adult fibre intakes have been reported between 13g-14g/day (less than 50% of the optimal intake recommended for good health<sup>5</sup>).<sup>6,7</sup> In the UAE, more than seven out of ten children and adolescents consume less fibre than recommended.<sup>8</sup> In Kuwait, one in three adults and just one in five children consume the recommended intake of fibre.<sup>9</sup> Low intakes have been reported in both children and adults in Bahrain.<sup>10,11</sup>

Fasting during Ramadan is likely to reduce fibre intake even further, often due to changes in the types of foods consumed. For instance, consumption of special festival foods that are richer in fats and sugars, and sugary soft drinks is common. This can result in an increase in fat intake and a shift from complex fibre containing carbohydrates (cereal, legumes, vegetables) to foods higher in simple sugars (sweets and sweetened drinks).<sup>12,13</sup> It is therefore reasonable to assume that fibre intakes fall accordingly with this change in diet. In addition to lower fibre intakes, the risk of dehydration also increases. Low fluid intakes are known to be a contributing factor to the problem of constipation.<sup>14</sup> Maintaining adequate hydration is more challenging in hot climates due to increased evaporation and fluid loss from the skin.

Overall, poor digestive health during Ramadan is likely to be due to a combination of different factors. These include: poor fibre intake; dehydration (very common side effect of fasting); physiological changes to gut motility as a consequence of fasting for long periods and altered food intake in terms of volume, type (e.g. fatty/spicy foods) and timing. Simple dietary changes to increase fibre intake and ensuring a good level of hydration is achieved between Iftar to before dawn will help to ensure that the transit of food through the gut is maintained as close to normal as possible, and symptoms of poor digestive health are kept to a minimum.

## Consciously selecting higher fibre foods during Ramadan could help to:

### ● Improve digestive health

Wheat bran fibre contributes to an acceleration of intestinal transit and an increase in faecal bulk, and therefore helps to prevent and relieve constipation.<sup>15</sup> In order to combat constipation during fasting, guidance is to 'drink more water, eat bran, brown wheat, and more vegetables and fruit'.<sup>1</sup> Research has shown that for most people eating a wheat bran rich breakfast cereal is effective in alleviating the symptoms of constipation and digestive discomfort within 3 days.<sup>15</sup>

### ● Limit hunger

Fibre helps to reduce appetite and short term food intake.<sup>16,17</sup> Health guidelines for fasting encourage high fibre foods, such as those with bran or wholewheat at Suhur.<sup>2,18,19</sup>



It is also important to encourage adequate fluid intake at Suhur, as well as during the period between Iftar and bedtime to help minimise risk of dehydration.

**Dietary Guidelines for the region recommend eating a selection of fortified grain foods to improve micronutrient intakes.**<sup>20</sup> Choosing a fortified breakfast cereal, which is also rich in wheat bran fibre, will help to maintain adequate intakes of vitamins, and minerals as well as give a welcome boost to fibre intake during periods of fasting.

**Although fasting is a time of spiritual growth, it can also be used as an opportunity to improve physical health.** Many Muslims change their lifestyle, sleep hours, physical activity, food consumption, meal frequencies and dietary habits during Ramadan.<sup>21</sup> Side effects of fasting are familiar to many however, but some side effects could be easily avoided, or at least reduced, by making positive dietary choices.

**Taking simple conscious steps to increase intake of dietary fibre, especially wheat bran fibre, combined with a sufficient fluid intake could ease the digestive ill health commonly experienced as a consequence of fasting.** As fibre intakes are generally below that considered adequate for good digestive health, consumption of wheat bran rich foods should be encouraged both during Ramadan and beyond.



1 <http://english.alarabiya.net/en/life-style/healthy-living/2015/07/08/Top-tips-to-end-Ramadan-on-a-healthy-happy-note.html> 2 King Abdullah bin Abdulaziz Arabic Health Encyclopaedia. Ministry of National Guard Health Affairs KSA [www.kaahc.org](http://www.kaahc.org) 3 Arsalan Baig (2014). Dietary intake during fasting in the month of Ramadan. New York Science 7: 15-18 4 Keshtelhi AH et al (2015) Evaluation of Self-Perceived Changes in Gastrointestinal Symptoms During Ramadan Fasting. J Rel Health 55: 1-8 5 SACN (2015) Carbohydrates and Health. TSO London. 6 MUSAIGER AO (2011) The paradox of Nutrition-related diseases in the Arab countries: the need for action. Int J Environ Res Public Health 8:3637-3671 7 Al-Shammari E et al (2015) Impact of Physical Activity and Intake of Fiber and Fat on the Anthropometric Indices of University Females in Hail City of Saudi Arabia. Curr Res Nutr Food Sci 3. doi: <http://dx.doi.org/10.12944/CRNFSJ.3.2.04> 8 Ali HI et al (2013) High proportion of 6 to 18-year-old children and adolescents in the United Arab Emirates are not meeting dietary recommendations. Nutri Res 33: 447-456 9 Zaghloul S et al (2013) Evidence for nutrition transition in Kuwait: over-consumption of macronutrients and obesity. Public Health Nutr 16: 596-607 10 Gharib N, Rasheed P (2011) Energy and macronutrient intake and dietary pattern among school children in Bahrain: a cross-sectional study. Nutr J 10: 62 11 Kingdom of Bahrain Ministry of Health (2002) National Nutrition Survey For Adult Bahrainis Aged 19 Years And Above. Accessed Feb 2016 at: [http://www.moh.gov.bh/PDF/survey/nut\\_survey1.pdf](http://www.moh.gov.bh/PDF/survey/nut_survey1.pdf) 12 Sadiya A et al (2011) Effect of Ramadan fasting on metabolic markers, body composition, and dietary intake in Emiratis of Ajman (UAE) with metabolic syndrome. Diabetes Metab Syndr Obes. 4: 409-416 13 Khaled BM & Belbraouet S (2009) Effect of Ramadan fasting on anthropometric parameters and food consumption in 276 type 2 diabetic obese women. Int J Diabetes Dev Ctries 29: 62-68 14 World Gastroenterology Organisation (2013) Coping with common GI symptoms in the community. A global perspective on heartburn, constipation, bloating, and abdominal pain/discomfort. Available at [www.worldgastroenterology.org](http://www.worldgastroenterology.org) 15 O' Sullivan K (2012) The Superior Benefits of Wheat Bran Fibre in Digestive Health. Eur Gast Hep Rev 8: 90-3 16 Samra & Anderson (2007). Insoluble and glyceimic response to food consumed cereal fibre reduces appetite and short term food intake and glyceimic response to food consumed 75 min later by healthy men. Am J Clin Nutr 86:972-9 17 Slavin & Green (2007). Dietary fibre and safety. Nutr Bull 32: 32-42 18 Healthy Ramadan. Accessed Feb 2016 <http://www.nhs.uk/Livewell/Healthylife/Pages/healthyramadan.aspx> 19 Food Guidelines for Ramadan. Accessed Feb 2016 [www.iadc.org/wp-content/uploads/2016/02/Food-Guidelines-for-Ramadan-IV.ppt](http://www.iadc.org/wp-content/uploads/2016/02/Food-Guidelines-for-Ramadan-IV.ppt) 20 MUSAIGER A (2012). The Food Dome: dietary guidelines for Arab countries. Nutr Hosp. 27: 109-115 21 Bakhotmah (2011). The puzzle of self-reported weight gain in a month of fasting (Ramadan) among a cohort of Saudi families in Jeddah, Western Saudi Arabia. Nut J 10: 84, 1-8.