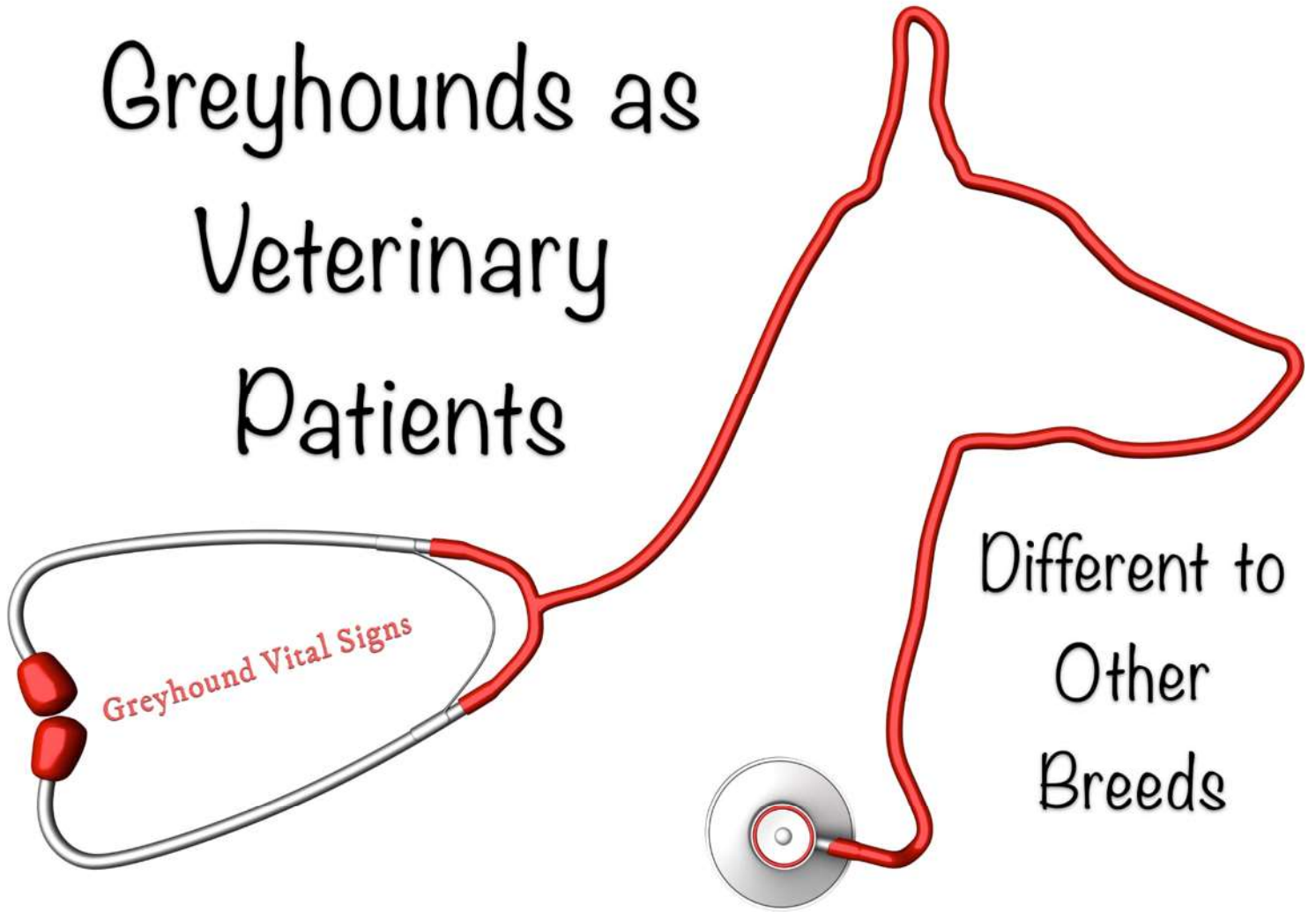


Greyhounds as Veterinary Patients



by Jason Beck, BVSc M VetClStud FANZCVS and Anna Deykin, BSc BVMS FANZCVS

Most dog owners have a special attachment to their chosen breed and greyhound owners are particularly guilty of this. Thinking greyhounds are special and different can lead to some assumptions and confusion about their veterinary treatment. For the majority of conditions and treatment applications, greyhounds can be treated like any dog. This article will mention some of the veterinary situations where the fact that your dog is a greyhound will need to be taken into consideration. Greyhounds have been ruthlessly bred for athletic function rather than ruthlessly bred for physical appearance like most purebred dogs. This form of selection pressure has resulted in greyhounds being the most orthopaedically sound breed and breed that is generally free of the plethora of hereditary diseases that affect a lot of other purebred dogs.

Routine blood tests

Like in people, blood tests are often performed as part of veterinary examination. This can be part of routine health check-ups if your dog is sick or to check organ function prior to a general anaesthetic. Blood parameters all have established normal ranges that healthy dogs fit into. In the greyhound breed, there are certain differences in the normal ranges of some important blood parameters when compared to the general canine population. These changes are due to their selection for athletic function and muscle mass.

Misinterpretation of blood tests can lead to unnecessary ongoing treatment for health problems that don't exist. Following are some of the more clinically significant differences.

Red blood cell count

Greyhounds typically have a higher haematocrit or percentage of red blood cells in their bloodstream than other breeds. The percentage of oxygen carrying red blood cells can be up to 20% higher in greyhounds. This can sometimes be mistaken for dehydration where the loss of liquid from the body increases the concentration of red blood cells in the bloodstream.

White blood cell count

Greyhounds have significantly lower white blood cell counts than other breeds. The white blood cells are involved in fighting infection as part of the dog's immune system. A low white cell count does not mean that greyhounds have a poor immune system, just that they have a relatively low white cell count. This can become important in the treatment of dogs with chemotherapy. The greyhound breed is unfortunately prone to the bone cancer osteosarcoma. Chemotherapy is an

essential part of the treatment of this cancer. Chemotherapy drugs are designed to kill rapidly growing cells. This is great if the rapidly growing cells are part of the cancer. It's not so great if the rapidly growing cells are white blood cells forming in the bone marrow that the dog needs to fight infection. When giving chemotherapy the vet will monitor the white blood cell count of their patient to determine if the chemotherapy has reduced the number of white cells to the point that the dog's immune system is compromised. If the white cell count is too low chemotherapy may need to be delayed or stopped to prevent the dog from developing an overwhelming infection. The naturally low white blood cell count in the greyhound can make these important determinations difficult.

Kidney function

Blood tests for kidney function are interpreted a little differently in greyhounds. The two main blood parameters used are blood urea nitrogen and creatinine. In greyhounds the blood urea nitrogen is about the same as other breeds but

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creatinine concentrations in normal greyhounds can be up to 20% higher than other breeds. This does not mean that they have reduced kidney function. There have been cases of greyhounds unnecessarily placed onto lifelong special diets and medications on the basis of wrongly interpreted blood tests. Also, many older ex-racing dogs will be helped by nonsteroidal anti-inflammatory medication. These medications should not be given to dogs with kidney disease as it may exacerbate the condition. Greyhounds will receive quality of life improvement from these drugs and it is important that they don't miss out because of misinterpretation of their kidney function.

Thyroid health

The thyroid gland plays a major role in controlling the general metabolism of dogs. Low activity in the thyroid gland can cause a variety of health problems. Thyroid health is measured by testing for levels of thyroid hormones in the blood.

Greyhounds have naturally low levels of the T4 hormone that is measured as the screening test for thyroid problems. Again, this can sometimes lead to dogs receiving ongoing treatment for a condition that they do not have.

Orthopaedic problems

The greyhound is an exceptionally sound breed orthopaedically. They are almost completely free of the developmental orthopaedic problems such as hip and elbow dysplasia that is such a problem in similar sized purebred

dogs. The only developmental orthopaedic disease seen in greyhounds is the occasional case of osteochondritis dissecans (OCD) in the shoulder and hock joint of young dogs. The most common orthopaedic problem seen in the general dog population is cruciate ligament rupture. Repair of ruptured cruciate ligaments forms about half the workload of most veterinary orthopaedic surgeons. Fortunately, the greyhound is not prone to the condition and the incidence is very low.

Dogs that have raced may have some chronic racing related injuries or have been retired as a result of an injury. **It is a myth that ex-racing dogs have generalised arthritis as a result of racing.** They are more likely to have specific injuries to specific bones or joints. If a retired dog has an ongoing lameness it would be a good idea to have it examined by an experienced vet as there may be treatment or surgery that could resolve the problem. Mobility issues can affect older retired greyhounds, the most common cause of this in my experience is lumbar back pain. This can be a difficult problem to definitively diagnose and treat. Back problems are generally not caused by a specific, localised problem such as a disc prolapse. They are more likely to be caused by generalised chronic ligament and disc problems, similar to older tradespeople who have done manual labour for many years. There is often no specific surgical treatment but dogs generally respond to exercise in moderation and courses of anti-inflammatory medication.

General anaesthesia

Veterinary anaesthesia techniques have evolved over years. With modern anaesthetic protocols many of the specific problems with anaesthesia in greyhounds have been



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eliminated. Greyhounds do have breed specific issues with metabolising the barbiturate drugs such as thiopentone and to a lesser extent propofol. These drugs are easily avoided with readily available alternatives. Despite their well-developed lung capacity, we see a significant number of greyhounds that do not ventilate their lungs adequately under anaesthesia and require mechanical ventilation. There is also a rare condition where greyhounds under general anaesthesia produce too much potassium in their bloodstream. This can be life threatening if not detected. A profound decrease in heart rate can be an indicator of this.

When greyhounds are having surgery, they are prone to losing body heat due to lack of body fat and are prone to pressure sores due to prominent bony points. They need good padded beds for surgery and recovery and to be kept warm during and after surgery. A certain percentage of greyhounds can be prone to severe bruising and bleeding after surgery. This is not caused by a problem in their blood clotting but an increased tendency for blood clots to be broken down after they form. It can result in delayed bleeding and bruising that can affect wound healing rather than excessive bleeding at the time of surgery. It can be largely controlled by the use of medication. This can be given prophylactically before surgery or after if the problem is identified post operatively.

Dental disease

Greyhounds as a breed often have poor dental health. This is most commonly seen as a build-up of tartar on the teeth. The build-up of tartar can push back the gum margin creating



Key differences in Greyhounds:

- Greyhounds typically have a higher haematocrit or percentage of red blood cells in their bloodstream than other breeds. The percentage of oxygen carrying red blood cells can be up to 20% higher in greyhounds.
- Greyhounds have significantly lower white blood cell counts than other breeds.
- Kidneys: creatinine concentrations in normal greyhounds can be up to 20% higher than other breeds.
- Greyhounds have naturally low levels of the T4 hormone that is measured as the screening test for thyroid problems.
- Surgery: greyhounds can experience poor lung ventilation, body heat loss and severe bleeding and bruising after surgery
- Greyhounds are more prone to dental disease

pockets where food and more tartar can accumulate. If untreated, it can cause periodontal and tooth root infection, leading to discomfort and the need for tooth removal. Jaw abscesses can also occur. There is some evidence advanced dental disease can lead to low grade septicaemia and toxin absorption which can cause general health problems and organ dysfunction. There is no established reason why greyhounds are prone to dental disease but anyone who has lived with the

breed will have experienced it.

Control of dental problems starts with a good diet and access to bones or dental treats to chew. It is possible to clean your dog's teeth with a toothbrush but not all dogs will tolerate this

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and it can be hard to remove established tartar. If bones and cleaning don't work, a visit to the vet for a tooth scale and clean will be required. This is generally done under an anaesthetic. Once the teeth are cleaned, regular access to

bones and avoiding soft mushy food may prevent a recurrence.


In summary, fundamentally greyhounds are physically just like other dogs. However, there are some differences that can



Editor's note: both Dr Beck and Dr Deykin have family members who are of the greyhound variety.

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Jason graduated from Queensland University in 1988 and spent three years in mixed and small animal practice before undertaking a residency in small animal surgery at the University of Sydney. Jason has a Master of Veterinary Clinical Studies degree awarded for investigations into the pathophysiology of canine gdv. He has worked as a faculty surgeon at the University of Sydney and Washington State University in the USA. He is a fellow of the Australian College of Veterinary Scientists and a registered specialist in small animal surgery.

With over fifteen years of experience in managing difficult and complex cases, his interests lie in all aspects of soft tissue, orthopaedic and neurosurgery.





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Anna graduated from Murdoch University in 1986. She worked in a small animal practice in Sydney and in England until 1992, after which she trained in ophthalmology residency programmes in Australia and the USA. Anna became a member of the Australian College of Veterinary Scientists in Medicine of Dogs in 1993 and a fellow in Veterinary Ophthalmology in 1997. In 1999-2000 she worked as a clinical instructor at Washington State University, USA. Since then she has worked at the Animal Referral Hospital in Sydney and as a consultant at Sydney University Veterinary Centre. Anna has been at BVSC since 2004 and has a strong interest in all areas of ophthalmic surgery, particularly cataract surgery.

