

Deafness in English Setters

Deafness in dogs can be caused by many things such as recurring ear infections, injury to the ear, or hearing loss due to old age. In fact anything that injures the ear canal, ruptures the ear drum or interferes with the tiny bones inside the ear can contribute to deafness, including infections, tumors, waxy build-up, repeated exposure to loud noises and nerve degeneration associated with old age.

However, some dogs are deaf from birth - this is known as congenital deafness and has a genetic basis that is often associated with dogs that have predominantly white coats.

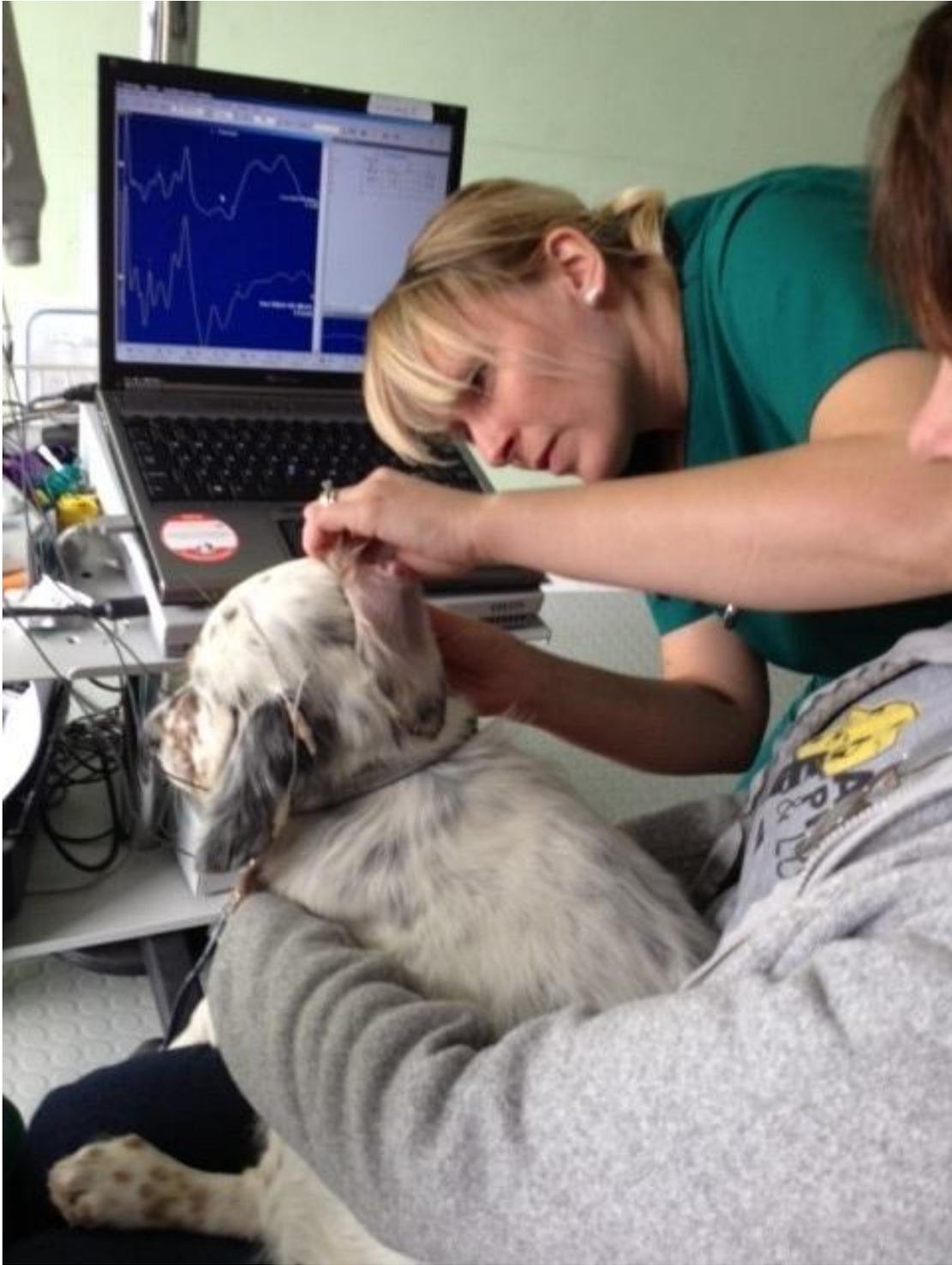
Congenital deafness can be bilateral – in other words it occurs in both ears and the dog cannot hear at all. Alternatively, it may be unilateral when the dog is only deaf in one ear and manages so well that they react in exactly the same way as puppies with normal hearing. A bilaterally deaf (totally deaf) puppy should be easy to detect – it will be unresponsive to even loud noises, and uses mainly visual cues and touch to interact with its environment. Generally, a normal puppy will respond to sound by about three weeks of age and most experienced breeders will be looking out to ensure that all members of the litter respond to noise.

Unilaterally deaf puppies (only deaf in one ear) are very difficult to spot and the only guaranteed way to identify an affected pup is for a professional to carry out a Brainstem Auditory Evoked Response (BAER) test.

The BAER Testing Process

This hearing test detects electrical activity in the cochlea and auditory pathways in the brain in much the same way that an antenna detects radio or TV signals or an EKG detects electrical activity of the heart.

The hearing of the puppy or adult dog is tested by placing three ultra fine needles under the puppy's skin. They do not feel these and this, and it is not distressing to them - they are like acupuncture needles. The optimal age for testing puppies is 5-6 weeks as many will be comforted with food and may fall asleep; making them unaware anything is going on. One needle is placed at the very back of the head, one at the top in the middle of the skull in the middle of the head and one in front of the ear being tested. As you can see from the photographs below the puppy is very relaxed and not at all stressed by the procedure.

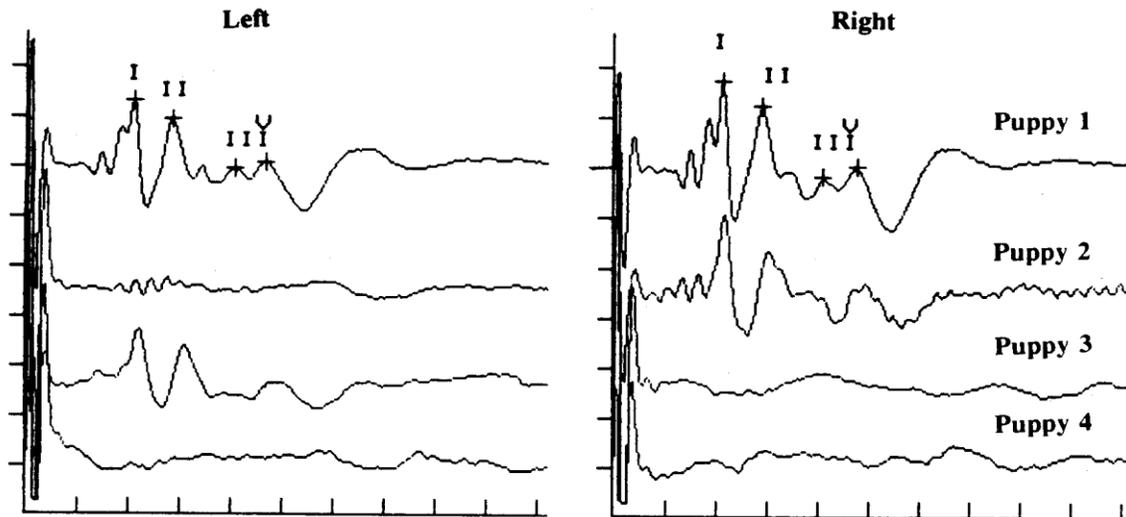


Two electrodes in position (top & rear of head) – 3rd probe being inserted in front of ear to be tested.



All 3 electrodes in position – vet nurse holding headphone over ear that is being tested.

The headphone is held over the ear being tested to allow a clicking sound to be played in to this ear at adjustable sound levels. This generates a computer graph measuring brain wave response to the sound shown as a series of peaks – the response from an ear that has no hearing shows essentially as a flat line.



This diagram above shows an example of the BAER trace for a litter of 4 puppies tested. Puppy 1 can hear in both ears, Puppy 2 is deaf in the left ear, Puppy 3 is deaf in the right ear, and Puppy 4 is deaf in both ears.

Ideally the BAER test will show normal hearing in both ears. If the puppy only responds in one ear, (unilateral hearing), it is not a major problem as it will still be able to have a happy life as a companion and their hearing will still be greater than any human. However, it is preferable that these animals are not bred from as studies have shown that the incidence of unilateral and bilateral deafness in their progeny is greatly increased. Because of this breeders should think very carefully before using affected setters in their breeding plans.

If the puppy's response is negative in both ear,s this is known as bi-lateral deafness. The pup will not be able to hear at all and so will present quite a challenge with training as it grows up. Some breeders prefer to have the puppy put to sleep at this stage as they feel that there is little quality of life for a dog that can hear nothing and although they can be trained it takes an awful lot of hard work, patience and dedication. Other breeders have a different view and feel that the dog can enjoy life using its other senses and have prospective homes available that have experience raising and training deaf dogs. Of course bilaterally deaf dogs should never be used for breeding.

After testing, you will be supplied with a copy of your setter's BAER trace and also a signed certificate stating whether or not they have 'passed' the test (shown to have normal hearing) in the right and left ears.

At present these results are not included on the KC Mate Select Health Test webpages but it is hoped that this will be possible in the near future.

BAER testing centres

BAER testing is not something that is routinely available at all vet surgeries as specialized computer software is required. Currently the cost of a BAER test is around £45 per dog but it is very often possible to get a reduced price if a whole litter is being tested or an owner has several adult dogs that they want testing at one visit. Sometimes, usually only with adult dogs, a light sedative is required to ensure that they keep their head still during the testing process and do not dislodge the electrodes. This would usually incur an additional charge.

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<p>Scarsdale Group Pride Veterinary Centre Riverside Road Pride Park Derby DE24 8HX Tel: 01332 678333 (Liz Moore)</p>	<p>Blacks Veterinary Group 109A Pedmore Road Lye West Midlands DY9 8DG Tel: 01384 897632</p>	<p>Animal Medical Centre Referral Centre (Mr Pip Boydell) 511 Wilbraham Road Chorlton Manchester M21 0UB Tel: 0161 8813329</p>
<p>Glasgow University (Professor Jacques Penderis) Faculty of Veterinary Medicine Bearsden Road Glasgow G61 1QH Tel: 0141 330 5738 email: J.Penderis@vet.gla.ac.uk</p>	<p>Mr Paul Harris Riverslea Mill Lane Boroughbridge N Yorks YO51 9LH Tel: 07810 360704 (Offers a mobile service in individuals' homes)</p>	<p>Woodlands Veterinary Clinic Katherine Court Salisbury Avenue Warden Hill Cheltenham GL51 3GA Tel: 01242 255133</p>
<p>The Vets 27 Burnley Lane Chadderton Way Oldham OL9 0BT Tel: 0161 633 5050</p>	<p>608 Veterinary Practice 58 Sheaf Lane Sheldon Birmingham B26 3HA Tel: 0121 705 3044</p>	<p>Brentknoll Veterinary Centre Whittington Road Worcester WR5 2RA Tel: 01905 355938</p>