

# Georgia Veterinary Specialists

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**DATE:** April 29, 2013

**PATIENT NAME:** Isabella Rosenthal, a (1 yr & 3 mo, spayed German Shepherd)

**CURRENT WEIGHT:** 63.2 Lbs

**BCS (body condition score):** 5/9

(The body condition score is rated from 1 (starving) to 9 (excessively obese). On this scale, 5 is perfect. Animals with a BCS of 5 have a distinct waist from the top and the sides, and ribs that are easily felt through simply by brushing the fingers over the sides of the chest)

**MCS (muscle condition score):** unknown

(The muscle condition score expresses whether and to what degree muscle wasting is present)

## **ASSESSMENT OF CURRENT DIET:**

Isabella is currently consuming about 2300 + kcal daily from food and treats.

## **ABOUT THIS DIET:**

This diet is lower in fat than I/D, but is more calorie dense because the protein content is considerably higher.

**Please let me know if she gains weight - you will want to reduce the amount of food recommended below.**

The recipe is formulated using a combination of clinical experience and current clinical recommendations along with guidelines from the National Research Council, the American Association of Feed Control Officials (AAFCO), and the European Pet Food Industry (FEDIAF). It has not been tested in feeding trials, and Isabella should be monitored regularly to assess her progress and the adequacy of her diet.

## **INGREDIENTS:**

### **Choose a protein:**

Chicken or Turkey breast, no skin, roasted                      12 oz

### **Choose a starch:**

Green peas, blanched    2.25 cups  
Quinoa, cooked    1.25 cups  
Sweet potato, cooked and mashed                                      1.25 cups

### **Choose veggies:**

3/4 cup (shredded)

Select from 2 or more, in variety -  
spinach, green beans, summer squash,  
carrots, bell peppers, mushrooms

**Assemble the following:**

Canola oil, organic only	2 tsp
Fish oil, regular strength	3 capsules
Balance It canine-K	4.5 blue scoops (if added to entire batch - see note below)
Salt substitute	1/8 tsp

Batch weight: 771 - 950 gm (median 900 gm)

\*\* Balance IT canine-K can be purchased from the company online: [www.balanceit.com](http://www.balanceit.com). You will need the following number to order your supplement: b01-vx32f421640500

**INSTRUCTIONS:**

- Prepare your meat – cook by broiling, baking or pan frying. Drain any fat rendered during cooking.
- Prepare your starch - cook quinoa according to package directions - if your pet is picky, it helps to replace the water in the recipe with poultry, fish or beef broth. Ideally this should be homemade to avoid any exposure to onion that is a common ingredient in commercial broths.
  - Blanch green peas
  - Bake or microwave sweet potato, cool, then peel and mash.
- Vegetables should be either pureed raw, or shredded/very finely diced then steamed to improve the absorption of their nutrients.
- Mix together measured meat, starch and veggies. Sprinkle the canola and fish oils over the entire surface of the bowl of ingredients and combine thoroughly.
- Vitamins and minerals can be added to the entire batch if you do not plan on re-heating it. Sprinkle the Balance It powder over the entire surface of the bowl of ingredients, and combine very thoroughly. Cool as necessary.
- Unfortunately, vitamins are destroyed if heated or microwaved, so if you need to reheat portions, you will have to add the vitamins to the already heated food just before giving to your pet (minerals are fairly heat stable). **Isabella's daily dose of Balance It is 7 scoops, divided between meals.**

If Isabella's weight is normal at 65-68 lbs and she has normal activity levels, she should require only about 1400 - 1500 kcal daily. However, she is having trouble maintaining her weight on approximately 2300 kcal/day at this time. We will start her out at about 2200 - 2300 kcal daily, but hopefully will be able to reduce it if she absorbs nutrients from this diet better.

The INITIAL amount that she should eat approximately 1800 grams\*\*\* of this food, divided into however many meals you feed daily. If you multiple this recipe by 5, it will INITIALLY make about 2.5 days worth of food for her.

Please monitor the body weight carefully as this calculation is an estimate based on an "ideal" dog or cat, and individual metabolic rates vary widely. If Isabella gains or loses weight inappropriately, adjust the amount you are feeding accordingly.

\*\*\* We are often asked if we can simply recommend an amount in cups rather than in grams. While we understand this is a more convenient way to feed, we cannot do so. Our food nutrient information comes

from the United States Department of Agriculture, and their analyses sometimes do not include cups of food, especially for meat ingredients. Even if they did, our custom diet formulations will have differing amounts of meats, starches and fats (the foods that make up most of the weight), and different levels of "fluffiness". Unfortunately, the most accurate way to make sure your pet gets adequate nutrition is to weigh out the final recipe on a gram scale where indicated on the recipe.

## GENERAL INFORMATION ABOUT PREPARING AND FEEDING HOMEMADE DIETS

### First, a Note about Safety

If your pet refuses to eat the new diet, please contact your regular veterinarian. This can be due to palatability problems with the diet, and we can sometimes adjust the diet to improve flavors. However, we formulate diets for many animals with chronic illnesses, and it is important to remember that a lack of appetite is a common sign of illness. If your pet refuses more than a meal or two of the new food, please revert back to the old food until further instructions from your veterinarian can be obtained.

### What nutrients do the ingredients provide?

Ingredients:	Source of:
Meat/Vegetable Protein	Protein & Amino Acids
Grain/Pasta/Potatoes	Energy & Fiber
Vegetables and fruits minerals	Fiber, flavonoids, carotenoids, vitamins,
Vegetable/Plant Oil	Linoleic Acid
Fish Oil	Long-chain Omega-3 Fatty Acids
Balance IT	Vitamins and Minerals, amino acids
Morton Salt Substitute	Potassium & Chloride

### Food ingredients

Your recipe is formulated with specific types of meats and carbohydrate sources. If you use a different meat or starch, it can unbalance the recipe as the fat, protein, vitamin and mineral profiles are different. For instance, with beef alone, the fat content can vary from 5% to 30%. If you are supposed to feed beef with 10% fat and switch to one that is 30% fat, your pet may eat less, and may therefore get lower doses of vitamins and minerals, possibly creating a deficiency. If you compare 100 grams of wild salmon to 100 grams of tilapia, there is a difference of 56 calories and 32 mg of calcium. The differences are even greater when switching between meats of different species.

### Supplements, general

We formulate our balanced diets to include missing vitamins, minerals, fatty acids and amino acids. The oils (such as sunflower, safflower, canola, and flax seed oils) can usually be found in grocery or health food stores.

The vitamins and minerals, if recommended singly (such as a single copper or zinc supplement), can come from any brand or company that is convenient for you. *Multivitamin/mineral supplements are provided as specific brands because we must calculate the diet based on the exact levels contained for each nutrient within a brand, and each brand can vary greatly nutrient to nutrient.*

Vitamin and mineral supplements are available from grocery and drug stores, health food stores, or online from many websites, for example:

[www.gnc.com](http://www.gnc.com)

[www.iherb.com](http://www.iherb.com)

[www.vitaminshoppe.com](http://www.vitaminshoppe.com).

*The vitamins and minerals listed in the recipe are essential and cannot be dropped or substituted. Any other supplements, such as probiotics, fish oil, or nutraceutical doses of antioxidants such as vitamin C, are considered 'extra', on top of a balanced diet.*

### **Multivitamins**

To ensure that the recipe contains the proper amount of vitamins and minerals, a reliable multivitamin must be used. We will sometimes recommend human products, because pet multivitamin/minerals are generally much lower in dose, as they are formulated to be given to animals already eating vitamin and mineral supplemented, complete and balanced diets. The most common human multivitamin/mineral we use is Centrum. There are many different types of Centrum out there, but for your pet the original/plain formula is the one you want to use. Centrum can be found in most drugstores.

The other way that we may provide missing vitamins, minerals and amino acids is through a company called **Balance IT** ([www.balanceit.com](http://www.balanceit.com) or 1-888-346-6362). The Balance IT supplements are formulated specifically to be used for homemade diets for pets. Diets that contain Balance IT supplements are generally more simple to prepare as they take the place of multiple human supplements. If the recipe recommends Balance -It canine-K (as opposed to simply Balance It), we will give you a prescription code to use when placing your order through this company.

Many people prefer other vitamin/mineral supplements, either because they prefer whole-foods based formulas, or because they would rather use the same product they are taking themselves. Substitutes are acceptable *only* if the essential nutrient levels in the new supplement are matched to levels required for the diet. Otherwise, the recipe will have to be completely recalculated with the new supplement, which will result in additional costs. Some of our clients prefer multivitamins that are based on whole food extracts, natural chelates, etc. If this is the case, we can reformulate the diet (at a small charge with a different supplement provided we have the exact formula of the supplement. We don't always know if this supplement will work until we enter it into our database and begin working with it. Since we have to spend time entering and working with the software, the charge will apply even if we have to break the news that the supplement can't be used in a balanced diet.

### **Oils**

Balanced homemade recipes (like commercial diets) contain a source for the essential fatty acids –linoleic acid (an omega-6 fatty acid), alpha-linolenic acid (an omega-3 fatty acid), and in cats, arachidonic acid. Sources of linoleic acid in the diets include safflower oil, sunflower oil, corn oil, canola oil, or other vegetable oil. These may also contain alpha-linolenic acid to varying degrees, but we usually supply that in the form of flaxseed, hemp or walnut oil. Arachidonic acid is usually contained in sufficient quantity in the meats in a cat's diet.

Although it is popular to use fish or coconut oil, these cannot be used to satisfy the essential fatty acid requirements for linoleic acid. Please do not change the amounts of oils recommended in the recipe, but if you want to use fish oil (for instance), you can add it as an extra supplement at your veterinarian's direction.

I use canola oil frequently in my recipes because of its superior balance of omega-3 and omega-6 fatty acids. Unfortunately, there is a great deal of misinformation on the web about canola oil. If you've been reading those pages and would like to see a rebuttal, look at my blog posting here:

<http://vetnutrition.blogspot.com/2012/10/canola-oil-safety.html>

Just the same, I do recommend using only organic canola oil.

### **Salts**

There are different salts that may be used for your recipe - iodized salt, lite salt or salt substitute. Your recipe may even require both types. The difference between the salts is the minerals that created them. Iodized salt contains sodium (Na), chloride (Cl), and iodine (I). Salt substitute contains only potassium (K) and Cl. Lite salt will contain K, Na, Cl and may or may not contain I, all of which are essential nutrients. *Because of these differences, it is not possible to substitute one salt for the other.*

The most common brand for lite salt is Morton's. This can be found at any grocery store. Iodized salt may also be found at any grocery store. Sea salts (with better trace mineral content) can be used instead of the regular salt, but not as a substitute for the lite salt or salt substitute.

The dose in the recipe is precisely computer balanced for that recipe.

### **Cooking guidelines (general):**

- You can double or triple recipes to decrease the number of days you'll spend cooking. After the recipe is prepared, you can use quart or gallon size zip lock bags to freeze in batches that can be stored in the refrigerator for a few days.
- Unless we have specifically agreed on a raw diet, the protein sources (all meats, fish and eggs) should be cooked until done. You can sauté, broil, or bake the meats (or boil if it is a large, firm chunk of meat). Eggs can be scrambled, fried or boiled (note – if we recommended a fat restricted diet, please drain any fat as instructed in the recipe, and avoid frying or sauteeing as your preparation for protein).
- If you are using raw meats, observe all normal cautions by washing cutting boards, dishes and utensils in very hot soapy water, and avoiding cross contamination of other foods to be eaten raw.
- Unless your pet is on a fat-restricted diet, when preparing meats by broiling or pan-frying, reserve juices as these can be used to flavor more bland ingredients (the only exception is for low fat diets recommended for weight loss or for pancreatitis patients).
- Vegetables should be cleaned and rinsed then, pulped (finely ground in a food processor) or chopped and steamed to increase digestibility. Vegetables can be given fresh or frozen.
- Dr. Wynn believes in the sustainability of organic and locally grown meats and produce. In addition to reducing chemicals in the environment, food animals raised as free range or on pasture may actually contain better quality fat that helps reduce inflammation in the body. Similarly, wild-caught fish usually contains better fats than farm-raised fish. If you can afford to buy organic, locally-grown meats and vegetables from the local farmer's markets and pasture-raised meats or wild fish, we

applaud that. If you cannot, conventional grocery store ingredients are still fresher and more nutritious than those ingredients in most pet food.

- In general, meals or batches can be prepared by first mixing the food ingredients, then mixing the supplements together.
  1. Mix cooked meats, starches and veggies together thoroughly by using a food processor, blending or dicing very finely. This prevents picky pets from cherry-picking the meats and leaving the other ingredients behind.
  2. Mix together dry ingredients by crushing tablets (in a pill crusher or mortar and pestle) and combining with salts and other powders.
  3. Mix wet and dry ingredients together.
- Food should be served at room temperature or slightly warmer, but if you are using a microwave oven, be CERTAIN to mix the food with your hands before serving because microwaving can generate hotspots that can burn the mouth.
- These diets are complete and balanced to prevent nutritional deficiencies. ANY alterations to the recipe can result in a diet that leads to nutritional deficiencies. We use the USDA food nutrient database and formulate according to National Research Council and/or AAFCO standards for safety and prevention of nutrient deficiencies.
- Do not use grapes, raisins, onions, chocolate, or macadamia nuts as additions to the recipe, as they are toxic to pets. Some sources claim that avocados may also be toxic to dogs.
- This recipe is complete and balanced as are most commercial pet foods. It is fine to mix the recipe with commercial balanced diets in any proportion that is convenient. This is not true if the recipe is altered in any way.

### **Guidelines for converting pre-cooked weights to cooked weights**

Pay attention to whether recipe specifies raw or cooked meat. Meat will lose about 30% in water weight when cooked, so start with about 1/3 more than desired for final cooked weight.

For rice and other dried grains:

- 1 cup of dry pre-cooked rice weighs about 200 grams whereas 1 cup of cooked rice weighs about 190 grams because it is 'fluffier'.
- 100 grams of dry rice cooks out to be about 300 grams
- 1 cup of dry rice or tapioca cooks out to be about 4 cups
- 1 cup of dried pasta cooks out to about 2 cups of cooked pasta
- 1/4 cup of dried tapioca pearls cooks to about 1 1/2 cups of hydrated tapioca

Potatoes and other starchy vegetables have precooked weights about equal to final cooked weights.

Fibrous, high water vegetables (carrots, broccoli, green beans) have pre-cooked weights also about equal to the final cooked weights.

Weight of the edible portion of chicken eggs:

Jumbo = 64 grams

One large egg = 50 grams

One medium egg = 44 grams

One small egg = 37 grams

All of the rules that apply to your own food apply here - be sure to examine the food for spoilage if you are storing in the refrigerator for longer than 3 days. Keep the food tightly covered to prevent it from drying out.

### Feeding Guidelines

When you begin feeding your pet with the new homemade diet, the transition from the old diet to the new diet should be a slow one for most cats, and for any dog that has a 'sensitive stomach'. It should take between 7-10 days to make the full switch. Here is a suggested schedule:

	Old Food	New Food
Day 1	<b>75%</b>	<b>25%</b>
Day 2	75%	25%
Day 3	<b>50%</b>	<b>50%</b>
Day 4	50%	50%
Day 5	50%	50%
Day 6	<b>25%</b>	<b>75%</b>
Day 7	25%	75%
Day 8	25%	75%
Day 9	25%	75%
Day 10	<b>0%</b>	<b>100%</b>

If you are making the switch to a high protein diet, your pet may experience some diarrhea during the transition. This is due to bacterial changes the GI must make to accommodate the increased amount of protein. A probiotic will help your pet make the transition, reducing the chances of diarrhea. When using a probiotic for this purpose, start it a day or two before starting the dietary change. Your vet can recommend a brand.

If other GI upset does occur (vomiting, gas, decreased or no appetite, diarrhea), switch back to the old food and make the transition more slowly. **If these symptoms occur longer than 48 hours or become more severe, please contact your veterinarian.**

The recipe may be for several days worth of food for your pet or just one day and it should specify an amount to feed your pet. Please note the calculation, measured in grams, of how much your pet should get DAILY. This amount may be divided into as many meals you would like to give your pet throughout the day. The metabolic rate can vary widely dog to dog or cat to cat, so your pet may require more or less and you will need to experiment with the amount that maintains the present weight (or allows weight loss as directed by the nutrition service or your veterinarian). You can make multiples of this recipe so that you're not cooking every single day.

It is certainly convenient and sometimes necessary to make multiples of the recipe, and to store extra in the refrigerator or freezer. We encourage you to do this if daily cooking is inconvenient!

### **Weights and measures**

Converting grams to teaspoons and cups isn't always possible when trying to convert a weight such as grams or ounces (which is how the foods are most accurately measured) to volumes such as cups or teaspoons, which is easier to cook with. We recommend you purchase a food scale, which costs from \$40-70 and can be found in kitchen stores and Bed, Bath, and Beyond, or online:

<http://www.toplinedigitalscales.com/>

<http://www.bedbathandbeyond.com/>

*Conversions that would be inaccurate:*

Teaspoons, tablespoons to grams (and vice versa)

Ounces, pounds to grams (and vice versa)

Cups to grams (and vice versa)

*Standard conversions that are accurate*

Dash	1/8 teaspoon (tsp)
Pinch	1/16 tsp
Smidgeon	1/32 tsp
3 tsp	1 Tablespoon (TB)
4 TB	¼ Cup
5 1/3 TB	1/3 Cup
8 TB	½ Cup
10 2/3 TB	2/3 Cup
12 TB	¾ Cup
16 TB	1 Cup
1 TB	½ fluid ounce (oz)
1 Cup	8 fluid oz
2 Cup	1 pint
4 Cup	1 quart
4 quarts	1 gallon
1 tsp	5 milliliters (mL)
1 TB	15 mL
1 Cup	240 mL
1 quart	1 liter
1/8 tsp	½ mL
¼ tsp	1 ¼ mL

**Other questions about feeding:**

**How often can I rotate recipes? (for those who have ordered multiple recipes or recipes that provide a variety of ingredients in rotation).**

This may depend on your pet's condition. For those with food intolerances, we may recommend very specific intervals ranging from 10 days to 3 months. For well pets, you can change recipes with each batch or every few weeks as you prefer.

How can I learn more about the nutrient contents so that I can study possible substitutions and nutrient



toxicities for myself?

The USDA maintains a “food nutrient database” that is free and accessible at:  
<http://www.nal.usda.gov/fnic/foodcomp/search/>

**Do I mix the supplements into the whole recipe batch or in my pet’s bowl just before feeding?**

The vitamins and minerals (or combinations like Balance It) can be added to the whole recipe batch. While B vitamins are sensitive to re-heating, we have included them at high concentrations so this should not be an issue unless you are re-heating the entire batch of food multiple times (this should not be the case as you should be removing just the amount needed for each meal and reheating only that meal until it is body temperature and no higher). Some herbs are sensitive to cooking, and herbs should never be microwaved.

**Can I rotate between the recipe and commercial dry, canned or frozen pet food?**

Absolutely, unless your veterinarian recommends against that.

**Do I have to prepare the meat exactly as it is in the recipe? For instance, can I broil it instead of pan frying it?**

Your vet can ask the nutrition service – in some cases, changing the preparation technique changes the fat content and this may be a critical element for dogs on prescribed diets.

**Can I use other parts of meat (for instance, chicken thighs instead of breasts, or beef heart instead of meat)?**

Your vet can ask the nutrition service – in some cases, changing the part changes the fat content and this may be a critical element for dogs on prescribed diets.

**I already know my dog hates this vegetable. Can I use a different one?**

It depends on your dog’s medical condition – your vet can ask the nutrition service.

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Nutrition Services, Georgia Veterinary Specialists