



CARING FOR YOUR SENIOR DOG

Ageing happens to us all, including our pets. As we all get older there are certain health conditions that are more likely to occur and also steps we can all take to look after ourselves to ensure a good quality of life. The same is true for our pets - this information pack covers some of the changes that are more likely to occur in our dogs as they get older and what can be done to keep them as healthy and happy as possible for as long as possible.

DEFINITION OF SENIOR/GERIATRIC

Generally we define a “geriatric” dog as one who has reached the last quarter of their life expectancy. As with humans, lifespan varies considerably amongst different dogs, but generally we find that small breed dogs are more likely to live longer than large and giant breed dogs. Therefore, as a rule of thumb we would define a geriatric dog in the following ways:

- A small breed dog (e.g. a Terrier), less than 10kg weight, over 12 years of age.
- A medium breed dog (e.g. a Springer Spaniel/Collie), 10-20kg weight, over 10 years of age.
- A large breed dog (e.g. a Labrador/Dalmatian), 20-40kg weight, over 8 years of age.
- A giant breed dog (e.g. a Mastiff/Great Dane/Irish Wolfhound), over 40kg in weight, over 6 years of age.

We would generally consider geriatric dogs to require special care, and to be at increased risk of certain diseases, as described below.

PREVENTATIVE HEALTHCARE IN OLDER DOGS

VACCINATIONS

There are certainly many diseases that are more likely to affect older dogs. Ideally we should do as much as possible to help keep our dogs as healthy as possible to prevent disease. We would recommend that dogs continue to have a health check every 6-12 months and vaccinations where necessary. Some vaccinations will give cover for at least 3 years; these being Distemper, Parvovirus, Infectious Canine Hepatitis and Rabies (rabies vaccination is only required if travelling abroad).

There are other vaccinations that should be given yearly, even into old age:

- **Leptospirosis** is a bacterial disease that is spread by rodents (especially wild rats) and other dogs. It causes liver disease, kidney disease and can lead to spontaneous bleeding. Because older dogs may have compromised liver and kidney function then Leptospirosis can be even more dangerous in these patients. There are numerous strains and we can vaccinate against the four most common of these. The vaccination will only provide one year of cover and should be repeated annually.
- **Kennel cough** - is caused by a bacteria (*Bordetella*) and sometimes by a virus (*Parainfluenza*). In young dogs it causes whooping cough-like symptoms which, although very unpleasant, are rarely life-threatening. In older patients it can lead to pneumonia and chronic respiratory disease, which can be

life-threatening. There is a kennel cough vaccination, which is given as a small quantity of liquid that is applied into the nose of your dog. As the strains of kennel cough are always changing (as with flu in humans) and because the immunity wanes fairly quickly then we would recommend all dogs to be vaccinated yearly for this disease, especially in old age.

REGULAR CHECK-UPS

Dogs age substantially quicker than humans do (one dog year roughly equates to seven human years). While a human may be a “geriatric” for 20 or more years most dogs will remain geriatric for only a few years. Because of this we would recommend that geriatric dogs have a health check regularly, ideally at least every 6 months, to ensure they are getting the best care. A six-monthly check up in a dog can equate to a three-yearly check up in a human, i.e. a lot can happen during that time.

BLOOD AND URINE SAMPLES

These can be recommended if there are unusual symptoms (increased thirst/urination, going off food, coughing, sneezing etc.) or if a dog is on long term medication. However, they can also be used to screen for disease. Early diagnosis and treatment of disease can reduce its severity and maximise chances of good recovery or control.

Urine samples can usually be obtained at home with a bit of practice and can tell us a lot about kidney function, blood pressure, infection status and can even diagnose diabetes. There is a good argument to analyse a urine sample at least once a year in a geriatric dog. The cost of processing a urine sample is £8-£16 depending on what tests are done.

Blood samples can be taken fairly easily in most dogs. A needle is placed into one of the veins, most commonly in one of the forelimbs or the neck. Taking a blood sample is no more uncomfortable than giving an injection or vaccination, and can be done within a few minutes. Blood tests can tell us a lot about the function of the body’s organs e.g. digestive organs, kidneys, heart, lungs etc. Blood samples may be recommended for a number of reasons, e.g. before starting medication, when there are symptoms of illness, when taking long-term medication or to screen for liver/kidney disease. The costs of blood tests can vary depending on what specifically we are looking for, your vet will advise you of the costs of any tests done.

FLEA AND WORM TREATMENT

Older dogs are just as predisposed to getting these parasites as younger dogs. We recommend the same prevention of these for older dogs as for younger dogs i.e.:

- A multi-wormer (protects against roundworms, tapeworms and lungworms) every **THREE** months, “Milbemax®” (controls lungworm) or “Drontal®” (does not control lungworm) are most commonly used.
- Regular flea treatment - this depends on how long each product lasts. Most spot-on flea treatments last 1-2 months and veterinary-grade tablets last 1-3 months.

EXERCISE

We assume that as we and our dogs get older that our exercise needs to decrease. Actually many older dogs (and people) can keep up with younger individuals and so there is often no reason to limit your dog as they get older. Regular exercise is essential to help keep the joints mobile, prevent weight gain, strengthen

muscles and maintain a good quality of life. "Slowing down" can often be attributed to old age, but in many cases a reduction in exercise tolerance can often be a sign of diseases such as osteoarthritis, heart disease, senility, reduced muscle fitness or weight gain. As these are fairly common in older age your dog's ability to exercise may reduce and the amount of exercise given should be proportional with what your dog can physically cope with. Speak to your vet or nurse for specific recommendations for your dog.

DIET

The nutritional needs of your dog change significantly as they get older. Lean body weight usually reduces with age, as does metabolic rate and body temperature, whereas body fat often increases. Energy requirements, therefore, in a senior dog are often about 12% lower compared to a younger adult. However, in late old age many dogs lose weight so may require substantially more calories. Foods should be slightly restricted in salt and phosphorus to help prevent kidney deterioration and high blood pressure. Protein intake should be slightly restricted, and ideally protein fed should be high "quality" (i.e. meat and fish derived). Because dental disease and constipation are more common in old age then foods with increased fibre and with dental hygiene attributes are increasingly suitable. Many dog food manufacturers develop their own senior foods which follow these rough guidelines. Speak to your vet or nurse about options.

ANAESTHESIA

Advances in anaesthesia means that anaesthetics are safer now than they have ever been. However, anaesthetics are slightly more risky in older patients, as they are more likely to be affected by cardiovascular, liver and kidney disease. The liver and kidneys are important in processing anaesthetic medication, and so dysfunction in these organs can lead to build up of the medications. As many anaesthetics can depress the heart and reduce blood pressure older patients can be more at risk of adverse effects during an anaesthetic. At Oakham Veterinary Hospital we will use this information to alter the medications we use to try and minimise the risk in an older patient. We may recommend a blood test to check for organ dysfunction and use techniques to help to support blood pressure (e.g. with intra-venous fluid therapy).

COMMON DISEASES ASSOCIATED WITH OLD AGE

ARTHRITIS (OSTEOARTHRITIS)

This is the inflammation of a joint. It could be due to a reaction to infection, irritation or trauma. The most common clinical signs of it are: redness, swelling, warmth and pain. One of the most common forms of arthritis is called osteoarthritis ("OA") and this is a degenerative process occurring within the joint. It is caused for a variety of reasons such as other joint problem: the joint not growing properly early in life (called "dysplasia") or by trauma to the joint; which can include wear and tear as we get older. It is incurable without joint replacement but can be well managed.

The symptoms include stiffness after rest, lameness - usually after particularly vigorous exercise, reduced activity and behavioural changes. They may have muscle loss (atrophy) through reduced use or concurrent spinal disease, joint thickening/effusion and restricted joint movement. These signs can be caused by other conditions and may require completely different treatment and so the diagnosis can't be made on symptoms and signs alone.

Definitive diagnosis is by veterinary examination, x-rays and in some cases joint fluid analysis. Additional tests that may be required include joint inspection using arthroscopy ("key-hole surgery"), MRI, CT or nuclear medicine ("bone") scans.

Osteoarthritis is usually diagnosed from the typical symptoms and signs exhibited by the patient. X-rays will be taken to confirm the characteristic bony changes around the affected joint(s). Your dog may be sedated or anaesthetised for x-rays and this is a very convenient time to take a sample of joint (synovial) fluid for laboratory analysis. This can help to rule out other forms of arthritis such as rheumatoid arthritis or a bacterial infection in the joint. In some patients a camera may be used for direct visual examination of the inside of the affected joint. This is called arthroscopy and it is a type of key-hole surgery.

Due to the inflammatory process, this problem will be treated mainly with painkillers/anti-inflammatory medication and supported by weight control. Joint supplements can be used to help slow down the disease process. Acupuncture and hydrotherapy can help loosen stiff muscles, improve fitness and reduce pain. It is also useful to help keep your dog warm during cold weather, using well padded bedding and avoiding slippery floors and stairs.

If OA becomes so severe the above therapy cannot help then surgery is seen as a last resort. The most common type of surgery for osteoarthritis is joint replacement, although other techniques do exist that may help.

CANCER

This is such a large topic it is difficult to provide more than a brief summary here. Most cancers are more common with age. What follows is a brief summary of the more common cancers in senior dogs.

Bone cancer – more likely to occur in leg bones, but others can be affected. They are more common in older, male medium to giant breed dogs. Signs include lameness or other signs of bone pain. X-rays and biopsy usually establishes the diagnosis. Treatment requires surgery and often follow-up chemotherapy.

Lymphoma – a cancer of lymphocytes, a type of white blood cell, may originate in the glands, spleen, liver, thymus, bone marrow, heart, lungs and gut. Symptoms are wide-ranging and relate to the organ(s) affected. It is unknown why the condition occurs, although there may be a genetic element. Treatment is usually via chemotherapy or medication to help a dog feel more comfy, but ultimately the cancer will usually return and is usually fatal.

Mammary (breast) cancer (females only) – this is more likely in bitches that are unspayed or who were spayed later in life. A mass is often felt in the breasts. Surgery (and spaying if not already done) can remove the tumour providing it has not already spread.

Prostate cancer (males only) – not uncommon and will cause problems with passing urine and/or faeces. The cancer can spread to other organs. Castration does not prevent this disease (but neither does it increase the risk of it). It is very difficult to treat; surgery and chemotherapy may help but the mainstay of therapy is good pain relief and supportive care.

Splenic cancer (haemangiosarcoma) – this is a tumour of the blood vessels in the spleen which may result in a life-threatening internal bleed. Some larger breeds are more susceptible. The tumour is often found in the spleen, but can occur in the heart, skin, lungs and liver. It spreads rapidly and so surgery alone to remove the tumour will rarely cause a cure and cancer will return in a matter of months. Post-surgery chemotherapy can help in some cases.

Testicular cancer (males only) – this only occurs in uncastrated males. It is more common in older dogs, and some larger breeds. Retained (undescended) testicles have a greater tendency to become cancerous and these may manifest with signs of abdominal pain. External testicular tumours can usually be seen or felt.

While most testicular masses are benign those that are cancerous can be aggressive and spread. Most (85%) testicular tumours will be cured by castration, the rest may need follow-up chemotherapy.

DENTAL DISEASE

Dental disease affects over 87% of dogs and 70% of cats over three years old. Excluding traumatic injuries such as tooth fractures, the majority of dental disease is a natural deterioration which affects all animals, ourselves included, unless steps are taken to slow down or halt the process. Saliva combines with bacteria, which are always present in the mouth, to form plaque - the creamy material we brush off our teeth every day. This plaque adheres to the teeth and over time calcifies due to minerals in the saliva to form the rock-hard tartar (or calculus). Tartar gets under the gum line and progresses down the tooth root causing physical irritation and gum inflammation. This leads to gum disease, gum recession, infection, loosening of teeth, pain and eventually loss of teeth. The rate of development is affected by diet but also varies with the individual animal. Once tartar forms it cannot be brushed away, it must be mechanically removed, preferably with an ultrasonic scaler which can reach under the gum line.

Dental disease is painful but can affect more than just your pet's mouth. When the tissues around the teeth have an infection, every time your pet bites down on something bacteria are released into the blood stream. This puts a strain on the immune system, which is often already compromised in elderly patients. Furthermore, these blood-borne bacteria can lodge in sites such as the kidney or heart valves leading to infections which can be hard to successfully treat.

Clinical signs of dental disease will vary with severity and between different pets. They will all suffer some degree of discomfort and pain but rarely do they actually stop eating or paw at their mouth. Signs are much more subtle and include:

- changes in preference of food type
- lopsided eating
- reduced appetite
- eating part of a meal and returning later to finish it
- no longer playing with certain toys
- interested less with owner and other pets
- halitosis (bad breath)
- weight loss
- drooling/salivating
- reduced grooming behaviour, possibly leading to a matted coat
- swellings around the face
- inflamed gums
- fractured teeth

Some pets may only demonstrate one or two of these signs but can still be in significant discomfort. Often the only way to be sure how much pain they are suffering is to observe the improvement in their demeanour following treatment.

Dental procedures require a general anaesthetic which is not without risk but is much safer than is usually perceived. At Oakham Vet Hospital we have a qualified, registered nurse monitoring your pet's anaesthetic from start to finish. They are only left once they are sitting up and are breathing easily and unassisted.

It is often elderly pets who require a dental. Age does not necessarily increase the risks associated with having a general anaesthetic; this is more affected by concurrent problems such as heart and kidney disease. We offer blood tests to assess liver and kidney parameters prior to the anaesthetic. You can also choose for your pet to have intravenous fluids which can help to control blood pressure and make the anaesthetic recovery smoother.

Once we are happy that your pet is stable under the anaesthetic, a specially-designed chart is used to record a score for each tooth. Plaque, tartar, gum inflammation or recession and other lesions such as fractures, cavities and resorptive lesions are assessed. Resorptive lesions are found in cats and occur when the surface enamel is lost revealing the underlying pulp and nerves. These are painful and necessitate extraction - their cause is unknown.

Following completion of the scoring chart, each tooth is cleaned using an ultrasonic scaler so that the mouth is as clean as possible prior to any extractions being performed. These are surgical procedures, often involving the overlying gum being peeled back and the bone of the socket being removed using a high-speed burr. This dental drill is then used to split multi-rooted teeth into individual root sections. It is important that each of these are completely removed. The socket is flushed with a dental disinfectant and the gum is then stitched back in place using absorbent sutures. Once all extractions are complete the remaining teeth are polished to remove microscopic scratches caused by the ultrasonic scaling.

Pain killers are more effective if given prior to the onset of pain. They are therefore given to your pet before any extractions are performed and can be added to during the procedure itself. Multiple types are often used allowing lower doses of individual drugs to be administered and greater overall effectiveness. Your pet will then be sent home with pain killers to continue for a few days. Antibiotics are dispensed depending on the number of extractions, age and general health of your pet.

Some pets require a large number of extractions, occasionally no teeth are left. This is not done without good reason. Your pet would rather have no teeth and comfortable gums than painful, rotten teeth. They will happily eat soft food or soaked dry biscuits for the rest of their lives. We have never experienced a pet who was unable to eat once extraction sites had healed. It is always rewarding to hear of pets who become obviously happier and more energetic following a dental procedure. Stories of dogs and cats who suddenly start eating all their meals with enthusiasm and in one sitting are common.

Determining how many, if any, teeth will require extraction can be impossible in a conscious examination. It is only once your pet is under the anaesthetic that we can fully examine all surfaces of all the teeth and use a probe to assess for any pockets between the gum and tooth surface. Given their unpredictable nature, a dental can take anything from 40 minutes to five hours from inducing your pet's anaesthetic to completing the procedure. It is therefore difficult to give an exact estimate for a dental prior to the procedure. We will give you a range covering one or two easy extractions through to multiple extractions. If any teeth are on the border between being saved or requiring extraction, we will often contact you to discuss them. The decision will depend mainly on the extent of tooth brushing and other dental homecare.

Following a dental procedure, a discharge appointment with a vet or nurse is booked to discuss any medications your pet is going home with and the procedure itself. You will be given a copy of your pet's scoring chart. A copy of this is stored at the practice for future reference. Two follow-up nurse consults are arranged to check that any extraction sites are healing well, your pet is comfortable and eating, and to discuss and demonstrate dental homecare. Ongoing homecare is essential to maintain a healthy mouth following a dental procedure. Dental diets and tooth brushing give the best results but mouthwashes, dental chews and water additives can also help.

Brushing your pets' teeth undoubtedly gives them the best chance of avoiding a general anaesthetic and dental or extending the time until a subsequent procedure becomes necessary. As with ourselves, this is a lifelong commitment and needs to be performed every day to make a significant difference. It is best to

start when they are young as puppies and kittens tend to be more accepting than adult dogs and cats. Dogs tend to be more tolerant than cats but this is not a reason to give up early; we do have clients who successfully brush their cats' teeth on a daily basis.

An appropriate soft-bristled toothbrush should be used. Brushes with stiff, solid bristles can cause unnecessary trauma and discomfort and are less likely to be tolerated by your pet. Finger brushes are good for puppies but only for training - they are not suitable for long term use as they will not reach under the small space between the edge of the gum and the tooth. Toothpastes can help but are not strictly necessary; the abrasive action of the toothbrush removing plaque gives the greatest effect. If toothpaste is used it should be palatable and designed for veterinary use. Human toothpastes are not appropriate as they have the wrong mineral content and can contain xylitol. This is toxic to pets, resulting in liver damage and insulin release which causes blood glucose to fall potentially leading to seizures.

Regular nurse dental checks can help to ensure any protocol you follow is effective and inform you if your pet requires a subsequent dental procedure. With appropriate homecare, hopefully this should not be necessary. If your pet is demonstrating any of the clinical signs described above and you are concerned that they would benefit from a dental, please speak to our reception to organise an appointment with a vet or nurse.

HEART DISEASE

Heart disease is common in dogs as they get older. However, their diseases are quite different to those that most commonly occur in older humans. For example, stroke is quite rare in dogs as is coronary artery disease and heart attack. Generally, small breed dogs are at more risk of heart valve disease and larger breed dogs are at more risk of heart muscle disease.

Dilated cardiomyopathy (DCM) – more common in large and giant breed dogs (as well as some cocker spaniels) and has a genetic element to the disease. The heart muscle becomes weak and thin, causing the heart chambers to enlarge and the heart beat to become weak. This causes tiredness, coughing, poor appetite and shortness of breath. Fluid can be retained in the abdomen and muscle mass is lost. The disease can be managed and treated with medication but there is no cure.

Valvular disease – small breed dogs are predisposed to this, especially the Cavalier King Charles spaniel, miniature poodle and some terriers. The most common valve to become diseased is the mitral valve, that helps control blood moving from the lungs through the heart and onwards to the rest of the body. Failure of the valve means blood leaks backwards during a heart beat, leading to heart chamber enlargement and fluid build up in the lungs. Such dogs may cough, slow down on exercise and become short of breath. Whilst it is incurable many dogs do very well on medication for some time.

INCONTINENCE

This can come in two forms:

Urinary incontinence – the main signs apparent are bed wetting or dripping urine from the vulva/penis whilst not aware that this is happening. Incontinence is much more common in bitches, especially those that have been spayed. Spaying (neutering) involves removing the ovaries (and sometimes the uterus), which reduces the amount of the hormone oestrogen circulating around the body. Oestrogen helps to maintain the strength of the bladder muscles, and so without it bladder weakness can occur. Urinary incontinence in older bitches can be fairly easily treated with medication (either an oestrogen replacement or a muscle-strengthening medication). Incontinence in older males is much less common and the causes are variable. There is a medication that can occasionally be used that can help.

Faecal incontinence - this is passing faeces without being aware of it, and such dogs will often mess their beds. This can occur for various reasons; in older dogs senility and spinal degeneration are the main causes. Senility (brain-ageing) treatment can sometimes help (see below) but in many cases this is untreatable.

KIDNEY DISEASE

Chronic kidney disease is very common in cats, less so in dogs. However, in the ageing dog a range of causes have been identified; infection, stones, previous traumatic insults and some degenerative conditions. Early signs of the disease include excessive thirst and urination, a reduction in appetite, nausea, depression and dehydration. High blood pressure, anaemia and excessive protein in the urine (protein-losing nephropathy) can result. Chronic kidney disease cannot be reversed, but it can be slowed. A kidney friendly diet (low in phosphate, restricted high quality protein and increase water-soluble vitamins) can increase quality of life and survival. Other treatments include phosphate binders, potassium supplements, injections of fluid for dehydration and blood pressure medication. Blood tests and urine samples can be useful in the diagnosis and monitoring of the condition. As the kidneys cannot regenerate when about 75% of the entire body's kidney function has been damaged survival is not possible, this is when humans might have a kidney transplant, but unfortunately this is a time when our dogs deteriorate to the point where euthanasia is the only humane option.

LIVER DISEASE

The liver is an incredibly complex organ with a bewilderingly-large number of functions. Therefore liver failure is a grave disease that can cause severe illness. In older dogs hepatitis (inflammation of the liver) is often the cause of liver failure. Death of liver cells (necrosis), scarring (fibrosis) and shrinking (cirrhosis) occurs in end stage liver failure. There are multiple causes that can include infection (e.g. infectious hepatitis or leptospirosis), some long term drug treatments, cancer or immune-mediated diseases (the body attacks the liver for no known reason). Signs of liver disease include lethargy, nausea, a yellowing of the skin, eyes and gums (jaundice), fluid retention (especially in the abdomen) and neurological problems. As the liver is responsible for processing a lot of the body's toxins, liver failure can cause a build up of toxins that can then poison the brain and cause drunken, wobbly walking (ataxia), poor vision, and occasionally seizures.

Diagnosis of liver disease may require a biopsy under general anaesthetic, and depending on the results of this different treatments may be advocated. Anti-inflammatories, supportive treatment of nausea, intravenous fluids to treat dehydration, antibiotics and liver supplements are often used in the treatment of liver disease. High quality food and feeding support is also required. The liver can regenerate and so with effective treatment can recover even from a severe insult. However, ongoing diseases (such as cancer) that cannot be corrected will make the long term prognosis much worse.

PROSTATE DISEASE

The prostate is an organ that surrounds the urethra (tube from bladder to tip of penis) just behind the bladder, in males only. It can be affected by a range of conditions, all of which are more common in older dogs:

Benign prostatic hyperplasia – this is by far the most common prostate problem in older dogs, and occurs only in intact (uncastrated) males. The prostate enlarges in size under the influence of the hormone testosterone. The enlarged prostate adds pressure to the colon and this in turn can cause problems with defecation (passing motions). The diagnosis of the disease is done by feeling an enlarged prostate during a rectal palpation and can be confirmed by blood test or by taking a sample (via cytological wash) of the

prostate. Treatment involves reducing the effect of testosterone on the prostate, either via surgical castration or some form of chemical castration, such as tablets or a 6-monthly implant.

Prostatitis and prostatic abscess - these are caused by an infection of the prostate, and are much more likely to occur in uncastrated (intact) males. Bacterial infection is the most common type; although occasionally a fungal infection can occur. Dogs with prostate infection are often off food, have a high temperature, are painful around their back area and may walk with an arched back. The prostate will be very painful when felt by a vet in a rectal examination. An x-ray or ultrasound scan of the prostate can help to see the disease, although usually samples need to be taken from the prostate to get a diagnosis. Treatment usually requires antibiotics, pain relief and supportive care but surgery may be required if there is an abscess to prevent it from rupturing (which can cause a fatal peritonitis). Castration or chemical castration (see above) can help to prevent recurrence of the disease.

Prostatic cancer – this occurs in castrated and intact males. As the cancer causes the prostate to enlarge it can be very painful, often with a discharge from the penis and the dog may strain to urinate or defecate. Some tumours may spread to the surrounding bones of the back and pelvis, causing walking difficulties. An irregularly enlarged prostate may be felt in a rectal examination and local lymph nodes (glands) may be enlarged. An ultrasound scan of the prostate and ultrasound guided biopsy can be used to help diagnose the condition. Surgical treatment is possible, although this is a serious procedure which can have complications, including incontinence. Surgery may not be successful, especially if the cancer has already spread. In many cases the main treatment is to use pain-killing anti-inflammatories to help keep the dog comfortable. The prognosis of dogs with this cancer varies depending on how fast the tumour grows and how much pain they are in. Most dogs will struggle to survive longer than one year after the diagnosis of prostate cancer and most cancers will spread to other organs.

PYOMETRA

This is a pus-filled uterus that occurs in bitches, more commonly over 6 years of age. It can only occur if the bitch has not had her uterus and ovaries removed – i.e. unspayed. Progesterone is a hormone that is released by the ovaries and can cause the uterus to produce a fluid lining. When the uterus is between seasons this fluid can accumulate and potentially become infected; this causes the accumulation of pus in the uterus. If the cervix is open (an open pyometra) this pus can leak out of the vagina and be seen as a foul-smelling vaginal discharge. If the cervix is closed (closed pyometra) the pus can build up and the infection can spread to other parts of the body, causing a severe illness. Occasionally the uterus can rupture, which is a life-threatening emergency that requires immediate surgery. Dogs may become depressed, develop vomiting and diarrhoea, they are often off food and they may drink and urinate more. Dogs with an open pyometra will have a vaginal discharge.

The diagnosis is often obvious if the pyometra is open. A closed pyometra may be felt when feeling the belly, although may require an ultrasound scan of the uterus to get a firm diagnosis. Many dogs may be dehydrated and septicaemic with this condition and so require aggressive intravenous fluid therapy and intravenous antibiotic treatment. Surgical treatment is required in the majority of cases to remove the uterus and ovaries – ovariohysterectomy (spaying). Medical treatment alone can be attempted in open pyometras but can be risky as it is not always effective and delaying surgery can be associated with a worse prognosis.

SENILITY

As dogs grow older we can begin to see signs that their mental health is deteriorating. Classic signs that owners may notice in their ageing dogs include anxiety, changes in sleep patterns, disorientation, loss of learned behaviours (e.g. start going to the loo inside) and loss of interaction with the owner. This has led to the condition being called Canine Dementia however it is more accurately known as Canine Cognitive Dysfunction.

Canine Cognitive Dysfunction is the result of gradual neuronal damage within the brain. All cells in the body produce potentially dangerous molecules known as free-radicals. Normally antioxidants within cells help to remove these metabolites but as we age fewer antioxidants are produced which allows free-radicals to damage neurons. This results in a gradual decline in mental health which can be distressing to see for owners.

What options do we have for managing Canine Cognitive Dysfunction?

Medication – Vitofylline® is a tablet which helps improve blood flow to the brain, and therefore it is used to improve overall demeanour in dogs as well as symptoms such as lethargy and dullness. Selgian® is a drug used to treat behavioural disorders, in particular canine dementia and separation anxiety. It works by promoting the “feel good” hormone serotonin within the brain. Selgian® comes as a tablet and is given once daily.

Environmental enrichment – Providing a varied and mentally stimulating environment can help reduce the progression of canine cognitive dysfunction by ensuring the brain is kept active. This can include alternating toys at home, buying new toys, taking your dog on different walking routes and playing problem solving games (e.g. hide and seek).

Dietary supplements – There are a range of dietary supplements available to assist us in managing canine cognitive dysfunction. Firstly we can provide a varied diet to provide further mental stimulation, for example alternating different flavours and adding vegetables to the diet. Essential fatty-acid supplements and vitamin supplements can help neurons to repair themselves and function healthily. There are now also some prescription ‘brain’ diets formulated to contain all the necessary vitamins, minerals and supplements to support healthy brain function.

Antioxidant supplements – As mentioned previously, one of the main reasons for senility in dogs is the fact that the antioxidant mechanisms that usually prevent neuronal damage begin to fail. Therefore by supplementing older patients with antioxidant medication we may be able to help reduce the progression of neuronal damage. Aktivait® is an antioxidant which can help some patients with canine cognitive dysfunction.

VESTIBULAR DISEASE

A potentially distressing condition for both dog and owner, vestibular disease is a neurological condition that many geriatric dogs present with. The correct title for this condition is ‘Idiopathic acute peripheral vestibular syndrome’ which essentially means that the disease can appear very suddenly and that we are often unable to find an exact cause for the signs that the dog presents with.

The vestibular system is a combination of structures and nerves that travel from the inner ear to the brain which allows us to balance and sense gravity. When the vestibular system does not function correctly we see signs that can be attributed to a loss in the ability to balance such as rolling, falling over, nausea, a head-tilt and flickering of the eyes. Many owners often describe their dogs “acting drunk” at home due to the staggering, falling over and nausea that can come with vestibular disease. Although many geriatric dogs present with the idiopathic form of the disease (aka we cannot find a specific cause) there are other

underlying problems that can cause the vestibular system to function abnormally for example trauma to the head or inner ear, cancer and ingestion of toxic substances. Therefore it is important that a veterinary surgeon assess all dogs presenting with these signs to determine if there is an underlying cause, or if the dog is simply presenting with the geriatric form. If an underlying problem is found to be causing the clinical signs then treating that problem will hopefully resolve the problem.

Geriatric vestibular disease will frequently resolve spontaneously after a period of weeks so treatment involves supporting the dog until the condition fades. Treating these dogs with anti-nausea medication can help the dog to feel better and to ensure they continue eating and drinking as normal. Severely affected dogs may benefit from short-term hospitalisation. At home it is important to keep these dogs calm and minimise stress, as well as helping the dog outside to go to the loo frequently. These dogs may need some help moving around due to their inability to balance correctly.

With supportive care these dogs will often return to normal after a few weeks, however the head-tilt can be permanent in some cases. It is also important for owners to be aware that the condition can recur again in the future so we need to keep a close eye on these dogs for any signs of the vestibular disease returning, at which point we can implement supportive care earlier.

END OF LIFE DECISIONS

No-one likes to think about the day that their pet will be put to sleep. Many often hope that their elderly pet will gently pass away in their sleep one night without the dreaded decision and vet visit. Unfortunately, in reality most pets will suffer to some extent before they die naturally. Knowing the details and options available before the time comes to make a decision will make that upsetting time just a little bit easier for you and hopefully limit any distress to your pet.

DECIDING ON THE RIGHT TIME

Making the decision to euthanase a much-loved pet is always traumatic. If they are elderly and have suddenly deteriorated, for example they are no longer able to get up, they are in significant pain, they are struggling to breath or they have a condition which requires surgery to maintain quality of life, then many people feel there is little decision to make. However, even in these cases it can be a difficult decision as modern veterinary medicine often provides options such as surgery, medications or trials of pain killers. Never feel that your vet is trying to lead you down one path or another; it is our duty to provide you with all the options, the details of what is involved and the potential outcomes. One option never suits every case, you may not wish your pet to go through surgery or have medications, while someone else may. The individual nature of your pet is incredibly important; some are relaxed and happy to be left with us in the practice, while others get very stressed as soon as they arrive in the car park.

No-one knows your pet as well as you do and so you are best placed to decide what is right for you and your pet. We are happy to give as much or as little guidance as you wish. Some people ask us "what would you do if he/she were yours" which we are happy to answer but please remember that we are in the fortunate position of being present throughout any procedure being performed and often our pets are very comfortable in the practice environment. If surgery is an option then there is always the possibility that your pet may not survive or that we contact you to report that the problem is inoperable and that it would be kinder not to wake them up from the anaesthetic. If you definitely want to be present with your pet at the end, then anaesthesia and surgery is probably not a good option for you.

It is important never to feel pressurised into making a rushed decision; if you want more time to consider your options then please ask for this. Your decision becomes even harder when your pet is gradually deteriorating and palliative care is the only option. This can occur with advanced osteoarthritis, kidney, liver or heart disease or with cancer where surgery or chemotherapy is not appropriate. We often see cases where change is so slow that one day is very like the one before and the one before that. If people could look into the future and see how their pet will be in a month's time, they would not want them to deteriorate to that stage. However, without a sudden change in their condition it can be very difficult to decide when is the right time. There is no easy answer to this, and again it must be remembered that every pet is individual, and that some cope better than others. Do not expect your pet to cry or howl if they are in pain, some simply become withdrawn and subdued.

Questions worth asking yourself are:

- Is he/she still capable of and enjoying going for a walk?
- Are they still eating well and getting excited when food is presented?
- Are they still pleased to see you if you have been out of the house for a period?
- Are they interacting with you and/or other pets?
- Are they showing obvious signs of pain and if so can this be controlled with painkillers?
- Ultimately, are they taking enjoyment from life or simply 'going through the motions', i.e. do they have quality of life? In veterinary medicine, we place quality of life as a priority over quantity of life.

If you find yourself in the situation of deciding what to do next, remember you are not alone and that there is no 'right or wrong' decision. Discuss it with family and friends. It is important that the whole family comes to a mutual decision where there will be no regrets or accusations later. As vets we will support and guide you as much as we are able. Keep asking us if other options exist; there may be another pain killer not yet tried. Please ask for our advice if you want it. Some people find that making an appointment to discuss euthanasia face to face can help them reach a decision they are comfortable with. It is worth remembering that these situations can be much worse for you than for them. They have no idea that time is limited and are just enjoying life to the best of their abilities.

Be aware that a vet is available at the end of the phone throughout the night. We are very happy to give advice if your pet has suddenly deteriorated, and if the time has come then we can either come to your house or arrange to meet you at Oakham Veterinary Hospital. You will never be asked to travel to a different site.

LOCATION

Some people would rather have their pet put to sleep in their own environment at home, whereas others choose to bring their pet to the practice. If you would rather not remember your pet being put to sleep at home, but find the practice building too clinical then we can come out to you in the car park. Some pets are more relaxed if they stay on their bed in the car, and if the weather is nice then finding a quiet spot on the grass in front of or behind the practice building can be very peaceful.

We will always try to accommodate a request for a home visit whenever possible. However, if this is out of hours and we are operating or monitoring a critical patient then we may not be able to leave the premises immediately. If your pet has a chronic condition and you would like a specific vet to visit, then arranging the visit a few days in advance gives the best chance of this being organised. This is of course not always possible if your pet's condition has suddenly changed.

THE EUTHANASIA PROCEDURE

Once you have decided that euthanasia is the best option for your pet, it can feel like a relief. However, no matter how prepared you feel, when the time comes it will be an emotional and upsetting experience. If you would rather not be present at the time then be assured that your pet will be treated with dignity and compassion. A vet or nurse will be present to reassure your pet throughout.

The injection used is an overdose of an anaesthetic so your pet will feel like they are going to sleep. If this is given intravenously then it acts within seconds giving your pet a peaceful and dignified end. A small section of hair is clipped from your pet's front leg and spirit used to highlight the vein. The clippers can sound loud and the spirit can feel cold - if your pet finds this upsetting then we will give them adequate time to settle before continuing. Some respond to the distraction of food while others simply seek some reassurance.

Your nurse will raise your pet's vein by putting pressure around their leg. Some vets then inject straight into the vein while others prefer to place an intravenous catheter first. If the vein is too small or fragile to take the injection then sometimes the other front leg is used instead.

If your pet gets too stressed by the procedure or their veins cannot take the injection then a sedative can be given into the muscle. The injection is quick and any associated discomfort is short-lived. You will then be left with your pet so that they have the best conditions to relax and become sleepy. The sedative can cause your pet's blood pressure to drop - if this makes their vein too small then the euthanasia injection can be given into the belly. This is painless and although it takes significantly longer to have an effect than if given intravenously, the priority is keeping the procedure as stress-free as possible for your pet.

Once your pet has lost consciousness it is not uncommon for them to 'gasp' or 'twitch'. This is a normal involuntary reflex which can continue for a minute or two; your pet will not be aware that it is happening but it can be upsetting for you if you are unaware it can occur. Their eyes usually remain open and their bladder sometimes empties.

Please take every opportunity to hold, stroke and speak to your pet throughout the procedure, if you wish to. If your pet gets so distressed that he or she becomes aggressive then every effort will be made to avoid using a muzzle. They are however sometimes necessary for the safety of everyone involved.

Once your vet has listened for a heart beat and confirmed that your pet has passed away, we will then leave the room to give you a chance to say a final goodbye. Take as long as you need at this point, you should never be rushed. Once you are ready, we will let you out the side door so you do not have to pass by other people in the waiting room. Do not be embarrassed at showing your emotions; we expect you to feel upset.

CREMATION

At the start of the consultation your vet will ask you to sign a form to confirm that you give your consent. One of the questions on the form will be whether you want your pet to be buried at home or cremated. We can organise a communal or an individual cremation for you. Some people find photos and memories are the best ways to remember your pet, others consider an individual cremation to be more helpful. If you wish an individual cremation then your pet's ashes will either be returned in a pot for scattering or in a sealed wooden casket with an engraving of your pet's name.

It is easier for you if you have decided which suits you best prior to the consult but if it was unexpected or you haven't made up your mind yet then you can always contact us the following day with your decision. If we have visited you at home and you wish to have a cremation then we will take your pet with us back to the practice. You will be given the same opportunity to spend some time saying goodbye that you would have if your pet was put to sleep at the practice. We will contact you once your pet's ashes are available for collection, if you requested an individual cremation.

We have used Lawnhill Pet Crematorium for some years and have built up a good relationship with this family-run business. One of our vets has visited their premises personally and been impressed with their facilities and more importantly their attitude and compassion. They guarantee that only the ashes of your pet are returned following an individual cremation. They are very happy for you to visit yourself with your pet for cremation and have a small wooden chalet where you can spend some time to say goodbye. There is a peaceful area with a pond and a small wood where you can choose to scatter your pet's ashes. Alternatively, they will collect your pet from our practice. More details and photos can be found at: www.lawnhillpetcrematorium.co.uk

BEREAVEMENT

Do not underestimate how upsetting losing your pet can be. They are a member of your family and are always greatly missed. Consider taking some time off work but remember that your house will feel very different without your pet's presence. Other pets in the household can also be affected. It is unknown whether letting them see and smell your pet following euthanasia helps them, but if you think this would then please do not hesitate to ask.

People cope with losing a pet in different ways; it can help to talk to family and friends about it. Unfortunately, people who do not own a pet sometimes struggle to appreciate how traumatising the event can be. If it would help to speak to your vet afterwards then this will always be arranged. You may have questions about your pet's condition or the experience itself which you did not think to ask at the time.

If you find you are struggling to come to terms with your loss then the Blue Cross provide a telephone helpline and email service manned by trained volunteers who have personally experienced pet bereavement (the Pet Bereavement Support Service, PBSS). More details can be found at: www.bluecross.org.uk

