

# Van 't Samaika Nest Education tips

[www.samaikanest.be](http://www.samaikanest.be)

## Choosing a puppy

First decide if you want a male or a female. Males are larger and more impressive looking, moult once a year, are more expensive to feed and grow faster which may lead to a risk of bone problems. Females are smaller, moult twice a year, season twice a year and have a risk of hormone imbalance. At about 5 or 6 weeks old the personality of the puppy is apparent, making this the ideal time to choose. Will your puppy be a pet or a prospective show dog? If the puppy is to be shown or bred from, then adhering to the breed standard is important. If the puppy is to be a pet, then marking is of less importance. The most important characteristic no matter what the puppy is destined to be, is a sound temperament. Once you have seen all the puppies together to judge overall quality, then the breeder should remove the sex you do not want, so you can study from those left. Remember that Berner puppies are generally lazy, this does not mean they are of ill health. Watch each one carefully as they move around, and take your time. Also remember that the largest puppy will not necessarily make for the largest adult. My best advice is to ask the breeder. They will be of enormous help in choosing.

## Recommendations

Both the GDC and OFA recommend that:

- breeding dogs be free of dysplasia
- breeding dogs' parents and grandparents be free of dysplasia
- 75% or more of any siblings or half siblings of breeding dogs be free of dysplasia

HD A : Free of hip dysplasia.

HD B : Overgangsvorm.

HD C : Mild hip dysplasia.

HD D : Moderate hip dysplasia.

HD E : Severe hip dysplasia

## Hip and Elbow Disease

Hip and elbow dysplasia's are common conditions in Bernese Mountain Dogs. These are structural defects in the joints that can cause mild to crippling arthritis. The summary below covers what every Bernese owner should know. The links to articles on specific types of joint disease provide more in depth information. Hips & Elbows

## HIPS

Dysplasia is inherited, but many genes are involved.

It is possible for normal parents to produce dysplastic puppies; however, the chance of a particular puppy's having dysplasia is reduced if both parents are normal, and even more greatly reduced if

other close relatives (parents' parents, parents' littermates, and other puppies produced by the parents) are also free from dysplasia.

environmental factors--overly rapid puppy growth, improper diet, and strenuous exercise--do not cause dysplasia but may act to worsen it.

X-rays of mature dogs are the definitive way to diagnose dysplasia. X-rays may be done of younger dogs who are exhibiting clinical symptoms (e.g., lameness), but they may not accurately predict how bad the final effects will be. Because both hip and elbow dysplasia's often are not apparent at birth but develop over time, mild or moderate dysplasia often cannot be diagnosed in young dogs.

The Institute for Genetic Disease Control in Animals (GDC) evaluates dogs at 1 year of age by X-ray. The Orthopaedic Foundation for Animals (OFA) evaluates dogs at 2 years of age by X-ray. Dogs found to be free of dysplasia are issued a certificate and a registration number.

Of all the breeds evaluated by the OFA, Bernese have the eighth highest incidence of hip dysplasia. 28% of the Berners whose hip X-rays are submitted are rated as dysplastic, but in reality the overall incidence in the breed is probably considerably higher, since many owners do not submit the X-rays if dysplasia is suspected.

## **ELBOWS**

What is an elbow joint? Three bones meet to form this complex joint. The humerus comes down from the shoulder and has a curved end, which rests on top of the radius. Behind the radius is the ulna, which extends up past the bottom of the humerus, and is what you feel as the point of the elbow. There is also a curved notch in the ulna into which the curved end of the humerus fits. If there is any joint that is a recipe for disaster, this is it. The precision with which the bones must fit together, combined with cartilage, ligaments, and tendons, added to the stress on the joint from running and jumping - it's a wonder the joint ever works properly. One 1986 Swedish study of 105 Bernese Mountain Dogs found that over 53% of them had elbow joint problems. Elbows are definitely a problem in the breed, and like other joint problems, there appears to be a genetic factor. In fact, one study found that the heritability factor of elbow problems was even higher than that for hip dysplasia!

Current theory on elbow dysplasia holds that all problems are caused by asynchronous growth of the bones. If the bones are not in the right place at the right time, processes won't unite, stress will be placed on the wrong part of a bone, etc. So even if the bone eventually catches up, the damage is already done. All of this makes a great deal of sense, and will probably change the view that some elbow problems are linked more to osteochondritis than to bone growth. For now, I will describe the three main aspects of elbow dysplasia using the earlier, still common explanations of joint incongruity, ununited anconeal process (UAP), and fragmented coronoid process (FCP). But understand that knowledge and treatment of elbow dysplasia is a continually changing field of veterinary medicine. CAT scans and MRI will be the way elbow problems are diagnosed in the future, which will help to better plan treatment methods.

Joint incongruity is usually caused by failure of the radius and ulna to grow at the same rate. You'll hear the term "premature closure of the distal ulnar (or radial) physis." Distal is simply a directional term used to mean the farthest from the body, and the physis is the growth area, involving cartilage and bone cell production. If the physis closes too soon, or is injured, the bone does not grow to its proper length causing the other bone to curve which causes incongruity of the elbow. (The bones more likely grow at different rates, not due to injury or premature closure of a growth plate). If the bones fail to grow properly, surgical correction of the bone length and curvature can be done to create a congruent elbow. Surgery to install pins and plates may be worth it to allow the dog normal movement, but post-operative care and recovery will be difficult and lengthy for both dog and owner. Joint incongruity may have a genetic basis, and is generally considered to be a growth problem.

To understand ununited anconeal process, we first need to know what the anconeal process (AP) is. At the top end (the proximal end, the part closest to the body) of the ulna, is a slightly hooked piece of bone, which fits into a hole in the humerus. It is enclosed within the joint capsule and is only visible in x-rays taken from a specific angle with the elbow partially flexed. The use of the word process is due to the fact that this is a part of the bone that articulates, or moves, with another bone. The AP forms in the developing bone from a separate growth area and is fully united with the ulna by the time the dog is 4 - 5 months old. But if it never unites with the ulna, it can detach completely and float in the joint capsule, causing pain and eventual arthritis. UAP was considered to be a form of osteochondritis, with the same causes: heredity, injury, and diet. Treatment is also similar as that for OCD. Surgery to remove the loose body is usually only done for extreme cases. DJD (degenerative joint disease) will develop even with the surgery, but at a slower rate. If the problem is diagnosed very early, the AP can sometimes be permanently fixed to the ulna without the later development of DJD, but the AP is often too damaged for this repair by the time diagnosis is made.

Fragmented coronoid process was also considered to be a type of OCD. To quote from "Small Animal Orthopaedics," "FCP may develop as the result of excessive loading of the medial coronoid process. Many dogs with FCP have elbow incongruity; an association with elbow dysplasia has been identified in Bernese mountain dogs. FCP may result from trauma. A genetic predisposition has been implied."

The head of the ulna has a curved indentation (called the trochlear notch) which allows the rounded bottom of the humerus to fit to form the curved joint. The top lip of this notch is called the anconeal process, and the bottom lip of this notch is called the coronoid process. The side of the coronoid process closest to the dog's body is called the medial coronoid process. If this notch fails to develop the proper curvature, too much weight is placed on the coronoid process, causing it to fracture. Diagnosis is difficult and is usually made by ruling out all the other possibilities. It usually starts when the dog is between 5 and 9 months of age and can begin as limping that comes and goes, getting gradually worse. Surgery is usually done to remove the fragment, but it won't always stop the development of DJD.