

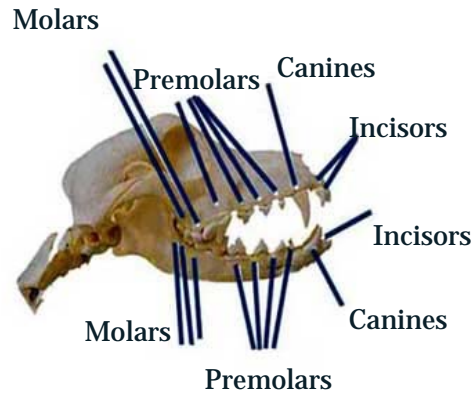
The Bernese Mountain Dog ~ An Illustrated Commentary on the Breed Standard

Teeth

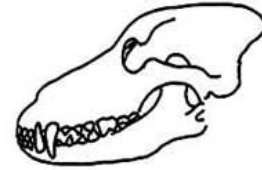
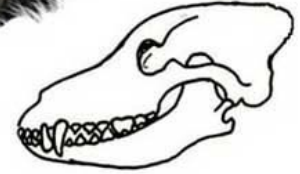
The teeth meet in a scissors bite. An overshot or undershot bite is a serious fault. Dentition is complete.

Even if you are new to Berners, with a basic understanding of dental structure you can evaluate the quality of your dog's dentition. Awareness of the conditions that exist in your dog's mouth can help you maintain the health of your dog's teeth. Bites are controlled by genetics, nutrition, environment, and by mechanical forces generated by the interlock of the upper and lower teeth. Head shape and growth determines how upper and lower teeth interlock.

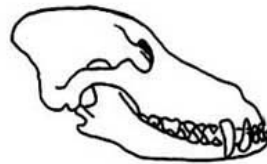
An adult Berner with complete dentition has a total of 42 teeth.



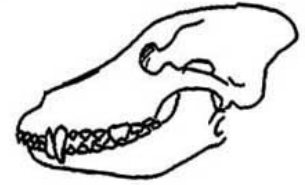
Scissors bite →



Even (level) bite ↑ causes wearing of incisors ~ other teeth aligned properly



Undershot ↑ Lower incisors beyond upper ~ other teeth displaced as well



↑ Overshot ~ Upper incisors beyond lower ~ other teeth displaced as well

Bite faults...

The typical bite faults seen in Bernese Mountain Dogs are missing teeth and malocclusions. Missing teeth (hypodontia) usually occurs in the premolar area in Bernese. The word malocclusion literally means "bad bite." Berners that have "bad bites" may have undershot bites, overshot bites, wry bites (where one side of the lower jaw has grown longer than the other, skewing the end of the jaw to one side), crooked, crowded, or protruding teeth. With slightly over or undershot bites, the incisors may be the only teeth affected. An anterior cross bite is often identified as an undershot bite. The difference between these two bites is not subtle. An anterior cross bite occurs when the lower incisors extend beyond the upper incisors, but all other teeth mesh properly. In a true undershot bite, the other teeth do not mesh properly. Some Berners have "dropped" incisors a condition where the center, lower incisors are shorter than normal. Sometimes dropped incisors will tip slightly outward or be crooked. Crooked teeth in Bernese may be caused by crowding in a too-small or too-narrow jaw.

Malocclusions in Berner bites usually are not severe enough to cause dogs to have problems chewing. In some Berners the difference in jaw length is extreme which causes most or all of the teeth to be misaligned with the teeth in the opposite jaw. A Berner bite that is this far off will result in teeth that do not function well because teeth grossly interfere with each other. In some cases wear on the teeth's surfaces may cause rapid tooth decay or damage to the soft tissues of the opposite jaw by the canines.

Puppy teeth/growth

A Berner puppy's set of milk teeth includes 28 deciduous teeth.

A puppy's deciduous incisors appear as early as 3 - 4 weeks of age. Puppies have 12 deciduous incisors that erupt at four to five weeks of age, (three on either side/six all together are present in the upper and lower jaws). Behind the incisors there are four deciduous canine teeth that erupt at about the same time (one on either side of the upper and lower jaws). Twelve deciduous premolars erupt at about six weeks, and are positioned behind the canines (three on each side, in the upper and lower jaws). Full deciduous dentition is usually present in Berner puppies by 8 weeks of age.

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Teeth 2

From Milk Teeth to Adult Teeth.....

At about three months of age, permanent teeth begin to erupt through the gingiva and the deciduous teeth are shed, starting with the central deciduous incisors. Permanent premolars (four on each side on both the upper and lower jaws) begin to erupt about four months of age, the rearmost teeth are usually visible by six months of age. The canine teeth are often the last to appear, and typically are not well developed until the pup reaches six - eight months of age. When the permanent teeth first erupt into the mouth they do not have roots. In most dogs the roots will have formed by one year of age. Before the roots of the adult teeth are well established the teeth can potentially become displaced and may shift.

Puppy Teeth ~ management

Just as with human children, puppies may experience a minor degree of discomfort when they cut deciduous teeth. Pups may become fussy or a "bitey" while cutting milk teeth. When a puppy is shedding milk teeth and growing adult teeth the jaws may become swollen and tender. Some pups may experience difficulty eating during this time. Softening kibble for pups with tender mouths may make eating more comfortable. Puppies make good use of safe chew toys and/or raw bones while they are shedding deciduous teeth/ developing their permanent adult teeth.

Evaluating Berner puppy bites.....

At 8 weeks of age breeders and owners can get a basic idea of the configuration of a Berner pup's teeth and jaws. Undershot, overshot and wry mouths can be seen. The configuration of a puppy's bite changes as the bones in the skull grow. Upper and lower jaws do not grow at equal rates. Usually if malocclusions are detected when looking at an 8 week old puppy's bite, those same malocclusions are likely to be present in the adult Bernese. Sometimes minor malocclusions are not easily detectable when viewing the bite of an 8 week old pup which makes it difficult to accurately predict the nature of the adult bite a Berner pup will eventually possess. A good method used to evaluate bites in Bernese involves observation of the premolars. Premolars should meet in a saw-toothed fashion. (For example, the tip of the lower third premolar should be positioned equally between the crowns of the upper third and fourth premolars. If the tip of one premolar points to the tip of another premolar, there may be a genetic malocclusion. In some families of Bernese, the dogs' bites are not set till age 4 due to changes that occur in the bones of the skull and foreface while the dogs' heads are growing. In other Bernese families the alignment of teeth changes very little after dogs reach one year of age.

Berner bites for breeders.....

Bernese breeders should be aware of the nature of dentition present in dogs they choose to use for breeding purposes. Overshot and undershot bites, missing teeth, crooked teeth and dropped incisors tend to run in Berner families. Breeders should look at teeth and remember which dogs have or do not have "good bites". Recognition of dentition patterns present in different families of Bernese allows breeders to make informed breeding decisions to minimize the incidence of producing pups with dentition faults.

Faulty dentition in Berners is typically a hereditary problem. Some bite defects in Bernese appear to have a simple mode of inheritance (overshot and undershot). Some genetic bite problems do not show up in each litter because they are recessively passed on. The jaw and skull structure of Berners affects dentition. So, it is likely that some bite faults are polygenic and involve a group of genes. The position of teeth in the jaw is dependent on a properly formed skull and lower jaw in order for a bite to function efficiently. A Berner's muzzle must be long and broad enough to accommodate the teeth in their proper locations. Jaw strength is determined by the shape of the skull and the musculature that creates movement. Generally speaking, dogs that have long, narrow heads have straighter angulation around the cheekbone (straighter angulation means there is less room for substantial muscles). Narrow headed dogs possess weaker jaws. A narrow jaw may also cause crowding of the incisors.

The degree of a Berner's bite faults should be weighed along with all the other virtues and faults the dog has. Minor bite faults have only minimal impact on the dog's ability to function. Berners with more severe bite faults should not be paired with mates of similar pedigree with the same fault or to mates from families where the same bite fault is known to occur. The normal relatives of dogs with bite faults may carry some genes for the dentition faults found in their family of dogs.

General teeth maintenance.....

Did you know that dogs' teeth age and have varying quality which affects their bites? Like some people, individual dogs are genetically predisposed to dental disease. Symptoms of periodontal disease include: red and swollen gums, foul breath, tartar build-up on teeth, discoloration of teeth, poor appetite and painful chewing.

Berners may show few obvious signs that indicate they suffer from periodontal disease. Routine dental examinations by a veterinarian are important to maintain your Berner's oral health. Many owners provide tartar control dog biscuits, chew toys, and processed or raw bones for their dogs to maintain condition of teeth. There are many different canine tooth care products available. Brushing a dog's teeth, using a hand held dental scaler to remove tartar and providing bones keeps most Berner teeth in reasonable to good condition.

Veterinarians may use anesthesia and an ultrasonic dental scaler to clean dogs' teeth. Price for veterinary teeth cleaning varies depending on the condition of the teeth, whether anesthetic is used, on the size of the dog and on whether additional veterinary services are required (pre-surgery blood panel or other lab tests). Costs for veterinary teeth cleaning run from roughly \$75.00 - \$250.00.