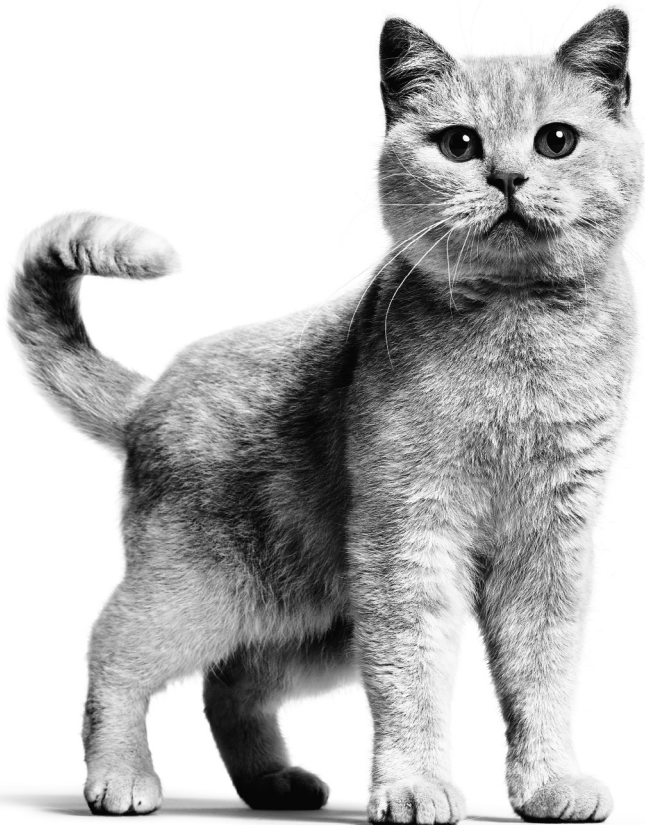




A HEALTHY WEIGHT STARTS WITH HEALTHY HABITS

Tailored nutritional solutions
to support healthy weight and
the management of cats and
dogs with diabetes mellitus

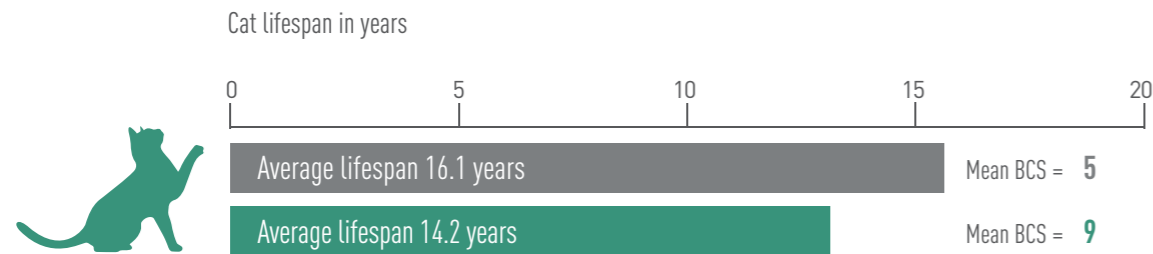


BEING OVERWEIGHT HAS HIDDEN COSTS THAT OWNERS MAY NOT BE AWARE OF

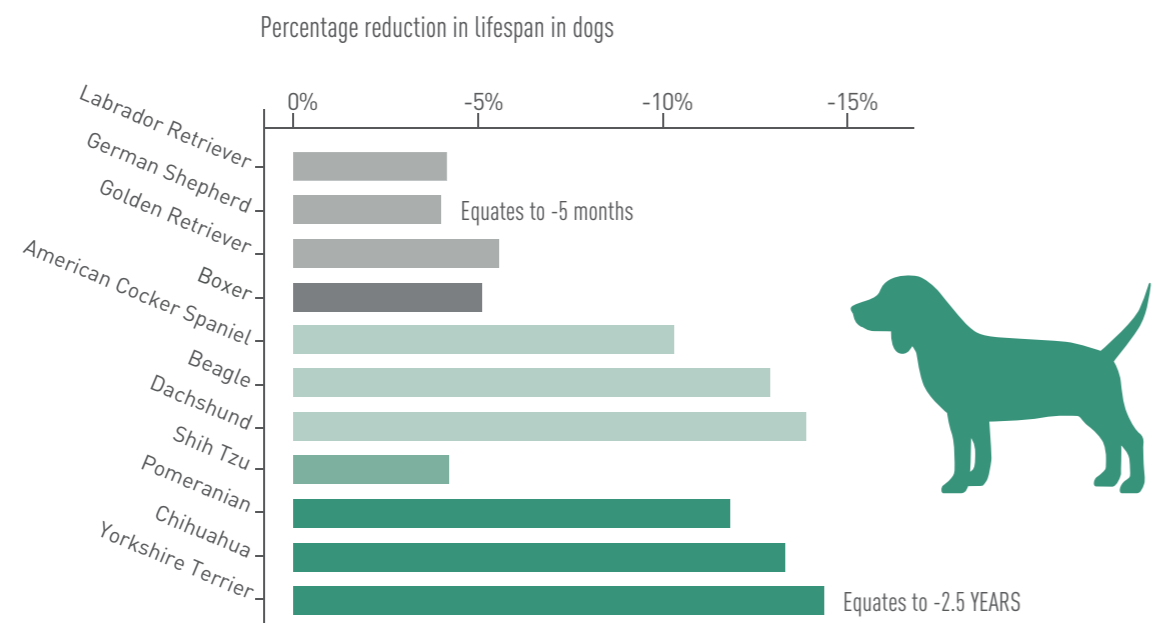
REDUCED LIFESPAN

STUDIES REVEAL THAT CATS AND DOGS WITH EXCESS WEIGHT MAY LIVE SHORTER LIVES^{1,2}

OBESSE CATS MAY HAVE THEIR LIFESPAN SHORTENED BY **1.9 YEARS** COMPARED TO CATS WITH AN IDEAL BODY CONDITION SCORE (BCS)⁷



OVERWEIGHT DOGS MAY LIVE UP TO **2.5 YEARS** LESS THAN THOSE AT AN IDEAL WEIGHT¹



Retrospective study of 57,787 neutered dogs, age 5.5 to 9.5 years.

REDUCED LONG-TERM HEALTH

OBESITY IS A GATEWAY TO ASSOCIATED DISEASES AND CONDITIONS SUCH AS:³⁻⁵

SKIN DISEASE

INFLAMMATORY DISEASE

CARDIO-RESPIRATORY DYSFUNCTION

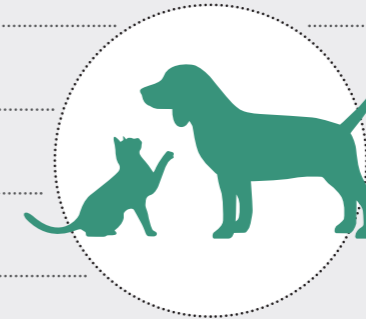
DIABETES MELLITUS

JOINT DISEASE

METABOLIC DISORDERS

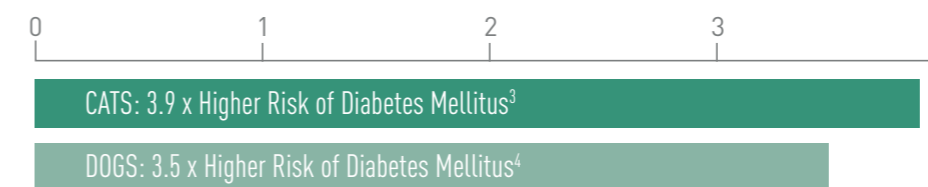
NEOPLASIA

URINARY DISEASE



INCREASED RISK OF DIABETES MELLITUS

STUDIES REVEAL THAT BEING OVERWEIGHT IS A MAJOR RISK FACTOR FOR DIABETES MELLITUS IN CATS AND DOGS^{3,4}



A LIFETIME OF EXTRA EXPENSE

OWNERS OF OBESE PETS SPEND MORE ON AVERAGE THAN OWNERS OF HEALTHY WEIGHT PETS⁶



Cat owners spent

- 36% more on diagnostic procedures
- 53% more on surgical services



Dog owners spent

- 17% more on healthcare costs
- 25% more on medications

Data from cats and dogs monitored over a 4 year period.



OBESITY AND DIABETES MELLITUS: MORE PREVALENT THAN YOU THINK

OBESITY

Obesity has now been classified as a **disease**, which is recognised as both chronic and incurable.⁷⁻¹⁰

The prevalence of overweight and obese cats and dogs in the UK is on the increase and it is recognised as the most common nutritional disease in dogs.¹¹⁻¹³

At least **65%** of all dogs are overweight or obese¹²



At least **39%** of all cats are overweight or obese¹¹



Around **1 in 290** dogs have diabetes

(Approx. 30,600 diabetic dogs in the UK)^{14,17}



Around **1 in 170** cats have diabetes

(Approx. 43,500 diabetic cats in the UK)^{17,18}

DIABETES MELLITUS

Diabetes mellitus is a disease that occurs either due to insufficient insulin production or the body's failure to respond to the insulin which is produced. Already a relatively common disease, the incidences of Diabetes in cats and dogs is on the increase.^{15,16}

Animals that are overweight are more predisposed to developing diabetes mellitus. Obesity can impact diabetic control by:

- **Decreasing insulin sensitivity.** Insulin sensitivity decreases by more than 50% in obese cats^{7,19,20}
- **Contributing to insulin resistance**^{7,19}

THE ROLE OF NUTRITION

Nutrition has a key role in achieving weight loss and the management of pets with Diabetes Mellitus. Feeding overweight pets less energy, not food, is what encourages weight loss whilst still meeting all the body's nutrient needs.

In the case of a diabetic pet, dietary management is of major importance along with appropriate medical care. A consistent dietary intake is key to achieving and maintaining glycaemic control.

START ADOPTING HEALTHY HABITS TODAY



Talk openly to your clients about the hidden costs of being overweight and associated diseases such as diabetes mellitus



Create healthy habits for both you and your clients to help pets live longer and healthier lives

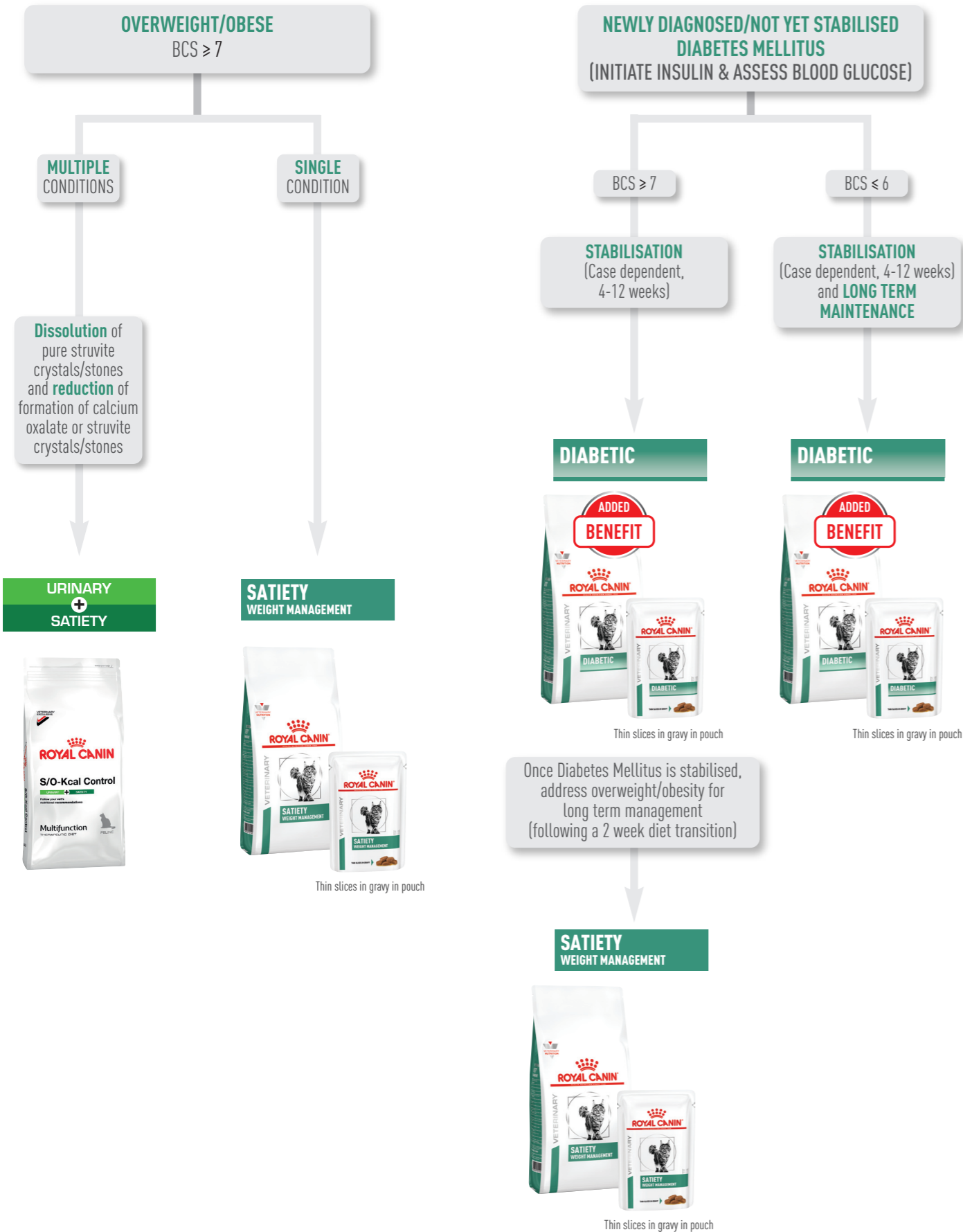


Understand your clients current habits by discussing feeding and treating behaviours

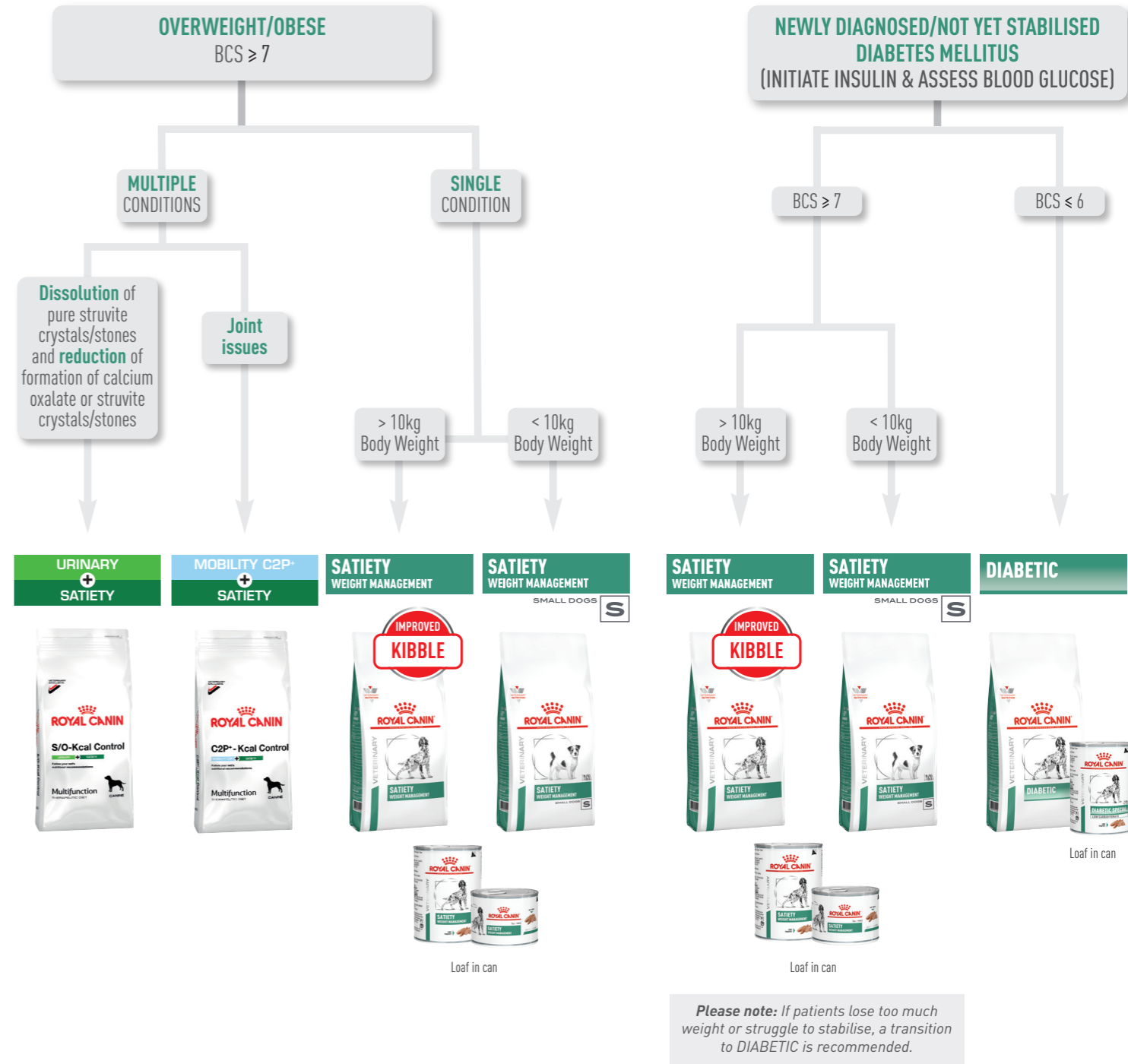


Support your clients in the process through tailored lifestyle and nutritional recommendations

FELINE NUTRITIONAL MANAGEMENT DECISION TREE



CANINE NUTRITIONAL MANAGEMENT DECISION TREE



INTRODUCING THE NEW ROYAL CANIN[®] SATIETY WEIGHT MANAGEMENT DOG X-KIBBLE



The new X-kibble provides a positive impact on eating behaviour. A study revealed that having a cross shaped kibble²¹:



SIGNIFICANTLY INCREASED MEAL DURATION BY **57%**



SIGNIFICANTLY DECREASED BEGGING BEHAVIOUR AFTER **ONLY 15 DAYS**



SLOWED DOWN EATING AND ENCOURAGED INCREASED CHEWING

Significant increase in meal duration with the new X-kibble shape

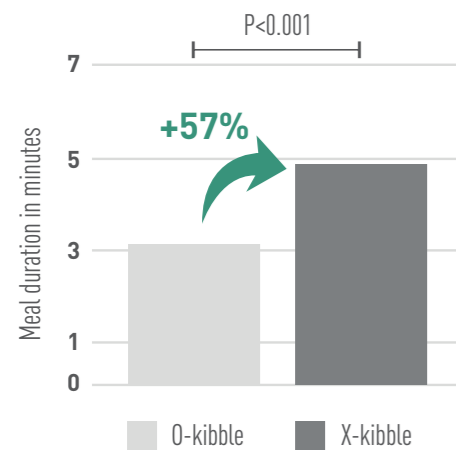


Fig. 1: Median meal duration was significantly longer for the X-kibble than for the O-kibble (n=24; X-kibble: 292 sec, 103 - 900 sec; O-kibble: 186 sec, 89-900 sec; p<0.001).

Significant decrease in begging behaviour

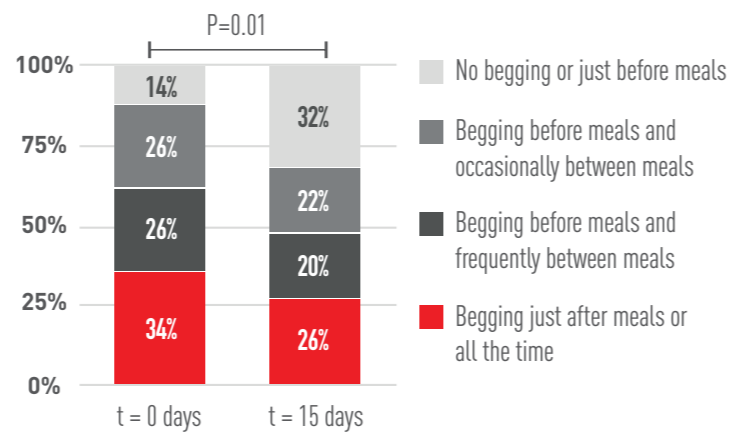


Fig. 2: Begging behaviour significantly improved for dogs in Europe (n=50; p=0.01) over the course of the study.

SATIETY WEIGHT MANAGEMENT: OUR BEST RECOMMENDATION FOR THE MANAGEMENT OF OVERWEIGHT PETS

CLINICALLY PROVEN

DIET FOR WEIGHT LOSS AND MAINTENANCE AFTER WEIGHT LOSS^{8,22,23}



97% of pets lost weight in 3 months^{22,23}



Helped control begging in **82%** of pets^{22,23}



The **NEW** SATIETY WEIGHT MANAGEMENT Dog X-kibble:

- Increases chewing and meal duration²¹
- Helps keep dogs satisfied between meals²¹

KEY BENEFITS



BEGGING CONTROL

High natural fibre level keeps cats and dogs satisfied between meals



EFFECTIVE WEIGHT MANAGEMENT

Adapted macronutrient profile provides safe weight loss and helps avoid weight regain

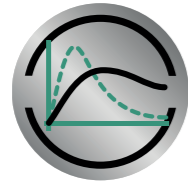


MUSCLE MASS MAINTENANCE

High protein content helps support healthy weight loss while maintaining muscle mass



UNCOVER THE CLINICAL BENEFITS OF ROYAL CANIN® DIABETIC DIET



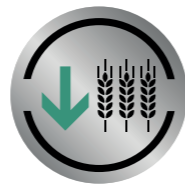
GLUCOMODULATION

SPECIFIC FORMULA TO HELP IN THE MANAGEMENT OF POST-PRANDIAL BLOOD GLUCOSE IN DIABETIC PETS



HIGH PROTEIN

HELPS REDUCE NET ENERGY SUPPLY AND SUPPORT MAINTENANCE OF MUSCLE MASS, ESSENTIAL IN DIABETIC PETS



LOW STARCH

FORMULA THAT CONTAINS A REDUCED LEVEL OF STARCH, <20% AS FED



ROYAL CANIN® DIABETIC

IS SPECIFICALLY FORMULATED TO HELP IN THE MANAGEMENT OF GLYCAEMIA

DIABETIC's macronutrient profile supports glucomodulation, maintenance of lean muscle mass and optimisation of ideal body composition.

Research has shown that low carbohydrate and high protein diets, in combination with insulin, help manage Diabetes Mellitus.^{24,31}

ROYAL CANIN® DIABETIC

HAS AN ADAPTED FIBRE BLEND

A specific blend of dietary fibre can improve glycemic control, possibly by slowing down gastric emptying, reducing the rate of starch degradation and help flattening the post-prandial glucose curve.^{28,32}

ROYAL CANIN® DIABETIC is highly palatable, which is important to help ensure consistent intake, especially during stabilisation of the diabetic patient. Due to its moderate levels of fat and energy content, it meets the needs of patients with various caloric requirements, up to a BCS of 6/9.



4 STEPS TO A SUCCESSFUL WEIGHT CONVERSATION WITH THE 30 MINUTE WEIGHT CONSULT

TOGETHER,

WE CAN RAISE AWARENESS ABOUT THE RISKS TO OVERWEIGHT PETS AND HELP YOU TO MANAGE THE WEIGHT AND HEALTH OF PETS FOR LIFE

1 LOOK. FEEL. WEIGH.

HELP OWNERS UNDERSTAND THEIR PET'S IDEAL SHAPE AND WEIGHT



- Encourage the owner to **look at and feel** their pet to monitor its body condition
- Weigh the pet and record the weight

2 MOTIVATE

EXPLAIN THE BENEFITS OF A HEALTHY WEIGHT



- Increased pet **lifespan**
- **Reduced risk** of associated diseases such as diabetes
- Improved **quality of life**

3 CONNECT

FIND COMMON GROUND AROUND BEGGING AND TREATING HABITS



- Is the owner **observing begging** behaviour?
- Acknowledge that begging is common and can be a **challenge** to manage
- Educate them on **begging behaviour** - pets may be asking for attention, play or exercise rather than food
- Encourage the owner to adopt a **new treat strategy**
- Replace food with other rewards to keep the bond, e.g. playing, attention, grooming, exercise

4 SUPPORT

RECOMMEND A HOLISTIC APPROACH TO HEALTHY LIFESTYLE AND FEEDING



- Offer an **individual nutritional recommendation** to effectively manage overweight pets using the Royal Canin Weight Management diets
- Reassure the pet owner by informing them about how much to feed, how much it will cost and the **importance of measuring** with digital scales
- Discuss a realistic activity plan which could involve **regular exercise** and **play activities**
- Stress the importance of attending **regular review appointments** to monitor their pet's progress

References: 1. Salt C et al. Association between life span and body condition in neutered client-owned dogs. *J Vet Intern Med* 2018;1-11. 2. Teng KT et al. Strong associations of 9-point body condition scoring with survival and life span in cats. *J Feline Med Surg* 2018;1-9. 3. Scarlett JM and Donoghue S. Obesity in cats: Prevalence and prognosis. *Vet Clin Nutr* 1996. 4. Poppl AG et al. Canine diabetes mellitus risk factors: A matched case-control study. *Res Vet Sci* 2017;114:469-473. 5. A.J. German et al. Obesity, its associated disorders and the role of inflammatory adipokines in companion animals. *The Veterinary Journal* 185 (2010) 4-9. 6. Bomberg E et al. The financial costs, behaviour and psychology of obesity: a one health analysis. *J Comp Path* 2017; 156:310-325. 7. German, A.J., M.Hervera, M. Hunter, L., Holden, S.L., Morris, P.J., Biourge, V., Trayhurn, P. (2009) 'Improvements in insulin resistance and reduction in plasma inflammatory adipokines after weight loss in obese dogs', *Domestic Animal Endocrinology*, 37, pp. 214-226. 8. German, A. J., Holden, S. L., Mather, N. J., Morris, P. J., Biourge, V. 2010. 'Low-maintenance energy requirements of obese dogs after weight loss', *British Journal of Nutrition*, 106 (1) pp. 93-99. 9. <https://www.bsava.com/Resources/Veterinary-resources/Position-statements/Obesity>. 10. Kopelman, P.G., (2000) Obesity as a medical problem. *Nature*, Vol404, pg. 635-643. 11. Courcier, E.A., O' Higgins, R., Mellor, D.J., Yam, P.S. (2010). 'Prevalence and risk factors for feline obesity in a first opinion practice in Glasgow, Scotland.' *Journal of Feline Medicine and Surgery*. 12. (10), pp. 746-753. 12. German, A.J., Woods, G.T., Holden, S.L., Brennan, L., Burke, C. (2018). Dangerous trends in pet obesity. *Veterinary Record*; 182 (1). 13. German, A.J., Holden, S.L., Bissot, T., Hackett, R.M., Biourge V. (2007) 'Dietary Energy Restriction and Successful Weight Loss in Obese Client-Owned Dogs'. *Journal of Veterinary Internal Medicine* 21; pp. 1174-1180. 14. Mattin M, O'Neill D, Church D, McGreevy PD, Thomson PC, Brodbelt D, An epidemiological study of diabetes mellitus in dogs attending first opinion practice in the UK. *Vet Rec* 2014 Apr 5;174(14):349. 15. Prael A1, Guptill L, Glickman NW, Tetrick M, Glickman LT, Time trends and risk factors for diabetes mellitus in cats presented to veterinary teaching hospitals. *J Feline Med Surg*. 2007 Oct;9(5):351-8. Epub 2007 Apr 20. 16. Guptill L Glickman L, Glickman N. Time trends and risk factors for diabetes mellitus in dogs: analysis of veterinary medical data base records (1970-1999). *Vet J*. 2003 May;165(3):240-7. 17. <https://www.pfma.org.uk/pet-population-2019>. 18. O'Neill et al. Epidemiology of Diabetes Mellitus among 193,435 Cats Attending Primary-Care Veterinary Practices in England. *J Vet Intern Med* 2016 Jul; 30(4): 964-72. 19. Appleton DJ, Rand JS and Sunvold GD, Insulin Sensitivity Decreases with Obesity, and Lean Cats with Low Insulin Sensitivity are at Greatest Risk of Glucose Intolerance with Weight Gain. *Journal Fel Med & Surgery* 2001 Vol 3.4 211-228. 20. Andre A et al, Recovery of insulin sensitivity and optimal body composition after rapid weight loss in obese dogs fed a high-protein medium-carbohydrate diet. *J Anim Physiol Anim Nutr* 2017 Jun; 101 Suppl 1:21-30. 21. Sagots, E., Hours, MA., Daniel, I., Feugier, A., German, A.J. (2019). Comparison of effects of different kibble shape on voluntary food intake and palatability of weight loss diets in pet dogs. *Research in Veterinary Science* 124: 375-382. 22. Flanagan J et al. Success of a weight loss plan for overweight dogs: the results of an international weight loss study. *PLoS One* 2017;12(9):e0184199. 23. Flanagan J et al. An international multi-centre cohort study of weight loss in overweight cats: Differences in outcome in different geographical locations. *PLoS One*. 2018 Jul 25;13(7):e0200414. 24. Frank et al. Use of a high protein diet in the management of feline diabetes mellitus. *Veterinary therapeutics* 2001, 2, 238-246.pdf. *Vet Ther*. 2001;2(3):238-246. 25. Marshall and Rand. Insulin glargine and a high protein - low carbohydrate diet are associated with high remission rates in newly diagnosed diabetic cats. *ACVIM*. 2004;52:401. 26. Bennett et al. Comparison of a low carbohydrate-low fiber diet and a moderate carbohydrate-high fiber diet in the management of feline diabetes mellitus. *J Feline Med Surg*. 2006;8:73-84. 27. Weaver et al. Use of glargine and lente insulins in cats with diabetes mellitus. *J Vet Intern Med*. 2006;234-238. 28. Graham et al. Canned high fiber diet and postprandial glycemia in dogs with naturally occurring diabetes mellitus. *J Nutr*. 1994;124:2712S-2715S. 29. Elliot KF et al. A diet lower in digestible carbohydrate results in lower postprandial glucose concentrations compared with a traditional canine diabetes diet and an adult maintenance diet in healthy dogs. *Res Res Vet Sci*. 2012 Aug;93(1):288-95. 30. Blanchard et al. Rapid weight loss with a high-protein.