

OWNER FACTSHEET

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Home-prepared cooked diets

Introduction

Home-prepared cooked diets are becoming increasingly popular and, as a consequence, we as veterinary professionals would like to provide guidance about the advantages and disadvantages of such foods.

Our advice to pet owners should always be based on:

- Sound scientific evidence, whenever available
- Excellent clinical reasoning
- Informed risk management.

This is so we can help you make decisions about what to feed your pet. As well as ensuring that minimum nutritional requirements are met, the chosen diet should ideally provide optimal (or ideal) nutrition to promote the good health of your pet.

Whatever the type of food you wish to feed, it should meet the following requirements:

- Complete and balanced nutrition the diet should provide every nutrient that your pet needs, in the correct quantities for the pet and not in excessive amounts
- **Digestible** the nutrients must be bioavailable to the pet consuming the food
- Palatable the food must be appealing to your pet so that they will consume it
- Not fed in excess excessive amounts of energy from any food will lead to obesity. Controlling the amount of food is strongly advised to maintain an ideal body condition score. Further information on body condition scoring is available from the World Small Animal Veterinary Association (WSAVA) (www.wsava.org)
- Safe the food must be safe to feed, being free of anything that may cause harm to you or your pet (e.g. toxic compounds or organisms (pathogens) that cause disease)
- Achievable the recommendation must be within your financial and time budget.

Sustainability of food sources is also of increasing concern for both humans and pets because, if current consumption continues, there will be a food shortage within the next 50 years.

What are home-prepared cooked diets?

Home-prepared cooked diets comprise cooked ingredients, with the exception of some uncooked vegetables, fruits and nuts. Depending on the home-prepared cooked diet type, the following specific ingredients may be included:

- Meat
- Fish
- Poultry
- Green or yellow vegetables
- Root vegetables
- Eggs
- Dairy products
- Cereals
- Oils
- Nuts
- Seeds
- Fruits

Similar to raw diets, home-prepared cooked diets comprise ingredients that can be easily purchased and, with the exception of some dairy products and oils, have undergone limited processing.



Types of home-prepared cooked diet

Home-prepared cooked diet recipes are widely available, but not all such diets are created equally.

- Home-prepared recipes:
 - The recipe source may vary and often includes:
 - Books
 - Magazines
 - Online content
 - Copy produced by veterinary professionals or nutritionists
 - Caution is needed, as not all recipes will deliver complete and balanced nutrition. It is important to ascertain the qualifications of the person who created the recipe
 - Appropriate qualifications include:
 - Diplomate of the American College of Veterinary Nutrition (ACVN)
 - · Diplomate of the European College of Veterinary Comparative Nutrition (ECVCN)
 - Most recipes are designed to be fed with a nutritional supplement. The appropriate supplement type and amount to feed to ensure that the food is complete and balanced should be clearly stated on the recipe
 - Although some recipes are intended to be fed without supplements, it can be more difficult to ensure that they are
 appropriately balanced and studies have shown most are not.
- No specific recipe:
 - A recipe may not be followed, rather the pet is fed according to its own preferences.

NB: Recipe assessment by an appropriately qualified person is always advised.

What are the advantages of feeding home-prepared cooked diets?

Advantages in a clinical (or veterinary) situation

- Food-elimination trials to rule out foods that may cause an adverse reaction (often called a 'food allergy'):
 - Trials typically last for 2–10 weeks and, if appropriately conducted, remain the gold standard for the diagnosis of adverse reactions to food
 - If used for short periods, such diets need not be complete and balanced
 - If the home-prepared cooked diet successfully resolves the clinical signs, it can then be considered for long-term feeding, but only if it is suitably balanced by an appropriately qualified individual.
- Home-prepared cooked diets can be used in cases where no other appropriate diet is available; for example, where there is a proven adverse reaction to food and no suitable commercially available diet exists. Again, it is strongly advised to ensure that the recipe used is created by an appropriately qualified person, so that it is safe for long term use.

Evidence for the benefits of home-prepared cooked diets

As a pet owner, you may choose to feed a home-prepared cooked diet because it gives you more control over what your pet eats, including the source of the ingredients. Advocates also believe that such diets are a healthier option than a commercially produced diet. However, there is currently no evidence to support these perceived benefits.

The proposed main advantages and the evidence for these claims include:

| Diet claim | Available evidence |
|--|---|
| Improved palatability | Depending on the formulation, home-prepared cooked diets often have a greater moisture content and might also contain more fat and protein. Foods that the pet likes are generally chosen. Improved palatability is therefore expected This may be an advantage for picky eaters This may be a disadvantage for pets prone to obesity |
| The diet is cooked (versus a raw diet which is uncooked) | The cooking of ingredients in home-prepared cooked diets significantly reduces the risk of pathological infection compared with feeding diets that are uncooked For further information, see 'Raw diets' |

Proponents of home-prepared cooked diets also report the following (albeit unpublished) advantages from their clinical experience:

| Diet claim | Available evidence |
|---|--|
| A more 'natural' food can be fed, and owners may feel that this is better for the pet | Guidance for the term 'natural' is that it must be obtained exclusively (or at least 95%) from the source material (e.g. of vegetable or animal origin). This is not an official or regulated definition Therefore, depending on the ingredients used, commercially manufactured diets can also be defined as 'natural' in accordance with the above guidance |

| Diet claim | Available evidence |
|--|--|
| More appropriate for dogs and cats due to its unprocessed content | ■ Although there is some emerging evidence that ultra-processed foods may be of concern in humans, further work in this area is needed. However, in general, pet foods would not be considered to be ultra-processed by the definitions used for human food |
| The diet need not contain carbohydrates/gluten/wheat: Carbohydrates are thought by some not to be digestible and even harmful to pets Carbohydrates are thought by some to be responsible for dietary intolerances | A study has shown that over the many years of dog domestication, their dietary needs have changed and their digestive capabilities have adapted to accommodate living as companions Unlike their ancestors, domesticated dogs can readily digest carbohydrates Studies have now shown that cats can also utilize carbohydrates, but to a lesser extent than dogs. This means that carbohydrates can form part of a nutritious diet for cats Adverse reactions to food are rare and may be protein or carbohydrate related, although they are most commonly found to be associated with the protein components of the diet |

It should be noted that many home-prepared cooked diets will contain carbohydrates, gluten and/or wheat. For further information on the inclusion of grains in pet foods, see 'Grain-free diets'.

| Diet claim | Available evidence |
|---|--|
| Reduced incidence of gastrointestinal signs | ■ There is no published scientific evidence |
| Improved stool volume due to feeding a diet without perceived 'fillers' | No scientific study evidence The smaller stool volume in pets fed home-prepared cooked diets may be due to the typically low fibre content |
| Improved stool quality | ■ No scientific study evidence |
| Improved breath odour | ■ No scientific study evidence |
| Eliminated gas or bloat risk | ■ The suggested mechanism is that home-prepared cooked diets contain a decreased amount of soluble and insoluble carbohydrates. While such a mechanism is plausible, there is currently no published evidence to support it |
| Fewer 'food allergies' or reduced skin complaints | No scientific study evidence; anecdotal evidence only. Switching to a home-prepared cooked diet might plausibly resolve clinical signs of an adverse reaction to food, provided that the component associated with the signs is not fed |
| Improved recovery from illness | No scientific study evidence Nutrition should be tailored to the illness and a home-prepared cooked diet might not be appropriate for conditions such as kidney disease where protein and phosphorus restriction is vital |
| Increased energy levels | ■ No scientific study evidence |
| Improved behaviour | ■ No scientific study evidence |
| Improved immunity | ■ No scientific study evidence |
| The same diet can be fed at all life stages | ■ This would be possible only if the recipe was created by an appropriately qualified individual and was appropriate for all life stages, including growth and reproduction |

What are the disadvantages of feeding home-prepared cooked diets?

Cost

- The cost of feeding a home-prepared cooked diet is significantly greater than other types of diet, especially commercially produced dry foods (e.g. kibble). Although exact costs vary depending upon the ingredients, as an owner you may typically expect to spend at least twice, and sometimes over 10 times, the cost of an equivalent commercially manufactured diet.
- The higher costs are due to:
 - Sourcing the ingredients (usually from local supermarkets or grocers)
 - Specific supplements that are essential for completing the nutritional profile of these diets
 - $\bullet\,\,$ The cost of the diet formulation creation by an appropriately qualified individual.
- For large breeds of dog, especially, these costs may quickly become prohibitive.



Cooking and preparation time

- Home-prepared cooked diets require the cooking of ingredients every 1–2 days. It takes significantly longer to prepare each meal than it would for pre-prepared foods, and this commitment can be difficult to maintain.
- Even if batch-cooked and frozen, the meals still take time to thaw, reheat and cool compared with other diet types which can be ready in seconds.

Pathogenic infection

- Compared with feeding a raw diet, the risk from pathogens is lower, making it safer overall.
- However, care is still required when meals have been pre-prepared, because incorrect cooking, cooling, thawing and reheating can result in bacterial growth, leading to a potential risk of food poisoning.

Excess or deficiency

- When feeding a home-prepared cooked diet, it is difficult for you to ensure that what you are feeding is a complete and balanced diet for your pet.
- Research studies assessing the nutritional adequacy of home-prepared cooked diets have found some concerning results:
 - Two studies looking at 94 commonly available recipes for home-made diets (both cooked and uncooked) for pets with medical conditions found them all to be inadequate
 - A third study of 200 different recipes for maintenance diets for dogs found that 95% were deficient in at least one essential nutrient, and 84% had multiple deficiencies.
- Clinical signs associated with conditions that are caused by feeding an unbalanced diet can take a considerable period of time to appear. At this point the damage may be irreversible.
- Although there are no published studies on prevalence, the risk of nutrient deficiencies causing clinical signs in otherwise healthy adult dogs and cats appears to be rare. However, such deficiencies are more frequently reported in growing animals. As a result, caution should be exercised when feeding such diets to pets that have not yet reached skeletal maturity.
- Appropriate feeding trials are performed for good quality commercial diets. When a home-prepared cooked diet is provided, the food trial is being performed on your pet.
- Nutrient interactions and bioavailability cannot be determined for home-prepared cooked diets.
- If a vitamin supplement is added to the recipe prior to cooking, many of the vitamins can be destroyed by the cooking process.

Reduced digestibility

- Although the cooking of ingredients, especially proteins, can reduce digestibility, this is only a minor reduction and can be easily compensated without the pet having to consume the diet in excess to meet their nutritional needs. Cooking can also increase the digestibility of many other ingredients.
- The methods of cooking, or overcooking, some ingredients may alter the nutritional content, so using a recipe formulated by an appropriately qualified person is always recommended.
- Even though reduced digestibility is undesirable, the benefits of cooking the ingredients and avoiding pathogens/infectious agents are a significant advantage for both your and your pet's health.

Sticking to the instructions (compliance)

- As it is harder to balance a home-prepared cooked diet, the margin for error may be smaller and so mistakes leading to deficiency are easier to make.
- Excellent compliance when feeding a home-prepared cooked diet is essential, to ensure that the diet being fed each day
 is complete and sufficiently balanced.

Can home-prepared cooked diets provide balanced nutrition?

Yes, provided that the recipe has been designed, overseen or approved by an appropriately qualified person and the recipe and supplement recommendations are followed carefully.

What safety measures are needed for feeding home-prepared cooked diets?

Hygiene

- Basic hygiene is essential for the safe feeding of a home-prepared cooked diet to prevent pathogen infection.
- At purchase, inspect the ingredient packaging for damage or contamination. If damaged, the ingredient should not be purchased or should be discarded. Damaged ingredients should not be fed to your pet.
- Hands should be washed before, periodically during and after food preparation.
- Preparation areas and surfaces should be cleaned after food is prepared.
- Clean food bowls should be used for each meal.
- Bowls and utensils should be washed after feeding.
- Bowls or plates for pet use should be kept separate from the ones you use.

Cooling, storing and reheating a home-prepared cooked diet

■ To prevent bacterial growth and subsequent food poisoning, care should be taken with cooling the cooked foods.

- Uneaten cooked meals can be stored and reheated at a later date, provided that:
 - Food is cooled to room temperature completely before it is covered and refrigerated
 - Foods should not be cooled in the refrigerator because this can increase the refrigerator's temperature, increasing
 the risk of spoilage of other foods
 - Food should be stored in a sealed container in either the refrigerator or freezer
 - When needed, food must be reheated only once
 - On reheating, food should be piping hot throughout and allowed to cool to an edible temperature before being fed to your pet.

Considerations for feeding home-prepared cooked diets in healthy dogs and cats

To feed a home-prepared cooked diet correctly for any stage of life, an appropriately qualified individual should be consulted and only approved recipes and supplements fed. This is especially important if your pet is young (i.e. still growing) or in its senior years, when its nutritional requirements differ from that of an adult.

Considerations for home-prepared cooked diets in dogs and cats with various diseases

To feed a home-prepared cooked diet correctly for pets who have a disease, especially a disease that requires nutritional alteration, an appropriately qualified individual should be consulted and only approved recipes and supplements fed.

Conclusion

Feeding home-prepared cooked diets has become increasingly popular in recent years. Therefore, it is important that you consider all the pros and cons when making decisions about what to feed your pet, no matter the diet type. Decisions will be made 'on balance' for your individual pet. Provided assurance of nutritional adequacy is confirmed, home-prepared cooked diets can be safely fed. If you are in any doubt, please seek advice from your veterinary practice.

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