

Announcer 0:12

If you want a wildly healthy, naturally disease-resistant pet who turns heads and starts conversations with awestruck onlookers, you're right where you belong. This is the Vital Animal Podcast, with your host, homeopathic veterinarian Dr. Will Falconer.

Will Falconer, DVM 0:36

Welcome to this latest episode of the Vital Animal Podcast. I wanted to talk to you today about an area I'm seeing a fair amount of confusion on, which is the difference between colostrum and transfer factors. There seems to be this confusion out there. Let me tell you what I think, based on starting out as a large animal vet in 1980, and using transfer factor for probably 20 years or more in both myself and my patients. And since colostrum is a common source of transfer factor, let's start with it. This is a super valuable resource, colostrum is, but to whom? That's the key question. Who is it valuable for? And the answer is, it's very valuable to those mammals, those non-human, non-primate mammals, so we're talking dogs and cats and horses and cows and all those youngsters, who are—get this—less than 12 to 16 hours old. So, it's important to note that all youngsters are born with immature immune systems. That's a given. We're not done developing when we come out of the womb, and neither are the dogs or cats as youngsters. So, they're not equipped to make the transition to a germ-filled world from mom's sterile womb, you can say. As they're unable to actively make their own immunity, guess what Mother Nature has graciously provided? It's called passive immunity. And it's in the form of colostrum, or the so-called first milk.

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You may have seen this stuff if you've been around cows, or—mainly cows is where you'd see it. It's syrupy and thick and kind of yellowish and looks nothing like milk that we're used to. So, who benefits from this? Puppies and kittens, foals, and of course, newborn calves from the cow herself. And why is colostrum so valuable? We can say more than valuable, it is critical. And if they don't get it in that first 12 to 16 hours of postpartum life, they can be in great trouble. And every farmer, every rancher, every breeder of any kind knows this. If they paid attention, they know this. It's part of life. They know to get that colostrum into the newborn just as quickly as they can. When they fail to get it in, we'll see things like joint ill in foals. Joint ill means multiple joints that are inflamed and often full of pus from often a strep germ that they've gotten, falling into their world with abundant germs from mom's sterile uterus. We'll see calf scours, as they're called, which is diarrhea that can often kill these young calves. They want to get the colostrum in right away, make sure these guys nurse on mom while that colostrum is present, and in their first 12 to 16 hours of life, or they have a good chance of dying.

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Pneumonia is another common childhood illness you can see in these guys. And in dogs, that's Parvo and distemper immunity in a passive way from colostrum. And in cats, it's another Parvo virus, but one called panleukopenia, which is highly fatal to young cats. And colostrum supplies not only transfer factors, but it supplies immune antibodies, and nutrients, and even hormones like insulin and cortisol. And these things actually aid the closure of the gut junctions. We'll come back to that in just a second, that's a real important

thing that happens. And they've got proteins in colostrum and growth factors and lactose and fats. So, there's energy in there, there's things to promote growth and things to sustain that youngster who's just come out of the womb and been fed through the placenta for all these months. So, all great stuff for a healthy start, right? Here's a quote from a vet school paper from France on canine and feline colostrum: "Birth induces major physiological changes in the fetus, and the newborn will have to adapt to survive. Among these dramatic changes, the environment becomes hostile, as massively infected by potential pathogens," meaning the sickness-causing germs, "and instable, low temperature, versus the sterile, thermoregulated uterus." That's the world they come into. And colostrum providing immune factors and nutrients, especially energy, is the key element for a correct adaptation of the newborn to extra-uterine life.

Will Falconer, DVM 5:44

So, what's different in newborns that are less than 12 to 16 hours old, versus anyone from that age up to 80 years old, old age, or a dog at 16 or 18? Well, there's one really significant difference. It's called gut permeability, or the gut's ability to absorb large molecules, like antibodies, for instance, part of colostrum. In fact, a chief component of colostrum. You've likely heard this term "leaky gut," right? Well, that refers to the lining of the gut, and how close those lining cells, also called enterocytes, how closely they lock together. Nature has in her intelligence purposely made the newborn's gut leaky, so to speak, to allow for the absorption of these very large antibodies. These big immune molecules are critical to newborns, as whatever antibodies mom has made against whatever germs she was exposed to can be handily absorbed and used for this child's or this youngster's protection. And to those same diseases. Pretty amazing, when you think about it, right? But after that 12-to-16-hour window closes, nature knows that gut lining needs to also close, or to seal up. If that fails, due to inflammation or any kind of a physiological insult, it's now going to absorb large proteins that can set off horrible and unwanted inflammation. We'll often see this as allergies, some of them life-threatening, like the peanut allergies you hear about in kids today. Leaky gut may be a chief reason that the aisle in your grocery store devoted to anti-inflammatories is so very long. Have you ever noticed this? Next time you're in the grocery store, just take a look and walk the aisle where they sell the ibuprofen and the Motrin and all that stuff. It's a long, long aisle, we have a lot of inflammation in our society. And it may be a lot of it due to leaky gut.

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Okay, so with a newborn, non-human, non-primate mammal, we humans and the primates get some immunity across the placenta, but the dogs and cats and horses and calves do not. These guys need colostrum. But what about adults? I've not found evidence that it's appropriate past 24 hours of age in any species to give colostrum. Why do mammals only secrete it for 24 to 48 hours before they turn to making normal white-looking milk? Is nature trying to tell us something here? After gut closure at 12 to 16 hours postpartum, is colostrum of much use? I think that's a very valid question. What role does transfer factor play in colostrum, and how is it different than antibodies? Well, transfer factor turns out as a very small protein molecule compared to the huge IgG antibodies that are a major part of colostrum. We adults, in order to use proteins, must and regularly do digest them into small amino acids. But, transfer factor being so small, it can be absorbed at any age animal, and

interestingly, in any species. So, that means the transfer factor from a cow can inform the immune system of a sheep or a goat or a human or an elephant or a dog or a cat. These transfer factors have been researched since the 1950s when it was discovered that they could transfer immune competency or immune power from a healthy human white blood cell to those who were suffering with tuberculosis. And the published papers are in the thousands since the '50s, when transfer factors were discovered. And this is one of the things that first attracted me to transfer factor as a means of helping our animals: huge volumes of research.

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Can we say the same about colostrum, especially in its use in adults? We cannot. Some of the claims for colostrum include: it's got macronutrients, vitamins and minerals; it's especially high in protein compounds—note that—that regulate immune responses and promote growth, including lactoferrin, growth factors, and antibodies. Well, that may all be in there. That may all be true if you put it on a lab bench and analyze it. But guess what? Lactoferrin, while it's useful to the young, is again a big molecule. And growth factors, how is that important to someone who is an adult? I don't think it is. And, again, we've discussed antibodies, they're big, they are not absorbed. So, I think what we end up with is a pretty expensive protein powder, if we're buying colostrum and hoping to get immune support. So, colostrum is clearly designed by Mother Nature to enhance the newborn mammal's chances of living through its early transition period, from womb to the big bad outside world. And we must digest all the proteins we and our pets eat once the newborn stage has passed. So, what are the chances that consumption of colostrum is going to boost immunity? If we're digesting those big proteins, I think the chances are slim to none, counter to the advertised claims.

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So, let's talk a bit more about transfer factor next. Besides these scads of research on it, since the 1950s forward, transfer factors are part of colostrum, but they're also part of egg yolk, and we all have some level of it in our white blood cells. That's where they originally discovered it, in fact. And they got their name from the ability to transfer immune competency from mother to offspring, or in the case of that human research, from an immune-competent individual to an immune-compromised one. The first had TB, the immune-compromised one had TB and the immune-competent one did not. They transferred the immune intelligence from the competent one to the TB patient and it worked, it helped. So, again, that was from the 1950s, and we've learned a lot about it since. What these thousands of research papers have told us since that time until now is that these very small, very absorbable molecules, do some amazing transferring of immune intelligence, from an immune individual to one we'd like to become more successfully immune. And as they are so small and common to us all in low levels, a transfer from a cow or a chicken can transfer immune intelligence to any species, as I mentioned. Humans to dogs, cats, horses, elephants, you name it.

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So, one way of calling out the function of transfer factor is saying, they are the brains of colostrum. I think that encapsulates it. What they do in simple terms is, first, they inform the

immune system, alerting it to dangerous viruses, bacteria, tumor cells, etc. And second, when it's appropriate, they initiate attack. When these sentinels see something wrong or something foreign, they initiate attack. They're often the first line of defense. Natural killer cells are informed by transfer factors. And they're on the front lines, you can say. And finally, they stand down when the attack is over. That's the third stage. So, they don't keep on attacking, keep on making inflammation, etc. When the germ is vanquished, the attack stops. And the body's immune system then returns to this state of restful watchfulness. And an immunologist told me years ago that a stimulated immune system is a balanced one. I'll say that again. A stimulated immune system is a balanced one. So, this comes to play when we're fighting autoimmune disease, where the immune system of, say, your dog is attacking her own red blood cells. And we see a lot of autoimmune disease today. Transfer factor is very much indicated in those diseases, because while stimulating, it brings it to balance. A stimulated immune system is a balanced one, say the immunologists.

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So, the question may arise: if transfer factor is a part of colostrum, what's the problem with just feeding colostrum? Well, the answer is all-around concentration. If it's immune support that you seek, here's a fact you'll want to take home with you. It takes two and a half quarts of colostrum to make just a teaspoon full of transfer factor powder. That's an 80-to-1 concentration of these so-called brands of colostrum, to get the powder of transfer factor. Another question people have is, what about those allergic to dairy? That's a real concern, and you'll see sometimes allergic responses to colostrum. But you won't with this purified concentrate of transfer factor. The allergens, again, are these big molecules, proteins, big proteins. And transfer factor is tiny in comparison, and doesn't provoke allergic responses. So, to sum up, colostrum is an amazing food with lots to offer to a very specific individual. And that is the newborn. That's probably why mammal moms don't keep making it beyond the first day or two of a newborn's life, right? They switch to milk. If you've got an adult animal, or to be more specific, anyone who's older than 16 hours postpartum, so they can be a growing youngster, but beyond that 16 hours postpartum, it appears to me colostrum is not the way to go. Especially if it's immune support you seek. Sure, colostrum has lots of immune support for the neonate. But once the gut closes after 16 hours postpartum, you're basically feeding a very expensive protein supplement with little to no immune support. Remember that 80-to-1 concentration we're talking about.

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So, products like Canine Immune Support use highly concentrated transfer factor, carefully extracted from colostrum and other sources, and known to boost immunity in all species, at any age. And in addition to transfer factor, it's got a special blend of other synergistic ingredients, including several medicinal mushrooms. So, colostrum definitely has its place. It's best gotten directly from suckling shortly after a newborn emerges from the womb. But for the rest of us, purified transfer factor products make much more sense. Let me just add that, as you probably learned from an earlier episode, we've got a couple now on titers, that this passive immunity gained from youngsters suckling colostrum is a short-lived thing. Dr. Robb told us that if you vaccinate in an attempt to get immunity, and you do it before 12 weeks of age, mom's antibodies will interfere with that, and those antibodies from mom run out at about 16 weeks. Nobody in the dog world has any antibodies from mom left after 16

weeks of age. So, if the question comes, these animals got a good suckling of colostrum, they should be set for life, right? The answer is no, they're not set for life. They're set for the first 12 weeks of life, maybe the first 16 at the outside. But from then on, they're on their own. And that's why supplements like Canine Immune Complete are so helpful. We can use them at any age, we can get an immune response, a strong immune system at any age animal. So, I wanted to clear that up for you. Thanks.

Will Falconer, DVM 19:06

So, this episode, like many, is brought to you by our sister company, Vital Pet Health at vitalpethealth.com. And there you can find our current canine supplement called Canine Immune Support, which is using this concentrated, purified transfer factor, medicinal mushrooms and other synergistic ingredients, to help your dog and soon your cat, parenthetically, and one day soon a human version, to have a strong immune system and be on the lookout for Parvo, distemper, dog flu, whatever's coming around. And to get those, it's as easy as jumping online to vitalpethealth.com. I wish you and your animals all the very best. Signing off for now. This is Dr. Will Falconer.