

## The Wisdom of Herbal Pet-Care

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Veterinarians today report a tremendous increase in the amount of cancer and heart disease in their patients. Younger and younger animals are presenting with diseases that were rare back in the early 1950's. Immune system problems, chronic skin and ear allergies, digestive upset, thyroid and adrenal disorders, seizures, gum and teeth problems, degenerative arthritis, kidney and liver failure, heart disease and cancer are all common these days among our animal friends. Vets are reporting more behavioral disorders as well, with more fears and aggression seen in our nation's 68 million owned dogs and 71 million owned cats. (APPMA 2001-2002) "Dogs resemble the nation which creates them..." stated Gertrude Stein, back in 1940. We must realize that our world today has become dangerous to the health of our animal friends and explore new ways to keep them healthy.

For a modern-day pet there is a high likelihood of coming in contact with toxic pesticides, herbicides and dangerous household chemicals. On a daily basis, pets may be exposed to toxins put on our "green" lawns, chemicals found in puddles on the street, additives and preservatives in their food, and chemicals found in household cleaning products. Foods sold for pets have much lower standards than those for humans and is often devoid of energy and nutrition, laden chemicals and preservatives, over-processed and boring. Equally important, medicines used on animals are often powerful pharmaceuticals that may have side-effects that we are often unable to monitor. Even substances used for flea and tick prevention can expose them to extremely poisonous chemicals that can wreak havoc on their immune systems. Vaccinations are also under scrutiny. We vaccinate to defend them from the onslaught of disease, yet as Martin Goldstein, DVM says in *The Nature of Animal Healing*, "...a growing number of holistic and now even conventional veterinarians are convinced, from sad experience, that the vaccines they have administered are doing more harm than good."

With our extensive use of antibiotics and steroids, many believe that we are merely focusing on suppression of symptoms and not treating the underlying causes of disease. And, by doing so, we are helping to create new beefed up viruses and bacteria. Strengthened by overuse of antibiotics, bacteria and viruses can now decimate entire populations of marine mammals, fish and dolphins, and are also rife among our household animal friends. Feline Infectious Peritonitis (FIP), Feline Leukemia (FeLV) and Feline Immuno Deficiency virus have appeared as recently as 1986.

Ironically, with modern medicines, our pets are perhaps living longer, but are they living better? Living longer lives, they will have the opportunity to have more chronic illnesses and develop more cancers. Some seventy types of cancer have been identified in domestic animals. According to an October, 1997 Morris Animal Foundation survey, cancer is the number one killer of dogs and cats, and the number one concern of pet owners. In the Morris study, which surveyed 2,003 pet owners, the leading cause of non-accidental death in dogs was cancer at 47 percent and one of three leading non-accidental causes of death in cats at 32 percent.

### **The tarnished "silver bullet"**

*"We have let our profligate use of antibiotics reshape the evolution of the microbial world and wrest any hope of safe management from us. Resistance to antibiotics has spread to so many different, and such unanticipated types of bacteria, that the only fair appraisal is that we have succeeded in upsetting the balance of nature."*  
—Marc Lappe, *When Antibiotics Fail*

Scientists during the 1950's thought we were within reach of a world free from malaria. At this time, a world free from all bacterial infections really seemed a possibility. Today, the medical "advances" of yesterday are slipping away. Sadly, we now know the vision of a "silver bullet" -- or a drug for all bacterial diseases -- is a tarnished one. According to the American Center for Disease Control and Prevention (CDC), over 13,000 patients in the U.S. were killed by *drug-resistant* bacterial strains in 1992. By 1997, over 100,000 people were estimated to be dying, and 3 million people were admitted to hospitals with difficult-to-treat, antibiotic-resistant bacterial infections; an additional 2 million people developed infections getting routine medical procedures. Even Alexander Fleming, the inventor of penicillin, noted as early as 1945 the danger of staphylococcus bacteria's resistance to penicillin. In 1945, despite the fact that it only had five years of limited use, up to 14% of all staphylococcus were resistant. By 1950, 50% were resistant, and by 1995 fully 95% were resistant. In 1943, streptomycin became the first cure for Tuberculosis (TB), and by 1947 streptomycin-resistant TB strains were reported.

Bacteria evolve at fantastic speed; one bacterium can produce almost 17 million in a 24-hour period! This allows them to pass along the drug-resistant gene not only to their own species but, more significantly, to other unrelated microbes. Overuse of antibiotics today greatly exacerbates the resistance problem. Shockingly, in the U.S., to fight infection and make livestock grow more quickly, in factory farms it is legal for 80 different antibiotics to be added directly to animal grains!

In spite of this onslaught, we must remember that our immune systems and those of our animals are remarkably efficient. Even peers of Louis Pasteur's

germ theory, researchers such as Max von Pettinkofer and Elie Metchnikoff, insisted that bacteria do not *cause* disease, but rather create an interruption in the normally health ecology of the body. Basically, human and animal beings live in, and have evolved from, a sea of bacteria. We have adapted and deal effectively with them when our systems are in balance and in full health. As Marc Lappe says, "It is the *body* which ultimately controls infection, not chemicals. Without underlying immunity, drugs are meaningless."

At the core of holistic medicine is the understanding that you need to look at the *whole* system to determine the source of disease and guide the course of healing from there. At the core of holistic pet care is the notion that the best way to cure an animal who is ill is to help the animal cure itself. Taking the holistic approach, we can see that there are alternatives to powerful pharmaceuticals, and that we can support the immune systems of our animals so they can remain strong and stay healthy in today's world. In addition to providing proper nutrition and exercise and a loving home, we can offer nutritional and healing support from nature in the form of herbal medicine. As an added bonus, when we eschew unbalanced pharmaceuticals in favor of the proactive protection of herbal medicine, using Mother Nature's medicine with all of her complex chemistries, there are *never* acquired resistances due to their use.

### **Nature's Pharmacy**

Plants generate chemicals as medicines to protect themselves. Plants have evolved from the same "sea of bacteria" and they, too, have been generating defensive compounds to protect themselves for some three and a-half billion years of life (marine micro algae). Anti-fungal, antibiotic and pre-infection anti-microbial compounds protect the plant from invading pathogenic organisms. For example, they can produce anti-fungal compounds to protect their roots. Chicory roots, for example, produce anti-fungal compounds that are so strong, that if they are kept moist for long periods on a plate they will not mold. It is a matter of survival for this plant, in damp, wet soil, to protect itself and its roots against mold. Plants need to generate these natural, yet complex chemistries to survive. They can generate antibiotic, anti-microbial, mucilaginous, gum, resin, anti-inflammatory, and analgesic compounds. Plants can also combine and move any of these compounds where they are needed, and yet, because many of them are extremely reactive to the air, and are often stored inside cells deep within the plant.

Anti-inflammatory compounds such as *quercetin* are made by plants for release into damaged areas to control cellular inflammation. Salicylic acid, the precursor of aspirin, is isolated from *Willow bark* and *Meadowsweet*. Both of these plants are used as anti-inflammatory agents in herbal medicine. Salicylic acid can stimulate or inhibit growth depending on the dosage used, and it is also analgesic. Plant compounds that inhibit cell division may be used as anti-cancer compounds. Within the plant they may

inhibit cell division in other seedlings attempting to germinate too close to the plant.

Plants will also generate hundreds of compounds to protect themselves from animals and insects. They may produce glycosides that can be toxic only when digested by the animal to deter a certain animal from that plant. Tannins in leaves have mild anti-bacterial compounds and act as a barrier against penetration and colonization by plant pathogens. They dry out leakage of fluids from any break in the plant's cells, causing contraction of the tissues. They also can bind with these pathogens on the surface causing a hardening or tanning of the cells, creating a protective layer, shutting down entry of the pathogen to the plant.

### The Whole Plant View

It is fascinating to note that bacteria do *not* develop resistance to *whole* plant medicines. Plant medicines, unlike pharmaceuticals, contain thousands of complex compounds that work synergistically; they are so complex that it is very difficult for pathogenic agents to develop resistance. Numerous plant medicines have shown activity against the very same bacteria that have developed resistance to human pharmaceuticals, with very few side effects. The African herb, *Cryptolepsia*, and "cold" energetics of a Chinese herb of *Qing Huo* (*Artemisia annua*,) are more effective against non-resistant malaria strains than pharmaceuticals, and produce none of the side effects seen from Chloroquine. *Artemmisen*, in the Chinese herb, *Qing Huo*, has shown in clinical trials to be very effective against the most deadly strains of malaria and will soon be the treatment of choice.

Parasites, similar to bacteria, are also constantly evolving, countering our moves against them. In Vietnam, first with the French and then with Americans, it was noticed that the first drug-resistant strains were starting to appear. Chloroquine's effectiveness was on the wane almost as soon as it was developed and the reason was due to the evolution of the parasite itself. The medical approach to resume the fight against malaria attempted to use combinations of several chemicals or alkaloids, in other words, a combination not unlike cheap *Cinchona* bark! It seems the only long-lasting hope for conquering malaria and other diseases will come from nature's complex compounds

*"(The) interwoven connections of the plants and their chemistries to the life around them has begun to reveal to contemporary peoples that the plant chemistries are used not only for the plants themselves, but are created and released to heal disease throughout the ecosystems in which they grow"*

--Stephen Harrod Buhner, *The Lost Language of Plants*

The connection of humans and animals is interwoven into our planet's (Gaia's) regulatory network of life. Animals and humans are called to the same healing resources within the sophisticated chemistries and energies of plants. Plant systems automatically observe when a member is struggling and ill, and the mycelial networks within the surface of the soil, transport and direct the healing chemistries toward it. When, for example, a species is under attack by insects and cannot produce enough of a compound to protect itself, healthy plants in the same system will provide support by passing along through the mycelial network much-needed chemical reinforcements. In one experiment, scientists deliberately cut a full circle of bark around the trunk of the tree, which should normally kill the tree. The tree survived on nutrients transported via the mycelial network from other plants in the community. The tree lived for years, while trees disconnected from the mycelial network died within a year.

Animals are able to utilize this intelligence found in the natural world. An animal will seek out certain grasses when they feel unwell to help regulate the health of mucous membranes of the intestines with the naturally occurring antibacterial and anti-microbial actions found in the grasses. Great apes employ over thirty species of plants for medicinal purposes. There is now even a scientific term for the study of the use of medicinal plants by animals: zoopharmacognosy.

### **What Animals Know**

Herbalists have long known that many of the defensive compounds found inside plants make effective herbal cures. They know that the natural environment provides a seemingly endless supply of potential medicines. However, the idea that animals might also use herbs (or anything else) to self-medicate has, until recently, been dismissed as romantic. Plants generate compounds for protection, and animals have, by trial and error, learned over millennia how to use these compounds. Humans have learned from animals how to use the plants in their environments. The studies are fascinating and provide us with a wealth of information about how animals instinctively understand how and when to use plants as medicine.

Animals have been on the planet for hundreds of millions of years. Animal knowledge about the use of plants as medicines may be passed along genetically over the ages, or it may come from instinctual understanding. It may also come from the animal's ability, like the those of the plant kingdom, to call to itself those substances needed to return to balance.

*"The idea that animals can convey meaning, and thereby offer an attentive human being, illumination is a commonly held belief the world over. The view is disparaged and disputed only by modern cultures with an allegiance to science as the sole arbiter of truth. The price of this conceit, to my way of thinking is enormous."*

-Barry Lopez, *The Language of Animals*

Traditional peoples have always learned from animals and assimilated this knowledge into their own systems of healing. Even in recent history, the cancer treatment practiced by Harry M. Hoxsey, (1901-1974), one of the longest-lived unconventional therapies of this century, came to us from an animal. The "Hoxsey treatment" was developed in 1840 by John Hoxsey, Harry Hoxsey's great-grandfather. It was derived from grasses and flowering wild plants growing in a pasture where one of John Hoxsey's horses, afflicted with a cancerous growth, grazed daily. The horse's cancer reportedly disappeared, and John Hoxsey surmised that the wild plants had caused the recovery. He gathered some of the plants from the pasture, and later added ingredients from old home remedies for cancer. He used the resulting herbal mixture to treat similarly afflicted horses near his farm in southern Illinois. The herbal formula was bequeathed to John Hoxsey's son, then to Harry's father John, and finally to Harry Hoxsey in 1919, whose father charged him with using it to treat cancer patients "if need be, in defiance of the high priests of medicine." Although Harry's father, a veterinary surgeon, was the first to use the formula to treat people with cancer, it was Harry Hoxsey who made it famous. This Hoxsey Formula in truth was originally developed by the horse of Harry Hoxsey's grandfather.

### **Animal Stories: observations of animals using herbs.**

#### **Sick female chimp using *Vernonia* bush for parasites:**

In her book, *Wild Health*, Cindy Engel reports an interesting story about a female chimpanzee. Dr. Michael Huffman, an American primatologist was working in Tanzania with an elder of the local Wa Tongwe tribe as a guide, who was both a skilled naturalist and an herbalist. While tracking an ailing chimp, they observed her stop in front of a *vernonia* bush (part of daisy family,) tear off a branch and begin peeling the bark. Prior to

consuming the plant sap, the chimp was suffering from constipation, malaise, and lack of appetite. A day later, she made a spectacular recovery. They continued to track the chimp, and collected dropping samples to send off for laboratory analysis. The results showed at the time of the first collection, the droppings contained 130 nematode eggs per gram. In under twenty-four hours, the egg level was reduced to 15 per gram. The chimp resumed hunting, an exercise she had been unable to perform the previous day. *Vernonia* is one of the most important and widely used medicinal plants of Africa.

**Asian elephants find natural stimulant and pain killer:** In the early 1940's, scientists observed Asian elephants, before embarking on long treks, devour the fruits *Entada scheffleri*. Researchers theorize that the plant may serve either as a stimulant or a painkiller.

**Pregnant elephant uses a borage tree to induce birth:**

According to World Wildlife Fund scientist, Holly Dublin, African elephants seek out a particular species of tree when preparing for labor. Holly followed a pregnant elephant for more than a year in Kenya, and observed that the elephant followed a uniform diet and daily behavior. However, at the end of her pregnancy, the elephant walked 17 miles in one day, many more than her usual three, and ate a tree of the *Boraginaceae* family from leaves to trunk! Within four days, her contractions started and she gave birth to a healthy calf. Dublin never observed this creature eat this species before or after this particular incident. She also found that women in Kenya brew tea from the leaves of this tree to induce labor.

**Pregnancy and fertility of Muriqui monkeys of Brazil:**

Anthropologist, Karen Strier, from the University of Wisconsin, found that, at different times, Muriqui monkeys of Brazil seem to practice a natural form of family planning. These monkeys have been observed at times to make a special effort to eat leaves of *Apulia leiocarpa* and *Platypodium elegans*. These two plants contain isoflavanoids, compounds similar to estrogen, that are believed to increase estrogen levels, thereby decreasing fertility. Conversely, they will eat the fruit of *Enterlobium contortisiliquim*, perhaps to increase their chances of becoming pregnant as this plant contains a precursor to progesterone called *stigmaterol*, the "pregnancy hormone".

**Asian two-horned rhinos use tannin-rich bark of the red mangrove as anti-diarrheal:**

The Asian two-horned rhino was observed eating so much of the tannin-rich bark of the red mangrove that its urine was stained bright orange.

Tannins are a major component of some over-the-counter anti-diarrheal preparations. The concentration of tannins in the bladder of the rhino necessary to change the color of its urine was undoubtedly sufficient to have an impact on parasites in the creature's bladder or urinary tract.

**A Young Porcupine use *mulengelele* for parasites:** Shortly after being taken in after its mother was caught in a snare, a young porcupine became sick, suffering from diarrhea and lethargy. It wandered off from the village and the porcupine dug up the root of a plant the WaTongwe tribe call *mulengelele*. The baby porcupine recovered from its illness.

**Bears use *Ligusticum porteri*, or Bear root:** *Ligusticum porteri*, or Bear root, has been known to be a fundamental medicine for American Indian cultures. It is used as a headache remedy, as a fungicide, as an insecticide, and for numerous other complaints. More than a dozen compounds in bear root have been shown to produce known pharmacological activity.

**Some birds use herbs** to enhance the health of their chicks. Male European starlings have been observed selecting aromatic herbs to bring back to the nest. In North America, starlings preferentially select wild carrot, yarrow, agrimony, elm-leaved and rough golden rod and fleabane even when they have to fly farther from the nest to find them. These particular herbs are all highly aromatic, and contain high concentrations of volatile oils. The herbs are woven into the nest and refreshed even as the chicks are hatching. It has been observed that chicks in the nests with the aromatic herbs have a significantly greater chance of surviving into the next season than chicks in nests from which the herbs have been removed.

I have worked with hundreds of Veterinarians providing symptom specific Herbal Formulas for their animal patients. The most common report back from the Veterinarians is that "if only we knew that herbal medicine worked so well, earlier in my career", they would have used it before using the powerful 'big guns' of pharmaceuticals. Obviously the vast majority use only drugs, yet there is a rapidly growing trend, of holistically oriented Veterinarians who, in my opinion wisely, use herbs first before considering pharmaceuticals.

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