

## **Detoxification for Your Pets (Full Video)**

By Dr. Karen Becker

Hi, this is Dr. Karen Becker. Today our pets are bombarded by hundreds of dangerous toxins in our environment, including radiation, environmental pesticides, lawn and home chemicals, EMFs, fire retardants, BPA's from plastic food and water dishes, hydrocarbons, heavy metals, animal hormones, and antibiotic residues, not to mention toxic preservatives found in pet foods, mycotoxins found in dry foods, allergens, as well as fluorides and toxins in our water sources.

Then pets have a second category of toxins on top of that: the chemicals in pesticides that many pet owners intentionally put on them or in them to repel fleas, ticks, and other types of parasites, as well as vaccines, dewormers, and drugs that are routinely given to pets by veterinarians.

Most pets also have some level of chronic low-grade inflammation present in their bodies, causing a consistent amount of metabolic stress. Nutrients that assist in healthy detoxification are depleted under stress, making the body even more susceptible to damage. The body must be supplied with adequate resources for both cellular detoxification as well as organ-assisted detoxification.

The primary organ of detoxification is the liver. The liver detoxifies the body through a two-phase system. Phase one processes environmental toxins and bodily wastes into intermediate metabolites that then requires antioxidants as well as conjugation through phase two detoxification for the complete neutralization and excretion of the toxins. The body relies on a number of nutrients, antioxidants, and co-factors to support the mechanisms of both detoxification pathways to protect against free radical damage.

Healthy cellular metabolism function and resiliency depends on the cells' ability to transport nutrients into the cells, resist free radical insult to the cell membranes, and participate in healthy cell-to-cell communication.

Like organ detoxification, cellular detoxification requires a number of nutrients for optimal transportation of waste products out of the cells. If the cells of the body can't detoxify themselves, the accumulation of waste products, heavy metals, and toxins becomes inevitable. This leads to abnormal cellular metabolism and function as well as a reduced cellular resiliency to viruses, bacteria, parasites, and disease.

### **Phase One Liver Detoxification**

To assist in liver detoxification, I recommend owners supply their pets with glutathione, the rate-limiting step or the rate-limiting molecule in phase one detoxification. Glutathione is a peptide molecule that must be synthesized from three amino acids, including the hard-to-come-by amino acid glycine. Glutathione is responsible for removing xenobiotics, the foreign chemical compounds that are present in all of our pets' bodies as a result of living in a chemically laden world.

Glycine is an amino acid essential for healthy function both in the digestive and nervous systems and assists in the manufacturing of glutathione. But glycine is also important for other detoxification mechanisms. For instance, chlorine can only be detoxified from the body with the help of glycine and the amino acid taurine. So, pets drinking city water benefit from this addition to our detox protocol.

My favorite detox aspect of glycine is its ability to detoxify the body from heavy metals. The amino acid readily crosses the cell membranes and has a significant affinity for metals such as antimony, mercury, aluminum, nickel, and lead. Glycine facilitates the movement of metals from within the cells to the extra cellular space, where they can be filtered and excreted by the kidneys. Glycine also detoxifies the body from plastic residues, including BPA.

### **Phase Two Liver Detoxification**

To assist in phase two of liver detoxification, I recommend guardians supply their pets with taurine and NAC.

Taurine is an antioxidant amino acid that stabilizes cell membranes, particularly the cells of the skeletal muscle, the heart, the central nervous system, and the white blood cells. Taurine makes the cells of the body more resilient to free radical attack. Although a minimal level of taurine is included in foods, taurine is easily depleted in stressed pets or pets with intestinal dysfunction. Taurine plays a very important role in neutralizing toxins produced by dysbiotic bacteria in the gut. This amino acid is also very important in the metabolism and excretion of xenobiotics.

Taurine is also an important component of bile, which the body produces to digest fat. Adequate bile production is critical for killing intestinal parasites and yeast, and assists in the removal of fat-soluble toxins and oxidized cholesterol.

NAC or N-acetylcysteine is a cellular antioxidant that boosts tissue glutathione levels and also plays a role in binding heavy metals. NAC protects against oxidative stress and is a potent free radical scavenger, particularly in the central nervous system. NAC also increases the levels of intracellular glutathione.

### **Natural Detoxifiers**

To assist in removing reactive oxygen species from your pet's body, I recommend the herb milk thistle. The active ingredient in this herb is silymarin, which stimulates the uptake of glutathione from liver cells. Milk thistle also assists in liver cell regeneration.

Schisandra fruit is included in many TCM formulas, because it helps protect the liver against various toxins. The hepatoprotective nature of this fruit means that it assists in keeping healthy cells resilient to the effects of environmental toxins.

Curcumin is what gives turmeric its yellow color. This potent antioxidant supports both phase one and phase two liver detoxification. Curcumin is known to have anti-inflammatory activity because of its ability to inhibit pro-inflammatory enzymes. This phytonutrient has been shown to be anti-carcinogenic, which means it fights cancer, primarily due to its ability to heighten the body's detoxification reactions. Recent studies also indicate curcumin may have a protective effect against mercury and other heavy metal exposure.

Phosphatidylcholine is critical for a detoxification process known as methylation. Pets' bodies are wired with very potent hormones needed for emergencies. Adrenaline and noradrenaline serve a very valuable purpose in helping your pet through a crisis. However, these hormones will be damaging over time. They are very damaging to body tissues with chronic exposure. The faster your pet's body can get rid of these hormones once they are no longer needed, the less damage is done.

The process of getting rid of these hormones is a process called methylation. Phosphatidylcholine is required for this critical process of breaking down and eliminating these hormones.

PC is found in extremely high levels in liver cell membranes where it functions as an antioxidant to protect liver cells called hepatocytes from damage. In addition to hepatocytes, cells of the brain and nervous system need large concentrations of PC for repair and maintenance. PC provides nourishment and protection to the fatty myelin sheath surrounding nerve fibers as well.

Resveratrol is the active ingredient in the plant known as Japanese knotweed. Resveratrol, of course, is hailed as one of the best anti-cancer and anti-aging antioxidants ever discovered. But believe it or not, it also reduces liver enzyme elevations by reducing lipid peroxidation in the liver. In essence, it helps the liver clean house, flushing accumulations of fat out of the liver, so that the liver can function optimally.

The catechins found in green tea dramatically modify cancer-causing molecules that damage cellular DNA. Inactivation and excretion of carcinogens is a big part of keeping your pet's body cancer-free for a lifetime. And green tea leaf extracts can be very beneficial for your pets.

The green super food known as chlorella functions as a potent heavy metal chelator, as well as a GI detoxifier, binding up excessive and toxic metals many pets are exposed to in their environment. Chlorella's tough outer cell wall also binds environmental pollutants in the gut, allowing them to be eliminated efficiently.

Superoxide dismutase, also called SOD, is a potent enzyme responsible for the removal of free radicals from your pet's body. Superoxide dismutase works by catalyzing the breakdown of superoxide radicals into oxygen and hydrogen. Superoxide radicals are toxic to the living cells of your pet's body. And removing them is critical for your pet's lymphatic system to work optimally.

Dandelion leaf has superior blood-cleansing benefits. Dandelion contains bitters called sesquiterpene lactones, which actually provides the herb's main detoxification benefits. Although dandelion also supports liver and gall bladder detoxification, it's especially helpful for kidney detoxification, assisting in the removal of blood-borne toxins excreted through the kidneys. Clean blood helps ensure metabolic wastes get efficiently carried away from your pet's tissues and vital organs.

### **How to Keep Your Pet Toxin-Free**

The sad truth is every pet would probably have measurable amounts of chemicals in their bodies, if we were to actually check for them. Pets walk through chemicals. They sleep on them. They breathe them. They drink them. They eat them. And then of course, not to mention, veterinarians end up prescribing and injecting them as well. Unfortunately, they are, all in all, totally unavoidable.

Side effects from unaddressed toxins range from skin conditions to organ failure, endocrine disease, cancer, behavior problems, as well as autoimmune diseases.

Pets are equipped with innate detoxification mechanisms. But depending on the toxin load, your pet's age, your pet's overall health status, as well as overall vitality, these detoxification systems can be overwhelmed, stressed, or can struggle to do their jobs adequately. The body's exposure to toxins can occur overtime or as a sudden unexpected event. Your pet's ability to clear accumulated toxins is based on the overall functionality of your pet's detoxification pathways, which requires several key nutrients for optimal functioning.

Because toxins are unavoidable for our pets, at least we have a means of helping them cope with the toxins in their environment.

If your pet is recurrently exposed to toxins – such as heartworm, flea, and tick preventives – on a monthly basis, creating an intermittent detox program for your pet is a really smart move. If your pet has seasonal exposure to toxins, say, summertime lawn chemicals, then offering seasonal detoxification would make good sense for you. If your pet has had a recent toxic insult, say, she has consumed a toxic plant in the backyard, or she has recently undergone some drug administration for a health condition, then using a focused, short-term detoxification protocol would make the most sense for that pet.

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