Minority ethnic groups with type 2 diabetes: The importance of effective dietary advice

Chantelle Venelda Carr

People from minority ethnic groups can face problems with diabetes-related dietary advice because they have certain food beliefs and eating preferences that current advice, based on a typical British diet, may not address. A literature review was undertaken to explore the main issues that minority ethnic people with type 2 diabetes face with dietary advice given by healthcare professionals. The research evidence suggests that nurses need to tailor their advice to suit individual needs, taking more account of each person's eating habits, culture and religion.

Article points

1. Education on diet and healthy eating is important in managing diabetes.
2. When counselling people from minority ethnic groups, healthcare professionals need to include traditional foods in healthy eating advice.
3. Dietary advice should also include the food classification of these traditional foods.

Key words

- Diet
- Healthy eating
- Minority ethnic groups
- Traditional foods

Chantelle Venelda Carr is a Community Diabetes Nurse, Heart of England NHS Foundation Trust, and a Staff Nurse, Sandwell and West Birmingham NHS Trust, Birmingham.

Diet is an important component of diabetes care, yet full co-operation with dietary regimens by people with type 2 diabetes (T2D) can often prove difficult to achieve (Lawton et al, 2008). However, what is less well understood are the factors affecting dietary knowledge among people with diabetes from minority ethnic groups (Shai et al, 2006).

In the UK, the main minority ethnic groups are Indian (22.7% of the minority ethnic population), Pakistani (16.1%) and African-Caribbean (12.2%) (Office for National Statistics, 2003).

People from minority ethnic groups can face problems with diabetes dietary advice because they have food beliefs and preferences that current advice may not address (Connor et al, 2003). Dietary advice for people with diabetes has tended to be based on a typical British diet (Scott, 1997).

In terms of dietary advice, healthcare professionals are rarely recognising and addressing barriers to healthier lifestyles in minority ethnic groups (Dyson, 2003).

Aim

The aim of this brief literature review is to identify the main issues facing people with T2D from minority ethnic groups when they are given dietary advice from UK healthcare professionals. Ways of overcoming these barriers can then be identified and applied in practice to achieve better standards of dietary control in diabetes.

Search strategy

A systematic search of existing literature was carried out. CINAHL was used for the initial search because it is the most comprehensive database, covering a wide range of international nursing literature (Aveyard, 2007). Key search terms such as "diabetes", "diet", "Asians" and

"African-Caribbeans" were searched in a further six healthcare databases: Library Information and Technology Abstracts, Medline, AMED, International Bibliography of the Social Sciences, British Nursing Index and Science Citation Index.

The inclusion criteria were:

- Publications from 1992 to current date.
- Primary research studies.
- Published in English.
- Qualitative research.
- Papers that report data on T2D only.
- Focused on diet or eating habits and minority ethnic groups.

The search was restricted to studies of Asian and African-Caribbean people as the search strategy retrieved these two groups even when the term "minority ethnic groups" was used in the search.

Exclusion criteria were:

- Articles that included type 1 diabetes or other conditions such as hypertension.
- Literature reviews.
- Studies that had no ethical approval.
- Expert opinion articles.

The electronic searches retrieved 2108 articles and, on reviewing the titles and abstracts, five suitable studies were identified. A search of the references in each paper revealed one further article for review.

Lawton et al (2008) looked at food and eating patterns from the perspective of 23 Pakistani and nine Indian people with T2D. Scott (1997) explored the influence of culture on attitudes to food and eating, as well as responses to professional dietary advice among 12 African-Caribbean and 12 white British people. Khajuria and Thomas (1992) examined the extent to which traditional beliefs about diet and health were held by a group of 28 people with T2D of Indian origin, in order to identify factors to be considered in providing appropriate and effective treatment for this group of patients. Scott and Rajan's (2000) aim was to assess dietary habits among two generations of African-Caribbeans, 80 with diabetes and 80 without diabetes. Fagerli et al (2005) explored how 26 Pakistani people with diabetes experienced dietary advice given by health workers in Norway, while Chowdhury et al (2000) researched the food beliefs and classification system of 40 British Bangladeshi people with T2D.

The six research articles were found to be of good quality, using the checklist for qualitative research (Critical Appraisal Skills Programme, 2006). This suggests that the findings and recommendations have the potential to contribute towards a sound basis for changes in practice. Each individual research paper was critically appraised, that is, its strengths and limitations in addressing a research question are addressed (Gerrish and Lacey, 2006).

The overall conclusion of the literature review was that dietary advice for people with T2D from minority ethnic groups was problematic and needed to be addressed.

Key themes

The most common topics from the six articles were chosen (Aveyard, 2007). The main findings from each study were assigned codes, e.g. cooking methods. These were then grouped together into themes, e.g. uncertainty of healthy cooking methods. Selective coding was applied and the most common themes were chosen (Huberman, 1994). Other themes such as meal patterns and the need for dietary advice to be provided in languages other than English, were highlighted as important, but did not emerge with enough frequency to qualify as key themes.

Four consistent themes emerged from the research studies:

- The need for patient education on why diet is important for diabetes management.
- The need for dietary advice on traditional foods eaten by people from minority ethnic groups, and their cooking methods.
- The need for the classification of traditional foods and food beliefs to be included in dietary information.
- Patients' limited awareness of basic information on healthy eating.

While the numbers of participants involved in each study was small, the consistency of the themes across the six papers from different areas indicates that the evidence has a degree of validity.

Page points

1. The author conducted a literature review focusing on diet, eating habits and ethnic minority groups.
2. The overall conclusion from the literature review was that dietary advice for people with type 2 diabetes from minority ethnic groups was problematic and needed to be addressed.
3. A need for patient education, including dietary advice on traditional foods, was identified.

Page points

1. Overall, the results suggested that people with diabetes were not clear about the nature of their condition, and the important role that diet plays in its management.
2. Dietary advice did not take account of traditional foods or ways of cooking, limiting the relevance of the advice for ethnic minority groups.
3. Culturally sensitive advice can also be given by taking into account variations in language used to classify food types.

Education on diet in diabetes

All the studies identified the need to educate people about how diet will help them to control their diabetes. Overall, the results suggested that people were not clear about the nature of diabetes, and the important role that diet plays in its management.

There is a need for people with diabetes to be offered regular dietitian review, both immediately after diagnosis and annually, to increase their understanding of their diet and diabetes (Connor et al, 2004).

Dietary advice and traditional foods

All six articles found that dietary advice did not take account of traditional foods or ways of cooking, limiting the relevance of the advice for ethnic minority groups.

Most of the African-Caribbean people interviewed by Scott (1997) said that the dietary advice they received was more suited to a European palate, and they were unsure which traditional foods they should avoid or could eat. Lawton et al (2008) concluded that the relevance of dietary advice for Indian and Pakistani people was limited, because the information focused on European food. Dietary change can only be promoted if recommendations are relevant to people's usual diets.

Scott and Rajan (2000) found that a third of their sample thought that dietary advice was about foods that were "too English", not what they usually ate. Chowdhury et al (2000) highlighted that education for Bangladeshi families needed to include their ways of cooking.

Advice that focused on a few limited dietary practices, such as being taught to reduce fat and sugar intake, but without any explanation as to the medical reason for this, causes problems (Fagerli et al, 2005).

Khajuria and Thomas (1992) noted a lack of specificity in dietary advice, possibly arising from a lack of detailed knowledge among healthcare professionals concerning the foods, eating habits and beliefs of these patients.

Food classification and beliefs

Culturally sensitive advice can also be given by taking into account variations in language. For example, African-Caribbean people have specific ways of classifying food. Terms such as hard food, heavy food and ground provisions refer to starchy foods such as yams, sweet potatoes, cassava, green bananas and plantains, while fresh food refers to other fruit and vegetables.

Scott and Rajan (2000) explored patients' understanding of food classifications. Interviewees understood terms such as hard food (76% of respondents) and ground provisions (45%), but were less confident about conventional food groups such as carbohydrates, starch, fibre, roughage and protein.

There is a South Asian belief that ghee is cooling, soothing and strength giving (Khajuria and Thomas, 1992). Consequently, it may be difficult for some South Asian people with T2D to accept that ghee is not good for health, despite its high fat and energy value.

Important themes identified by Chowdhury et al (2000) in their study of first-generation British Bangladeshi people included religious restrictions (notably the Islamic prohibition of pork), and customs based on the availability of foods in the home country. Foods were not classified according to UK food types such as carbohydrate or protein, but instead defined as strong or weak and digestible or indigestible. Cooking methods, especially healthy options such as baking and grilling, were believed to alter the nature of the food.

Healthy eating

The studies found a lack of basic knowledge about healthy eating among ethnic minority groups, irrespective of whether they had diabetes or not. Scott and Rajan (2000) asked people to define healthy eating; interviewees with diabetes were slightly more likely to give definitions of healthy eating that included low fat, no sugar and fresh fruits and vegetables, but overall knowledge of healthy food choices was low. This led the researchers to conclude that health promotion messages are not reaching sections of the Caribbean community.

African-Caribbean people had difficulty in understanding some of the food groups such as fibre. There was general awareness that fibre was important in diet, but many were

Table 1. Suggestions of alternative food or methods of cooking for common African-Caribbean foods.	
Hard dough bread	Choose wholemeal types, as wholemeal bread is high in fibre.
Dumplings	Add wholemeal flour to the white flour or cornmeal. Also, try to boil or steam and not fry.
Rice	Cook rice in less fat by adding little or no margarine.
Rice and peas	Use little or no coconut cream for a low fat option and reduce or eliminate salt.
Starchy fruits	Cook fruits such as green banana, plantain and breadfruit with less fat, use them as just part of the main meal, or put into soups.

unsure of its function or what foods were good sources of fibre (Scott, 1997).

Implications for nursing practice

Education on diet in diabetes

Many participants in the studies had a poor understanding of the fact that diet alterations help blood glucose control. This suggests that nurses need to address patient education on a regular basis, and not just at diagnosis, and that education should explain how dietary management is central to effective T2D care.

If people with diabetes do not receive regular education, they may find it difficult to incorporate the eating advice they are given into their own lives. This could be tested by healthcare professionals educating their patients on what diabetes is and the importance of effective management.

People who are taking certain oral antidiabetes drugs (OADs) need to be educated about the importance of eating regular meals in order to minimise hypoglycaemia (Dyson, 2003). It needs to be reinforced that pharmacotherapy should be combined with dietary measures and regular exercise to enhance the likelihood of successful diabetes control.

The National Service Framework and NICE guidance are clear about the importance of structured education, including dietary advice, to aid self-management of diabetes (Department of Health, 2001; NICE, 2008). The importance of the multidisciplinary team (MDT) in diabetes care is highlighted. NICE states that individualised, ongoing nutritional advice from a healthcare professional with specific expertise and competencies in nutrition should be available to all people with diabetes.

While dietetic provision may be limited in certain areas, Diabetes UK (2005) does recommend referral to a dietitian for all people newly diagnosed with diabetes. Ongoing education about all aspects of diabetes management should be provided by every member of the MDT and so they should ensure they can access training in order to supply up-to-date, evidence-based information.

Dietary advice on traditional foods

Food has a specific value and significance among different minority ethnic groups (Lawton et al, 2008). If people are aware of healthier options for their traditional foods, they may be willing to compromise. Healthcare professionals should talk to people about their eating habits, and reinforce this advice with leaflets suggesting healthier traditional food options. This could include healthier ways of cooking their favourite meals without compromising the taste (Diabetes UK, 2012).

Diabetes UK is a useful source of advice and leaflets, and the eatwell plate from the Food Standards Agency incorporates foods from a wide range of ethnic groups in its pictorial messages (Department of Health, 2011).

Table 1 gives suggestions for alternative foods and methods of cooking for common African-Caribbean foods.

Food classification and beliefs

Dietary advice for people with T2D from minority ethnic groups should incorporate the colloquialisms used to describe their foods, which would help people feel that their education is more relevant to them.

South Asian people may hold specific food beliefs related to religion and traditional medicine. It should be explained that eating strength-giving foods such as ghee is acceptable as long as they are eaten as part of a

healthy, balanced diet and people are careful of the portion size.

Some of these beliefs are cultural, while others are the result of people having a limited knowledge of nutrition. For example, some West Indian people believe foods such as sweet potatoes and oranges can turn into sugar in the blood and should be completely avoided (Scott, 1997).

Knowledge deficits about foods affect both people's ability to adopt healthy eating habits and healthcare professionals' ability to provide appropriate advice and respond to questions. Nurses should also remember that food availability and economic circumstances play a part in food choices.

Healthy eating advice

Healthy eating advice needs to be implemented in practice by healthcare professionals.

From the studies examined, it would appear that people with T2D from ethnic minority groups would benefit from understanding the five food groups, how their traditional foods fit in, and the impact that each food group will have on their diabetes.

Study days could be of value to help healthcare professionals understand what kind of foods their patients eat, and why.

Charities offer a valuable source of healthy eating education for minority ethnic groups. Diabetes UK produces a healthy living booklet for African-Caribbean people (Diabetes UK, 2009), and a healthy eating guide for South Asian people, available in Bengali, Gujarati, Hindi, Punjabi and Urdu, as well as English (Diabetes UK, 2011). Diabetes UK also produces the *Diabetes Lifestyle* newsletter, providing information and advice specifically for black and minority ethnic communities.

The British Heart Foundation offers advice, recipe cards and even smartphone apps for African-Caribbean people, along with information in several South Asian languages. While aimed at those with heart disease, it is still very useful for people with T2D wishing to make healthy choices and the recipes are particularly helpful (British Heart Foundation, 2012).

The Blood Pressure Association (2007) has a useful booklet and website which includes a list of African-Caribbean dishes that may contain too much salt and saturated fat (*Table 2*).

Strengths and limitations of review

The strengths of the review are that the evidence of implications for practice for healthcare professionals has been discussed and future research also has been considered. A systematic search of the literature was achieved by searching in seven appropriate databases, and also by hand searching the references of the studies found in order to identify additional literature.

The review presented only qualitative findings so one validated appraisal tool

Page points

1. Specific beliefs relating to religion, traditional medicine and a poor knowledge of nutrition need to be addressed.
2. Dietary advice for minority ethnic groups is available from several charities.
3. The studies examined identified a lack of understanding of how traditional foods fit into food groups.

Table 2. African-Caribbean dishes that may contain too much salt and saturated fat (Blood Pressure Association, 2007).

Country	Foods
Antigua, Montserrat, Nevis	Fish soup, pepper pot soup
Barbados	Jug-jug, black pudding
Belize	Conch fritters, rice and chicken, tamales, refried beans, iswa
Dominica	Tannia, mountain chicken
Grenada	Callaloo, lambi souse
Guyana	Mellagee
Jamaica	Brown George, roasted breadfruit, saltfish, ackee
St Vincent and the Grenadines	Stewed shark
British Virgin Islands	Saltfish and rice, fish chowder, conch salad
Trinidad and Tobago	Kachouri, palouri, pelau, pakoras
Guadeloupe and Martinique	Pâté en pot, méchoui

"The nurse role in the care and management of people with type 2 diabetes is expanding rapidly. DSNs must be aware of the ways they could make their dietary advice more effective for minority ethnic groups. However, it is also important that this knowledge extends to all members of the multidisciplinary team."

was selected. The Critical Appraisal Skills Programme (2006) tool for qualitative research was selected as it is comprehensive and its focus is on rigour, credibility and relevance, which are important considerations when determining the value of research to people with diabetes.

On the other hand, there were several limitations of this review. Notably, due to time constraints, only studies published in English could be systematically reviewed. Bias is a significant cause of concern for all researchers, but in this literature review, an inclusion/exclusion criterion was included to avoid this.

Conclusion

The literature review highlighted four key issues regarding dietary advice for ethnic minority groups that need to be addressed.

- Healthcare professionals need to educate patients about diabetes and how their diet will affect their condition.
- There is a need for advice on healthier options and ways of cooking traditional foods.
- Healthcare professionals should learn some of the food terms that ethnic minority groups use to classify their food.
- Healthy eating advice needs to include the foods eaten by different ethnic minorities.

The nurse role in the care and management of people with T2D is expanding rapidly. DSNs must be aware of the ways they could make their dietary advice more effective for minority ethnic groups. However, it is also important that this knowledge extends to all members of the MDT. ■

Acknowledgements
Thank you to Alison McComiskie, lecturer, University of Birmingham, for the help and guidance she has given me.

Aveyard H (2007) *Doing a Literature Review in Health and Social Care*. Open University Press, Maidenhead

Blood Pressure Association (2007) *Healthy Eating the African Caribbean Way*. Available at: http://bit.ly/xiAm1k (accessed 08.03.12)

British Heart Foundation (2012) *African Caribbean: Healthy Eating*. Available at: http://bit.ly/At1GoC (accessed 08.03.12)

Chowdhury AM, Helman C, Greenhalgh T (2000) Food beliefs and practices among British Bangladeshis with diabetes: implications for health education. *Anthropol Med* **7**: 209–26

Connor H, Annan F, Bunn E et al (2003) The implementation of nutritional advice for people with diabetes. *Diabet Med* **20**: 786–807

Connor H, Bunn E, McGough N (2004) Why do people with diabetes contact Diabetes UK for dietary advice? *Pract Diab Int* **21**: 253–5

Critical Appraisal Skills Programme (2006) *10 Questions to Help You Make Sense of Qualitative Research*. Available at: http://bit.ly/wO11Lg (accessed 05.03.12)

Department of Health (2001) *National Service Framework for Diabetes: Standards*. DH, London

Department of Health (2011) The eatwell plate. Available at: http://bit.ly/szmENB (accessed 12.03.12)

Diabetes UK (2005) *Recommendations for the Provision of Services in Primary Care for People with Diabetes*. Diabetes UK, London

Diabetes UK (2009) *Living Healthily With Diabetes: A Guide for Black African-Caribbean Communities*. Diabetes UK, London. Available at: http://bit.ly/xtqPnr (accessed 08.03.12)

Diabetes UK (2011) *Healthy eating for the South Asian Community*. Diabetes UK, London. Available at: http://bit.ly/zDbtN7/ (accessed 08.03.12)

Diabetes UK (2012) *Eating well*. Available at: http://bit.ly/rqMPX4 (accessed 05.03.12)

Dyson PA (2003) The role of nutrition in diabetes. *Nurs Stand* **51**: 47–53

Fagerli RA, Lien ME, Wandel M (2005) Experience of dietary advice among Pakistani-born persons with type 2 diabetes in Oslo. *Appetite* **45**: 295–304

Gerrish K, Lacey A (2006) *The Research Process in Nursing*. 5th edn. Wiley-Blackwell, Oxford

Huberman AM (1994) Coding strategies. In: *Qualitative data analysis: An expanded sourcebook*. Miles MB, Huberman AM, editors. Sage, London

Khajuria S, Thomas J (1992) Traditional Indian beliefs about the dietary management of diabetes – an exploratory-study of the implications for the management of Gujarati diabetics in Britain. *J Hum Nutr Diet* **5**: 311–21

Lawton J, Ahmad N, Hanna L et al (2008) 'We should change ourselves, but we can't': accounts of food and eating practices amongst British Pakistanis and Indians with type 2 diabetes. *Eth Health* **13**: 305–19

NICE (2008) *The Management of Type 2 Diabetes*. Available at: www.nice.org.uk/cg66 (accessed 08.03.12)

Office for National Statistics (2003) *Ethnicity*. Available at: www.ons.gov.uk (accessed 20.03.12)

Scott PA (1997) Culture, food, diet and diabetes: the West Indian perspective. *Practical Diabetes International* **14**: 209–11

Scott P, Rajan L (2000) Eating habits and reactions to reactions to dietary advice among two generations of Caribbean people: a South London study, part 2. *Practical Diabetes International* **17**: 213–6

Shai I, Jiang R, Manson JE et al (2006) Ethnicity, obesity, and risk of type 2 diabetes in women: a 20-year follow-up study. *Diabetes Care* **29**: 1585–90