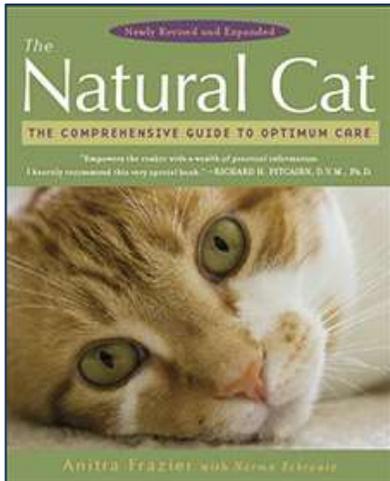


Vitamin C to the Rescue

by Anitra Frazier, author of "The Natural Cat"



It is certainly easier, cheaper and a lot more pleasant to prevent illness than it is to trap a sick cat, transport him to a vet and then try to diagnose and treat the frightened animal.

Vitamin C, the first vitamin discovered by humankind, is truly a friend to the caregiver of a feral colony. An efficient healer and powerful protector, it works like a nutritional knight in shining armor fighting against invasions of germs and viruses and battling stress of all kinds. Germs, viruses, dirt, x-rays and chemicals such as antibiotics, steroids, tranquilizers, anesthetics, pesticides and the preservatives in commercial pet foods have all been shown to use up large quantities of Vitamin C.

In addition, this versatile vitamin is user friendly. It is water soluble and cannot be stored by the body so an overdose is, for all practical purposes, almost impossible. While 250 milligrams

is the maximum dose that a cat can absorb and put to use at one time, if more is given, the excess will simply be excreted via the urine and none will linger behind in the body.

Healthy cats can make some Vitamin C in their intestine. The operative words here are "healthy" and "some." Cats can manufacture enough C only if the diet is rich in all the other nutrients they need and only if daily stresses do not become too numerous, too extreme or too prolonged. Stresses such as extreme heat or cold, fighting, being wounded or hurt, being trapped or caged, loud noises, strong, unpleasant smells or forced change of territory use up Vitamin C at an alarming rate. Even a healthy, well-nourished cat can use up more Vitamin C than he can produce if faced with a high level of stress. Depletion of this vitamin leaves a cat easy prey to every germ or virus that happens along.

Any trap-neuter-return project will include the cats being trapped, caged, undergoing surgery and anesthesia and having other medications administered. These are all potentially stressful to the cats and can result in upper respiratory and other diseases. What we need here is a knight in shining armor to bring the cats safely through all this. Enter Vitamin C. This inexpensive and easily obtainable supplement will greatly enhance any cat's chance for a full recovery.

There are three main types of Vitamin C in general use. Each has its own particular strengths and drawbacks, but all will provide Vitamin C to the cats:

- **Ascorbic Acid** is the cheapest and most popular form of Vitamin C. It is readily available in pill or powder form from health food stores and pharmacies. On the plus side, ascorbic acid helps keep the urine acidic, thereby preventing bacterial growth and inhibiting formation of crystals. Here's how it works: a cat's body can absorb only 250 mg and no more at one time. If more is administered, the body will dispose of the excess by sending it out in the urine. Ascorbic acid raises the acidity of the urine on the way out, which is why holistic caregivers use it in doses greater than 250 milligrams to help dissolve bladder stones and

crystals. The only drawback to this form of Vitamin C is its acid or sour flavor – cats don't like it if too much is given. I counteract this by mixing it into a food with a strong flavor of its own. Petguard Savory Seafood or Fish, Chicken & Liver do the job nicely. For really finicky cats, I give only a half dose (125 mg) or even a quarter (62.5 mg).

- ***Sodium Ascorbate*** provides the same amount of Vitamin C as ascorbic acid and is almost as cheap. If more than 250 mg is given at one time, the excess will also be excreted harmlessly, but will not acidify the urine because sodium ascorbate is alkaline. On the plus side, its flavor is milder and it is the most readily accepted by cats of the three types of Vitamin C, although as with ascorbic acid, it's a good idea to add some fish-flavored food to cover the sour taste. So if there is no reason to worry about the acidity of the urine and you simply want to give a Vitamin C supplement, sodium ascorbate is the one I would choose.
- ***Calcium Ascorbate*** is very popular for use in humans because it is very alkaline instead of acidic. It is used by people who suffer from ulcers or hyperacidity because it tends to neutralize stomach acid. Unlike with humans, the stomach of a healthy cat is supposed to be extremely acidic to facilitate the digestion of protein, so calcium ascorbate can upset this balance. Another drawback when it comes to cats is its very bitter taste. A person can pop it down as a pill, but for cats we have to use a powder form and mix it into the food. It makes the whole meal taste bitter. It's also a bit more expensive than the other two types. I don't use it at all.

When found in its natural state in foods like tomato sauce, Vitamin C is accompanied by bioflavonoids, rutin and hesperidin. Science has found that these nutritional sidekicks are provided by nature to help the body absorb the C and put it to work more efficiently. A cheap jar of ascorbic acid in powder form will certainly give wonderful support and protection and it will help keep the urine acid as it should be, but C complex (ascorbic acid with bioflavonoids, rutin and hesperidin) will do a lot more for only a little more money. Health food stores will have several choices available. I use Twin Lab Super C, yellow label.

Vitamin C does not need refrigeration but you must keep the contents of the bottle dry. Use a clean, dry measuring spoon. Because C cannot be stored by the body, it must be given every meal and can be continued indefinitely. A maximum dose of 250 milligrams equals about 1/8 teaspoon. Because the presence of moisture causes it to lose potency, mix it into the food right before you feed. If everything is going well for a colony, I recommend giving only 125 milligrams or 250 for each two cats. If the weather turns harsh or some other stress presents itself, try to increase the dose to 250 milligrams per cat. During trap-neuter-return projects when stress will skyrocket, give the full dose for two days before trapping. During confinement and treatment, feed three or four small meals a day in order to get the C into them more frequently. If a cat objects to the sour flavor, as happens occasionally, cut the dose down by half or use just a few grains. Any amount is better than zero. Remember to try adding a "bribe food," something they love that has a strong flavor. You can also sprinkle brewer's yeast on top.

Tomato sauce is a rich natural source of Vitamin C complex. If you know that a colony enjoys it as part of the food mix (most do), make sure to include it along with the supplement in

times of stress. I prefer Muir Glen organic tomato sauce. Mix 1 or 2 tablespoons in a large 14 oz. can of cat food.

Remember, Vitamin C cannot be stored by the body so always giving a little with every meal is like a mini-insurance policy. Adding 2 tablespoons of tomato sauce to each large can of cat food is a delicious way to accomplish this. Then, if there is inclement weather, loud construction work nearby, injury or any other stress, add up to 250 mg per cat per meal of Vitamin C powder to a strong flavored food until the disruption is past. After the stress is over, go back to adding the tomato sauce to each meal.

Because we are practicing prevention, caregivers may find it difficult at first to pinpoint a clear demonstration of results. The benefits are mostly about what does not happen. Cats do not die under anesthesia; wounds do not become infected; there is no outbreak of respiratory infections shortly after a new cat arrives in the colony. Resistance is high; the cats are more resilient.

I would not feel even half as secure about managing a feral colony if I didn't have the help of Vitamin C, my trusty knight in shining armor, to back me up.