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# Home-prepared dog food: benefits and downsides

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Home-prepared diets for dogs, formulated by owners using conventional household ingredients, provide a distinctive means of managing canine nutrition. This method enables precise dietary adjustments tailored to an individual dog's specific physiological and health requirements, often employing ingredients shared with human diets. For some owners, such diets are perceived as a natural and transparent alternative to commercial pet food, which is occasionally associated with potential long-term health risks. Despite the potential benefits of home-prepared diets, their formulation requires meticulous planning to ensure nutritional adequacy. Diets lacking input from nutrition experts may result in deficiencies or imbalances, posing significant health risks to dogs. This paper critically evaluates the advantages and limitations of home-prepared dog food, underscoring the necessity of professional oversight in developing nutritionally complete and safe feeding regimens.

KEYWORDS

**home-made diets, nutrition, risks, advantages, disadvantages, balanced intake**

## 1 Introduction

The role of food in the overall health and longevity of dogs has become an increasingly significant topic of research. While the concept of using diet to improve health and manage disease is not new, it has gained considerable attention from the public, as well as from scientific and medical communities (Michel, 2006). Among the various approaches to dog nutrition, home-prepared diets, which consist of meals made at home using ingredients commonly found in human diets, have drawn significant interest. Over time, different types of home-prepared diets have emerged, including raw meat-based diets (BARF) and vegetarian diets, the latter being specifically adapted for dogs, as they are not obligate carnivores like cats (Axelsson et al., 2013). Recent studies indicate that while commercial dog food remains the most commonly purchased option, a growing number of dog owners are exploring alternative approaches, including homemade diets (Joban et al., 2020). These alternative, or unconventional, diets often aim to provide complete nutrition tailored to individual dogs or serve as a supplement to commercial diets. Owners who adopt unconventional diets may do so to meet their dogs' specific needs or align their feeding

practices with personal beliefs or lifestyle choices (Parr and Remillard, 2014; Vandendriessche et al., 2017; Dodd et al., 2018a).

A recent study examined the characteristics of dog owners using unconventional diets, such as BARF or homemade meals, compared to those relying on conventional commercial diets. Among 426 respondents, 38% fed their dogs unconventional diets. These individuals were more likely to reside in non-urban areas, own more animals, have fewer children, and allow their dogs to roam off-leash more frequently. Additionally, they often relied on internet resources for dietary information and consulted veterinarians less frequently (Hoummady et al., 2022). These findings illustrate lifestyle differences between users of unconventional and conventional diets and highlight opportunities for veterinarians to engage more effectively with owners regarding dietary choices.

While unconventional diets are growing in popularity, their use underscores the need for expert involvement to ensure they are nutritionally balanced and appropriate for individual dogs (Stockman et al., 2013). The increasing reliance on these diets reflects broader trends in pet care, emphasizing individualized feeding practices and a closer alignment with owners' values and lifestyles.

## 2 Clarifying the concept of dog food

Food for dogs can be categorized based on various criteria, with a key distinction being the preparation method. Home-prepared diets refer to meals made by the owner, often using ingredients intended for human consumption. These diets may be developed either with or without the guidance of an animal nutrition specialist. Home-prepared diets can vary widely in terms of ingredient selection, preparation methods, and freshness. This variability allows for significant customization to meet individual needs or preferences. However, such diets require careful planning and ideally the involvement of an animal nutrition expert to ensure they are nutritionally balanced and complete, supporting the dog's health and overall well-being (Remillard, 2008).

### 2.1 Home prepared food

Home-prepared food refers to diets made by owners using various ingredients. Due to the variability in recipes and the limited expertise of many dog owners in veterinary nutrition, involving a nutritionist is highly recommended when preparing such diets. Based on thermal preparation, home-prepared diets can be divided into two categories: raw diets and cooked diets (Choi et al., 2023).

#### 2.1.1 Raw meat-based diets

Raw meat-based diets (RMBDs) are a subset of home-prepared diets that have seen increased use for both dogs and cats in recent years (Heinze et al., 2012; Buff et al., 2014; Waters, 2017). While raw meat has long been included in the diets of working dogs such as sled dogs and greyhounds, modern raw meat-based diets, comprising raw meat, bones, and other ingredients are increasingly being fed to show animals and pets (van Bree et al., 2018).

These diets are often referred to by several names, such as Biologically Appropriate Raw Food or Bones and Raw Food (abbreviated as BARF), initially popularized by Dr. Ian Billinghurst (Griffith et al., 2010). Another term used for such diets is Raw Animal Products (RAP) (Billinghurst, 1993; Freeman et al., 2013). As an alternative to commercial dry or canned pet food, raw meat-based diets have gained a dedicated following among pet owners who believe in their benefits.

Home-prepared raw diets often use fresh, uncooked ingredients such as meat, offal, fat, internal organs, cartilage, and bones derived from farm animals (e.g., ruminants, pigs, and poultry), horses, and fish. These diets are frequently associated with certain health benefits as reported by owners (Freeman et al., 2013; Morgan et al., 2022). The rationale for raw food diets is largely intuitive: carnivores, such as dogs and cats, evolved by consuming raw foods. In contrast to this evolutionary perspective, heat processing in commercial food can alter or destroy nutrients and enzymes, such as thiamin, which is particularly sensitive to thermal degradation (van Bree et al., 2018). Some studies have suggested that dogs on raw meat-based diets excrete less calcium in their urine compared to those consuming commercial dry, extruded diets, leading to speculation that RMBDs may reduce the incidence of calcium oxalate urolithiasis in dogs (Ricci et al., 2012). However, interpreting these findings is challenging because the RMBDs studied contained half as much calcium, less than a third as much sodium, and significantly more water than the dry diets (Morelli et al., 2019).

While commercial raw meat diets are often designed to adhere to AAFCO nutrient guidelines and provide complete nutrition for specific life stages, home-prepared raw meat diets typically rely on ingredient rotation to supply essential amino acids, fatty acids, vitamins, and minerals (Freeman and Michel, 2001; Fredriksson-Ahomaa et al., 2009). Unfortunately, many home-prepared raw diets are nutritionally unbalanced, leading to potential health issues.

#### 2.1.2 Home-cooked diets

##### 2.1.2.1 Meat-based home-cooked diets

The motivations behind pet owners choosing home-prepared food can be attributed to several factors. Unlike animal nutrition experts who approach pet nutrition with a scientific lens, many pet owners consider feeding their pets in the same way they would feed their family members. This perspective is influenced not only by nutritional considerations but also by social and cultural factors surrounding eating habits and food choices (Michel, 2006). Most commercial pet food contains by-products of human food production. While these ingredients are typically nutritious and safe, many pet owners find them unappealing for personal consumption and extend these preferences to their pets. Pet owners often question the use of by-products in commercial pet foods, viewing them as less desirable than fresh, whole ingredients. Preparing meals for pets also allows owners to exert greater control over their companion animals' health and well-being (Fossati et al., 2019). Meat-based home-cooked diets are characterized by a wide variety of ingredients, many of which are commonly used in human

diets. However, these diets often exhibit high caloric content and nutritional imbalances. Typically, home-cooked diets include different types of meat as the primary protein source and a combination of vegetables and grains to provide carbohydrates (Joban et al., 2020). In a 2020 study involving three categories of dog breeds, researchers demonstrated that it is possible to prepare nutritionally balanced rations using varied ingredients at a relatively reasonable cost (Joban et al., 2020). Protein sources included chicken breast, beef, and lean lamb, while carbohydrates were derived from rice, barley, and wheat. Poultry fat and sunflower oil served as sources of fatty acids. To ensure adequate levels of vitamins and minerals, magnesium chloride, eggshell, bone meal, and sodium chloride were added, with raw carrots supplying fiber and additional vitamins.

Dog owners often opt for home-cooked diets due to the affordability and perceived superior quality of ingredients. Many believe that using familiar, processed components ensures food safety and preserves nutritional value (Vandendriessche et al., 2017). However, it is important to note that most home-prepared diets are not designed or tested by qualified nutritionists. As a result, claims of health improvements by owners are anecdotal and not scientifically validated. Without professional guidance, dogs consuming these diets risk developing health problems, particularly young animals (Ricci et al., 2012; Hinney, 2018).

#### 2.1.2.2 Vegetarian home-prepared diets

While dogs are descendants of wolves and traditionally rely on meat to meet certain nutritional needs, they have demonstrated the ability to thrive on well-designed diets relying predominantly on plant-based ingredients, supplemented with animal-derived components like eggs and dairy when needed (Brown et al., 2009; Zlatanova et al., 2014; Alexander et al., 2020). Vegetarian diets for dogs, which exclude all forms of meat, may include such plant-based ingredients as legumes (lentils, peas, chickpeas), grains, and vegetables, as well as animal-based ingredients like eggs and dairy to meet protein and other nutrient requirements. Such diets are often chosen by pet owners for ethical, health, or environmental reasons, reflecting a broader trend in pet nutrition where dogs are fed home-prepared foods based on plant-based ingredients (Knight et al., 2022). Lentils, for example, are frequently incorporated into these diets because of their low glycemic index and high levels of resistant starch, which contribute to better digestive health and stable blood sugar levels (Bednar et al., 2000; Atkinson et al., 2008; McCrory et al., 2010). Pulses, including lentils and peas, offer a valuable protein source with moderate protein levels and fermentable fiber, which can support healthy digestion and overall wellness (Fossati et al., 2019) Nonetheless, the success of plant-based diets depends on consistent implementation, professional guidance, and careful consideration of palatability and nutritional completeness. This ensures dogs can thrive on these diets even during periods of high energy demand, such as increased physical activity (Axelsson et al., 2013). Challenges such as ingredient selectivity and inadvertent dietary imbalances highlight the importance of involving veterinary nutrition experts to maintain optimal health and well-being (Case et al., 2010) Along the same lines, homemade diets for companion animals also carry the significant risk of nutritional imbalances, even when prepared following a correctly formulated recipe. Errors in the preparation process, such as variations in ingredient measurement, substitutions of ingredients, or inconsistencies in cooking methods, are common in home-cooked meals. These deviations can lead to deficiencies or excesses of essential nutrients, undermining the intended nutritional adequacy of the diet. Furthermore, differences in ingredient quality, bioavailability of nutrients, and the potential for nutrient loss during cooking can exacerbate these imbalances (Hajek et al., 2022).

## 3 The benefits of home-prepared dog diets

Home-prepared diets have become an increasingly discussed topic in canine nutrition, offering both opportunities and challenges that require careful consideration. While concerns about the potential for nutritional imbalances in such diets are valid, these risks can be significantly reduced through consultation with a nutrition specialist (Parr and Remillard, 2014). For many owners, home-prepared diets present a safer alternative to commercial dog food, addressing issues such as contamination and the use of synthetic additives, which have raised concerns about the safety and quality of commercial options (Boermans and Leung, 2007; Nestle and Nesheim, 2010; Bianco et al., 2020). Home-prepared diets are often tailored to the specific needs of individual dogs and are particularly beneficial for managing chronic illnesses or identifying food intolerances in clinical settings. For example, vegetarian diets have gained popularity due to their reported benefits, including reduced incidence of gastrointestinal, hepatic, and ocular illnesses, and perceived improvements in longevity; (Knight and Leitsberger, 2016; Alexander et al., 2020). These diets appeal to owners who prioritize sustainability and ethical concerns about conventional agriculture, particularly regarding the use of animal proteins (Knight et al., 2022). Pulses, such as lentils and peas, are frequently incorporated into vegetarian diets due to their low glycemic index, resistant starch content, and fermentable fiber, all of which promote digestive health, stable blood sugar levels, and overall wellness (Bednar et al., 2000; Atkinson et al., 2008; McCrory et al., 2010; Fossati et al., 2019). For owners who prefer home-prepared meat-based diets, practical advantages such as improved palatability, reduced cost, and the avoidance of synthetic additives are particularly appealing (Laflamme et al., 2008; Halfen et al., 2017; Dodd et al., 2018b; Kratzer et al., 2022). One prominent example is the BARF (Biologically Appropriate Raw Food) diet, which focuses on raw meat and bones. Owners have reported benefits such as shinier coats, cleaner teeth, and increased muscle mass in dogs consuming this diet; (Billinghurst, 1993; Ricci et al., 2012). Research supports these claims, showing that raw bone supplementation can significantly reduce dental calculus without causing tooth fractures (Rousseau et al., 2007; Gianella et al., 2009; Marx et al., 2016; Jaffey et al., 2022). Furthermore, the absence of thermal processing and synthetic preservatives in such diets may positively impact canine longevity (Dijcker et al., 2012; Thompson et al., 2012). Despite their appeal, home-prepared diets are not without risks. Nutritional

imbalances can occur when recipes are sourced from unreliable resources or prepared without professional guidance, particularly for young, elderly, or sick dogs who are more vulnerable to deficiencies; (Ricci et al., 2012; Freeman et al., 2013). While commercial dog foods claim to provide balanced nutrition, recalls between 2018 and 2023 due to contamination with bacteria, mycotoxins, or excessive vitamins underscore the limitations of commercial options (Cima, 2021). In contrast, home-prepared diets, made from human-grade ingredients, are generally free from such contaminants but require careful planning to ensure their adequacy. In conclusion, while home-prepared diets offer significant advantages such as enhanced safety, reduced costs, and owner satisfaction, their success depends on proper formulation. Consulting with a qualified animal nutritionist is essential to ensure these diets meet the nutritional needs of individual dogs, providing a balanced and effective alternative to commercial options.

## 4 The disadvantages of home-prepared diets

While home-prepared diets whether BARF (Biologically Appropriate Raw Food), cooked, or vegetarian offer some advantages, they also present significant limitations. Many dog owners opt for home-prepared meals, believing them to be healthier than commercial alternatives. However, comparative studies suggest that these meals do not provide any significant health benefits over commercially produced, nutritionally complete pet foods (Burdett et al., 2018). A major issue is the lack of expertise among owners in designing diets that meet dogs' nutritional needs, resulting in imbalances (Roudebush and Cowell, 1992; Beynen, 2015). Furthermore, home-prepared diets are more time-consuming, costly, and labor-intensive compared to commercial options, requiring specific ingredients and supplements often necessitating guidance from nutritionists (Freeman and Michel, 2001; Lauten et al., 2005; Casna et al., 2017). Many owners also fail to recognize the clinical signs of nutritional deficiencies or excesses in their pets (Streiff et al., 2002). Despite these challenges, interest in home-prepared diets remains steady (Freeman et al., 2011). Also taking in consideration the increased risk of home-prepared diets, the AAHA nutritional assessment guidelines emphasize the critical need for thorough evaluations of dogs consuming home-prepared diets. Such assessments aim to identify potential risks, including nutritional imbalances, microbial contamination, and deficiencies that may arise from preparation errors. This proactive approach ensures that the dietary needs of pets are adequately met while minimizing health risks associated with non-commercial feeding practices (Cline et al., 2021).

### 4.1 Meat based home cooked diets

Owners often source recipes for home-prepared diets from books, magazines, or the internet (Freeman et al., 2011). Unfortunately, these recipes are rarely developed by veterinary nutrition specialists, increasing the risk of nutritional imbalances that may have serious long-term consequences Examples (de-Fornel-Thibaud et al., 2007; Taylor et al., 2009; Sanderson, 2021). Studies highlight that many home-prepared diets are deficient in essential nutrients such as calcium, vitamin A, and vitamin D3, and often have an inverse calcium-to-phosphorus ratio as high as 1:10, compared to the optimal ratio of 1:1 to 2:1. These imbalances can lead to bone disorders like rickets or osteomalacia (Parr and Remillard, 2014; Johnson et al., 2016). Protein levels in these diets are frequently higher than necessary due to owners' misconceptions about canine nutritional needs, while fat-soluble vitamins and trace minerals, such as zinc, copper, and potassium, often fall below recommended levels (Streiff et al., 2002; Larsen et al., 2012). Additional research confirms that home-prepared diets are often deficient in iron, vitamin E, zinc, copper, choline, riboflavin, thiamine, and vitamin B12, while calcium and vitamin A levels can exceed the safe limit (Burdett et al., 2018). Furthermore, many recipes lack clear instructions, leaving owners to rely on their judgment, which can exacerbate the risk of nutritional deficiencies. Even when owners are advised to include supplements, adherence to these recommendations is often low, as some perceive supplements as harmful synthetic compounds (Richardson and Zicker, 2000; Freeman et al., 2011). Although some studies suggest higher digestibility coefficients in home-prepared diets, selective feeding by dogs can result in unbalanced nutrient intake. Also, home-cooked diets for dogs, similar to home-prepared human meals, are susceptible to microbial contamination. Pathogenic microorganisms can be introduced during the preparation process, often due to cross-contamination from raw ingredients to cooked food. This risk is exacerbated by insufficient cooking temperatures that fail to adequately eliminate harmful pathogens. Additionally, improper handling practices, such as using shared utensils or cutting boards without proper sanitation, can facilitate the transfer of microbes. These vulnerabilities underscore the importance of stringent food safety measures, including adherence to appropriate cooking protocols and hygiene practices, to minimize the risk of microbial contamination in homemade diets for companion animals (Kępińska-Pacelik and Biel, 2021).

Anthropomorphism, where owners treat dogs as human family members, often influences dietary choices. Owners may apply human dietary preferences, such as avoiding fat, cholesterol, or sodium, which are inappropriate for canine physiological needs (Michel, 2006; Schlesinger and Joffe, 2011; Oliveira et al., 2014). While some owners attempt to create nutritionally balanced diets by using diverse ingredients, this approach does not guarantee proper nutrient levels (Adolphe et al., 2015). Ultimately, home-prepared diets require careful formulation and monitoring by animal nutrition specialists to ensure they meet canine dietary needs.

### 4.2 Home-prepared vegetarian diets

Fully plant-based diets are not a natural food source for dogs, which are omnivores or facultative carnivores. Designing a nutritionally complete and balanced vegan diet is particularly

challenging and increases the risk of deficiencies (Alexander et al., 2020). Key nutrients such as sulfur amino acids, omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid), and pre-formed vitamins like retinol (vitamin A) and cholecalciferol (vitamin D3) are scarce or absent in plant-based ingredients; (How et al., 1994; Hazewinkel and Tryfonidou, 2002). For example, ergocalciferol (vitamin D2) from plants is not metabolically equivalent to cholecalciferol, leading to potential deficiencies (Lefebvre et al., 2008; Kanakubo et al., 2015). Plant-based diets also struggle to provide sufficient levels of calcium and vitamin B12, which are generally derived from yeast or algae (Hazewinkel and Tryfonidou, 2002; Alexander et al., 2020). Common vegan protein sources, such as soy, have been linked to behavioral changes with long-term use (Zafalon et al., 2020), while gluten, another staple, has been implicated in allergic sensitivities in Irish Setters and canine epileptoid cramping syndrome in Border Terriers (Simon et al., 2004; Meurs et al., 2012). Ingredients like potatoes and tomatoes from the *Solanaceae* family can contain solanine, a toxic compound, although proper cooking and peeling reduce this risk (Meurs et al., 2019). However, legumes also contain anti-nutritional factors like phytates and trypsin inhibitors, which can impair nutrient absorption but can be neutralized through processing methods such as soaking, boiling, and fermentation (Modgil and Mehta, 1993). Despite the potential benefits, vegetarian diets must be carefully planned to ensure nutritional adequacy. Certain nutrients that are abundant in animal-based foods such as taurine, vitamin A, cobalamin (B12), and arachidonic acid are either absent or present in insufficient amounts in plant-based ingredients (Harsini et al., 2024). As such, homemade vegetarian diets should be formulated under the guidance of a veterinary nutritionist to prevent deficiencies and to ensure that the dog's health needs are met. Given these challenges, home-prepared vegan diets should only be created and administered under the supervision of nutritionists to ensure the dog's health and safety. Without professional guidance, such diets pose significant risks to canine well-being.

## 4.3 Home-prepared raw meat-based diets

As far as the BARF diet is concerned, although is becoming increasingly popular (Clemens, 2014) it is characterized by numerous nutritional imbalances both excesses and deficiencies (Hinney, 2018) not complying with almost entirely the minimum recommendations, and can be classified as nutritionally inadequate (Dillitzer et al., 2011; Davies et al., 2019), mainly because owners are using recipes that are not prepared or recommended by specialists in veterinary nutri-tion using magazines, books, websites as sources of information (Billinghurst, 1993). In terms of shortcomings, most raw meat-based diets are deficient in key com-pounds such as Vitamin A and D, Calcium Manganese, Iodine, and Zinc, given that adult dogs experience deficiencies when their diets contain critical nutrients at levels below 50% of the allowances (Hazewinkel and Tryfonidou, 2002) therefore, raw meat-based diet consumption over a long period will predispose dogs to serious pathologies. A common practice among dog owners who follow the BARF diet is the administration of bones, usually ungrounded, to supplement calcium intake and prevent the onset of periodontal disease, but this practice predisposes dogs to severe constipation or gastrointestinal obstruction (Michel, 2006). Although advocates of raw diets claim benefits such as improved coat and skin, reduced dental disease, elimination of odors, increased energy, and enhanced immune function these claims lack scientific validation (Dijcker et al., 2012). Feeding pets unbalanced meals increases the risk of deficiencies or excesses of certain nutrients, which can be especially harmful to young animals (LeJeune and Hancock, 2001). Raw meat-based diets are typically high in fat, increasing their energy density and posing a risk of obesity. While some owners associate high-fat content with improved coat appearance, the potential for obesity should not be overlooked (Morgan et al., 2024). Additionally, raw meat and internal organs are prone to contamination during slaughter, processing, or transport and often test positive for pathogens such as bacteria, viruses, and parasites ( (Fredriksson-Ahomaa et al., 2009; Wideman et al., 2016; Solís et al., 2022; Morgan et al., 2024). Bones included in these diets can also pose risks, such as internal puncture wounds (Fosse et al., 2008). The spread of zoonotic pathogens from contaminated raw meat products or the feces of pets fed RMBDs has been well-documented, posing health risks to humans handling the meat or living near animals consuming these diets. Common pathogens include *Campylobacter*, *Salmonella*, and *Yersinia* (Fredriksson-Ahomaa et al., 2009). Raw poultry is frequently contaminated with *Campylobacter* and *Salmonella*, while raw pork often harbors *Yersinia* and *Salmonella*; (Fosse et al., 2008; Pedrinelli et al., 2017). Also, raw meat-based diets for dogs can serve as a reservoir for antibiotic-resistant *Escherichia coli*, posing a significant risk of severe infections in both canine and human populations through direct transmission or environmental contamination (Sealey et al., 2024).

# 5 Comparative effects of nutritionally balanced and superficially balanced homemade diets on canine quality of life

The formulation of homemade diets for dogs has gained increasing attention as pet owners seek greater control over their pets' nutrition and overall health. However, it is crucial to distinguish between nutritionally balanced homemade diets, developed with expert guidance, and superficially balanced diets, which may lack comprehensive nutritional planning. Properly balanced diets are specifically designed to meet the unique nutritional needs of individual dogs, promoting optimal health and quality of life. In contrast, superficially balanced diets may fail to provide essential nutrients, potentially leading to deficiencies or imbalances that can negatively affect a dog's health.

Research highlights the benefits of well-balanced homemade diets supplemented with functional ingredients, such as hulled hemp seeds, which have shown significant advantages in increasing protein digestibility, enhancing gut microbiota

diversity, and reducing oxidative stress (Frazzini et al., 2023). These outcomes underscore the potential of carefully planned homemade diets to not only meet basic nutritional requirements but also improve physiological parameters and promote better overall health. However, a substantial number of owners implement homemade diets without consulting veterinary professionals, increasing the risk of nutrient deficiencies. Studies report common deficiencies in calcium, phosphorus, and vitamin D, which can lead to serious health consequences if left unaddressed (Menniti et al., 2022). For example, improper supplementation or ingredient selection in homemade diets has been linked to clinical cases of chronic health conditions. One case involved a Boston Terrier with chronic pancreatitis and inflammatory bowel disease, where a properly formulated exclusion diet dramatically improved clinical outcomes after initial setbacks caused by unbalanced supplementation and non-compliance (Opsomer et al., 2022). Conversely, poorly planned homemade diets may exacerbate or even cause health problems. A rescued dog suffering from iron-deficient anemia, hypocobalaminemia, and hypofolatemia had been fed an unbalanced homemade diet consisting of various human foods. This nutritional inadequacy, compounded by excessive breeding, led to chronic inflammatory enteropathy and significant health deterioration. The condition resolved only after transitioning the dog to a balanced commercial diet and providing appropriate supplementation (Herstad and Cuq, 2023). In a prospective study involving 167 dogs, both healthy and diseased, a customized, well-balanced homemade diet was implemented. After 14 months, 62% of dogs adhered to the diet, with healthy dogs demonstrating improvements in coat condition (70%), bowel frequency (47%), and weight loss targets (67%). Among dogs with gastrointestinal and dermatological disorders, significant symptom improvement was noted: 95% for chronic enteropathy, 83% for dermatological conditions, and 100% for cases with both disorders (Pignataro et al., 2024). These findings underscore the potential of nutritionally balanced homemade diets to enhance canine health and quality of life. At the same time, they highlight the risks associated with poorly planned or imbalanced homemade diets, reinforcing the importance of professional guidance in diet formulation to ensure nutritional adequacy and prevent adverse health outcomes.

## 6 Conclusions

The rising interest in home-cooked diets for pets highlights an increasing concern among pet owners about the quality and safety of commercially available pet foods. Many owners perceive home-prepared meals as a way to provide their pets with fresh, high-quality ingredients while avoiding artificial additives. This preference often stems from a desire to exert greater control over their pets' diets, particularly in response to incidents such as pet food recalls and the discovery of undesirable ingredients in some commercial products. Despite the understandable appeal of home-cooked diets, the potential advantages are frequently outweighed by significant risks, particularly when these diets are not designed under the guidance of a nutritionist. The most critical concern is the likelihood of nutritional imbalances, as creating a diet that meets all of a pet's essential needs requires specialized knowledge of animal nutrition. Without professional oversight, there is a substantial risk that the diet will be deficient or excessive in key nutrients, potentially leading to serious health issues over time.

To address these challenges, experts generally recommend that any home-cooked diet be formulated in collaboration with an animal nutrition expert. Such professional guidance ensures the diet is not only safe but also nutritionally complete and tailored to the individual needs of the pet. Regular evaluation by a qualified expert is essential to maintaining the nutritional adequacy of the diet and minimizing the risks associated with deficiencies or excesses. Consequently, home-prepared diets should only be considered viable when they are meticulously planned and supported by ongoing professional supervision, ensuring they contribute positively to the pet's overall health and well-being.

## Author contributions

CNI: Conceptualization, Investigation, Methodology, Writing – original draft. SD: Conceptualization, Methodology, Validation, Visualization, Writing – review & editing. RP: Supervision, Validation, Visualization, Writing – review & editing. AM: Supervision, Visualization, Writing – review & editing.

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