

# Healthy eating resources for South Asians

In Britain, South Asians (Indians, Pakistanis, Bangladeshis and Sri Lankans) are six times more likely to develop diabetes compared with the general population (D'Costa et al, 2000). Amongst these groups, it has been suggested that Bangladeshis have the highest risk of diabetes (International Diabetes Federation, 2011). Additionally, South Asians with diabetes have an increased risk of developing retinopathy and renal failure at a younger age compared with Caucasians (Chandieh Shaw et al, 2006).

South Asians also have a higher prevalence of diabetes compared with other ethnicities irrespective of BMI (Oza-Frank et al, 2009). A possible reason for this is that South Asians may have impaired mitochondrial oxidation of fatty acids, which may lead to increased deposition of body fat (Bakker et al, 2014). This is plausible and could be related to the thrifty gene hypothesis (Neel, 1962). The thrifty genotype helped survival in the feast-or-famine days of hunter-gatherers. However, this advantage has become a disadvantage in the absence of food deprivation. Henceforth, in this modern era, special attention should be paid to avoiding overindulgence and poor food choices. It is possible that targeting the South Asian diet could reduce the risk of diabetes in this population.

## South Asian diets

Reviewing South Asian recipes from various literature, it is notable that their cuisine involves the use of ghee (clarified butter) and a lot of frying as a method of cooking. For example, Indian breads (paratha and bhatura) are prepared using ghee on a griddle and with a deep-fat fryer, respectively. A dosa is another type of food typically consumed throughout the day. It consists of rice powder with gram flour and is cooked in ghee, and a filling of deep-fried potato is often used (Misra et al, 2009). These foods contribute towards a highly calorific diet with a high intake of saturated fatty acids (SFAs). The consumption of SFAs influences

insulin resistance and reduces insulin-stimulated glycogen synthesis (Manco et al, 2000). Therefore, it is recognised that excessive SFA intake reduces the body's ability to manage blood glucose levels.

Yagalla et al (1996) reported that migrant Asians in the US have an increased fat intake (32% higher) compared with the general population. Subsequently, a higher BMI suggestive of obesity was noted in these individuals. This would probably apply to those living in the UK as well. Indeed, South Asians living in this country incorporate Western foods in their diets but continue to consume their traditional foods (Anderson and Lean, 2005). Additionally, the globalisation of fast food establishments has introduced foods low in fibre and rich in energy, saturated fat and sugar, which have a low nutritional value (Kris-Etherton et al, 2001). The consumption of refined foods along with high fats is associated with diabetes (Azadbakht et al, 2011).

## Lifestyle advice from current resources

It is necessary to explore the healthy nutritional information available to South Asian people with diabetes and to analyse the advice provided. The "Healthy Eating and Diet Tips for South Asians" advice from the diabetes.co.uk website suggests cutting down on refined carbohydrates and fried foods, and to include vegetables and fruits in the diet (Diabetes Digital Media Ltd, 2018). In addition, the avoidance of high-calorie foods such as fried rice, samosas, onion bhajis and masala curries is advised. However, these foods are the main staple of South Asian cuisine and culture; therefore, a complete change of identity is being recommended, which may be a challenge to adopt. Thus, it is beneficial to explore whether there is a cultural connection with the foods eaten.

The Hindu sacred book, the *Bhagavad Gita*, divided foods into three groups based on their relation to Property, Sanctity and Quality (*Sattvika*, *Raajasika* and *Taamasika*). It is suggested that "Property" foods represented prosperity,

## About this series

This is the second in a series of practical articles highlighting tools that can support us in day-to-day delivery of diabetes care. Each article outlines what the resource is, how it can be accessed and how it can be used in a consultation. Where appropriate, step-by-step instructions on how to use the tool in a clinical setting will be included from a clinician experienced in using the tool, along with useful hints and tips for optimising benefit. The potential or proven benefits of using the tool will be highlighted if there is formal evidence and additional endorsements will be included from other clinicians using the resource.

## Authors

Mohammad Abdool, Hockley Farm Medical Practice, Leicester

Kamlesh Khunti, Hockley Farm Medical Practice, Leicester, and Diabetes Research Centre, University of Leicester

Sam Seidu, Hockley Farm Medical Practice, Leicester, and Diabetes Research Centre, University of Leicester

**Citation:** Abdool M, Khunti K, Seidu S (2018) Healthy eating resources for South Asians. *Diabetes & Primary Care* 20: 139–41



Read more  
online

### CPD module

#### The challenges of managing diabetes in hard-to-reach groups

Alia Gilani explores a range of groups, including South Asian populations, highlighting the difficulties in engagement and the different needs that exist in each.

*Diabetes & Primary Care* **19**: 126–35

Available at:  
<https://bit.ly/2QM5Wex>

### Article

#### Delivering grassroots diabetes education in the South Asian community

Samina Ali and colleagues discuss the delivery of culturally tailored education at the grassroots level to help tackle health inequalities in South Asian people.

*Diabetes & Primary Care* **19**: 121–5

Available at:  
<https://bit.ly/2xHSFfc>

health and happiness. These foods include fruits, vegetables and sweets. “Sanctity” foods denote passion and activity. These foods comprise hot, spicy and salty foods.

“Quality” refers to the avoidance of foods that slow the mind and body, including meats, fish, mushrooms, garlic and alcohol (Tamang and Kailaspathy, 2010; Tamang, 2016). Such foods are a major part of the Mediterranean diet, which is in fact healthy and an effective non-medical treatment option for diabetes (Sofi et al, 2013). Hence, these religious beliefs may represent a barrier to uptake of a healthy diet.

The Heart UK literature on healthy swaps for South Asian diets suggests that vegetable oils should be substituted for butter and ghee. Similarly, vegetarian meat substitutes such as paneer (Indian cheese) are recommended to be replaced with tofu, and baking and grilling are recommended over frying as cooking methods (Heart UK, 2018). These could be regarded as sensible recommendations; however, baking a samosa is unlikely to have the same appeal. Furthermore, in South Asia, products derived from cows, such as ghee and paneer curd, are considered sacred and the purest substances available for use (Korom, 2000). Therefore, advising South Asian patients to avoid their consumption could lead to a religious conflict of interest.

The Leicestershire Diabetes library of authentic recipes adopts a different approach, with an emphasis on measuring ingredient quantity, which is often overlooked when preparing meals. This approach may also help control the number of calories consumed and is more likely to be followed due to the lack of imposed restrictions.

### Dietary resources

Additional resources that promote healthier South Asian diets can be found in *Box 1*. These will enable healthcare professionals to provide patient education and empower healthier eating. However, the leaflet titled *Healthy eating for the South Asian community* does not appear to factor in South Asian food culture and health beliefs. For instance, it recommends the avoidance of herbal remedies, which could be seen as a cultural conflict of interest. For example, herbal

derivatives of karela (bitter melon) are available in local Asian stores and are often brought back when visiting native countries due to the perceived health benefits for diabetes (Day, 2005). One small study has suggested that karela improves glucose tolerance by enhancing peripheral and hepatic glucose clearance (Leatherdale et al, 1981).

In conclusion, healthy South Asian diet advice exists and has proven benefits in relation to diabetes. As healthcare professionals, when providing diet advice, we should recognise the cultural and religious aspects that food has on an individual. Therefore, it would be sensible to recommend the measuring of portions rather than outright avoidance. However, the difficulty lies with adherence and acceptance, which relates to self-care. Further investigation may be warranted to assess why some individuals lead a healthier lifestyle than others. In addition, cultural and religious beliefs may influence good food choices, and may continue to contribute to poor health and diabetes if not tackled in a larger campaign. It would be sensible to evaluate the thoughts and feelings that South Asian people have towards their foods to overcome any barriers that could lead to the development of diabetes. ■

Anderson AS, Lean MEJ (1995) Healthy changes? Observations on a decade of dietary change in a sample of Glaswegian South Asian migrant women. *J Hum Nutr Diet* **8**: 129–36

Azadbakht L, Haghghatdoost F, Esmaillzadeh A (2011) Legumes: a component of a healthy diet. *J Res Med Sci* **16**: 121–2

Bakker LE, van Schinkel LD, Guigas B et al (2014) A 5-day high-fat, high-calorie diet impairs insulin sensitivity in healthy, young South Asian men but not in Caucasian men. *Diabetes* **63**: 248–58

Chandie Shaw PK, Baboe F, van Es LA et al (2006) South-Asian type 2 diabetic patients have higher incidence and faster progression of renal disease compared with Dutch-European diabetic patients. *Diabetes Care* **29**: 1383–5

D’Costa FD, Samanta A, Burden AC (2000) Epidemiology of diabetes in UK Asians: a review. *Practical Diabetes* **8**: 64–6

Day C (2005) Are herbal remedies of use in diabetes? *Diabet Med* **22**(Suppl 1): 10–12

Diabetes Digital Media Ltd (2018) *Healthy Eating and Diet Tips for South Asians*. Diabetes Digital Media Ltd, Coventry. Available at: <https://bit.ly/2NTHEld> (accessed 19.09.18)

Heart UK (2018) *Healthy swaps for South Asian diets*. Heart UK, Maidenhead, Berkshire. Available at: <https://bit.ly/2DFmbz4> (accessed 21.09.18)

International Diabetes Federation (2011) *IDF Diabetes Atlas* (5<sup>th</sup> edition). IDF, Brussels, Belgium

Korom FJ (2000) Holy cow! The apotheosis of zebu, or why the cow is sacred in Hinduism. *Asian Folklore Studies* **59**: 181–203

**Box 1. Healthy eating resources for South Asians.**



**Leicestershire Nutrition and Dietetic Service**  
(online resource)  
<https://bit.ly/2MSf7rV>



**Diabetes.co.uk**  
(online resource)  
<https://bit.ly/2NTHeld>



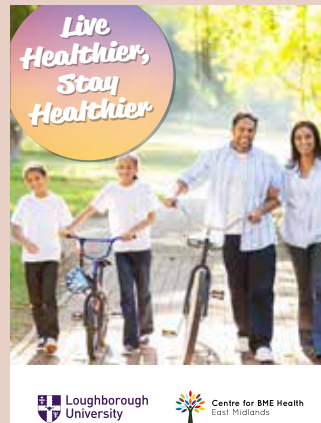
**Diabetes UK**  
(PDF)  
<https://bit.ly/2LqxjZ6>



**Palo Alto Medical Foundation**  
(online resource)  
<https://bit.ly/2NqOoHQ>



**British Heart Foundation**  
(PDF)  
<https://bit.ly/2QJpvFk>



**Centre for BME Health**  
(PDF)  
<https://bit.ly/2xvJort>



**Leicestershire Nutrition and Dietetic Service**  
(PDF)  
<https://bit.ly/2xuFYW6>



**Diabetes Care Community**  
(online resource)  
<https://bit.ly/2utuDUR>

Kris-Etherton P, Daniels SR, Eckel RH et al (2001) AHA scientific statement: summary of the Scientific Conference on Dietary Fatty Acids and Cardiovascular Health. Conference summary from the Nutrition Committee of the American Heart Association. *J Nutr* **131**: 1322–6

Leatherdale BA, Panesar RK, Singh G et al (1981) Improvement in glucose tolerance due to *Momordica charantia* (karela). *Br Med J (Clin Res Ed)* **282**: 1823–4

Manco M, Mingrone G, Greco AV et al (2000) Insulin resistance directly correlates with increased saturated fatty acids in skeletal muscle triglycerides. *Metabolism* **49**: 220–4

Misra A, Khurana L, Isharwal S, Bhardwaj S (2009) South Asian diets and insulin resistance. *Br J Nutr* **101**: 465–73

Neel JV (1962) Diabetes mellitus: a "thrifty" genotype rendered detrimental by "progress"? *Am J Hum Genet* **14**: 353–62

Oza-Frank R, Ali MK, Vaccarino V, Narayan KM (2009) Asian Americans: diabetes prevalence across U.S. and World Health Organization weight classifications. *Diabetes Care* **32**: 1644–6

Sofi F, Macchi C, Abbate R et al (2013) Mediterranean diet and health. *Biofactors* **39**: 335–42

Tamang JP (2016) Indian dietary culture. *Journal of Ethnic Foods* **3**: 243–5

Tamang JP, Kailasapathy K (2010) *Fermented Foods and Beverages of the World*. CRC Press, Boca Raton, FL, USA: 1–40

Yagalla MV, Hoerr SL, Song WO et al (1996) Relationship of diet, abdominal obesity, and physical activity to plasma lipoprotein levels in Asian Indian physicians residing in the United States. *J Am Diet Assoc* **96**: 257–61