

# **KetoPet**

## **A Pet Parent's Guide to the Ketogenic Diet**



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# The Story Behind KetoPet

At KetoPet, dogs are family, and that's why we are so passionate about helping canines with cancer. Unfortunately, the disease is the leading cause of death in man's best friend, and each year, about 6 million dogs in the US will be diagnosed with cancer. We are committed to changing those statistics.

KetoPet was founded in 2014 as a program under the 501(c)(3) non-profit organization, Epigenix Foundation. The program was started by a group of people with a passion for helping shelter and rescue dogs with cancer who would otherwise be euthanized. KetoPet sanctuary staff placed each dog on a ketogenic diet as a form of cancer treatment, and worked tirelessly to give them a quality of life and a forever home. In addition to nutritional therapy, the sanctuary offered dogs the highest standard of veterinary and oncology care (surgery, chemotherapy and/or radiation), fluorodeoxyglucose positron emission tomography (FDG-PET) imaging (typically used only in humans), metabolic conditioning, hyperbaric oxygen chamber treatments (HBOT), and of course, lots of love.

KetoPet is the first organization that has systematically tested the ketogenic diet in canines. While not a cure, KetoPet has found this metabolic therapy to be effective in improving outcomes when treating canines with cancer. In fact, 55% of the dogs who graduated from the KetoPet program are still going for long walks, enjoying belly rubs, playing catch, and experiencing a quality of life far beyond their original prognosis. A few of our dogs have even been diagnosed with some of the most aggressive forms of cancer in canines (including hemangiosarcoma and mast cell), and today they are thriving, cancer-free. It's also important to note, however, that some of our sanctuary dogs have unfortunately lost their battle to cancer.

Our eBook and KetoPet Calculator is offered free of charge and we do not sell anything at KetoPet. If you would like to help us continue our impactful work with dogs in need, please make a donation or purchase food for your dog from Valiant Pet Nutrition, as they offer a portion of their proceeds to help KetoPet. You can learn more at : [www.ketopetsanctuary.com](http://www.ketopetsanctuary.com)



When KetoPet was originally established, our team would only work with dogs on site at the sanctuary to maintain perfect control over every aspect of the metabolic therapy protocol. We are now committed to sharing what we've learned with pet parents around the world. To help you get started with the ketogenic diet, we've created this e-book, and you'll find an easy-to-use KetoPet Calculator on our website (and listed in the checklist below) that will make the process of creating a diet for your dog at home as simple as possible. We urge you to first read the entirety of this eBook before building your own plan with the calculator. Having a solid understanding of the ketogenic diet will be key in helping your dog successfully enter into ketosis.

Once you've built your dog's plan, please also be sure to join our private Facebook group as it's a great place to find support, ask questions, and receive the latest and most reputable information on nutrition science and our KetoPet protocol. To join our group, please request access here: [www.facebook.com/groups/KetoPetSupport/](http://www.facebook.com/groups/KetoPetSupport/)

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# What is the Ketogenic Diet?

A ketogenic diet is one that is high in fat, adequate in protein, and low in carbohydrates (carbs). When non-fibrous carbs are significantly reduced, protein is moderate, and dietary fat is increased, the body will naturally switch its primary fuel source from carbohydrates to fat. Once a person or dog begins using fat for fuel instead of glucose, the liver breaks down those fats into ketone bodies which are then used for energy by tissues throughout the body. This process induces a healthy metabolic state called ketosis.

The ketogenic diet has been used clinically for nearly 100 years as a therapy to control seizures in children with drug-resistant epilepsy. While it's continued to be prescribed as a treatment for seizures today due to its powerful neurocognitive effects, the use of this metabolic therapy has expanded exponentially. Not only is the ketogenic diet showing promise in improving human health and performance, but it's being used as a therapy in preclinical studies focused on a variety of diseases including Alzheimer's, amyotrophic lateral sclerosis (ALS), type-2 diabetes, traumatic brain injury (TBI), and even cancer. The ketogenic diet has also shown to significantly lower and stabilize blood glucose levels, which can improve insulin sensitivity and encourage fat loss. Lowering blood sugar and insulin also triggers anti-inflammatory processes in the body that can enhance cellular function and ultimately improve overall human and canine health.

Much of the research currently underway and involving cancer and the ketogenic diet was inspired by a discovery made many decades ago by German biochemist, Otto Warburg. Warburg found that most cancer cells, unlike healthy cells, exhibit an altered energy metabolism where they rely heavily on sugar (carbohydrates) for energy. This phenomenon, is also known as the Warburg Effect. Since Warburg's observation, preclinical trials have shown that lowering glucose in the blood (cancer's primary fuel source) can potentially slow tumor progression. This is just one of the ways the ketogenic diet seems to help with cancer and other inflammatory conditions. Dr. Thomas Seyfried, a scientist and professor at Boston College, pioneered research showcasing the metabolic dysfunction of cancer at a time when most scientists were convinced it was a genetic disease. Building upon Dr. Seyfried's work, University of South Florida researchers, Dr. Dominic D'Agostino and Dr. Angela Poff, found that this weakness in cancer metabolism could be targeted therapeutically using a ketogenic diet. These studies (among others), and the metabolic theory of cancer, have served as a foundation for KetoPet.

For additional information on the ketogenic diet and cancer, please visit

[www.ketopetsanctuary.com/resources/](http://www.ketopetsanctuary.com/resources/)

Support KetoPet and our mission to help dogs with cancer. To donate, please visit [www.ketopetsanctuary.com](http://www.ketopetsanctuary.com) or click below.

**DONATE NOW!** ►





# Ingredients in a KetoPet Ketogenic Diet

## Grocery Store Ingredients

The first step in creating a ketogenic diet for your dog at home requires you to choose the type of food you'd like to use in your recipe. One way to create the diet is to choose grocery store items as your ingredients. Choosing this option will require you to go to the grocery store and pick out each ingredient: a specific lean/fat percentage of meat, leafy green vegetables, and quality sources of fats. You'll then need to purchase a food scale to properly measure the gram amounts of each ingredient in this recipe. You'll also want to make sure your dog drinks plenty of water, and that you lightly salt your dog's food for added sodium. Mineral/sodium requirements increase on a ketogenic diet. As your dog's insulin level drops, the kidneys are triggered to excrete excess water, and with that comes electrolytes. Grocery store food alone will not supply your dog with the needed minerals to maintain an electrolyte balance when entering into ketosis, and you may want to purchase a supplement that includes potassium and magnesium.



We also recommend the use of chia seeds with a homemade grocery store recipe to add some additional fiber into the diet. We suggest giving a dog 1tbsp per 40lbs.

Valiant Pet's products were inspired by the work that's been done at KetoPet. So much so, that the VP team has committed to partnering with KetoPet by donating a portion of their sales to our organization - allowing us to continue our mission of helping dogs with cancer. Some of the founders of our non-profit are also investment partners in Valiant Pet.

Please visit [Valiantpet.com](http://Valiantpet.com) to learn more.

## Packaged Ketogenic Dog Food

If you're looking for a more convenient way to make a ketogenic diet, you may choose to use a packaged ketogenic dog food. At KetoPet, we used to weigh and measure food for each of our dogs twice a day. It would take our staff hours to create all of our dog's daily meals. Valiant Pet Nutrition understood this time-intensive process, and also noticed how many pet parents were finding it difficult to properly build a ketogenic diet at home. To offer a solution, they created a raw ketogenic recipe using only low-carbohydrate ingredients that could be used in any ketogenic meal plan. Since October 2017, Valiant Pet has kindly donated their raw ketogenic food to KetoPet, and we feed it to our dogs every single day.

You may not be aware that most packaged dog foods on the market contain up to 80% of calories from digestible carbohydrates. Due to the fact that dog food does not have a nutrition facts panel as human food does, there's no easy way to determine how much digestible carbs a product contains without sending it to a lab for detailed analysis (which we have done). Even products that claim to be grain-free and raw, can still contain high amounts of carbs in the form of fruit, sweet potatoes, carrots and other ingredients. In comparison, Valiant Pet Nutrition's recipe includes less than 2% net carbs in the form of broccoli and green beans. As a result, Valiant is setting a new standard in the pet food world, and it's the reason why we only feed Valiant to our dogs with cancer. It's truly ketogenic and approximately fits the macronutrient distribution of an Option 1 plan.

Another benefit to this convenient ketogenic dog food is that it's already complete and does not require added supplements or chia seeds like the grocery store plan does.



# Which Ketogenic Plan Option Is Best for Your Dog?

Regardless of why you might be putting your dog on a ketogenic diet, we suggest starting him or her on an Option 1 Plan (see below) that contains 69% of calories from fat, 30% from protein, and 1% from net carbohydrates. Starting your best friend on this type of a plan will allow them to experience a smoother transition as they shift toward a higher fat diet. Depending on the state of your dog's gut health, increasing fat too soon can cause GI distress (nausea, diarrhea etc.) in some canines. Please refer to the two sections below on how to transition a dog to a higher fat plan if they have cancer or suffer from seizures.

Patience is key when transitioning a dog onto any new diet. As mentioned above, a ketogenic diet can cause your dog to initially lose water weight. If weight loss happens in the first few days of placing your dog on the diet, don't be alarmed. Monitor them patiently, and if they continue to drop weight past the first week or two, you may need to re-adjust their meal plan by using the KetoPet Calculator. However, if your dog needs to lose weight, monitor their weight loss until they've reached their ideal body condition score. At that point, you can increase their calories a little to prevent further weight loss.

After starting the diet, we often rotate sources of protein, vegetables, and fat from time to time. Your dog will enjoy variety in their diet, and it will also prevent them from developing an aversion to specific food items. It's also important to note, that we do not feed treats at KetoPet as our dogs are on a very calorically controlled plan for disease management. We don't suggest offering treats to your dog unless it's a portion of their meal plan or you are using the diet as a lifestyle. Most treats have added carbohydrates and/or protein and can kick your dog out of ketosis.

To make the process of building ketogenic Option 1, 2 or 3 plans easy for you, we've created a simple KetoPet Calculator. You can gain access to the calculator by visiting the checklist at the end of this eBook. You will also find answers to frequently asked questions when transitioning a dog into ketosis.

## Using the Ketogenic Diet as a Lifestyle

When using a raw ketogenic diet for a dog without cancer or any history of disease, you may choose to use an Option 1 raw ketogenic plan to allow your best friend to experience the potential health benefits associated with low-carb living. You can create this plan with our KetoPet Calculator and continue to follow it for as long as you'd like, just be sure to switch up your food sources from time to time.

## Using the Ketogenic Diet for Disease Management - Cancer or Seizures

If you are dealing with a cancer or epilepsy diagnosis, we'd still suggest starting your dog on an Option 1 plan. After 1-2 weeks on an Option 1 plan, and as long as your dog responds well to the diet, we'd then suggest increasing the percentage of calories from fat with the KetoPet Calculator (independent of increasing or decreasing calories). Switching a dog with disease to an Option 2 plan (see below) or 82% of calories from fat may offer therapeutic benefits, and most dogs are able to get into ketosis with this macronutrient distribution. For dogs with cancer, we do not increase calories from fat beyond an Option 2 plan as it typically encourages adequate ketone production and blood glucose suppression (as long as calories are controlled appropriately). For a dog with seizures, you may need to bump your dog from an Option 2 plan to an Option 3 plan for seizure control. For instance, your dog may need upwards of 87% of their calories coming from fat to reduce or stop seizures with nutritional therapy alone. It is very important to work alongside your vet if you are using the diet as a metabolic therapy for cancer or seizure control.

Keto Diet Options	Fat	Protein	Net Carb
Option 1	69%	30%	1%
Option 2	82%	17%	1%
Option 3	87%	12%	1%

# How to Test Blood

One of the many benefits of a ketogenic diet is that it naturally lowers your dog's blood glucose while raising ketone levels. Considering this change in the blood, you don't need to guess whether the diet's working or not. You can validate its effectiveness for yourself by simply measuring your dog's blood glucose and ketone levels. This is by no means a requirement as feeding the recommended diet will almost certainly put your dog into ketosis. For those who want to monitor their dog's metabolic state more closely, testing blood is a smart option. We only recommend testing dogs who are using the diet for disease management. As a reminder, please start your dog on an Option 1 Plan and then graduate to Option 2 after 1-2 weeks. Once your dog has been on an Option 2 program for about one week, you can then begin testing blood.

Testing your dog to see if he or she is in nutritional ketosis isn't difficult. The easiest option is to purchase a hand-held blood glucose and ketone measuring device and strips. At KetoPet, we use an Abbott Precision Xtra blood glucose and ketone monitor. This particular brand can test both blood glucose and blood ketone levels, and has proven to be the most accurate when testing our dogs at the sanctuary. You can purchase the monitor on Amazon.com or Abbottstore.com. To draw blood, you can use the side of your dog's paw pads or the loose skin on their front elbow. You may also want to try the inside of the ear or lip. We suggest using the needle only (and not the lancet device) as it's more controlled and the device may scare your dog. Please follow the remaining instructions that come along with the device kit.

**IMPORTANT NOTE:** Make sure that you measure both blood glucose and blood ketone levels together as both are important in determining if your dog is in nutritional ketosis. For example, if his or her ketones are high and their glucose is high, that tells one story. However, if your dog's glucose is low and ketones are low that tells another. At the sanctuary, staff aim to keep the dogs' blood glucose levels at or below 75 mg/dL and their blood ketone levels at or above .3mM.

## EXAMPLES

**Measurement 1: Blood Glucose 110 mg/dL, Blood Ketone 0.1 mM = Not Ketosis**

**Measurement 2: Blood Glucose 75 mg/dL, Blood Ketone 0.3 mM = Ketosis**

*TIP: After you've purchased your blood glucometer (testing strips are usually sold separately), please join our [private Facebook group](#) for videos and further explanation on how to test blood.*

Keep in mind, that these tests only offer a snapshot of your dog's blood levels. It's also important to note that we've found that it is much easier to decrease a dog's blood glucose level than it is to raise blood ketones. Additionally, you may find that your dog's ketone levels will be much lower than what you might see when testing yourself (if you're on a ketogenic diet). We think that dogs may use ketones for fuel more efficiently, and they aren't circulating in the blood like they do in humans. However, this theory has yet to be proven.

As you transition your dog onto the diet, and later onto an Option 2 plan, we'd suggest testing their blood glucose and blood ketone levels often (a few times a week) to optimize their meal plan. Once you see numbers consistently where you want them to be, you can reduce testing to once or twice a week. The test strips can get expensive, so measure as often as you can to get a good barometer of their metabolism, but not so frequently that you're breaking the bank. Remember, each dog is different and some dogs may only have a ketone reading average of 0.2 mM. However, if their blood glucose is low, this may be your dog's normal level of ketosis. The best time to measure is in the evening before their last meal of the day (if they have two meals). Please make sure that you do not test following exercise.

If testing blood sounds daunting, you can also take your dog to your veterinarian and ask them to run a blood panel that measures blood glucose and blood ketone levels. For accuracy, please make sure these levels are tested through blood and not urine. Although visiting your vet is an option, keep in mind that stress can increase blood glucose levels (i.e. going to the vet), and this panel may not accurately reflect what your dog's levels would be if he or she were in the comfort of their own home.





# Getting Started Checklist

- 🐾 **Read the entirety of this eBook!**
- 🐾 **Choose what type of ingredients you'd like to use between the two following options:**
  1. Grocery store items
  2. Packaged ketogenic dog food
- 🐾 **Use our KetoPet Calculator to build your dog's macronutrient requirements and ketogenic recipes. Go to [www.ketopetsanctuary.com/calculator/](http://www.ketopetsanctuary.com/calculator/) to access it.**
- 🐾 **If you've decided to build a grocery store based recipe, gather the following products:**
  1. Mineral supplement: As insulin drops this causes the kidneys to excrete excess water. If mineral supplements are not used in the process, this can result in an electrolyte imbalance.
  2. Chia seeds – Purchase a bag just in case your dog experiences GI upset
  3. Digital food scale – Whether you're building a plan for disease management or lifestyle, you will need to weigh each food item in grams (protein, carbs, and fats)
  4. Stainless steel food bowl
  5. Blender or food processor to mix food
  6. Ingredients from grocery store
- 🐾 **If you've decided to build a Valiant Pet Nutrition based recipe, you'll need the following:**
  1. Purchase frozen or freeze-dried Valiant Pet from [www.valiantpet.com](http://www.valiantpet.com)
  2. Digital food scale – This is only needed for an Option 2 plan for disease management. The scale will be used to weigh additional fat
- 🐾 **Read the FAQ on our website as you may find answers to many ketogenic questions: [www.ketopetsanctuary.com/faqs](http://www.ketopetsanctuary.com/faqs)**
- 🐾 **Once you've started the diet, request to join our private Facebook group here: [www.facebook.com/groups/KetoPetSupport](http://www.facebook.com/groups/KetoPetSupport)**
- 🐾 **Blood meter:** If you're using the diet for disease management (Option 2) and if you want to test your dog's blood, order a meter to gauge whether or not the diet is working. You can validate its effectiveness through a simple blood test. We suggest purchasing a Precision Xtra along with blood glucose/ketone strips before getting started.

Although switching up your dog's diet can be a little daunting, especially in the face of cancer, we are here to make the process easier for you. Once you've completed the program, please feel free to ask questions in our private Facebook group. We are here to help you and your best friend along the way!





## Success Stories

### Cali's Story



Cali is the first graduate of the KetoPet program. She's a sassy and athletic Vizsla who loves humans and lots of affection. The fact that she is alive today is nothing short of miraculous. Cali was diagnosed with hemangiosarcoma in 2014. More dogs die of this type of cancer than any other canine cancer. Most only survive a few months after diagnosis. Cali's cancer was discovered by her previous owner when she was pregnant. An ultrasound revealed shocking news. What should have been a litter of six puppies, was just one and a giant tumor. Cali went through surgery to remove the tumor, and her veterinarians only gave her six weeks to live. Once at KetoPet, Cali was placed on a ketogenic diet and PET scanned. Cali's scan showed that the cancer had already metastasized throughout her body.



However, three years and many scans later Cali is now cancer free and continues to enjoy lots of love, exercise and delicious ketogenic food.

Watch Cali's story here:

[www.facebook.com/KetoPet/videos/778904398944645](https://www.facebook.com/KetoPet/videos/778904398944645)

### Blazer's Story



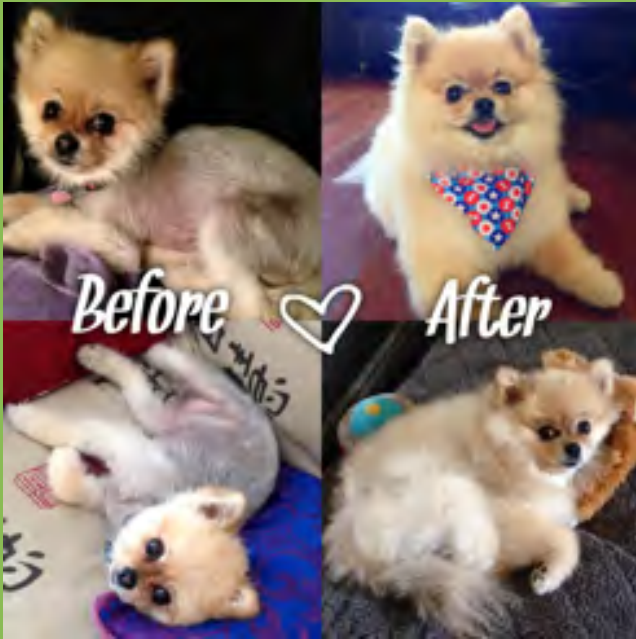
Blazer is a sweet and rambunctious Staffordshire mix at KetoPet. KetoPet rescued him after he was diagnosed with a Grade II Mast Cell Tumor. Blazer underwent PET/CT imaging, and started a ketogenic diet once he arrived at the sanctuary. After 60 days on the diet, Blazer's second PET/CT scan showed no evidence of disease. Blazer remains in good health and can now get back to his love of playing with giant rubber toys for hours.

Watch Blazer's story here:

[www.facebook.com/KetoPet/videos/810612439089044](https://www.facebook.com/KetoPet/videos/810612439089044)

## Success Stories

### Sasha's Story



"Sasha started having grand mal seizures about a year after she suffered a brain injury at six months old from a dog bite. Her seizures soon increased to multiple times per week, and the vet told us that she had to go on a heavy dose of anti-seizure meds to control them. Sasha's seizures started to slow down on the meds, but not without some serious consequences. She started losing all of her hair, her skin turned black, and she just wasn't the same Sasha we knew and loved.

Thanks to the founders of KetoPet, we learned about the ketogenic diet and how it might help her condition. Since starting keto in October of 2014, we've been able to completely stop her medication, her skin is back to its perfectly-pink color, her hair grew back faster than a chia pet, and she's much more like herself again. She also went from having multiple break through seizures per week to one every six months, if at all. The benefits she's experienced from the ketogenic diet have been life changing for her and so inspiring for us to watch!"

– Victoria & Josh Field

### Hannah's Story



"In February of 2017, my dog Hannah, who is 10-13 years old, was diagnosed with a mast cell tumor. The next month in March, she was placed on the KetoPet diet consisting of raw hamburger meat & vegetables. Over the last 5 1/2 months, Hannah is still active, alert, and looking better than she ever has. Her coat is clean and shiny and she's enjoying life as well as she ever has. So far, there's been no repeat occurrence of the tumor and Hannah is vibrant and happy as ever."

- Dan Corbett

### Sahara's Story



"My name is Laura Zundel, and this is my beautiful Golden Retriever, Sahara. She was diagnosed with visceral hemangiosarcoma cancer on June 12, 2017. Her spleen and part of her liver were removed. I was desperate to help her and came across a video from Keto Pet Sanctuary. I contacted them and started Sahara on a

ketogenic diet. The doctors told me best case scenario she would live three months. She has had two ultrasounds since diagnosis and both have been clear showing no new growth. I am a firm believer that diet and the right attitude can make a change! I am so grateful for their research and help "

– Laura Zundel



# Frequently Asked Questions

## Feeding a Raw Food Diet

### Why does KetoPet suggest feeding raw food?

KetoPet dogs are fed a raw ketogenic diet as it's very similar to an ancestral diet and closely replicates how a canine might eat in the wild. It does not include rendered or high heat processed fats or proteins. Cooking dog food can significantly impact the quality and integrity of ingredients. In fact, high heat can damage fats through the heating process, and may increase the chance of your dog developing pancreatitis ([see our Blog](#)).

## The Ketogenic Diet & Disease

### How long should my dog stay on a ketogenic diet?

For most of canine history, dogs were naturally in a state of ketosis much or most their lives. The introduction of digestible carbohydrates to a dog's diet is a relatively new phenomenon. In our opinion, all dogs should be eating this way for their entire life. We do have anecdotal data of cancer returning in dogs who were taken off of their ketogenic meal plan. In cases only where cancer was no longer evident through scans, we would increase protein in a dog's diet (if they were on an Option 2 plan) once they had completed our 120-day program.

### The difference between ketosis and ketoacidosis

Ketosis achieved through nutrition should not be confused with the term ketoacidosis. When a person's (or dog's) primary fuel source is carbohydrates, blood glucose levels are typically moderate, and ketones are non-existent. Ketoacidosis, on the other hand, is only seen in patients with diabetes mellitus and is considered an emergency event where ketones are extremely high (usually 20-25 mM) in the presence of extremely high blood glucose. In comparison, nutritional ketosis is where ketones are moderately high (0.2-8 mM) and are in the presence of moderately low glucose (<75 mg/dL). Below you'll find an example that describes the difference between these two metabolic states.

Ketosis: 0.5 mM Ketones, 75 mg/dL Glucose

Ketoacidosis: 20.0 mM Ketones, 220mg/dL Glucose

### Can my dog eat this diet while on chemo or radiation?

Yes, they can. As a matter of fact, a ketogenic diet can improve the outcome of these treatments as well as mitigate the harsh side effects often associated with standard of care therapies. Please see our [Scientific Articles](#) section to read journals associated with these findings.

### Does the amount of food I feed my dog change if we decide to put him through chemo?

No, as long as your dog is doing well with the current amount of food on his or her plan, we wouldn't suggest changing it just because they are starting treatment. The diet has actually been shown to improve the efficacy of treatment involving chemotherapy and radiation.

### My dog has seizures. Will they benefit from a ketogenic diet?

Yes, we have been able to reduce (and in some cases completely stop) seizure medication in some of the epileptic dogs we've worked with by using a ketogenic diet. We often suggest starting a dog with seizures (and on medication) at a lower ratio and working up while watching seizure activity closely. Due to the fact that the diet may initially cause initial water loss, this can create an electrolyte imbalance, and in some cases, trigger more seizures before you experience control. To avoid triggering seizures, we suggest making sure that you start a mineral supplement prior to starting the diet (for grocery store plans only). Please also lightly salt your dog's food (as long as it doesn't interfere with medication), and begin the diet with an Option 1 Plan.

### Will a ketogenic diet help a dog with diabetes? What if my dog is on insulin?

Yes. If you follow the diet properly and stop feeding your dog food that's high in carbohydrates, you will be able to lower, and in most cases, stabilize your dog's blood glucose numbers. Our dogs at KetoPet typically have blood glucose levels in the mid 50s to low 60s. It is important to note, however, that you will need to work very closely with your veterinarian if your dog is insulin-dependent. Due to the drop-in blood glucose and insulin, your vet may need to reassess the dosage given to your dog.



# Frequently Asked Questions

## **Will a ketogenic diet help a dog with arthritis or joint issues?**

Yes. A diet full of high-glycemic carbohydrates can cause a lot of inflammation in the body, especially in the joints of older dogs. Eliminating these carbs and increasing the consumption of quality fats will often eliminate a lot of the inflammation and joint pain.

## **What if my dog suffers from Inflammatory Bowel Disease?**

Inflammatory Bowel Disease (IBS) results in inflammation of the intestines and can come along with chronic symptoms associated with the gastrointestinal tract. Considering the ketogenic diet offers many anti-inflammatory benefits because of its lowering blood glucose effects, your dog may experience relief after following the diet for an extended period of time. Keep in mind, you will want to ensure that you transition a dog with gastrointestinal issues very slowly (Option 1 plan) to ensure that the process goes smoothly, without further aggravating symptoms.

## **My dog has skin allergies. Will the ketogenic diet help?**

As mentioned above, a diet high in carbohydrates can wreak havoc on the immune system and spark inflammation in the body. Itchy skin, paw biting, and redness is often related to inflammation and the food you feed your dog. In working with pet parents around the world, we've seen many dogs not only improve their disease state, but their skin problems clear up too.

## **Types of Food on a Ketogenic Diet**

### **What does 80/20, 97/3, 93/7 mean on a meat nutrition label?**

The term 80/20 (or 93/7 etc.) refers to the percentage of lean meat and fat by weight, but that does not tell you the percentage of calories from fat in the meat. To make the process of building a recipe with different meat sources easy, we offer a few different options of protein in our [KetoPet Calculator](#). All three options of meat can be found at your local grocery store.

### **Does the meat I use have to be grass-fed?**

It all comes down to what you can afford. If you can afford grass-fed beef, then by all means, buy it. Inducing ketosis in your dog is far more important than finding grass-fed beef. If you do not have access to grass-fed, use the highest quality beef you can find.

### **Can I use a blend of bone, organ meat etc.?**

As long as you can calculate the grams of protein and fat in the blend of meat you have, you can factor it into any ketogenic diet. Keep in mind, the leaner the meat the more fat you'll need to add in. Bone/organ meat can be challenging to add into the diet as it's higher in protein. To keep the recipe simple and help you induce ketosis in your dog, our [KetoPet Calculator](#) does not include organ meat or bone options.

### **Can I use commercial dog food in building a ketogenic meal plan for my dog?**

Many "raw" dog food products are higher in carbohydrates, and they are not required to list them on the label. It would be very difficult to calculate a meal plan using a food source that doesn't list calories or a full list of macronutrients. Even though your dog's food might be grain free and raw, many products contain sweet potatoes, fruit, carrots and other ingredients that will make it very challenging for your dog to enter into ketosis. In comparison, and as previously mentioned, Valiant Pet Nutrition's recipe includes less than 2% net carbs in the form of broccoli and green beans. As a result, Valiant is setting a new standard in the pet food world, and it's the reason why we only feed Valiant to our dogs with cancer.

## **KetoPet Calculator**

### **I used the KetoPet Calculator to create my dog's diet. Why are the measurements you gave me in grams?**

If your dog suffers from cancer, it's very important to finely tune his or her caloric intake. If you don't own a food scale, we suggest purchasing one as it will help ensure that you are delivering the exact amount of food suggested. Please weigh out the grams listed on your [KetoPet Calculator](#) recipe on a food scale. If that seems difficult, use Valiant Pet Nutrition's packaged ketogenic food.

### **Are your food measurements, correct? The meal plan doesn't seem like a lot of food.**

Yes, the measurements are correct. The standard kibble diet is very high in calories, and most of those calories come from carbohydrates/sugar. This is the #1 reason that approximately 25-30% of the general canine population is obese in North America. Keep in mind, that a diet higher in fat is also more calorically dense. While it may look like a smaller portion on the plate compared to a bulky carbohydrate diet, it's higher in calories as fat has 9 calories per gram compared to 4 in protein/carbs.

Please note that as your dog's weight fluctuates, you can always make caloric adjustments as needed.





# Frequently Asked Questions

## **Are the food measurements on the plan you sent me for one meal or for the entire day?**

The gram measurements produced by our KetoPet Calculator are for the entire day, but the recipe can be divided into multiple meals if you prefer feeding one, two, or three times per day.

## **How do I know if the meal plan is working?**

The ketogenic diet is the only diet that you can validate with a simple blood ketone test. We only suggest testing blood if your dog is on an Option 2 plan for disease management. If the blood ketone test shows 0.3mmol or higher and below 75 mg/dL or lower for blood glucose, that's a good indication that the diet is working.

## **Validating The Diet**

### **I recently discovered urine ketone strips, and they're cheaper than blood ketone strips. Can I use them?**

We do not recommend using ketone urine test strips. The urine strips will only work for the first few weeks of a ketogenic diet, if at all. In the early stages of a ketogenic diet your body will produce a small number of ketones, and they may not be detectable in your dog's urine. It takes time for your body to efficiently use those ketones for fuel, and as a result, they are passed and show up as trace amounts of ketones in your urine. Once keto-adapted (glucose is low and the body is efficiently burning fat for fuel), ketones will no longer be present in urine. We do not suggest using urine testing as a method to validate the diet with a dog.

### **My dog is having difficult entering into ketosis, what should I do?**

Keep in mind, we only suggest using blood testing for a dog that is using the diet for disease management and on an Option 2 plan. If your dog has difficulty entering into ketosis on an Option 2 plan, please thoroughly review what and how much you're feeding your dog, and remember to include treats and medications in your assessment. Overfeeding will make it difficult for your dog to enter into ketosis. Remember, protein, in addition to carbohydrates, can also impact a dog's ability to produce ketones. In some cases, canines may also require a reduction in the quantity of vegetables consumed in order to produce higher levels of ketones. If your dog is physically able, he or she may also need to increase exercise to encourage a shift in metabolism.

Please also understand that some medications, like prednisone, can spike blood glucose and make it challenging for your dog to enter into ketosis.

## **Troubleshooting The Diet**

### **What are some of the side effects of a ketogenic diet?**

When transitioning onto a ketogenic diet, the most common side effects are water and fat loss. Caloric intake should always be closely monitored and adjusted to meet the nutritional needs of your dog. Please use our KetoPet Calculator to make simple calorie adjustments to your plan. Loose stools and/or constipation can also be an initial side effect (issue discussed in further detail below).

### **My dog has very loose stools since starting the ketogenic diet. How can I fix this?**

When transitioning your dog from a kibble-based diet to a ketogenic diet, they may temporarily experience loose or irregular stools. This is due to a change in their diet, and it's the number one reason we recommend starting with an Option 1 Plan. GI distress will eventually subside as they adapt to consuming a higher amount of fat. If your dog is not eating Valiant Pet Nutrition (which already contains chia), you can add in a tablespoon of chia seeds (per 40lbs) split between their meals if they continue to have diarrhea. If your dog is constipated, he or she may not be getting enough electrolytes and/or water. Please make sure to very lightly salt your dog's food (if it's homemade), and ensure they are drinking enough water during the transition.

### **My dog is losing too much weight, what do I do?**

Patience is key when transitioning a dog onto any new diet. Keep in mind, when starting the ketogenic diet, water loss can occur as blood glucose/insulin levels drop. If weight loss happens in the first few days of placing your dog on the diet, don't be alarmed. Weight loss and/or fluctuation is to be expected during the transition. Some dogs will lose between 1-5 pounds when initially transitioning onto a ketogenic diet. Monitor your dog patiently, and if they continue to drop weight past the first week or two, you may need to re-adjust their meal plan and add in more calories using the KetoPet Calculator. However, if your dog needs to lose weight, monitor their weight loss until they've reached their ideal body condition score. At that point, you can increase their calories a little to prevent further weight loss.

# Frequently Asked Questions

## **Why is my dog's stomach upset?**

Your dog may experience nausea and/or vomiting during the transition onto a ketogenic diet. This can be fairly common when a dog's gut health is not in ideal condition. It is also likely due to the transition of acclimating to a higher fat/lower carb diet, and not a result of raw feeding. If your dog is currently experiencing this side effect we'd suggest lowering the percentage of calories from fat to slow down the transition.

## **My dog doesn't want to eat. What do I do?**

It is perfectly okay if your dog misses a meal or even a few meals. Please read our blog for more on the benefits of intermittent fasting. If your dog is not interested, place the meal in the fridge and try feeding them at a later time. Your dog will eventually eat when they are hungry. You can try to exercise your dog as activity typically increases appetite. However, if multiple days have passed and they still will not eat, please contact your veterinarian.

## **What about the risk of fatty liver disease associated with high fat consumption?**

Developing fatty liver disease from high fat consumption on the ketogenic diet is not likely. Fatty liver disease is often the result of abnormal bile flow in the liver and deficient hepatic function. Significant deterioration of hepatic function can affect the liver's capacity of detoxifying the bloodstream, and waste products can accumulate in the body causing further complications.

## **Metabolic Conditioning and Additional Supplements**

### **How often should I exercise my dog and what exercises do you recommend?**

Metabolic conditioning (metcon) was a very important part of our ketogenic diet protocol at KetoPet sanctuary. The goal was to give each dog daily exercise to increase their heart rate, burn calories, and stimulate their mitochondria. This also keeps insulin low, helping them battle cancer. Every dog that was physically able would participate in metcon that typically consisted of two 20 to 30 minute sessions per day. An intense game of fetch or a long jog is a perfect way to enjoy your best friend's company while getting in daily activity!

### **What treats can I give my dog?**

At KetoPet, we do not feed our dogs treats. All of the calories our dogs get are in the two meals we feed them. If you're using the diet for disease management, we'd suggest trying to avoid feeding treats as they can easily add a lot of extra calories (often in the form of protein and carbs) to their diet. Some treats are also full of protein and hidden carbohydrates which may prevent your dog from getting into ketosis. However, it is okay to give your dog a bully stick once a week to help keep his or her teeth clean. If you must give them a treat, try freezing a tablespoon of coconut oil or salted butter in a hollow bone or Kong. Just make sure you give this to your dog outside or on a hard surface. You can also break up a freeze-dried Valiant Pet Nutrition medallion, and give it as a treat.

### **Are there any supplements I should give to my dog?**

At KetoPet, we used our own mineral mix that is not commercially available. When transitioning onto the ketogenic diet, we suggest adding in a mineral supplement that includes potassium and magnesium. We also suggest purchasing chia seeds that you can use if your dog experiences loose stool. We typically give our dogs 1tbsp per day for every 40 lbs. Please also very lightly salt your dog's meals. Sodium and mineral requirements increase on a ketogenic diet because as glucose/insulin drops the kidneys excrete excess water. Water loss can result in an electrolyte imbalance if minerals and salt are not used.

### **Are there any other supplements that are safe for my dog on a ketogenic diet?**

You may choose to add in additional supplements to your dog's diet to ensure your best friend is getting all of the nutrients they need. Please speak with your vet about what they recommend as every dog's situation is different. However, be careful when selecting additional supplements to give your dog while they are on a ketogenic diet. Some supplements may prevent them from getting into ketosis as they can cause a spike in blood glucose (due to hidden carbohydrates). Before purchasing additional supplements, do your research and/or ask your vet for advice. We'd also suggest using blood testing to gauge whether or not your dog's supplements are appropriate for the ketogenic diet.



## Conclusion

A better understanding of the intersection of nutrition, metabolism, and disease is key in helping our best friends live longer, stronger, and more vibrant lives. Encouragingly, people around the world are taking a more active role in improving the health of their canine companions, and although a ketogenic diet in veterinary oncology has not yet gained widespread adoption, it is starting to receive more and more attention.

We hope this eBook helps you understand the fundamentals of a well-formulated ketogenic diet for your dog. Whether your best friend has cancer or you simply want to improve their health, we know this nutritional approach will benefit your dog in many ways. Changing your dog's diet takes patience and persistence, and we applaud you for being such a great pet parent! We strongly encourage you to join our [private Facebook group](#) for continued educational content and support, and use our [KetoPet Calculator](#) as often as you need it. We are here to help you along the way!

Please also visit [ketopetsanctuary.com](http://ketopetsanctuary.com) to find medical journal articles, frequently asked questions, and tips about the ketogenic diet.

Thank you for taking the time to read our eBook!

***The KetoPet Team***

