

## A BIG PROBLEM FOR SMALL DOGS

Obesity is one of the most prevalent nutritional disorders in dogs. It is a complex multifactorial condition where excess body fat accumulation negatively affects a pet's health and reduces lifespan.<sup>1,2</sup>

## CONSEQUENCES ASSOCIATED WITH OBESITY<sup>1-3</sup>

- Upper respiratory tract problems
- Surgical risks
- Cardiopulmonary conditions (aggravation)
- Osteoarticular problems
- Metabolic disorders
- Decreased lifespan



Small and miniature dogs are just as prone to being overweight or obese as larger dogs






## A PROBLEM IN CLINICAL PRACTICE

It can be a challenge to examine obese dogs, and less information can be obtained from a physical examination, abdominal palpation, or heart and lung auscultation because of the presence of a great quantity of adipose tissue.

## FOR SMALL DOGS, A LITTLE CAN MEAN A LOT

For small dogs, the difference between an ideal weight and being overweight can be often minimal. Even a slight excess in food can lead to a significantly higher caloric intake proportionally to their size. Therefore, weight management in small dogs requires careful monitoring and precision.

Using Body Condition Score (BCS) to estimate overweight in small dogs<sup>4</sup>:

	5	6	7	8	9
Body Condition Score	 Ideal weight	 10% overweight	 20% overweight	 30% overweight	 40% overweight
kg	3	3.3	3.6	3.9	4.2
kg	4	4.4	4.8	5.2	5.6
kg	5	5.5	6	6.5	7
kg	6	6.6	7.2	7.8	8.4
kg	7	7.7	8.4	9.1	9.8
kg	8	8.8	9.6	10.4	11.2
kg	9	9.9	10.8	11.7	12.6
kg	10	11	12	13	14

For a 5 kg dog, an increase of only 2 kg means that they can have a BCS of 9!

<sup>1</sup> Laflamme D. Understanding and managing obesity in dogs and cats. *Vet Clin Small Anim.* 2006; **36**: 1283-95.

<sup>2</sup> Salt C, Morris PJ, Wilson D, Lund EM, German AJ. Association between life span and body condition in neutered client-owned dogs. *J Vet Intern Med.* 2019 Jan;**33**(1):89-99.

<sup>3</sup> Kil DY, Swanson KS. Endocrinology of obesity. *Vet Clin North Am Small Anim Pract.* 2010 Mar;**40**(2):205-19.

<sup>4</sup> Laflamme D. Development and validation of a body condition system for dogs. *Canine Practice.* 1997;**22**(4):10-15.

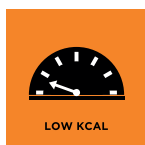
Complete dietetic dry pet food for adult small dogs (< 10kg) to support the reduction of excessive body weight and for the regulation of glucose supply (diabetes mellitus).

## KEY BENEFITS



### HIGH PROTEIN

High protein level to help promote loss of fat while maintaining muscle mass



### LOW CALORIE

Low calorie diet proven to promote effective and steady weight loss<sup>1</sup>



### REBOUND WEIGHT CONTROL

Helps reduce the risk of rebound weight gain



1.3 kg

St/Ox: formulated to help reduce mineral concentration in the urinary environment.

PURINA® PRO PLAN® VETERINARY DIETS **CANINE OM St/Ox Obesity Management™ Small & Mini** is formulated with an increased nutrient-to-calorie ratio, ensuring that the patient receives adequate nutrients even while caloric intake is reduced to support a healthy weight loss.

## ADDITIONAL BENEFITS

- **High nutrient: energy ratio** to compensate for the reduced calorie intake
- **Increased protein level** and a higher protein to calorie ratio, proven to preserve lean body mass during weight loss<sup>1,2</sup>
- **Increased fibre** to help contribute to satiety and reduce overall caloric intake<sup>6</sup>
- **Glucoregulation** through a combination of high levels of complex carbohydrates and mixed fibre sources, combined with low levels of simple sugars<sup>3,4,7</sup>
- **A low fat level**, which supports lipid metabolism in the case of hyperlipidemia<sup>5</sup>

### COMPOSITION

Corn\*, dried poultry protein, soya meal\*, wheat gluten, pea hulls\*, barley\*, cellulose, digest, glycerol, animal fats, minerals.  
\*Carbohydrate sources.

### KEY NUTRIENT VALUES\*

	DRY
Moisture	7.5%
Protein	31%
Fat	6.3%
- Linoleic Acid	1.5%
Carbohydrate	39.2%
- Starch	24.5%
- Total Sugars	2.1%
Crude fibre	10%
Vitamin E	260 IU/kg
Metabolisable energy (ME)**	2992 kcal/kg

\*Typical analysis in the final product as fed.  
\*\*Calculated following NRC 2006 equations.



[www.vetcentre.purina.co.uk](http://www.vetcentre.purina.co.uk)

<sup>1</sup>Clinical trial on 42 dogs, using a high protein formula, Nestlé PURINA, 1999.

<sup>2</sup>Hannah SS, Laflamme DP. Increased Dietary Protein Sparing Lean Body Mass during Weight Loss in Dogs. *J Vet Int Med.* 1998; 12: 224

<sup>3</sup>Atkinson FS et al. 2021. International tables of glycemic index and glycemic load values 2021: a systematic review. *Am J Clin Nutr.* 114:1625-32.

<sup>4</sup>Nelson, R. W., Duesberg, C. A., Ford, S. L., Feldman, E. C., Davenport, D. J., Kiernan, C., & Neal, L. (1998). Effect of dietary insoluble fiber on control of glycemia in dogs with naturally acquired diabetes mellitus. *J Am Vet Med Assoc.* 212(3), 380-386.

<sup>5</sup>Ford RB, Lodlow CL. Disorders of Lipid Metabolism. *Small Animal Clinical Nutrition*. Ed. by Michael S. Hand et al. 5th edition. Topeka, Kan: Mark Morris Institute, 2010.

<sup>6</sup>Jackson JR, Laflamme DP, Owens SF. Effects of dietary fiber content on satiety in dogs. *Vet Clin Nutr* 1997;4:130-134.

<sup>7</sup>Flickinger EA and Sunvold GD. 2005. Early nutritional management to reduce the risks of diabetes and obesity. Proceedings from a Symposium at the 30th World Congress of the World Small Animal Veterinary Association. Mexico City, Mexico.