## PPURINA Institute

Advancing Science for Pet Health

## НОТ TOPIC

## Sugar in pet foods

## In focus

The small amounts of sugar in pet foods have important functions, but pet owners often view sugar as an ingredient that only adds calories and causes obesity or diabetes.1.2

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## What is sugar?

From a chemistry standpoint, sugars are carbohydrates. "Simple sugars" refer to the monosaccharides (glucose, fructose and galactose), disaccharides (sucrose, lactose, maltose) and monosaccharide-derived products called "sugar alcohols" based on their chemical structure.

Sugars are also natural components of fruits and vegetables, such as apples or carrots, which may be used as ingredients in pet foods. ${ }^{3}$


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## Why is there sugar in my pet's food?

Sugars may help meet pets' energy requirements, which vary with age, weight, life stage and life style. Glucose, for example, is the primary source of energy for the body's cells, while lactose is critical for early development. ${ }^{1,2,4}$ While metabolic pathways may differ between pets and people, both dogs and cats are capable of metabolizing and utilizing the dietary sugar contained in pet foods. ${ }^{5-8,10}$ Small amounts of sugars can also improve the texture, appearance, flavor or shelf life of pet foods and treats. ${ }^{12,13}$

## How much sugar is in pet foods?

When found in pet foods, sugars comprise a very small percentage of the total metabolizable energy (ME) of the diet. The majority of carbohydrates in complete and balanced pet foods come from oligo- and polysaccharides, often considered "complex carbohydrates." ${ }^{2}$ One study compared the sugar levels and ME of 32 dog treats and found that the highest levels of glucose, fructose and sucrose - relative to the total ME - were $0.7 \%, 0.4 \%$, and $4.6 \%$, respectively. ${ }^{13}$

## Analysis of simple sugars in 32 dog treats Relative to the total ME



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## Won't sugar make my pet fat and cause diabetes?

Many people associate sugar in foods as the cause of obesity. But the prime risk factor for obesity in dogs and cats is excessive caloric intake. ${ }^{14,15}$ Gram for gram, sugars have fewer calories than fat or protein. ${ }^{9,16}$ And obesity, not dietary sugar, is the main risk factor for diabetes mellitus in dogs and cats. ${ }^{8,11}$


The key is to maintain ideal body condition (4 or 5 on a 9-point scale), and limit food items that are not complete and balanced to less than $10 \%$ of the pet's total caloric intake. ${ }^{14,15}$

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