



Wolfdogs | Wolf – Dog Hybrids

Low, Mid & High-Content Wolfdogs, Wolfdog Behaviour, Phenotyping & DNA Analysis, and More.

What Is A Wolfdog?

Simply put, a Wolfdog is a canine that contains a combination of both wolf (*Canis lupis*) and dog (*Canis lupis familiaris*) DNA. While it's entirely possible for wolves to mate with dogs in the wild, their behavioural, territorial, and mating tendencies often deter them from reproducing – this applies to other wild canines like jackals and dingoes as well. Rather, the vast majority of wolfdogs are the result of human intervention and the intentional crossing of species to create hybrid animals to be sold as exotic pets. The problem here is that the behaviour of wolfdogs can vary greatly from one pup to another and is heavily influenced by the amount of wolf content they possess, the breed(s) of dog they are mixed with, and the early training & socialization they receive as puppies.

Some of the most common dog breeds found within Wolfdogs include Siberian Husky, German Shepherd, Alaskan Malamute, and other Northerly Spitz-type breeds because they share many physical attributes with wolves (cue thick coats, body size, upright ears, and elongated muzzles). When looking at the wolf side of the family tree, we typically see Grey Wolf and Arctic Wolf genetics.

Wolves and dogs are considered “interfertile,” meaning they are fully capable of reproducing with each other, and their offspring are also capable of reproducing. However, the breeding cycles of wolves and dogs are very different - Wolves are only fertile between the months of December and January and only give birth between the months of April and May.

Why Wolf Content Matters: Low, Mid, and High-Content Wolfdogs:

Wolfdogs are classified as either low, mid, or high-content based on the amount of wolf genetics they carry. The amount of wolf content present is hands down the most important factor in determining what behaviours to expect as well as their suitability as pets. Simply put, a low-content wolfdog will display more of the behaviours typical to a domesticated companion animal whereas high-content wolfdogs display instinctual, hardwired behaviours that have been developed over thousands of years to ensure their survival.

Low-content Wolfdogs: 20% - 49%

Low-content Wolfdogs possess more dog genetics than wolf, and often take on more of the personality and appearance of their domesticated ancestors, though some wolf features are usually present. In terms of pet ownership, low-content Wolfdogs typically fare well under the leadership of an experienced owner who can cater to their unique needs and independent nature. Known as true escape artists, even low-content Wolfdogs have been known to weasel their way out of almost any enclosure.

Some typical behaviours of dogs with low wolf content include high prey drives, destructive behaviours when left alone for too long (especially indoors), and wariness towards new people.



Photo Courtesy of Yamnuska Wolfdog Sanctuary

Mid-content Wolfdogs: 50% - 79%

Mid-content Wolfdogs contain more wolf DNA than dog and display more of their wolf ancestor's physical and behavioural attributes. However, they still exhibit some typical dog traits and may sport some features not found in pure wolves such as different coloured eyes, colour variation in the nails, smaller paws, and varying ear and muzzle shapes.

Since most of a mid-content Wolfdog's genetics come from wolves, they tend to retain the instinctual behaviours of wolves. They share many of the behavioural tendencies common to their low-content counterparts but may also become territorial, guard resources, show same-sex aggression, and have a far more pronounced fear of humans and changes to their environment.



Photo Courtesy of Yamnuska Wolfdog Sanctuary

High-content Wolfdogs: 80% - 95%+

On the opposite end of the spectrum from Low-content Wolfdogs, High-content Wolfdogs contain very little dog DNA. Being more wolf than dog, high-content Wolfdogs present a unique set of challenges and are not cut out for life as pets. Their behaviour is essentially entirely instinctual which makes training, socialization, and domestication nearly impossible.

Unlike dogs, wolves do not possess the desire to please humans. In fact, they're quite fearful of people and are wary towards outsiders and anything else out of the ordinary. Physically speaking, high-content wolfdogs share their wolf ancestors' long, slender legs, narrow chests, thick, well-insulated coats, all-black noses, and yellow to green-coloured eyes.



Photo Courtesy of Yamnuska Wolfdog Sanctuary

Wolfdog Behaviour

As mentioned above, the amount of wolf content within a wolfdog is the number one factor affecting their behaviour, personality, and physical attributes.

Generally speaking, the more wolf content a canine has, the more unpredictable and instinctual behaviours will be, and vice versa. The domestic dog breeds found within a wolfdog are another strong indication of determining how they will behave. For example, German Shepherds are known to be very protective and intelligent while Huskies are energetic and a tad hard-headed; These are personality traits that could potentially be passed on to offspring. The amount of early training and socialization they receive is also incredibly important in shaping their behaviour and potential to live safely alongside humans.

Common Wolfdog Characteristics:

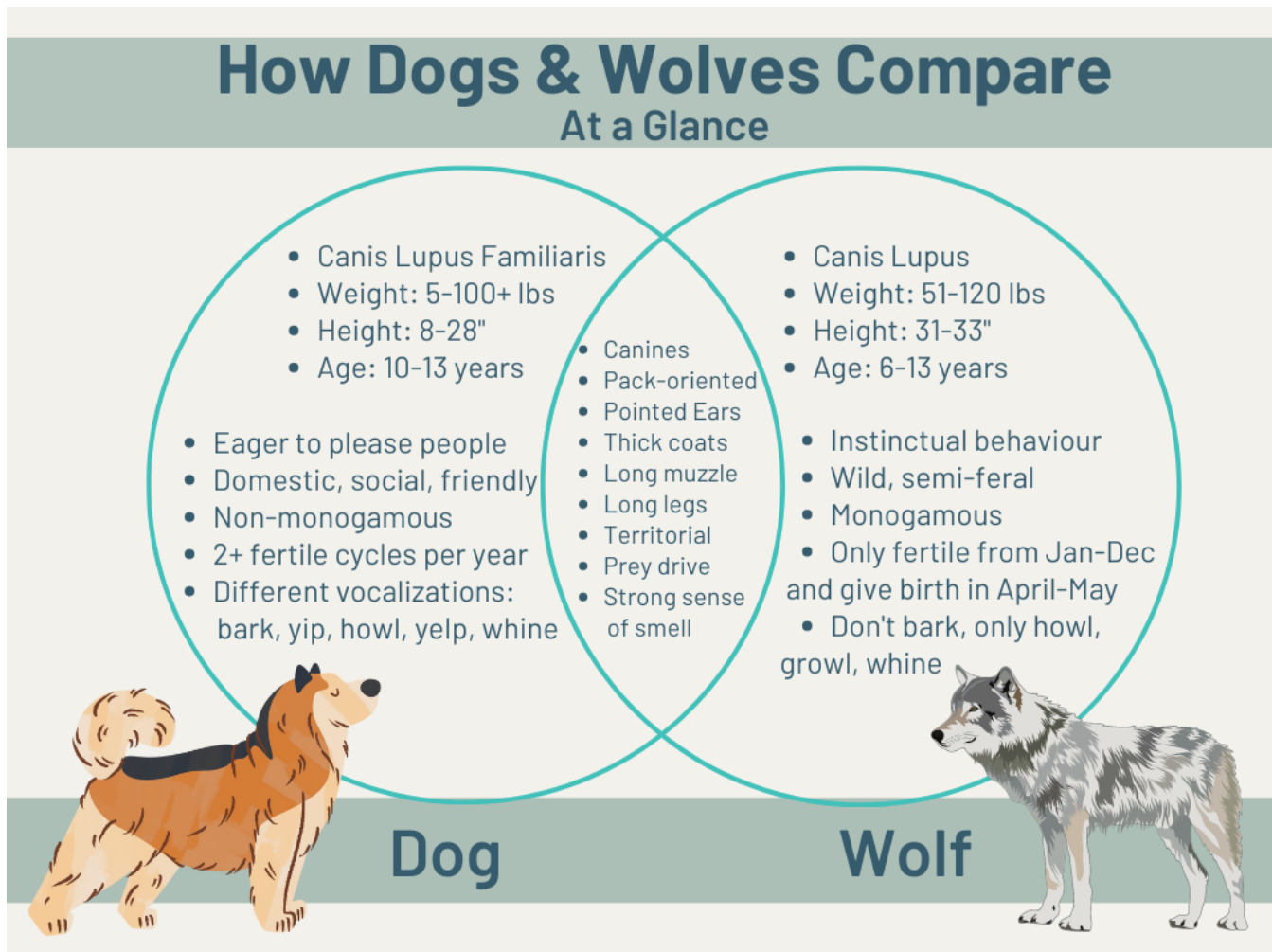
- Territorial
- Monogamous
- High prey drive
- Wariness of humans
- Same-sex aggression
- Seasonal behavioural changes
- May challenge owners for dominance
- Instinctual, hardwired thinking
- No/ low desire to please people
- Fear of confinement
- Independent, aloof, and free-thinking
- Talented escape artists
- High energy levels
- Destructive (especially indoors or alone)

While not all wolfdogs will display these tendencies, they are common.

Wolf-dog hybrids are highly sought after as exotic pets; however, their behavioural traits can be highly unpredictable making their suitability as domesticated animals challenging. Unfortunately, many wolfdogs come from un reputable or backyard breeders who tend to overlook critical personality, behavioural, and health concerns in favour of appearances. As a result, owners often find themselves overwhelmed and overrun by a pet they weren't quite prepared for. Many are surrendered to sanctuaries and other non-profit organizations to live out their lives in a more suitable environment.

Differences Between Dogs and Wolves

While they are members of the same species and share a common ancestry dating back thousands of years, wolves and dogs are quite different in some very important ways. When humans began domesticating wolves (which started with the Grey Wolf) their natural environments and roles within them changed dramatically. This led to changes in their behaviours, temperaments, and physical attributes which occurred in order to adapt to life alongside people.



Mating behaviours:

The mating behaviours of wolves and dogs are quite different. For starters, wolves are monogamous, meaning they typically mate with the same partner for life. Wolves also only experience one fertile cycle per year between the months of December and January and only give birth in the months of April and May. The importance of social hierarchy also comes into play here; In a nutshell, a wolf is a little out of a dog's league. Not to sound mean, but a wolf would probably turn its nose up at a dog as a potential mate unless they were feeling a little... desperate.

Physical Differences:

While many domestic dog breeds sport wolfish features (Huskies, German Shepherds, Malamutes, Northern Spitz Breeds) there are some key differences in their physical attributes. Wolves are much taller and leaner than dogs, have ears that are pointed yet semi-rounded, sport black “eyeliner” and solid-black noses, and have yellow, amber, or golden-coloured eyes. In fact, pure wolves do not carry genes that allow for blue eyes!



NIKKI



LAIKA



ZEUS

Nikki, a low-content wolfdog, Laika, a mid-content wolfdog, and Zeus, a high-content wolfdog. Photos courtesy of Yamnuska Wolfdog Sanctuary

Territorial Nature:

Wolves are incredibly territorial and pack-oriented animals that are often reluctant to welcome newcomers or outsiders, especially those outside of their own kind. A wolf would be more likely to see a dog as either a threat or prey as opposed to a mate, and chances are they wouldn't allow a domestic, or even feral dog, into their pack.

Maturity Rate & Dominance:

Wolves and dogs mature at quite different rates. While dogs typically reach full maturity by the time they're a year old, wolves take a little longer and tend to mature closer to the age of 4. As most owners of domestic dogs know very well, dogs tend to go through phases and act out in ways comparable to human toddlers and teenagers. For example, they may become picky eaters, develop a stubborn streak, act destructively, be extra vocal, or act more clingy than usual.

When looking at wolves, the behavioural changes are a little more intense, so to speak, as their social hierarchy and role within the pack change dramatically between the ages of 1-4. Owners of wolfdogs may notice their pet starting to challenge them for dominance and exhibit dominant behaviours in ways they never did before. This is one of the most common challenges experienced by wolfdog owners, and further emphasizes the need for early and consistent training and socialization.


How To Determine Wolf Content: Phenotyping vs DNA Analysis

When it comes to determining a Wolfdog's wolf content, there are two primary methods: Phenotyping and DNA Analysis. Let's get into how each works and discuss the pros and cons of both.





Phenotyping:


Simply put, Phenotyping involves making an assessment based on an animal's physical, biological, and behavioural traits. Phenotyping relies heavily upon visual identification and should be performed by a professional. In terms of determining wolf content, the behavioural traits mentioned above and certain defining physical features would be studied and an assessment of low, mid, or high wolf content would be made.

For example, some physical attributes that point to high wolf content include yellow, amber, or golden-green eyes, long legs, a narrow chest and tall frame, thick, dense coats with thick tails, ears that are erect yet semi-rounded and well-insulated, and solid-black nails and noses, black "eyeliner", and all-black paw pads.



Pros & Cons of Phenotyping

	
Affordable	Results may be inaccurate or unreliable
Accessible	Relies on visual identification
Can be done quickly by a professional	Analysis must be made by a professional
Can observe behaviour firsthand	Can't provide in-depth health & biological traits
	




DNA Analysis:


We tend to get a little excited about this part – DNA analysis is by far the most accurate way to determine a canine's wolf content and detailed insights into their biological and behavioural traits.

We use CNV (Copy-Number Variation) to gather the most accurate results possible, right down to the smallest percentage. CNV is a phenomenon in which sections of the genomes are repeated and the number of repeats in the genome varies between individuals. Simply put, CNV analysis involves looking very closely at these genetic sequences and variations to pinpoint specific breeds.

After testing your wolfdog's DNA, you'll know their wolf content in no time and can use that information to provide more customised care, get to know them better, and learn more about their health, behaviour, training and exercise requirements, and more.



Pros & Cons of DNA Analysis





High accurate results

Get results quickly

Get in-depth info about health & behavioural traits

Get a breed analysis certificate







Can be expensive

Not always accessible, especially in remote areas

Not all companies offer wild canid breed tests





DNA My Dog's Wolf and Canid Hybrid Test

Chances are, if you're interested in testing your wolfdog's DNA it's because you want answers. Whether you're looking for specific breed identification to pinpoint hereditary conditions and predispositions to disease or just want to get to know your dog better, we believe our two and four-legged friends deserve the most reliable results possible.

Our wolf breed analysis test is affordable and over 99.97% accurate. We make the process simple from start to finish – Simply collect your dog's oral swab sample, return it to us in the prepaid packaging provided with your kit, and leave the rest to us! Your results will be in within 2-3 weeks, giving you plenty of valuable insights into your wolfdog's health, personality traits, enrichment needs, breed history, and so much more.