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Dog Tips

# Ozone Therapy – An Alternative Option for Dogs with Cancer

Could this promising therapy provide hope for pets struggling with cancer, as well as other diseases? Here's how it works and what the research says.

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# **STORY AT-A-GLANCE**

- Ozone therapy uses an activated form of oxygen (O<sub>3</sub>) to kill harmful microbes, reduce inflammation, and boost healing in pets, offering a drug-free, natural alternative for common health issues
- Veterinarians use ozone to treat infections, wounds, joint pain, and cancer-related symptoms by improving oxygen delivery, enhancing immunity, and easing inflammation without harsh side effects
- Research shows dogs with breast cancer lived longer, had stronger blood health, and experienced fewer chemo side effects when treated with both carboplatin and ozone therapy
- Veterinarians can administer ozone therapy through various safe and noninvasive methods, such as rectal insufflation, limb bagging, ozonated oils, and autohemotherapy, depending on the pet's condition and needs
- When administered by trained vets, ozone therapy is low-risk and well-tolerated, making it a promising option for pets needing gentle, holistic support during illness or recovery

When you hear the word "ozone," you might immediately think of air pollution or the atmosphere. But did you know that ozone can also help your pet feel better? Ozone therapy is now a growing trend in pet health, offering your furry friend a gentle, natural way to heal from many conditions.

# What Is Ozone Therapy?

Ozone is an activated form of oxygen with three oxygen atoms; hence, it's known as  $O_3$ . The extra oxygen atom sets it apart from the air we breathe, which contains two oxygen atoms ( $O_2$ ).

However, having this extra atom makes ozone highly active, as it reacts with and neutralizes other harmful organisms, such as yeast, fungi, bacteria, and viruses, making it highly useful for cleaning, healing, and boosting health. According to an article published by Animal Care Center of Castle Pines:

"Damaged tissues that have swelling, inflammation, infection, and bruising contain elevated amounts of  $CO_2$ and lactic acid, which is what causes pain. Ozone displaces the  $CO_2$  and improves tissue oxygenation to reverse these conditions and stimulate the healing process."<sup>1</sup>

Oxygen passes through an electrically charged tube to produce ozone. This electrical energy then breaks the molecules apart, creating both  $O_2$  and  $O_3$ . However, it's essential to use pure, medical-grade oxygen to make  $O_2$  and  $O_3$ , since ozone cannot form from room air due to the presence of nitrogen. Nitrogen would result in nitrous oxide, a toxin.

## How Does Ozone Help Pets Heal?

To put it simply, ozone "oxygenates" your pet's cells to boost mitochondrial function, which helps prevent many chronic, degenerative diseases. One of ozone's unique abilities is that it stimulates the production of cytokines, which then activate the immune system.

Cytokines like interferons and interleukins act as "messenger compounds" that cause a positive chain reaction throughout the body. Depending on how ozone therapy is used, it can either enhance or downregulate the immune system. This makes it helpful with various chronic conditions, such as:<sup>2</sup>

- Wounds, cuts, abrasions, abscesses, burns, rashes, and hotspots
- Bacterial, fungal, and yeast infections
- Parasitic infections like mange and ringworm
- Allergies and itchy skin
- Ear, sinus, and dental infections
- Upper respiratory viruses
- Sore throat and kennel cough
- Intestinal and bladder issues (diarrhea, gas, bloating, indigestion, and constipation)
- Anal gland issues
- Lyme disease
- Arthritis, joint, and tendon injuries
- Mobility issues like stiffness, lameness, and limping

# Using Ozone Therapy to Help with Pet Cancer Treatment

In particular, ozone therapy produces tumor necrosis factor (TNF), a cytokine that's useful for treating cancer and autoimmune diseases.<sup>3</sup> Ozone therapy creates a hostile environment for cancer cells by increasing oxygenation in tissues. For pets suffering from cancer, it helps:<sup>4</sup>

- Relieve pain
- Slow down tumor growth
- Manage nausea
- Provide anti-inflammatory effects
- Boost the immune system's response
- Improve appetite and energy

A 2024 study published in the journal Antioxidants (Basel) looked at how ozone therapy worked for canines with breast cancer.<sup>5</sup> The researchers studied 25 female dogs diagnosed with malignant mammary neoplasia, with one group receiving a chemotherapy drug called carboplatin, while the other received both chemo and ozone therapy.

The researchers found that dogs that received both ozone and chemotherapy had better results, showing more red blood cells and platelets, fewer side effects, and higher levels of antioxidants. They also lived longer and felt better overall.

"These results indicate that the combination of carboplatin and ozone therapy represents a promising complementary treatment for female dogs with mammary cancer, as it was associated with fewer adverse reactions and a better oxidative profile," the researchers concluded.<sup>6</sup>

## How Is Ozone Therapy Given?

Using ozone therapy doesn't cause any pain or discomfort, and veterinarians administer it in various ways, depending on your pet's condition. Here are a few examples:

• **Rectal or bladder insufflation** — This involves gently administering the gas into the rectum or bladder, allowing it to come into direct contact with bacteria or cancer cells, and also allowing it to be absorbed into the body to stimulate oxygen utilization.

Treatments usually require 50 to 150 mL of  $O_3$  and are typically administered once or twice a week. The frequency is then reduced depending on the condition and the results.

- Autohemotherapy This requires a few milliliters of your pet's blood mixed with O<sub>3</sub> in a sterile environment. The ozone blood is reinjected into your pet's body. Autohemotherapy is used to treat cancer, infections, allergies, and other conditions, such as autoimmune, immunodeficiency, and inflammatory diseases.
- **Limb bagging** Your pet's leg or paw will be isolated with a plastic bag filled with ozone gas. This method often treats infections, wounds, and decubital ulcers.
- **Ozonated olive oil** As the name suggests, this is olive oil treated with ozone and used topically. It is usually helpful with yeast, ear, and bacterial infections, ringworm, ulcers, and bed sores.
- **Ozonated saline** The O<sub>3</sub> is bubbled into saline, sterilizing it. The O<sub>3</sub> is then safely administered back into the body through subcutaneous or IV administration. It works for painful conditions as well as chronic renal failure, and other systemic illnesses, both acute and chronic.
- **Prolozone therapy** This is a combination of prolotherapy (regenerative injection therapy) and ozone gas, often used for tendon or ligament injuries.

## Is Ozone Therapy Safe for Pets?

When administered by a highly qualified veterinarian, ozone therapy is generally safe and produces few side effects. Typically, a veterinarian will administer ozone twice a week. Acute conditions may require three to six treatments weekly, and patients with chronic conditions may require more at one- to two-month intervals.<sup>7</sup>

Your vet will carefully control and administer the correct dosage for your pet based on their size and health status. In most cases, the side effects are minimal, such as temporary coughing or fatigue. The wrong dosage can result in diarrhea or vomiting.<sup>8</sup> This is why it's crucial to find a professional who is very proficient in using ozone therapy.

# **Final Thoughts**

Even though ozone therapy has been around for a long time in human medicine, it's relatively new in pet care. However, this is changing quickly as more and more vets are adding it to their clinics because they see how well it works. If your pet is struggling with pain, infection, or a long-term condition, ozone therapy is a helpful choice.

While the research is still ongoing to explore ozone's full potential, the early results are promising. Whether used on its own or with other treatments, ozone therapy can help improve your pet's health, reduce pain, and boost energy. With the proper care and expert guidance, this simple form of oxygen might be the fresh start your pet needs to live a happier, healthier life.

#### **Sources and References**

- 1,3 Animal Care Center of Castle Pines, December 23, 2021
- <sup>2,7</sup> <u>IVHC, Ozone Therapy</u>
- <sup>4,8</sup> Arya Animal Acupuncture, August 16, 2024
- <sup>5,6</sup> Antioxidants (Basel). 2024 May 30;13(6):673