



**A simple guide to
nutrition for dogs with
diabetes mellitus**





SPECIFIC™ IS COMMITTED TO A PHILOSOPHY THAT WE CALL THE CIRCLE OF GOOD

We believe it is our responsibility to support the environment that produces the extraordinary ingredients that create our nutritious and healthy foods

At SPECIFIC our goal is to provide high quality nutrition for cats and dogs - life stage diets, for healthy cats and dogs, designed to meet the specific needs of different ages, and special care diets designed to provide nutritional support for a wide range of veterinary conditions.

We are committed to delivering this quality nutrition in as sustainable way as possible.

- All of the fish in our dry diets now comes from sources accredited as sustainable
- Our fish are caught with the more sustainable midwater trawl and ring netting fishing systems
- The majority of our cartons are FSC certified and we have a project in place to move the remainder over soon
- 2,500 m² of solar panels on our European factory saves 25 tons of CO₂ per year
- Packaging changes made in 2018 and 2020 reduced plastic usage by 18 tons a year



WHAT IS DIABETES MELLITUS IN DOGS?

Insulin allows the body to use glucose (sugar) for energy. When blood glucose levels rise, then more insulin is released helping to maintain a steady level of blood glucose.

In most dogs with diabetes mellitus, the primary problem is insulin deficiency, meaning that their pancreas does not produce enough insulin. In some cases, the primary problem is interference with the action of insulin, leading to insulin resistance. Sometimes, both problems occur together.

The result is that the body can't properly use glucose for energy and is less able to control blood glucose levels.

WHAT CAUSES DIABETES MELLITUS?

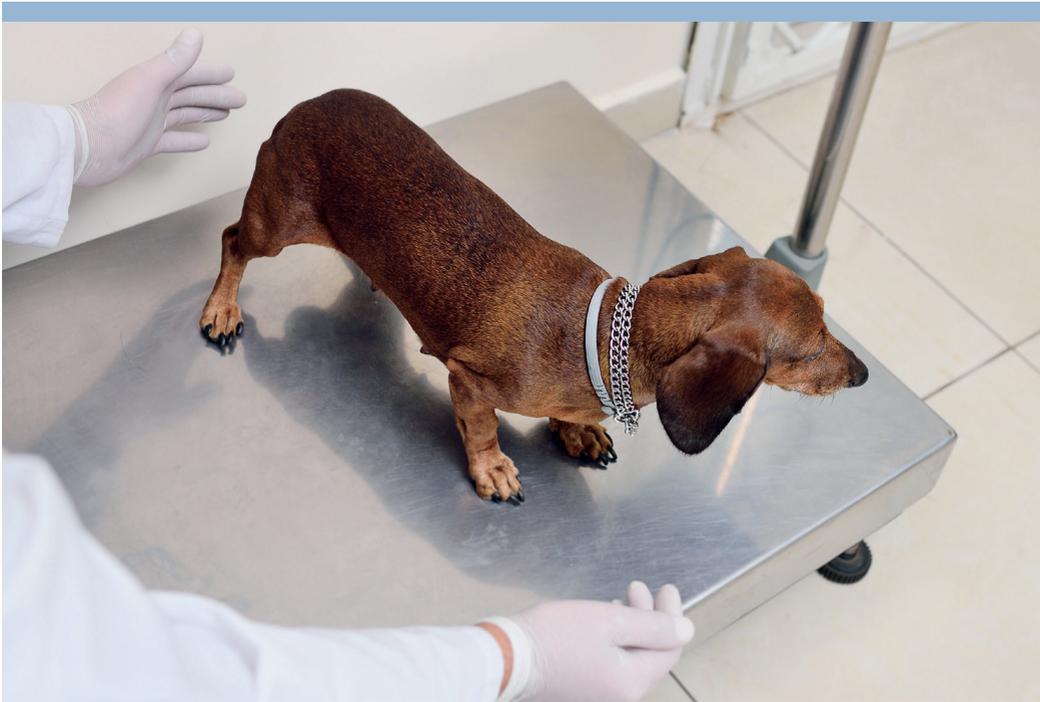
Diabetes (mellitus) typically occurs in dogs above 7 years of age. Whilst younger dogs can suffer from this condition these cases are rarer. It occurs with approximately equal frequency in males and females.

Certain breeds are at greater risk of developing the disease, such as Samoyeds and certain terrier breeds. In contrast, Boxers and German Shepherd Dogs are at low risk.

COMMON SIGNS OF DIABETES MELLITUS

The main signs of diabetes mellitus in dogs are:

- Increased urination - as the higher blood glucose levels increase urine production
- Increased thirst – to compensate for the water lost through increased urination
- There may be weight loss combined with an increased appetite as the body is less able to extract nutrients from food, however excess weight is also often associated with diabetes
- Some diabetic dogs are at risk of a complication called diabetic ketoacidosis (DKA). The main signs of this are lethargy, lack of appetite and vomiting.



HOW CAN DIET HELP WITH DIABETES MELLITUS?

Diet can support insulin treatment to:

- Achieve optimal blood glucose regulation
- Achieve ideal bodyweight
- Reduce the risk of potential complications such as pancreatitis

DIET AND THE REGULATION OF BLOOD GLUCOSE LEVELS

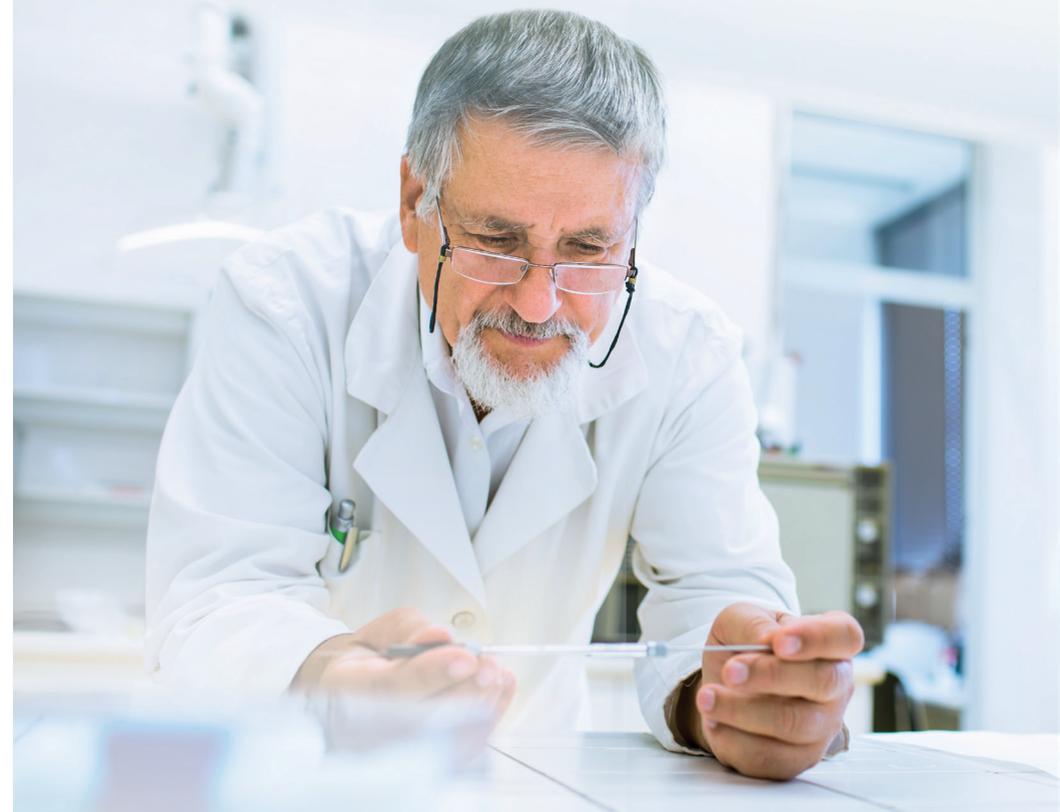
In diabetic patients, a shortage of insulin and reduced effectiveness of the insulin means the body is less able to control the blood glucose levels meaning you need to help achieve this control through careful diet.

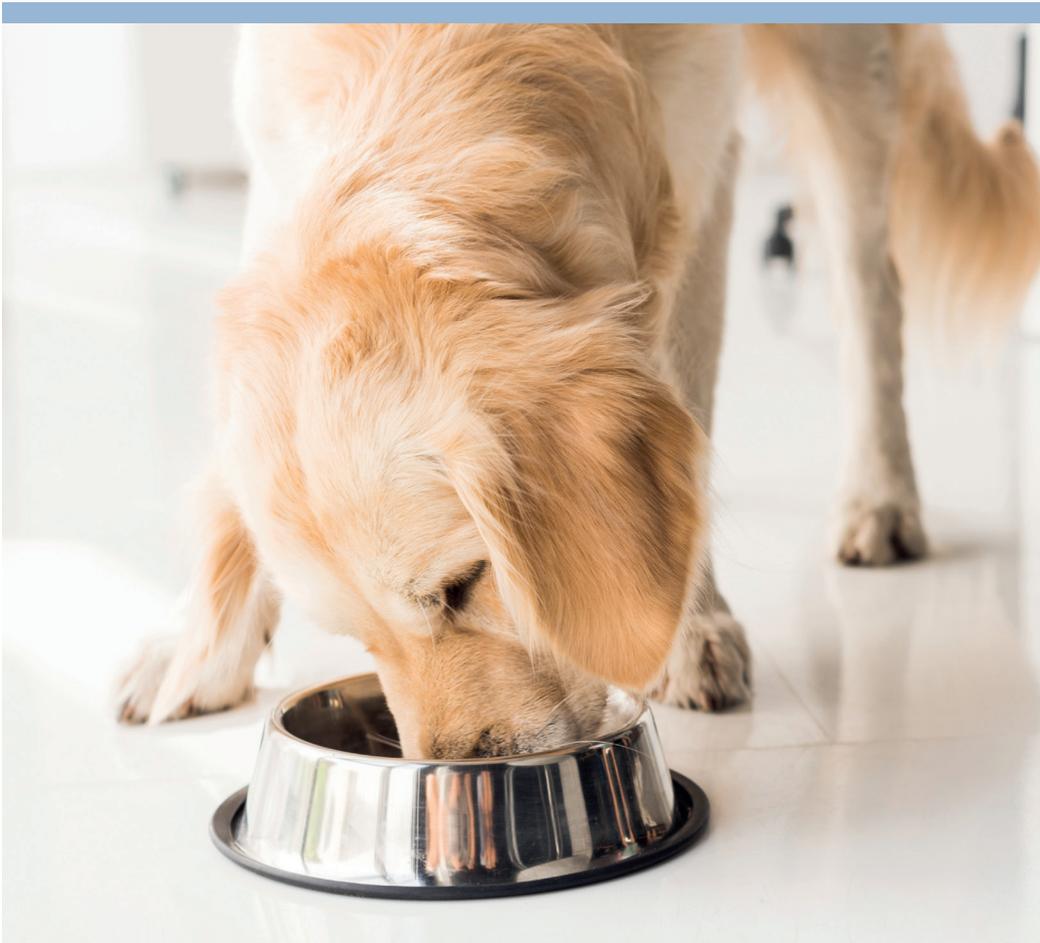
There are two key elements to this - carbohydrates and fibre.

Carbohydrates are rapidly turned into sugar so, for a diabetic, it is important to reduce the levels of carbohydrates and to eat the types of carbohydrate that are more slowly converted to sugar – those that have a lower glycaemic index.

Fibre also plays a role, by slowing down the speed of digestion of carbohydrates.

Beta-glucans and omega-3 – also help by improving the body's response to insulin – helping offset the insulin resistance.





DIET AND ROUTINE

To achieve best control of blood glucose, dogs should be fed the same type and amount of food every day. This also helps to keep their weight constant, which reduces the need for changes in insulin dosing.

Getting them on the right food from the start will help with initial stabilisation.

Keep meal times the same, as well as the timing of insulin injections, to help reduce fluctuations in blood glucose control.

It is important to keep daily exercise consistent. Walk your dog at the same time and for the same duration each day, to reduce changes to insulin requirement. Some owners take honey or glucose solution with them on walks in case of unexpected episodes of hypoglycaemia.

INSULIN

As well as dietary management, all diabetic dogs also require daily injections of insulin.



Your vet will take you through this and show you how to do it – but it's easier than most people think.

DIET AND SUPPORT IN CASE OF INFLAMMATION, OXIDATIVE STRESS AND ASSOCIATED CONDITIONS

Inflammation is a normal bodily function that helps fight off infection and repair injury. Diabetes causes increased inflammation and a reduced performance of the immune system resulting in a number of secondary problems, that include urinary tract infections.

Nutrients such as EPA and DHA omega-3 from fish can help by supporting the body's natural anti-inflammatory response, whilst nutrients such as zinc, selenium and vitamin A can support the immune system.

Oxidative stress: Free radicals are unstable components produced as natural by-products of processes, such as metabolism. Free radicals cause damage when they react with body cells. Anti-oxidants – molecules that neutralise free radicals - are the body's defence system. Oxidative stress occurs when there are more free radicals than there are anti-oxidants to deal with them – and there is evidence that this state of oxidative stress exists in diabetics – potentially giving rise to a number of complications. Foods rich in antioxidants can help neutralise free radicals.

Diet and pancreatitis: Pancreatitis is inflammation in the pancreas and there is a close relationship between diabetes and pancreatitis in dogs – although it isn't clear which is causing which. Foods with moderate fat levels can help manage the pancreatitis.



YOU CAN HELP YOUR VET

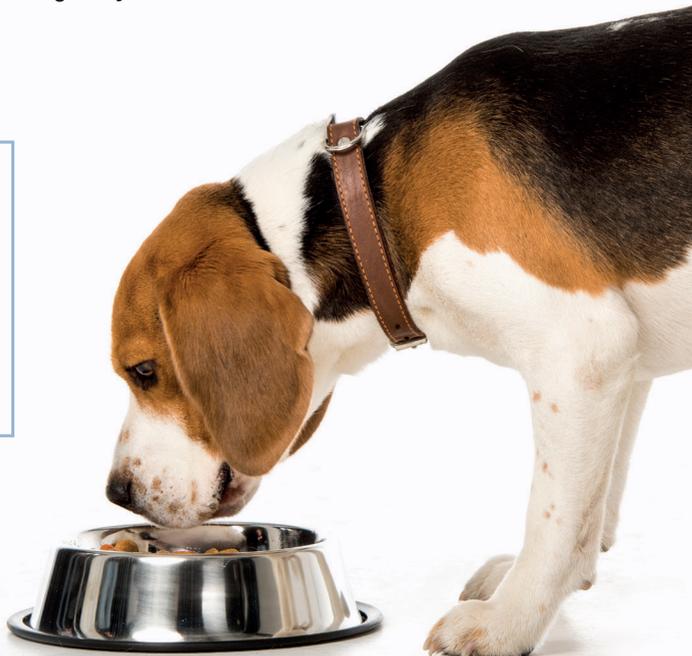
Once diabetes mellitus is diagnosed, you will work closely with your vet to manage this condition.

In the early stages you will need to make frequent visits to the vet, whilst they stabilise the situation. After that less frequent, but still regular, visits are needed to monitor the situation.

You can help your vet by having to hand clear and accurate information on a number of things. Try to keep a record of:

- The time of injections and the amount of insulin injected
- What is your dog's appetite like – ideally note the actual weight of food eaten
- Have there been incidents of vomiting or diarrhoea – note the actual dates and times when they occur
- Try to measure the amount of water your dog drinks – measure out the water when you fill the bowl then at the end of the day pour any left back into to a measuring jug and note the amount drunk
- Try to keep a weekly note of your dog's weight – if you struggle to do this at home try calling into your vets
- Watch and note any changes in their demeanour, are they more lethargic or more sleepy than usual; are they moving freely or is there some stiffness?

If you have noted these things then you will be able to give your vet vital information that can aid their assessment.



SPECIFIC DIABETIC DIET

Dry diet for dogs providing nutritional management of both diabetes mellitus and its associated complications - they contain

- Very low level of carbohydrates and carbohydrates from sources with a low glycaemic index, combined with increased fibre levels help control blood glucose levels
- High levels of omega-3 from fish and beta-glucans to support the body's natural anti-inflammatory process and improve insulin sensitivity
- Low fat level to support dogs with the associated condition of pancreatitis
- Fermentable fibre to support a healthy gut

CANINE DIABETES MELLITUS : OWNER MONITORING RECORD

					WEEK COMMENCING		
	Insulin Dose and time	Appetite Increased/ unchanged/ reduced	Water intake Increased/ unchanged/ reduced	Activity Level Increased/ normal/ reduced	Any behaviour changes?	Any urination changes?	Any other unusual signs?
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OVERALL THIS WEEK

Control of symptoms has been (1 = poor, 5 = excellent)

My experience of managing the condition has been (1 = negative, 5 = very positive)

OTHER COMMENTS

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**If you have any questions about the SPECIFIC diets, please talk
to your nutritional advisor or veterinary nurse or contact:**

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