

Religious constraints on prescribing medication

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It is important for prescribers to take any religious dietary restrictions into consideration when prescribing in order to optimise treatment. This article summarises the main dietary restrictions of the largest religious groups in the UK and the problems that may be encountered with medication ingredients.

There is an ever-growing diversity of religious beliefs in UK society that prescribers need to take into account during their interactions with patients. Several world religions, including Islam, Judaism and Hinduism, prohibit their followers from consuming certain foods and drinks, for instance alcohol, pork and/or beef products, or those not prepared in specified ways. Vegans and vegetarians, not necessarily for religious reasons, also restrict their consumption of animal-derived products. Very many medications contain at least one active or inactive ingredient derived from prohibited sources.¹ Most patients and many physicians are unaware that these ingredients might be in their medicine and prescribers need to understand the issues and be sensitive to patients' views before prescribing medication or treatment. Religion is an important question, not always recognised in this context, but how do you raise it?

Sid Dajani, Royal Pharmaceutical Society (RPS) English Pharmacy Board member and an independent community pharmacist, says: "Religions are followed



and interpreted differently by individuals, so some practices may be acceptable to some patients and others may not. An open dialogue between a healthcare professional and a patient is necessary, so proper consideration can be given to the patient's religious beliefs before prescribing drugs or treatment. Healthcare professionals, including pharmacists, need to be able to define and explain medical necessity and to explore the existence of suitable alternatives to haram or non-kosher medications, feeds and nutritional supplements."

The RPS further advises: "It's good for prescribers and pharmacists to be aware of patients who fast, as it may well be possible to make modifications to a patient's medicine regimen. If not, and if

by fasting the patient puts their health at risk, then healthcare professionals need to clearly communicate the risks and advise the patient to seek the advice of the local scholars and imams.”

How many people in the UK have religious affiliations?

In the 2011 UK Census,² the question asking for religious affiliation was the only voluntary one, so not everyone answered. Christians formed the largest religious group in England and Wales, with 33.2 million people (59 per cent of the population). Muslims were the second largest group, with 2.7 million people (5 per cent of the population). Other major religious groups included Jewish, Sikh, Buddhist and Hindu, while a quarter of the population, 14.1 million (25 per cent) reported that they had no religion and a small number had other religious affiliations. These figures are subject to significant regional differences.

What are the main dietary restrictions of these religions?

Christianity

Christians have few restrictions on their diet, and none are compulsory. The historical recommendation to avoid meat on Fridays is now largely ignored by Protestants although devout Roman Catholics may restrict their consumption. Practising Roman Catholics are also more likely to observe fasting on holy days and specified periods of the church year, such as Lent. Seventh-day Adventists are encouraged to eat a vegetarian diet and have prohibitions on pork, alcohol, coffee and tea.

Buddhism

Buddhists have no set dietary laws and there is a great diversity. Many Buddhists refrain from meat and encourage a vegetarian diet, with moderation in all foods, and some are vegan. Other Buddhists, often from China or Vietnam, will not eat ‘pungent spices’ eg onion, garlic or leek.

Islam

In Islam, under sharia law, all food and drink is permitted, ie ‘halal’, unless explicitly prohibited, in which case it is ‘haram’. Alcohol can lead to addiction,

misbehaviour and has a negative impact on health, therefore it is classed as haram and prohibited. Something considered halal can become haram in preparation, for instance by using alcohol in the process. Pork and its by-products are haram for observant Muslims but according to a letter by the WHO on the findings of Islamic legal scholars,³ transformation of pork products into gelatin alters them sufficiently to make it permissible for observant Muslims to receive medicines containing pork gelatin, although others do not agree.

Animals not slaughtered in a specified way or that are unhealthy, diseased or a possible cause of death are all haram. Foods containing animal fats or emulsifiers from animal derivatives, blood or its by-products are haram. The acceptance of shellfish varies by community. Muslims sometimes use the term ‘mushbooh’ when it is unclear whether substances are halal or haram. Practising Muslims fast from food and drink from dawn to sunset during the month of Ramadan, the ninth month of the Islamic lunar calendar.

Judaism

Judaism has a complex set of dietary laws (kashrut) that determine what food and drink are permitted. Those that can be eaten are ‘kosher’ and divided into three categories: meat, dairy and pareve (permitted foods that are neither meat nor dairy). Meat and dairy products must not be eaten together; pareve products can be eaten with either meat or dairy. Shellfish and pork are strictly forbidden by Jewish dietary laws. Observant Jews will only consume kosher meat, ie from ruminant animals with split hooves (eg beef, lamb, mutton and goat) or poultry (chicken, duck, turkey and goose) that has been slaughtered according to kashrut law to be passed as kosher. Foods not complying with these specifications are non-kosher.

Prescribers need to consider and alert their patients about medications that might contain wheat starch during the festival of Passover, when wheat, barley, rye, oats and spelt are not permitted.

Hinduism

Many Hindus practise vegetarianism, but dietary practices vary between individ-

uals. They do not usually eat eggs, but cakes or biscuits containing eggs are often considered acceptable. All other meat and fish is restricted or avoided. The cow is sacred, therefore beef cannot be eaten, but cows’ produce is pure and desirable. There are numerous fasting days. The use of bovine-based drugs or cartilage transplants derived from cattle, would have belief implications for Hindu patients, as well as for some vegans and vegetarians. Many Hindus will maintain a vegetarian diet during Diwali and Navratri, even though they might eat some meat at other times.

Sikhism

Some Sikhs are vegetarians, and may avoid all meat, fish and eggs. Others might eat meat but not that slaughtered according to the guidelines of other religions (halal or kosher), and some do not eat beef or pork. Observant Sikhs will not consume alcohol.

Which medications and ingredients are generally in question?

Pharmaceutical drugs come from a variety of sources, including plants, minerals and animals. Micro-organisms are also the source of some drugs, for example certain antibiotics, although most are now manufactured in laboratories.

Certain pharmacologically active constituents of plants are also used in medical treatment, such as digitalis extracted from foxglove. Minerals have been used to treat various afflictions for centuries, such as iodine for thyrotoxicosis and gold for arthritis.

Drugs that include animal ingredients can be roughly divided into those with animal-derived active constituents and those containing more or less inert, inactive animal-derived excipients that are included to produce an effective vehicle for a drug.

Many pharmaceutical products have constituents that would have implications for Jewish, Muslim, Hindu and Sikh patients. Those with active ingredients directly derived from animals include: heparin, an injectable anticoagulant, that is commonly extracted from porcine intestinal mucosa or bovine lung;

conjugated oestrogens, used in some HRT preparations, derived from pregnant mares' urine; and insulin (bovine or porcine) extracted from the pancreas of cows or pigs. These days, animal insulin

– although still available on prescription – has largely been replaced by human insulin or insulin analogues. Supplements with active ingredients that could be derived from animal products include:

calcium tablets, from animal bones; glucosamine, from shrimp, lobster and crab shells; chondroitin from shark, bovine or porcine cartilage; and heme iron supplements, from animal blood.

Advanced search term (limited to SPC)	Product listed	SPC section	Relevant information
Porcine	Creon (pancreatin)	5.1 Pharmacodynamic properties	Contains porcine pancreatin formulated as enteric-coated (acid-resistant) mini-microspheres within gelatin capsules
	Curosurf (poractant alfa)	2. Qualitative and quantitative composition	A natural surfactant, prepared from porcine lungs
	Defitelio (defibrotide)	2. Qualitative and quantitative composition	Produced from porcine intestinal mucosa
	Fluenz Tetra nasal spray (influenza vaccine)	6.1 List of excipients	Contains porcine (Type A) gelatin
	Fragmin (daltaparin sodium)	5.1 Pharmacodynamic properties	Produced from porcine-derived heparin sodium
	Hypurin Porcine (insulin)	2. Qualitative and quantitative composition	Porcine-derived insulin
	Nutrizym 22 Pancrease HL Pancrex (pancreatin)	5.1 Pharmacodynamic properties	Enzymes (lipases, proteases and amylases) derived from porcine pancreas
Bovine	Hypurin Bovine (insulin)	2. Qualitative and quantitative composition	Bovine-derived insulin.
	InductOs (dibotermin alfa)	6.1 List of excipients	Contains bovine (Type 1) collagen
	NovoSeven (eptacog alfa)	4.4 Special warnings and precautions for use	May contain trace amounts of mouse IgG, bovine IgG and other residual culture proteins (hamster and bovine serum proteins)
Ethanol/alcohol	Daktarin oral gel (miconazole)	2. Qualitative and quantitative composition	Alcohol 7.59mg/g
	Diazepam 5mg/ml solution for injection	2. Qualitative and quantitative composition	Ethanol 96% 100mg/ml
	Amitriptyline hydrochloride 25mg/5ml and 50mg/5ml oral solution	2. Qualitative and quantitative composition	Approximately 10.5mg ethanol per 5ml
	Co-trimoxazole for infusion 16mg/80mg per ml	2. Qualitative and quantitative composition 6.1 List of excipients	13.2 % vol ethanol (alcohol) per 5ml
	Priadel liquid (lithium citrate)	2. Qualitative and quantitative composition 6.1 List of excipients	211mg ethanol 96% per 5ml

Table 1. Examples of searches within summaries of product characteristics (SPCs) held on the electronic Medicines Compendium (eMC; www.medicines.org.uk) to identify possible haram constituents of UK licensed medications⁶

Pharmaceutical companies are becoming more aware of the need to cater for patients with particular dietary restrictions, so their major drugs with active ingredients derived from animals may well have synthetic alternatives, manufactured in the laboratory.

Medicines with largely inactive excipients that may cause problems include those containing ethanol (used as a solvent), gelatin (common in capsule shells) or stearic acid (often made from bovine fat and may be included in a salt form in medicines; for instance, magnesium stearate is used as a lubricant during tablet manufacture).

Halal or haram

For a medicine to be passed as halal, its ingredients and production methods must be rigorously checked to ensure they comply with sharia law. Gelatin used to encapsulate medications is often sourced from bovine or porcine (and occasionally fish) skin, bones and connective tissue. If derived from pigs, it can be a problem for some Muslims, although the issue is contentious. A paper issued by Sussex Partnership NHS Foundation Trust to clarify the situation included a guidance statement by the Islamic Organization for Medical Sciences in Kuwait in 1995,⁴ which concluded that *istihalah* (the process of change of a substance into one with different characteristics) can convert an impure substance into a pure substance, and thus the transformation of bones, skin and tendons of impure animals into the form of gelatin is sufficient to render it permissible for consumption. However, there is much disagreement on this issue.

On the other hand, substances considered halal can be rendered haram, if the preparation process is not correct. Medicinal products containing alcohol are not permissible although some religious leaders consider that if the alcohol is used for the purpose of dissolving or preservation only, it can be deemed halal. Pharmaceutical ingredients that might be considered *haram* by some Islamic scholars include butyl and cetyl alcohol, glycerine, glycerol monostearate, lactose,

calcium and magnesium stearate and mono- and diglycerides.⁵ The term ‘*tayyib*’ is sometimes used to refer to pharmaceutical products that are of good quality and produced by standardised processes under sharia law.⁶

Kosher or non-kosher

In Judaism, porcine-derived and other non-kosher products are allowed in non-oral medications used to treat an illness, even if it is not a life-threatening condition.³ However, some orthodox Jews might not agree with this and might refuse treatment.

Lactose, which is milk-derived, should not be taken at the same time as medications containing meat-derived products. Products derived from shellfish or non-scaly fish are not permitted. Hence, glucosamine and chondroitin are generally considered non-kosher. However, some authorities may regard the considerable processing of the shells and cartilage and their nonchewable pill form to render them inedible nonfoods, and therefore not required to be kosher for those in need of treatment.

Who supplies halal medicines in the UK?

Halal medicines are available and used in some over-the-counter (OTC) remedies but the production of solely halal pharmaceuticals is currently limited to manufacturers in countries that are predominantly Muslim. The Halal Food Authority (HFA) is a halal certification company in the UK that includes some OTC medicines in its lists of products. Some Muslims, however, might not consider the certification processes acceptable to their own interpretation of their beliefs.

Where do you find information about specific medicines?

Prescribers and patients should contact the manufacturers of pharmaceutical products to ascertain their constituents and the process of preparation to determine if they are suitable for a halal diet, for example. The UK Medicines Information (UKMI) advice sheet on medicines suitable for a halal diet⁶ says that the Summaries of Product Characteristics (SPCs) – which can be

searched to identify possible haram constituents of UK licensed medications – should be consulted with caution because the details of any haram active ingredient or excipient needs a proper understanding of haram and of how to search within the SPC for relevant information (see Table 1).

A spokesperson for NICE says it has not issued any specific guidance around religious dietary requirements for the drugs it has examined, but stresses NICE has not assessed all prescription drugs. However, for each piece of guidance or drug appraisal NICE undertakes, it also carries out an equality impact assessment to determine whether there are any issues it should take into account. The spokesperson noted two references to religious dietary requirements in the NICE guidance on *Food Allergy in Under 19s: Assessment and Diagnosis*,⁷ and references to religious beliefs in guidance on fertility⁸ and blood transfusion.⁹

The Royal Pharmaceutical Society's practice support team say they do not have any specific guidance for prescribers on the need to ask a patient about religious affiliations or attitudes to medications with forbidden ingredients. They add: “However, we follow the guidance from the Specialist Pharmacy Service when we need to advise pharmacists on an individual basis.”

Patients and prescribers who are in doubt about treatment are advised to consult a religious leader. For Muslims this would be an Islamic scholar, such as a recognised local imam, or they can contact the Muslim Council of Britain (MCB) for specific queries.¹⁰ A point of contact for Jewish patients and health professionals would be their local rabbi.

How can prescribers help?

Many drugs come in different forms (eg tablets or solution, as well as capsules), so a different formulation with permissible ingredients could be considered. Some manufacturers make capsule shells from a plant source, allowing Muslim and Jewish patients to consume them, as they are kosher and halal certified. There are also plant sources for stearic acid and its salts, therefore the source of magnesium stearate needs to be verified with the manu-

facturer before deciding on an alternative source. If the chosen treatment is not available in a different formulation, there might be a similar treatment from the same drug class that is free of nonpermitted substances. If all alternatives have been explored without success, patients might wish to consult their religious leader for advice. Jewish, Muslim and Hindu religious leaders will interpret their scriptures in the case of a patient that has a life-threatening illness, to determine whether there can be an exemption for a medication that is normally classified as nonpermitted. However, some patients might have their own interpretations of their faith.

Muniba Naeem, a locum pharmacist in south London, endorses RPS board member Sid Dajani's recommendations and adds: "It is of great importance to make people feel involved in decisions regarding their healthcare. As a practising Muslim, I believe that for the purpose of improving health, it is acceptable to take medication containing gelatin. However, in day-to-day practice, I come across people of the same religious background with opposing views, resulting in poor compliance with their medicines. As pharmacists, we are in a good position to cater to their needs where possible to improve adherence. We have the necessary knowledge and

access to information to allow patients to make an informed decision."

In the UK's multicultural society, it is vital for prescribers and patients to engage in an open dialogue and to take religious dietary restrictions into consideration when prescribing in order to optimise treatment.

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Declaration of interests

None to declare.

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