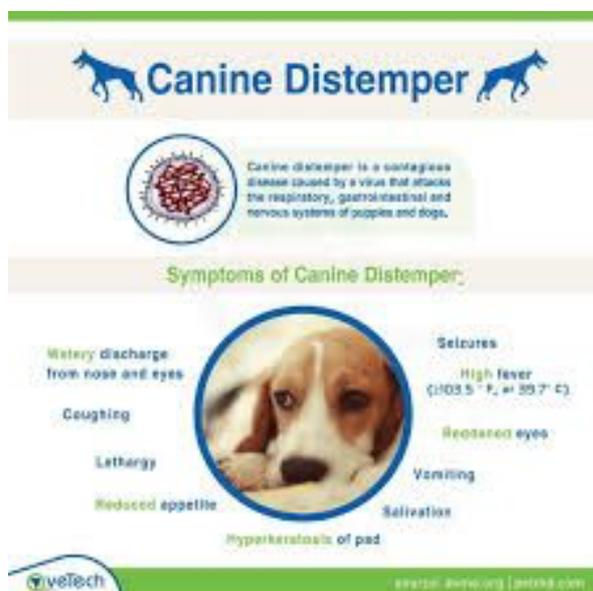


# The cruellest disease- distemper... BLOG

13 January 2022

## LARGE PRINT/FOR DOWNLOAD with LIVE LINKS

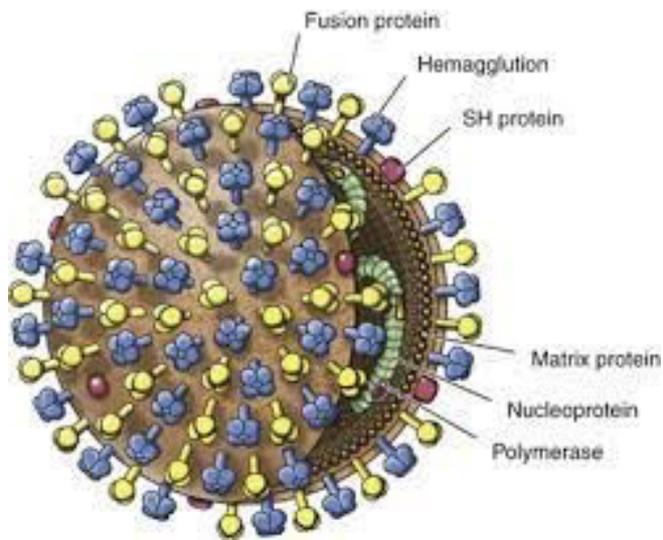


courtesy of <https://www.pashudhanpraharee.com/canine-distemper-cd-in-dogs/>

What is distemper and how likely is my dog to catch it?

Well firstly distemper is what people usually call Canine Distemper Virus or CDV for short so it's a virus.

And it looks a bit like this:



<https://veteriankey.com/canine-distemper-virus-infection/>

Lots of viruses look like this when magnified, and yes they look scary.

*Any dog can get distemper at any time, same as any virus, but the chances are much higher if*

1. they're in kennels a lot/in a kennel based rescue or shelter,
2. very young (16-20 weeks and under),
3. or unvaccinated,
4. or do a lot of walking in places that have a lot of wildlife/  
regularly meet a lot of other possibly unvaccinated or carrying  
dogs and animals,
5. or if they have other immune or organ system issues

distemper is much more likely. It can also be due to **neglect** of the animals (they could be forced to live in their own or infected dogs' waste, or an inexperienced, overworked or complacent vet may not pick up even on obvious signs), or where the virus has got in through an *open cut* missed by accident by a well meaning adopter. But you could say the same of almost any virus. However this is one reason *why we do not run our own kennels, ask our adopters not to kennel our dogs if at all possible, and only offer home foster and forever places once the dog is in the UK- to cut down the likelihood of the dog ever*

*coming into contact with such nasties during DEFRA quarantine and decompression.* It's one of the many reasons for our motto: **'no kennels, no cages, no chains'**.

This virus has been around for a very long time all over the world but was first noted scientifically in the early 1900s in France. So we first really knew about it around 120 years ago. 'Canine' means dog but it can affect similar species such as wolves, foxes, pandas, ferrets and more, but not presently known to transfer to or infect cats. It's also a close virus relation to measles in humans, which used to be a big killer but thanks to an extensive testing and vaccination programme, has almost been eradicated. The same can be said for distemper- that thanks to vaccines it's nowhere near as big a problem as it used to be. With quick treatment there's no reason why a dog can't live a long and happy life after contracting it too. Though *distemper is not 'curable'* it can be managed if caught in time, and a dog with a healthy immune system can fight it off themselves. But of course *prevention altogether is best.*

### What is a virus?

Viruses are microscopic or very very tiny parasites, generally much smaller even than bacteria.

They can't live and reproduce outside of a host body (the dog) for very long. There is some debate as to whether they are alive as we understand life in science, and the short answer is 'borderline'. On one hand, they contain the key things that make up all living creatures: special 'goo' called DNA or RNA (and any virus can only have one or the other in them). On the other hand, viruses appear to lack the capacity to independently act upon the information contained within DNA or RNA. In the case of distemper, it's an RNA virus. This means

inside each viral cell there's a 'code' that gives them the ability to reproduce themselves. So RNA is known as a 'messenger' that carries information to make copies just like a courier bringing a printer you ordered online, that is the job of RNA. To get that virus to its destination- a living host- then make copies, and lots of them!

How can you get a distemper test?



<https://homehealth-uk.com/all-products/5-x-canine-dog-distemper-virus-cdv-health-nasal-swab-pet-test-kit/>

The rescue and your vet can advise. It's a simple blood and/or urine test- at the start of the disease presentation anyway- but also see below once it's gone from the blood after 2-3 weeks it stays present in the lymphatic system (your body's defence against infection) and nervous system (how the body sends instructions like pain and moving limbs to the brain) e.g. *spleen, lungs, bone marrow and the brain*. [Nervous system or neurological problems](#) can damage *digestion, breathing and sexual development* (puberty) too. After 3 weeks 'Trans-

tracheal' or throat washes may be positive for more than 3 weeks. Then the virus persists in central nervous system (or CNS) for at least 60 days causing havoc across four body organ systems (more on this below) so early detection is vital. False positives and negatives are rife in distemper testing to don't be complacent if your dog came from a rescue kennels or breeder and tests negative. Few other viruses are so 'sneaky' when vets are trying to detect and diagnose them.

### How dangerous is it?

This is where the disease really starts to be cruel. Even today, 40% plus (more than 4 out of 10) dogs don't even survive the first stage as other damage is happening invisibly even as external symptoms are still mild, but being vaccinated in time is up to 99% effective at prevention from getting it in the first place. However, immunity takes a few days to kick in so if your dog's just had the vaccine, don't take it out for or have other dogs in the home for at the very least a week afterwards, and we'd recommend 21 days just to be sure due to its long infection period. The problem is that it's super contagious (catching) too in the first and sometimes the middle stages and what's called the window of infection or infection period (time they can pass it on for) varies. *And many dog survivors of distemper can develop neurological/behavioural issues especially if it was left untreated inside 60 days, or not treated at all.* By 60 days it's usually in the brain starting to cause brain damage we cannot see, at a time we could still treat it if only we knew. Yet many dogs walk away from the condition, or still carrying the virus, and never develop it full blown. The random chance lottery distemper seems to offer dogs no matter if they get sick or not also seems incredibly cruel.



- Canine Distemper (CD) is a highly contagious infectious disease of dogs worldwide caused by the canine distemper virus (CDV). It is often fatal.
- CD is a multisystemic disease that can present with one or more of the following:
  - Respiratory disease with severe pneumonia
  - Gastrointestinal disease with vomiting and diarrhoea
  - Neurological disease including seizures
  - Severe immunosuppression leading to infection by normally innocuous bacteria and viruses
- The most common source of infection is direct contact between the susceptible dog and infected dogs or wildlife.
- CD and canine parvovirus remain the two most important infectious diseases of dogs. CD is an important cause of death for dogs in areas where vaccination is limited (e.g. <40% of the dog population.)
- CDV vaccines provide prolonged immunity in a high percentage of dogs that receive one dose of MLV vaccine at or after 16 weeks of age. Efficacy of CDV vaccines approaches 99% and dogs develop protective immunity within a few days after vaccination.
- Ideally every dog should receive a CDV vaccine at least once when they are 16 weeks of age or older. The current vaccine provides protection against all biotypes of CDV, and antigenic variation is not a significant concern.

CD: A vaccine preventable disease



Photo: LE Cernicheau, M. Appré



Photo: LE Cernicheau, M. Appré



Photo: LE Cernicheau, M. Appré

<https://wsava.org/wp-content/uploads/2020/01/WSAVA-VGG-Pictorial-Fact-Sheets-June-2015.pdf>

## What is an incubation period?

As distemper presents differently in every dog, the **incubation period** (rate of development of the virus) can vary but is usually 1-2 weeks from the time of exposure to development of initial clinical signs, but it can be as long as 4-5 weeks or even more. Occasionally neurological signs develop months after exposure in dogs that never showed initial signs of infection. Therefore, initial quarantine of dogs possibly exposed to distemper should be a minimum of one month, and even then it is impossible to be sure of catching all cases. ALL exposed dogs must be included in a quarantine plan in order to control an outbreak until an appropriate risk assessment has been determined for each animal.

## But how does a dog catch distemper?

The virus has to get into the body somehow. Usually it gets in

- through breathing passages (nose/mouth) as can be airborne and travels to a new host if an infected dog coughs or sneezes,
- and open wounds can act as gateways for viruses.
- Sometimes insects provide a living taxi in as some viruses will hitch a lift in an insect's saliva and enter the dog's body when the insect bites.
- In the case of distemper in dogs, they can also contract through skin absorption of infected urine and faeces of other dogs or distemper prone wildlife so always check your dog's paws and face after a walk.

**Backyard breeders and rubbish rescues** who do not keep dog rooms and kennels clean enough, or vaccinate enough/at all could also be unwittingly or neglectfully spreading distemper across all the dogs in their 'care'. We test our dogs and pups for distemper more than once to ensure this very contagious virus stays dead and does not affect our dogs. It can remain in the soil for over a year without frequent industrial levels of cleaning, so the area is usually left empty and soil tested before putting any other dogs in that kennel (if you're a reputable breeder or rescue anyway...) or airborne waiting for its next host for hours (longer in cold weather) so regular cleaning is vital in any rescue. Sadly Brexit has meant we have had to stop sending the DEFRA approved cleaner that was keeping both parvo and distemper cases low. Rates were really down in the rescues we have teamed up with in Romania. But now they are forced to use whatever they can get locally which wasn't working well in the first place, and diluted bleach too but that's dangerous in larger kennels, so cases there are on the rise again.

What are signs my dog might have distemper?

**Figure 4**



The typical clinical signs of CDV infected dogs: (A) displayed respiratory signs with an ocular discharge from the eye; (B) exhibited clinical symptoms of full of red rashes in the face; (C) hardened footpad of the infected dogs; (D) Bloody diarrhea on the ground.

<https://virologyj.biomedcentral.com/articles/10.1186/1743-422X-8-520>  
"Pathogenesis and phylogenetic analyses of canine distemper virus strain ZJ7 isolate from domestic dogs in China"

Well this is a tricky one. Obvious signs are

- lethargy
- discharge or 'goo' from the nose and eyes
- hard skin on the feet and nose
- and a cough

especially at first but *these symptoms can happen after booster vaccines as well* so it's best to look at all the obvious symptoms and contagion times (how long it's 'catching' for) which can also be called the 'infection period' all together. The more symptoms you see, the quicker you need get the dog to a vet!

## Checklist of symptoms when the dog first gets distemper.

They can vary in speed of development and severity between dogs depending on

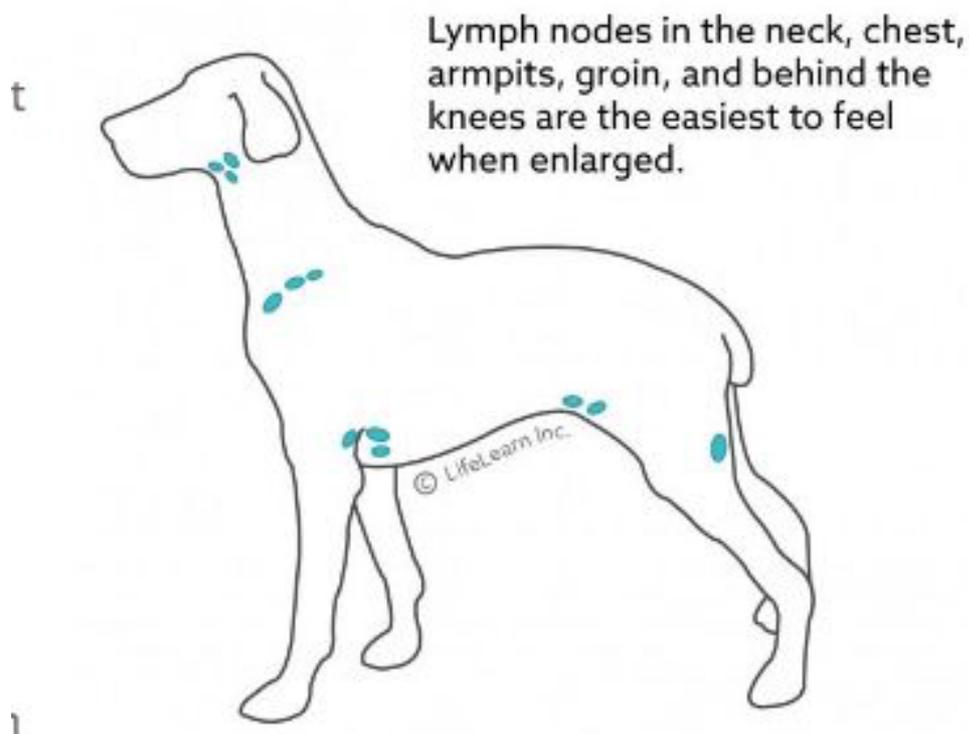
- the age (young; senior dogs are not especially prone)
- health of the dog
- if they've ever been vaccinated for distemper
- and the strain of CDV (distemper.)

### FIRST STAGES (week 1)

if you see these happening in your dog or they are present in your (new) dog together inside 3-4 days GET TO THE VET! CALL IN ADVANCE TO SAY YOU SUSPECT **DISTEMPER**.

1. **Difficulty** breathing (this can also sound like kennel cough or bronchitis or asthma)
2. **Inflamed** (red or sore looking or puffy) inside of the mouth or tonsils
3. **Hard skin patches** (called hyperkeratosis) forming or already formed on the nose and pads of the feet. This is a *classic distemper sign* so much so that it used to be called the 'hard pad disease'
4. **Teeth** issues (hypoplasia- **discolourations or defects of the teeth** unusual to the dog especially if it's young and not had time to develop plaque or tartar on the teeth like older dogs, and can be caused by physical trauma or contracting a viral or bacterial infection or both as a puppy). This used to be *one of the main indicators for distemper*. But it can also be present should a pup have experienced malnutrition while still growing. The staining can, like the discharge from the eyes and nose in symptom 6 below, range from yellow to dark brown and can also look like chips of tooth are 'missing' when really they never formed right in the first place. It can be, but often isn't, causing them pain in the mouth but when it presents along with symptom number 5 below, would be of great concern.

5. **'Eye and nose has goo** (thickening liquid) coming out of them that comes back in minutes or hours after wiping it off. It can be clear, yellow, greenish or even light brownish (discharge) as the white blood cells fight the virus (just like when a human gets a common cold and you have bogies!)
6. **[Pneumonia symptoms](#)** which of course can also start the same as distemper, and/or distemper can lower the immune system enough for the dog to be vulnerable to pneumonia: a cough (dry, or produce thick yellow, green, brown or blood-stained mucus (phlegm), rapid and shallow breathing/ breathlessness, even when resting, rapid heartbeat, high temperature (fever) and shivering loss of appetite and chest pain – which gets worse when breathing or coughing
7. A generally harder-medically-to-pinpoint **dip in health** such as a bacterial infection that has no obvious source and are usually treated with broad base antibiotics, which has the unfortunate side effect of lowering the immune system protection even more. This is because the **[lymph nodes are under attack](#)** and dogs with distemper are therefore more prone to succumbing to bacterial, a viral, or a fungal intruder in the body. (see picture below)
8. May show **minor negative behaviours** they've not done since they first came and started decompressing like growling, wetting, reactive on walks or to people, animals and situations they 'used to' be fine with, and conflicting body language (e.g. tail wagging but legs stiff, play bow but eyes are fixed/fixated on another point). Pups can all do those behaviours when going through fear stages though (see our **['aggressive' blog](#)**) or not decompressing properly (see our **[psychology of decompression blog](#)**) so as a stand alone symptom it is not going to be distemper. But alongside all the symptoms above it could be the beginning of the memory loss that comes with distemper-caused brain damage. So the difference is that the negative behaviours will escalate no matter how well you decompress a dog and you'll see less and less 'good days' with your dog.



<https://vcahospitals.com/know-your-pet/lymphoma-in-dogs>

*So to summarise for the First Stages:*

**D**ifficulty breathing

**I**nflamed (red) tonsils

**S**kin patches on the nose or feet that are hard

**T**eeth that are stained or look deformed/has tooth pain

**E**ye and nose discharge

**M**outh sensitivity/redness/pain

**P**neumonia (strong fever that lasts a day or two)

**E**xtra sudden or new weird or random health problems all over the body but mostly in

lymph node locations (see diagram below)  
**Regression/going backwards in behaviour  
*and this literally stands for DISTEMPER.***

A blood test at this point would show a low white blood cell count and a weak (at the least) distemper positive result. This test can be called a [Canine Distemper Virus PCR Test](#), or Vaccicheck (titre test for distemper (vaccine) antibodies) or a FASTest **DISTEMPER** Strip, among other names and types. [From February 2017](#) this test has compared what is called the 'viral load', which is typically much higher during actually having the infection compared to the level detected due to recent vaccination; and often comes as part of a set of respiratory panel tests. *False negatives are very common* on these tests so [regular distemper tests](#) are always advised while in kennels; or when they first come home with you should you spot any symptoms; especially during the first two to three months of arrival.

### **MIDDLE STAGES (weeks 2-4 but can vary)**

if you see these in combination get your dog to the vet IMMEDIATELY. CALL IN ADVANCE TO SAY YOU SUSPECT **DISTEMPER**.

1. After the **fever** that lasts 2-3 days then disappears completely with no treatment, it **returns worse** in a week to ten days after the first fever for no obvious reason (such as the development of another illness, which can also happen as distemper suppresses the immune system in other words leaves the dog open to other diseases). At this point the virus is on full attack on the dogs organs and cells. This is called viremia, or where the virus really digs in to and takes a hold of the body of the dog

2. **Big loss of appetite and energy**
3. **Diarrhoea and Gastric** (stomach) issues such as vomiting or (less common) bloating in general increasing in frequency and severity, or coming in waves of normal toileting then bad attacks of bad stomach gases and faeces
4. A pregnant dog could suddenly and unexpectedly **miscarry**, or the pups be born dead when the last scan showed them healthy.
5. **Enteritis** (inflammation of the small intestine). Keep an eye out for hard and/or hot spots on their upper under tummies.  
Unfortunately enteritis can be serious or even life threatening and one of the big dangers of enteritis is *dehydration*.
6. Symptoms of **dehydration** (not having enough water in the body) include dark-coloured urine, urinating less than normal, excessive thirst, headache, dizziness, fatigue, and skin that remains raised after pinching it. This is also a side effect or symptom of rabies but in the case of rabies your dog will not want to drink.
7. **Eye problems** may well get more noticeable now. Distemper can cause blindness at worst, but this is just one possibility or end result. Anterior uveitis (inflammation of the front chamber of the eye; may cause the cornea to appear cloudy and/or cause changes in the appearance of the iris), Keratoconjunctivitis sicca (KCS = dry eye right up to Optic neuritis (inflammation of the optic nerve- may cause sudden blindness and Retinal degeneration or separation (may cause vision impairment) can start to show at this point
8. **Infection problems.** The **Lymphatic system** is what the body has inside to fight off infections. As the disease gets stronger, pain and problems in the lymph nodes (that feel like little bumps under the skin that swell when you're sick- if you ever got mumps you'll know what we mean!) on the legs, (see diagram below) like necrosis (where the skin goes dead and starts to rot) or frequent to constant unexplainable by the vet lower leg infections when lymph nodes are not due to an obvious wound (but remember, distemper like all viruses and bacteria can also get in through an open wound) often develop. Your dog could suddenly start to limp without getting an injury and the limp (and associated pain body language) can go away as soon as it came.

9. **Metastasising.** This is when the virus jumps from being limited to only being able to attack certain cells or systems (like where it started, in the gastrointestinal, immune and respiratory systems and 'adapts' to attack other cells or systems like the lymphatic, reproductive and nervous systems. So it causes major problems, inflammation and discomfort in the lungs, bone marrow, brain, eyes, lymph nodes, mouth/teeth and stomach. This is usually in full swing in 60 days although many some or almost none of these symptoms may be obviously present in the dog, just enough to make an observant and empathic adopter uneasy. It is usually at this point you will see some very obvious behaviour changes as both the lymphatic and nervous systems are under attack. This usually confirms what you've been suspecting but dreading- the beginning of end stage distemper. If you can see a skin rash on your dog's belly (though rashes with some distemper strains on the face are a bad sign) too ironically that can be a sign the dog is winning the battle and can indicate a favourable prognosis and good quality of life long term usually provided you've spotted it within two months of it developing.

### *So to summarise for the Middle Stage:*

**Diarrhoea and gastric issues**

**Infection problems or conditions that seem unrelated keep cropping up (immune system is weakening)**

**Skin patches on the nose or feet that are hard**

**Temporary changes in dog mobility, such as limping or circling or stiffening with no visible medical reason**

**Eye problems up to and including incurable blindness**

**Metastasising. Where the virus adapts to attack more body systems. Can sometimes**

see behaviour changes at this point as it attacks the brain.

**P**regnant and very young dogs are very at risk  
**E**nteritis (severe upper stomach swelling) and  
dehydration

**R**eturning of a more serious fever after the first (usually milder) fever attack even though at first it seemed have cleared up without meds.

***and if you take the first letters of these words above, they make the word DISTEMPER too.***

**END (neurological) STAGE (3 weeks to 60 days and longer)**

One in three dogs should they survive the first two stages, will show most or all of these symptoms below in the end stages.  
If distemper was

- never noticed or treated
- or they were asymptomatic (showing no obvious signs) till now
- or blood tested for it and came up negative, but is presenting symptoms from the above lists that appear to be getting more severe (this could mean it's spread to the other systems and thus no longer easily detectable in the blood)

the symptoms are likely to be much worse and the dog may go downhill health wise much faster. And even in the end stage not all the neurological or the above symptoms are visible

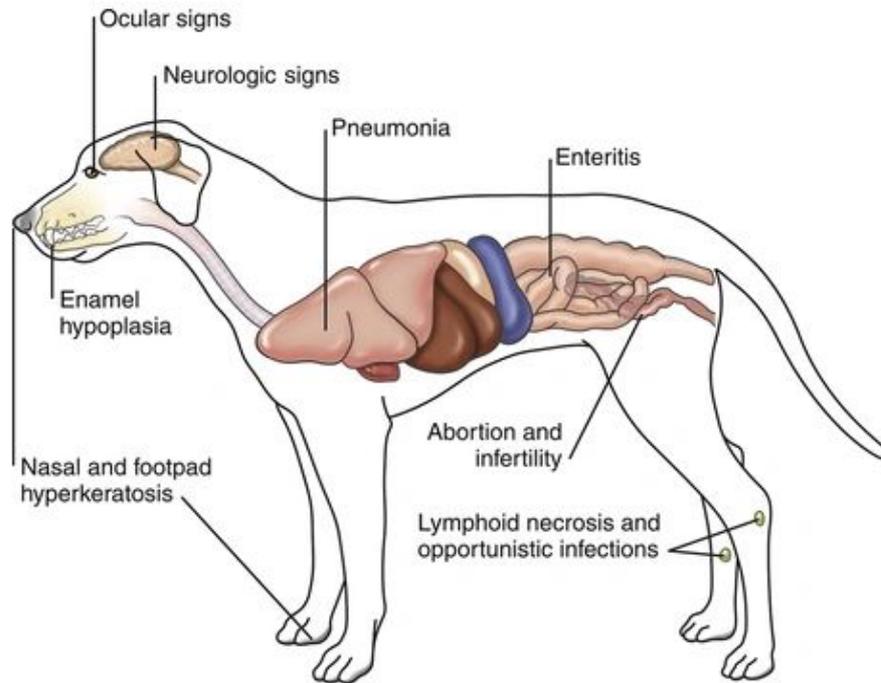
especially at first. And there does often seem to be periods of 'recovery' when no symptoms present for days or even weeks and you dare to hope they've made it through. This is another reason why it's one of the cruellest incurable conditions a dog can get. For the adopters as well as the dog.

The neurological symptoms tend to present as follows:

1. localised involuntary **twitching** of a muscle or group of muscles, such as in the leg or face
2. slight or complete body **stiffening** to the point of *paralysis*, often most noticeable in the hind limbs as failure of muscle coordination, followed by weakness and paralysis in all 4 legs
3. 'mild' convulsions (**seizures**) with **drooling** and **chewing** movements of the jaw ("chewing-gum fits")
4. '**circling**' (walking in a circle instead of a straight line) or '**staring**' at the wall and not moving for some time
5. temporary **non response to name or basic commands** followed by super responsiveness and 'obedience' but **rarely remorseful body language** even if they did something 'naughty' once through the other side of a 'black out'
6. a **head tilt** the dog can't control, and it can get locked in that position sometimes in combination with **nystagmus** (uncontrolled, rapid eye movements). Not quite like lockjaw which can also be an indication of tetanus or rabies but dogs do appear to get less and less control over their head movements in general
7. Seizures become more frequent and severe as the disease progresses. The dog may **fall** on its side and paddle its legs. Involuntary urination and defecation often occur.
8. Inflammation of the brain in longterm distemper (that used to be called "old dog encephalitis") is often marked by **lack of coordination**, compulsive movements (such as **head pressing** or continual **pacing**), and exaggerated and **unpredictable** muscle movements and behaviours, which can sometimes be(come) aggressive due to

**(dis)stress** caused by **pain or blackouts**. This shows similarly with dogs with rabies. These signs may be seen in adult dogs with or without a history of signs related to canine distemper. The development of neurological signs is often progressive and cumulative (more than one at a time), so the aggressive behaviour can present before tremors or repetitive actions, during or after. Dogs with this form or stage of the disease do not spread it to other dogs but the prognosis (outcome) for them is very bleak indeed.

9. **mid term memory loss** due to damage to the nervous system or interruptions of blood flow to the brain due to seizures. You can see similar issues in dogs who have been **injured in the head**; not just memory loss but almost all the above symptoms too. **Sudden violent behaviours** can also start to occur, like **fits of 'temper' out of nowhere** and **increasingly hard chewing or biting** of themselves (especially their back legs) or others, but with little to no recall of acting that way afterwards. *Sadly should this happen this is where the Dangerous Dogs Act (1991) comes into force and the bite(s) must be reported to the relevant legal authorities.* And this is the cruellest cut of all- because they can't help it, and when not seized in the grip of a distemper fit, are often the most affectionate, kindest and sweetest dog you've ever known.



The disease works its way through the body's systems and organs  
<https://veteriankey.com/canine-distemper-virus-infection/>

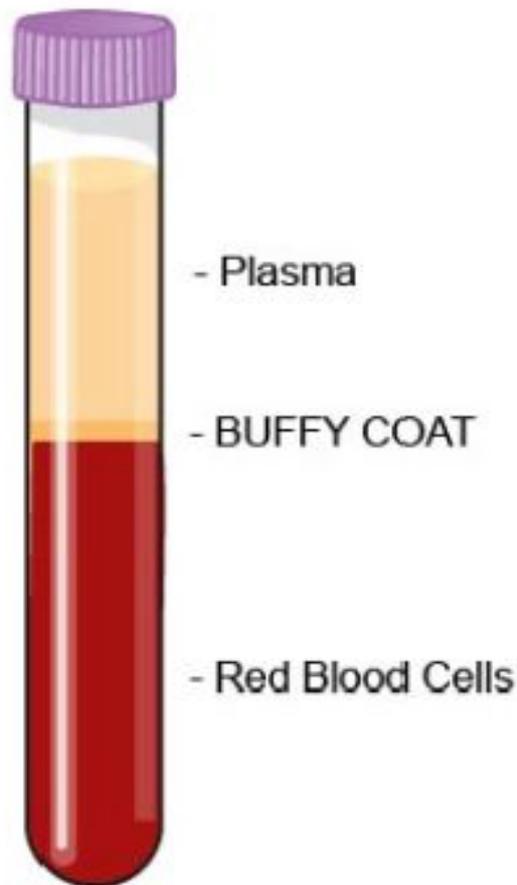
The course of the disease from first stages or showing no symptoms to end stage where there is little choice left but to put to sleep may be as short as 10-14 days, but the onset of neurological signs may be delayed for several weeks or months. By this point a blood test may not be reliable as false negatives are almost inevitable. Therefore testing moves to

- spinal fluid tests for antibodies
- or biopsies of the footpad (too-hard skin that has developed) to test

as much to rule out other diseases and conditions as to confirm distemper. Other tests and observations that can be done are

- conjunctival or 'eye' 'scrapes'
- buffy coat (white blood cell) test
- checking urine sediment- colour and cloudiness in urine for dogs (and humans!) is a major test of health indicator!
- and traumatic bladder catheterisation, a more invasive

procedure to check urine health.



<https://vcahospitals.com/know-your-pet/buffy-coat-examination-for-mast-cells>

Some of these conditions are also symptomatic of dog coronavirus and parvovirus as well, some even of rabies- which is why we double test for parvo and distemper both at the same time when a dog first comes into us and has to stay in quarantine for the first 3-4 weeks. Our dogs are always given rabies, distemper and parvo vaccines, then a minimum 3 week observation period; a full 4DX panel as well as many other tests; and if they've been in the shelter more than six months, a titre test to show the presence of all vaccines.

## Sensible Precautions (not just for distemper!)

### **HYGIENE**

A dog can pick up distemper for the spoor (waste products) or or from close contact with any infected animals so it's good to get into the habit of giving them a clean after a walk, or visit to another building like a vet or social visit:

1. just separate **warm wet pads** for the face, feet and genitals if they're big 'other dog sniffers' or have encountered lots of 'sniffers' that day, or stood in lots of mud, sand and muck is probably best, with boiled then left to cool water
2. a medical mix of **salt water** (also called [saline solution](#)) is also a good option in a 1ml salt to 100ml water mix- for a PDF of how to make your own medical saline contact us (put email here) it's really easy!
3. while you can use something **aloe or witch hazel** based on the face (not on open cuts as it stings) or feet, beware of them licking there while or after you've cleaned the area!
4. But **NO HUMAN soaps**, bar soap or liquids unless your vet gives the ok
5. **NO human shampoos** ([Hibiscrub](#) being a notable exception as it's prescribed by vets as well as used by GPs and in the NHS for good hygiene as it's anti-microbial (anti-bacterial and anti-viral so you can use it in a weak solution- just add water: 1 part shampoo to 20 parts water)
6. **NO rubbing alcohol or medical hydrogen peroxide**
7. **NO herbal preparations** unless recommended by a qualified dog nutritionist, and this includes tea tree oil.
8. Good old Sudocrem for human baby nappy rash, or Savlon, is also not toxic to dogs (though if you do have a licker try and cover the wound as non toxic doesn't mean they can eat ounces of the stuff...)

### **ADVICE**

If you are seeing any of the symptoms present together GO TO THE VET! You may only have hours to save your dog. but as it

is so *contagious*, *warn the vet* of your suspicions and *list the symptoms* you are seeing. Better a false alarm than a dead or brain damaged dog.

## VIGILANCE

Check your dogs's feet and face especially the nose on your way out or home for hard/very rough skin.

Keep an eye out for (for example)

- any *nose or eye discharge* or *coughing/breathing issues*
- what look like rotten or damaged parts of *teeth* where the rest is normal and white
- running a *temperature* or had hot/hard spots on the *tummy*
- *tremors*,/unexpected body *stiffening* or glazing of the eye
- *conflicting body language*
- loss of *appetite or energy*, or conversely sudden and unusual bursts of activity that seem desperate (this could be mini seizures as well as distressed behaviour)
- manic focus on one thing or utter lack of *focus* (can't hear you calling them)
- *loss of use of limbs* especially back legs
- *loss of bowel function* (and loss memory of having the bowel function, you may find them laying the mess in asleep unconcerned) when they are toilet trained especially overnight when they normally last fine all night. Again could be mini seizures.
- *repeated behaviours* like circling, facing the corners, drooling, snapping *out of character* and *forgetting* actions they have just performed.

## ERADICATE

A [good disinfectant containing phenol](#), and non toxic (but don't let them drink it even diluted or walk across any cleaned floor too soon after cleaning as it can get on their paws) to dogs is best used, or a 1:20 dilution of household bleach kills the virus instantly though not permanently, the virus can be brought in again with another dog and the pre cleaned area will provide

little to no protection. However beware- bleach is an irritant to dogs breathing and skin so don't let them in the area until the cleaned part has long dried.

Ensure your dog has been distemper tested and if they haven't, *vaccinate* and ask your vet for a *titre test* (called Vaccicheck) for one to either confirm the diagnosis or rule it out.

Ensure your dog has the best possible *immune system boost* (some medical conditions will not allow this but is is very rare) a high protein raw feed diet with diatomaceous earth to keep that stomach settled (as well as being a great flea and tick repellent!) and regular (2-3 times a week, a small handful per 10kg or liquidised and mixed into their food) doses of vitamin C (in dog supplements or fresh or frozen, dried or powdered dog friendly (but watch out for hidden sugars!) fruits like apples, strawberries, cranberries, apricots and raspberries).

So, to help you remember:

**H**ygiene

**A**dvice

**V**igilance

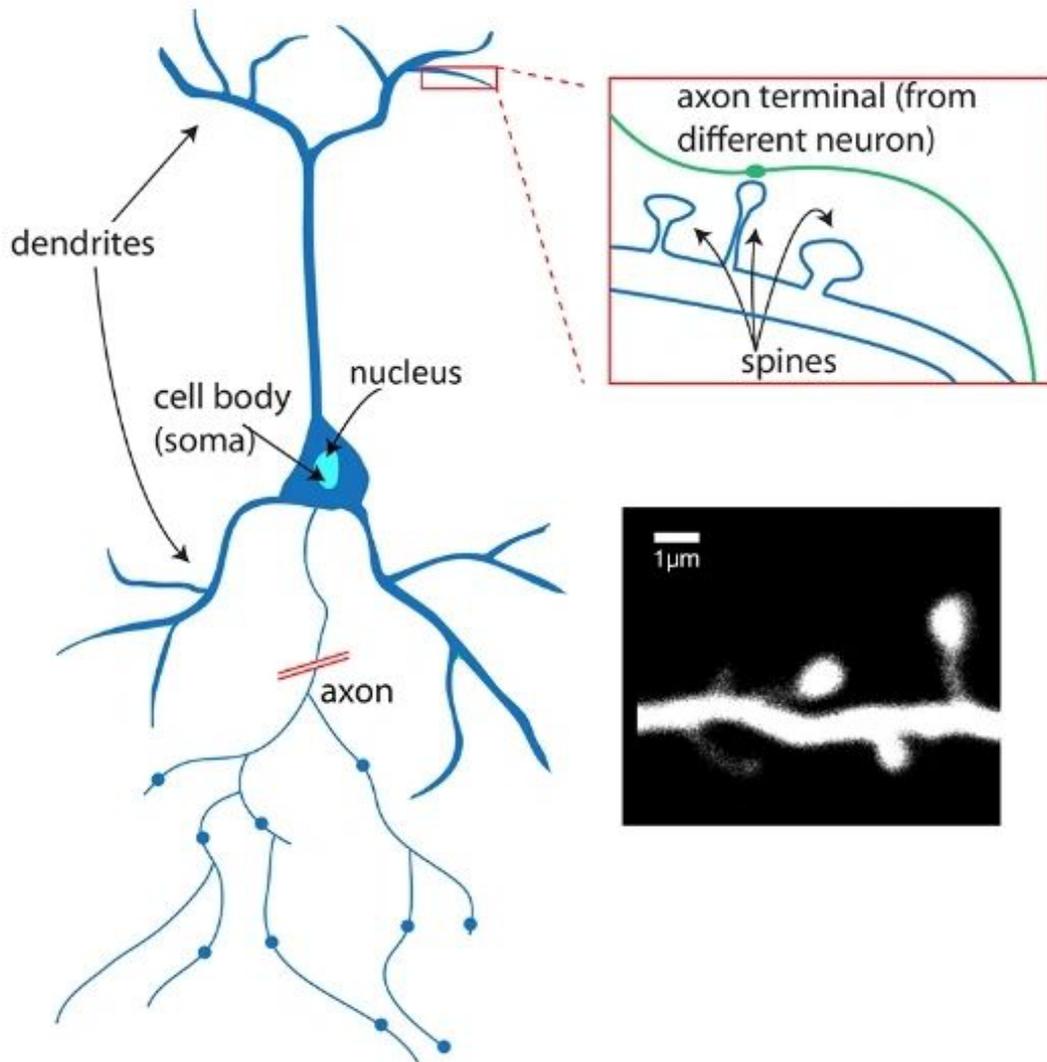
**E**radicate

**HAVE** this list handy (on the fridge or a noticeboard, or your phone) till it becomes second nature.

How is it treated?

You can't cure distemper- the final cruel blow. In the end it causes neuronal necrosis (cell death). Brain neurons (also called neurones or nerve cells) are the fundamental units of the brain and nervous system, the cells responsible for receiving information through the senses (smell, taste, touch, sight, hearing) from the outside world, for sending commands to move our muscles, and for transforming and relaying the electrical signals at every step in between to make such things possible in the body.

This is what a brain neuron looks like



The tree-like structure of a neuron. Dendritic spines are small structures that receive inputs from the axons of other neurons. Bottom-right image: a segment of dendrite from which spines branch off, like leaves off a tree branch. Note the very small size (~0.001mm). (Image: Alan Woodruff; De Roo et al / CC BY-SA 3.0 via Commons)

<https://qbi.uq.edu.au/brain/brain-anatomy/what-neuron>

It also accelerates atrophy in the brain. All mammal brains do this (shrink) as they age even in a healthy brain but distemper ramps this to the max. **You can only alleviate any symptoms the dog has and ensure that their quality of life is good enough to not consider putting them to sleep if they get to**

**this stage.** This symptom resembles dementia and can be very upsetting to witness by adopters and veterinary professionals alike. It can also depend on how long they've had it and also as long as the dog isn't having such bad memory lapses and repetitive behaviours that they cause distress and fear aggressive behaviour.

Treatment therefore is supportive care only, for example:

1. *fluid* support as the dogs can get dehydrated as we have said
2. *nutritional* support in there is prolonged diarrhoea
3. *anti-emetic therapy* for vomiting and prolonged anorexia due to lack appetite
4. *nebulisation and coupage* (striking the chest gently but firmly with cupped hands to dislodge heavy mucus) for pneumonia
5. and *antibiotic treatment* for all the random conditions your immune suppressed dog is likely to pick up. Broad spectrum antibiotics are indicated to treat secondary bacterial infection. Antibiotics with good activity against *Bordetella bronchiseptica* and *mycoplasma* (e.g. doxycycline) may also be indicated if distemper is suspected or confirmed. Combination of these treatment may be regularly required as and when symptoms present
6. *Seizures* may need to be controlled with anti- seizure medication (Pexion, Keppra etc.)

Because many dogs with mild signs usually test negative so are never actually confirmed as having distemper as opposed to kennel cough for example, assessing how beneficial the above treatments are in general is hard to study scientifically; whether these treatments are given early in the treatment or not, that are thought to be helpful early in the course of infection or illness. This is because the **majority of distemper cases are not recognised, even by professionals, until relatively late in the disease course.** It is also because distemper often co-presents or causes other conditions as it attacks all the body systems.

The prognosis for dogs in end stage distemper is poor. If dogs

survive, neurological damage is usually permanent but these dogs may stabilise and have a reasonable quality of life if damage is not too severe. *However, the outlook for long-term recovery in dogs with distemper infection limited to gastric (stomach) or respiratory (lung) disease is fair with good supportive care.* As noted above, many dogs with mild signs are never even diagnosed and recover uneventfully. Although uncommon if caught in time or vaccinated, adopters should be warned that neurological signs could develop up to 3 months and beyond after infection.

### What should I do if my dog I am adopting/ have adopted is in the infectious stage of distemper?

Should your dog be unfortunate enough to contract distemper but lucky enough to recover, 4 months away from other dogs is usually advised in recovered dogs. Recently recovered dogs ideally should be adopted directly from the location of treatment or foster care and not go into a home with lots of other animals unless they all have titre tests for distemper in the past three months.

Sometimes the dogs come to us with distemper, or had it when they were abandoned and it started to present once in our care. If this happens, we always fully disclose this information. The death rate sadly is very high especially if they're pups (6 out of 10 won't make it) and out of the survivors, one could present with neurological issues. If the dog is still in rescue and if they should get a positive distemper result or symptoms that aren't down to just being vaccinated for it, we would test two more times to remove the chance of a false negative or positive, and a full course of supportive treatment, under clinical obs, sometimes intravenously (by tube) regular tests and procedures are done by the rescue at their expense until a fully clear test comes back. All records of any such testing, vaccinations and any treatment needed will be in the dog's passport and/or health book on arrival. The rescue will have

discussed with you any need for supportive or post treatment care (rare as the dogs are tested so often we catch it early) and long term prognosis before any adoption takes place. Insurers may vary on their response to disclosure of distemper treatment but this would be a fully treated condition before they leave the rescue with full documentation provided. All insurance is only valid with regular vaccines, which of course includes distemper; though some will accept titre tests. Should a dog be at the end stages and the adopter still wishes to go ahead, as they're no longer contagious by end stage, it would be for palliative/end of life care however long that may last and the rescue would not be liable for those costs though we'd be happy to help promote any fundraiser you set up on our platforms if you're a basic or full Lora's Luck member. We also have to consider if they would get too stressed on, or even not survive the trip. So we do not tend to approve dogs in end stage distemper for adoption. Permanent foster cost donations for such dogs are always welcomed.

If the dog contracts distemper post adoption (which can happen to any dog especially adventurous ones who like to make friends with the local wildlife or roll in horrible stuff!) then we advise you to come on your post adoption aftercare online live support portal for help, informal advice and a friendly shoulder, and go to your vet immediately for extra testing to confirm it or rule it out. *Take all the documents you get from us with you as it will show the vet exactly how much distemper vaccines/preventative treatment your dog will have had, and when. A timeline like this could be vital to getting early and therefore usually more successfully treatment.* Remember so many symptoms can be indicative of distemper but also of many other conditions too that are curable so professional advice and testing is always the way to go.

As younger dogs are most at risk recovered dogs should be

separated from puppies (including puppy training classes) and away from unvaccinated or immune suppressed dogs also for a full 4 months following recovery or until confirmed negative by PCR test or similar is often suggested by the vet. But since isolating dogs for such long periods is often impractical at best, regular PCR testing can be used to assess whether dogs are still 'shedding' detectable distemper virus cells. Nasal swabs should be taken over a several-day period at least 2 weeks after recovery. If negative, the dog is most likely not shedding virus in significant quantities and is not a threat to other dogs (but of course as with any test, false results are still possible even at this point; careful sample handling is vital).

**It's not the automatic death sentence it used to be, and testing has really improved. Good rescues and fosters can catch it earlier too as they don't leave the dogs alone for long periods. But it's only thanks to scientific advanced and regular vaccines that it's under any control as a virus so the fight against distemper is not over yet.**

Could a 'cure' be out there?

“Back in 2013 a case report from the University of Florida's Veterinary Medical Center describes the safe and effective use of botulinum toxin (botox) type A to treat debilitating myoclonus in a dog suspected of having had distemper. Botox was injected into the patient's affected muscles and initial improvement of myoclonus was noted within 5 hours. Repeated botox treatment was required 18 days later. No long-term, overt adverse side effects were reported. Although definitive botox treatment protocols for myoclonus do not exist for veterinary patients, the

case report offers its treatment strategy (Schubert, Clemmons, Miles, & Draper, 2013)."

However, this treatment is not offered by vets as standard and more studies would be required in the long term to ensure the lowest amount of side effects possible.

\*Schubert, T., Clemmons, R., Miles, S., & Draper, W. (2013). The use of botulinum toxin for the treatment of generalized myoclonus in a dog. *Journal of the American Animal Hospital Association*, 49(2), 122-127.

#### FURTHER READING

[Creevy, K.E., Canine Distemper Overview \(2018\) DVM, MS, DACVIM, Texas A&M University](#)

[Hines, R. PhD., Canine Distemper In Your Pet \(2012\)](#)

[Sykes, J. E., Canine Distemper Virus Infection, Chapter 15](#)

(Case study) [Tariq A, Shahzad A, Tahira S\(2013\). Clinical aspects of canine distemper in 1.5 year old Labrador retriever bitch. Res. J. Vet. Pract. 1 \(2\): 20 – 22.](#)

**EQUITY BY DESIGN- inclusive information by default.**

Created by:

Lora's Luck Ltd

20-22 Wenlock Road, London, N17GU

Company Number 12130277

EORI GB372394676000

VAT Number 372 3946 76

All rights reserved 2021.

# Can YOU support Lora's Luck?



donate today!

Just £3 a month  
to sponsor



website: <https://lorasluck.org>

PayPal: [lorasluck@gmail.com](mailto:lorasluck@gmail.com)

Find us on



@lorasluck

