



# Autumn Newsletter



**“Autumn is a second spring when every leaf is a flower.”  
Albert Camus**

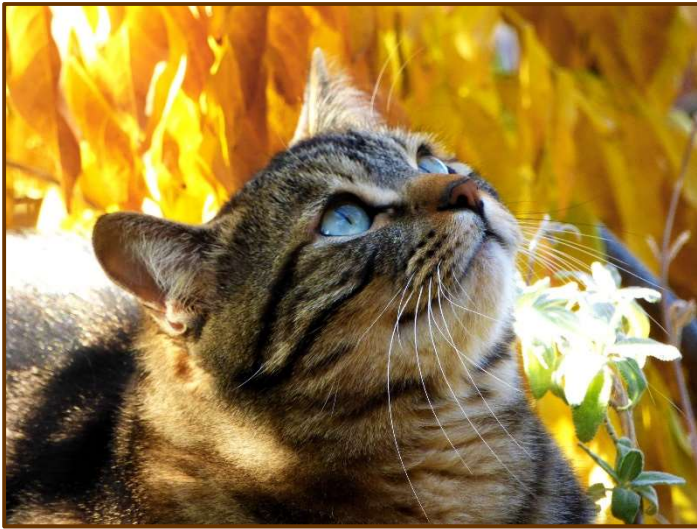
Autumn, also known as Fall in North America, is the third season of the year, when crops and fruits are gathered and leaves fall. Autumn marks the transition from summer to winter, in September (Northern Hemisphere) or March (Southern Hemisphere), when the duration of daylight becomes noticeably shorter and the temperature cools considerably.

Autumn is upon us and, whether you like it or not, the air is cooler and crisper. The leaves on the trees are starting to change colors, the acorns and walnuts are dropping, and the leaves are now readily beginning to fall off. Autumn can be a dangerous time for cats thus those of you who have a cat should pay a bit more attention to your feline companion during this change of seasons.

In this newsletter, EndFIP® provides an overview of Feline Infectious Peritonitis as well as some advice on how to make sure your cat stays healthy throughout Autumn.

## ***A word about FIP***

Feline Infectious Peritonitis (FIP) is a devastating viral disease of cats that occurs worldwide and can affect many systems of the body. It is a progressive disease which carries a high mortality rate. In 1963, American veterinarian Jean Holzworth first described a peritonitis in cats which caused the abdominal cavity to fill up with fluid. The condition appeared to be infectious, hence the name Feline Infectious Peritonitis (FIP).



Within a few years, it was recognized that the cause of the disease was a virus, a coronavirus. Feline coronavirus (FCoV) is undoubtedly one of the most poorly understood feline viruses and the disease it causes (FIP) is unquestionably the most feared disease in any multi-cat environment and the most shattering diagnosis for a pet parent to come to terms with. Luckily, most cats infected with FCoV never develop FIP. However, for reasons that we don't yet fully understand, instead of clearing FCoV infection, an unfortunate few cats develop the disease.

Since first being discovered decades ago, Feline Infectious Peritonitis is one of the most studied feline diseases and yet, it remains one of the most enigmatic viral diseases of the cat. Much progress has been made since those early days and encouraging new treatments have surfaced in recent years but there's much work to be done in the fields of feline FCoV and FIP. In spite of promising treatments, FIP still remains an almost always fatal disease.

## ***What is Feline Coronavirus (FCoV)?***

Feline coronavirus (FCoV) is an enveloped RNA virus. The name coronavirus comes from the shape of the structure which resembles a crown (corona in Latin) when viewed under an electron microscope. The virus (crown) spikes are what attach it to the cell when it infects a cat. For those of you who prefer fancy scientific information, FCoV contains the largest known viral, non-segmented RNA genome. It has an enveloped virion which is composed of four major viral proteins: spike, envelope, membrane and nucleocapsid.

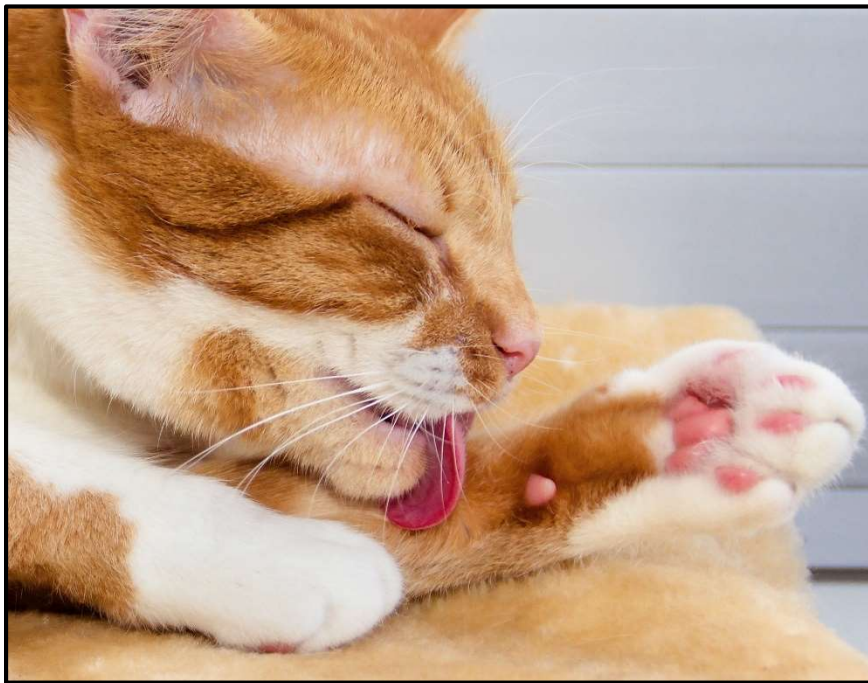
## ***FCoV and the pathogenesis of FIP***

FCoV is a virus of the gastrointestinal tract. Most infections are either asymptomatic, or cause diarrhea/mild intestinal upset, especially in kittens, as maternally derived antibodies wanes at between 5 and 7 weeks of age.

Feline coronavirus (FCoV) is shed in the feces. FCoV infection occurs when cats ingest (or inhale) the virus. FCoV is a very contagious virus and it only takes a tiny speck of cat litter dust from a litter tray previously used by an infected cat for the virus to spread. Therefore, exposure to feces in litter boxes is the most common mode of infection.







FCoV is a relatively uncommon virus in pet cats allowed access to the outdoors and kept in households of one or two cats, but in situations where there are a lot of cats (i.e. breeding catteries, rescue shelters, hoarding situations, etc.) FCoV is endemic, infecting almost all of the corresponding cat population. Feline coronavirus (FCoV) is ubiquitous globally and perhaps you are wondering why some cats developed FIP whilst the vast majority of FCoV infected cats thankfully don't.

The pathogenesis (fancy word meaning the manner of development of a disease) of FIP is complicated: the reductionist view is that it is entirely

due to a mutation of the virus. Whilst this internal mutation theory is the most widely accepted, no consistent mutation has been identified. The holistic approach is that FIP occurs as a result of a number of factors, including viral load, the immune status and general health of the cat.

FIP is an immune mediated disease. The name Feline Infectious *Peritonitis* is slightly misleading; FIP isn't inflammation of the peritoneum (the lining of the abdomen), it is a vasculitis (inflammation of the blood vessels). The clinical signs which the cat develops depend on which blood vessels are damaged, and which organ(s) the damaged blood vessels supply.

There are two major forms of FIP - an effusive form, often called "wet FIP", which is characterized by high protein fluid accumulation in body cavities, and a non-effusive form or "dry FIP" which is characterized by pyogranulomatous lesions in any body organ or system. Although FIP is separated into these two forms, there is really a gradient between these forms and sometimes signs of both forms can be seen. Signs common to both forms of FIP include fluctuating antibiotic unresponsive fever, lethargy, anorexia, and weight loss.

**Want to learn more about FCoV and Feline Infectious Peritonitis.**

Visit: <http://www.endfip.com/fip-in-depth/>



## Autumn Care for Cats

EndFIP® has a vision: every cat a healthy cat. This vision expands beyond the boundaries of FIP. With that in mind, below we provide some information and advice pertinent to this time of the year. Autumn brings some specific concerns for cats, so if you have a kitty, you'll want to consider taking some steps to keep your feline friend safe and secure.

### 🍁 Weather

As the weather cools, your kitty will spend even more time napping. Provide your feline buddy with lots of comfy beds to snuggle up in. Also, make sure your cat's litter box isn't in a drafty spot. Cats don't like chilly bathrooms!



### 🍁 Outdoor Hazards

Cats are always safer living indoors. Your kitty may think of herself as a fierce lioness, but in truth, she's vulnerable to many different hazards, such as traffic, weather, and predators. For one thing, the weather can take a sudden turn for the worse. As the weather cools, wild animals will be preparing to hibernate, and may be more aggressive than usual. Autumn is the season when snakes also prepare for hibernation and are more likely to strike, increasing the possibility of bites to naïve and curious pets.



Chemicals are another big concern. This time of the year, many people fill their cars with antifreeze. Antifreeze is extremely toxic to cats, but unfortunately has a taste many kitties like. Lawn and garden products are also hazardous; your cat could get sick just by walking through a spot that was recently treated, and then licking his/her paws. There are also some hidden environmental dangers like mushrooms, rodenticides and other poisons. There is also increased danger for traffic, especially around the Holidays.

Last but not least, cats go crazy with leaves but leaf piles remaining on your lawn quickly accumulate moisture, which promotes bacterial and mold growth. If your cat ingests these microorganisms, digestive

tract upset (vomit, diarrhea, decrease appetite, etc.) could ensue. If you do let your furry friend wander, make an emergency shelter, such as a storage tote with a door in the side, but ideally keep your cat safe and sound indoors!





## 🍁 Indoor Hazards

Even inside Fall brings specific hazards for our beloved cats. Candles, decorations, seasonal candies, and toxic plants are a few concerns. Candles can make your home look and smell nice, but they don't mix well with inquisitive cats. Keep candles in high, secure spots your feline can't reach. Be careful of space heaters as well. At all times, keep your feline friend's safety in mind, and store anything that could be dangerous out of rambunctious paws' reach.



## 🍁 Nutrition

Cats eat more this time of the year, both in terms of quantity and frequency. Like many other animals, their metabolism undergoes some changes and to stay well they have to take in some extra protein, fat, vitamin and minerals. Even if you prefer to feed your cat only dry food, the inclusion of a bit of red and white meat alternated with some fish and a veggie or two is highly recommended as these additions will boost your cat's immune system. Busy pet parents can find properly balanced and highly nutritious canned food at pet retail stores. If the cat lives outdoor, please consider warming up the food.



## 🍁 Shedding | Grooming

Autumn is a peak shedding time for cats. As summer comes to an end, your cat's fur will begin to change, with most of this change happening during the first few weeks of autumn. To speed up the growth of the undercoat and help your furry friend to gain a thick and healthy winter coat, consider brushing your cat regularly (ideally once a day, and if your kitty has long fur, twice a day). Brushing your cat will also help cut down on the amount of fur you find stuck to your furniture and clothes. You may also want to consider using washable slipcovers. If your cat has a thick and/or long coat, ask your veterinarian for advice on using hairball remedies.



## 🍁 Seasonal illnesses

This time of the year, the grass seems to be damp with dew each morning, with a slight frosty sheen on the colder mornings. One quick stroll outside, or a walk in high, wet grass can give your cat a seasonal ailment, like a cold, the flu or even bronchitis. It is not so much the cold, but humidity you have to beware of. If your cat likes to spend time outside, consider allowing him/her out in the afternoon. If your cat lives outside, please make sure his/her house is nice and dry at all times. Please consider stuffing the bottom of the interior with straw or other insulating materials (no blankets or towels) to provide both insulation and a comfortable spot to lie down.

## 🍁 Parasites



Fleas and ticks will try to get indoors as the weather cools. Parasites can come and bother your cat even when summer is long gone. You can never let down your guard! As soon as the heating comes on, if your cat lives indoors, any flea eggs hiding in the carpet or on the sofa or bedding, will hatch and infect your kitty once again. In addition, some tick species are active pests even in winter and actually survive the first freeze. Please make sure your furry friend is current on his/her parasite control.

## 🍁 Veterinary Care

Keeping your cat up to date with vaccinations and specific anti-parasitic medicine is of utmost importance. If your cat hasn't had an exam in a while, please take him/her in as soon as possible. Older cats often get stiff and sore in cold weather, so if your furry friend is a senior or is afflicted with chronic bone or joint issues, he/she may benefit from supplements, medication, and/or pain management treatments. Please make sure to discuss all the specifics of your situation with the veterinarian to obtain the proper advice.

**All of us at EndFIP® are dedicated to keeping cats healthy and happy.**

We hope that you find the information provided helpful and that you will take our advice to heart. Above all, we wish your cat will have a safe Autumn!





**EndFIP® has a vision: every cat a healthy cat.**

**Our ultimate goal is that one day, no one will have to go through the pain of losing their beloved cat to a disease that has claimed so many for so long.**

## **EndFIP® Global Initiative:**

The EndFIP® Global Initiative was launched on October 5, 2018 from Assisi, Italy. All of us in the team are fully dedicated to our goal to put an end to the disease. We intend to end FIP by educating, informing and inspiring people to create lasting solutions to prevent feline coronavirus (FCoV) infection in multi-cat environments, such as breeding and rescue catteries.

EndFIP® kicked off its second year in Paris, with a positive forward momentum and committed to remain focused on the cultural transformation we began last year. We will transform the FIP field, step-by-step, by instilling a cat's wellbeing – centric mindset, logic-based thinking and mission-driven alignment. We want to make it simple and clear that we believe in ethical, cruelty-free research and firmly stand against the needless suffering of animals in the name of science.

We are thrilled that interest and support for our work are growing, because that means we can set our sights on furthering our impact. As we start our second year, we want to thank you for being part of our community. It is a joy and an honor to partner with you in our efforts to help cats worldwide. It matters for each of them that we take the power we have and use it to create change.

Thank you for supporting our mission. It's inspiring to see how you continue to step up and take action to prevent cats from becoming infected with feline coronavirus, thus preventing FIP altogether.

Thank you for your compassionate support, and for always being an irreplaceable part of the success that is the EndFIP® Global Initiative.

We hope you enjoyed this newsletter and will give us your feedback, which is truly a gift that help us improve every day. We are available at: [reachus@endfip.com](mailto:reachus@endfip.com)



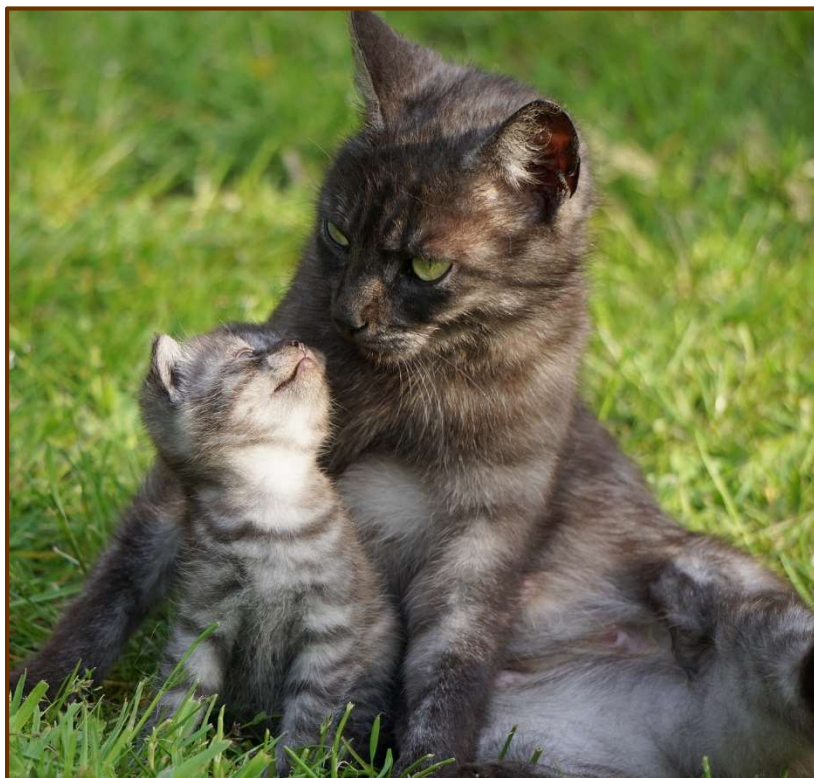
[www.endfip.com](http://www.endfip.com)



Feline Infectious Peritonitis is a global problem. We know that you are reading this newsletter because you care about cats. The alarming truth is that in the time it takes to read these few pages hundreds of cats worldwide are losing their respective battles to this insidious disease.

We can't bring back those we've lost. But together we can use every loss to FIP as a wake-up call, a sign that something must be done!

**Please, make an urgent gift of any amount right now at:  
[www.endfip.com/donate](http://www.endfip.com/donate).**



#### **EndFIP®: A vision and a mission**

- Bring awareness
- Raise funds for research
- Eradicate FCoV and end FIP

Help us accomplish our goals. Your donation is both needed and appreciated. The Luca Fund for FIP Research is committed to exclusively support research that does not use laboratory cats and does not conduct experimental infection of healthy cats with a deadly virus. Help us end FIP, so that one day, no one will have to go through the pain of losing their cherished cat to a disease that has claimed so many for so long.

The Luca Fund for FIP Research is part of the global vision of the EndFIP® project. Your donation to the Luca Fund will be applied to studies conducted at the University of Glasgow School of Veterinary Medicine. The Luca Fund for FIP research is a special fund of the American Alumni of the University of Glasgow established in 2018 to accept tax-deductible donations for Feline Infectious Peritonitis research. AAGU has been recognized by the IRS as a section 501(c) (3) charitable organization. All donations to AAGU are deductible as charitable contributions to the full extent permitted by law.



**[www.endfip.com/donate](http://www.endfip.com/donate)**

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