

# *Info shared by Pitbull SA.*

*Manjaro APBT kennel.*

*South Africa.*

*My Website [www.pitbullsa.co.za](http://www.pitbullsa.co.za)*

*My E mail "[manjaro@pitbullsa.co.za](mailto:manjaro@pitbullsa.co.za)"*

*My Facebook "Gawie Manjaro"*

*My Facebook page "Manjaro Kennel"*

*My mobile +27827838280.*

*Zello.com "VoIP" – ask for info.*

## ***1. Treatment for parvoviral infection.***

Veterinarian treatment for parvovirus infection centres on **supportive care.**

This means that the clinical problems that come up in the course of the infection are addressed individually.

The goal is keeping the sick dog alive long enough for an immune response to generate.

Because we do not have effective antiviral drugs and must rely on the patient's immune system for cure.

**BE PREPARED FOR A 5-7 DAY HOSPITAL STAY  
AND A SUBSTANTIAL EXPENSE.**

**INTENSIVE CARE IS NEEDED TO TREAT THIS INFECTION.**

There are certain basic treatment principles which can be viewed as "must haves" in addressing the parvo puppy.

Beyond these basics are some “added pluses” which may or may not contribute to the chance for survival.

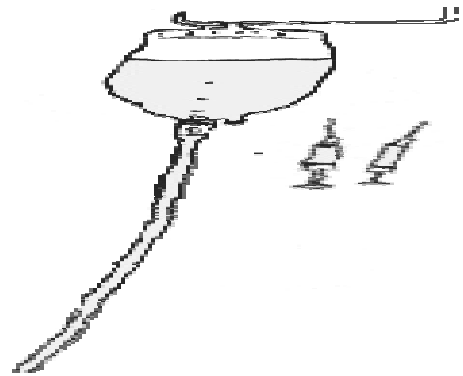
In order to achieve the usual survival rate of approximately 75-80%, the basics must be delivered.

If an owner is less concerned about expense and simply wants to maximize survival chances, some of the following optional treatments may be employed.

### THE BASICS

Fluid therapy: One of the ways parvo can kill is via the metabolic derangements that occur **with dehydration**.

It is **crucial** to replace the vast fluid losses (from vomiting and diarrhoea) with **intravenous fluids**.



Fluids are given as a steady drip rather than simply under the skin so that absorption into the circulation is direct.

Potassium is usually added to the fluids in order to maintain electrolyte balance.

Dextrose (sugar) is also frequently added as the stress of the disease may lower blood sugar especially in a very small puppy.

### Antibiotics:

The second way parvo kills is through bacterial invasion of the circulatory system (“sepsis.”)

The intestine is normally full of bacteria and when the parvovirus ulcerates the intestine there is little to prevent the bacteria from marching easily into the bloodstream.

With the GI tract damaged, antibiotics cannot be given orally.

They are given either as shots or are added into the IV fluid bag.

There are a number of antibiotics which may be selected.

**Some antibiotics you may see in use include:**

Cefazolin

Baytril

Ampicillin

Gentamicin

Amikacin

Trimethoprim-sulfa

Some Vets tends to prefer "Cefazolin" as a basic choice.

For more information on this drug you may wish to read the Pharmacy Centre section on its sister drug: "[Cephalexin](#)"

Recently, Pfizer Animal Health has released "Cefovecin", a single injection of which lasts 2 weeks.

This product has not been adequately tested in puppies under age 16 weeks but may find a place in the treatment of older puppies.

**Control of nausea:**

Patient comfort is a very important part of treatment for any disease but is especially important for parvo treatment as these puppies feel **extremely nauseated**.

Again, the GI tract is too damaged for oral medication so medications are given as injections.

There are several popular medications for nausea control:

**Metoclopramide:** (best given as a continuous drip in the IV fluid set up.)

If used as separate injections, relief tends to be short lasting and does not provide "around the clock" control.

### **Important to know >>**

If a continuous drip is used, nausea control lasts as long as the drip is running.

**Chlorpromazine:** a very strong nausea control medication which lasts 6-8 hours per injection and has the added benefit of a drowsiness side effect (so patients can sleep through most of this uncomfortable time).

**Ondansetron and dolasetron:** These injectable medications are especially strong anti-nauseal medications.

In the past, expense has made these medications uncommon but recent generics have made them readily available.

Ondansetron is typically given 2-3 times daily while dolasetron is given only once daily.

**Maropitant (brand name: Cerenia®):** This powerful anti-nauseal has not been adequately tested in puppies under 16 weeks of age. For older puppies, this should be an excellent choice to improve patient comfort.

It is given once daily.

The vomiting typical of parvo infection is not only uncomfortable but can ulcerate the esophagus.

The disease itself ulcerates the stomach and small intestine.

Medications called "gastroprotectants" help heal ulcers and help minimize their formation.

These medications include the injectable antacids (cimetidine, [ranitidine](#), or [famotidine](#)) as well as [sucralfate](#), which forms webbing over ulcers to facilitate healing.

### **Monitoring.**

The following tests are helpful in adjusting parvovirus treatment:

Faecal floatation to rule out worms/internal parasites.

The last thing these patients need is a parasite burden contributing to their nausea and diarrhoea.

Since parvo victims are puppies and puppies are high risk for parasitism, it is important to test for worms and microbes that can contribute to the GI upset and eliminate them if present.

White blood cell counts/complete blood counts.

One of the first acts of the parvovirus is to shut down the bone marrow production of immunologic cells (the white blood cells). White blood cell counts are often monitored as the infection is followed.

The white blood cell count bottoms out at the height of the viral infection and recovers as the patient's immune system gains the upper hand.

### **Urine specific gravity/Azosticks.**

In order to assess the effectiveness of the fluid therapy, some objective evaluation of dehydration is useful.

If adequate IV fluids have been provided then the urine produced will be dilute (as measured by "specific gravity") and azosticks measures of protein metabolites (which build up in the blood stream) should be at normal levels.

### **Abdominal palpation.**

Abnormal motility of the intestines occurs with this infection. Sometimes an area of intestine actually "telescopes" inside an adjacent area in a process called "intussusception."

This is a disastrous occurrence as intussusception can only be treated surgically and parvo puppies are in no shape for surgery.

Euthanasia is usually elected in this event.

### **Total blood protein.**

Protein depletion is common when there is heavy diarrhoea.

If blood proteins drop too low, special IV fluids or even plasma transfusions are needed to prevent massive life-threatening edema.

## EXTRA TREATMENT WHICH MAY HELP:

Tamiflu® (Oseltamivir)

While this particular addition to the parvo treatment plan has not universally caught on everywhere, news of its efficacy has spread far and wide.

This oral medication is typically given for five days starting as soon as the diagnosis is made.

It interferes with the reproduction of the parvovirus so that the patient's immune system essentially has fewer enemy soldiers to combat.

This medication is helpful in the treatment of parvo patients plus can **prevent development of the disease when given to exposed puppies.**

The key is to begin this treatment before the virus has had a chance to maximize its numbers; if treatment is started later in the infection, there may be so many viral particles present that little benefit can be realized.



## PLASMA TRANSFUSIONS.

Plasma is the protein-rich fluid that remains when the red blood cells are removed from a sample of blood.

These proteins may include antibodies against the parvovirus, albumin to help expand the patient's blood volume, as well as other healing proteins.

Plasma can be obtained from donor dogs in the hospital or can be purchased from animal blood banks.

### **CEFOXITIN (A SPECIAL ANTIBIOTIC).**

The best antibiotic coverage controls both gram negative and gram positive organisms, both aerobic and anaerobic organisms and does so with minimal side effects.

The use of Cefoxitin (brand name Mefoxitin<sup>®</sup>) does an excellent job of covering for the organisms of concern without the kidney side effects of gentamicin or amikacin and without the cartilage side effects of [Baytril](#).

### **SEPTI-SERUM.**

This product represents anti-serum (antibodies extracted from horses) which binds the toxins of any invading GI tract bacteria.

The use of this product is controversial though the veterinary teaching hospital at Auburn University uses it commonly.

It is usually given only one time as the equine origin of the product has potential for serious immunological reactions.

### **ANTI-INFLAMMATORY DRUGS.**

There have been many studies indicating the benefits of single doses of these medications in the prevention of septic shock.

Repeated doses may cause further GI ulceration (which is obviously something a parvo puppy has enough of).

The usual medication is flunixin meglumine (banamine<sup>®</sup>).

### **NEUPOGEN.**

"Neupogen" is the brand name of a genetically engineered hormone called "granulocyte colony stimulating factor."

This hormone is responsible for stimulating the bone marrow to produce white blood cells and its administration easily overcomes the bone marrow suppression caused by the parvovirus.

In other words, neupogen helps the white cell count recover.

A recent study did not find increased survival with the addition of this product to the parvo regimen; however, in sicker puppies it may make a significant difference. However it is very expensive.

## **HOME TREATMENT FOR PARVO.**

Home treatment for parvo infection is a bad idea when compared to hospitalization and intensive care.

Mortality rises substantially and the heavy diarrhoea and vomiting lead to heavy viral contamination in the home.

Still, if financial concerns preclude hospitalization – usually the case, home care may be the puppy's only chance.

Fluids will have to be given under the skin and orally at home as will injectable medicines.