

Which Side of This Salmonella Scare Are You On?

One side claims A, the other side claims B. So how many of the facts are you really getting? And which claim does the new research support? Here's the scoop, but it's something you may not be getting from your current information sources (and should be).

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- If you want to help your dog have a healthy gut microbiome, don't follow the advice of the anti-fresh feeding movement
- One of their scare tactics would have you believe fresh pet food is loaded with salmonella, when in fact, it is processed pet food that has a history of recalls for pathogens
- While the anti-raw movement continues to issue tiresome warnings about the "dangers" of feeding raw, those with a genuine interest in keeping your pet's microbiome healthy are building a body of research on dietary influences
- That research suggests that dogs (and cats) eating fresh food have healthier guts than pets fed processed diets
- The best way to nourish your dog's microbiome is with a nutritionally optimal, species-appropriate diet

Editor's Note: This article is a reprint. It was originally published September 16, 2019.

In an otherwise informative post on the importance of a balanced microbiome in dogs, written by the Texas A&M College of Veterinary Medicine & Biomedical Sciences for Bark magazine, unfortunately, the quoted expert revealed her bias against raw diets toward the end of the piece.

In discussing ways to avoid an unbalanced microbiome, veterinarian Dr. Audrey Cook says, "Feeding a consistent, high-quality diet is also helpful, and we certainly want to avoid introducing pathogens such as salmonella by feeding raw foods."¹

To be fair, it's also possible Cook's warning about raw diets is because she's either woefully un- or misinformed about the types of pet food most commonly contaminated by salmonella (processed kibble), or that research shows that animals fed fresh diets have healthier gut microbiomes.

Sadly, a lack of knowledge of pet nutrition fundamentals is a widespread problem in most veterinary schools and veterinary practices across the U.S.

First Let's Get the Salmonella Issue Out of the Way (Again)

Three years ago, the head of the FDA Center for Veterinary Medicine openly admitted to me and the rest of the attendees at an AAFCO meeting that the agency would be heavily focused on testing raw pet foods for the foreseeable future.

Astonishingly, the FDA's decision to target raw diets wasn't in response to customer complaints or ill dogs or recalls or even the random discovery of contaminants. It was actually an offensive strategy designed to shake up this fast-growing segment of the pet food industry, as well as to find a problem to highlight to sow seeds of doubt and fear among consumers (and gullible veterinarians).

Thanks to the constant badgering by processed pet food advocates (a group that obviously includes the FDA) about the dangers of salmonella in raw pet food, many pet parents remain concerned about feeding raw foods specifically because raw meat can contain salmonella bacteria. The reality is that pathogen contamination has historically been a problem associated with processed diets — not fresh pet food.

The vast majority of recalls involving potentially pathogenic bacteria over the last six years have involved kibble, but this isn't what you are reading about in the news:



What many pet parents don't realize, and the anti-raw movement won't admit, is that salmonella can be found in up to 36% of all healthy dogs and 18% of healthy cats regardless of the food they consume. Many pets harbor these bacteria as a part of their normal gastrointestinal (GI) flora and naturally shed salmonella organisms in feces and saliva.

All non-typhoid salmonella species are ubiquitously present in the environment and reside in the GI tracts of many animals, including pets. The majority of human salmonellosis cases are acquired through ingestion or handling of contaminated dry pet foods and treats — not raw meat.

In fact, of the three cases reported to the CDC in the past six years of pet food making humans sick, two involved dry food (kibble) and the third involved pig ears — no cases involved commercially produced raw pet food. Here's what you need to know about salmonella:

- Dry food and raw food can certainly harbor salmonella, so awareness and proper home hygiene are important, regardless of the type of pet food you feed.

- Regardless of what food you feed your pet, animals can naturally harbor salmonella that can be a risk to humans, especially if you or a member of your family is immunocompromised.
- The raw meat used in many commercially available raw food diets is human-grade, USDA-inspected and no different from the steak and chicken purchased for human consumption from a grocery store. It should be handled with the same safety precautions you use when you prepare meals for your family. It's all the same meat. Your kitchen counters, bowls, cutting surfaces and utensils should be disinfected whether the raw meat is intended for your pet or human family members.
- About half of the commercially available raw diets on the market are sterile, meaning devoid of all bacteria, because they have been treated with high pressure pasteurization (HPP).

Commonsense Tips for Feeding Raw

The FDA offers the following tips to prevent infection when feeding raw:²

1. Thoroughly wash your hands with soap and water (for at least 20 seconds) after handling raw pet food, and after touching surfaces or objects that have come in contact with the raw food.
2. Thoroughly clean and disinfect all surfaces and objects that come in contact with raw pet food. First wash with hot soapy water and then follow with a disinfectant. You can also run items through the dishwasher after each use to clean and disinfect them.
3. Freeze raw meat and poultry products until you are ready to use them, and thaw them in your refrigerator or microwave, not on your countertop or in your sink.
4. Carefully handle raw and frozen meat and poultry products. Don't rinse raw meat, poultry, fish and seafood. Bacteria in the raw juices can splash and spread to other food and surfaces.
5. Keep raw food separate from other food.
6. Immediately cover and refrigerate what your pet doesn't eat or throw the leftovers out safely.
7. If you're using raw ingredients to make your own cooked pet food, be sure to cook all food to a proper internal temperature as measured by a food thermometer. Thorough cooking kills Salmonella, L. monocytogenes and other harmful foodborne bacteria.
8. Don't kiss your pet around its mouth, and don't let your pet lick your face. This is especially important after your pet has just finished eating any type of pet food.

Bottom line, follow the same safe handling precautions regardless of what you feed your pet, and be assured that responsible raw food companies perform due diligence to control potential pathogenic bacteria in a variety of nontoxic ways, including using phage technology, fermentation and lot/batch testing to ensure each batch of product is safe for consumption.

Pets on Raw Diets Found to Have a Healthier Gut Microbiome

Microbial ecologist Dr. Holly Ganz founded AnimalBiome after learning through her research that many pets with chronic health conditions have poor gut health, detected by looking at the composition of their gut bacteria. During my interview with her, I asked Dr. Ganz how she was able to distinguish an animal with an unhealthy gut from one with a healthy gut.

“Sometimes it turned out to be very obvious,” she answered. “We’ve found in many cats and dogs with chronic digestive problems that they have really depleted compositions of gut bacteria. We’re using sequencing to look at that.”

Through my work with the Kittybiome project, we began interacting with people who were very passionate about raw feeding — the fact that cats are obligate carnivores and many commercially available diets aren’t biologically appropriate for them. We could actually see the benefit of raw diets as we analyzed the composition of gut bacteria. We could see the difference in microbiomes between the sick cats and the cats eating raw diets.”

I’ve talked to other researchers, as well, who were able to confirm what Dr. Ganz has found, which is that animals eating fresh food have a more diverse microbiome. You can visit [**AnimalBiome**](#) to learn more about Dr. Ganz’s work and microbiome restorative therapy.

More Evidence of the Benefits of Fresh Food on the Microbiome

Another recent university study revealed how different types of diets affect the gut bacteria (microbiome) of dogs.³ According to the researchers, the objective of the 28-day study was to determine fecal microbiota and metabolite concentrations in eight adult dogs fed four different diets that included two lightly cooked diets from Freshpet, a raw Freshpet diet and an extruded diet (Purina Dog Chow).

Not surprisingly, the study results showed there are indeed differences in gut bacteria depending on what diet dogs are fed. The researchers observed that the mildly cooked and raw diets were generally higher in protein and/or fat and were more digestible than the extruded diet, and also reduced blood triglyceride concentrations.

Other research on how diet impacts the canine gut microbiome has provided better insight into the benefits of feeding species-appropriate diets to dogs. For example, an Italian study published recently compared the influence of a raw meat and vegetable diet vs. an extruded diet in eight healthy Boxers.

The study authors concluded that feeding a raw diet “... promoted a more balanced growth of bacterial communities and a positive change in the readouts of healthy gut functions in comparison to [an extruded] diet.”⁴

In another recent study in New Zealand of 15 adult dogs, the researchers discovered that the dogs fed a raw red meat diet showed higher levels of digestibility of protein and energy than dogs fed kibble. They also produced a smaller volume of **poop** with lower levels of fecal volatile fatty acids.⁵ As for gut bacteria, the study authors noted that:

“Diet significantly affected 27 microbial families and 53 genera in the faeces. In particular, the abundances of Bacteriodes, Prevotella, Peptostreptococcus and Faecalibacterium were lower in dogs fed the meat diet, whereas Fusobacterium, Lactobacillus and Clostridium were all more abundant.”

The shift in the microbiota correlates to protein and fat digestibility in the dogs. By understanding the relationship between a dog’s microbiome and digestibility of the food consumed, we gain insight into the influence of diet on the overall well-being of pets.

Interestingly, the amount of healthy, indigestible fiber included in raw food diets is also a determining factor in the quantity and diversity of gut microbes. So far all of the raw food research suggests a small amount of fiber (in the form of indigestible plant roughage) is important for building a healthy microbiome, and the diets that do not include fiber create less healthy microbiota.

The Best Way to Nourish Dog's Microbiome

While there are many environmental and lifestyle factors that influence your dog's gut health, the diet you feed has a direct effect on the microbial diversity of his or her microbiome and is the single most important factor in preventing illness and maintaining wellness.

If you haven't already, I recommend transitioning your pet away from "fast food" (kibble), and instead feeding a nutritionally optimal, species-appropriate diet, which means food containing unadulterated, high-quality animal protein, moisture, healthy fats and fiber, with low to no starch content.

A nutritionally complete raw or gently cooked homemade diet is the **top choice for pets**, but only for those pet parents who are committed to doing it right. If you don't want to deal with balancing diets at home, choosing to feed a pre-balanced, commercially available raw food is a good alternative.

And be sure to incorporate probiotics, **fermented veggies** and a variety of fresh foods into your pet's diet, too. Blueberries, chia and hemp seeds in coconut oil, raw pumpkin seeds and kefir can provide your furry family member with a variety of nutrition and flavors.

Sources and References

¹ [Bark, July 2019](#)

² [FDA.gov](#)

³ [Journal of Animal Science, Volume 95, Issue suppl 4, August 1, 2017, pages 111](#)

⁴ [BMC Veterinary Research. 2017; 13: 65](#)

⁵ [PeerJ. 2017 Mar 2;5:e3019](#)
