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Q: What is GS?

**A:** GS is short for GS-441524 which is an experimental anti-viral drug (nucleoside analog) that has cured cats with FIP in field trials conducted at UC Davis by Dr. Neils Pedersen and his team. See study here: <a href="https://journals.sagepub.com/doi/full/10.1177/1098612X19825701">https://journals.sagepub.com/doi/full/10.1177/1098612X19825701</a>

It is currently available as an injection or an oral medication. Please ask an admin!

Q: How long is the treatment?

A: Recommended treatment based on Dr. Pedersen's original field trial is a minimum of 12 weeks of daily sub-cutaneous injections.

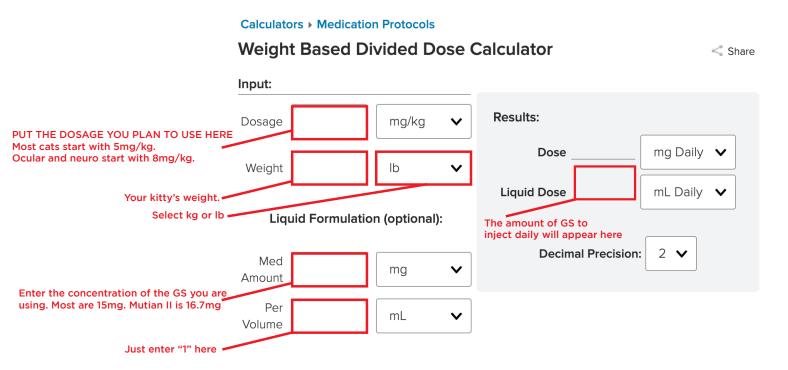
Bloodwork should be checked at the end of 12 weeks and cat's symptoms should be assessed to see if additional treatment is needed.

## Q: What is the correct dose of GS to give my kitty?

**A:** Dosing is based on the weight of the cat.

Below is a very good online tool for calculating the correct dose for your cat.

https://reference.medscape.com/calculator/weight-dosing



Fill in the boxes as shown above to calculate the daily dose

If you love math, the formula to calculate is: 5mg\*(GS) x weight(kg) / GS concentration per 1mL\*\* = dose per 24hr

\*Neurological and Ocular FIP cats require 8mg / kg **MINIMUM.**Can go as high as 10mg/kg for extreme ocular or neurological cases.
\*GS concentration per 1ml = total GS in bottle (mg) / total solution volume (mL)

Q: What exactly are "neuro" or "ocular" cases?

A: "Neuro" cat means that FIP has crossed the blood brain barrier and symptoms include central nervous system issues. Ataxia (weakness in my back legs especially), inability to jump fully without hesitation, poor coordination and seizures may occur. Ocular involvement, which is common with the neurological form since the eyes and brain are closely connected, looks like this:



Zach has been cured of ocular dry FIP!

Q: How much does the 12 weeks of treatment cost?

A: Each 5 mL bottle of treatment costs from \$80 - \$358 depending on the brand.

Dose will depend on the weight of the cat - each bottle of GS is 5mL liquid at either 15mg or 16.57 mg concentration depending on the brand purchased.

12 weeks of treatment can cost anywhere from \$1,100 - \$11,000 USD depending on the brand of GS used and the weight of the cat.

# Q: Why are the prices so varied?

A: The different manufacturers charge different prices. Think of it like Rolls Royce and Toyota. Both great cars but very different price points. Mutian brand which sells for \$358 per bottle guarantees a cure if you use their products for 12 weeks. If your cat relapses or isn't cured, they will provide free treatment until the cat is cured. They also offer oral medication. See next page for details on the oral meds. The second brand that charges \$80 per bottle is a bit newer to the market but is also working well for the cats in our group currently using it. Both were tested for biological activity at a leading US university lab and appeared to be as advertised. You may see additional brands of FIP treatment in other FB groups but we have not tested those and do not endorse them.

Q: What are the details with the oral treatment?

A: Mutian Oral Capsules:

Please place all orders for Mutian pills by sending PM to Nancy Schmidt-Moulen or Ziyu Lu in our group

Q: How do I buy the FIP treatment?

**A:** Please contact any admin in the group for help getting the treatment.

Q: How do I know the FIP treatment I am buying is the real thing and will work?

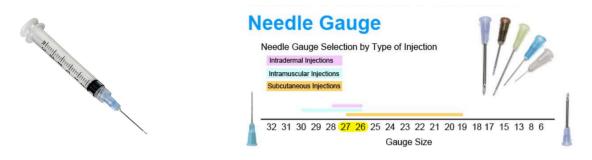
**A:** While we randomly tested the two brands of FIP treatment we discuss in this group and confirmed biological activity and acidity as claimed by the sellers, the group cannot and will not provide any guarantees. All cat owners using GS are doing that at their own risk. We can only share our experiences and successes we had.

# Q: What size syringes and needles do I need?

A: Depending on what your cat's dose is, you can used either a 1 mL or a 3 mL syringe. Use a 20 gauge needle to draw up the GS into the syringe and then it's best to CHANGE the needle to a fresh one of the same size OR SLIGHTLY SMALLER (21 or 22 gauge) to inject. The GS liquid is somewhat thick and a larger needle allows it to be drawn up and injected faster. The LENGTH of needle can be anywhere from 1/2" to 1 1/2" in length. It's a bit of a personal preference. Some use the longer needles to try and avoid any GS leaking out, some are more comfortable injecting with a shorter needle. You DEFINITELY want Luer-lock needles so they can be secured to the syringes and not pop off.

#### A NOTE ON NEEDLE GAUGE SIZES:

The number used to describe the circumference or "width" of the needle opening gets **larger** as the size of the opening gets **smaller**. For example, an 18 gauge needle has a larger opening than a 21 gauge needle.



Q: Where do I get syringes and needles?

**A:** Hopefully your vet can start you out with a few syringes and needles. They can also be ordered from:

- Amazon.com
- Valley Vet Supply <a href="https://www.valleyvet.com/">https://www.valleyvet.com/</a>
- MedLab Supply <a href="https://www.medical-and-lab-supplies.com/">https://www.medical-and-lab-supplies.com/</a>
- Care Touch https://www.caretouchusa.com/

Insulin syringes are NOT recommended unless you change to a larger needle. The insulin needles are too small for the thickness of the GS to pass through them.

# Q: How do I give the GS injections?

A: The injections are given sub-cutaneously or "sub-cu" which means just under the skin.
Injections are to be given every 24 hours at as close to the same time everyday as is possible for at least 12 weeks. The needle should NOT poke into the muscle of the cat. The GS stings upon injection but the pain is over as soon as the injection is over. It's best to have your vet do the first injection or two and to teach you how to do them. Kitties that are more difficult to restrain for the shots may require daily trips to the vet.

https://www.youtube.com/watch?v=JDISYcizEv0 https://www.youtube.com/watch?v=drMDxAez4sM



https://www.zenbycat.org/blog/how-to-give-injections-for-fip-drugs? fbclid=lwAR2elZE9JJAfVIRayTnsQ3wUWt21M79Msl4\_bt4seZPdcwtw pGGm\_O58m0Y

Q: What are the side effects of GS?

**A:** The only known side effects of GS are pain during injections and the possibility of skin lesions forming at the injection sites.

# Q: My kitty is on GS and now has diarrhea. What should I do?

**A:** We recommend giving B-12, bland food and a probiotic. Pumpkin puree is also okay to give. Fortiflora or Proviable are two probiotics. If the cat seems to be getting dehydrated, giving sub-cutaneous fluids is okay too. Please check with your vet as well.

### Q: What supplements do I give during GStreatment?

**A:** Many of our members use a variety of supplements during GS treatment to support organ and immune health. Dr. Pedersen believes that if you are using GS, you don't need anything else so "save your money". It's a personal choice and below are some of what our community is using along with GS:





# Q: Can I just buy the GS in powder form and mix it up myself?

**A:** You need some degree of expertise and the right equipment to prepare the diluent, adjust the pH, accurately weigh small amounts of drug, suspending it in diluent, and fully solubilizing it by readjusting pH and sonication. Some of the chemicals such as concentrated HCl are also dangerous in the hands of novices and technically the drug should be handled with gloved hands and with some care. People were having extremely difficult time doing these things and were continually asking advice, which is hard to give to ordinary people with no equipment.

Q: How do I dispose of all of the used needles or "sharps"?

**A:** This link is a great resource for finding a sharps disposal location near you: <a href="https://safeneedledisposal.org">https://safeneedledisposal.org</a>

You can also purchase something like this for about \$4 at your local pharmacy and they might even take it for disposal when it's full ofsharps!



Q: Should I continue to use flea/tick treatment for my FIP kitty during treatment?

A: No. Do not use Revolution, Frontline or other chemical flea/tick treatments while on FIP treatment. The biggest part of treating for fleas is the environment.

Vacuum daily (floors, closets, bedding, anything the cats come in contact with) and wash all bedding. You can flea comb your cat daily to remove fleas. You can make a mixture of water and apple cider vinegar (2:1) to apply on a cloth and wipe onto your cat daily so the fleas don't want to be on her. Revolution is one of the more safe options, but I would hesitate to combine it with GS for fear of affecting the GS being able to have full effect.

Q: Should I vaccinate my FIP kitty during treatment?

**A:** No.

Q: How long after completing FIP treatment should I wait to spay/neuter my cat?

A: 3 months.

Q: Is it okay to give antibiotics when treating my kitty for FIP using GS?

**A:** Some antibiotics are okay to use but others are NOT! Below is a list of the ones to **AVOID during GS treatment:** 

# Baytril, Zeniquin, Orbax, Veraflox

Fluoroquinolone antibiotics cross the blood brain barrier and have fluoride in them and it is very well known that they can cause neurological side effects.

These are the ones that are okay to use:
Zithromax, Cephalexin, Amoxi, Penicillin,
Clavamox, Doxycycline, Clindamycin