

An Easy Way to Reduce Risk for Nine Age-Related Diseases in Dogs

Data on over 24,000 subjects indicate that dogs offered this way of eating were less likely to develop dental, GI, orthopedic, kidney/urinary and liver/pancreatic disorders. It can also help keep your canine companion lean and improve the longevity of almost any dog.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Researchers at the University of Arizona have published a study suggesting that feeding dogs just one meal a day may help reduce the risk of several significant age-related diseases
- An analysis of data on over 24,000 subjects indicates that dogs offered a single daily meal were less likely to develop dental, GI, orthopedic, kidney/urinary, and liver/pancreatic disorders
- Intermittent fasting can also help you keep your canine companion lean; it can help heavy dogs lose weight and improve the health, wellness, and longevity of almost any dog
- There are a variety of approaches to intermittent fasting (time restricted feeding) that can accommodate almost any busy person's daily/weekly schedule

University of Arizona researchers have concluded that offering dogs just one meal a day may reduce their risk of nine types of age-related diseases, including **cognitive decline**, disorders of the gastrointestinal (GI) tract, liver, and kidneys, urinary disorders, cancer, and dental issues. The study authors published their findings, titled "Once-daily feeding is associated with better cognitive function and health in companion dogs: results from the Dog Aging Project," in the journal *Geroscience*.¹

The research team analyzed data on over 24,000 dogs collected via the **Dog Aging Project**, looking for links between feeding frequency and health outcomes. After controlling for factors such as age, breed, and sex, the scientists found that dogs that were given only a single meal per day appeared less likely to develop dental, GI, orthopedic, kidney/urinary, and liver/pancreatic disorders.

*"For nearly a century, caloric restriction has been known to extend lifespan and delay age-associated pathology in laboratory animals," the study authors wrote. "Companion dogs provide a potentially powerful animal model in which to better understand the relationship between diet and age-related health outcomes."*²

Intermittent fasting, aka time-restricted eating studies are underway for both rodents and humans, and as it turns out, once-daily feeding in dogs is a natural model for that research, since canines may benefit from fewer feedings for evolutionary reasons. After all, wolves in the wild often go for days without food, and it's thought that this evolutionary feeding schedule may still be present in the genomes of domestic dogs.

Benefits of Intermittent Fasting for Dogs

With a few notable exceptions (growing puppies, lactating females, senior and geriatric dogs, dogs with health conditions for which fasting is contraindicated, and small toy breeds prone to hypoglycemia), I believe creating an "eating window" (and fasting dogs the rest of the day) is an underutilized strategy for improving health, wellness, and longevity in canine companions.

Intentional intermittent fasting involves sufficient nutrient intake on non-fasting days to maintain vital tissues, organs, and muscle, along with liver enzyme co-factors to help with fat breakdown and the release of toxins. Fasting triggers a dog's body to metabolize fat. Waste products stored in fat are released. This waste not only includes breakdown products of natural substances the liver couldn't process, but also toxins absorbed from the environment, for example, chemical pest repellents.

Robert Mueller, co-developer of BARF brand diets and an advocate of fasting lists several other benefits, including:³

- *"Elevating macrophage activity, which will engulf and destroy bacteria, viruses, and other foreign material."*
- *"Allowing the digestive system to relax and let the body focus on other important bodily functions."*
- *"Allowing the body to regenerate briefly. 'It is amazing to watch a complete reversal of digestive symptoms such as upset stomach and diarrhea, as well as allergy relief.'"*

The same health benefits that occur in people who therapeutically fast also occur in dogs who are fasted. One of the most notable, system-wide benefits is a reduction in the amount of insulin, a pro-inflammatory hormone that circulates in the body. This not only reduces systemic inflammation, but also helps to maintain insulin sensitivity.

We know now that dogs enter into the profoundly health-enhancing metabolic state of **nutritional ketosis** when fasting is implemented and preliminary research demonstrates that the same immunologic and metabolic improvements seen in calorie-restricted humans are most likely happening in canines as well.⁴

Giving the body a break from constantly digesting and processing food not only restricts calories, which is linked to long-term health benefits,⁵ it improves mitochondrial function⁶ and allows organs a chance to repair and restore function. It also sparks a process called autophagy, which allows the body to recycle and clean up cellular debris and waste that builds up over time.

When I interviewed Dr. Satchin Panda from the Salk Institute for The Forever Dog, he told me it's not just about what our pets eat. When they eat is equally important. When it comes to canine circadian rhythms, he was quick to point out that dogs were never meant to have a steady stream of calories coming in from morning until just before bed. Between meals, treats and snacks, many well-loved dogs are in a constant state of processing calories, something science has proved is least optimal for achieving long-term health and wellbeing.

Many pet owners are extremely uncomfortable with the thought of "denying their dog food," but I'd like to propose reframing the idea of intermittent fasting as a daily opportunity to intentionally create health while providing all the nourishment your dog needs in a set window of time. When you think of it this way, you realize you aren't denying your furry family member anything, rather, you're helping him achieve improved wellbeing and a longer lifespan.

Approaches to Intermittent Fasting for Dogs

There is more than one way to fast a healthy dog, but if your pet **needs to lose weight** (which includes over half the dogs in the U.S.), the first thing you must do is calculate how many calories to feed each day. Let's say your Labrador Retriever is 80 pounds and should be 65 pounds:

$$\text{Daily calories} = \text{Body weight (kg)} \times 30 + 70$$

First, convert your dog's weight from pounds to kilograms. One kilogram = 2.2 pounds, so divide her ideal weight (not her current weight) in pounds by 2.2. $65/2.2$ means your dog's ideal weight in kilograms is 29.5. Now the formula looks like this:

$$\text{Daily calories} = 29.5 \text{ (kg)} \times 30 + 70$$

And finally, it looks like this:

$$\text{Daily calories to maintain a 65-pound dog} = 955$$

The 955 calories per day number (including treats) is what an average 65-pound dog needs as a baseline. If your dog is more active, she'll need more calories. If your 80-pound dog isn't exhibiting signs of profound hunger you can begin feeding this amount of food in a 24-hour period and she should drop steadily to her ideal weight of 65 pounds and maintain it.

If she immediately notices the smaller portion size you can calculate the calories needed for a 75-pound dog as a first weight loss goal, and once she's achieved that weight, recalculate calories for a 70-pound weight goal. Once that is reached, reduce her to 955 calories to help her drop to her ideal weight of 65 pounds. Once she's achieved her ideal body weight you can (and should) continue to harness the long-term health benefits of maintaining a defined "eating window" of time every day.

If your dog doesn't need to lose weight or if you're looking to help her gain weight, you can plug in whatever ideal weight you'd like her to achieve in the above formula to determine the calories needed per day to reach the goal.

Creating your dog's eating window can be completely customized around your lifestyle. For overweight dogs, consuming their daily calorie requirement in less than an 8-hour eating window is ideal. The clock starts ticking with the first bite of food (or treats) and ends, ideally, at least 2 hours before bed.

Intermittent fasting can involve, for example, feeding two regular meals within a 6-to-8-hour period for a total of 955 calories. You might feed the first meal at noon and the second at 6 pm, creating an 18 hour fast (from 6 pm to noon the next day). If you work late, you can feed the first meal at 7 am and the last meal at 1 pm. Some pet parents, including me, feed their dogs only once a day, so they fast most of every day for maximum longevity benefits. As a side note, I feed my kitties their daily calories in a window of 10 hours, leaving 14 hours for their rest-repair-restore cycle to healthfully occur.

If you can't create an 8-hour eating window for your dog due to your work schedule, consider feeding her just before you leave for work, and again immediately upon arriving home, with a healthy exercise period later in the evening, prior to bedtime.

Always keep in mind that dogs aren't evolutionarily adapted to three meals a day. There are numerous studies that point to increased longevity and decreased disease potential when non-grazing animals consume the same number of calories over time but distributed in a more natural "feast or famine" evolutionary pattern. Intermittent fasting mimics the health benefits of traditional fasting (withholding all calories, never water) while minimizing any risks.

An alternative to intermittent fasting is a once a week true fast, which for healthy adult dogs means six days of regular meals, followed by a 24-hour period of water only. Some people choose to offer a big **meaty bone** on fast day, which really isn't a true fast, but still results in substantially fewer calories ingested in a 24-hour period and positive metabolic changes.

I encourage you to consult with an integrative veterinarian if you're considering traditionally fasting your dog. And needless to say, all fasts involve restriction of food only, never pure drinking water.

Sources and References

[Whole Dog Journal June 8, 2023](#)

^{1,2} [Bray, E.E. et al. Geroscience, 2022 Jun;44\(3\):1779-1790](#)

³ [BARF Blog, July 25, 2013](#)

⁴ [Journal of Proteome Research, July 5, 2013, 12\(7\):3117-27](#)

⁵ [Journal of the American Veterinary Medical Association, May 1, 2002, Vol. 220, No. 9, Pages 1315-1320](#)

⁶ [Brain Research, Volume 1226, 21 August 2008, Pages 209-217](#)
