

We are what we eat

Carolyn Menteith investigates the link between diet and behaviour.



ABOUT CAROLYN

Carolyn Menteith DipCABT, KCAI, is a dog trainer, writer, and broadcaster. She is a member of INTO Dogs and an accredited animal behaviourist (ABTC). Carolyn is passionate about bringing the principles of reward-based training into the public eye.

Junk food could have an impact on how your dog behaves.

When we are thinking about what to feed our dogs, there are lots of things that go into making that choice. Cost, availability, and quality are all high on the list — and, of course, we want to choose a nutritious, balanced diet, which will keep our dogs healthy.

Maybe we decide to feed what we have always fed our dogs, or what the breeder or rescue centre recommended. Sometimes we even choose a food based on the appearance of the pack or how enticing the adverts are.

One of the things we don't often take into account is the effect food has on behaviour. Maybe that's because it is an invisible thing — unlike a shiny coat or a decreasing waistline — but we shouldn't underestimate how much diet can play a part in our dog's ability to learn, settle, and behave in a calm manner.

We shouldn't really be surprised by this. Any parent or teacher, who has had to look after a group of children, will tell of the horrors of seeing their delightful little charges turning into a swarm of creatures resembling deranged gremlins, after being exposed to traditional party food of brightly coloured drinks, sweets, and cakes!

This link between a child's diet and hyperactivity (a general term used to describe behavioural difficulties affecting learning, memory, movement, language, emotional responses, and sleep patterns) is such an accepted truth now, a warning must be put on food that contains any of the six E-number colourings that appear to be the major culprits (along with the warning: 'May have an adverse effect on activity and attention in children').

We now know without any doubt that we are what we eat. What we put into our bodies is reflected in our health

and in our brains — and our dogs are exactly the same.

Canine behaviourists have known this for years. One of the first things most behaviourists will ask when taking a case history for everything from aggression to separation-related issues is 'what does the dog eat?' — and often changing this forms a key part of any behaviour modification programme.

DITCHING JUNK FOOD

Sometimes, this is as simple as advising clients to actually read dog food labels and change their dog from junk food on to a high-quality, low-additive, complete dog food, to reduce the colourings, preservatives, sugars and so on, that may be causing the behavioural problems.

For many owners and their dogs, diet-related behaviour (and health) problems can be solved by finding

an appropriate high-quality diet, getting rid of unnatural additives, and sometimes doing a bit of trial and error as to what protein and carbohydrate sources suit the individual dog. This can often be a revelation, as owners don't always think that by changing food you can change behaviour, and are amazed by the results.

Other times, even with good-quality food, certain ingredients can still cause problems. Often when owners really look at their dog, they notice that after meals the dog can become hyperactive, mouthy, and frantic — or else depressed and withdrawn. Discovering which foods can be causing this requires a bit more dietary detective work, but again, is something that can transform a dog's behaviour.

EMOTIONAL RESPONSES

By manipulating the diet, you can actually have a positive effect on a dog's brain chemistry, and improve his mood state and emotional responses.

Val Strong originally trained as a medical scientist, studying all aspects of human health, including the effects of nutrition on behaviour. In 1998, her passion for animals became her career, and she gained her MSc in companion animal behaviour counselling from the University of Southampton. She went on to study the effects of nutrition on canine learning abilities.

At the time, the idea that diet affected behaviour was very new. Early thinking suspected you could improve behaviour problems by lowering protein content. Val's work showed it wasn't lowering the protein content which was significant — it was raising carbohydrate levels and feeding that at a time that was beneficial.

Val discovered it was possible to change the way the key neurotransmitters which modulate mood (largely dopamine and serotonin) were made available in the brain. Dopamine is involved in learning, attention, and reaction time, whereas serotonin is involved in the regulation of mood, the control of sleep and arousal, and regulation of pain and sensitivity.

Low serotonin levels have been linked to aggressive behaviour, hyperactivity, over-excitability, anxiety, and learning problems, so making sure these neurotransmitters were available in sufficient quantities in the brain became key to positively modulating a dog's mood state.

Serotonin is made in the brain from the essential amino acid, tryptophan (while dopamine is made from tyrosine, which is a non-essential amino acid). An essential amino acid is one that the body can't make itself and has to come from the diet — and tryptophan comes largely from meat sources (or other proteins).

One of the problems with tryptophan, however, is that there are several other amino acids all going through the same gateway to the brain, and the others often take priority, so by the time the tryptophan is able to get through, it has been metabolised and there is none left to produce the serotonin needed by the brain.

What is needed is something to give tryptophan priority. A small amount of carbohydrate fed after a protein meal can do this, by raising levels of insulin, which has the effect of diverting the other amino acids to the skeletal muscle. This leaves the way clear for the tryptophan to get to the brain, where more serotonin can then be produced.

ALL ABOUT TIMING

This knowledge led to what became known as 'Val's Diet', and was outlined in her book, 'A Dog's Dinner'. This dietary protocol has been used by many

behaviour professionals and owners to improve dogs' behaviour by boosting their

serotonin levels.

It worked really well for those who were able to follow it, but it required dedication, and owners to be able to feed their dogs four times a day. It involved feeding two meals a day of an easily digested protein source in the morning and evening, adding vitamin B6 to these meals (which is needed for the production of serotonin), and then three hours after each of these meals, feeding a small amount of carbohydrate (plain boiled potato or boiled pasta).

Thankfully, Val didn't stop her research there, as she was also frustrated by the difficulties faced by owners trying to feed their dogs in this way, and thought there must be an easier way. Earlier this ►



Over-excited behaviour can sometimes be linked to diet.



A dog's diet has a bigger impact than many owners realise.

year, working with Oscar Pet Foods, she launched the Breakthrough diet — the first complete dog food which, using a slow-release carbohydrate, works on exactly the same principle. For the first time, there is now a dog food which has been developed to balance brain chemistry, and potentially improve behaviour when used alongside a behaviour modification programme.

A HEALTHY OUTLOOK

Early studies carried out by independent behaviourists, and also by staff at Wood Green, The Animals Charity, have been extremely encouraging, showing significant reduction in anxiety

and agitation, and an improvement in calm, relaxed behaviour. Wood Green's behaviour team has also been able to prevent dogs being handed in for rehoming by recommending Breakthrough to struggling owners, along with behaviour advice.

This isn't a magic wand, however, and while the food may help the dog's mood and put him in a better place to be able to learn, this needs to come as part of a behaviour modification plan, so the dog can learn new skills, better coping strategies, and more positive emotional responses.

More than ever, we are seeing that, like us, dogs really are what they eat.

If you think that your dog's diet could be affecting his behaviour:

- Read the packaging of your dog's food — look out for E-numbers, colourings, preservatives, sugars, bulking agents and any hints you are feeding canine junk food, no matter what the advertising says!
- Does your dog look healthy? Is his coat and skin in good condition? Behaviour is often reflected in the body.
- Is your dog calm, or is he anxious, reactive, and struggling to learn?
- Change your dog's diet to a high-quality, additive-free food.
- Watch your dog. Look at his behaviour after his food: does he become hyperactive, frantic, lethargic, unable to settle, or is he calm and relaxed? Is he better behaved in the mornings before he eats? Build a picture of how the current food affects your dog.
- Ask your vet or a qualified canine nutritionist for advice, and work with a behaviourist who understands the link between diet and behaviour.

Part of looking after our dogs is making sure they get the nutrition they need, but also ensuring that the food we give them keeps them mentally and emotionally healthy, just as much as it keeps them physically healthy.

CASE STUDY

“Henry was able to discover new ways of interacting”

TTouch instructor and behaviour counsellor, Sarah Fisher, gives talks and demonstrations on canine handling and behaviour.

She recalls: “Henry, a young, highly intelligent bull breed, bounced his way to us at Tilley Farm, near Bath, in May, due to escalating grabby behaviour in his home. When he first arrived, he was tense and itchy, and, not surprisingly, didn't find body contact rewarding, air-snapping and mouthing when touched at times.

“His guardians had also noticed that Henry would wake suddenly and snap at his own body, before staring and air-snapping at them. Sudden noises would trigger a fly-by grab.

“While repetitive grabbing, hard mouthing, and air-snapping are often signs of frustration, body tension, and

confusion, there is also a correlation between this behaviour, digestion, and diet. I changed Henry's food immediately, replacing chicken and rice with turkey and sweet potato.

“His new diet, coupled with quiet learning opportunities, brought dramatic change. His body tension diminished and the itching disappeared. Henry was able to discover new ways of interacting with humans that didn't involve his teeth, maintaining calm focus when in novel situations and being less aroused by noise. Bodywork has become so rewarding for Henry, he now prefers hand contact to treats or toys. He is settling in with his new family, who are totally in love with this exceptional dog. I truly believe that, had I not addressed his diet, Henry's story would not have had this happy ending.”

