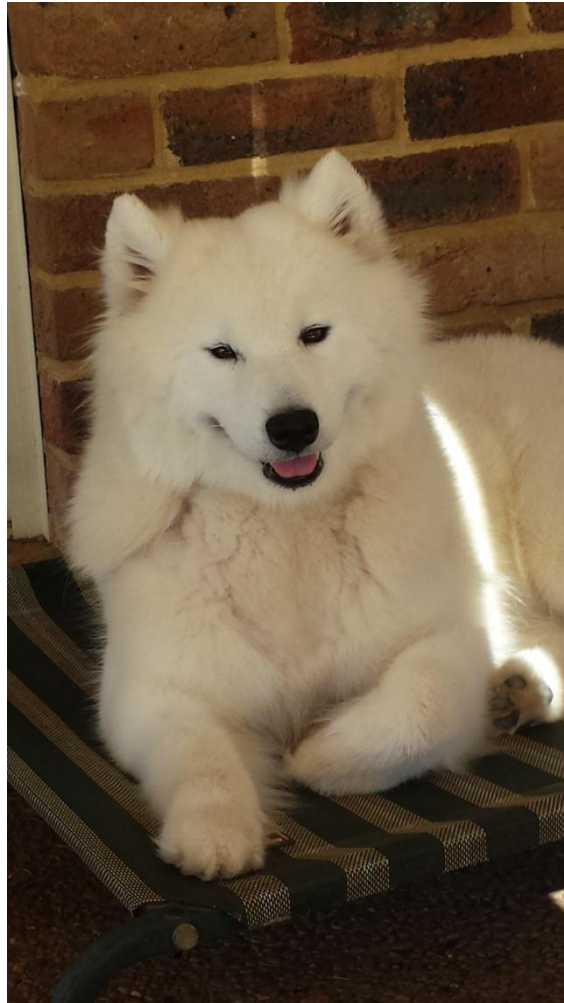


Amy's Story



I had bought Amy from another breeder intending to show, do agility and eventually breed from her, she had seemed a perfectly normal puppy, and grew well. She had always been a good eater, was extremely active, well muscled and so full of energy. From a young age she did suffer from allergies and eventually ended up on hyposensitization vaccines. Amy had a strange little quirk of standing in her water bowl after running around. When she was about 12 months of age she had a high temperature and ended up spending the morning at the vet clinic on a drip, given antibiotics she was back to normal very quickly. From time to time she would have a re occurrence of these temperatures ranging from mild to high. She also suffered 3 episodes of bleeding from the mouth/nose over a 12 month period.

On the June long weekend in 2015 I took her again to the vet there was something just not right with her but nothing you could really put your finger on, again she had a temperature and a rapid heart rate, the next day the vet started further testing, x-rays showed nothing, but her blood was a little slow to clot. All blood tests that had been done up to that point in time had not shown much, mainly an elevated white blood count. Amy did start to become difficult to handle around her mouth at that time, I could no longer give her pills easily she would lock her jaw and then grab my hand in her mouth holding it very hard, the day she had x-rays she bit the vet when he tried to look inside her mouth, this was really uncharacteristic behaviour she was normally such a sweet natured dog. Amy was sent home with Vit K but we still had no answers I was told to bring her back in a

couple of days for more intensive testing, but before that could happen my son found her collapsed in the middle of the night.

We rushed her to the emergency hospital lots of questions by the vets, but no real idea what was wrong, they kept her overnight and rang early the next morning, Amy was in a serious condition, still no answers but they were taking her by ambulance with a vet and nurse to their main hospital just stay by the phone they said. Up to that point Amy had been to 3 different vet practices and seen 5 different vets. At the time she collapsed she was 18 months old.

That morning Amy's luck was finally about to change, on duty at the Animal Referral Hospital (ARH) was Dr Sarah Helmond, Sarah had spent time working in America, including time at Cornell University working alongside Dr Sharon Center one of the world's foremost authorities on Liver diseases. When Sarah rang me that morning she was convinced Amy had a liver shunt and said she would treat it as such until proven otherwise.

Over the next few days there were lots of tests, bile acid tests showed she did have a compromised liver, blood ammonia tests at 322 was extremely high, ultrasounds and CT Scans were done to determine the type of shunt and position and Sarah was proven right, Amy had a large Congenital Intrahepatic Left Divisional Portosystemic Shunt.

At first we managed her medically, she had lots of regular blood tests done to make sure she remained stable, she ate a special moderate protein diet - Hills Hepatic food and took several different drugs. A typical day started at 5.30am with her first supplement to support the liver denosyl that had to be given on an empty stomach wait an hour then her breakfast, she had to have frequent small meals as it is easier on the liver so she was fed 5 times a day.

She was on drugs to prevent seizures, antibiotics to lessen the build up of ammonia in her blood and lactulose a sugary syrup that changes the PH in her large intestine, and helps lessen the absorption of ammonia and other toxins. Because of her feeding and medication schedule she came everywhere with me even to work. But she did well and had no more symptoms.

I read everything I could find on liver shunts. From all my research it quickly became clear to me that I couldn't put Amy thru the open abdominal methods of surgery commonly done to repair liver shunts. These surgical methods provide excellent outcomes for dogs with extrahepatic shunts but for intrahepatic shunts the surgery is more complicated and the risk high, in fact they have mortality rates up to 28% and major complications as high as 77%, it just didn't make sense to me to open up an already compromised liver this way, that type of surgery seemed too brutal.

Sarah told me of a man in New York Dr Chick Weisse who was using a minimally invasive procedure to repair Intrahepatic shunts - Percutaneous **Transjugular Coil Embolization (PTCE)**. Sending Amy to New York was not possible we live in Australia, to bring Chick to Amy would have been very expensive. So we began to search for a surgeon in Australia who was familiar with this procedure. I heard about surgeons that had the experience only to find they had now moved overseas. I found a surgeon that had trained with Dr Weisse but hadn't yet done the procedure, Sarah found another 2 surgeons but they had done only 3 procedures each. I am sure they are fine surgeons but we wanted someone with more experience, it is a complex procedure. I became resigned to just keeping her alive as long as possible on medical management alone.

Then a series of events happened that changed everything, another Samoyed breeder told me about a heart problem that had occurred in a puppy she had bred, and there were stories of other Samoyeds maybe having heart problems, so I decided to add cardiac checking to the list of health

testing done on my dogs. One day I logged on to Facebook and up came a notice for a cardiac and eye clinic to be held that coming Saturday, so I booked 2 dogs in. I had made it a practice that whenever I met anyone in the veterinary profession I told them about Amy, I was always hoping that one day someone would say I have done lots of those I can fix that. And that is exactly what happened that Saturday, Dr Niek Beijerink was doing the cardiac clinic and he said "I can fix that".

Niek had trained in the Netherlands at Utrecht University and worked with liver shunts there before he came to live in Sydney where he is now a cardiology specialist at Sydney University. If I had logged onto Facebook 5 minutes earlier that day or even 5 minutes later I would have missed that notice about the clinic. And if that breeder hadn't told me of her pup's heart problem I wouldn't have ever thought to have my dogs tested. So strange, how things eventually worked out, and only just in time too as Niek left Australia for a 6 month research trip the week after operating on Amy.

On Wednesday 2nd March 2016 Amy had her surgery almost 9 months since she collapsed. The surgery went off without a hitch. There was always a chance she would need additional surgery, approximately 17% of dogs do need further coils added. But she at least had a chance now to live a longer life than she might have with just medical management alone.

Amy's symptoms the night she collapsed in June I now know were classic symptoms of Hepatic Encephalopathy (HE) she was drooling, appeared to be blind was staggering eventually lapsing into a coma, later as she recovered at ARH she would press her head into the corner of the crate, but up until that time her symptoms were anything but textbook so it is little wonder none of the vets who had seen her previously ever thought of a Liver Shunt. I now know that the standing in water bowls was done to help cool her down, liver shunt dogs overheat easily. When she became difficult to handle around her mouth it was probably because she was in pain, people that have Liver Shunts liken HE to having a really bad hangover. The unexplained fevers are also a sign of Liver Shunts, just not a common symptom.

Owners and breeders need to be more aware of this awful disease, it is seen in many breeds of dogs, and in those breeds that are over represented, breeders should be doing bile acid tests on puppies before they are sold, no owner should ever have to sit across the table from a vet and hear that their much loved pet may die or likely live a much shortened life. This is an awful disease, hard on the dog and hard on the owner.

Post Script.

Amy returned to Sydney University for a Laparoscopic Spey 32 months after her shunt surgery and they were able to do another CT scan on her liver, it showed the coils and stents still in place and that the size of the liver had increased and that there was a significant increase in blood flow to the liver. Amy has no symptoms eats regular dog food (just fed twice a day now) and lives a completely normal life even competing in Agility. The only medication she needs to take now is her daily Omeprazole. We are hopeful she will live a normal length of life.