

Introduction

Adequate nutrition throughout **all life-stages** helps prevent disease and improve quality of life

Goal: Provide adequate energy and nutrients to sustain life

- prevent **nutritional pathology (diet related)**



Introduction

- › All pets need a feeding plan
- › How to choose?
 - › Assess nutritional status
 - › Identify risks
 - › If needed, provide recommendations

Diet must be:

- Nutritious (complete & balanced + adequate for individual)
- Safe
- Consumed by pet

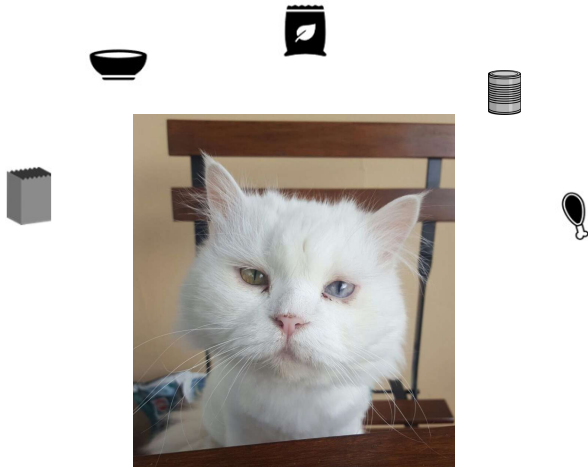
- Not one best feeding plan for all
- Multiple options can be **adequate**

Diet

Amounts

Feeding method





+ market
diversification

Natural
Organic
Vegetarian
Grain free
Raw
...

- Multiple commercial options

- Lifestage
- Lifestyle
- Breed
- Sensitivities
- Physical form/textures

- Pet caretakers want what's best

- Want information to navigate available choices
- Information is readily available → quality?

In cooperation with

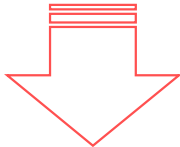


Timely Topics in Nutrition

Pet feeding practices of dog and cat owners in the United States and Australia

Dorothy P. Laflamme, DVM, PhD, DACVN; Sarah K. Abood, DVM, PhD, DACVN;
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Veterinary team must be a
trusted source of reliable
information on pet nutrition



**Up to date on feeding
options**

(2008)
≈54% pet owners in
USA/Australia search for
advice from veterinary team

Table 4—Primary sources* of information about pet care obtained by dog and cat owners.

Source	Pet health care		Pet nutrition		All other pet care	
	Dog	Cat	Dog	Cat	Dog	Cat
Family and friends	118	122	123	102	155	139
Media	59	43	57	41	82	46
Internet	49	40	48	30	59	47
Pet paraprofessional†	40	6	36	9	44	10
Veterinarians	536	356	414	291	372	256
Veterinary clinic staff	41	23	33	20	30	10
Pet store staff	19	10	27	15	32	21
Other	7	11	23	19	13	21
None	13	19	64	53	55	38

*Primary sources refer to those indicated as the first or second choice among the options provided. †Pet paraprofessionals include breeders, trainers, and groomers.

Communication issues

- › Clients won't always follow diet recommendations from the VHCT (Veterinary Health Care Team)
- › Important to build trust → good communication skills



Sources of resistance

- › Not communicating benefit to the pet
 - › Focus on what and how vs why
- › Perception of financial motivations
- › Making recommendations without all the information
 - › Incomplete understanding of client's perception and knowledge
 - › Reco might not align with their goals
 - › *Not addressing their specific concerns*

Client concerns: ingredients

I am worried this diet includes cheap fillers

- › The wording implies that these are ingredients added only to reduce the cost of the food without providing any nutritional value
- › Perception from misleading advertising
- › Usually applied to starch sources, more specifically cereals

- › Cereals provide starch (source of energy)
 - › Not essential
 - › Protein sparing effect
 - › Moderate calorie effect
 - › Technological benefits
- › They also provide:
 - › Essential nutrients (AA, EFA, vitamins, minerals)
 - › Fibre

Cereals are valuable ingredients providing multiple benefits

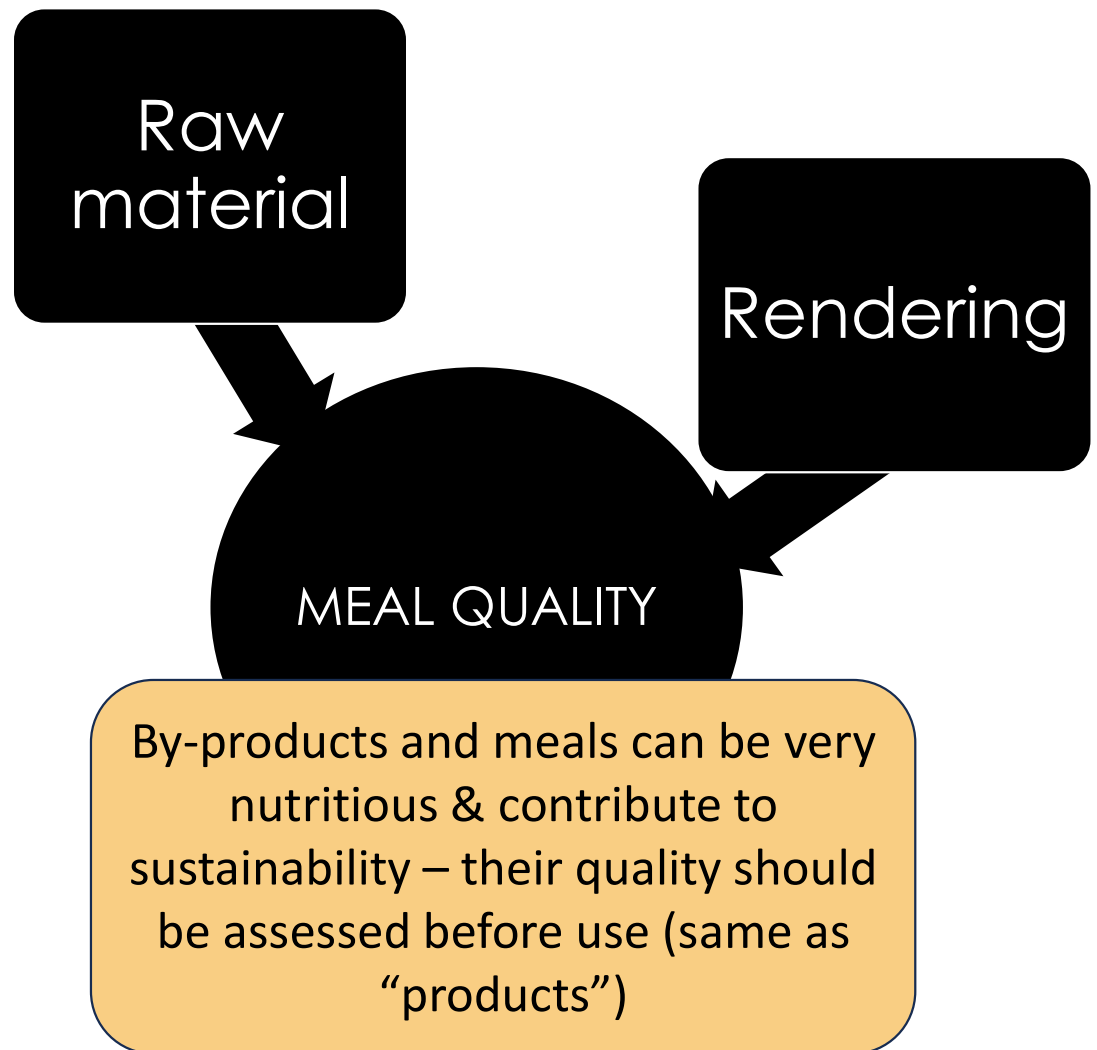
Client concerns: ingredients

I don't want to feed a diet that includes by-products

- › By products: secondary products obtained in addition to the principal product
- › Animal by products exclude “noble cuts”
 - › CULTURAL
- › Highly regulated
- › Can be very nutritious
- › Upcycling
- › Quality of both products and by products is **variable**



- › Products and by-products can be provided as **meals**
- › Many positives:
 - › High protein concentration
 - › Microbiological safety
 - › Cost
- › Quality can be affected
 - › Nutrients, digestibility
 - › Supplier
 - › Take into account during manufacture



Client concerns: ingredients

This is a low quality diet because the first ingredient is not meat

- › Feed material declaration includes raw material in descending order of (fresh) weight, % not mandatory
- › Individual vs categories
- › Name or location of ingredient → no info on quality or nutritional profile
- › Location on list can be gamed
 - › Moisture
 - › Portioning

Meat and Animal Derivatives (48%, including 4% Chicken), Cereals (including 4% Cooked Rice), Oils and Fats (including 1% Sunflower Oil), Minerals, Derivatives of Vegetable Origin, Vegetable Protein Extracts

— 80% —
Farm Reared Turkey
with Superfoods

Nutrients



Ingredients

Meat ≠ Protein

80 g turkey per 100 g food

Turkey can have 10-20% protein (15% average) [if breast: 30%]

80 g turkey ≈ 12 g protein

If we used a meal (60-65% protein):

$$\frac{12 \text{ g protein}}{100 \text{ g food}} \times \frac{100 \text{ g meal}}{60 \text{ g protein}} = 20 \text{ g meal} / 100 \text{ g food}$$

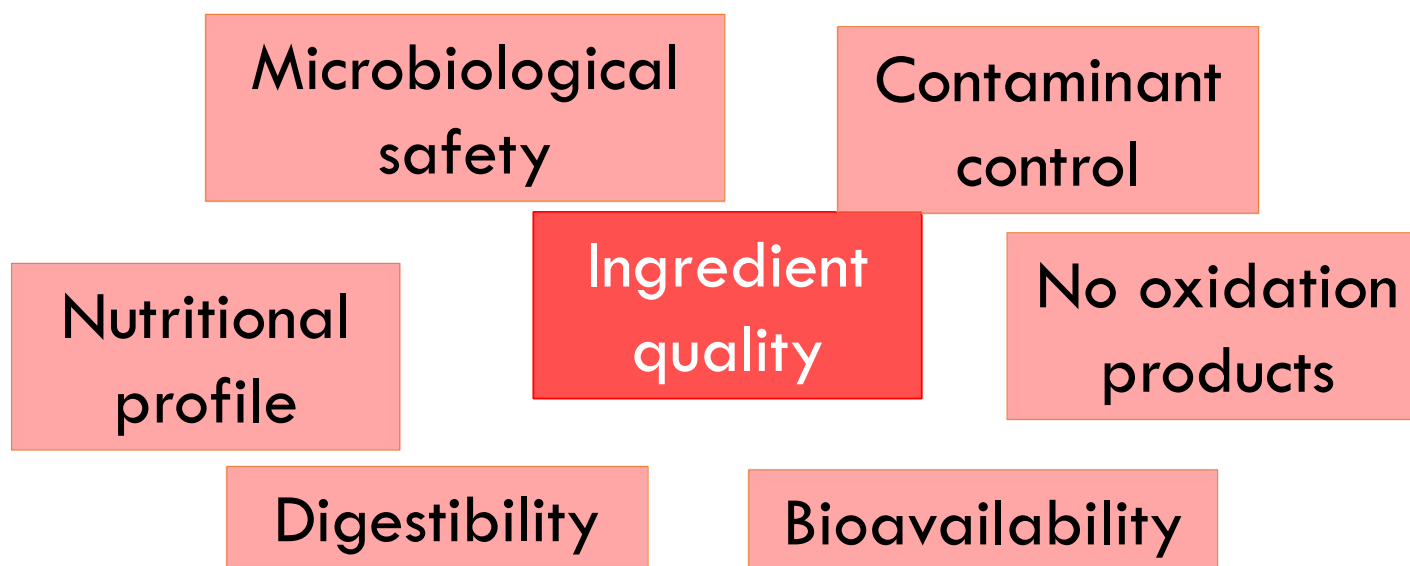
Diets can have good nutritional profile and quality with or without meat as the first ingredient

A COMPLETE PET FOOD FOR ADULT DOGS

COMPOSITION: Turkey (80%), Peas (5%), Sweet Potato (4%), Carrots (4%), Apples (4%), Spinach (1%) Yucca Extract, Green Tea Extract, Dicalcium Phosphate. ADDITIVES PER KG: Nutritional Additives: Vitamins: Vitamin A 1,000IU, Vitamin D 100IU, Vitamin E 14mg. TRACE ELEMENTS: Zinc sulphate monohydrate 50.1mg, (Zn 18.3mg); Ferrous sulphate monohydrate 20mg, (Fe 6mg); Copper (II) Sulphate pentahydrate 7.2mg (Cu 1.8mg), Calcium iodate anhydrous 0.4mg (I 0.26mg); Selenised yeast inactivated 8.6 mg (Se 0.02mg). ANALYTICAL CONSTITUENTS: Protein 13% Crude Fat 9%; Crude Ash 3%; Crude Fibre 1%; Moisture 68%.

Products may contain small bone pieces 4g/100g may be present.

What affects the quality of an ingredient



Client concerns: processing

- › Conventional: extruded, retorting
- › Homemade style
- › Raw (frozen, freeze dried)
- › Others
- › No consensus on what highly/ultra processed foods are → marketing term
- › Some studies analysing advance glycation products
 - › Role in health?
 - › inconsistent results
- › Raw diets: specific risks

- Bones
- Nutritional adequacy (home prepared)
- Microbiological safety

Of the 196 raw pet food samples analyzed, 15 were positive for *Salmonella* and 32 were positive for *L. monocytogenes* (see Table 1).

Table 1: Number and type of pet food samples that tested positive for *Salmonella* and *Listeria monocytogenes* (Years 1 & 2)

Type of Pet Food Sample	No. samples tested	No. positive for <i>Salmonella</i>	No. positive for <i>L. monocytogenes</i>
Raw pet food	196	15	32
Dry exotic pet food*	190	0	0
Jerky-type treats†	190	0	0
Semi-moist dog food‡	120	0	0
Semi-moist cat food‡	120	0	0
Dry dog food§	120	0	0
Dry cat food§	120	1	0

* Non-cat and non-dog food, such as dry pellets for hamsters, gerbils, rabbits, amphibians, and birds.

† Included chicken jerky product, pig ears, and bully stick-type products.

‡ Typically packaged in pouches for retail sale, such as (1) pouched dog and cat food; and (2) food treats shaped like bacon, fish, pork chops, and burgers.

§ Included pellet- or kibble-type food typically packaged in bags for retail sale.



WSAVA Global Nutrition Committee: Raw Meat Based Diets For Pets



What are raw meat based foods?

- Foods based on meat, bones, and offal (organ meats) that have not been cooked.
- These diets tend to be higher in fat, lower in carbohydrates, and can be highly digestible but raw foods (similar to cooked foods) are not all equal! They vary in ingredients, energy content, and nutritional profile.

Are raw meat-based foods healthier than dry or canned pet food?

- There is no evidence that raw meat-based diets provide health benefits over commercial or balanced homemade cooked diets.
- High fat, low fiber diets (raw, but also cooked) may be well tolerated by many pets, but others will show gastrointestinal problems, such as diarrhoea, or even pancreatitis.
- There is growing evidence that feeding raw meat can be a health risk both for the pet and the owner.

It is important for the practitioner to know when their patients are fed raw meat based diets, as nutritionally imbalanced or contaminated diets may lead to health issues or contribute to clinical signs of disease.

Risks



Raw meat-based diets have a high risk of bacterial contamination

- Raw meat can harbour various bacteria, including pathogens. A food-borne infection can be serious and even fatal (e.g. *E. coli*, *Salmonella* spp, *Yersinia*, *Campylobacter* spp, *Listeria monocytogenes*, *Mycobacterium bovis*) for pets and people.
- Pet carers and other people in the household can be infected by handling the food or the pet's stools. Individuals with a compromised immune system are more at risk (e.g. small children, pregnant people, the elderly and individuals with illnesses or on certain medications), even if they are not actively feeding the pet.
- Some bacteria found in raw meat-based products can be antibiotic resistant. Studies have found an association between raw feeding and fecal presence of antimicrobial resistant bacteria in dogs.
- Pets on raw food diets can also be a risk factor for other veterinary patients in the clinic as they may carry and shed pathogenic bacteria.
- Freezing, dehydration or freeze-drying do not kill all bacteria in food.



- Bones are offered to pets for enjoyment and for perceived dental benefits, however, they can result in broken teeth, intestinal or oesophageal obstruction, and constipation.
- Feeding bones does not reduce the risk of plaque or tooth loss due to periodontitis.



- Home prepared cooked and raw meat based diets may have important nutrient deficiencies and excesses.
- An unbalanced diet is especially detrimental for puppies and kittens, that may suffer from painful skeletal disorders and pathological fractures.



- Parasites can be found in raw meat based diets, and some (e.g. *Toxoplasma*) can infect humans, too. Pregnant people are at an especially greater risk as toxoplasmosis can affect the fetus.
- Dogs can also spread food-derived parasites to farm animals.

Davies RH, Lawes JR, Wales AD. Raw diets for dogs and cats: a review, with particular reference to microbiological hazards. *J Small Anim Pract.* 2019;50(6):329-339; Freeman LM, Chandler ML, Hamper BA, Wraith LP. Current knowledge about the risks and benefits of raw meat-based diets for dogs and cats. *J Am Vet Med Assoc.* 2019;243(11):1549-1558; Nemser S, Doran T, et al. Investigation of *Listeria*, *Salmonella*, and Toxigenic *Escherichia coli* in Various Pet Foods. *Foodborne Pathog Dis* 2014;11:706-709; Schlesinger DP, Joffe DJ. Raw food diets in companion animals: a critical review. *Can Vet J.* 2011;52(1):50-54; Van Bree FPJ, Bokken GCAM, Mineur R, et al. Zoonotic bacteria and parasites found in raw meat-based diets for cats and dogs. *Vet Rec.* 2018;182:250.

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FORNIA

PRO PLAN

Tuberculosis due to *Mycobacterium bovis* in pet cats associated with feeding a commercial raw food diet

Conor O'Halloran¹, Olympia Ioannidis², Nicki Reed¹, Kevin Murtagh³, Eili Dettmering⁴, Stefaan Van Poucke⁵, John Gale⁶, Julie Vickers⁷, Paul Burr⁸, Deborah Gascoyne-Blinzi⁹, Raymond Howe¹⁰, Melanie Dobromyskiy¹¹, Jordan Jayne Hope¹ and Danielle Gunn-Moore¹

Evaluation of the association between feeding raw meat and *Salmonella enterica* infections at a Greyhound breeding facility

Paul S. Morley, DVM, PhD, DACVIM; Rachel A. Strohmeyer, DVM, MS; Jeanetta D. Tankson, PhD; Doreene R. Hyatt, PhD; David A. Dargatz, DVM, DACVIM, DACT; Paula J. Fedorka-Cray, PhD

Giacometti et al. BMC Veterinary Research (2017) 13:224
DOI 10.1186/s12917-017-1143-z

BMC Veterinary Research

CASE REPORT

Open Access

Highly suspected cases of salmonellosis in two cats fed with a commercial raw meat-based diet: health risks to animals and zoonotic implications

Federica Giacometti^{1*}, Jacopo Magarotto², Andrea Serrano¹ and Silvia Piva¹

Journal of Veterinary Internal Medicine

Open Access

ACVIM

Standard Article

J Vet Intern Med 2018;32:352–360

Investigation of the Role of Campylobacter Infection in Suspected Acute Polyradiculoneuritis in Dogs

L. Martinez-Anton¹, M. Marena, S.M. Firestone, R.N. Bushell, G. Child, A.I. Hamilton, S.N. Long, and M.A.R. Le Chevoir

Freezing can help control parasites but not bacteria. Irradiation? High pressure pasteurization?

Journal of Feline Medicine and Surgery
1-15
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SAGE



Cat deaths linked to bird flu-contaminated raw pet food, sparking voluntary recall

Feline susceptibility to H5N1 a cause for vigilance

Survival of *Salmonella* Copenhagen in food bowls following contamination with experimentally inoculated raw meat: Effects of time, cleaning, and disinfection

J Scott Weese, J. Rousseau

Table 1. Recovery of a *Salmonella* spp. from pet food bowls experimentally inoculated with *Salmonella* bacteria and subjected to different cleaning or disinfection protocols, expressed as the percentage of bowls from which *Salmonella* bacteria were recovered after cleaning or disinfection.

	Stainless steel	Plastic	Total
No cleaning	12/12 (100%) ^a	12/12 (100%) ^a	24/24 (100%) ^a
Warm water rinse	12/12 (100%) ^a	11/12 (92%) ^a	23/24 (96%) ^a
Rinse and scrub	12/12 (100%) ^a	11/12 (92%) ^a	23/24 (96%) ^a
Scrub with soap	10/12 (83%) ^a	9/12 (75%) ^a	19/24 (79%) ^a
Soak in 10% bleach	8/12 (67%) ^{a,b}	9/12 (75%) ^a	17/24 (71%) ^{a,b}
Dishwasher	8/12 (67%) ^{a,b}	8/12 (67%) ^a	16/24 (67%) ^{a,b}
Scrub/bleach soak	4/12 (33%) ^b	6/12 (50%) ^a	10/24 (42%) ^b

Different superscripts indicate significant differences between treatment groups ($P < 0.05$)

[https://www.fda.gov/animal-veterinary/animal-health-literacy/tips-safe-handling-pet-food-and-](https://www.fda.gov/animal-veterinary/animal-health-literacy/tips-safe-handling-pet-food-and-treats)



Tips for Safe Handling of Pet Food and Treats

(Scott Weese, Worms and Germs blog)

<https://www.wormsandgermsblog.com/files/2008/04/M2-Raw-Meat-Owner1.pdf>

Antimicrobial resistance



21 November 2023

Key facts

- Antimicrobial resistance (AMR) is one of the top global public health and development threats. It is estimated that bacterial AMR was directly responsible for 1.27 million global deaths in 2019 and contributed to 4.95 million deaths (1).

 frontiers | Frontiers in Veterinary Science

TYPE Systematic Review
PUBLISHED 07 October 2024
DOI 10.3389/fvets.2024.1447707

 Check for updates

OPEN ACCESS

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Risk factors for antimicrobial-resistant *Enterobacterales* in dogs: a systematic review

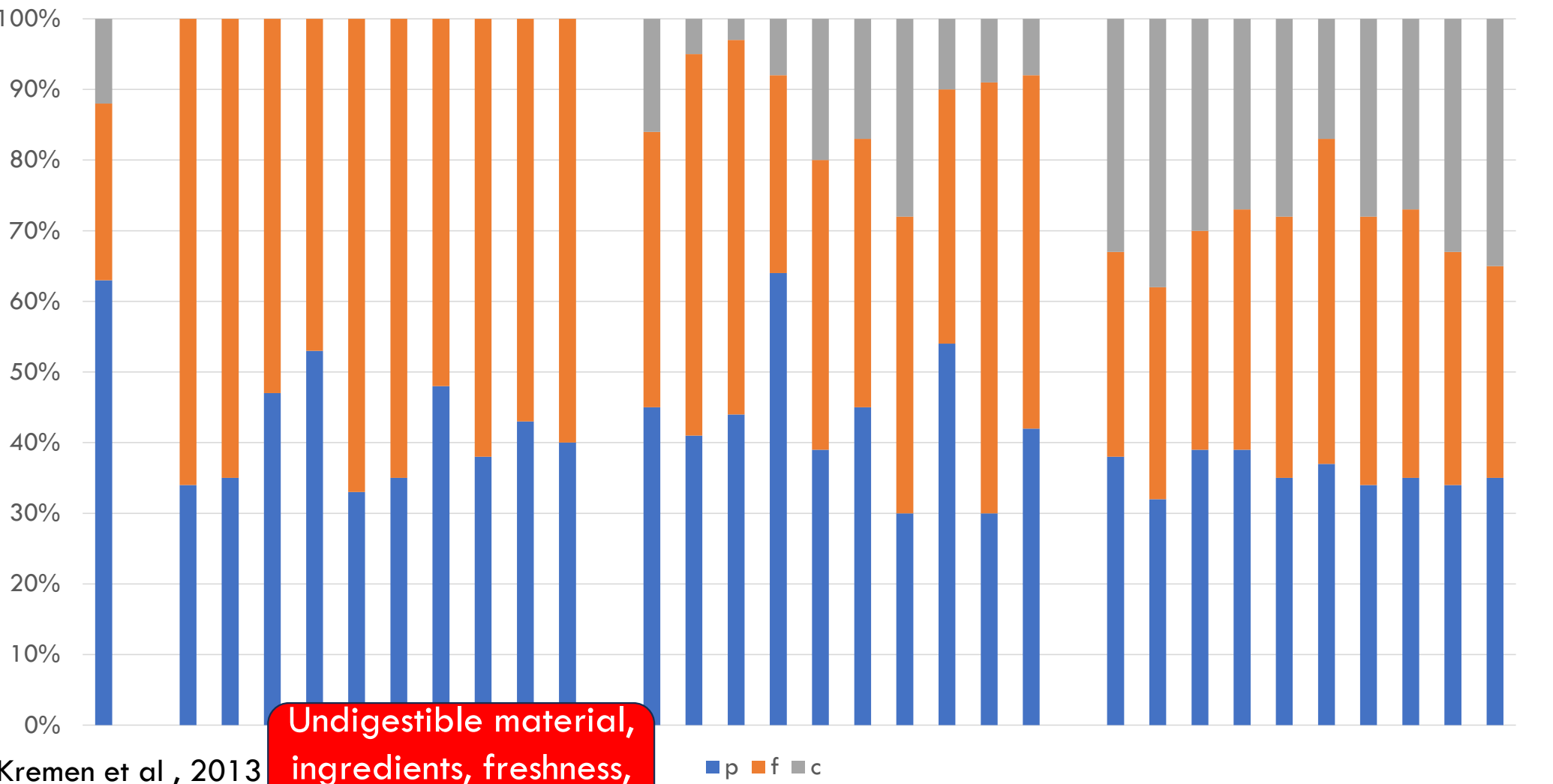
Esa Karalliu¹, Kai Yeung Chung¹, Brett MacKinnon²,
Belete Haile¹, Pawel M. Beczkowski², Vanessa R. Barrs²,
Ibrahim Elsohaby^{1*} and Omid Nekouei^{1*}

hospitalization (19), and feeding raw diet (14). Of these, antimicrobial use was the most common risk factor significantly associated with AMR-*Enterobacterales* (19/28), followed by raw diet (9/14) and hospitalization (8/19). Our synthesis emphasized the importance of increasing awareness regarding the prudent use of critically important antimicrobials (CIAs), such as fluoroquinolones, in companion animal practices, strengthening infection prevention and control procedures in veterinary clinics and hospitals and educating caregivers about the potential risks of feeding raw diets in order to reduce the burden of AMR-bacteria in dogs.

Client concerns: processing

- › Conventional: extruded, retorting
- › Homemade style
- › Raw (frozen, freeze dried)
- › Others
- › No consensus on what highly/ultra processed foods are → marketing term
- › Some studies analysing advance glycation products
 - › Role in health?
 - › inconsistent results
- › Raw diets: specific risks
- › Nutritional profile → not homogeneous

% ME



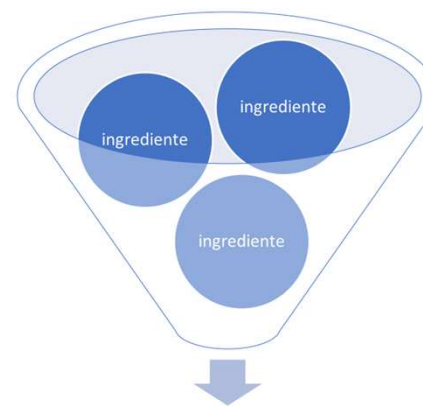
Undigestible material, ingredients, freshness, storage...

What affects the quality of a pet food

Ingredient
quality



Final
product
aspects

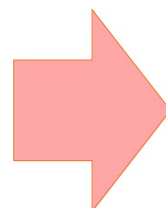


Diets with different ingredients &
processing types can do the job!

Ingredient interactions

Processing (cooking,
packaging, storage...)

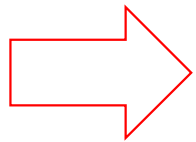
**Does the diet
does its job**



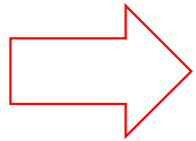
**Nutritious, safe,
consumed**

Discussing nutrition concerns: tips

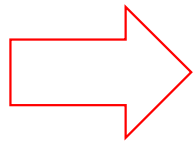
- › Be proactive : perform nutritional assessment from 1st visit, including detailed diet history



Obtain nutritional information



Show proficiency of **vet team** on nutrition (also saves time)



Opening topic for discussion



Include in medical record

WSAVA
Global Nutrition
Committee

Short Diet History Form

Please answer the following questions about your pet

Pet's name: _____ Species/breed: _____ Age: _____

Owner's name: _____

Date form completed: _____

Gender: male ☐ female ☐ Neutered/spayed: No ☐ Yes ☐

1 How active is your pet? Very active ☐ Moderately active ☐ Not very active ☐

2 How would you describe your pet's weight? Overweight ☐ Ideal weight ☐ Underweight ☐

3 Where does your pet spend most of the time? Indoors ☐ Outdoors ☐ Indoors and outdoors ☐

Please list below the brands and product names (if applicable) and the amount of ALL foods, treats, snacks, dental hygiene product, rehydrates and any other foods that your pet currently eats, including foods used to administer medications:

Food	Form	*Amount	Number	Fed since
Examples:				
• Purina Dog Chow	dry	1 1/2 cups	2x/day	Jan 2010
• Science Diet Adult				
Gourmet Beef Entree	moist	1/4 can	2x/day	Jan 2010
• 80% lean hamburger	pan-fried	3 oz (85 grams)	twice/week	May 2011
• Milk Bone medium	dry	2	3/day	Aug 2012

*If you feed by volume, what size measuring device do you use? _____

*If you feed tinned/canned food, what size tins/cans? _____

4 Do you give any dietary supplements to your pet (for example: vitamins, glucosamine, fatty acids, or any other supplements)? No ☐ Yes ☐

If yes, please list brands and amounts: _____

Information below to be completed by the veterinarian:

Current body weight: _____ Ideal body weight: _____

Current body condition score: _____ or _____ *Refer to the body condition scoring chart

Muscle Condition Score: normal ☐ mild wasting ☐ moderate wasting ☐ severe wasting ☐

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Discussing nutrition concerns: tips

- › Be proactive : perform nutritional assessment from 1st visit

Empowers VHCT for best diet recommendation

- Complete and balanced
- Adequate for individual sensitivities
- Palatable

Internet: feed pets, unvetted
Vet team: experts in **MY** pet

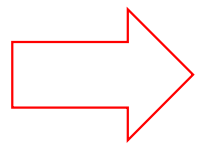
Sources of resistance

- › Not communicating benefit to the pet
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 - › Reco might not align with their goals
 - › *Not addressing their specific concerns*

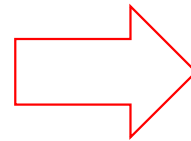
Use diet history taking to
identify clients concerns and
goals

Discussing nutrition: tips

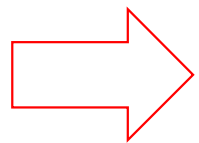
- › Key moments to repeat the NA & bring up feeding management
- › Anticipate problems



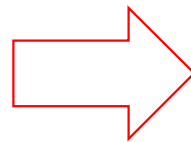
Puppy/kitten
visits



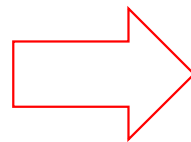
Diet change



Yearly check up



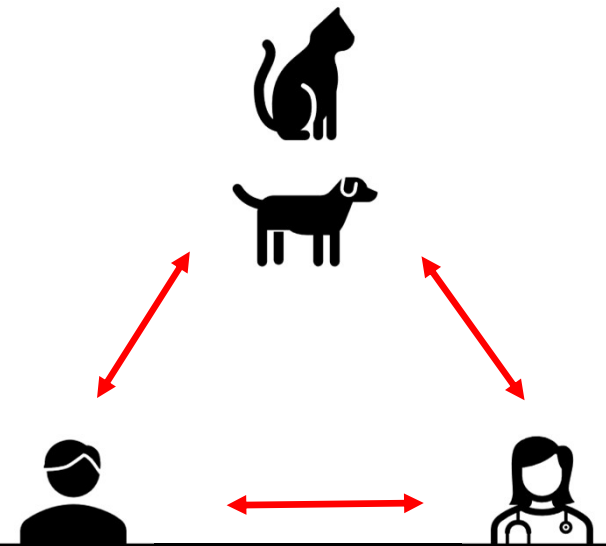
Spay/neuter



New diseases

Discussing nutrition: tips

- › Obtain all relevant diet info (main diet(s), treats, scraps, supplements...)
- › Non-judgemental environment, active listening – all same goals
 - › Paraphrase
 - › Validate concerns – pet food choice is complex & frustrating
- › Identify non-negotiables (on each side!)
 - › Adapt to pet & clients preferences if possible
 - › Practices can often be accommodated



Discussing nutrition: tips

› Specific concerns → specific solutions

- Someone in the dog park/SM told me I was poisoning my pet with this food
- Dry kibble is not natural, its like feeding fast food to my cat
- Additives are dangerous
- I would not eat this, why would I feed it to my pet
- Wolves/tigers do not eat packaged bits

Discussing nutrition: tips

Focus on the aspect you wish to communicate (stressing the misguided belief can help cement/spread it)

This approach is:

- Less antagonistic (less pressure on not changing their mind)
- Focuses on the positive goals that we all want for our patients (health and well-being, for as long as possible)



Discussing nutrition: tips

Focus on the aspect you wish to communicate (stressing the misguided belief can help cement/spread it)

Pet food X is not like
"fast food", which is high
in fat +/- salt +/-
sugar and poor in
nutrients like vitamins
and minerals

vs

Properly formulated pet
food X is nutrient rich,
adequate for the species, it
is like astronaut food

Discussing nutrition: tips

Explain how cats and dogs have evolved eating informs dietary choices today

We want Fluffy to live a long & safe life in close contact with their family. Ensuring the diet is safe for everyone is a priority for us

Dog

- Scavengers
- Carcasses, faecal matter
- Human leftovers (cereals...)

Cat

- Small mammals
- Small birds
- Insects

These feeding strategies allowed them to survive on what was available
The current environment is **different**, and the diet we feed them has to accommodate these new risks

Discussing nutrition: tips

Get personal! I feed X diet to my pet because

- › it is the best for them in their situation right now
- › I have a baby/elderly relative, and I want them to enjoy their time with Fluffy without concerns about their safety
- › My cat is unable to defecate without medications and enemas unless I use this carefully designed diet
- › I worry about the planet, feeding an unnecessarily high protein diet is not sustainable



Discussing nutrition: tips

Focus on **the specific** pet

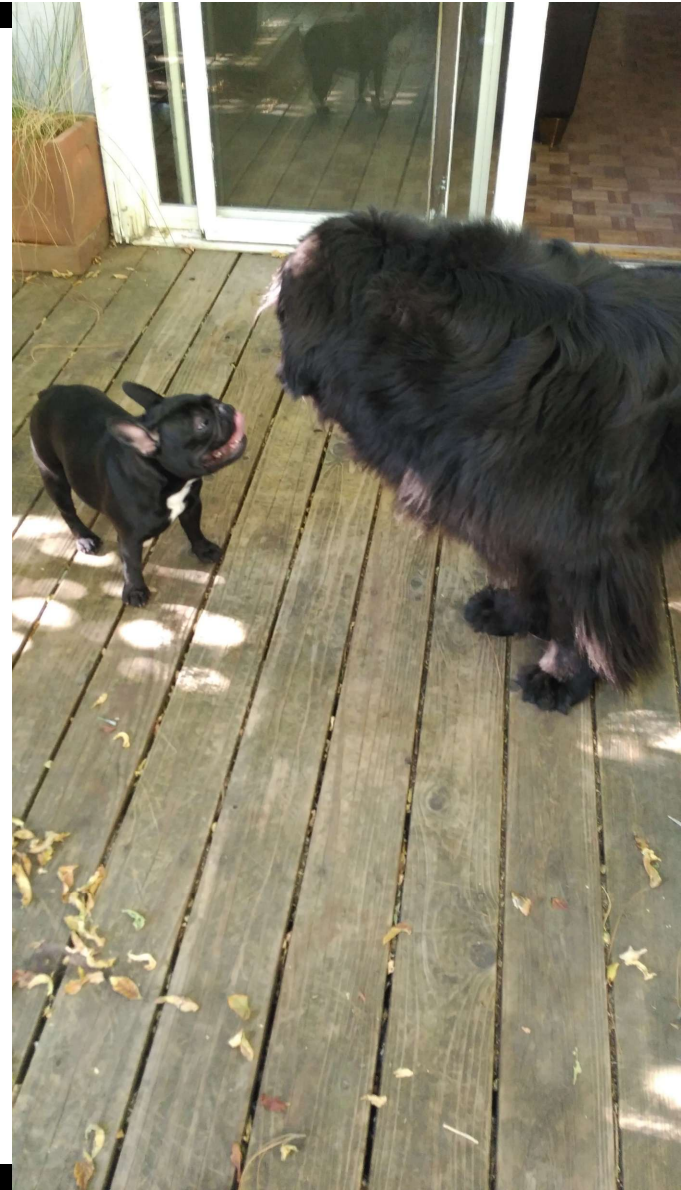
“while X feeding can be well tolerated in some cases, Fluffy has specific disorders that make this strategy riskier than average”

Examples:

- › Fat sensitivity
- › Immunosuppression (disease vs medications)
- › CKD

If commercial diets are a non-negotiable consider homecooked diets

- › Consult with a veterinary nutritionist: DACVIM (nutrition), DECVCN



Discussing nutrition: tips

- › Different clients, different approaches
- › Written & simple instructions
- › Schedule follow ups to reinforce therapy
- › Vet health care team – consistent message
- › Communicate that *you are* willing to change your mind!
 - › “With the current knowledge available to us”
 - › “Hopefully we will get more good research in the near future”
 - › Let’s see how Fluffy does, we can always change the plan in the next checkup

Discussing nutrition: tips

- › Cannot win all battles
 - › You are not the food police or the decision maker
 - › Make sure you write your assessment and recommendation in medical record
- › There is nothing wrong with having red lines (your non-negotiables)
 - › For example, I do not recommend or use raw diets, and I always:
 - › Recommend clinics have a hospitalization policy
 - Focus on safety of other patients and staff
 - › Talk to clients about hygiene (<https://www.fda.gov/animal-veterinary/animal-health-literacy/tips-safe-handling-pet-food-and-treats>)
 - › Write my recommendation on the medical record
 - › Refer (if possible) to someone who will assist

Resources

> WSAVA nutrition toolkit:

> <https://wsava.org/global-guidelines/global-nutrition-guidelines/>

> For raw feeders: <https://www.wormsandgermsblog.com/>

> <https://www.wormsandgermsblog.com/files/2008/04/M2-Raw-Meat-Owner1.pdf>



WSAVA Global Nutrition Committee: Recommendations on Selecting Pet Foods



Interpreting Food Labels, EU

Ingredients (raw materials) are listed under "composition"

-In descending order of weight (fresh matter)
-The names can be specific or can also be named by their legal category (see example)

Label must include those nutritional additives (vitamins and minerals) with legal inclusion maximums. The amounts are those added (therefore, the overall amount of nutrient might be different depending on raw material provision and effect of processing. Other additives (like preservatives, dyes, or flavouring agents) do not have to be reported by their specific name, but the company responsible for labelling should provide this information if contacted.

Name, address and contact information of the company responsible for labelling must be included. Label does not have to include country of production. If it applies, companies can use "made in the EU"

Label should include traceability information such as batch number and plant approval number. Best before date must be included in month and year (plus day if short shelf life)

[Product name] 400 g

Complete pet food for adult cats

Composition: Meat and animal derivatives (4% chicken), vegetable protein extract, derivatives of vegetable origin, cereals, minerals, various sugars

Additives (per kg):

	weight (kg)	serving / day (g)
Nutritional additives:		
Vitamin D3 as UI, E1	5	50
(iron) as mg [-],	4	62
Preservatives:		
antioxidants	5	74

Store in a cool dry place

Analytical constituents: Crude protein XX %, Crude oils and fats XX %, Crude ash XX %, Crude fibres XX %, Moisture XX %

ABC [company responsible of labelling/packaging], address/phone #

BATCH 1234567890
plant ABCD
Best before date MM/YYYY

Net weight must be reported

The pet food label must:
- Specify target species and lifestyle
- Specify if the food is "complete" (provides all necessary nutrients and energy for the species and lifestyle, and can be used as sole source of nutrition) or "complementary" (does not provide all nutrients and mainly refers to treats)

Feeding instructions can be more or less detailed. Many labels state that these are only recommendations and might vary depending on age, breed, activity and health

Label should include storage instructions (canned food might also include storage instructions after opening)

Dry pet food must recommend that the pet must have fresh water available at all times

Analytical constituents are declared as percentages (grams per 100 g of pet food) in fresh matter. The ones that are mandatory are crude protein, crude oils and fats, crude ash, and crude fibres. Moisture is only mandatory if >14%. The energy density (kilocalories per kg, cup or can) is not mandatory and is often absent from labels.

Resources

› Blogs:

› Petfoodology

<https://vetnutrition.tufts.edu/petfoodology/>

› Purina Institute:

<https://www.purinainstitute.com/>

› FEDIAF

You can make your own



LIFE STAGE NUTRITION

Practical information about the nutritional needs of cats and dogs at each life stage, including growth, maintenance, reproduction and aging.

[VIEW RESOURCES](#)



FOCUSED NUTRITION

Helpful information about the unique nutritional needs of dogs and cats with certain lifestyles or health challenges.

[VIEW RESOURCES](#)



THERAPEUTIC NUTRITION

Useful information about the needs of cats and dogs with nutritionally sensitive health conditions. New topics being added regularly.

[VIEW RESOURCES](#)



UNDERSTANDING PET FOOD

Practical information about commercial pet foods and what goes into them.

[VIEW RESOURCES](#)



NUTRITIONAL & CLINICAL ASSESSMENT TOOLS

Resources to help evaluate a pet's current nutrition and guide nutrition recommendations.

[VIEW RESOURCES](#)



NUTRITION CONVERSATIONS

Tips and tools for effective nutrition conversations with case scenario examples.

[VIEW RESOURCES](#)

Catherine Lenox, DVM, DACVIM (Nutrition)

Jonathan Stockman, DVM, DACVIM (Nutrition)

Cecilia Villaverde, BVSc, PhD, DACVIM (Nutrition), DECVCN



PI Canine and Feline Well-Pet Nutrition Handbook

COMMUNICATING WITH PET OWNERS ABOUT INGREDIENTS IN PET FOOD

- › Chapters:
 - › 3-4 pages
 - › Visuals
 - › Key takeaways
 - › 1 communication tip
- › Practical tools

Cecilia Villaverde, BVSc, PhD, DACVIM (Nutrition), DECVCN
Fermoy, County Cork, Ireland

Figure 1. Factors affecting quality of a

Microbiological
safety

COMMUNICATION TIP

If some ingredient questions come up frequently, it is useful and a time-saver to prepare and provide resources that the client can either take home or read on the clinic's website.

KEY TAKEAWAYS

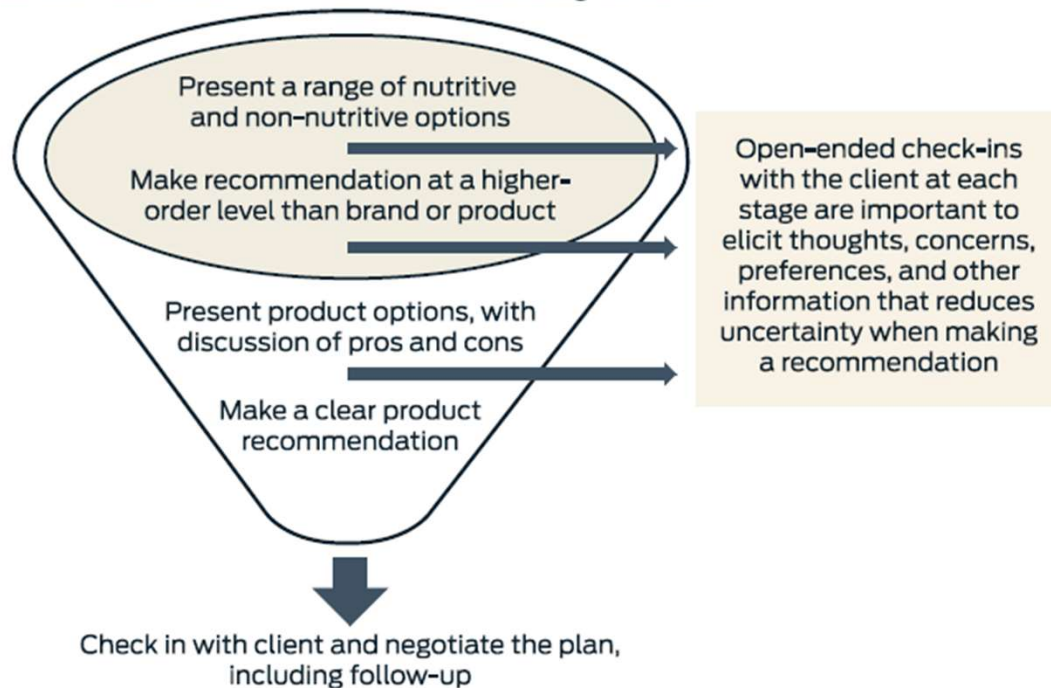
- Ingredients are the vehicles of nutrients. Ingredient quality is very important for the overall nutritional value and safety of pet foods and is a focus of pet owners when deciding what to feed their pets.
- There are many misconceptions surrounding pet food ingredients, and the veterinary health care team must be able to provide accurate and unbiased facts to pet owners.
- It is recommended to avoid engaging with myths or misconceptions and instead focus on what to communicate about the ingredient, to avoid further spread of the wrong concepts and to keep the conversation from becoming antagonistic.

PI Canine and Feline Well-Pet Nutrition Handbook

1. Nutrients and their functions
2. Life stage and specialized nutrition
 - › Growth, adults, senior, repro, working dogs, palliative care, shelter pets
3. Proactive nutrition
 - › Oral health, weight management, behaviour, cognition...
4. **Communication skills**
5. Applying nutrition in practice
 - › Nutritional assessment, take a diet history, supplements, calculations...

Figure 1. The funnel approach to making a nutritional recommendation

Before the recommendation: Educate about the health or nutritional concern and solicit client interest in addressing the concern

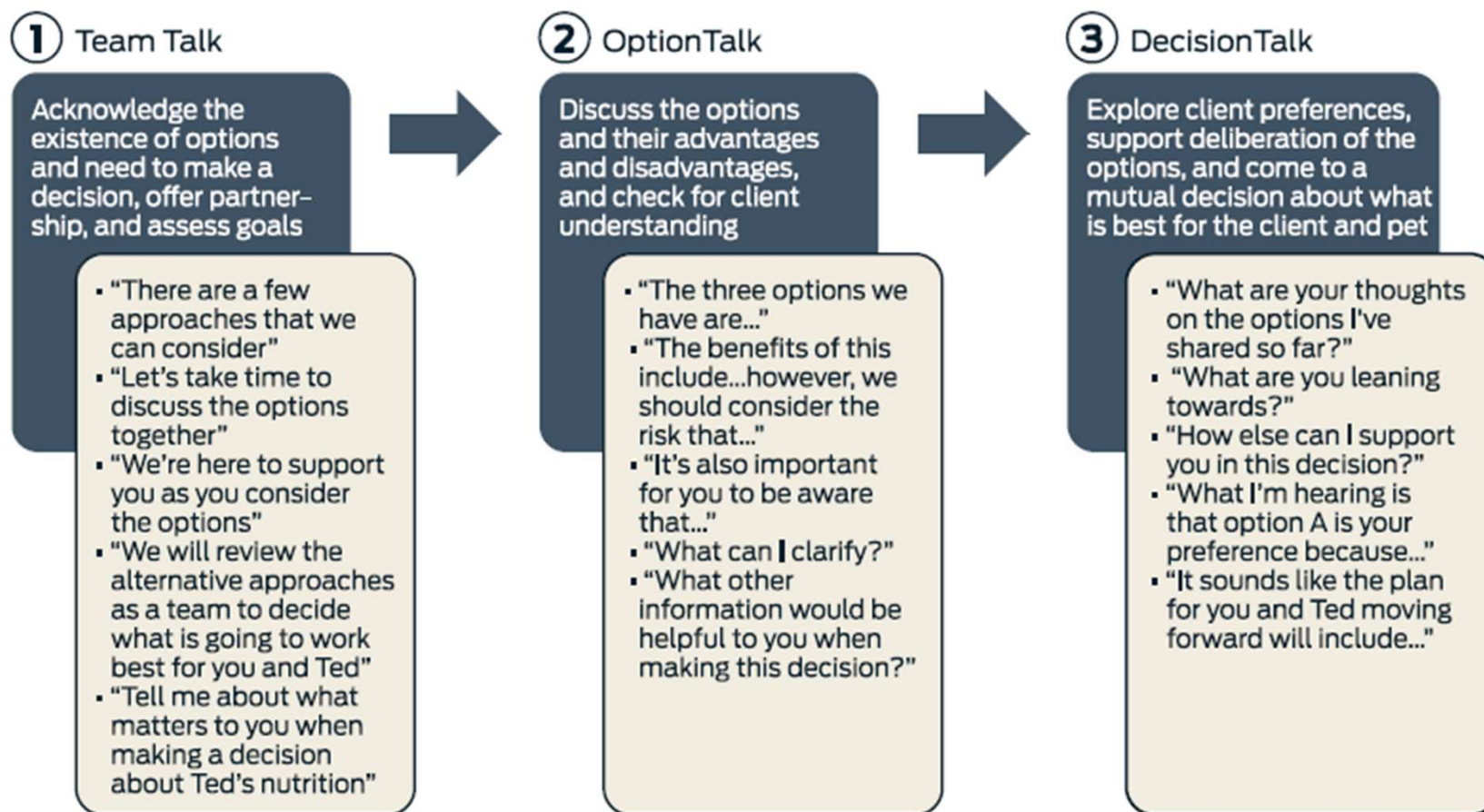


- 1st – Explore client stance on nutritional intervention
- 2nd – Explain options
- 3rd – Recommend product category
- 4th – discuss options within that category
- 5th – make specific recommendation

COMMUNICATION STRATEGIES TO UTILIZE WITH PET OWNERS

Lisa Hunter, MSW, and Kat Sutherland, PhD
Fort Collins, Colorado, USA

Figure 2. Implementing the three-talk model of shared decision-making¹⁶ in nutrition conversations



ANSWERING COMMON PET OWNER QUESTIONS ABOUT NUTRITION

Jacqueline M. Parr, DVM, MSc, DACVIM (Nutrition)
Athens, Georgia, USA

COMMUNICATION TIP

Keep in mind, assuming positive intent on the part of the pet owner when encountering nutritional misinformation, such as negative marketing claims they have shared, is an important first step to debunking misinformation.

COMMUNICATING WITH PET OWNERS ABOUT DIET SELECTION AND DIET CHANGES

Jennifer Larsen, DVM, MS, PhD, DACVIM (Nutrition), and Lauren Tseng, DVM
Davis, California, USA

COMMUNICATION TIP

Patience is key. An initial food refusal does not indicate the pet will never accept the new food. Many pets require repeated exposure to the new food before consistently consuming it.

COMMUNICATING WITH PET OWNERS ABOUT WEIGHT MANAGEMENT

Jason B. Coe, DVM, PhD
Guelph, Ontario, Canada

COMMUNICATION TIP

By asking the client's permission to discuss their pet's weight, we respectfully assess a client's readiness for the conversation, and we can begin to gauge a client's stage of readiness to address their pet's weight. This allows the veterinary team to tailor communication accordingly.

PRACTICAL TOOL: COMMUNICATING WITH PET OWNERS ABOUT TREATS

Emily Luisana, DVM, DACVIM (Nutrition)
Raleigh, North Carolina, USA

PRACTICAL TOOL: COMMUNICATING WITH FIRST-TIME PET OWNERS ABOUT NUTRITION

Shoshana Verton-Shaw, RVT, VTS (Nutrition)
Guelph, Ontario, Canada



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Where Science Meets Passion

Thank you!

