

# Prescribing advice on animal derived medicines in within Primary Care

## Purpose of document

For Prescribers and Prescribing Advisors who are approached by patients who wish to avoid animal products for religious, cultural or ethical reasons or those who are allergic to or intolerant to certain substances and need to know about the origin or source of drugs and excipients contained within their medicines.

## Background

A number of medicines such as capsules, injections and excipients in medicines contain animal products or are animal derived. Some examples and their sources are listed in the table below:

Drug(s)/ Product	Source
Creon capsules <sup>1</sup> , Fragmin <sup>1</sup>	Currently derived from porcine
Havrix <sup>1</sup> , Engerix B <sup>1</sup> , Avaxim <sup>1</sup> , Adcal D3 (except caplets) <sup>2</sup> , Accrete D3 <sup>2</sup>	Derived from bovine sources
Epoietin-alfa <sup>1</sup>	Derived from Chinese hamster ovaries
Infliximab <sup>1</sup>	Currently derived from murine (mouse) sources
Influenza vaccine <sup>1</sup>	Majority of influenza vaccines are derived from eggs ( a product not derived from eggs is available)
Premarin tablets <sup>1</sup>	Derived from equine sources
Bee pollen <sup>1</sup>	Gathered by bees and collected from legs of bees
Chitin <sup>1</sup>	From insets and crustaceans
Chymotrypsin <sup>1</sup>	Ox pancreas
Cochineal/carmine/carminic acid	Red pigment from crushed cochineal insects
Disodium inosinate <sup>1</sup>	From meat extract
Gelatin <sup>1</sup>	From cows or pigs. Used for many capsules
Lactose <sup>1</sup>	From cows' milk. Usually made synthetically (Common filler in tablets)
Lanolin <sup>1</sup>	Fat extracted from sheep's wool
Oleic oil and oleostearin <sup>1</sup>	From pressed tallow -rendered form of beef or mutton fat
Stearic acid <sup>1</sup>	Fat from cows, sheep, dogs or cats. Can be obtained from vegetable sources
Trypsin <sup>1</sup>	Enzyme from pork pancreas

## Who is affected?

Any patient who wishes to avoid animal products for religious, cultural or ethical reasons and those who are allergic or intolerant to medicines containing animal products or animal-derived products

Main author:	Samina Ali, Prescribing Support Pharmacist
Approved by	Primary Care Prescribing Management Group
Date of approval:	16 <sup>th</sup> June 2016
Date of review:	16 <sup>th</sup> June 2017

Particular faiths have dietary restrictions that may forbid certain animal products (eg. pork) within their diet.<sup>3</sup> A publication titled “How can I find out if medicines may be considered ‘Kosher’ or ‘Halal’?” provides an overview of Judaism and Islam belief systems and relates them to the consumption of medicinal products and is available at: [http://www.medicinesresources.nhs.uk/upload/documents/Evidence/Medicines%20Q%20&%20A/QA381\\_1KosherandHalal\\_FINAL.doc](http://www.medicinesresources.nhs.uk/upload/documents/Evidence/Medicines%20Q%20&%20A/QA381_1KosherandHalal_FINAL.doc)

Below is a table<sup>1</sup> which summarises religious restrictions of certain faiths:

<b>Religion / Beliefs</b>	<b>Restrictions</b>
Buddhism	Encourages a vegetarian diet
Hinduism	Majority are vegetarians – no meat or eggs Those who are not, usually abstain from beef or pork.
Islam	Abstain from pork and pork products Abstain from animal products not killed in the prescribed ritualistic way ( <i>halal</i> ) Abstain from products containing alcohol
Jehovah’s witness	Abstain from blood products – eg. blood transfusions
Judaism	Land animals must be mammals which chew their cud and have cloven hooves – pigs are prohibited Birds of prey are prohibited Fish must have fins and scales – non-fish seafood is prohibited eg. shellfish Meat and milk (any dairy) cannot be mixed
Sikh	Some are vegetarian (no meat or eggs) but milk products are usually acceptable Many abstain from pork or beef Abstain from meat killed in ritualistic way (eg. do not eat <i>halal</i> ). Abstain from alcohol.

NB: Vegetarians, because of dietary, cultural or ethical convictions, do not consume meat poultry, game, fish, shellfish, crustacean or animal products.<sup>4</sup>

Religions such as Islam and Judaism have allowed exceptions in taking animal derived medicine.<sup>3</sup> For example, Colecalciferol (Fultium D3), is derived from sheep wool fat and as it is derived from a permitted, clean animal, this formulation is Halal and Kosher certified.<sup>5</sup> However, the final decision rests on the individual patient, assumptions should not be formed, and depends on which extent they adhere to their religious beliefs.

One of the principles of Islamic law states that, “Necessities overrule prohibitions.” In other words, life is sacred and has great value in Islam and it is considered a duty to save life. As a general rule, Muslims are not allowed any form of pork but when there is no suitable medication alternative and there is a risk of health deterioration, Islamic law does allow medicines derived from pigs.<sup>6</sup>

The World Health Organisation (WHO) has reported on the advice of over 100 Islamic Legal Scholars who have determined that the transformation of pork products into gelatin alters them sufficiently to make it permissible for observant Muslims to receive vaccines containing pork gelatin and to take medicine packaged in gelatin capsules.<sup>6</sup>

More detailed information is available at:

<http://www.immunize.org/concerns/porcine.pdf>

Similarly, in Judaism, consuming pork containing medicines is permissible as medicines taken orally are not considered as “eating”.<sup>3</sup>

### **How to establish if a drug is of animal origin?**

1. Check the summary of the product characteristics. Information is available at: <http://www.medicines.org.uk/emc/>
2. Contact the drug manufacturer
3. Seek advice from the local medicines information service
4. Patients can be referred to their Community Pharmacist to verify the brand of medicine being dispensed is from a non-animal source

Please note, the source of origin of the ingredients is not always known by the manufacturer<sup>7</sup>

### **Advice on alternatives to animal derived medicines**

The following options should be considered. The alternative medicine should be free from animal derived products and should be safe, clinically effective, cost effective and acceptable to the patient. Alternative options include the following –

- Prescribe a different formulation
- Prescribe a different drug from the same class
- Prescribe a drug from a different class
- Prescribe a different strength
- Avoid drugs which need to be specially manufactured- as these medicines are unlicensed, expensive and all excipients may be unknown and may vary between different manufacturers
- Please refer to NHS Greater Glasgow and Clyde Guidance on the Use of Specials in Primary Care  
([http://www.ggcprescribing.org.uk/media/uploads/prescribing\\_resources/specials\\_guidance\\_v3\\_final\\_december\\_2015.pdf](http://www.ggcprescribing.org.uk/media/uploads/prescribing_resources/specials_guidance_v3_final_december_2015.pdf) )

If there is no suitable alternative, and if for religious reasons, the patient should discuss and seek advice from local religious leaders such as a rabbi or imam.

## References

1. Queensland Government. *Medicines/pharmaceuticals of animal origin*. Queensland: Queensland Government; 2013 [12<sup>th</sup> April 2016] Available from: <http://www.health.qld.gov.au/qhpolicy/docs/gdl/qh-gdl-954.pdf>
2. UKMI. *Is there a calcium and vitamin D preparation which is suitable for a vegetarian or vegan?* [12<sup>th</sup> April 2016] Available from: [http://www.medicinesresources.nhs.uk/upload/documents/Evidence/Medicines%20Q%20&%20A/UKMi\\_CalciumVitDQA355%204%20final%20aug12.doc](http://www.medicinesresources.nhs.uk/upload/documents/Evidence/Medicines%20Q%20&%20A/UKMi_CalciumVitDQA355%204%20final%20aug12.doc)
3. NHS Rotherham. *Medicines derived from animal products*. Rotherham: NHS Rotherham; 2016 [12<sup>th</sup> April 2016]. Available from: [http://www.therotherhamft.nhs.uk/Patient\\_Information/Patient\\_Information\\_Leaflets/](http://www.therotherhamft.nhs.uk/Patient_Information/Patient_Information_Leaflets/)
4. Vegetarian Society. *What is a vegetarian?*; 2016 [12<sup>th</sup> April 2016]. Available from: [www.vegsoc.org](http://www.vegsoc.org)
5. UKMI. *Which vitamin D preparations are suitable for a vegetarian or vegan diet?* [12<sup>th</sup> April 2016] Available from: <http://www.medicinesresources.nhs.uk/upload/NHSE%20QA%20Vitamin%20D%20-%20vegetarians%20and%20vegans%20387.2%20FINAL.doc>
6. World Health Organisation. *The Judicially Prohibited and Impure Substances in Foodstuff and Drugs*. Geneva: World Health Organisation; 1995. [12<sup>th</sup> April 2016]. Available from: <http://www.immunize.org/concerns/porcine.pdf>
7. Eriksson A, Burcharth J, Rosenberg J. Animal derived products may conflict with religious patients' beliefs. *BMC medical ethics*. 2013; 14(1):48.