

# **Welfare of Pedigree Dogs: Bred to Suffer?**

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Are pedigree dogs being bred and born into this world to suffer from certain conditions that could be prevented? (Nicholas *et al.*, 2010). This question recently received public media attention and sparked some highly important scientific research into this alarming issue. This paper aims to examine how the deliberate breeding of conformational traits have a detrimental effect on pedigree dogs' quality of life, by outlining the two main categories of this issue; namely, disorders directly related to breed standard, and those disorders that are not directly linked to breed conformation but which are a consequence of low genetic diversity from excessive selection in breeding populations. This paper will also look at how science has helped improve the welfare of pedigree dogs and the important role of science in contributing plausible routes for improvement to pedigree dog welfare in the future, not only on an individual, but more importantly, a population level.

## **Disorders directly related to breed standard**

The basis for all pedigree dog breeding is selection for accentuation of desirable traits, in some cases to the extreme extent that the dog's quality of life is limited (Rooney, 2009). Examples of such disorders include brain damage caused by reduced cranial size in Cavalier King Charles spaniels related to caudally steep skull selection, large or giant breeds having predisposition to hip and elbow dysplasias as a consequence of selection for large body size and fast growth rate, with dysplasia prevalence estimates as high as 50% in some breeds (Asher *et al.*, 2009). While breed standard related conditions have not been well documented in peer-review papers, the fact that the veterinary literature has numerous examples of surgical and palliative procedures that have been exclusively developed to treat these disorders is evidence that these impacts of breed standards are of a welfare concern. Asher *et al.* (2009) recently examined the prevalence and impact of disorders related to conformation aspects of the breed standards. The authors

found that the literature currently available linked each of the 50 most popular pedigree breeds of dog in the UK to at least one heritable defect due to physical conformation.

### **Disorders indirectly linked to breed standard**

The indirect effect of selective breeding for appearance through line breeding methods has reduced the genetic diversity of pedigree breeds and increased the prevalence of certain disorders in specific breeds. An example is the 17% prevalence of cardiac problems in Cavalier King Charles spaniel pedigree lines (Summers *et al.*, 2010). There is a confirmed link between inbreeding and increased disease risk in pure breed dogs (Rooney, 2009). Selective breeding has contributed to this situation. Each breed is considered a closed gene pool and mating occurs to accentuate specific traits. In most cases, a champion sire is overused and his deleterious alleles can quickly be distributed in the breed. Hence, these common practices in the pedigree breeding only exacerbate the problem of elevated disease incidences in specific breeds. In future, there needs to be a concentrated effort to not just avoid selection of certain disorders, but active selection against them. The focus of breeders should be on the development of genetic diversity to reduce the high prevalence of heritable disorders in pedigree breeds, hence improving the health and welfare of pedigree breed populations as a whole (Rooney, 2009).

### **The role of science for pedigree dog welfare**

Recent research by Asher *et al.* (2009) on the scientific aspects of the disorders associated with conformation to breed standards, resulted in the production of a database of disorders and developed an index to score severity of disorders. This helped collate the information currently available, created a means to quantify the relative severity of disorders, and thus identify areas for future study.

The president for the Australian National Kennel Council, Hugh Gent, stated that he would do “everything in his power to make changes to any breed

standard that is proven scientifically to compromise the welfare of dogs” (Nicholas *et al.*, 2010). The challenge for veterinary and animal scientists therefore, is to assemble evidence to facilitate these changes to the breed standards. In future there needs to be more evidence of the clinical implications of breed standards, and further research into prevalence and severity of disorders in order to assess the impact on the welfare of a breed.

There has also been little research into the impacts of breed selection on dog behaviour. Since selection is based on physical appearance, little attention is paid to temperament or social capacity to cope in domestic environments (Rooney, 2009). This is an area where more research needs to be conducted in order to understand the full spectrum of implications for dog welfare. Studies have shown that reasons for relinquishment of unwanted dogs include behavioural problems and wrong breed choice (Diesel *et al.*, 2009). Perhaps if the focus was on selection for good health and desirable behaviour rather than physical appearance, then such behavioural problems might be reduced along with the number of cases of dog relinquishment.

Ideally, from an animal welfare perspective, the selection preference should be for social, healthy, easy to manage dogs without behaviour problems, rather than purely aesthetic appeal. However, this sort of change would require a dramatic shift in the social perception of what is desirable in dog breeds. Through changes to breed standards facilitated by scientific research, along with education of breeders and the public, this current perception of aesthetic preference over health and temperament would be greatly improved on.

Inappropriate pedigree breed standards are emerging as a leading welfare issue currently facing dogs. Veterinary and animal scientists have a key role in assembling the evidence in order to facilitate the needed improvements to breed standards and shift the focus from purely physical appearance to a health and welfare selection basis. Science has and will continue to have a major role in the improvement of welfare for animals.

## References

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