

Managing EPI in South Africa

The first thing you need to know about managing EPI in South Africa is that EPI is totally manageable in South Africa! It can certainly seem overwhelming when you are first told that your beloved pet has Exocrine Pancreatic Insufficiency (EPI). It becomes more overwhelming when it seems that all of the information and resources available online are designed mainly for the northern hemisphere (particularly North America, Canada and the United Kingdom).

The main purpose of this brochure is to give some advice to those living in South Africa on how best to manage EPI with reference terms that are 'normal' to South Africa. I wrote this brochure to be able to help others who are going through this. I am a South African woman from Cape Town and my GSD Tyson, who has just turned 4 years old on June 25, 2015, was diagnosed with EPI ON 17 December 2013 – he was only 2.5 years old and I was terrified! I spent hours and hours researching EPI, reading about treatments, prognosis and how others had gotten through this. I am hoping to condense all those hours of research into a simple and straight-forward brochure that can help fellow South Africans wrap their heads around EPI. I was very frustrated by the lack of information available to me in South Africa, so I hope that this brochure will make it all a little easier to understand.

I moved to Canada in August 2014 and bought my two dogs over with me – My EPI GSD Tyson and my non-EPI Ridgeback Cara. Resources and support are no doubt easier here than in South Africa BUT that does not mean that EPI is a death sentence – it just means you have to be a little more creative to find what works for you and your pet. As it stands currently, this is the formula I have put together for my Tyson – and this is what works for him. It also just so happens that everything that is in his formula is available in South Africa. But remember, this formula may not work for your pet. You will need to spend time seeing what does and doesn't work and develop a formula that suits your pet.

Tyson:

Current weight: 28kg / Weight prior to diagnosis (abbreviated to dx): 30kg / Weight at diagnosis: 21kg

455grams of ground (minced) raw food per meal – fed twice per day

2 Creon 10,000 opened and sprinkled over raw food

1/8 tsp of Tylan per meal, mixed in

1 Wonderlabs B12 with Intrinsic factor every morning

½ tsp coconut oil every 2nd day

Carrots as treats.

Slippery Elm if he gets a grumbly tummy

Important Resources where you will find support, suggestions and stories of so many others that have walked this path:

<http://www.epi4dogs.com/>

<http://www.globalspan.net/epi.htm>

<https://groups.yahoo.com/neo/groups/k9-EPIGLOBAL/info>

https://www.facebook.com/groups/38663535025/?ref=br_tf (Exocrine Pancreatic Insufficiency group)

<https://www.facebook.com/groups/311346519017756/> (EPI and pancreatitis in canines support group – in South Africa)

Important tests you should know about to discuss with your vet and that are referenced throughout:

The North American authority on testing for Gastrointestinal disorders and their related issues is TAMU – the Texas A&M University. While your vet will not send your pets samples all the way to North America, the TAMU website can still be a good source of knowledge for you and your vet to refer to when testing and understanding the results (<http://vetmed.tamu.edu/gilab>)

Ctli test: Blood test that requires 12 hours of fasting. Tests for EPI.

- Normal range is 5.7 – 45.2 µg/L
- Values below 2.5 µg/L typically mean you pet has EPI
- Values between 3.5 and 5.7 µg/L don't usually mean your pet has EPI but could be a sign that something else like Pancreatitis is going on.
- When Tyson was tested, his Ctli result was 1.9

Cobalamin and Folate test: Blood test that requires 12 hours of fasting. Done as one test.

- Cobalamin: Tests levels of B12
- Normal range is 252 – 908 ng/L
- Low ranges indicate B12 deficiency. Should be treated immediately. Low B12 has been linked to neurological damage. EPI dogs should be kept on higher end of normal range. Often associated with SID
- Recommended to test B12 levels periodically
- High values seem to have no significance. Your pet cannot overdose on B12 as they will just pass the excessive B12 out with urination.
- When Tyson was tested, his results were as follows: 228 (Dec 2013), 57 (April 2014 after following the TAMU protocol) and 1008 (July 2014). I had to specifically ask my vet to do the TAMU protocol when it came to B12. To learn more about what TAMU recommends for B12, follow this link:
<http://vetmed.tamu.edu/gilab/research/cobalamin-information>
- The summary of the TAMU protocol is:
 - o Test the current B12 level
 - o Treat the pet with the recommended dose of B12 (see below) every 7 days for 6 full weeks

- Wait 30 days after the 6 week cycle and give one dose
- Wait 30 days and then retest
- Recommended dose: (Liquid B12 can be obtained directly from your vet or you can do weekly visits to your vet)
 - Cats: 250 µg per injection
 - Dogs:

Dogs weight	Below 4.5kgs (10lbs)	4.5kgs - 9kgs (10 lbs - 20 lbs)	9kgs - 18kgs (20 lbs - 40 lbs)	18kgs - 27kgs (40 lbs - 60 lbs)	27kgs - 36kgs (60 lbs - 80 lbs)	36kgs - 45kgs (80 lbs - 100 lbs)	Above 45kgs (100 lbs)
Dose of cobalamin	250 µg	400 µg	600 µg	800 µg	1000 µg	1200 µg	1500 µg

- Folate: Tests for SID (small intestinal dysbiosis)
- Normal range is 7.7 – 24.4 µg/L
- Low range may indicate other problems
- High range indicate that SID is present
- When Tyson was tested, his result showed a score of 44.70 µg/L
 - With high scores present, treatment of either Metro (Flagyl) or Tylan (Tylosin) is recommended.

Remember, the crucial triangle that makes up the first steps to recovery is the enzymes, B12 and treatment with antibiotics if SID exists. Once these three find a balance, you will begin to see improvement – better output, weight increase and positive changes in behaviour. Once you have achieved this balance, you can consider adding supplements, changing food and trying to decrease enzymes, antibiotics and B12 supplements to get your pet to a level of minimal required sustainability.

In the beginning, this journey can seem very overwhelming with a lot of opinions out there. It can be more so scary because a lot of the recommendations simply do not exist in South Africa, or are very expensive. To help with keeping things under control and to make it easier to track the changes and their effects, keep a diary. Just buy a notepad from CNA or Pick n Pay and start jotting down notes daily. Start with your pet's weight. Then note: what you feed, when you feed, what enzymes you use, what and how much antibiotics you give etc. And very importantly, note your pets reaction to the treatment – do they eat their food, do they eat their food all in one go, what does their output look like, how is their behaviour etc. Believe me; this diary will be so helpful. If you introduce changes and your pet does not do well, you will be able to go back and look at the last thing that worked well, or you can refresh your memory when something didn't work well. I kept a diary for Tyson for approx. his 1st year of having EPI and still to this day, if I introduce anything that I have not used before (or have not used in a long while), I make notes to monitor the progress.

I hope that you find the information useful in this brochure. I am happy to help where I can, so if you have any questions or just need to chat to someone who has been through this, please feel free to email me:

chez_imogen@yahoo.co.uk

Happy reading!

1. Find a GREAT vet (don't just settle for good).

If you suspect your dog or cat has EPI – and it is very likely that you do otherwise you would not be reading this brochure – find a vet that is willing to listen and explore with you. My GSD Tyson was in and out of the vet for months before his actual EPI symptoms started as he was just not well overall. My vet just kept telling me to give him antibiotics and sent me on my way. When his pancreas finally atrophied, the symptoms were clear as day: starvation, yellow cow-pie (runny, sloppy) output, sudden and massive weight-loss and a change in behaviour.

My GSD was at the vet at least 4 times before I begged my vet to do the cTLI test – I had spent weeks researching the symptoms and I was convinced my dog had EPI. My vet agreed to do the test but he was not supportive, encouraging or helpful. When the test results returned positive, I spent the morning phoning at least 50 vets in the Greater Cape Town area to find out if they had worked directly with an EPI dog. I got a lot of 'No' answers which were discouraging, some 'Yes' answers but the details seemed sketchy, and a few 'I have worked with a dog that had secondary EPI, but not primary EPI' – which is usually caused by a dog having pancreatitis and as a result they develop EPI. There were fewer vets who answered my question with a bold and confident yes BUT the point is that there are vets who have worked successfully with EPI dogs. I settled on a vet, Mariaan, who also just so happened to be my neighbour's vet (my contact details are available in this brochure and if you would like more information on Mariaan, please feel free to get in touch). My new vet wasn't incredibly experienced with EPI but I chose her for two reasons: 1. She had worked with 4 Jack Russel dogs that had had secondary EPI so she had put in lots of research time learning the condition and 2. She was prepared to learn WITH me.

My point is that this journey can be scary and long and overwhelming and you need someone with you who is prepared to help and listen, learn and grow. So don't sell yourself or your dog (or cat) short – find a great vet.

2. Pancreatic enzymes.

If your dog or cat has EPI, the only treatment that you first need to worry about is the pancreatic enzyme. You need a REPLACEMENT – a simple supplement will not work. And it needs to be a pork based supplement; a plant based supplement will not help at all. This is your first step to helping your pet on the road to recovery. There are some options, but really there is only one option:

a. DigestEaze

This is the only enzyme powder available in South Africa and on your vet's shelf. It is also only a SUPPLEMENT and NOT a replacement. You can see the comparisons below:

The average composition of a REPLACEMENT powder is:

Protease: 434,000 USP / Amylase: 476,000 USP / Lipase: 66,080 USP

The average composition of DigestEaze powder is: (although the container does not say that the measurements are in USP, I emailed Kryon Laboratories directly and they confirmed these amounts are in USP which makes them easy to compare)

Protease: 25,000 USP / Amylase: 25,000 USP / Lipase: 3250 USP

SO in order to get the DigestEaze to equal 1 teaspoon of the average replacement powder, you would need to give your dog roughly **18** teaspoons. At a cost of R300 per container, not only is this option barely viable, it is not practical or effective.

The instructions on the DigestEaze container also state:

“Add one level measure (about 3.5 grams) of DigestEaze to each meal for pets weighing more than 10kg”. It has been discussed and agreed upon numerous times that the amount of enzyme to give should correspond to the AMOUNT of food given and NOT to the weight of the pet. The standard starting point is one teaspoon of average replacement powder per cup of food regardless of pet size and weight.

I used DigestEaze for 4 days – the amount required was impractical and the jar depleted quickly. I would not recommend this option unless you have a miniature or small dog that eats less than a cup of food per day, and even then you are going through approximately 18 teaspoons a day.

There is no information on the internet about DigestEaze and is only available through your vet.

b. Pancreatin Quadruple Strength tablets

These tablets can be found at the Wellness Warehouse at about R130 for 50 capsules. These tablets consist of the following composition:

Protease 75,000 USP / Amylase 75,000 USP / Lipase 15,000 USP.

This means you would require roughly 5 tablets to equal 1 teaspoon of an average replacement powder – this is much better! But this too could work out costly:

Assuming you are feeding two meals a day (1 cup of food per meal) and giving 5 tablets per meal – that would be a use of 10 tablets per day. So one bottle of 50 tablets would last you 5 days. That means you would need at least 6 bottles a month – that’s a total of R780 per month.

You can read more about Pancreatin here: <http://www.wellnesswarehouse.com/shop/health/health-concerns/digestion-support/pancreatin-tablets/>

c. Enzyme Diane

Enzyme Diane is based in the USA and is in my opinion the leading enzyme powder by far – she is also one of the more cost effective options: IF you live in the Northern hemisphere. Enzyme Diane will ship her enzymes to South Africa but in my opinion this is not a viable option due to the exchange rate. The average one month supply of enzymes costs approximately \$180 – that is a hefty R2300 per month. If this is still an option you would like to explore, you can find out more at <http://www.enzymediane.com/>. Diane is such a helpful and knowledgeable person and she will be happy to answer any questions you might have.

d. Raw pork pancreas

This is another possibility. I tried and successfully used raw pancreas for a while when my GSD was diagnosed. This is also an extremely cheap option BUT a very messy and time consuming option. I acquired my pork

pancreas from Winelands Pork based in Stikland, Cape Town. I would buy two weeks supply at about R20 (Just over 3kg's). You can find out more about this and contact them at <http://www.wlpork.co.za/>

I would phone in my order a week in advance and collect on Friday afternoon's. It would come in a big frozen block that had been cut into individual size blocks. I would race home praying it would not melt too much! I would then take out 1 week supply which I calculated to a rough 1.6kg's (A good rough calculation is approx.. 150 grams of pancreas to two cups of food, so my GSD was at the time getting about 4 cups of food a day so he got 300grams of pancreas a day: 300grams x 7 days = 2100 but I went slightly under this amount). I would then defrost it and place it into a blender to break it up. This would form a gooey, rubbery liquid of sorts which I would then store in the fridge and serve a portion with every meal. No incubation required.

One of the problems with raw pancreas is that you cannot be exactly sure how much Protease, Amylase and Lipase you are getting and it can make it hard to monitor what is working for your pet and what is not working. I used the raw pancreas for about three months when I got (what I have assumed) was a bad batch – the colour did not quite seem right and two days after eating from the new batch, my GSD started showing his earlier symptoms – hunger, cow-pie output and a grumbly tummy. Having gone through everything that we had, I just was not prepared (mentally or emotionally) for a set-back, so I switched him to Creon immediately.

e. Creon

Creon is a human medication. For this reason, your vet may not know about it and you can only get it from a pharmacy. The good news is that you don't need a prescription (often abbreviated to rx). The bad news is that it is relatively expensive. In your research, you may come across talk about the different Creon strengths – 5,000; 6,000; 10,000; 12,000; 25,000 – in South Africa you can only get Creon 10,000 and Creon 25,000. No other strength is available.

The standard starting point is 1 Creon 10,000 per cup of food and then you can tweak up and down from there. It took me about 8 months of tweaking to find the necessary dose. My GSD is currently fed 455 grams per meal (which is about 1.92 cups, so effectively 2 cups per meal) and he gets 2 Creon 10,000 per meal – so he fits right in with the standard math. BUT remember, your pet may not conform to the standard and that is okay – they may need slightly more or slightly less – again that is okay. You will find what works for your pet.

I open up the capsules and sprinkle over my GSD's food and he eats it without batting an eye. But my GSD is fed a raw diet so sprinkling the capsule on is easy – this may not work as well if you are feeding dry kibble. I would recommend that you then push the capsule down the pet's throat or hide it in something delish, like a little bit of fishpaste or a hotdog.

In South Africa, you can get Creon from any pharmacy but I found Clicks was the easiest – they often had it in stock, never argued with me about needing a prescription and you can earn Clicks points. Dischem was my 2nd go to place but sometimes they would argue about a prescription but the pharmacy manager usually cleared up any misunderstandings.

Creon can be pricey. A bottle of 100 Creon 10,000 capsules at Clicks costs around R750 – this is roughly your one month supply (4 tablets/ day x 30 days = 120 tablets).

3. Antibiotics (Tylan vs. Metronidazole)

Both antibiotics can be obtained directly from your vet. In South Africa, you vet will usually refer to Tylan as Tylosin Tartrate and Metro is referred to as Flagyl. Do the research. Some EPI pets don't even need antibiotics, some need it for a short while and some need antibiotics for life. The recommendation to treat SID (small intestinal dysbiosis) [previously known as SIBO (Small Intestine Bacterial Overgrowth)] or suspected SID is to start with a once off 45-day course of Metro. If there is little or no improvement, some recommend doing another 45-day course. My GSD did these two courses and while he showed marked improvement while on Metro, he declined almost immediately after treatment had ended. There has been some research suggesting that long-term use of Metro can have neurological side effects so many (myself included) use Tylan. Tylan can be ordered directly from your vet. The recommended starting dose is 1/8 tsp with every meal. Tylan is very bitter so you need to find a way to include it in your pet's meal. You can monitor how your pet reacts to and adjust the Tylan dose accordingly. My EPI GSD is now on 1/16 of a tsp per meal – and it appears he will be for life.

If you feed raw, you can just mix it in. If you feed dry but mix powder enzymes with water, you can also just mix it in. If you feed dry with Creon in the capsule, you will need to mix the Tylan in somehow. Some suggest half a tsp of fishpaste with the Tylan mixed in. Or you can buy the empty capsules and machine that will allow you to put the measurement of Tylan into a capsule and you can give it that way. The empty capsules and machine can be bought at Clicks, Dischem or Wellness Warehouse.

You can also order Tylan (Tylosin) directly from a Virbac representative – just find one in your area at:

<http://www.virbac.co.za/home/about-us/your-local-representative.html>

4. B12 – tablets and injections

You will notice in the introduction, I had mentioned that Tyson had gone through the TAMU protocol and he had come out worse with a dangerously low B12 level of 57 ng/L. Because of this I chose to start treating him with both B12 injections AND tablets. I bought a bottle of liquid B12 from my vet, along with syringes and she taught me how to inject Tyson at home (not everybody is comfortable with this). Tyson got a weekly B12 injection of 0.8 ml for 3 months along with a daily B12 tablet (with Intrinsic factor – it is very important that this is included).

B12 with Intrinsic Factor can be bought without prescription from Wellness Warehouse at R225 for a 60 day supply (if you give one daily). To see the brand, see at:

<http://www.wellnesswarehouse.com/shop/health/supplements/vitamins/intrinsi-b12-folate-tablets/>

There are cheaper B12 tablets but they do not contain Intrinsic Factor and as a result will be of no use – don't waste your money. After the three month period, Tyson's B12 shot up to 1008 ng/L – as a result I stopped the injections but have kept his daily dose of B12 with Intrinsic Factor.

5. Supplements (Coconut oil, Slippery Elm, Fish oils [sardines], probiotics)

Supplements are only ever advised once you have reached stability. Adding too much too quickly can cause more problems. Reaching stability means: "normal" output (use the chart here to see what you should be aiming for: <http://www.epi4dogs.com/poopchart.htm> [Number 2 or 3 is your aim]), increased weight,

decrease in 'EPI behaviour' (acting hungry all the time, searching for food in bins, on the ground etc., appears less aggressive or aggravated). Reaching a level of stability does not happen overnight – it takes months. For some, it takes a month or two, for others it can take up to a year. For Tyson, it took about 6 months of tweaking enzymes, food, B12 and his antibiotics to really get into a routine and reach 'normality'.

Once you are ready to introduce supplements, it is always recommended to introduce one supplement and then wait 3-5 days to see how your pet will react to it – not all pets react the same and some supplements can throw your pet right off routine. A neat trick to understand your pet's digestive process is to feed them a raw carrot and then check their output daily – when you see the raw carrot in their poop (as they are unable to digest carrot) you will know how many days it takes for their body to process food.

Not all supplements are recommended but if you are looking for the standard supplements such as Coconut Oil, Fish Oils and Probiotics you can find these at Dischem, Clicks and Wellness Warehouse (in that order for the best price). You can get Slippery Elm tablets from Wellness Warehouse for R66 / 30 tablets.

If you live in Cape Town, then I would strongly recommend going on down to Hout Bay harbour. You can buy a bag of sardines for around R20 – they can be kept frozen and served as a snack or with meals and are an excellent source of fish oil – this is by far the cheapest option and your pet will love eating a raw sardine.

Lastly, there are some human, over-the-counter medications that you can use to treat some of the issues that your EPI pet might have – but please ALWAYS check with your vet before you administer any medication and confirm you have the right dose.

For allergies and allergic reactions or itchy skin – Allergex | For a grumbly and sore tummy – Buscopan

6. Food

The food found in the Northern Hemisphere is fairly similar to South Africa – both carry popular brands like Royal Canin and Hills. However, up North has a lot more 'middle-standard' brands that are available at pet shops. Most pet shops in SA will carry Royal Canin and Hills (but the prescription brands you can only get from the vet) and maybe one or two other cheaper brands like Montego. Many up North will refer to brands like Blue Buffalo, Orijen, Purina, Beneful, Acana, Canidae, Taste of the Wild (often referred to as TOTW), Earthborn Holistic etc. (these are just some of the popular names you will see people talk about – there are SO many types of pet food available up North!).

Unfortunately SA does not have anywhere near this many types of pet food available and with EPI, the cheaper store foods like Purina, Montego and the others carried by PnP, Shoprite and even Woolworths will usually not be a good food – BUT you can give it a try as every pet is different and responds to food differently.

Usually the rule of thumb is to try not change the food your pet is currently on when diagnosed. This is because you want to try see how they will react to the introduction of the enzymes, antibiotics and B12. It is usually only recommended to change the food if your pet is having a terrible reaction to the food once diagnosed.

The most important recommendation is to keep fibre to a minimum – at least less than 4%. This means avoiding foods that are high in grains and those that contain carbohydrates such as rice, potato's etc.

Raw food for pets has certainly become more popular in SA. You can find raw pet food in most pet shops but I find them to be expensive. You can google raw pet food suppliers for your area (certainly for areas like CPT, DBN, JHB, PE, BLOEM etc.) and contact them directly to find out more on pricing, delivery etc.

It is usually recommended to feed an EPI pet 150% of their normal food allocation until they have gained sufficient weight back after diagnosis so be prepared to be paying a little more on food for a while. My Tyson is still on 200% of his ideal food amount – but I have found that when I decrease his food, he loses weight. Currently he is meant to only be fed about 220grams of food a meal but he actually gets 455 grams of food per meal and he will likely stay at 200% for life - that is just what works for him.

And so this very long document sums up the knowledge that I have gained so far in the journey of EPI. I hope that it is informative, helpful and speaks a language that you understand. Please feel free to contact me if you need any assistance or just need a fellow South African to talk to – my email address is on page 3.

EPI can be a scary and overwhelming diagnosis – but to watch your pet thrive and get better is worth all the research – you are literally saving their life! Thank you.

Cheri Mc Dougall.

My Tyson Mc Dougall – now happy and healthy and an EPI Survivor.

