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# Providing diabetes care to Arab migrants in the UK: cultural and clinical aspects

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## Abstract

**A**rab migrants make up a significant minority of the Muslim population of the UK. As the result of recent conflicts in the Middle East there has been an increase in the number of Arab refugees seeking asylum in the UK, and therefore this population is expected to increase in the future. Whilst UK Arabs share the increased diabetes and cardiovascular risk that is seen in South Asian migrants, they are distinct in terms of customs and traditions. Culturally appropriate, validated, evidence-based management strategies in order to aggressively control the cardiovascular risk factors in this high risk diabetic population are required.

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**Key words:** Arab, cultural, diabetes, hypertension, lipids, migrants, obesity.

## Introduction

The UK has a documented Muslim population of around 1.2 million and 7% of these have an Arab background.<sup>1</sup> As both diabetes and obesity can be considered, in large part, 'lifestyle' related conditions, the culture and traditions of Arab people can potentially provide major influences to the development and management of these diseases.

## Diabetes and obesity in Arab populations

The rates of diabetes and obesity are rising in the Arab world, with studies showing a prevalence of obesity (defined as BMI > 30) in Arab countries that range from 30–40%.<sup>2,3</sup> The high incidence of obesity in the Arab world is mirrored by a high incidence of diabetes, with an estimated 6.5% of the population between the ages of 20–79 (13,000,000 people), having diabetes mellitus.<sup>4</sup>

To date, there have been no prevalence studies of diabetes or obesity in the UK Arab population. However, it should be noted that the first UK cases of type 2 diabetes mellitus in children were in girls of Arab or South Asian origin,<sup>5</sup> and studies have shown that Arab-American migrants have a greater incidence of obesity and diabetes when compared to the overall US population mean.<sup>6,7</sup> This is comparable to the increased risk of diabetes and obesity seen in South Asian migrants to the US and the UK,<sup>8,9</sup> and it is very likely that a similar pattern exists in the UK Arab population.

## Other cardiovascular risk factors in Arab populations

Arab populations have similar risks of developing diabetes and cardiovascular disease as South Asians,<sup>10</sup> with one study showing that the Arab men who had suffered a myocardial infarction, had a significantly higher incidence of hypertension and diabetes than the South Asian men, who had also suffered a myocardial infarction.<sup>11</sup> Arab subjects with type 2 diabetes are also more likely to develop proteinuria, often at a younger age, than matched Anglo-Celtic subjects for a given level of blood pressure.<sup>12</sup> These cardiovascular risks are especially high for Arab individuals who have migrated to America or a European country, in a similar pattern to the increased risks demonstrated in South Asian migrants.<sup>13</sup>

Dyslipidaemia is also common in Arab populations, and data from pre-Haj medicals in Oman, showed that approximately 25% had elevated total cholesterol levels of > 6.12 mmol/L.<sup>14</sup> Using a similar cut-off, another study showed approximately 50% of the population having high cholesterol levels, with higher cholesterol levels being observed in Arabs than in South Asian Indians.<sup>15</sup> In addition, non-diabetic Arab-American migrants have also been shown to exhibit the typical diabetic dyslipidaemia with low levels of HDL and high triglyceride levels.<sup>6</sup>

In the Middle East, cigarette smoking is a common and accepted way of daily life and there is little perception of smoking as a negative behaviour. Studies have shown high rates of smoking (20–50%) in various Arabic populations.<sup>3</sup> This is also translated into higher rates of tobacco use in Arab migrant populations.<sup>6,16</sup> It should be remembered that some patients may smoke sheesha rather than cigarettes. Sheesha (also called Shisha, Hookah, Huka or Nargila) is a single or multi-stemmed water pipe device for smoking. It can be used for smoking many substances, including tobacco, marijuana and herbal fruits. Sheesha smoking is considered a social

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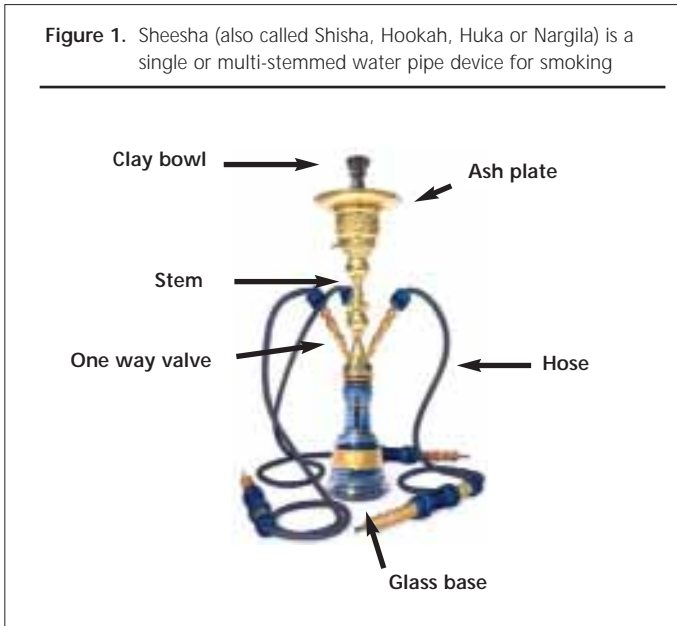
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ACHIEVING BEST PRACTICE

**Figure 1.** Sheesha (also called Shisha, Hookah, Huka or Nargila) is a single or multi-stemmed water pipe device for smoking



additive substances seems to be equivalent to that found in cigarettes (figure 1).<sup>17</sup>

Cultural aspects which may impinge on diabetes care in the UK Arab population are summarised in table 1.

**Specific advice on the care of an Arab patient with diabetes**

In addition to usual diabetes care it is important to pay special attention to:

- Aggressive control of cardiovascular risk factors as per Joint British Society 2 (JBS2) guidelines.<sup>22</sup>
- Contraceptive and pre-conception counselling to females, who may be of child-bearing age.
- Culturally appropriate smoking cessation advice. For example the incorporation of Islamic messages denouncing smoking behaviour. This is especially thought to be effective in young Arab migrants.<sup>23</sup>
- Specific advice to Arab patients who wish to perform the pilgrimage to Mecca (Haj) (table 2) and observe Ramadan (table 3), when many Arabs patients will wish to fast. The use of 'pre-Ramadan' and 'pre-Haj' consultations may also be useful opportunities to re-engage with Arab diabetic patients and also encourage them to improve their overall diabetes control. Such consultations are also an

activity, and is often done in sheesha cafes or at home with friends. There is a paucity of studies examining the effects of sheesha use but the content of nicotine and cancer causing

**Table 1.** Cultural aspects to diabetes care in Arab populations.<sup>18</sup>

- **Body Image** – ‘Plumpness’ may be regarded as a sign of affluence and fertility and may be a desirable attribute in some Arab societies. Therefore individuals, whose friends and family want them to look ‘healthy’, may be discouraged from losing weight.
- **Diet** – Arab cuisine depends to a great extent on oil. Food is cooked in it or dressed with it for serving. The choice of cooking fat varies but in Saudi Arabia the preferred fat is ghee or clarified butter, which contains oxidised lipids, which are more atherogenic than standard butter. Dates are a dietary staple for many Arabic people, and are generally classed as high glycaemic index foods.
- **Hospitality and Social etiquette** – guests may be pressed to eat rich snacks and it is important to be seen to receive hospitality in good grace. It may be considered ill-mannered to refuse and individuals may be embarrassed to mention dietary restrictions.
- **Hijaab** – Many Arab women in the UK wear hijab, a long shirt and scarf that covers the body, head and part of the face. This is not ideal for exercise and may deter some women from participating in sport.
- **Alcohol** – Moderate levels of alcohol intake have many cardioprotective effects.<sup>19</sup> Islam strictly forbids alcohol consumption, therefore persuading Arab subjects to start drinking alcohol is probably not a good idea!
- **Contraception** – A strict ‘sexual morality’ is practised by Arabs, in common with other Islamic cultures. Despite living in the UK it is possible that issues like contraception may not be discussed as openly as they are in Western cultures.
- **Acculturation** – Studies in Arab immigrants to the US have shown that there is an association between hyperglycaemia and unemployment, speaking Arabic with friends, more frequent consumption of Arabic food and less integration into American society.<sup>20</sup> This may also be true of Arab migrants to the UK, some of whom can find it difficult to integrate into UK society due to social and cultural differences.
- **Fasting** – Fasting during Ramadan involves abstention from food and drink from dawn to sunset. Although individuals with chronic illnesses, such as diabetes, for whom fasting may be detrimental to health, are exempted, many prefer to meet their religious obligations by fasting.
- **Haj** – The pilgrimage to Mecca (Haj), is a stressful endeavour and requires strenuous physical effort. Factors which may lead to problems and poor control include travel to unfamiliar environment, change in climate, intercurrent illnesses, lack of supply of medication, lack of monitoring equipment and limited access to medical/diabetes care.<sup>21</sup>

**Table 2.** Specific management of diabetes during Ramadan<sup>18,24,25</sup>

| "Pre-Ramadan" treatment | Advice   |
|-------------------------|--|
| Diet                    | Usually no barriers to fasting from a 'glycaemic control' point of view. Discourage 'compensatory gorging' of carbohydrate and fatty foods during non-fasting period.  |
| Metformin               | 'Pre-Ramadan' doses reversed, so the usual morning dose is taken with the sunset meal and the evening dose with the pre-dawn meal.   |
| Sulphonylurea           | Switch to short-acting sulphonylureas, e.g. tolbutamide, or a meglitinide, e.g. nateglinide.<br>'Pre-Ramadan' morning and evening doses of a sulphonylurea should be reversed during the fast.   |
| Insulin                 | If patient is on pre-mixed insulin and wishes to remain on this, then the morning and evening doses should be reversed. Alternatively, use of a short-acting insulin (e.g. humalog or novorapid) before the pre-dawn and sunset meals with an intermediate insulin (Insulatard or Humulin I) in the evening is safe. |

The following groups of patients should be advised to avoid fasting

- patients who have intercurrent infections
- patients with renal impairment
- patients with a history of recurrent diabetic ketoacidosis
- patients with a serious concurrent disease
- pregnant women with diabetes

opportunity to carry out a full assessment, agree management plans and identify any potential problems. Further practical advice is detailed in tables 2 and 3.

**Conclusion**

Successful and effective management of Arab migrants with obesity and diabetes needs to be structured as with any other patients, and many of the recommendations for a lower threshold for treatment of cardiovascular risk factors in South Asian patients equally apply to Arab patients. Evidence-based patient strategy that can work well across different languages and cultures is needed in the UK. This is especially important as both patients and healthcare professionals come from such a diverse range of countries. The 'Alphabet Strategy' for diabetes care as noted in JBS2, is one such validated evidence-based approach, which also provides a useful mnemonic of the main components of diabetes care.<sup>26</sup>

Interventions for Arab patients with diabetes mellitus should focus on diet, exercise, aggressive treatment of coronary heart disease risk factors and an awareness of the cultural issues which may complicate care in this high-risk population.

**Table 3.** Specific management of diabetes for patients performing Haj<sup>18</sup>

|  |
|--|
| <ul style="list-style-type: none"> <li>• Patients should ensure they have enough medication, needles, pens and monitoring equipment prior to travelling.</li> <li>• Patients should be encouraged to wear wristbands or necklaces identifying them as having diabetes, these can also contain emergency information e.g. medication records and emergency contact numbers.</li> <li>• Hypoglycaemia avoidance advice – pilgrims are likely to be exercising more than usual, and therefore subjects with well-controlled diabetes should be advised to slightly reduce their morning doses of sulphonylurea or insulin. This importance of mid-morning snack should be reinforced.</li> <li>• Hypoglycaemia management advice – the signs and symptoms of hypoglycaemia should be taught and patients should be encouraged to carry 'emergency snacks'. An 'emergency kit' containing 'Hypostop gel' or glucagon injections for insulin treated patients may be considered.</li> <li>• Patients should be encouraged to wear appropriate footwear and discouraged from walking barefoot. Pilgrims with diabetes who walk barefoot over the hot ground may develop burns and ulceration, particularly if neuropathy is present.</li> <li>• The diabetes 'sick-day' rules should be reinforced particularly for insulin-treated patients.</li> </ul> |
|--|



**Key messages**

- Arab diabetic patients share the same increased cardiovascular system risk to that demonstrated in South Asian diabetic patients.
- Cardiovascular system risk factors should be controlled aggressively as per JBS2 guidelines.
- An appreciation of the unique cultural factors is necessary in order to successfully treat this group of patients.

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**Contra-indications:** Hypoglycaemia. Hypersensitivity to insulin lispro or to any of the excipients.

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**Date of Preparation or Last Review:** March 2006

**Full Prescribing Information is Available From:** Eli Lilly and Company Limited, Lilly House, Priestley Road, Basingstoke, Hampshire, RG24 9NL

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