

Epilepsy and Breeders decisions.

Are breeders brave and realistic, or simply uneducated and lucky, or perhaps more to the point, plain old scared to talk about epilepsy because they would not sell their puppies?

How do you really know what is true when talking to a breeder?

Have you walked in their shoes for at least a year in an attempt to understand, that working with nature can be devastatingly cruel no matter how careful, knowledgeable and prepared we think we are?

How many breeders place full pedigrees on their site with even the most basic health information?

How many breeders actually place all their litters on their website so you know what and how many they are breeding?

How many breeders place sensitive information onto their website such as puppies dying, or born with defects?

Have you asked yourself WHY they don't make much of this information public?

There are multiple reasons, but perhaps, despite trying their best, they feel criticised and judged by other people, when nature turns against them.

What I do know is breeders are continuously bullied by certain comments and blamed irrationally when a dog turn out not to be as healthy or well behaved as the owner had hoped, this attack has influence on their reactions, both good and bad; some become better more professional breeders, whilst others go underground or stop breeding completely.

If you are going to blame breeders, be very sure you are not being unhelpful or worse still, contradictive and dishonest yourself by spreading rumours you may have heard from Joe Soap, check it out yourself, do not judge on what others say.

There are 1000's of "small" and one time breeders, even big breeders, who do not register their pups with a society and most do not follow up the owners nor even record who they sell their pups to.

Despite this, they all need support, education and honesty – only those ingredients will help take us forward to being better honest breeders.

Epilepsy the breeder's nightmare come true.

How can a layperson explain epilepsy to you, if they are NOT a specialist, since, even the specialists are still in the dark about the majority of causes and nobody really knows yet the absolute mode of inheritance?

In my experience, it is due to the lack of understanding and awareness of epilepsy, that a conscientious breeder will currently lose 8 out of 10 "qualified and fantastic" owners, the minute you tell them that there has been a case of epilepsy in one of their lines.

– The ones who will usually still opt in, after disclosure, to take a pup, are those with some personal knowledge of the affliction and the ones who have taken the time to learn about the genetics of all disease and about epilepsy itself.

Out of these 8 potential owners, seven will probably go on out and buy from other breeders; Breeders, who do not keep records or are one time/small breeders, who rarely have very little real knowledge about any of their bloodlines.

It is fact that if it is not mentioned or it is strongly denied then it is believed that there is absolutely no chance that the pup could ever be affected. **NOT TRUE, that one is very sad ☹**

Perhaps out of those seven, at least 1, will be unlucky enough to get a dog with serious preventable health condition, simply because they went with a more convenient option/price and with the opinion of "what they don't know will not touch them" ☹.

This leaves the conscientious and responsible breeder with just two possible owners out of 10 qualified enquiries and these may not even like the puppies offered to them.

When this happens, a conscientious and careful breeder who researches, and records, feels total failure in their ability to explain something so complex that not even the Veterinary profession can easily understand it. Not surprising either that the breeder often fails and result is no puppy sales? Unfortunately it is also fact that the breeder who, is dishonest, uncaring or simply does not know, about epilepsy and other defects, because they have not done their research or done all in their power to understand breeding genetics will often place their pups much more easily, ahead of the conscientious breeder who is trying to tackle everything head on with clarity and disclosure.

Epilepsy

Identifying Hereditary Idiopathic Epilepsy, the Carriers, causes

Are they "known" carriers of Epilepsy?

Is the fitting really idiopathic?

Have the vets been able to carry out all the diagnostics and has the owner kept a diary and records to establish and rule out environmental factors?

Just because a puppy/dog starts multiple fits; this does not mean that it is of a hereditary cause.

At the moment we do not even know the mode of inheritance so cannot be sure of anything just yet.

There is much work to be done in education since 99.999% of breeders are ordinary laypersons, often without even a sound advanced biology qualification which is one of the minimum requirements which allows one to study as a geneticist or vet.

Even from my recent, but still very limited knowledge, experience and research, it is clear, that there are 100's if not 1000's of random causes for a dog to fit and only a tiny percentage of these are actually currently proven to be hereditary, it may well be a fact that a great many fitters have causes which can be found in our environment and from the foods which our dogs eat, not to mention stress and mental health issues.

There may well be a predisposition to fitting, even from environmental causes – only detailed research will tell us this, there is recent thoughts that some dogs have a higher threshold (will be able to fight against a cause for fitting) than others and that this is more likely to be the hereditary factor which causes one dog to fit and another to be healthy. If only it were that easy to identify.

Environmental factors could start, I believe, with the conception and development of the fitter's mother (since the correct development of her eggs is crucial to the health of her future puppies).

So it is conceivable to expect trouble to arise if the dam were injected or exposed to something (such as radiation or some chemicals) even when as an embryo or juvenile themselves, whilst their eggs were being developed, - *even prior to the fitting pups fertilization, trouble could already be brewing in the health of the egg and sperm at fertilization* - leading to the first and subsequent splitting of the egg cells to form the embryo and then the subsequent development of the brain in the pup which one day may start fitting for whatever unknown reason.

It is not usually so obvious to the breeder that the care of the future breeding bitch during puberty and gestation is crucial to the correct development of her future puppies.

It is also feasible, to expect that a lack of oxygen or any ill health of the pup at birth and during the early few weeks of growth may interfere with the development of the brain synapses, as will any knocks on the head during the rearing process or at any time thereafter.

How much do we actually know about any of these things?

We are what we eat and drink, breathe and absorb through our skins.

The environmental list is almost endless and is not complete without considering all the man-made chemicals we place into food, on and in our dogs bodies as supposed medicines, cleaners etc.

Because of the way genetics works there are possibly very few, if any bloodlines which are completely clear of producing fitters and certainly NONE which are totally free of all other horrific hereditary afflictions such as CEA, TNS, IGS, HD, and many, many more which as yet do not have a DNA or other test available.

Good breeders and owners are currently basing their future decisions on the very often "incomplete" diagnosis of Idiopathic Epilepsy, made by vets and/or owners (it is rare for a vet to see a fitting dog as in most cases, it is usually recovered by the time it arrives at the vet).

This short cut to diagnosis is simply because the owner does not have available – either, and/or, all the funds/inclination/opportunity/knowledge nor seldom does the owner have any training in correct observation and recording skills which really need to be devoid of emotion for correct unbiased analysis.

All these facts would further help in the investigation for a definitive and useful diagnosis.

A thorough and detailed process of elimination, which I believe, should include at the very least, complex blood and urine analysis tests (samples preferably taken immediately after an episode), record keeping of all events and "things" in the environment, food analyses etc

– MRI scans of the brain

Most important is contact with the breeder so they can provide a full history of the mother, the birth and rearing of the pup, a good breeder will want to help find the cause and will certainly want the information so further breeding plans can be adapted if needed.

Contact with the owner of the Sire for the history of his health at least 6 months prior to the mating, and a record of any other pups sired by him. A good stud owner will want to help find the cause and will certainly want the information so further breeding plans can be adapted if needed.

Finally in the event of death (important - When death finally occurs) a full post mortem should be carried out.

Unfortunately, because of the limitations most owners have especially in funding, if not insured; the search for a definitive diagnosis is curtailed and the vet is often subjected to a "hands tied behind the back" approach of treating and managing the symptoms - often simply to aid the owners distress because watching a fitting dog is a horrific, terrifying and highly emotional, helpless experience- This is a pity as going through the rational but very expensive route to a full examination may hopefully yield a more conclusive diagnosis and possible cure.

I am not advocating non treatment, but rather a more educational approach from the vets, loaded with support for the owners, so that they understand their options towards solving the cause of this affliction, not only for their own dog, but also for all dog breeders and future owners.

Therefore, to be completely rational about this very sensitive subject we need to use a scientific approach so that we do not "throw the baby out with the bathwater" by for instance, irrationally removing breeding stock or early euthanasia of the dog, because of an undiagnosed reaction to a chemical in commercial dog food?

Therefore, it is essential that we all (Vets, owners and breeders) are far more diligent in working together to determine the discovery of the causes of epilepsy; first and foremost.

This approach may well help us out of uncertainty and helplessness and encourage breeders and stud dog owners to learn to understand Epilepsy better.

Then eventually; through the increased possibility (brought forward through better diagnosis) for research towards the discovery of the gene/s involved, and then by using the corresponding new knowledge that the research will bring us, Breeders will be given correct and much more useful tools to help them make positive informed breeding choices.

What can be done to reduce the chances of afflicted pups?

I will now talk about sires as they produce the most pups but the following guidance principle works for bitches too and perhaps in very obvious cases, to siblings and other very close relatives as well.

Until the evidence becomes more solid each, every case should be treated on its own information and merits but in general, and when making our breeding choices we must always be open to quick and immediate change as new knowledge becomes available:-

< One afflicted pup within a litter could be considered random, since there is also the possibility that there is perhaps incomplete evidence available, due to the lack of eliminating all environmental and other disease/tumours etc. as the cause.

< Two afflicted pups would be certainly treated as suspect especially if present within the same litter or even within a repeat mating of same parents; more suspect if the affected pups are owned by different owners and/or reared in different litters under different conditions. If the two or even more pups were from the same litter, are reared and maybe even owned under the same conditions this would perhaps indicate an environmental cause.

< Three affected pups in a litter or repeat of same parents, regardless of ownership or methods of rearing, starts to make a valid case for hereditary factors - however even then, other factors should also be taken into account such as the method and differences that the litter/s were reared under and owned in order to rule out any environmental factors.

< Now then if a dog were to sire more than three pups from three or perhaps even two different bitches then there is VERY strong evidence of possible hereditary factors being involved but you would still have to evaluate the pedigree's and environmental history of the other mate/s and siblings before determining absolutely if there is a genetic cause = however I would still also take into account the diagnosis, as well as the route taken to diagnosis and the detailed vets report on each affected pup.

It is not just about a dog fitting; there are many huge reasons to stand back to be objective and try to view this like a scientist would.

Where each breeder draws the line will depend entirely on their knowledge of their bloodlines and of their veterinary and genetic knowledge but also on the advice they seek out and receive from experts in these fields.

Obviously the following is only really possible and realistic with the larger and/or very experienced breeders.

If a breeder sees a "pattern" developing within any particular bloodline, like multiple cases of epilepsy for example - sire, grand- sire, great-grand-sire etc all producing more than one random affected puppy to different mates in multiple environments etc. then that would be pretty good evidence of hereditary factors.

Rarely though, are these family correlations investigated in enough detail, nor do the general public have the inside knowledge or additional diagnostic information to view the whole picture which the breeder will see. To look for bloodline links, it is still currently difficult for any breeder to gather this information from other breeders and owners, therefore, it is must also be a virtually impossible task for the layperson whose assumptions which are actually based on little evidence can ruin reputations in seconds.

All the information from both the owners and the breeders' co-operation together with an interactive database is needed before judging what a breeder may or may not be doing.

Given the lack of full information, the use of the current advice to all breeders of border collies and other breeds, "Do not repeat the mating which produced a fitting pup" is far easier for the average breeder/owner to understand and follow right now.

Yet there are many who still advocate the removal of sire, dam, siblings and sometimes other close relatives.

Consider, please, the following scenario and take into account that the majority of breeders, perhaps as much or even more than 80-90%; do not have the same desire, knowledge nor the big picture that the "elite professional breeder" will have – ("elite breeder" makes up no more than 10% of all breeders).

Definition of the "Elite" breeder:-

A person who will be conscientious, passionate people who's drive will encourage them to do all of the following and possibly much, much more :-

Register all puppies,

Research for continued learning and advancement of understanding disease and genetics,

Record all relevant details necessary for the continued improvement of their breed,

As an absolute minimum, if available, will Health test to prevent affected puppies being born with life threatening untreatable diseases?

Most importantly, breed for the purposes of maintaining and improving the breed's reason for existence.

This "elite" group will also include some of the "big breeders" who may not only rely on their reputations to make their living from their dogs but are also most likely to be as knowledgeable or perhaps even more so, than most breeders and some are real advocates of the breed and should not be discounted.

A big question:

Should the majority of breeders (90%) exclude the sire, the dam, the siblings and other close relatives of fitting dogs or be bullied into giving up breeding altogether?

The trouble I see in answer to this question is that since the 90% of breeders will come into this "majority" category the genetic fallout could be too large when they "throw the baby out with the bathwater" and the breed may well be in deep trouble, if, all we are left with, are the breeders at the bottom who could not care a damn about anything and the perhaps (if we are very lucky) we may still have a proportion of the 10% "elite" breeders who knew what to do and how to do it because they bothered to educate themselves and keep up with scientific advice.

Bearing in mind all of the above, I ask you! What would be more beneficial - Damning breeders "big" or "small" because they do not do it "your way" or for us to be far more proactive, helpful and educational?

Perhaps we should think about the start of a Border Collie Epilepsy Foundation for the purpose of gathering funds so that we can help the owners of fitting dogs fund the expensive full diagnostic tests and complete the detailed process of elimination required, in order to find a definitive diagnosis.

At the same time, this will promote awareness, further education and provide positive research material into the research into the Genetic links so that the genes responsible will be found that much QUICKER.

Because, as said before there are numerous causes and therefore there may well be numerous individual genes linked to many different TYPES of epilepsy – thinking big and out of the box, will take us positively and more productively, into the future.