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Is Your Greyhound in Pain?

This Greyhound's refusal to bear weight on the right rear leg is a possible display of guarding behavior in response to pain. (In addition, the toes on the right rear foot are not extended.)

There are many new pain relievers available for Greyhounds ("The Pill and the Patch: Narcotic Pain Relievers for Your Greyhound," Fall 2002 *CG*) and more will be arriving on the market soon. But how can you tell when your Greyhound is in pain? What is pain? Are there different types and levels of pain? This article answers these questions so you can help your Greyhound lead a pain-free life.

Pain is a physiological condition involving nerve receptors, nerves, and the brain. The nerve receptor is activated by a stimulus. The receptor sends a signal via the nerve to the brain that a painful stimulus has occurred. The brain interprets the stimulus and responds accordingly.

Nerve receptors are present in most areas of the body. The receptor responds to heat, trauma, and pressure. When stimulated, the receptor releases compounds into the tissues, causing swelling or redness. The receptor communicates with the nerve, indicating that it has been activated.

The nerve transmits the signal to the brain. The area of the brain that interprets the pain response is called the "dorsal horn." The dorsal horn cells receive all pain stimulation, interpret the stimulation, and form the appropriate response. The dorsal horn cells also become sensitized after pain stimulation. This process is called "winding-up," which means even non-painful stimuli such as a light touch or tepid temperatures are interpreted as painful. This is why after a painful stimulation you do not want any one to touch the sensitive area.

The stimulated dorsal horn cells send a response to the stimulus. Responses could include moving, running, holding up a leg, or biting. Once the receptor ceases to be stimulated, the "winding-up" stops and no further response is necessary. The entire

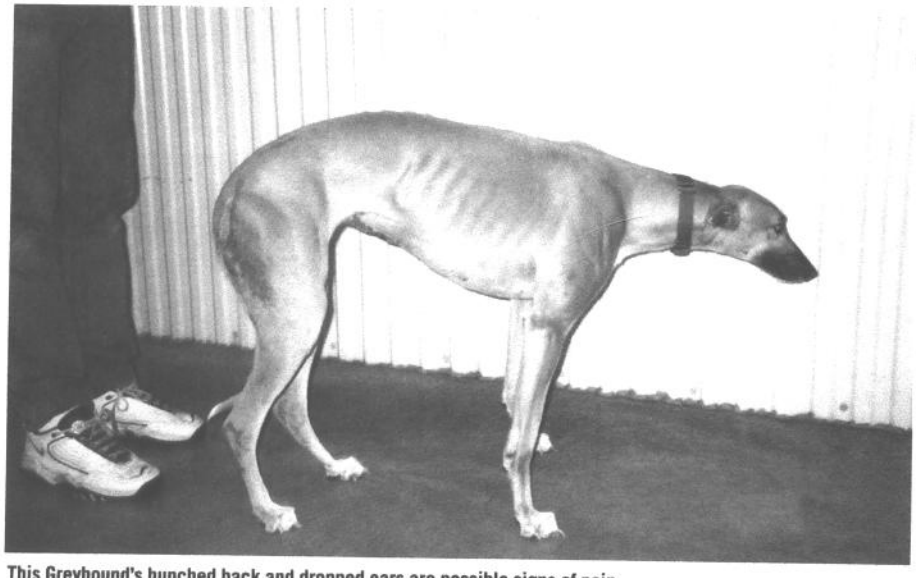
process from stimulation to response takes approximately one-hundredth of a second.

Pain can be either acute or chronic. Acute pain is a response to an injury or surgery. Chronic pain is a disease. Whether acute or chronic, pain is categorized as mild, mild to moderate, moderate to severe, or severe. Mild pain is associated with conditions such as superficial lacerations, urine scald, or eyelid surgeries. Mild to moderate pain is characteristic of tooth extractions, spay or neuter, and ear hematoma (bruising, blood clotted within tissue). Moderate to severe pain occurs with localized burns, toe amputation, and eye ulcers. Severe pain is associated with pancreatitis, neck disc surgery, and surgery of the chest. Chronic pain incidents are present with degenerative diseases such as arthritis, disc disease, or persistent infection. Chronic pain is more serious than acute pain, because chronic pain will modify the Greyhound's internal reflexes to cause a decrease in kidney and heart function. Decreased blood flow to the kidney, a reduction in the heart's ability to pump blood, and a decreased ability to supply oxygen where it is needed can contribute over time to a general failure of the Greyhound's organs.

How does your Greyhound tell you he is in pain? He may give you many different signals. Obviously, surgery or an acute injury will induce a pain response and should be treated accordingly. If these events have not occurred, what signs will be evident? There are ten signs of acute or chronic pain. Any of these signs alone or in combination may indicate your Greyhound is in pain.

The first two indications of pain are *vocalization* and *facial expression*. Mournful cries, groans, and anxious whining may indicate discomfort. The facial features may indicate a mournful expression, ears may be in the dropped position, or the dog may have a fixed stare.

The third and fourth indications of pain are *body posture* and *guarding*. A dog in pain will often display a hunched back or lay on his side. Guarding includes protecting the painful area, licking or chewing the area, and limping.



This Greyhound's hunched back and dropped ears are possible signs of pain.

The fifth and sixth indicators are *modifications of activity and attitude*. The Greyhound may become more restless, display reduced mobility, or tremble. His normally pleasant attitude may become aggressive. Where he was confident, he may be fearful.

The seventh and eighth indicators are *appetite* and *house training*. A reduced appetite is very common in a Greyhound who is experiencing pain. The Greyhound may show a 30 to 50 percent decrease in food consumption, causing a loss of 5 to 10 percent of his body weight. The Greyhound may also begin urinating or defecating in the house after being perfectly housebroken for years. This new behavior may indicate a painful condition that needs treatment.

The last two indicators are *grooming* and *response to palpation*. Most Greyhounds in pain — especially chronic pain — will not groom themselves. Their coat becomes dull and matted, and hair loss may occur. The Greyhound appears poorly groomed and unkempt. Finally, response to palpation means that an area that is touched can elicit a pain response. This response could be crying, running, or biting. These responses are more common with an acute injury than a chronic injury.

Pain is a very complex yet simple response. Each Greyhound may interpret a painful stimulus differently. What may be a moderately to severely painful stimulus to one Greyhound may be a mild to moderate stimulus to another. Medications are given based on pain indicators, response to medications, and cost of the medications. Providing a pain-free life for your Greyhound is imperative. Consult your veterinarian with questions about pain and current treatment options. Remember that no medication is without side effects, and each individual Greyhound may respond better to one medication than another. ■

Dr. Jim Bader is a CG regular contributor.

References

McKelvey, Diane and K. Wayne Hollingshead. *Small Animal Anesthesia and Analgesia*. St. Louis: Mosby. 2000.

Thurmon, John, William J. Tranquilli, G. John Benson, and William V. Lumb. *Lumb and Jones Veterinary Anesthesia*. Baltimore: Williams and Williams. 1996.