



ADVERSE FOOD REACTION + URINARY STONES IN DOGS: UNDERSTANDING MORE



ADVERSE FOOD REACTIONS EXPLAINED

Issues we often loosely refer to as a 'food allergy' belong, in fact, to adverse food reactions (AFR). Because the signs of food intolerances and food allergy are similar, these conditions can often be clinically impossible to distinguish. Typical signs are cutaneous issues, mostly linked to scratching and inflamed skin (with consequent cutaneous lesions +/- potential hair loss), but also digestive signs such as diarrhoea, vomiting, rumbling (borborygmi), and flatulence.

WHAT ARE FOOD ALLERGENS?

Food allergens are mostly proteins (or glycoproteins), whose size allows recognition by a sensitive or over-reactive immune system. The proteins are made up of chains of amino acids, the weight of which varies according to their nature.

Amongst major ingredients involved in food allergies, beef is frequently mentioned. **A dog allergic to beef may react to another ingredient that shares some allergic protein with beef (cross-reactivity phenomenon).** Therefore, the strategy of feeding a 'hydrolysed protein' diet is often recommended.

DID YOU KNOW?

Unlike usual practice in human allergology, the only way to confirm if a dog is affected by an adverse food reaction is via a diet elimination trial. Tests from blood, saliva, or hair samples may yield incorrect results.

HOW DO YOU IDENTIFY AN ADVERSE FOOD REACTION?

This process should be carried out under vet supervision.

To determine the cause of your dog's reaction, you will need to:

- Provide one diet exclusively for 8 weeks (hydrolysed diet or a protein source that your dog hasn't eaten before).
- If signs disappear, your veterinarian may suggest that you reintroduce the food your dog ate before it tried the new diet and see whether the signs reappear.

If signs reappear, an adverse food reaction may be confirmed (whereas if not, another cause may be behind your dog's signs, such as environmental allergy).

In everyday life, an elimination diet can be a challenge. First there is diet choice. **The food must, of course, be balanced,** and this is something that is hard to achieve with a typical 'homecooked' diet. Using a novel protein diet (which contains a protein source your dog hasn't eaten before) can also present challenges. You will have needed to keep a detailed record of what your dog used to eat (and dogs do not tell us everything they eat!). In addition, not only main food has to be taken into account but also any supplements, titbits or flavoured medications. It is for these reasons, that many vets will recommend using a hydrolysed diet.

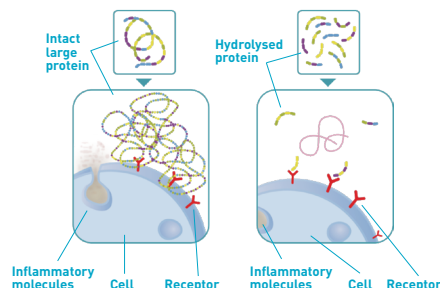
You will then have to abide strictly by the diet as recommended by your veterinarian. Any break from the discipline could mean your efforts have been in vain. By strictly following their nutritional instructions, your vet will be able to properly identify the issue and introduce the most appropriate management. The effort will be worthwhile to find the most appropriate long-term solution.

MANAGING DOGS WITH AN ADVERSE FOOD REACTION

When an adverse food reaction has been identified, a major part of the nutritional management relies on avoiding consumption of the protein(s) that are causing the problem. Here too it will be vital to stick strictly to your vet's dietary recommendation. This is because, when an animal has been diagnosed as having an adverse food reaction, it is for life!

WHAT EXACTLY ARE HYDROLYSED PROTEINS?

These proteins have been broken down to a small enough size that the risk of the body's defence system recognising and reacting to them has been minimised. **This means that consuming these proteins has a very low risk of triggering an adverse reaction.** Foods based on hydrolysed proteins are sometimes recommended for other specific issues because they are highly digestible.



Case 1: release of mediators, triggering allergic flare and signs such as itch.

Case 2: no immune recognition of the hydrolysed protein, no release of the mediators.





URINARY STONES DIFFERENT TYPES

Matters become more complicated when another issue requires consideration at the same time, for example when a dog also has urinary stones.

These are mineral deposits that form in the urinary tract, which are known as **uroolithiasis**. The urinary tract includes kidneys, ureters, bladder and the urethra.

TRUE OR FALSE?

A dog's size has an influence on the development of a urolithiasis.

TRUE. Small breed dogs can be predisposed to urolithiasis.

Nutritional management can help in reducing the risk of recurrence of urolithiasis in dogs.

TRUE. With a suitable diet and sufficient water intake, the dog can produce diluted urine that can be unfavourable to the development of urinary stones.

WHAT IF YOUR PET HAS UROLITHIASIS?

If the stone can be dissolved, then your veterinarian will make a plan for their dissolution, which will include a diet that can help with this. Alternatively, your veterinarian may need to surgically remove the stones and may send them off for analysis, which helps to identify the exact type of stone they are. **Once stones have been removed or dissolved, the risk of recurrence must be reduced.** There is no secret that a sedentary lifestyle and excess weight are factors that increase the risk of urolithiasis. This makes it important to consider both in the nutritional management of your pet. A diet has been formulated specially by nutritionists and scientists at Royal Canin to assist in the dietary management of such dogs.

Your vet has recommended a specific food to enable your dog to reach and maintain an ideal weight while also helping to reduce the risk of the recurrence of urinary stones.

TO MONITOR YOUR ANIMAL'S HEALTH EFFECTIVELY:

Getting rid of the extra weight is a long-term challenge. As part of your dog's weight loss programme, we recommend that you:

- Use a notebook to regularly record your dog's weight and body condition score and what it eats, including 'extras' and how much time it spends exercising.
- Also monitor your dog's consumption of water and any change in urination.

This information will be very valuable to your vet and help them to keep your dog in the very best of health.

S/O: STRUVITE AND OXALATE

There are different types of urinary stones, the composition of which depends on the minerals that form them. Some may be dissolved by a special diet: this is notably the case of **struvite stones** (these are the S in S/O). Others such as **calcium oxalate stones** (the O in S/O) can only be removed by surgery or other means. Stones may also be made up of layers of different types of minerals.



Struvite crystals and stones



Calcium oxalate crystals and stones

