



## SUMMARY

ROYAL CANIN Veterinary Diet™<sup>TM/MC</sup> canine CALORIE CONTROL CC™<sup>TM/MC</sup> IN GEL (canned) , and CALORIE CONTROL 25™<sup>TM/MC</sup> (dry) are highly palatable, complete diets formulated to promote weight loss in overweight or obese dogs. The diets should be used as part of a weight loss program in combination with behavioral management and, where appropriate, an exercise program.

## INDICATIONS

- For weight loss in overweight or obese adult dogs

## CONTRAINDICATIONS

- Growing puppies
- Pregnant or lactating bitches
- Dogs with high energy requirements (e.g., working dogs)

## NUTRITIONAL DIFFERENCES

(as compared to typical commercial pet foods)

- Reduced energy content
- Normal fiber content
- All essential nutrients are increased relative to energy to ensure nutrient requirements are met during weight loss
- Enriched with antioxidants
- High palatability and digestibility

## RATIONALE

Obesity is considered to be the most common form of malnutrition encountered in small animal practice. Obesity is the result of an energy intake in excess of requirements. The dietary management of obesity, therefore, involves restricting energy intake while still delivering all essential nutrients.



**CANINE**

## Nutrient Levels Increased Relative to Energy

There are two ways of restricting energy delivery to an overweight dog; by feeding less of the dog's regular diet or by feeding a specially designed weight loss diet. Maintenance diets are balanced for normal energy intake. When the intake of a maintenance diet is restricted, the intake of all essential nutrients is restricted. This approach can lead to deficiencies in protein, vitamins, minerals, and essential fatty acids. A properly designed weight loss diet, on the other hand, provides higher levels of all essential nutrients relative to energy. This ensures that when calories are restricted nutrient delivery is not. Canine CALORIE CONTROL CC<sup>TM/MC</sup> IN GEL (canned) and CALORIE CONTROL 25<sup>TM/MC</sup> (dry) have increased levels of protein, essential fatty acids, vitamins, and minerals relative to calories to avoid nutritional deficiencies during calorie restriction. When fed as directed, this diet ensures delivery of all essential nutrients.

## Normal Fiber Content

Many weight loss diets contain elevated levels of dietary fiber as a bulking agent to control hunger. Data from studies performed at the Waltham Centre for Pet Nutrition have demonstrated that the addition of either soluble or insoluble fiber, at moderate or high levels, has no effect on satiety or feeding behavior in dogs. Moreover, high levels of dietary fiber can be associated with several negative effects including greatly increased stool volume (which often leads to house soiling), reduced nutrient availability, poor palatability, and poor compliance. Canine CALORIE CONTROL CC<sup>TM/MC</sup> IN GEL (canned) and CALORIE CONTROL 25<sup>TM/MC</sup> (dry) have normal fiber levels to maintain high palatability and promote normal stool volume. The result is better compliance and a greater likelihood of successful weight loss.

## Steps for a Successful Weight Loss Program

- Use appropriate diagnostic screening to eliminate other possible causes of obesity (e.g., endocrine disorders).
- Counsel the owner on the need to reduce weight in order to promote health, longevity, and reduce the risk of secondary disorders which may be exacerbated by excessive weight (e.g., joint disease, diabetes mellitus, cardiac disease).
- Weigh the dog and set a target weight representing at least 85% of the initial body weight (i.e., 15% reduction in body weight). In general, the target weight should be no more than 15% of the dog's current weight. If necessary, repeat the weight loss program to achieve normal body weight for the dog's breed and size.
- Determine the energy required for weight loss by consulting the feeding guides or by using the equation: energy for weight loss kcal/day = 55 x [initial body weight (kg)<sup>0.75</sup>].
- Determine the amount to feed by consulting the feeding guides or by using the kcal requirements and kcal/cup or kcal/can values provided in this guide.
- Define a time frame for the weight loss to occur. Most dogs will achieve a 15% weight loss after 90 days on CALORIE CONTROL CC<sup>TM/MC</sup> IN GEL (canned) or CALORIE CONTROL 25<sup>TM/MC</sup> (dry).
- Set weekly appointments for the dog to come into the clinic for body weight determination so that progress can be tracked and positive results reinforced. Owners are more likely to be motivated to continue the program if the dog's weight is recorded after each weigh in. A simple graph of progress should be kept up to date.
- Synthesizing digestive enzymes requires energy. Metabolizing food can represent as much as 10% of a dog's daily energy requirements. Eating several small meals a day uses more energy than eating a single large meal and will help expend energy during weight loss.
- The calorie content of any treats or snacks should be taken into consideration when calculating the food requirements for the dog. Suggest replacing high calorie treats with lower calorie treats such as fruit, vegetables, rice, or even ice cubes. Treats should be limited to less than 10% of daily caloric intake.



# ROYAL CANIN Veterinary Diet™<sup>TM/MC</sup>

- In multi-pet households, the access to other pets' food should be restricted.
- Encourage the owner to exercise the dog. Swimming is a beneficial form of exercise for dogs with concurrent arthritic disease. Exercise increases energy expenditure and promotes the preservation of lean body mass during weight loss.
- For dogs that are particularly resistant to weight loss, feeding canned ROYAL CANIN Veterinary Diet™<sup>TM/MC</sup> canine CALORIE CONTROL CCT™<sup>TM/MC</sup> IN GEL (canned) may be beneficial. Canned diets, with their increased moisture content and lower caloric density, are often found to be satisfying for the dog.
- Ensure that no additional family members or neighbors are feeding the dog.

## GENERAL FEEDING RECOMMENDATIONS

- Daily feeding recommendations may be divided into two to four meals.
- Ensure fresh drinking water is available at all times
- Individual requirements may vary depending on breed, age, sex, environment, and activity level.

## FEEDING GUIDE

### FEEDING RECOMMENDATIONS FOR ADULT DOGS

Actual Body Weight		Target Body Weight		Suggested Caloric Intake kcal/day	Daily Feeding	
lb	kg	lb	kg		Canned Only cans/day	Dry Only (8-oz cups/day)
5.8	2.6	5	2.3	116	1/3	1/2
11.5	5.2	10	4.5	195	1	3/4
23.0	10.5	20	9.1	328	1 1/2	1 1/3
34.5	15.6	30	13.6	444	2	1 3/4
46.0	20.8	40	18.1	551	2 1/2	2 1/3
57.5	26.1	50	22.7	652	3	2 3/4
69.0	31.3	60	27.2	747	3 1/2	3 1/4
80.5	36.6	70	31.8	839	4	3 1/2
92.0	41.7	80	36.3	927	4 1/3	4
103.5	46.9	90	40.8	1013	4 3/4	4 1/4
115.0	52.2	100	45.4	1096	5	4 2/3
126.5	57.4	110	49.9	1177	5 1/2	5
138.0	62.6	120	54.4	1256	6	5 1/4
149.5	67.9	130	59	1334	6 1/4	5 2/3
161.0	73.0	140	63.5	1410	6 2/3	6
172.5	78.2	150	68	1485	7	6 1/4



## PRODUCT DESCRIPTION

ROYAL CANIN Veterinary Diet™<sup>TMM</sup> canine CALORIE CONTROL CCTM/MC IN GEL is a highly palatable, low energy density dog food which delivers balanced nutrition to adult dogs during weight loss. Essential nutrients are included at levels to meet the requirements of an overweight dog.

## NUTRITION STATEMENT

Canine CALORIE CONTROL CCTM/MC IN GEL is intended for intermittent or supplemental feeding as part of a veterinary-supervised weight reduction program.



- Low energy (< 900 kcal ME/kg) reduces caloric intake and promotes healthy weight loss.



- All essential nutrients are increased relative to energy to ensure nutrient requirements are met during weight loss.



- High protein content to ensure maintenance of lean body mass during weight loss.

## GUARANTEED ANALYSIS

Crude Protein, (min)	6.0%
Crude Fat, (min)	2.0%
Crude Fiber, (max)	1.0%
Moisture, (max)	87.5%

## METABOLIZABLE ENERGY

From Protein	40.0%
From Fat	53.7%
From Carbohydrate	6.3%

Approximately 212 kcal per 12.7-oz (360 g) can (59 kcal per 100 g).

## INGREDIENTS

WATER, MEAT BY-PRODUCTS, CHICKEN BY-PRODUCTS, TRACE MINERALS (CALCIUM CARBONATE, SODIUM TRIPOLYPHOSPHATE, POTASSIUM CHLORIDE, MAGNESIUM OXIDE, ZINC SULFATE, MANGANOUS SULFATE, COPPER SULFATE, CALCIUM IODATE), CARRAGEENAN, CAROB GUM, GUAR GUM, VITAMINS (DL-ALPHA TOCOPHEROL ACETATE [SOURCE OF VITAMIN E], THIAMINE MONONITRATE [VITAMIN B1], BIOTIN, SELENIUM, D-CALCIUM PANTOTHENATE, VITAMIN A ACETATE, RIBOFLAVIN [VITAMIN B2], PYRIDOXINE HYDROCHLORIDE [VITAMIN B6], VITAMIN D3 SUPPLEMENT, FOLIC ACID), NATURAL FLAVORS, VEGETABLE OIL, TAURINE\*.

\*Not recognized as an essential nutrient by the AAFCO Dog Food Nutrient Profiles.

# CALORIE CONTROL CC<sup>TM/MC</sup> IN GEL



**CANINE**

## TYPICAL ANALYSIS

Nutrient	Unit	Per 100 g as fed	Per 1000 kcal
Moisture	g	84.84	
Protein	g	7.8	132.2
Fat	g	4.32	73.22
Carbohydrate	g	1.23	20.85
Ash	g	1.81	30.68
Crude Fiber	g	0.46	7.8
<b>Minerals</b>			
Calcium	g	0.26	4.41
Phosphorus	g	0.24	4.07
Sodium	g	0.15	2.54
Chloride	g	0.30	5.08
Potassium	g	0.24	4.07
Magnesium	g	0.04	0.68
Copper	mg	0.75	12.64
Iron	mg	7.72	130.81
Zinc	mg	2.97	50.27
Manganese	mg	2.32	39.31
Iodine	mg	0.052	0.881
<b>Vitamins</b>			
Vitamin A	IU	1616	27390
Vitamin D3	IU	52.2	884.7
Vitamin E	mg	6.00	101.69
Thiamine (B1)	mg	0.30	5.10
Riboflavin (B2)	mg	0.60	10.17
Niacin	mg	2.75	46.61
Pyridoxine (B6)	mg	0.19	3.22
Pantothenic Acid	mg	0.14	2.39
Folic Acid	mg	0.006	0.102
Cobalamin (B12)	mg	0.0071	0.1203
Biotin	mg	0.04	0.68
Choline	mg	105	1780
<b>Fatty Acids</b>			
Linoleic acid	g	0.39	6.61
<b>Amino Acids</b>			
Arginine	g	0.44	7.46
Lysine	g	0.47	7.97
Methionine	g	0.15	2.54
Methionine + Cystine	g	0.22	3.73
Taurine	g	0.075	1.271



## ORDERING INFORMATION

Can	Weight		Item Code
	oz	g	
24 per case	12.7	360	K60412

## PRODUCT DESCRIPTION

ROYAL CANIN Veterinary Diet™/MC canine CALORIE CONTROL CC 25™/MC is a complete, highly palatable food for adult dogs during weight loss. Levels of essential nutrients meet the requirements of a dieting dog.

## NUTRITION STATEMENT

Canine CALORIE CONTROL CC 25™/MC is intended for intermittent or supplemental feeding as part of a veterinary-supervised weight reduction program.



- Calories are controlled to restrict energy intake and promote healthy weight loss.



- All essential nutrients are increased relative to energy to ensure nutrient requirements are met during weight loss.



- High protein content to ensure maintenance of lean body mass during weight loss.



- Naturally preserved with mixed tocopherols, rosemary extract, and citric acid.

## GUARANTEED ANALYSIS

Crude Protein, (min)	25.5%
Crude Fat, (min)	7.5%
Crude Fiber, (max)	5.7%
Moisture, (max)	10.5%

## METABOLIZABLE ENERGY

From Protein	30.6%
From Fat	23.8%
From Carbohydrate	45.6%

Approximately 238 kcal per 8-oz cup, 359 kcal per 100 g, 66 g per cup.

## INGREDIENTS

RICE, CHICKEN MEAL, GROUND CORN, CORN GLUTEN MEAL, GROUND WHEAT, NATURAL FLAVORS, CELLULOSE POWDER, CHICKEN FAT, DICALCIUM PHOSPHATE, POTASSIUM CHLORIDE, VEGETABLE OIL, CHOLINE CHLORIDE, SODIUM CHLORIDE, CALCIUM CARBONATE, TAURINE\*, VITAMINS [DL-ALPHA TOCOPHEROL ACETATE (SOURCE OF VITAMIN E), NIACIN, BIOTIN, RIBOFLAVIN (VITAMIN B2), D-CALCIUM PANTOTHENATE, PYRIDOXINE HYDROCHLORIDE (VITAMIN B6), THIAMINE MONONITRATE (VITAMIN B1), VITAMIN B12 SUPPLEMENT, VITAMIN A ACETATE, VITAMIN D3 SUPPLEMENT, FOLIC ACID], TRACE MINERALS [ZINC OXIDE, FERROUS SULFATE, COPPER SULFATE, MANGANOUS OXIDE, SODIUM SELENITE, CALCIUM IODATE], PRESERVED WITH NATURAL MIXED TOCOPHEROLS, ROSEMARY EXTRACT, AND CITRIC ACID.

\*Not recognized as an essential nutrient by the AAFCO Dog Food Nutrient Profiles.



## CANINE

### TYPICAL ANALYSIS

Nutrient	Unit	Per 100 g as fed	Per 1000 kcal
Moisture	g	9	
Protein	g	27.5	76.6
Fat	g	9.5	26.5
Carbohydrate	g	40.9	113.9
Ash	g	9.4	26.2
Crude Fiber	g	3.7	10.3
Total Dietary Fiber	g	6.7	18.7
<b>Minerals</b>			
Calcium	g	1.75	4.87
Phosphorus	g	1.25	3.48
Sodium	g	0.35	0.97
Chloride	g	1.20	3.34
Potassium	g	1.00	2.78
Magnesium	g	0.09	0.25
Copper	mg	3.3	9.2
Iron	mg	16.5	45.9
Zinc	mg	25.0	69.6
Manganese	mg	7.5	20.9
Iodine	mg	0.46	1.28
Selenium	mg	0.035	0.097
<b>Vitamins</b>			
Vitamin A	IU	2500	6962
Vitamin D3	IU	120	334
Vitamin E	mg	50	139
Thiamine (B1)	mg	1.7	4.7
Riboflavin (B2)	mg	6.0	16.7
Niacin	mg	19.4	54.0
Pyridoxine (B6)	mg	4.6	12.8
Pantothenic Acid	mg	5.7	15.9
Folic Acid	mg	1.2	3.3
Cobalamin (B12)	mg	0.017	0.047
Biotin	mg	0.35	0.97
Choline	mg	400	1114
<b>Fatty Acids</b>			
Linoleic acid	g	2.6	7.2
Arachidonic acid	g	0.02	0.06
<b>Amino Acids</b>			
Arginine	g	1.5	4.2
Lysine	g	1.1	3.1
Methionine	g	0.6	1.7
Methionine + Cystine	g	1.0	2.8
Taurine	g	0.2	0.6



### ORDERING INFORMATION

Bag Size	Weight		Item Code
	lb	kg	
Small	n/a	n/a	n/a
Medium	5	2.27	27205
Large	16	7.26	27216
Extra Large	33	14.98	27233

## REFERENCES

- Diez M, Nguyen P, Jeusette I, et al. Weight loss in obese dogs: evaluation of a high-protein, low carbohydrate diet. *J. Nutr* 2002, 1685s-1687s.
- Diez M, Nguyen P, Jeusette I, et al. Evaluation of a high protein, low carbohydrate diet in obese beagle dogs. Proceedings of the 11th ESCVIM Congress, Dublin Sept 5-8, 2001, p141.
- Diez M, Nguyen P, Blanckear C, et al. Management of weight loss in obese client-owned dogs - Proceedings of the Waltham International Symposium, Pet Nutrition Coming of age. Vancouver, Canada August 7-8, 2001, p46.
- Diez M, Nguyen P, Jeusette I, et al. Weight loss in obese experimental dogs – Evaluation of a high protein, low carbohydrate diet. Proceeding of the Waltham International Symposium, Pet Nutrition Coming of age. Vancouver, Canada August 7-8, 2001, p45.
- Butterwick RF, Hawthorne AJ. Advances in dietary management of obesity in dogs and cats. *J Nutr* 1998;128:2771S-2775S.
- Earle KE, Kienzle E, Opitz B, et al. Fiber affects digestibility of organic matter and energy in pet foods. *J Nutr* 1998;128:2798S-2800S.
- Hawthorne AJ, Butterwick RF. The satiating effect of a diet containing jojoba meal in dogs. *J Nutr* 1998;128:2669S-2670S.
- Butterwick RF, Markwell PJ. Effect of amount and type of dietary fiber on food intake in energy-restricted dogs. *Am J Vet Res* 1997;58:272-276t.
- Markwell PJ, Butterwick RF. Recent Research in the management of obesity in cats and dogs. *Waltham Focus* 1997;6(1)25-29.
- Markwell PJ, Butterwick RF, Wills JM, et al. Clinical studies in the management of obesity in dogs and cats. *Int J Obes Relat Metab Disord* 1994;18:539-543.
- Butterwick RF, Markwell PJ, Thorne CJ. Effect of level and source of dietary fiber on food intake in the dog. *J Nutr* 1994;124:2659S -2700S.
- Butterwick RF, Markwell PJ. Effect of level and source of dietary fibre on food intake in the dog. Proceedings of the BSAVA Congress: 1994; p157.
- Butterwick RF, Markwell PJ. Effect of level and type of dietary fiber on food intake in the dog. *J Vet Intern Med* 1994;8:153.
- Butterwick RF, Markwell PJ. Effect of level and source of dietary fibre on food intake in the dog. Proceedings of the Waltham Symposium on the Nutrition of Companion Animals: 1993; p81.
- Markwell PJ, van Erk W, Parkin GD, et al. Obesity in the Dog. *J Small Anim Pract* 1990;31:533-537.
- Holler K, Holler W, Steinger E. Untersuchungen über eine neue Reduktionsdiät beim Hund. *Wiener Tierärztlicher Monatschrift* 1989;76:259-262.

