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A World of Pain **Linda Aronson, DVM**

My husband's chiropractor sent him a newsletter the other day, and the first sentence said "You can (literally) lose your mind from chronic pain." It's hard to believe there was a time when egocentric humans believed that animals can't feel pain. When I was in vet school, it was commonly held that if you treated an animal for pain it would be more active and undo surgical repairs, dehiscence sutures and delay healing. Now we know quite the opposite is true and so rapid was the turn-around that within 15 years veterinarians lost their licenses for malpractice when they spayed bitches and did not treat for postoperative pain. Chronic pain diminishes the quality of life, restricting a dog's ability to play or work. The chiropractor's article also states that pain reduces brain volume and function and increases brain cell loss 10 to 20 times that of normal aging. In our dogs poor quality of life often results in euthanasia. So how can we address pain in animals?

I'll know it when I see it: Veterinary medicine has long struggled with various scales and parameters to measure and monitor pain. One good rule of thumb is that if a human would find something painful a dog will too. Still, we know that humans have a wide range of pain thresholds that can vary by as much as five fold between individuals. Humans and animals may not perceive pain when they are otherwise occupied – during battle or an intense sporting activity when the adrenaline is flowing - but afterward the pain will be no less intense. At the other end of the spectrum are the drama queens that cry out in anticipation of potentially painful events.

Do dogs see pain as a sign of weakness and try to avoid it in a dog eat dog world? Certainly dogs are often pretty stoic, especially when it comes to chronic pain. Keeping a diary, or mental notes on your dog's activity level; heat seeking behaviors; restlessness – trying to get comfortable; ability to sleep comfortably; avoidance of stairs and other activities can all be helpful in determining pain level. Sometimes it will be seen as a furrowed brow, a troubled look – the pained expression.

Chronic pain is often dismissed as normal aging; it can have a gradual onset and we remain unaware of the suffering the dog experiences. A thorough



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veterinary exam, gait analysis and X-rays for the bony changes of arthritis can help us gain perspective on what we are dealing with. Sometimes we can try a pain-killer and see if there is a change in the dog's attitude and activity. Neurological pain can often go unnoticed. There is good evidence that dogs can get headaches and certain activities can precipitate them. As in humans the body can experience pain memory. One form of this is phantom limb pain where the animal experiences pain even though the body part has been removed. In dogs this may also cause obsessive licking and chewing at areas of the body, especially paws, long after the injury has resolved. After surgery, dogs with good pain control sleep, rest and recover far faster than those that are in pain. Giving pain relief before and during surgery will provide better pain control after surgery and allow us to keep the dog comfortable with lower doses of pain killers. Acute injury however, may require very high doses of pain-killers by comparison.

Pharmaceuticals: For acute pain and surgical pain drugs will often be our best choice for rapid onset pain relief. These drugs fall into two basic categories NSAIDs (non-steroidal anti-inflammatory drugs) and narcotics.

NSAIDs have a rather bad rap among dog owners, and while they can cause serious side-effects and even death in some individuals, it must be remembered that they help huge numbers of dogs safely. The patients receiving them also tend to be old and/or debilitated. Of the older OTC NSAIDs only aspirin should be considered for use in dogs. The biggest downside of aspirin is that it can cause gastric ulcers quite easily. Buffered aspirin may reduce the risk somewhat. Also be aware that herbal medicines containing white willow bark will potentiate the risk of using aspirin as it contains aspirin like substances. Less frequently aspirin can cause liver and kidney problems which are more often associated with the newer Cox-2 inhibitors.

Cox-2 inhibitors have fewer deleterious effects on the gastrointestinal tract, but when they do cause problems they tend to be more severe.

Unfortunately, it is impossible to determine which dogs will experience problems. Rimadyl (carprofen) is the drug most commonly associated with causing liver damage, and liver enzymes should be monitored in dogs



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receiving Rimadyl chronically. In practice this doesn't usually happen, as the drug's biggest asset over the other drugs in the class is that it is cheaper.

For arthritis, Deramaxx (deracoxib) is probably the most effective. Some individuals seem to be at higher risk for gastric bleeding on this drug. Previcox (firocoxib) may be more effective for some dogs. The other Cox-2 inhibitor commonly used is Metacam (meloxicam). The veterinary drug is prescribed as a honey flavored liquid. The generic human form of the drug is very cheap; the biggest downside is achieving the correct dose – a 50 lb dog needs about 1/3rd of an unscored, small pill. Liquid Metacam is most easily dosed at the correct dosage. Be careful not to overdose your dog as it will make negative side effects more likely. Corticosteroids are anti-inflammatory but do not provide pain relief. They also cause the breakdown of cartilage. They may be injected into severely damaged arthritic joints in which little to no cartilage remains in order to provide some quality of life for a severely disabled animal.

Narcotics can provide effective pain control. Addiction in the dog is not a concern, but may be a consideration when it comes to sending these drugs, most of which are controlled substances, home. For this reason they are more likely to be administered in the veterinary hospital. Another downside is short duration of action for many drugs in this class, meaning that frequent dosing is needed. Some drugs are produced in combination with NSAIDs – Vicodin (hydrocodone/acetaminophen), codeine/aspirin combinations.

Dogs will sometimes be sent home after surgery with fentanyl patches. The narcotic is absorbed through hairless skin providing a constant pain relief. Most dogs will leave these alone, but care must be taken handling the patches and to prevent the dog ingesting them. Obviously small children or other pets swallowing one would also be at risk. Tramadol is an opiate agonist, but not a narcotic. It is not a controlled substance, but there is still the potential for human abuse. It can be an effective treatment for pain alone or in combination with other drugs. Gabapentin is an anti-seizure drug that is effective against extreme pain, such as that of cancer patients or in neurological conditions. Amitriptyline is a tricyclic antidepressant, but it may



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produce some of its effect by ameliorating pain and has been used for this purpose. It may explain why some dogs with acral lick syndrome (chronic licking of the paws) respond well to this medication if the cause is actually pain memory rather than an anxiety disorder.

Several **herbs** can reduce inflammation and may be as effective as some of the milder NSAIDs, these would include willowbark, bromelain, boswellia, devils' claw, ginger and curcumin/turmeric. Like the NSAIDs they mostly act on prostaglandin levels and care should be used if the dog is also receiving an NSAID. These herbs are often found in combination preparations for treating arthritis. Other frequently used ingredients include glucosamine, chondroitin, cetyl myristoleate, shark cartilage, green lipped muscle, etc. These are generally safe. Glucosamine may induce insulin resistance so should not be used in diabetic dogs without consulting your veterinarian. In my experience you may need to experiment with various products to find one that works well for your particular dog. Chinese herbal remedies for pain may be very useful, but beyond the scope of this article.

Thinking outside the box: Other treatments can also provide considerable pain relief and whether you worry about side-effects, don't like drugs or they aren't effective for your dog it is worth exploring alternatives especially when your dog has a chronic condition.

Acupuncture has long proven its worth in the control of acute, chronic and phantom pain. Chiropractic adjustment can be used too. Both modalities may work in conjunction with other pain treatments or alone to provide relief.

Laser treatment, cold and infrared, is increasingly common as a treatment for pain. It may take several appointments before you see significant improvement, while in other cases relief can be immediate. Don't overlook the obvious either. Dogs with arthritis and other chronic conditions may receive huge benefits from simply shedding some of the extra weight that puts a strain on defective joints. Massage can be a wonderful bonding experience for you and your dog, and the movements can help unknot and rearrange painful muscles and joints. Ice packs can be very helpful for acute injuries while heat is soothing for chronic pain. Orthopedic beds can



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be helpful too, provided your dog is willing to try them. Make sure they're not so deep and cushy the dog has problems getting himself out.

We owe it to our dogs to keep their lives as free of pain as we possibly can.