

# Coefficient Of Inbreeding

The Inbreeding Coefficient (IC) or Coefficient Of Inbreeding (COI) of an individual is defined as the probability that the two genes this individual has in a locus are identical by descent, i.e., they are both inherited from a common ancestor.

In general the lower the result, the lower the risk of this dog having health issues. It's important to remember that these results are a measure of risk, rather than a direct measure of health.

- When choosing a good match, remember that it's the result for the two dogs that matters, not each parents individual results.
- You should produce puppies with an inbreeding coefficient which is below 25% and ideally as low as possible while maintaining common ancestors to keeps 'Type'.
- In general the lower the result, the lower the risk of the puppies having health issues.
- It's important to remember that these results are a measure of risk, rather than a direct measure of health. It is possible that two closely related dogs do not have the same disease-causing gene mutations, while two seemingly unrelated dogs do - it's all down to chance. Which is what makes breeding an 'art form' and not wholly scientific.

However you always need to check to see how many generations have been used for the calculation. If the results show that only three to five generations which are fully complete have been used to make the calculation, then the results will need to be used with care and in conjunction with additional pedigree information in order for you to make an informed breeding decision.

This is because The Kennel Club only hold three generation pedigrees for all dogs that have been imported or re-imported, they are therefore unable to calculate an informative accurate COI result for any mating that contains an Imported dog, due to all imported dogs on The Kennel Club's database have a COI value of 0.0% so this then distorts all future COI calculations made containing that dog. Therefore it even distorts the overall average COI for a breed, especially if it's a breed which contains a high number of imported dogs. The other thing that distorts the breed average COI is the use of a popular stud dog who is himself an imported or re-imported dog (ie gone to another country to be shown and then come back to the UK) as COI is recorded for every litter registered for that breed and goes to make up the overall COI breed average, if the recorded COI for a litter is 0% it is naturally going to lower the breed average COI result.

Therefore COI should always be used with pedigree research and breeding decisions and risks should be made upon full analysis of COI results and pedigree as well as looking at the actual dog themselves, the dogs contained within those pedigrees and what the chosen dog has produced in the past when mated to other bitches who are either similar or dis similar descent to your dog or his pedigree.

## GOLDEN RULE

When you look a dogs pedigree, it tells you what a dog "OUGHT" to be...

When you look at a dog, it tells you what it "SEEMS" to be...

When you look at a dogs progeny it tells you what it "IS".