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Food aversion – how it happens and how to prevent it

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ABSTRACT: Over the last 15 years, an increasing amount of study has been undertaken stating the importance of nutrition for chronically ill patients, resulting in it being widely documented. These studies have shown that the provision of a prescribed and balanced diet suiting the specific need of patients is vital in improving their longevity. The problem, however, seems to be how and when to offer these diets to prevent food aversion. Many sick animals are offered these diets in hospital, often resulting in a refusal to eat the diet at home and thereby decreasing longevity.

Introduction

The importance of nutrition for chronically ill patients, has resulted in it being widely documented as an important aspect of patient management (Gajanyake et al., 2012). The aim of nutritional care in the veterinary clinic is to maintain the resting energy rate (RER) of each individual patient (Ramsey, 2012), while ensuring the most suitable nutritional diet is offered. During the hospitalisation period, prevention of malnutrition and encouragement of nutritional intake is vital. Therefore, the fifth vital assessment of nutrition needs to be clearly taken into account with transition to dietary therapy of prescription diets discussed with owners and staff and encouraged to help improve quality of life (QOL) (Elliott, 2012).

It is important to correctly introduce and integrate prescription diets into the patient's life; if introduced incorrectly, this could cause the patient to be unwilling to eat the diet, thus resulting in an adverse effect on the longevity of the patient. Food aversions are explained as an acquired defence in response to an unpleasant experience, a physiological occurrence causing a defence mechanism (Freeman & Riley, 2009). Although it was initially rejected as a concept in animals, it is a recognised and accepted condition within veterinary clinics.

Veterinary patients learn this aversion from an unpleasant experience, associating it with pain, nausea, general indisposition (Purina, n.d.), or perhaps even a strange environment, and with research by Elliott, Rawlings, Markwell, and Barber (2000) and Ross et al. (2006) proving that renal prescription diets can indeed increase longevity, it is vital for the health and life expectancy of the patient that food aversion be avoided at all costs.

Occurrence of food aversion

Michel (2002) pointed out that it is impossible to prove food aversion in animals due to the inability to vocally communicate their symptoms or their needs. He did, however, state that it is highly suspicious from experience that this is a phenomenon which also exists in the veterinary field as well.

It is known that food aversion was found in 23% of human renal failure patients involved in a study by Bossola, Laciani, Rosa, and Tazza (2005); however, in the human field, it is possible to ask the patients questions regarding their sense of taste and smell or whether they feel nauseous, all of which are associated with many illnesses. Yet in cats this is merely speculation associated with observation and an assumption that cats may follow



▲ **Figure 1.** Feeding tubes are a usual way to maintain RER until the patient will eat voluntarily



▲ **Figure 2.** Encouraging the patient to eat a "normal" diet. Photo courtesy of Shoned Hawksworth Tai Wai Small Animal Exotic Hospital with permission from the owner given

similar patterns of olfactory alterations due to the associated renal impairment.

In conflict with this is the wide recognition by veterinary staff that food aversion is a common occurrence in cats in general; however, there is some debate over the best ways to feed hospitalized cats and conflicting statements from Towell (2011) and May and Langston (2006) on when and how to introduce a veterinary diet, with the former advising starting as soon as possible and the latter stating that when the patient is home and recovering would be best. Also, there does seem to be some

conflict between creating a learned food aversion and feeding the required diet. There also does seem to be some conflict between creating a learned food aversion and feeding the required diet, a fine line between feeding the most beneficial diet, preventing malnutrition and preventing food aversion is therefore noticed. In the veterinary clinic it can prove difficult to encourage cats to eat, and as mentioned by Baldwin et al. (2010), good nutrition enhances quality and quantity of life. It is here that the Registered Veterinary Nurse (RVN) needs to use their knowledge and experience to encourage the patients to eat a suitable diet using a variety of methods at their disposal. The refusal of a patient to eat could result in early euthanasia of the patient should the owners feel that this is warranted, and it is prior to this that the Veterinary Surgeon (VS) and RVN need to discuss whether eating any diet is better than eating nothing. Towell (2011) and Holloway (2004) are in agreement that therapeutic diets should not be offered in hospital, so it would seem sensible to follow the advice of Chandler (2012) and Baldwin et al. (2010) of encouraging feeding anything such as comfort foods as soon as possible to prevent malnutrition.

Despite a seemingly significant lack of research into this phenomenon with animals, many researchers and authors tend to be in agreement that preventing food aversion is in the best interest of the patient (Baldwin et al., 2010; Towell, 2011). Prevention of this phenomenon would allow the therapeutic diet to be introduced when the patient is home

and feeling better. As research by Elliott (2012) proved, this would in turn increase longevity of the patient and it is the RVN's obligation to ensure this occurs in the interests of their patients' welfare.

The need to realise the importance of feeding a veterinary diet to patients is explained by Elliott et al. (2000), with an individual professional acknowledgement as to why – for example, chronic renal failure cats – may be reluctant to eat or are malnourished due to associated symptoms such as nausea and pain. Patients' normal feeding patterns should be understood, with the RVN implementing a nutritional assessment upon admission by talking to the owner, thereby forming a useful tool in deciding on the most suitable feeding method for each individual and recognition as to when the veterinary diet should be introduced, therefore preventing food aversion and increasing longevity.

The slowing of disease progression is found with patients fed the correct diet and this plays a vital role in reducing pain and associated symptoms, thereby increasing the QOL of the patient, as clearly proven in clinical studies as stated by Elliott (2012). However, although this has been proven clinically, there is documentation by Holloway (2004) stating that cats often do not tolerate new foods and will refuse to eat. This bears the risk of anorexia and subsequent malnutrition, causing further demise to the patient's condition and possibly leading to a reduced QOL and the earlier death of the patient. A clinical decision must be made regarding the patient eating any food that may not be suitable for the disease compared to not eating, and as most VSs and RVNs know, it is better for the patient to eat something rather than nothing at all. Nonetheless, as the feeding behaviour of cats is known, the RVN can use this theoretical knowledge to their advantage and help the owners in the transition to a suitable diet while maintaining adequate nutritional input and preventing food aversion.

Certain illnesses have the potential to cause an altered sense of taste, with research by Quimby, Brock, Moses, Bolotin, and Patricelli (2014) proposing that nausea can also be an associated by-product of some diseases, resulting in inappetence and possibly a learned food aversion correlating to this.

Killner (2008) suggested that it is important to speak to the owner to establish the usual diet and feeding routines of

the patient, with evidence justifying that taste and smell is an extremely important factor in determining what cats will eat. Along with the statement by Bradshaw (2006) that cats are highly individual and idiosyncratic in their food preferences, Towell (2011) also mentioned the picky eating habits of cats, who may be reluctant to eat if different food bowls, textures and temperature of foods are offered to which they are not accustomed. Modifying food preferences based on experience and preferring several small meals a day, an assumption could therefore be made that due to the nature of cats' feeding habits, the possibility of a learned food aversion could be deemed to be increased.

Feeding methods

As there are many assisted-feeding methods available which can be implemented in order to maintain RER, the most suitable choice needs to be selected based on individual requirements. This should take into account being able to give the veterinarians food of choice while preventing food aversion. The most common accepted voluntary intake method, found by Dorricott (2012), was hand-feeding warm, smelly food; this agreed with Spencer (2009), who also suggested this method, along with syringe feeding. However, Spencer (2009) also advised the use of enteral nutrition and parental nutrition to reduce morbidity. Both are accepted methods of maintaining a nutritionally balanced diet in the short term; although parental feeding may be useful in the prevention of food aversion, this is not a long-term resolution and cannot be maintained for extended periods. Therefore, as mentioned by Perea (2012), transition to oral feeding needs to be initiated, and this is where care to prevent food aversion needs to be taken. Enteral nutrition can be utilised at home in the short term, with the renal diet a possibility, yet Holloway (2004) suggested that learned food aversion may be associated with smell in animals.

Spencer (2009) does suggest syringe feeding, although he also stated that force feeding should not be engaged in; this implies that knowledge and experience is required on the part of the RVN to ascertain at what point the syringe feeding turns into force feeding, with force feeding readily identified by Collins (2012) as one of the major instigators in causing food aversion, due to the associated stress and resentment. Although all of these methods come with their own advantages and disadvantages, the main goal is the same: to provide suitable and appropriate nutrition to patients, while preventing food aversion.

Preventing food aversion

The most suitable method of preventing food aversion can be deemed a simple one, if one looks at all the documentation stating that force or syringe feeding should not be done with the chosen veterinary diet. However, this is often easier said than done, with the VS being in charge of treatment and perhaps insisting on the feeding of the renal diet as soon as possible. It is therefore the responsibility of the RVN to use evidence-based research to explain not only to the VS but to junior members of staff more suitable methods for feeding. Conversely, if the cat will not eat and a feeding tube is not permitted as an option, then the RVN faces the dilemma of syringe feeding versus anorexia with all of its associated problems. In this situation a suitable maintenance diet which can be easily substituted for the remainder of the patients' life should be used, thus still avoiding a learned food aversion to the therapeutic diet. However, this situation is not ideal and all efforts should be taken to avoid it, with the RVN using their knowledge and experience to solve the situation.

Syringe feeding is a commonly used method to encourage intake of any diet (Spencer, 2009), with Killner (2008) stipulating that this method may be used in order to stimulate appetite. Although this method is common, it is difficult to provide enough nutrition to meet the RER and is possibly one of the biggest factors in causing food aversion to occur and undue stress to hospitalised patients.

As hospitalised patients are generally unwell and nervous, certain feeding methods often result in a learned food aversion associated from nausea and discomfort. Holloway (2004) advised that new foods should not be introduced as it may result in food aversion, as could offering multiple dishes at any one time, while Hotchner (2005) also mentioned this effect when offering foods to patients who exhibit signs such as gulping, drooling or turning the head away, showing clear signs of not wanting to eat. Once this learned behaviour has been formed it thereby reduces the food choices appropriate to the patient's condition, decreasing longevity (Holloway, 2004).

Polzin (2007) agreed with May and Langston (2006), stating that patients should not be force-fed as this could cause a food aversion, stating that new diets should be implemented 6–8 weeks after the patient has returned home.

The thought of many, such as Towell (2011) and Chandler (2012), is to begin feeding a diet sooner rather than later, the premise being that those with advanced disease will be less likely to accept a change in food and therefore will be unable to benefit from this. However, this is contradicted by Towell (2011), who suggests that the diet should be gradually increased over a period of one week. In contrast to this, May and Langston (2006) suggested that this diet be gradually introduced over a period of 6–8 weeks, with a number of suggested feeding methods utilised to prevent food aversion.

Dos and don'ts to prevent food aversion

- Do not force-feed or syringe-feed the long-term therapeutic diet
- Do not tube-feed the therapeutic diet
- Do not introduce the therapeutic diet in hospital
- Do not offer the therapeutic diet while the patient is still recovering
- Do introduce the new diet when the patient has been home and well for at least 6 weeks
- Do introduce the diet slowly over at least one week

Conclusion

It is undeniable through research and through personal experience, especially with chronic renal failure cats, that food aversion is a phenomenon in patients, and it is also proven that the feeding of therapeutic diets improves survival times in patients. It is therefore vital for their longevity to prevent food aversion of these diets at all costs and as is the case with any illness or disease within any veterinary clinic, each patient should be looked at on an individual basis. The premise that no two patients are alike and that no one patient responds the same to medication and nutritional changes can be deemed correct. It is these areas that the VS and RVN need to be aware of and must take these factors into consideration when forming their nutritional decisions.

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