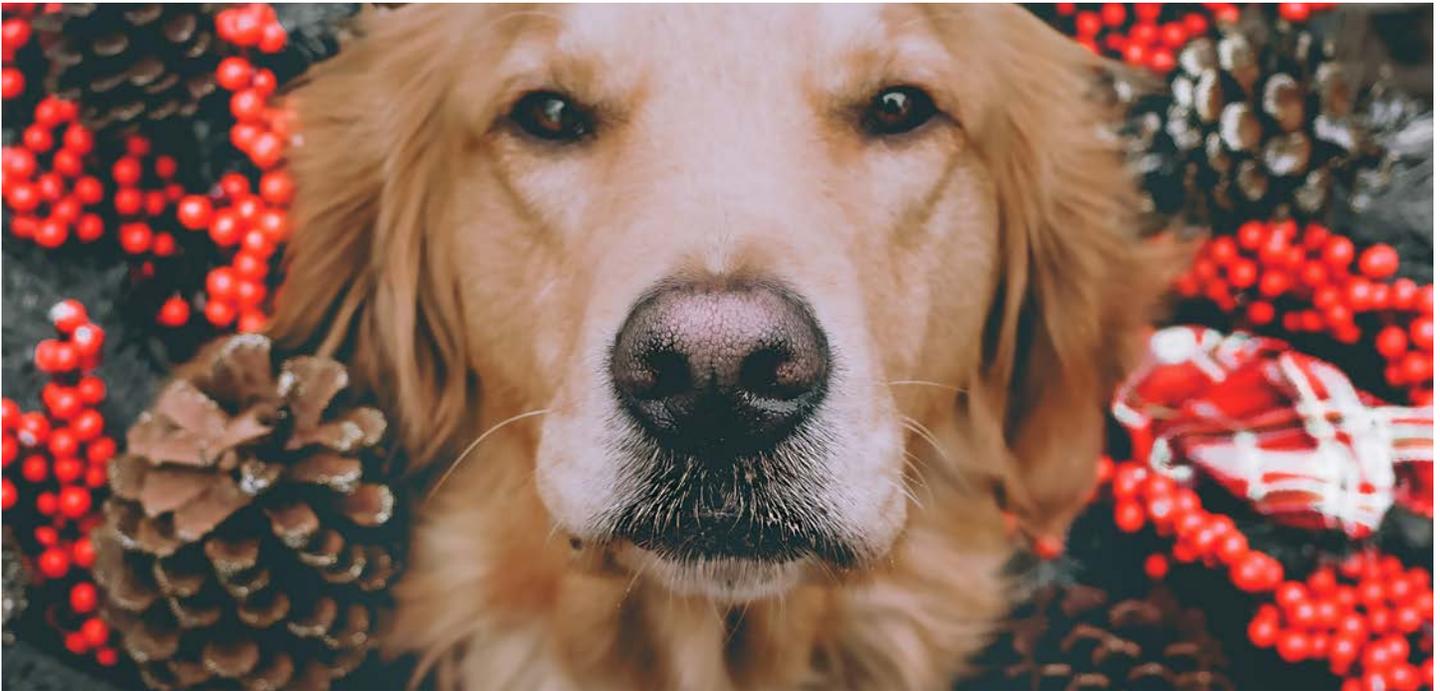


VETgirlbeat



UPCOMING WEBINARS

now including large animal, leadership and more training

[TAKE A LOOK](#)



VETGIRL BLOG

unique topics in quick-read format

[CHECK IT OUT](#)



PODCASTS

CE training on the run

[MORE INFO](#)

IN THIS ISSUE

Q4 WEBINAR HIGHLIGHTS // [03](#)

Wag more, bark less: Learning to find happiness // [03](#)

What's new in diabetic monitoring in dogs and cats? Continuous glucose monitoring and more // [07](#)

5 keys to treatment success: You can have success with your allergic patients by paying attention to these 5 steps // [14](#)

Improving patient care with equine serum amyloid A testing // [18](#)

Buzzwords describing pet foods: Deciphering fact from fiction to interpret mysterious market claims // [22](#)

TECH TIPS // [29](#)

Some unique and amazing tips and tricks we've learned and need to share

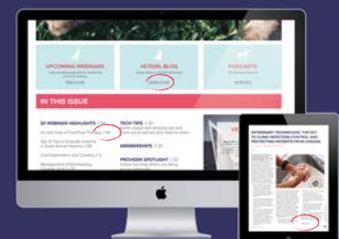
MEMBERSHIPS // [29](#)

UPCOMING WEBINARS // [30](#)

PROVIDER SPOTLIGHT // [30](#)

Check out what others are doing in our community

GET MORE OUT OF OUR NEWSLETTERS!



[LEARN MORE](#)

We know you're short on time. Check out our [live links](#) (noted and underlined in blue) throughout the newsletter to help get you where you want, and what you want, quickly.

SAVED YOU A SEAT.



OK, maybe there won't be a cat in your chair.

But you will get 16-20 hours of RACE-approved CE in our TED-talk like, case-based program, with topics ranging from surgery to anesthesia to emergency to derm to neuro! Plus you'll be treated right. Awesome speakers, relaxing evening events, free daycare and free swag!

AUGUST 5-8, 2021 | FAIRMONT HOTEL, CHICAGO IL

VETgirl 

vetgirlontherun.com

WAG MORE, BARK LESS: LEARNING TO FIND HAPPINESS

KARLENE BELYEY, MBA

VP of Wellness, Mission Veterinary Partners

In this [VETgirl](#) webinar entitled “[Wag more, bark less: Finding happiness at home and at work](#)”, [Karlene Belyea, MBA](#), reviews how to find happiness at work and at home. Studies show that expressing a positive attitude improves resilience, engagement, energy and profitability. The human brain is wired to be negative, but neuroscience has proven that anyone can become more positive with appropriate tools. Learn ways to handle negative people, diffuse conflict and create more personal and professional happiness in this online VETgirl webinar.

KEY HIGHLIGHTS

In the middle of a pandemic, it's tough to be happy. We are burned out, overwhelmed, exhausted, anxious, out of our comfort zones and depressed. So... what determines happiness, and can we become happier? According to Sonja Lyubomirsky, Ph. D. from the University of California Riverside, genetics determine 50% of our happiness. That means that if we grew up with happy parents, we're likely to be pretty happy, too. 10% of our happiness depends on external circumstances, so if you're sleeping in a nice bed rather than on the street, you're probably happier. The great part is that 40% of our happiness depends on our actions and thoughts. We can focus on impacting our own happiness using these strategies!

1 CONTROL YOUR THOUGHTS

Often, we say things like I'll be happy when... “I pay off my student loans,” “I buy a house,” “I get married,” “I find the perfect job,” etc. The happiness myth says: If we work hard and become successful, we will be happy. But the happiness truth is: If we are happy now, we are more successful.

Becoming more aware of our thoughts is key. What you think about, you bring about. Our words and thoughts are where our focus is. Henry Ford said, “Whether you think you can or



whether you think you can't, you are right.” We know from experience that if we feel confident that we can do something, we are much more likely to be successful at it.

We also tend to be great at negative self-talk, but we can learn how to turn around our negative thoughts. Sometimes you have to tell the negative committee in your head to just sit down and shut up. The goal is to love and be kind to ourselves. We can help by recognizing and stopping self-criticism and treating ourselves like we treat loved ones. Try saying something nice to yourself in the mirror every day.

2 TRAIN YOUR BRAIN TO THINK MORE POSITIVELY

Your brain typically looks for whatever is easy. It's impacted by fear, negativity, freeze, fight or flight. This is automatic and unconscious. Becoming more aware of your thoughts is key to changing this pattern. Periodically ask yourself, “What are my thoughts right now?” If your thoughts are negative, redirect them. Step 1 is to become more aware of your thoughts. Step 2 is to redirect negative thoughts by asking, “What is the opposite of the negative thing?”

(continued)

WAG MORE, BARK LESS: LEARNING TO FIND HAPPINESS

KARLENE BELYEA, MBA

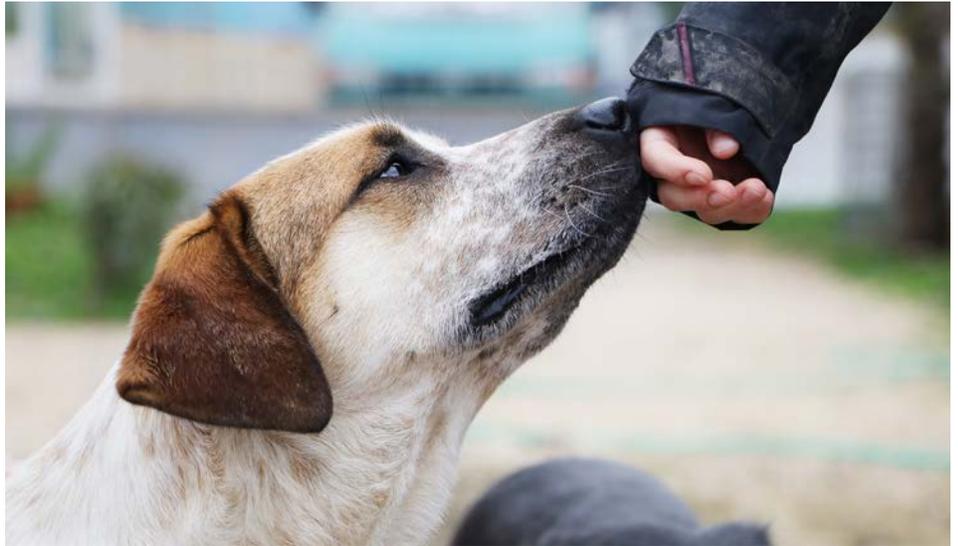
(continued)

Let's say, for example, you are craving a coffee from Starbucks. You glance over and there's a huge line of people waiting that's out the door. Immediately, your thoughts begin to tell you that it will take forever to get the coffee, people in line will be unfriendly, and it will be cold waiting outside. At that point ask yourself, "What is the opposite of these negative thoughts?" Perhaps the line will go quickly, and you'll meet a couple friendly people while waiting. It takes time to train your mind to do this but be patient. You'll get better at it. Our negative thoughts lead to negative emotions and impulses, so try to catch them before ruining your own day. Remember that thoughts are not necessarily true.

Here are two other ideas to help train your brain to be more positive. Think of 3-4 words that describe your ideal self and focus on those words 3 times a day. Put them in your phone and have them come up as an alarm to remind you. You can also try asking yourself positive questions 3-4 times a day like, "What am I incredibly grateful for right now?", "How could I surprise someone right now?", "How could I have fun right now?" or "How could I demonstrate love or excellence right now?" Try this for 30 days and you'll recognize a shift in your life. The more you take action, the more your brain is conditioned to understand "that's what we do."

3 PROMOTE AN ATTITUDE OF GRATITUDE

Have you ever noticed you can't be angry or fearful and grateful at the same time? Neuroscience has shown us that being grateful increases happiness. Dr. Robert A. Emmons of the University of California Davis, and Dr. Michael E. McCullough of



the University of Miami, conducted a study on the physical outcomes of gratitude. In this study, 1/3 of subjects kept a daily gratitude journal, 1/3 wrote about daily irritations and the last 1/3 wrote anything they wanted. After 10 weeks, the gratitude group was more optimistic, positive, physically active and healthier. Try creating a gratitude journal and writing down 3 things you're grateful for every day. Over time, it will help your brain to be less negative which will make you happier.

Expressing gratitude with a specific "thank you" is also a powerful way to motivate people to work harder. In addition, a study of couples found that individuals who took time to express gratitude felt more positive toward that person and more comfortable expressing concerns about their relationship.

4 GET NEGATIVE PEOPLE OUT OF YOUR LIFE

Negative people affect your entire team and lower the productivity of everyone. Negativity is contagious

and we're wired to be empathetic. Emotional contagion is the phenomenon of having one person's emotions and related behaviors directly trigger similar emotions and behaviors in others. To the extent that they are not in your immediate family, do what you can to get them out of your life. Here are a few ways to handle certain types of negative people:

- Locomotives/Steamrollers – "It's not OK to treat me like this anymore."
- Resisters – "Which part of this do you want to do?"
- Not-My-Jobbers – "I don't want to nag but if you want to get out of here by 10pm, you'll need to help and pick up the pace."
- Rumormongers – "Why are you telling me this? I do not wish to be involved. Talk to the person directly."
- Pessimist – "What will help you feel better about this?"
- Criticizers – "Give me specific feedback."

(continued)

WAG MORE, BARK LESS: LEARNING TO FIND HAPPINESS

KARLENE BELYEA, MBA

(continued)

Just as negative people can influence our brain, so too can we influence them. One way to do this is to try using a positive power lead. The first sentence spoken in any conversation sets the tone for the conversation. A power lead says you're in a positive space and nudges others to look for something positive to say. You can start meetings with a gratitude power lead or emails by saying something like, "I hope you're doing well." You can also start conversations by giving a compliment. If you are with a negative person, try to speak first to set the tone.

5 RESOLVE CONFLICTS QUICKLY

Conflicts are inevitable at work; what matters is how you resolve them. Always use facts versus judgements. Here are a couple examples:

- Judgement: "You are always late and not very reliable." vs. Fact: "We started our meeting today at 8:30 and you weren't here. This is the 2nd time this week that has occurred."
- Judgement: "You really need to keep your cool with clients." vs. Fact: "I heard you raise your voice with Mrs. Smith this morning. Let's talk about how to better handle her next time."

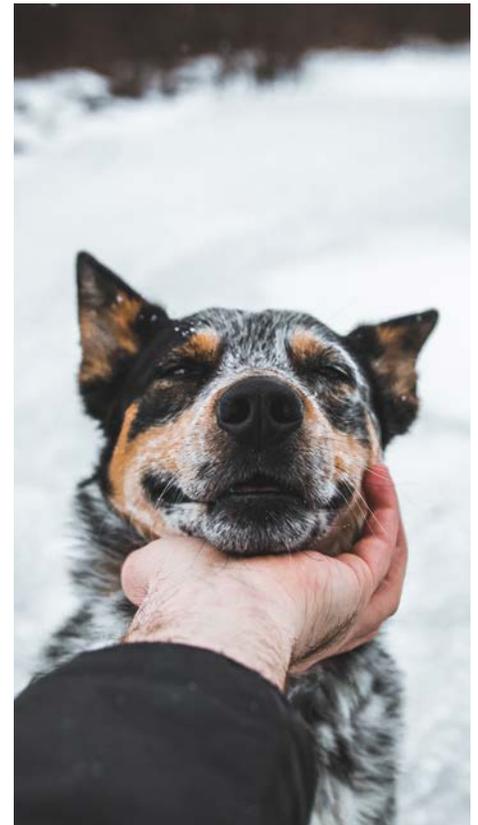
When having a conflict, begin conversations from a place of curiosity and respect. Ask open-ended questions and listen with an open mind. Try reflective listening (saying

some of their words back to them) to make sure the person knows they have your full attention. If you listen to them, they are much more likely to listen to you. Use "I" statements rather than "you" statements. The word "you" can imply that you are placing blame and people become defensive. Also, practice the pause; before judging, accusing or reacting harshly.

6 IMPROVE MORALE AT WORK

It's estimated that we spend 90,000 hours of our lives at work. Consequently, we want to enjoy our jobs and the people we work with. Here are a few ways to do that:

- Celebrate successes and little victories.
- Recognize, reward and surprise people.
- Add fun to meetings.
- Treat mistakes as opportunities to improve and involving people in problem solving.
- Show gratitude (specifically).
- Use fist bumps, elbow bumps, and high fives.
- Tell staff to leave work at work.
- Create a monthly calendar with a different focus each month. The focus could be on gratitude, breathing for stress reduction, inspirational quotes, nutrition, hydration, celebrating obscure holidays, creating a work-free zone, mindfulness, physical fitness, volunteering, sleep hygiene, or promoting self-care.



Remember that life is a choice. It is YOUR life. Choose consciously, choose wisely, choose honestly. Choose happiness. Create positive change by putting yourself first, meditating, exercising, doing random acts of kindness, making social investments, letting go of perfectionism and learning to say "no".

[LEARN MORE](#)

CONNECT WITH VETGIRL // ON SOCIAL MEDIA





THE COMPLETE BUSINESS TOOLBOX FOR VETERINARIANS

Weave's veterinary software and phone system gives you powerful tools for building brilliantly powerful customer (and pet) relationships.

Schedule a live demo today!

As part of our December special, see a demo and get a \$50 Amazon Gift Card!



Here are some key features meant to help pet clinics support your customers in the best way possible:



Weave Phones

Phones are seamlessly connected to Weave and your veterinary software. Kind of like a smartphone, but for your veterinary practice.



Weave Messages

Powerful two-way texting—wherever you are—to communication with customers, send updates, and collect payments.



Curbside Drop-Offs

Have your customers send you a text when they arrive. You can avoid the waiting room all together by sending your customers a text right when you are ready for their pet.



Weave Text-to-Pay

Full payment processing and easy collections with text to pay. Plus, if you buy Weave before 2021, your office can save on its 2020 taxes and invest in its future.



WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

In this complimentary [VETgirl-Merck Animal Health](#) webinar entitled “[What’s new in diabetic monitoring in dogs and cats](#),” Catharine Scott-Moncrieff, Vet MB, DACVIM, DECVIM reviews the various modalities available for monitoring of diabetic dogs and cats. Learn the pros and cons of each modality and how to start using continuous glucose monitoring technology in your veterinary practice.

KEY HIGHLIGHTS

1 PATHOPHYSIOLOGY OF DIABETES MELLITUS

Diabetes mellitus (DM) is a common endocrine disease in cats characterized by an absolute or relative deficiency of insulin. This results in a decreased ability of cells to take up and utilize glucose, amino acids, fatty acids, and electrolytes. Insulin deficiency results in increased gluconeogenesis, glycogenolysis, lipolysis, ketogenesis, and protein catabolism. Predisposing factors in cats include obesity, advancing age and being male.

Two types of DM are recognized in man, and these classifications can be applied to the disease in dogs and cats. Type I DM (insulin dependent diabetes mellitus) is due to an absolute deficiency of insulin. This form of diabetes is characterized by minimal secretory response to cell secretagogues such as glucagon. This is the most common form of DM in dogs. Type II DM (non-insulin dependent diabetes) is characterized by an abnormal pattern of insulin secretion in combination with peripheral insulin resistance, and results in a stable reregulation of the blood glucose concentration at a higher concentration. This form of diabetes mellitus is most common in cats. The two types of diabetes



are classically distinguished by characteristic responses to challenge by insulin secretagogues such as glucose, glucagon, or arginine. In type I DM, there is a decreased or negligible secretion of insulin compared to normal animals, whereas in Type II DM, total insulin secretion may be normal or increased, although the pattern of secretion is abnormal and the amount of insulin is insufficient to prevent hyperglycemia. The phenomenon of glucose toxicity complicates interpretation of glucagon tolerance tests particularly in cats,

and the glucagon tolerance test is of little practical utility in clinical practice. Factors that likely influence the need for exogenous insulin in individual diabetic cats include the severity of pancreatic pathology, whether the pancreatic pathology is progressive or static, presence of concurrent disease that results in peripheral insulin resistance, presence of obesity, the carbohydrate content of the diet and the ability to achieve good glycemic control.

(continued)

WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

(continued)

2 DIAGNOSIS

The diagnosis of DM is made based on characteristic clinical signs of diabetes mellitus (polyuria, polydipsia, polyphagia, and weight loss), and documentation of hyperglycemia and glucosuria. In cats the diagnosis may be complicated by stress hyperglycemia. When making a diagnosis of DM in cats, it is therefore important not only to document persistent hyperglycemia and glucosuria, but also to rule out other diseases that may cause similar clinical signs such as hyperthyroidism and gastrointestinal disease. Measurement of fructosamine concentrations or urine glucose concentration of samples collected in the home environment may allow the clinician to distinguish between stress induced hyperglycemia, and persistent hyperglycemia due to diabetes mellitus. Measurement of fructosamine is unreliable for cats with concurrent hyperthyroidism because increased protein turnover decreases fructosamine concentration. Glucosuria may also occur secondary to ketamine anesthesia, chronic renal failure, and post-obstructive diuresis so is not on its own diagnostic for diabetes mellitus. The presence of significant ketonuria and concurrent hyperglycemia is diagnostic for diabetes mellitus.

Cats are also unique in that DM in this species may go into remission. Up to 70% of diabetic cats have been reported to go into spontaneous clinical remission, with good glycemic

control. Unfortunately, the glucagon tolerance test is not useful in predicting whether or not a cat is likely to go into diabetic remission.

3 INSULIN THERAPY

Classification of insulin: It is very important for clinicians prescribing insulin to understand the characteristics of the different products that are commercially available. Insulin may be classified by insulin source, insulin formulation, or duration of action. Product availability has changed over the last few years.

Insulin formulations that are currently available include short duration regular insulin (designated R), moderate duration NPH insulin (designated N), moderate duration Lente insulin (designated L), and long duration PZI insulin. Insulin may be derived from bovine, porcine, or human recombinant sources and the concentration may be either 100 units/ml (human products) or 40 units/ml (veterinary products). A number of human recombinant insulin analogues are also available. The insulin products that are currently commercially available in the US are listed below.

INSULIN PRODUCTS CURRENTLY AVAILABLE COMMERCIALY AND USED IN CATS AND DOGS

SHORT ACTING

Regular insulin (Zinc insulin crystals)

Products:

Humulin R [Lilly], Novolin R [NovoNordisk] Both human recombinant (100 U/ml)

MODERATE ACTING

NPH insulin (neutral protamine hagedorn)

Products:

Humulin N [Lilly], Novolin N [NovoNordisk] Both human recombinant (100 U/ml)

Lente insulin (65% crystalline and 35% amorphous)

Product Vetsulin (Merck) pork (40 U/ml)

LONG ACTING

PZI insulin

Insulin complexed with protamine and zinc.

Product: ProZinc [Boehringer Ingelheim] human recombinant (40 U/ml)

Glargine

Insulin analogue

Products: Lantus [Sanofi-Aventis], human recombinant (100 U/ml)

Detemir

Insulin analogue

Products: Levemir [NovoNordisk], human recombinant (100 U/ml)

WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

(continued)

Most newly diagnosed diabetic dogs are treated with Lente or NPH insulin administered twice daily. The typical starting dose for most insulin used in diabetic dogs is 0.25 – 0.5 U/kg. Detemir should be started at a lower dose of 0.1 U/kg. Longer acting insulins such as PZI may be useful in some patients with rapid metabolism of insulin. Although the majority of canine diabetic patients are treated twice daily some dogs treated with Lente insulin can be adequately managed on once a day insulin. Protamine Zinc Insulin has recently been approved by the FDA for once daily administration.

There are three insulin products that are appropriate for first line treatment of diabetes mellitus in cats; Protamine zinc insulin, Lente insulin, and Glargine insulin. NPH insulin tends to have a very short duration of action in cats and is not recommended as first line insulin.

PZI insulin (ProZinc)

There have been two large studies published regarding the use of PZI insulin in cats, one using Beef/pork PZI insulin (PZIVet) and the other using human recombinant PZI insulin (ProZinc). Both studies demonstrated good glycemic control in 85-90% of diabetic cats. Both newly diagnosed cats and cats that had had poor control with other insulin products were included in these studies. In the most recent study of 133 diabetic cats (120 cats with newly diagnosed DM, and 13 cats previously treated cats), PZI insulin was effective in decreasing BG concentration and improving clinical signs in 85% of the cats within 45



days of initiating treatment. All cats were treated with PZI twice daily, and the starting dose was 0.22 – 0.66 U/kg/injection. The mean insulin dose was 0.59 U/kg/injection at the end of the study (day 45). The nadir of the blood glucose occurred at 5-7 hours post-injection. Hypoglycemia occurred in 22% of the cats and sometimes occurred even when very low insulin doses were used. For this reason, it is recommended that the starting insulin dose should be conservative (1U/cat/injection) with subsequent dose increases made based upon clinical response to treatment and blood glucose curves.

Pork Lente insulin (Vetsulin)

Pork Lente insulin has been approved by the FDA for use in cats and it has been used successfully in cats in Europe for several years. Vetsulin is a pure pork insulin which has an intermediate duration of action,

although it has a shorter onset and duration in cats than in dogs. The time from injection to the BG nadir is 4 hours and the duration of effect (time for BG to return to baseline) is approximately 10 hours, so Lente insulin should be administered twice daily in cats. The starting dose for Lente insulin in cats (0.25 -0.5 U/kg/injection) is similar to that of other insulins, and the median dose required for good glycemic control in a group of diabetic cats was 0.5 U/kg. In this same study, 7 of 25 cats went into diabetic remission during the 12 months of the study and all the cats that remained diabetic had good or excellent control at the conclusion of the study. In a study of 90 cats with diabetes mellitus, 41 cats were treated with Lente insulin and 23 (56%) went into diabetic remission.

(continued)

WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

(continued)

Insulin Glargine (Lantus)

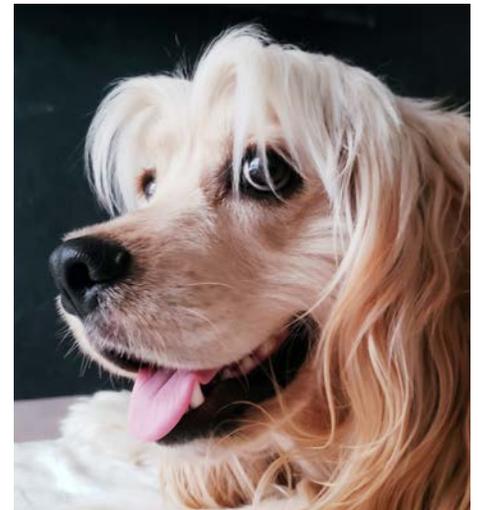
Glargine insulin is a long acting insulin analogue that is also used for treatment of diabetes mellitus in cats. The pharmacokinetics of insulin glargine are very similar to that of PZI although the time to insulin nadir is longer. In a study of 13 diabetic cats fed a commercial high protein low carbohydrate diet and treated with either once daily Glargine insulin at a dose of 0.5 U/kg once a day, or lente insulin (human recombinant) 0.5 U/kg, twice a day, there was a significant improvement in both groups of cats and no difference was detected in glycemic control between the two insulin groups. Of the four cats in remission at the end of the study, 3 had been treated with lente insulin and one with glargine. In a study of 24 newly diagnosed diabetic cats, treated with glargine, PZI, or Lente, and fed a low carbohydrate, high protein diet, glargine treated cats tended to have lower blood glucose concentrations and fructosamine concentrations than those treated with PZI or Lente. In this study there was a higher rate of diabetic remission rate in the cats treated with Glargine insulin than in the cats treated with PZI or lente insulin. In a study of 90 cats with diabetes mellitus, 29 cats were treated with glargine insulin and 21 (72%) went into diabetic remission.

The starting dose for insulin in a new feline diabetic patient is 0.25 – 0.5 Unit/kg or 1-3 U/cat. It is recommended that PZI and Glargine insulin are both started at the lower end of this dose. It is difficult to predict in advance

which cats will do better with which insulin formulation. Cats should be carefully monitored for occurrence of hypoglycemia, because of the possibility of remission of diabetes mellitus. A blood glucose curve should be performed 7-14 days after making any change in insulin formulation. Whichever formulation is chosen, twice a day insulin therapy is more likely to result in good glycemic control than once a day therapy. If twice a day treatment is not possible, once a day therapy with PZI or Glargine can result in effective control of clinical signs in some cats.

Goals of insulin treatment

The primary goal of insulin therapy in diabetic patients is to control clinical signs of DM while avoiding hypoglycemia. Severe hypoglycemia can be life-threatening and even mild insulin-induced hypoglycemia can result in clinical signs of poor glycemic control due to the insulin resistance that results from secretion of anti-insulin hormones such as glucagon, growth hormone, cortisol, and epinephrine. Persistent severe hypoglycemia can lead to permanent neurologic damage. The long-term benefits of tight glycemic control, while well established in human diabetic patients have not been demonstrated in dogs and cats; although theoretically better glycemic control should result in fewer diabetic complications such as recurrent infection, proteinuria, and cataract formation. The goals of diabetic regulation should therefore, take into account the lifestyle of the owner, the presence of concurrent



illness, the age of the patient, and the practicality of tight glucose monitoring. Ideally the blood glucose should be maintained between 100 to 200 mg/dl, however most patients will have some blood glucose concentrations that fall outside this range and most patients are clinically well regulated if most of the blood glucose concentrations are less than 300 mg/dl. Occult hypoglycemia is an important cause of poor glycemic control and can lead to unnecessary visits to the emergency clinic. The insulin dose should be decreased if the blood glucose falls below 80 mg/dl on the BG curve. It is important to remember that it is difficult to assess the duration of insulin action if the glucose nadir is in the hypoglycemic range because this can lead to release of counter-regulatory hormones such as glucagon which drives the blood glucose back up prematurely.

(continued)

WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

(continued)

Monitoring the diabetic patient

The ideal monitoring strategy should be multimodal and individualized for the patient and owner(s). Parameters that can help in assessing the adequacy of diabetic control include clinical signs, serial blood glucose concentrations measured at home or in the clinic, fructosamine concentrations, glycosylated hemoglobin concentration (HbA1C), and urine glucose concentrations. The presence of ketones in the blood or urine can also be useful to indicate the presence of impending diabetic ketoacidosis. The most important factor in assessing diabetic control is whether clinical signs are well controlled. Blood glucose concentrations, urine glucose concentrations and glycated proteins should be interpreted in the light of the clinical signs. Monitoring should be individualized to meet the needs of the patient and owner. Although blood glucose curves have been considered to be the gold standard for evaluating glycemic control, they have some serious limitations. Blood glucose curves are affected by stress and there can be marked day to day variability. Blood glucose curves are expensive and require collection of multiple blood samples that can be stressful to the patient even when performed by the owner at home. Misinterpretation of blood glucose curves due to the effects of occult hypoglycemia can lead to incorrect treatment decisions. Newer continuous interstitial glucose monitoring techniques are changing the approach to blood glucose monitoring. These systems allow continuous evaluation of

interstitial blood glucose concentration for up to 14 days via a small flexible subcutaneous catheter, replacing the blood glucose curve. The newer systems are affordable, easy to use, and well tolerated by patients. The reports can be downloaded as a pdf and allow an integrated analysis of changes in blood glucose over a 14-day period.

Glycosylated proteins also allow assessment of longer-term glycemic control and can aid in interpretation of blood glucose curves. Glucose binds irreversibly to serum proteins and hemoglobin and these products persist for the life of the proteins. The resultant products can be measured

in serum or whole blood respectively. Fructosamine indicates adequacy of glycemic control over the previous 2-3 weeks, while HbA1C reflects glycemic control for the previous 4-6 weeks.

Urine glucose concentrations can also be used to assess glycemic control and are particularly helpful in cats to assess for the presence of diabetic remission as well as to detect relapse. Urine glucose should not be used to determine the daily dose of insulin but trends in urine glucose can be very helpful in assessing diabetic control especially if assessed on a consistent basis and recorded in a diary or log.

(continued)



WHAT'S NEW IN DIABETIC MONITORING IN DOGS AND CATS? CONTINUOUS GLUCOSE MONITORING AND MORE

J. CATHARINE SCOTT-MONCRIEFF, MA, MS, VET MB, DACVIM, DECVIM

(continued)

4 DIABETIC REMISSION

A unique feature of diabetes mellitus in cats is that some diabetic cats become non-insulin dependent after treatment has been initiated. From 15 to 70 % of cats with DM, have been reported to go into spontaneous clinical remission after initiation of insulin treatment.

This is termed diabetic remission.

Diabetic remission is typically defined as euglycemia that persists for greater than 4 weeks without the use of exogenous insulin. The duration of remission is variable with some cats requiring insulin treatment again within a few weeks to months and other cats remaining in remission for months to years.

Influence of diet

It has been proposed that low carbohydrate diets increase the chance of diabetic remission in newly diagnosed diabetic cats. A prospective study comparing a low carbohydrate-low fiber diet to a moderate carbohydrate-high fiber diet in 63 diabetic cats showed improvements in glycemic control in both groups, but there was a higher rate of remission of diabetes mellitus in the low carbohydrate-low fiber diet. These findings support the clinical opinion that low carbohydrate diets in conjunction with good glycemic control increase the likelihood of diabetic remission. If diabetic remission occurs in cats it is most commonly in the first few months of treatment.

Influence of insulin

It has been shown that strict glycemic control is important in achieving diabetic remission and it is clear that

diabetic cats can go into remission with any insulin if good glycemic control is achieved. Most cats have better glycemic control with long acting insulin (PZI or Glargine) so most clinicians recommend these insulin formulations as the insulin products of choice in diabetic cats.

Other factors

Other factors that have been documented to increase the likelihood of diabetic remission in cats include short duration of diabetes mellitus (< 180 days), administration of glucocorticoids prior to diagnosis, low insulin dose required to achieve glycemic control, and lack of polyneuropathy. Age, sex, body weight, presence of renal failure, presence of hyperthyroidism, or presence of obesity at diagnosis have not been shown to influence the likelihood of remission. Serum concentrations of glucose, fructosamine, insulin, glucagon, and insulin growth factor I are not different between cats that do and do not achieve remission, but cats achieving remission have a higher glucagon to insulin ratio.

REFERENCES

1. Bennett N, Greco DS, Peterson ME, et al. Comparisons of a low carbohydrate-low fiber diet and a moderate carbohydrate-high fiber diet in the management of feline diabetes mellitus. *J Fel Med and Surg* 2006;8:73-84
2. Marshall RD, Rand JS, Morton JM. Treatment of newly diagnosed diabetic cats with Glargine insulin improves diabetic control and results in higher probability of remission than protamine zinc and lente insulins. *J Fel Med Surg* 2009;11:683-689.
3. Nelson RW, Lynn RC, Wagner-Mann CC, et al. Protamine zinc insulin for treatment of diabetes mellitus in cats. *J Am Vet Med Assoc* 2001;218:38-42.
4. Nelson RW, Henley K, Cole C. Field safety and efficacy of protamine zinc recombinant insulin for treatment of diabetes mellitus in cats. *J Vet Intern Med* 2009;23:787-793.
5. Roomp K, Rand J. Intensive blood glucose control is safe and effective in diabetic cats using home monitoring and treatment with Glargine. *J Fel Med Surg* 2009;11:668-682
6. Zini E, Hafner M, Osto M. et al. Predictors of clinical remission in cats with diabetes mellitus. *J Vet Intern Med* 2010;24:1314-1321.

[LEARN MORE](#)



“

Animals are non-verbal beings.

They can't tell us that they hurt in a verbal way.

They can only tell us by their behavior, their unwillingness to socialize,
their unwillingness to play ball and so forth.

And if we don't treat that pain of arthritis, we're taking all of that away from them.

And that's really sad, because then they're not going to have a fuller life
that they really deserve.

”

- Dr. Michael Petty, DVM, CVPP, CVMA, CCRT, CAAPM



DISCOVER

more at

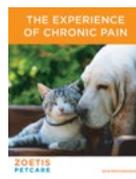


THE NEW SCIENCE OF
OA PAIN



DOWNLOAD

The Experience of Chronic Pain



5 KEYS TO TREATMENT SUCCESS: YOU CAN HAVE SUCCESS WITH YOUR ALLERGIC PATIENTS BY PAYING ATTENTION TO THESE 5 STEPS

FIONA BATEMAN, BVSc, MANZCVS, DACVD

In this complimentary [VETgirl-Zoetis](#) webinar entitled [Allergic Dermatitis: 5 keys to treatment success](#), Fiona Bateman, BVSc, MANZCVS, DACVD will focus on 5 keys steps for finding immediate and long-term solutions for allergic dogs. These include:

- Having a practice plan for allergic patients
- Treating itch as an urgent condition
- Being committed to the diagnostic workup
- Finding an anchor treatment as the foundation for long term control and
- Communicating correctly to partner with owners and set realistic expectations

KEY HIGHLIGHTS

Managing allergic dermatitis can be frustrating for veterinarians and owners alike. From initial presentation and rapid itch relief, to finding that sometimes elusive diagnosis, to long term management – treating allergies is more of a marathon than a sprint. Here are 5 key points to make the diagnosis and management of these allergic patients much more enjoyable and successful!

1 HAVE A PRACTICE PLAN FOR ALLERGIC PATIENTS (GETTING EVERYONE ON BOARD WITH THE OPPORTUNITY)

Allergic pets are a leading cause of visits to the veterinarian.¹ You are familiar with protocols for the diagnosis and treatment of many medical conditions, but does your practice have a plan when treating itchy pets? One way to help your clients feel they are in good hands is to develop both a communication and medical plan for the diagnosis and treatment of itchy pets. Make sure your entire team is on board to ensure best outcomes for clients, their pets and your practice.

2 TREAT ITCH AS AN URGENT CONDITION

Allergic itch isn't just a nuisance. Itching is an urgent medical condition that needs fast and effective therapy.



Itching can make pets and their owners miserable, which contributes to reduced quality of life and can adversely affect the human-animal bond. In addition, itch can affect the bond your client shares with you and your practice – if they do not feel their own and their pets' needs are being promptly and ideally addressed, they may seek a second opinion elsewhere.

3 COMMIT TO THE DIAGNOSTIC WORKUP

Unfortunately, the diagnosis of allergy isn't always straightforward, as clinical signs for various types of allergic dermatitis (e.g., flea allergy, atopic

dermatitis, food allergy) can overlap. Therefore, it is critical to follow a logical and stepwise approach to rule in (or rule out) parasites, infections, the presences of food allergies or even unrelated medical conditions that may cause itch. Diagnosis of atopic dermatitis is generally based on consistent history, clinical signs and exclusion of other differentials.² Once a definitive diagnosis has been made, the appropriate long-term treatment options can be discussed and mutually decided upon for long term control of clinical signs.

(continued)

5 KEYS TO TREATMENT SUCCESS: YOU CAN HAVE SUCCESS WITH YOUR ALLERGIC PATIENTS BY PAYING ATTENTION TO THESE 5 STEPS

FIONA BATEMAN, BVSc, MANZCVS, DACVD

(continued)

4 FIND AN ANCHOR TREATMENT AS THE FOUNDATION FOR LONG TERM CONTROL

Anchor therapies are the long term, single (preferably), sustainable treatments for allergic skin disease. In the case of flea allergy or food allergy, this may be as simple as isoxazoline flea control or the appropriate diet. In the case of atopic dermatitis, many treatment options are available for long term control of the disease. Steroids have been used to reduce and inflammation.^{3,4} Antihistamines have historically been used for allergy control in pets. However, simply blocking histamine is often inadequate because it doesn't control the key cytokine mediators that cause the pet's itch and inflammation. According to the International Committee on Allergic Diseases of Animals, antihistamines offer little or no benefit in treating flares of canine atopic dermatitis.⁵

Newer targeted therapies work by inhibiting specific steps in the pathway that produces itching and inflammation in dogs with atopic and/or allergic dermatitis.

Cytokines are chemical signaling molecules that act as inflammatory mediators. Cytokines with a pivotal role in canine allergic dermatitis include interleukin-2 (IL-2), interleukin-4 (IL-4), interleukin-6 (IL-6), interleukin-13 (IL-13) and interleukin-31 (IL-31).⁶ These cytokines contribute significantly to itching and inflammation in allergic dogs, especially IL-31, a key cytokine in the neuronal pathway of itch.

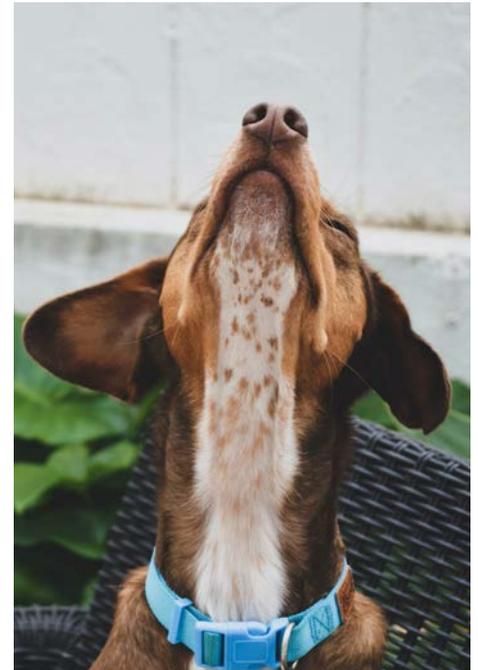
One targeted therapy, CYTOPOINT® (Zoetis), is an injectable, caninized monoclonal antibody that targets IL-31 specifically, stopping itching by

inhibiting the binding of this cytokine to its receptors in dogs with allergic dermatitis and atopic dermatitis.^{7,8}

APOQUEL® (oclacitinib tablet), by Zoetis, is a targeted therapy that works fast and provides good efficacy in dogs with atopic dermatitis and allergic dermatitis. APOQUEL is a JAK enzyme inhibitor that selectively targets JAK-1– dependent pruritogenic, proallergic and pro-inflammatory cytokines.⁶ APOQUEL stops itching and inflammation at the source by suppressing transmission of chemical signals that lead to clinical signs in dogs with atopic and allergic dermatitis.

Other therapies such as Atopica® (cyclosporine) are also used to control atopic dermatitis. Cyclosporine is a potent inhibitor of cell-mediated immunity and a less potent inhibitor of humoral immunity.⁹ This occurs primarily by blocking the gene transcription of cytokines such as IL-2, IL-4, IL-5, and IL-13. As such, cyclosporine has been shown to have both anti-pruritic and anti-inflammatory effects on the skin.⁹

Finally, allergen specific immunotherapy is another option for many pets. Allergen specific immunotherapy relies on intradermal or serological testing to identify the offending allergens responsible for the pets' clinical signs. Then, immunotherapy is administered (generally subcutaneous injections or oral sublingual drops) at frequent intervals to induce immunological tolerance to the allergens and desensitize the patient. Generally, immunotherapy is considered a life-long treatment.



It is important to also recognize the importance of supportive therapies such as parasite control, skin barrier repair such as essential fatty acids and ceramides, topical antimicrobials and dietary support.

5 THE IMPORTANCE OF COMMUNICATION TO PARTNER WITH OWNERS AND SET REALISTIC EXPECTATIONS

Communication is of critical importance in managing the allergic patient – from your initial patient visit, through the diagnostic steps and finally managing the patient long term. Without great communication, positive outcomes can be hard to achieve. It is important to understand the perspective of itchy dog owners, and that they in turn understand the need for the systematic workup of the patient and the likely lifelong treatment needed.

(continued)

5 KEYS TO TREATMENT SUCCESS: YOU CAN HAVE SUCCESS WITH YOUR ALLERGIC PATIENTS BY PAYING ATTENTION TO THESE 5 STEPS

FIONA BATEMAN, BVSc, MANZCVS, DACVD

(continued)

Remember to set realistic expectations from the first visit – what diagnoses you are considering, how you will achieve that diagnosis and the time and commitment needed to get there. Finally, remember that allergies are a complex and ever-changing condition – you will not be able to control all the symptoms all of the time. Aim for good control for the majority of the pet's life – and whilst flares in allergy can and will happen, have a proactive plan in place to identify and treat flares when they occur. Finally, make open and 2-way communication a goal for every itchy dog visit. This will certainly make managing allergic patients much more enjoyable (and effective) for owners and veterinary staff alike.

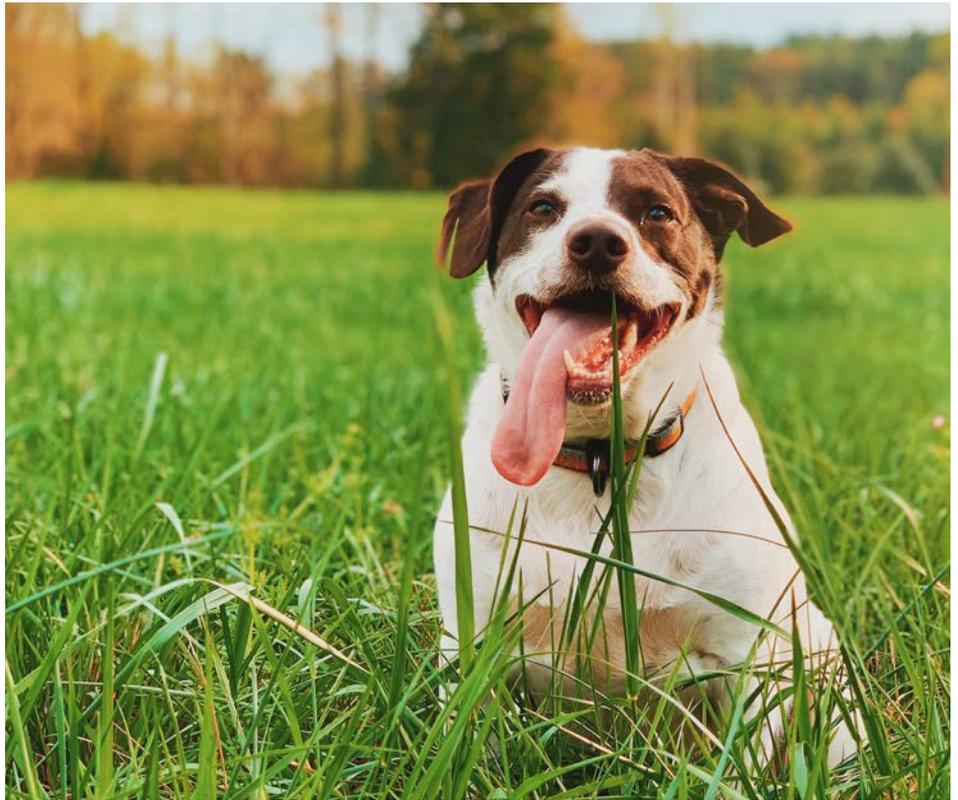
IMPORTANT SAFETY INFORMATION FOR APOQUEL

Do not use APOQUEL in dogs less than 12 months of age or those with serious infections. APOQUEL may increase the chances of developing serious infections and may cause existing parasitic skin infestations or pre-existing cancers to get worse. APOQUEL has not been tested in dogs receiving some medications including some commonly used to treat skin conditions such as corticosteroids and cyclosporine. Do not use in breeding, pregnant, or lactating dogs. Most common side effects are vomiting and diarrhea. APOQUEL has been used safely with many common medications including parasiticides, antibiotics and vaccines. See full Prescribing Information on the next page.

CYTOPOINT has been shown to be effective for the treatment of dogs against allergic dermatitis and atopic dermatitis.

[LEARN MORE](#)

vetgirlontherun.com



REFERENCES

1. <https://blog.nationwide.com/news/common-medical-conditions-for-dogs-and-cats-can-lead-to-costly-veterinary-visits/> Accessed Nov 12th, 2020.
2. Gedon NKY, Mueller RS. Atopic dermatitis in cats and dogs: a difficult disease for animals and owners. *Clin Transl Allergy*. 2018;8:41.
3. Sousa CA. Glucocorticoids in veterinary dermatology. In: Bonagura JD, Twedt DC, eds. *Kirk's Current Veterinary Therapy*. 14th ed. St Louis, MO: Saunders Elsevier; 2009:400-404.
4. Notari L, Burman O, Mills D. Behavioural changes in dogs treated with corticosteroids. *Physiol Behav*. 2015;151:609-616.
5. Olivry T, DeBoer DJ, Favrot C, et al. Treatment of canine atopic dermatitis: 2015 updated guidelines from the International Committee on Allergic Diseases of Animals (ICADA). *BMC Vet Res*. 2015;11:210.
6. Gonzales AJ, Bowman JW, Fici G, et al. Oclacitinib (APOQUEL®) is a novel Janus kinase inhibitor with activity against cytokines involved in allergy. *J Vet Pharmacol Ther*. 2014;37(4):317-324. doi:10.1111/jkm.12101.
7. Data on file. Study Report No. C166R-US-17-180, 2018, Zoetis Inc.
8. Souza CP, Rosychuk RAW, Contreras ET, et al. A retrospective analysis of the use of lokivetmab in the management of allergic pruritus in a referral population of 135 dogs in the western USA. *Vet Dermatol*. 2018;29(6):489-e164. doi:10.1111/vde.12682.
9. Robson D. Review of the properties and mechanisms of action of cyclosporine with an emphasis on dermatological therapy in dogs, cats and people. *Vet Rec*. 2003;152:768-772.

VETgirl certification program

As on-the-floor clinicians, we know what you need to practice better medicine, provide better patient care, and ultimately save that patient's life. VETgirl certification is designed to give you the expertise that you need, geared for clinical veterinary professionals. Offered in unique tracks, these courses range from 12-60 hours of RACE-Approved CE for both veterinarians and veterinary technicians.



BASIC

emergency medicine

This 35-hour course is carefully curated and designed to focus on the key areas of emergency medicine - and will make you feel well-rounded and comfortable with handling any HBC, BDLD, UO, or CHF case coming through the door.

Course Outline : 35 hours



ADVANCED

emergency medicine

You've been doing this for years. But now, it's time to take it to the next level. This certification was created by in-the-trenches, board-certified emergency critical care specialists, Dr. Justine Lee, DACVECC, DABT and Dr. Garret Pachtinger, DACVECC. This 60-hour course is carefully curated and designed to focus on the key areas of emergency and critical care.

Course Outline : 60 hours



veterinary nutrition

Thanks to generous support from Hill's Pet Nutrition, earn your Nutrition Certificate and get the 411 on what's new in veterinary nutrition. From life stage nutrition to buzz words of pet food to urolith management, find out how you can improve your patient's health while helping your pet owners be educated advocates!

Course Outline : 12 hours



practice management

There's so much to know to make your veterinary clinic run lean, efficiently and smoothly. Earn your Practice Management Certificate and improve your business and leadership skills! *(Please note that this is not a CVPM certificate).*

Course Outline : 30 hours

Visit vetgirlontherun.com/certificates/ for more information on course offerings and certification details!

* Note: The basic emergency medicine certificate should be completed prior to the advanced course.

IMPROVING PATIENT CARE WITH EQUINE SERUM AMYLOID A TESTING

SIDDRA HINES, DVM, PHD, DACVIM

Veterinary Scientist, [VMRD](#), Inc.

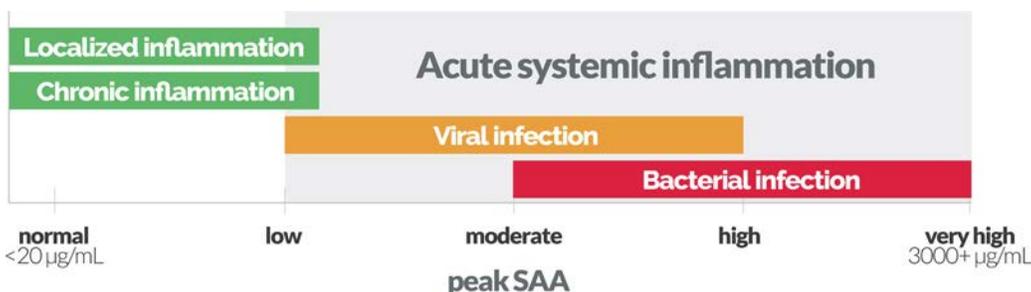
KEY HIGHLIGHTS

1 SAA INCREASES RAPIDLY AND DRAMATICALLY WITH ACUTE SYSTEMIC INFLAMMATION

Early identification of infection in the horse is both critical and challenging, with initial clinical signs often being subtle. To this end, the acute phase protein [serum amyloid A](#) (SAA) is a sensitive indicator of inflammatory status, even more so than elevated body temperature. SAA is virtually undetectable in normal animals but increases within 6-12 hours in acute inflammation, reaching up to 1000-fold baseline values. This is far more rapid and dramatic than alterations in fibrinogen or WBC count. SAA is rapidly responsive to clinical changes and begins dropping within 12-24 hours as inflammation starts to resolve.

2 ELEVATION IN SAA IS COMMONLY CAUSED BY BACTERIAL OR VIRAL INFECTION

SAA increases with any acute systemic inflammation; however viral or bacterial infections are common culprits. Bacterial infections in particular cause high levels of SAA. Non-infectious etiologies may cause mild elevation, but minimal increase is seen with chronic or localized disease. SAA can be used to differentiate between disease processes with similar clinical presentations and help identify those requiring antimicrobials. By this same token, SAA can help assess potential etiology and disease severity in horses with non-specific signs such as ADR or fever of unknown origin.



Equine veterinarians often use SAA to differentiate pneumonia from uncomplicated equine asthma. Significant elevation strongly supports a primary or secondary infection, as allergic etiologies alone stimulate minimal SAA production. If a bacterial infection is suspected, antimicrobial therapy can be instituted, and efficacy monitored through repeat SAA measurement.

3 TRACKING SAA OVER TIME IS PARTICULARLY VALUABLE

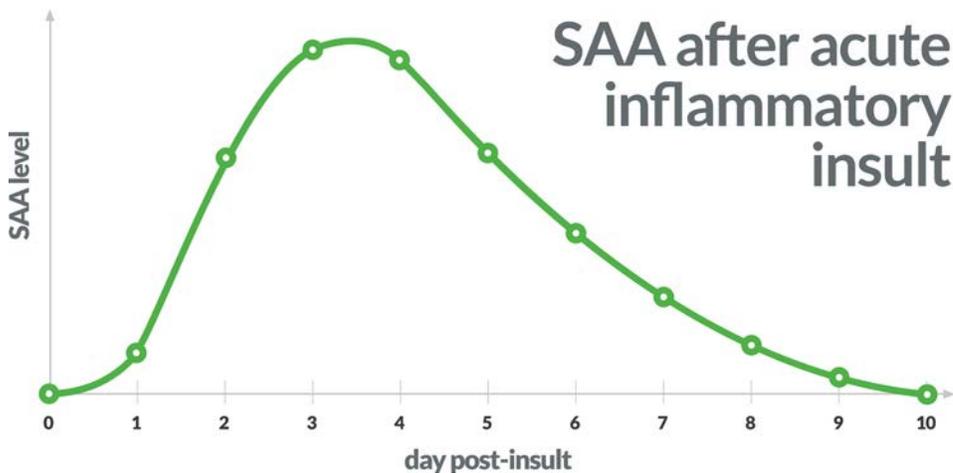
Veterinarians can monitor the trend of SAA values over time to track clinical progress, including response to treatment. The dynamic nature of SAA makes it an ideal marker for this purpose. SAA measured at a single time point may not reflect overall peak value, as it will increase for 2-4 days following an acute inflammatory insult and may not yet have peaked when the horse is first evaluated. Appropriate application of follow-up testing can avoid confusion by characterizing the peak value to help with interpretation of subsequent results.

(continued)

IMPROVING PATIENT CARE WITH EQUINE SERUM AMYLOID A TESTING

SIDDRA HINES, DVM, PHD, DACVIM

(continued)



Patients should be tested during the initial exam and retested in 24-48 hours in case SAA increases further. Follow up testing should be performed 3-4 days after treatment is initiated (or 1-2 days after peak [SAA] has been identified). Inflammation/infection will begin to resolve with effective treatment, with associated decline in SAA. If SAA remains high, additional evaluation or alternative treatments should be considered. Follow-up assessments every 2-3 days can identify concerns with ongoing treatment success if SAA stops declining or starts to increase. At a minimum, it is advisable to test SAA prior to discontinuing therapy and/or hospital discharge to ensure the horse has returned to normal.

Tracking SAA is also useful for early identification of post-operative complications and for management of other medical conditions to improve patient care and outcome. Although surgery itself will cause some elevation, it should follow an expected pattern with uneventful recovery, peaking at 2-4 days post-op and then gradually declining. If post-operative values remain high, or spike up during later recovery, complications are likely and should be explored. SAA can be re-evaluated every 1-3 days depending on budget, level of concern, and patient proximity.

4 SAA IMPROVES BIOSECURITY AND MONITORING OF HIGH-RISK HORSES

SAA is a valuable tool for biosecurity and evaluation of horses at high risk for infections to identify subclinical disease early and allow rapid intervention. Any elevation of SAA should be considered abnormal and trigger further investigation. SAA can increase even in the absence of fever, and unlike fever, will not be resolved by NSAID therapy.

Disease outbreaks may be prevented with SAA screening prior to comingling at events or when introducing new horses to a resident population, along with existing measures. During an active infectious disease outbreak, SAA can help monitor at-risk or exposed horses to identify affected individuals early for proper containment, treatment, and additional diagnostics.

SAA can also be used to monitor populations at increased risk due to age, stress, exposure, population density, or other factors. This includes young horses in intense training, hospital populations, or horses undergoing long-distance travel. Testing prior to transport can identify subtle abnormalities with potential to develop into bigger issues, and shipping-related infections can be identified quickly after transport.

5 SAA BIOLOGY EXPLAINS MOST SURPRISING RESULTS

SAA results must be interpreted in light of other clinical data, and with an understanding of SAA biology. Little increase is seen in localized, chronic, or allergic issues, which can be confusing when faced with a horse that is clearly sick. However, these negative or low positive results are quite useful as they indicate a low likelihood of systemic inflammation due to bacterial or viral infection. Importantly, although SAA increases rapidly, a horse may show peracute signs with severe illness before SAA is measurable. In such cases, treatment must be based on other clinical evidence, and SAA can be rechecked in 12-24 hours. (continued)

IMPROVING PATIENT CARE WITH EQUINE SERUM AMYLOID A TESTING

[SIDRA HINES](#), DVM, PHD, DACVIM

(continued)

Any acute inflammatory stimulus can drive SAA production, including intramuscular administration of vaccines or antimicrobials. Maximum levels are reached at 2-4 days post-vaccination and gradually return to normal by 7-10 days. Concentrations typically stay below 500-1000 µg/mL, however some horses (generally young or vaccine-naïve individuals) can reach over 3000 µg/mL while still appearing completely healthy.

Significant increases in SAA are not expected strictly due to stress, and physical exertion will cause minimal increase at most. If no confounding inflammatory stimulus can be identified, elevated SAA warrants high suspicion for subclinical disease and further investigation. If reevaluated 24 hours later, SAA should be even higher with an active inflammatory process.

6 HORSE-SIDE RESULTS ALLOW IMMEDIATE TREATMENT DECISIONS

[Serum amyloid A](#) testing has become more accessible to equine practitioners in recent years with the availability of point-of-care assays. Horse-side quantification of inflammation allows immediate treatment decisions and recommendations for further diagnostics and management, without the delays of lab submission. SAA does not replace a good physical exam, standard bloodwork, or clinical judgment, but adds valuable, objective information to these fundamental tools.

LISTEN [HERE](#) TO LEARN MORE!

Horse-side results for horse-side decisions

- Identify **inflammation** and infection early
- Improve **patient care** and treatment
- Prevent spread of **infectious disease**

VMRD SAA test for **Serum Amyloid A**

vmrd

vmrd.com/saa | saa@vmrd.com | +1 509 334 5815 | Pullman, WA 99163, USA



Transforming Lives

DIGESTIVE CARE

TURN GI ISSUES AROUND IN AS LITTLE AS 24 HRS



Hill's Prescription Diet GI Biome demonstrated clinical results in cats with constipation or diarrhea¹ and dogs with diarrhea² in as little as 24 hours.



Ask about microbiome nutrition that's **A STEP AHEAD FOR THEIR BEST LIFE**

Also available in delicious wet options.
Find out more at HillsVet.com/GI

¹Wernimont, S.M., et al. Food with Specialized Dietary Fiber Sources Improves Clinical Outcomes in Adult Cats with Constipation or Diarrhea (in a 2 Month Study). *FASEB J.* 2020;34(1). Some cats may require multimodal management. ²Fritsch, D.A., et al. Food with Novel Fiber Blend Improves Clinical Outcomes and Changes Gastrointestinal Microbiome Metabolism in Dogs (in a 2 Month Study). *J Vet Intern Med.* 2019; 33(5):2513. The Hill's Transforming Lives logo, the Hill's Prescription Diet logo, the ActivBiome+ logo, the S+OX SHIELD logo, Hill's, Prescription Diet, and Gastrointestinal Biome are trademarks of Hill's Pet Nutrition, Inc.

BUZZWORDS DESCRIBING PET FOODS: DECIPHERING FACT FROM FICTION TO INTERPRET MYSTERIOUS MARKET CLAIMS

JULIE CHURCHILL DVM, PHD, DACVN

University of Minnesota College of Veterinary Medicine, Veterinary Clinical Science Department

In this complimentary [VETgirl-Hill's Pet Nutrition](#) webinar entitled "[Nutritional BUZZwords describing pet food: What's meaningful or what's just malarkey?](#)", Julie Churchill, DVM, PhD, DACVN reviews persuasive buzzwords used in marketing terms about ingredients, nutrition and pet food products, which make it difficult for even the best-intentioned pet owner to make good decisions. Learn how your staff can play a vital role in answering client questions and help pet owners be able to select what is truly the best food for their pet – not just a product with the best marketing and buzzwords.

KEY HIGHLIGHTS

HOW TO DECIPHER INFORMATION ABOUT A PET FOOD TO MAKE A DIET RECOMMENDATION

Making a decision about what to feed their pet has become even more complicated for pet owners whose goal is often to feed *the* best food. Clients can bombard the veterinarian and veterinary staff with questions about pet food. With almost 5000 different product labels on the market it is inevitable the veterinary healthcare team (VHCT) will be asked about a product they are not familiar with.

Advice and information recommending the best food is readily available almost anywhere; from trainers to pet food retailers, from magazines, internet sources and social media. However, these voices can be strongly biased and may compete with the veterinarian healthcare team's advice.

There is no single 'best' food for all pets since optimal nutrition depends on several things such as life stage, body condition, appetite, activity (or sedentary lifestyle), environment and health status. Pet owners frequently make their decisions based on the marketing claims rather than objective nutritional information. Therefore,



veterinary professionals need to be competent and confident in evaluating new or less familiar products in order to make nutritional recommendations for their patients and help owners make sound nutritional decisions for their pet.

Although there are significant limitations to evaluating a pet food, the label is a good place to start, and important for the veterinary teams to understand because pet owners make their choices based on label information and have many questions about what they read on the petfood label. All pet food labels are required to include the following 9 items:

1. Product Name, food type
2. Net weight
3. Nutritional statement (adequacy claim or 'AAFCO' statement)
4. Basis of nutrition claim; life stage
5. Ingredient list
6. Guaranteed analysis (% nutrient content as fed)
7. Feeding directions
8. Manufacturer or distributor name and address
9. Universal product code

A systematic approach to evaluating labels is a useful first step in assessing a product for a patient.

(continued)

BUZZWORDS DESCRIBING PET FOODS: DECIPHERING FACT FROM FICTION TO INTERPRET MYSTERIOUS MARKET CLAIMS

JULIE CHURCHILL DVM, PHD DACVN

(continued)

Of all of these, the two most useful pieces of information on a pet food label are 1) the manufacturer and 2) the nutritional adequacy statement.

What follows is a suggested approach to assessing labels and pet food products for indicators of a product's nutritional value and potential impact on pet health.

Suggested in descending order of importance:

1 THE MANUFACTURER INFORMATION

The manufacturer's name and contact information should be provided. Contact the manufacturer whenever you have questions about a product. This can provide you with valuable information as well as an indication of how willing a company is to work with the veterinary profession. The American Animal Hospital Association (AAHA) (Baldwin 2010) and the World Small Animal Veterinary Association (WSAVA, 2011) [Nutritional Assessment Guidelines](#) includes an excellent list of questions or considerations to ask of manufacturers.

- The manufacturer should employ at least 1 full-time qualified nutritionist. Appropriate qualifications are a PhD in animal nutrition or board-certification by the American College of Veterinary Nutrition or European College of Veterinary Comparative Nutrition.
- The manufacturer should test its diets with AAFCO feeding trials. If AAFCO feeding trials are not conducted, the manufacturer

should, at a minimum, ensure that diets meet AAFCO nutrient profiles through analysis of the finished product.

- The manufacturer should own the plant or plants where the food is manufactured.
- The manufacturer should practice strict quality-control measures. Examples include certification of a manufacturer's procedures (e.g., Global Food Safety Initiative, Hazard Analysis and Critical Control Points, or American Feeding Industry Association); testing ingredients and end-products for nutrient content, pathogens, and aflatoxins; materials risk assessments; and supplier audits.
- The manufacturer should be able to provide a complete nutrient analysis for any dog or cat food of interest (not only the guaranteed analysis, which is listed on the label, but the average [typical] analysis as well). The manufacturer should be able to provide exact values for all nutrients. This should ideally be provided on an energy basis (i.e., grams per 100 kilocalories or grams per 1,000 kilocalories), rather than on an as-fed or dry-matter basis, which does not account for the variation in energy density among foods.
- The manufacturer should be able to provide the number of calories for any food on any requested weight or volume basis (e.g., per

gram, per pound, per cup, or per liter).

- The manufacturer should conduct and publish research in peer-reviewed journals.

Additionally, this author values manufacturers who do not use negative advertising or fear-based misinformation in their advertising or website.

2 NUTRITIONAL ADEQUACY STATEMENT (NAS)

A statement of nutritional adequacy developed by AAFCO is required on all pet food packages. The nutritional adequacy statement confirms 3 important features of that pet food product:

1) The product is complete and balanced. This means that the product is intended to provide all the nutrient requirements as the sole source of nutrition. If the statement reads "intended for intermittent or supplemental feeding" it should not be considered complete and balanced and should be avoided for everyday feeding unless overseen by a veterinarian (as some of the therapeutic diets are labeled).

2) The life stage. When a product is complete and balanced, the NAS should identify the life stage for which it is intended. AAFCO defines nutrient profiles and feeding trial requirements for growth (including an addition of large breed puppy), reproduction and adult maintenance, and all-life stages only.

(continued)

BUZZWORDS DESCRIBING PET FOODS: DECIPHERING FACT FROM FICTION TO INTERPRET MYSTERIOUS MARKET CLAIMS

JULIE CHURCHILL DVM, PHD DACVN

(continued)

It is important to remember that there is no AAFCO defined nutrient profile for senior/geriatric life stage and the nutrient content of products marketed for senior pets can vary widely. If a product is formulated to meet AAFCO profiles for “all life stages” it must meet the minimum nutritional requirements for both growth and adult maintenance. Products formulated for “all life stages” may contain excessive amounts of some nutrients, which can result in overfeeding. It is better to feed pets with food designed to match their life stage.

3) Method for determining nutritional adequacy. Nutritional adequacy can be established by a pet food company either 1) through animal feeding trials or 2) through formulation tests.

Feeding trials are conducted with animals to ensure that nutrients in a given food or line of foods are present in sufficient quantities to promote good health *and* are bio-available to the animal ensuring the nutrients are digested properly.

a. A product bearing the statement: “Product X” is formulated to meet nutrient profiles established by AAFCO (Species) nutrient profiles for [specified] life stage. These formulated products have had nutrient content confirmed by mathematical calculations (adding nutrient content of ingredients listed in a database) or by analytic testing of the finished product (preferred). The formulation method does not include testing involving animals.

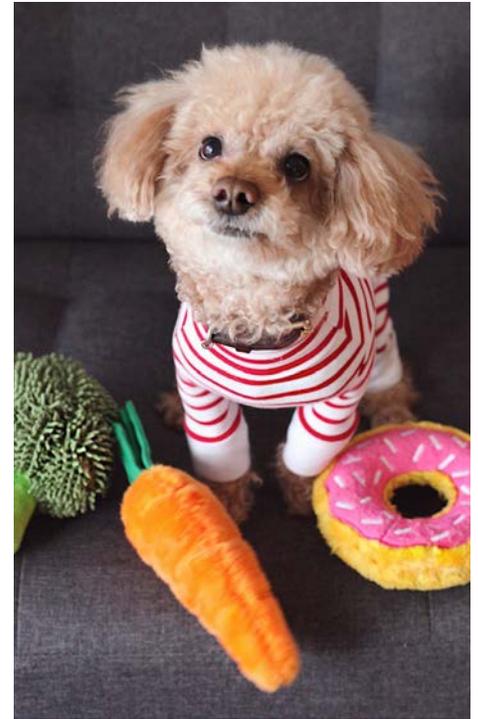
b. A product bearing the statement: “Animal Feeding tests using AAFCO procedures substantiate “Product X” provides complete and balanced nutrition for [specified] life stage, has undergone a feeding trial evaluation. Feeding trials allow for an *in vivo* product evaluation and an indirect measurement of bioavailability of nutrients. Feeding trials are preferable to formulations to help test nutritional adequacy but they do not assure the product provides adequate nutrition under all circumstances.

3 CALORIC CONTENT DISCLOSURE

Because of the prevalence of obesity in pets, caloric disclosure and labeling is essential for veterinarians to assess and counsel clients about purchasing pet foods that meet the energy needs of their pets. Fortunately, caloric disclosure is now required on packaging. Owners are still unaware of caloric content variation between foods causing pet owners a risk of overfeeding their pets, resulting in obesity and related health problems. Companies that choose to report the caloric content in ways easily found on websites and packaging are preferred. Making calorie content readily accessible greatly helps the veterinary team determine a proper food dose when making a nutritional recommendation and allows consumers to make comparisons between foods and select more appropriate feeding portions.

4 INGREDIENTS

Evaluation of the ingredient list is often the most controversial aspect



when interpreting a label. Evaluating ingredients presents challenges for clients because they are barraged with marketing claims, misinformation and even scare tactics. The belief that the ingredient list is the most important piece of information when judging pet food quality is reinforced when many of the pet food rating systems and pet food reviews are based on judgments about ingredients. With the exception of patients with adverse reactions or primary food allergies, or a traditional Chinese medicine approach, this is often the least useful information provided.

(continued)

BUZZWORDS DESCRIBING PET FOODS: DECIPHERING FACT FROM FICTION TO INTERPRET MYSTERIOUS MARKET CLAIMS

JULIE CHURCHILL DVM, PHD DACVN

(continued)

Pets require nutrients, not ingredients.

so a food composed of wonderful sounding ingredients may be less nutritious than one with seemingly less appealing (to the pet owner) ingredients. Clients usually want to prioritize ingredients and much of their information is based on misconceptions. The veterinary team must be careful not to discount client concerns yet, use the opportunity to educate and guide owners in their decision-making about pet foods.

Evaluation of ingredient lists remains challenging for many veterinary professionals because transparency about ingredients, ingredient sources, and processing methods beyond the minimum of what is legally required is generally difficult to come by in the pet food industry. In addition, the nutrient-based scientific literature is not comprehensive, especially when compared to the research base for human nutrition. Although there is widespread misunderstanding about pet food ingredients, the major ingredients commonly used in pet food (beef, poultry by product, lamb meal etc.) are fairly well-regulated and defined by AAFCO. Many fruits, vegetables, and other seemingly healthy ingredients have no AAFCO definition for the ingredient. If an ingredient definition does not exist, AAFCO regulations state that it “shall be identified by the common or usual name.” For example, ‘Apples’ or other fruits may contain seeds, stems, leaves, skins, or pulp. While pulp may contribute nutrients to the food, the generic definition does not clearly

exclude any other parts that may not be beneficial to the animal’s health. For all of these reasons, reliance on pet food ingredients as the primary way to assess a pet food product would be a poor indicator of a product’s overall health impact for a pet. As part of the initiative to consider nutrition the 5th vital assessment, a [Nutrition Reference Manual](#) provides an excellent description of pet food label requirements and clarifications about [ingredient definitions](#). These are useful tools for team training about how to talk about ingredients with pet owners.

5 NUTRITION RESOURCES

Another very credible and useful resource to help staff discuss nutrition myths and many other pet nutrition topics is the Tufts Clinical Nutrition blog: [Petfoodology](#). This content is current and written for pet owners, so the VHCT can direct them to this site. WSAVA has collated a [Nutrition FAQ and Myth](#) fact sheet, and created guides for pet owners to help them evaluate nutrition information from the internet about [feline](#) and [canine](#) nutrition.

6 NUTRITION RECOMMENDATION, A PET-SPECIFIC PROCESS

The final steps of making a nutritional recommendation for a pet food are to use your judgment in evaluating a product and match it closely with life stage, lifestyle and health of the pet. To complete the process, you would continue to monitor the pet’s response to make sure you see the expected results, that the patient maintains optimal health.

7 RECALLS

Sadly, pet food safety issues remain a growing concern. We have become more aware of pet food safety issues, most dramatically evident in 2007 with melamine adulteration of wheat gluten which affected many products and led to renal failure in a number of pets. More recently, products have been recalled for aflatoxin contamination, and several more foods or treats with potential salmonella contamination. Pet food safety is now more closely monitored by the FDA, and there are more professional “watch-dogs” sharing information and updates about pet food recall; Veterinary Information Network (VIN), American Veterinary Medical Association (AVMA), and State Veterinary Medical Association etc. There is now a central Food and Drug Administration (FDA) online safety reporting portal for veterinarians and owners to submit reports of concern about pet foods and treats. These can be submitted electronically:

<http://www.fda.gov/AnimalVeterinary/SafetyHealth/ReportaProblem/default.htm>

If the veterinarian has suspicions about the safety of a food, this warrants a thorough diet history. Check the FDA website and contact the pet food manufacturer to alert and confirm your concerns. You will need information from the product label, so advise client to keep the label with the food until the bag is completely consumed.

[LEARN MORE](#)

WAITING IS HARD.



Luckily we're ready when you are.

VETgirl delivers cutting edge, clinically relevant, on-demand veterinary training for veterinary professionals who are constantly on the run. For only \$249/year, you'll have access to 100+ hours of NEW, RACE-approved CE training via webinars, videos, rounds and blogs - all from board certified specialists in the areas of

Small Animal Care / Leadership / Technician / Large Animal Care

You will also have complete access to the massive, growing on-demand library content so you can learn on YOUR time!

VETgirl

vetgirlontherun.com



Less than 10 left!
Get your COVID cooking on!

Because you deserve to eat a meal using
silverware instead of tongue depressors.

[ORDER NOW](#)

family-friendly recipes
for the dog-tired chef



the
VETgirl
COOKBOOK

apple crisp

ingredients

6 cups sliced apples
 ½ cup flour
 ¾ cup brown sugar
 ½ cup rolled oats
 ⅔ cup margarine/butter, softened
 ¾ teaspoon cinnamon
 ¾ teaspoon nutmeg

directions

- 1 Preheat oven to 350 °F.
- 2 Place sliced apples in greased 9"x13" pan. In bowl, mix the rest of the ingredients until crumbly. Spread over apples.
- 3 Bake for 30 minutes or until lightly browned and crisp.



Submitted by Hannah Duranleau

berry trifle

ingredients

1 can (14 oz.) of sweetened condensed milk
 ½ cup of cold water
 1 package (4 serving size) instant vanilla pudding
 2 cups whipping cream
 ¼ cup of orange juice + 1 tablespoon, divided
 2 cups of angel food cake, cubed
 ¼ cup red raspberry preserve (original recipe calls for ½ cup, but it's too much), divided
 2 cups seasonal berries (I usually use raspberries, blueberries, and sliced strawberries)

directions

- 1 In medium-sized bowl combine milk and water. Add pudding mixture, mix well with a fork, and put into refrigerator for 5 minutes. Pudding will set.
- 2 In a large mixing bowl, whip the cream until soft peaks form. Slowly fold in the pudding mixture and 1 tablespoon of orange juice, being careful to not overmix and flatten the whipped cream.
- 3 Gently fold the raspberry preserves in with the seasonal berries, being careful not to smash the berries too much.
- 4 Layer ½ of the cake into the bowl to fully cover the bottom, then sprinkle with ⅛ cup of orange juice. Layer ⅓ of the berries and top with ½ of the whipped cream mixture. Follow with layers using the remaining ½ of cake sprinkled with ⅛ cup of orange juice, ⅓ of berries, and remaining ½ of whipped cream. Use the last ⅓ of the berries for décor on top of the final cream layer.
- 5 Let sit in refrigerator for at least 2 hours, but ideally overnight, before serving.

Submitted by Olga Vinogradova

TECH TIPS //

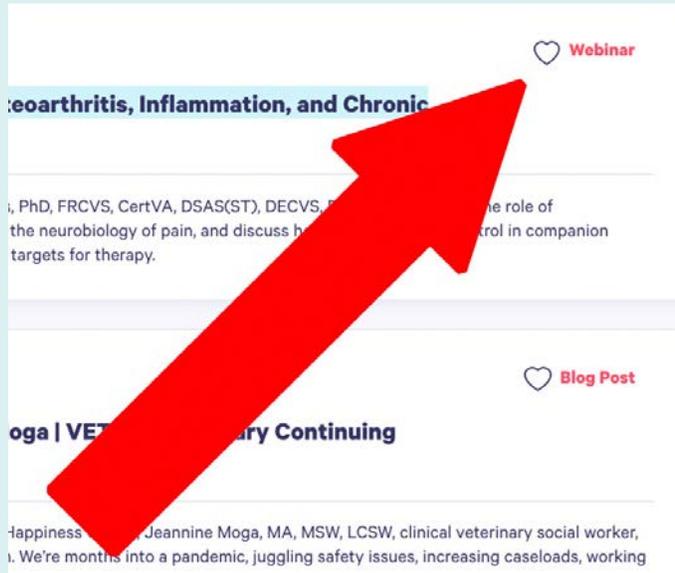
WITH VETGIRL COO, DR. GARRET PACHTINGER, DACVECC

Each newsletter will highlight one of the notable features on the website. This newsletter we wanted to highlight the new [VETgirl continuing education \(CE\) FAVORITES](#) function!

This feature allows you to add content to your [“FAVORITES” list](#) so you know what to come back to view later! Simply log into your VETgirl ELITE membership (even TRIAL) and click on the heart to make it a favorite.

We hope you love... and more importantly use this new VETgirl feature!

Thank you again for being part of the VETgirl CE experience, learning with the #1 CE community, resource, and CE management system for busy veterinary professionals.



MEMBERSHIPS //

GET 100+ HOURS OF CLINICALLY RELEVANT, PRACTICAL, CUTTING EDGE CE FROM BOARD-CERTIFIED SPECIALISTS **ON YOUR TIME.**

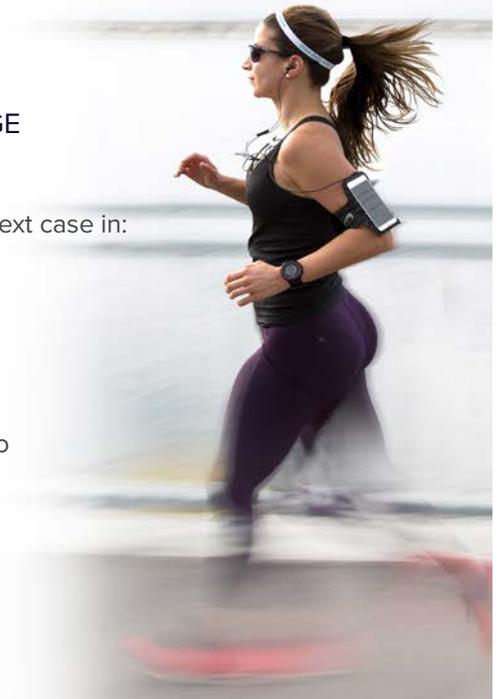
New content added each week, delivering the CE tracks you need to treat your next case in:

- SMALL ANIMAL
- LARGE ANIMAL
- TECHNICIAN
- LEADERSHIP

RACE-approved, online veterinary training straight to your device through podcasts, webinars, blogs, videos and social media. There are a variety of ways to take advantage of what VETgirl has to offer.

Find the plan that is right for you.

[JOIN HERE](#)



UPCOMING WEBINARS //

CLICK ON THE TITLES BELOW TO SIGN UP FOR THESE WEBINARS NOW!

- 12/9/2020 [Parasites in the dog & cat: A veterinary technician's perspective on testing methods and identification](#)
- 12/10/2020 [Advances in understanding osteoarthritis, inflammation, and chronic pain](#) (SPONSORED)
- 12/13/2020 [Nutrients vs. ingredients: The VHCT guide to help you detangle pet food marketing from science!](#) (SPONSORED)
- 12/14/2020 [Perineal hernia surgery: Tips for successful outcomes](#)
- 12/16/2020 [Creative kudos: Rewarding, recognizing and appreciating talented team members](#)
- 12/17/2020 [Bovine lameness](#)
- 12/20/2020 [Fecal transplantation: What's coming down the pipeline](#)

PROVIDER SPOTLIGHT //

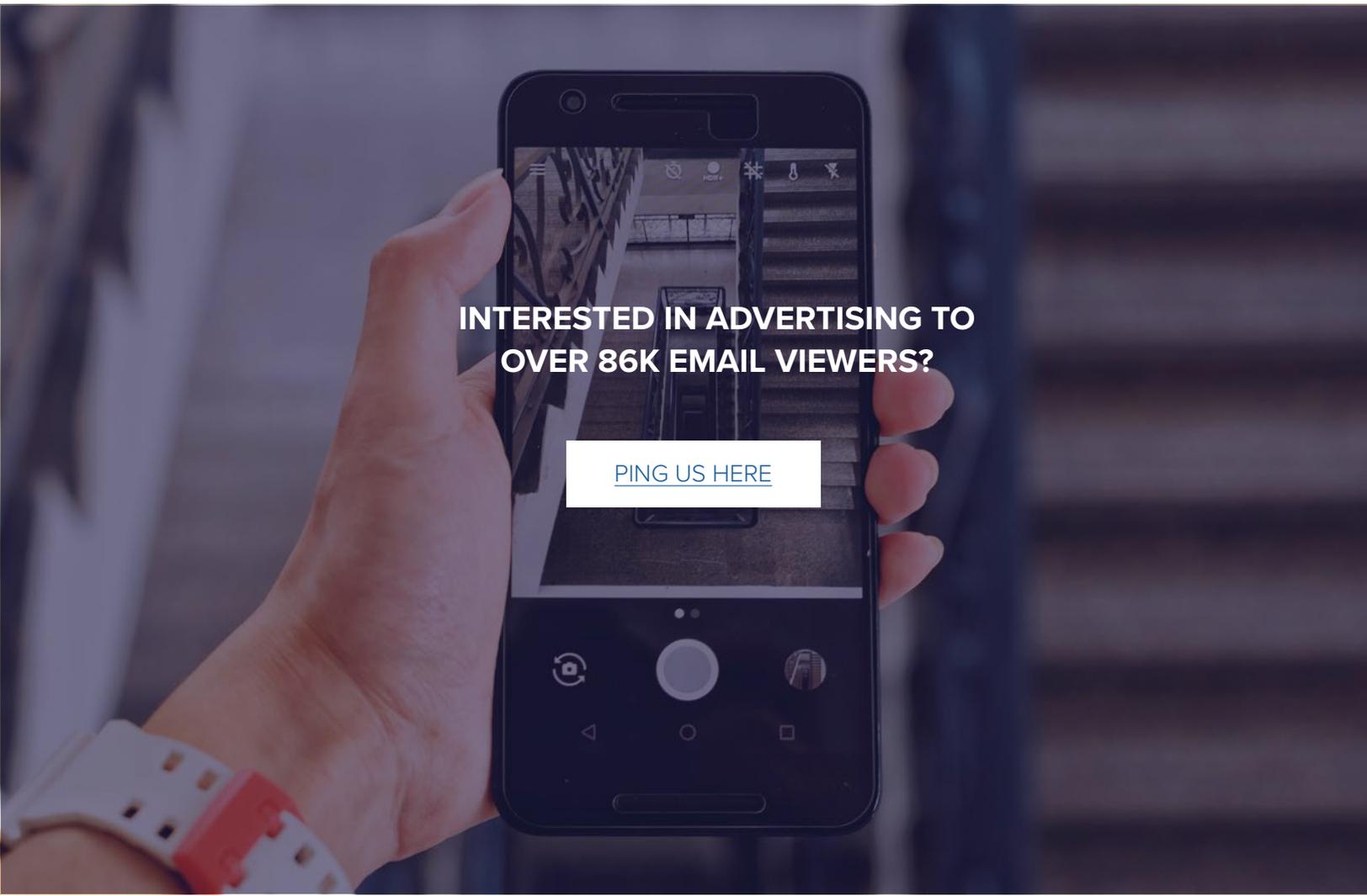
TRACY COVERT

MARKETING AND SPECIAL EVENTS MANAGER, VETGIRL, LLC

Tracy Covert is a veteran marketer and designer, bringing more than 15 years-experience to the team. She has held various management roles at the Viticus Group (formerly WVC) organization over a span of nearly 11 years, developing online education and technology platforms while managing their marketing and technology departments. Prior to her life in veterinary medicine, she worked in the homebuilding sector, marketing for KB HOME and now owns Details Creative, LLC, a boutique marketing agency focused on taking small businesses to the next level. As a wife and mother of three, she keeps busy, but manages to maintain work/life balance through creative outlets such as web design and enjoying her three Boston terriers, Dude, Daisy and Zeke.



QUARTERLY BEAT / DECEMBER 2020



**INTERESTED IN ADVERTISING TO
OVER 86K EMAIL VIEWERS?**

[PING US HERE](#)

© VETgirl, LLC. 2020.

VETgirl is an approved provider of online veterinary continuing education by the AAVSB (Provider #785). Each program is reviewed and approved (or pending approval). This approval is valid in jurisdictions which recognize AAVSB RACE; however, participants are responsible for ascertaining each board's CE requirements. Participants should be aware that some boards have limitations on the number of hours accepted in certain categories and/or restrictions on certain methods of delivery of CE. Please contact the AAVSB RACE program or VETgirl if you have any comments/concerns.

NOTE: When in doubt, all drug dosages should be confirmed and cross-referenced with a reference guide such as Plumb's Veterinary Drug Handbook.