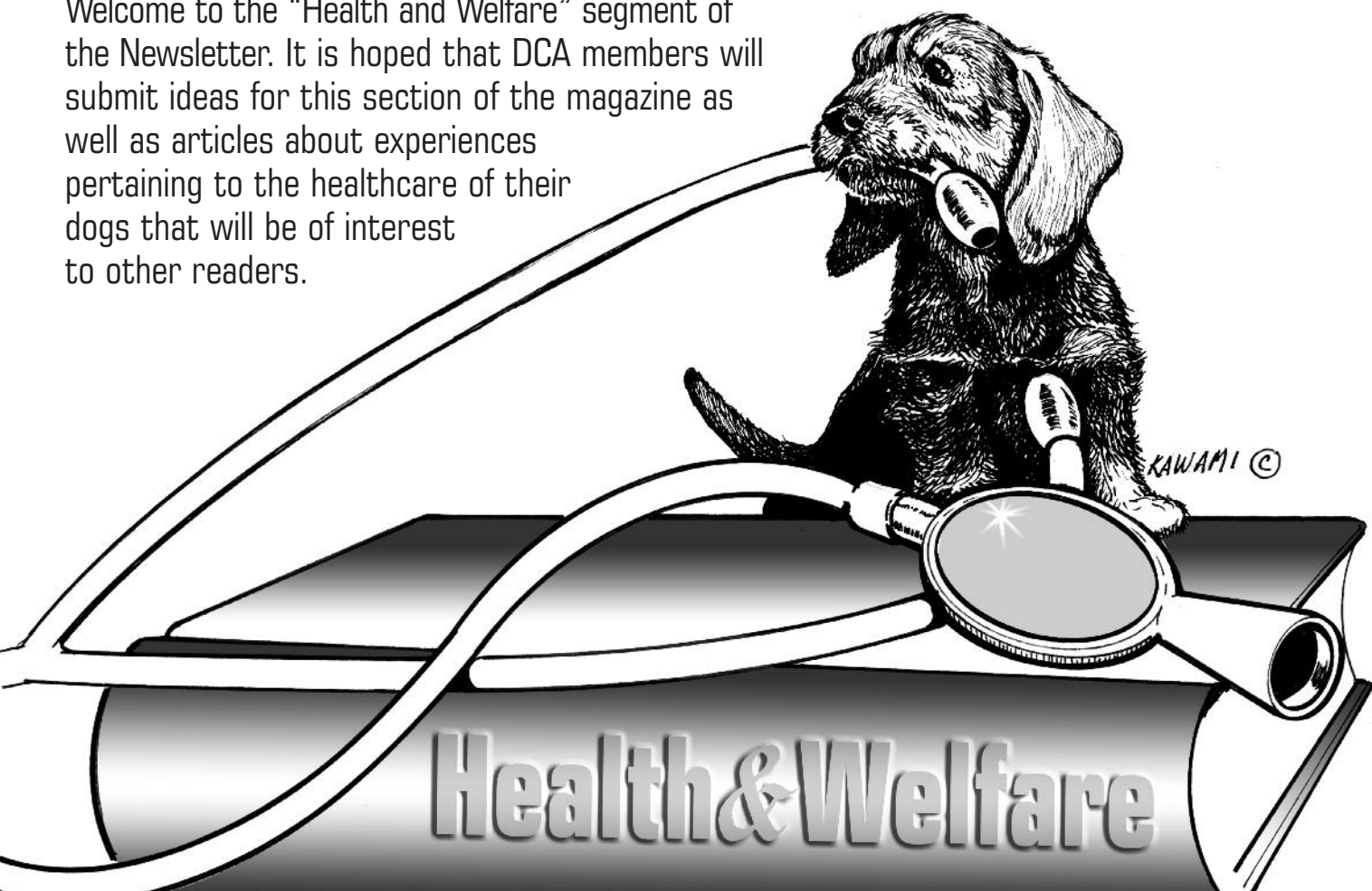


Welcome to the "Health and Welfare" segment of the Newsletter. It is hoped that DCA members will submit ideas for this section of the magazine as well as articles about experiences pertaining to the healthcare of their dogs that will be of interest to other readers.



Please send ideas, suggestions and articles to: Charlotte Borghardt, DCA Health & Welfare Committee, P.O. Box 1126, Sierra Vista, AZ 85636-1126, teckelhofaz@yahoo.com

ANSWERS ABOUT IVDD SURGERY

written for *Dodgerslist*, June 2011 by Dr. Andrew Isaacs, DVM, ACVIM (Neurology), reprinted with permission from *Dodgerslist* and Dr. Isaacs

INDICATORS FOR SURGERY.

Are there certain IVDD or other conditions of the spine that make a dog not a surgical candidate?

There is a balance between the risk associated with surgery versus the benefit gained if all goes well. With any surgery there is the potential risk that the patient may be permanently worse after the procedure. The risk is greater with the intervertebral disk disease that is severe, at multiple sites and chronic compared with mild, single site, acute. Myelomalacia is a situation where the benefit of surgery is highly questionable and a dog is not a good surgical candidate.

With what symptoms is a dog not ready to be considered as a surgical candidate?

The decision to pursue surgery depends on multiple variables. Any dog can be managed medically. However, typically the decision to

treat medically versus surgically is dependent upon the risk:benefit ratio. If the same outcome can be obtained medically versus surgically, then it is wise to treat medically. On the other hand, if there is a better outcome associated with surgery versus medical management, surgery warrants consideration. Again, this does not mean that medical management cannot be pursued, it just may not be ideal. In general, situations where surgery warrants consideration include dogs that have lost motor function (plegic) and have questionable to no deep pain sensation.

If following strict conservative treatment, what are the indicators for considering surgery?

Dogs that do not have deep pain sensation or deteriorate to the point where they lose deep pain sensation ideally benefit immediately from surgery versus medical management. Also, if the clinical signs deteriorate in spite of strict medical management or there is no improvement after 2-4 weeks, surgery warrants consideration.

Are there any indicators that would require emergency IVDD surgery (e.g. Schiff-Sherrington symptoms)?

Schiff-Sherrington syndrome (poor/flaccid muscle tone to pelvic limbs and increased

extensor tone to thoracic limbs) is indicative of an acute spinal cord injury. However, deep pain sensation can remain intact with dogs with Schiff-Sherrington syndrome. Therefore, dogs that do not have deep pain sensation or deteriorate to the point where they lose deep pain sensation ideally benefit immediately from surgery versus medical management.

If surgery is not a financial option for the owner, what treatment options should the owner follow?

Steroid blasting vs. anti-inflammatory dose vs. NSAID? Currently there is a multi-center study investigating the potential benefit of "steroid blasting". There have not been any clinical studies demonstrating a statistically significant clinical benefit from "Steroid blasting". Some veterinarians will use anti-inflammatory doses of steroids, but this too has not been documented in the scientific literature to be of benefit. The use of NSAID's is also of questionable benefit.

How long is too long to be on a Corticosteroid to get swelling and pain down?

It really depends on the dose. At the higher end of the dose there is a risk of developing GI tract side effects. Also, the use of steroids in dogs receiving or having recently received NSAID's increases the risk for GI tract side effects.

How long to try rest and meds?

Typically, after 2-4 weeks the chance of seeing benefit from medical management starts to decline. However, as long as the dog can be managed appropriately (pain management and urinary bladder) it is worth seeing where things are at in 2 months.

Corticosteroids vs NSAIDs?

Personally, I will use anti-inflammatory doses of steroids in cases where surgery is warranted but not financially feasible. The dose and course of steroids vary depending on the response. Some dogs respond well and I am able to taper completely off of the steroids. The goal is to find the lowest effective dose required to help with the neurological status.

Also, just as important as steroids, if not more, is strictly activity restriction!

Why is euthanasia not an option for disc disease?

Euthanasia is a difficult topic to discuss. Ultimately, the decision comes down to quality of life. Most people agree that euthanasia is something to consider when a companion animal has a poor quality of life. The difficulty arises because different people have different perceptions of when a poor quality of life is reached. For dogs with intervertebral disc disease, there is the initial perception that if a dog cannot walk or voluntarily urinate it has a poor quality of life. However, for the owner of a small breed dog, if armed with the knowledge to care for their dog, there is the potential for an excellent quality of life. Euthanasia should never be considered before all other avenues have been pursued.

Why is euthanasia necessary with Myelomalacia?

Two situations where euthanasia is strongly advised are intractable pain that is not responsive to any type of treatment and ascending myelomalacia (if the myelomalacia ascends, respiratory function is compromised). Euthanasia (although a hard decision) is in the best interest of the dog.

Do you believe that a dog's propensity to develop myelomalacia is impacted on whether a dog undergoes surgery?

There is a good chance that the surgery helps decrease the likelihood of myelomalacia. I have appreciated a greater number of dogs presenting with myelomalacia with a history of aspirin therapy. Therefore, it is important to not use aspirin for the treatment of pain in dogs predisposed to having intervertebral disc disease.

How critical is it to choose between a general DVM vet that does surgery vs a board certified veterinarian?

Board certification is a sign that certain training requirements have been met. There is a greater degree of consistency with a board-certified veterinarian versus general DVMs in training and expertise.

Neuro vs. ortho?

The two categories of board-certified specialists that typically perform neurosurgical procedures are either board certified neurologists (Diplomate ACVIM(Neurology)) or board-certified surgeons (Diplomate ACVS). Board-certification is achieved through a three year residency training program that was preceded by a one year rotating internship after graduation from a veterinary college. There is a degree of variability to every residency training program for both neurologists and surgeons. Therefore, it all depends on the training program as to the comfort level the specialist has performing neurosurgical procedures. In general, the more neurosurgical procedures a specialist performs the greater the competency. Typically, neurologists that perform neurosurgical procedures have a case load of only neurosurgical procedures.

University veterinary hospital vs. private board certified hospital?

There are board certified specialist at both universities and private practices. It is good to get the opinion of your general veterinarian about the differences in service offered by the two in your area.

Is there a good experience that nerve root signature pain could resolve with conservative treatment?

Pain due to nerve root compression can respond to medical treatment. However, if the degree of compression is severe enough and there is not a response to medical management surgery may warrant consideration.

In a non-technical manner what generally does the surgery seek to correct regarding the herniated disc, the spinal cord and possibly adjacent discs?

The Primary goal of surgery is to decompress the spinal cord (removal of herniated disk material within the spinal canal that is compressing the spinal cord). Not all of the disk material is removed with surgery – only the disk material within the spinal canal that is compressing the spinal cord is removed.

Are you a proponent of fenestration: pros and cons?

Fenestration is the removal of disk material from the intervertebral disk space (where it normally is and should be). Not all disk material is removed with fenestration. The concept of fenestration is to remove disk material that may herniate at a future date. In the veterinary literature it is not straightforward if fenestration is beneficial. I do not fenestrate in all cases but do feel there is benefit in certain situations.

When an owner first visits his dog post op, what might he expect to see?

An area around the incision is shaved to help prevent infection of the surgery site. In the center of the shaved area will be the incision. Typically, the incision will have skin staples or sutures visible to help hold the skin together while it is healing. Immediately after

surgery and for a couple of days pain medications (narcotics) are used to help keep the dog comfortable. The narcotics can cause the dog to be sedate, have a suppressed appetite and slow down defecation. The dog may also have an intravenous (IV) catheter to help with the administration of drugs and make sure the dog gets enough fluids to keep hydrated.

Sometime, the dog's neurological status deteriorates temporarily due to the irritation associated with the surgical procedure. This is not anything to be overly concerned about until 2 – 4 weeks post-operatively. If the dog is not able to voluntarily urinate there may be an indwelling urinary catheter to help keep the bladder decompressed.

Are owner visits recommended, beneficial?

The goal of performing the surgery is to allow the spinal cord to heal. If a dog gets too active immediately after surgery there is a potential for the spinal cord to get re-injured. Therefore, even though it is difficult for an owner not to visit, due to the chance of undoing all the benefits gained from surgery, I will typically not recommend visits for at least the first couple days. I never prohibit an owner from visiting, I just advise of the potential risk if the dog gets too excited and let the owner decide. In some situations I will ask an owner to visit if the dog is not interested in eating after weaning off the narcotics.

What caveats are there to surgery: anesthesia risks, surgical risks, guarantee of outcome?

Unfortunately, there is no guarantee with any surgery. Therefore, I will recommend surgery only if the risk associated with surgery is less than the risk of continuing with medical management. There is always a small risk the dog may not make it through anesthesia/surgery and is permanently worse or never improves. Because of this, an owner should never be told they have to do surgery. It is important to not be rushed into making the decision and have the opportunity to ask as many questions as needed. Surgery needs to be a decision an owner enters into recognizing the risk, but also recognizes the benefit. This way if something unforeseen occurs an owner can be comforted and at peace with the fact that the surgery was the right decision and they did all they could for the dog.

MEDICATIONS

What have you found to generally be effective medications/combinations for pain management?

Every patient is unique. Some dogs respond well to drugs that other dogs do not respond well to.

Is Diazepam considered an effective muscle relaxant?

In some dogs diazepam is enough. However, in other cases additional medications may be required.

Is there a danger with combining Metho-

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IVDD SURGERY

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carbamol and Tramadol as we have seen some vets not wanting to prescribe them together while others frequently do?

I do not typically use the two together due to a greater chance for too much sedation. However, if appropriate doses are utilized then concurrent therapy is not contraindicated.

Is there a danger in combining Tramadol and Gabapentin?

No, this combination is one that I utilize more than Methocarbamol/Tramadol.

How long should it take to see pain getting under control after medicated?

Medically managing pain associated with intervertebral disk disease is dependent on the amount of disk material that herniated and the location of the herniated disk material.

Therefore, it is difficult to have a standard answer.

At what point should the surgeon be advised pain is not under control to see if pain meds can be tweaked for dose, frequency or mix of drugs?

At any point, if an owner is concerned that their dog is painful they should notify their veterinarian.

Does pain hinder the healing process?

Yes, adequate pain management is important to the healing process.

What is the current thinking about pain being used as a means of keeping the dog from moving too much?

It is not appropriate to withhold pain medication to keep a dog inactive.

At what point when a disc problem appears is it prudent to begin use of stomach medications such as Pepcid AC or Sucralfate?

GI tract protectants (Pepcid, Sucralfate, Omeprazole, etc.) should be used concurrently whenever steroids are prescribed.

Also aspirin and other non-steroidal anti-inflammatories should not be used in conjunction with steroids.

CRATE REST AND PT

How long does it take the surgical procedures on bones to knit back together?

In general, bone can take up to 3-4 months to heal.

How long does it take surgery on muscle tissues to mend?

The soft tissue dissection associated with surgery typically takes 4-6 weeks to mend.

How long can it take for nerves to regenerate?

Nerve regeneration depends upon the degree of injury to the nerves. If the injury is severe enough the damage may be irreversible. On the other hand, if the injury is not too severe the nerves may not be permanently injured.

Typically, at 6 months most of the healing has plateaued, but some cases take up to several years.

If in post-op there is a lack of deep pain sensation, what is the longest period of time you have known dogs having return of neuro functions?

I have seen dogs take up to 5-6 months to regain deep pain sensation and know of other cases that have taken longer.

Do you or other specialists follow up a year after or longer to accumulate data?

I typically do not follow up at the 1 year time frame (primarily out of convenience to the owner). However, it would be nice to have a more consistent follow-up.

What effect might surgical swelling have on neuro functions?

Post-operatively a dog can be temporarily worse. This is due to inflammation and irritation associated with surgery.

Typically how long does it take the trauma of surgical swelling to subside?

In general, 2-4 weeks we will see the temporary inflammation and irritation resolve.

What is the typical order that neuro functions return?

A dog gets better in the exact opposite order that it developed problems. The ideal recovery will progress from no deep pain sensation to regaining sensation to slight motor function, to enough motor function to ambulate.

Why can't a time line be given for each to happen?

Unfortunately, no spinal cord injury is exactly alike. Therefore, even though the initial clinical signs may be similar to another dog that had a disk rupture, the healing process may take a different course.

During the post-op healing process why is crate rest prescribed and for how long?

Crate rest is important post-operatively to help prevent damage to the surgical site. If a dog gets too active bleeding can occur that leads to a hematoma (blood clot) compressing the spinal cord. Also, it takes 2-4 weeks for the rent/hole in the intervertebral disk to heal and seal over. So, if a dog gets too active post-operatively additional disk material can rupture and we are right back or worse than we were to begin with. Therefore, it is very important to keep your dog strictly confined for 2 weeks and then after rechecking with the surgeon at 2 weeks devising a plan to slowly reintroduce activity. Lifelong, there needs to be a lifestyle change to minimize activities that can put the dog at risk at a later date in life.

How does the physical activity of PT fit in with the concept of providing crate rest?

Physical therapy (PT) is performed in a controlled setting. Therefore, the activity is not high impact and does not run the risk of causing harm.

When can PT usually be started?

Some mild, low impact PT can start the day after surgery. Every dog's temperament is different and the PT has to be tailored to the individual and the degree of neurological deficits.

Why is PT ok, but not allowed for a dog to scoot around the house, sit on the couch or be harness and leash free at potty times?

PT is performed in a controlled setting. If not supervised, there is a risk of activity causing too much stress on the surgical site and causing harm.

What are some examples of post-op PT that an owner can do at home for the paralyzed dog or a dog that is walking?

The types of activities depend on the degree of neurological function. For dogs that are paraplegic (no motor function at all) passive range of motion and toe stimulation activities work well. If the dog is non-ambulatory paraparetic (motor function present, but not able to walk) standing with support and hydrotherapy can be added. If ambulatory paraparetic (wobbly but able to walk) additional activities like sit to stand and cavaletti rails can be utilized.

How to stay calm and know there is still hope even if the dog is not up and running in 5 days as promised.

Post-operatively, I will advise owners that I do not get concerned or discouraged until 2-4 weeks post-operatively. The status at 2-4 weeks sets the tone for the dog's recovery. At 2-4 weeks post-operatively, I hope to see some (but not complete) improvement. Sometimes the degree of improvement is dramatic and with others is only very mild. Regardless, as long as some improvement has occurred I am not concerned or discouraged. Before 2-4 weeks there has not been enough time for the spinal cord to heal and we have not allowed enough time to pass to see the benefit of surgery. Even if no improvement is noted by 4 weeks it is not hopeless, it is just not as likely. I also advise that at 2-4 weeks we are not seeing the end result of the healing process – this typically does not occur for 6-12 months and in some cases even longer.

If the dog never does regain ability to walk, what hope is there for any quality of life?

Every dog and dog owner are different. That being said, some dogs can live with not being able to walk and have an excellent quality of life (especially smaller breed dogs). If anything, it is usually harder on the owner than the dog. The dog does not have any way of knowing that things should be any different. However, as an owner it is hard to not feel bad for our dog's situation and have the mindset that they are suffering. With proper education and knowledge an owner's concerns and fears can be addressed thus allowing an informed decision to be made about their dog's quality of life and not one based on emotions alone.

At what point post-op is it time to consider whether money is better spent on additional PT or invest in a wheelchair?

If there has not been any improvement 4 weeks after surgery I would consider getting a wheelchair. It is important to recognize that the wheelchair itself can be modified to help with physical therapy and is not synonymous with giving up hope. When ordering a wheelchair there is typically a 2-3 week delay. With this in mind, if ordered 4 weeks post-operatively it will arrive 6-7 weeks post-operatively.

DISCHARGE DAY

Generally how many days post-op is usual for a dog to stay in the hospital for monitoring before released home?

This all depends on the neurological status, pain management and urinary bladder function, in conjunction with the owner's comfort level with providing at-home care. A typical range is 2-5 days depending on these variables. I will let an owner know when I am comfortable discharging the dog, but also let them know that this does not mean the dog has to go home if they do not feel comfortable providing at-home care.

What is being monitored at the hospital?

Neurological status, comfort level, urinary bladder status, surgical incision and maintaining adequate hydration and nutrition.

What are the determining factors for a dog to be able to be released from the hospital to go home?

This all depends on the neurological status, pain management and urinary bladder function, in conjunction with the owner's comfort level with providing at-home care. A typical range is 2-5 days depending on these variables, I will let an owner know when I am comfortable discharging the dog, but also let them know that this does not mean the dog has to go home if they do not feel comfortable providing at-home care.

When is it advisable for the dog to go home with a catheter?

With adequate medication and good client education most cases do not need to go home with an indwelling urinary catheter and the owners can manually express the urinary bladder. Occasionally, a dog is extremely difficult to express and the risk is outweighed by the benefit. It is extremely important to keep the urinary bladder decompressed to prevent permanent damage and dysfunction.

Therefore, if the urinary bladder cannot be manually expressed an indwelling urinary catheter may be an option your veterinarian chooses. Another option if unable to manually express the urinary bladder is intermittent catheterizations. This takes an owner that is willing, able and has been educated properly on the technique used to perform the catheterizations.

What are the pros and cons?

With an indwelling catheter, there is a greater risk of developing urinary tract infection the longer the catheter remains in place. Also if not monitored and cared for properly the catheter can become occluded/kinked and cause even greater problems.

How often does the dog's bladder need to be manually expressed and why is it important to do so?

Ideally, the urinary bladder should be expressed every 6 hours (within reason). An owner does not need to wake up in the middle of the night to express the bladder. Expression before bed and when waking up is sufficient. If left distended, the urinary bladder will not be able to function properly even after the spinal cord injury heals.



How will steroids affect the frequency of expression?

Steroids cause increased water loss through the kidneys. Therefore, a dog on steroids will have an increased volume of urine compared to a dog not on steroids thus require more frequent expression.

Is it "normal" for dogs to experience post-op discomfort during expression?

After surgery (even with pain medications) a dog can be sore when trying to express. Some dogs are more difficult to express than others and require more manual pressure. This increases the chance of causing discomfort. It is acceptable to have a dog somewhat irritated with manual expression, but the dog should not be placed in a situation that causes undue stress, excessive movement and pain. If an owner is concerned about this, they should contact their veterinarian.

What symptoms indicate a UTI?

Discolored, foul smelling, blood tinged urine and urinating small amounts (if able to voluntarily urinate) are signs suspicious for a UTI.

Why is it important to get this treated by the vet immediately?

A urinary tract infection can lead to more serious infections and problems if left untreated.

If the dog is coughing, gagging or hoarse from tracheitis due to the endotracheal tube, what treatment can soothe these symptoms?

If you notice these symptoms, it would be worth having a veterinarian examine the dog. Sometimes this can be the initial signs associated with aspiration pneumonia and it is best to identify as soon as possible.

How long is too long to wait for a bowel movement at home?

It all depends on the amount of food the dog is eating. Typically, if the dog has not defecated within two days of getting home and is eating well, it would be worth adding a teaspoon of plain canned pumpkin per day to the food (for a dachshund sized dog). It is also important to make sure the dog is adequately hydrated. Adding equal amounts of water as kibble will help with maintaining hydration. If 3 days go by, or the dog is acting uncomfortable sooner, it would be warranted to visit the veterinarian for an enema.

With stitches, when is it OK to use a harness?

It is OK as long as the harness is not rubbing heavily on them and the incision looks healthy.

When can bathing or water therapy be started?

After the staples/suture is removed by your veterinarian or earlier if the veterinarian OK's.

What are the indicators that healing is not taking place as it should with the incision?

Redness, swelling, hot and painful to the touch, and any discharge. It is not unusual for a seroma to form in some cases. A seroma is not an infection, it is an accumulation of serum under the skin. Most of the time with restricted activity and warm compresses, the seroma will resolve in a week or two. If any swelling is noted at the incision, it is warranted to have a veterinarian examine it.

Generally what kind of follow-up communications does the hospital do during early post-op release days?

Typically, they will call to check in a couple of days after discharge and then in 2 weeks for staple/suture removal.

Does the vet or the vet tech call?

This is variable depending on the clinic.

Is the owner supposed to call in with updates?

If any concerns or questions arise it is important to call. Otherwise it is dependent on the clinic.

PLEASE NOTE: You can ask ANY questions about IVDD to Dr. Isaacs and Dr. Galle at Dodgerslist Neuro Corner - <http://www.dodgerslist.com/neurocorner/answers/answers.html>