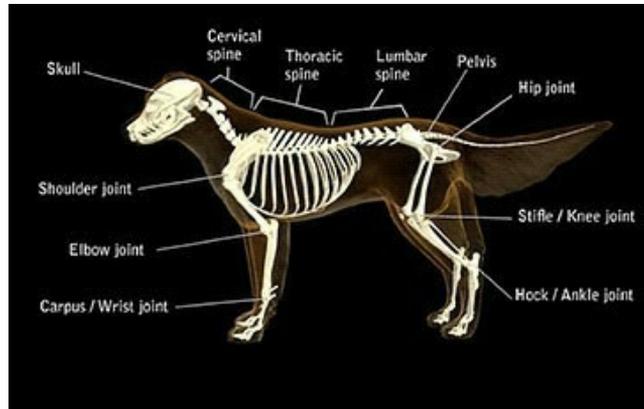




# Eurasier Society UK

*We share a passion for Eurasiers*

*All About Health - a series of articles originally published in our Newsletters over 2014/15*



## All About Hips

**The first in a series of articles on Eurasier Health**

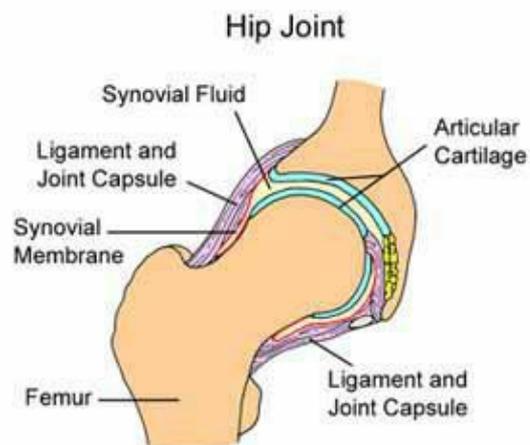
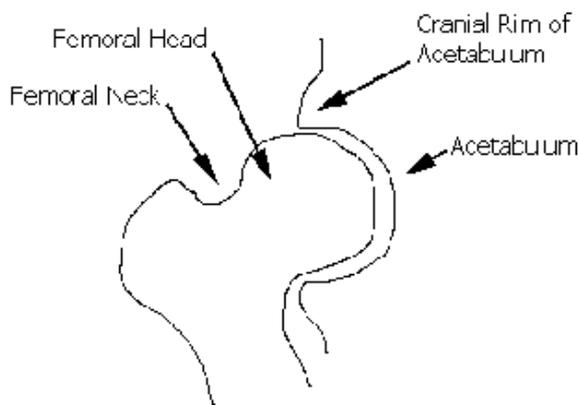
by Val Ford, former ESUK Health Coordinator and owner of Louis, Castro and Bella

I had an email recently asking if I could recommend any **simple** articles on canine hip dysplasia (CHD). The writer had found several on the internet but they were all a bit 'beyond her'. I know how she felt! I ended up writing a kind of FAQ, which forms the basis of this article now.

### **Where are my dog's hips and what do they look like?**

First things first! You probably have at least a vague idea of where your dog's hips are, but it might be helpful to examine the joint in some detail. Above is a basic skeletal diagram to get us started.

Just as in humans, the dog's hips are ball-and-socket joints: the head of the femur (ball) fits into the acetabulum (socket) in the pelvis. (The femur isn't labelled on the diagram above but it's the thigh bone, in between the hip joint and the knee joint.) The diagrams below show a normal hip joint where the ball fits snugly into the socket, allowing smooth and pain-free movement:



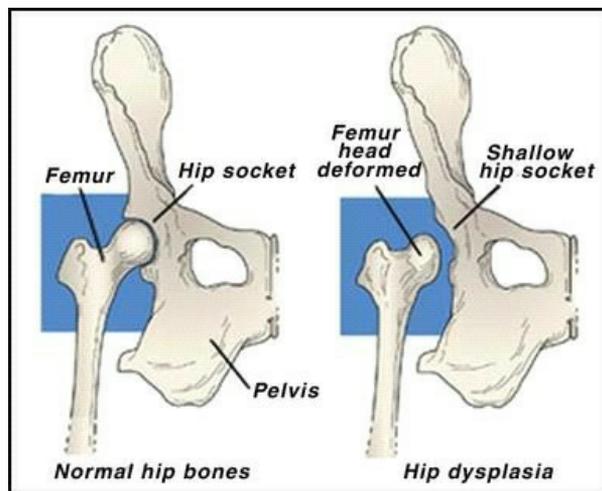
The second diagram above shows some other important components of the hip joint, but they needn't concern us here.

### **What does a dysplastic hip look like?**

In hip dysplasia, either the ball, the socket or both may be affected, to a greater or lesser degree. We'll come back to that later in the section on grading hips, but for now here's a diagram showing what a very bad hip joint would look like:

### **How does hip dysplasia affect the dog?**

Different dogs are affected in different ways, depending partly on the location of the abnormality and the degree of the malformation. Usually both hips are affected. The condition is often painful, but again the amount of pain varies from one dog to another, as does the individual's tolerance of pain. Some might develop an abnormal gait, while others might refuse to perform particular movements such as going up or down steep steps, or jumping. Sad to say, however, that because this condition is present in quite young dogs, many grow used to the chronic pain and show no symptoms, but suffer in silence. In the longer term, the abnormal wear and tear on the joint very often leads to osteoarthritis, which in turn can become so severe that the dog is effectively crippled.



### **Genetic or environmental?**

Both! It's generally agreed that hip dysplasia is a primarily inherited disorder, though the mode of inheritance is a lot more complicated than parents just passing it on to their offspring. I don't want to delve into genetics here, but in very simple terms, good (or bad) hips don't result from a single pair of genes (where one gene is inherited from the mother and the other from the father). In other words, hip dysplasia is a polygenic disorder. Even worse, in terms of understanding the mode of inheritance, some of the genes in question may be dominant, and some recessive.

Environmental factors also play a part, with diet and exercise in puppyhood thought to be the most important. Being overweight puts undue strain on any dog's hips, but is especially serious in a young dog whose bones and joints are still developing. Even if the dog does not seem fat, over-feeding - or feeding too much protein - can cause growth which is too rapid.

It's also thought that over-exercising a young dog can lead to, or worsen, hip dysplasia. This is particularly the case with exercise which involves repetitive movements, such as walking or trotting on a lead. When the dog can't move freely, joints have a restricted range of motion which is not healthy for good development.

### **Why should you get your Eurasier's hips tested?**

It clearly makes sense for breeders - and owners of stud dogs - to have their dogs' hips tested and to remove them from breeding if hip dysplasia is detected. In fact breeders who abide by the Eurasier Society's code of ethics always do this. However, as we've seen, the mode of inheritance of this disorder isn't simple: a bitch and a dog with very good hips can still produce a puppy with dysplasia. The 'bad' genes will be somewhere in either or both dogs' pedigrees, but with no way of identifying them it may not be clear where they are.

For this reason, the **breadth** of the pedigree is as important, if not more important than the depth of the pedigree in polygenic disease control. In other words, looking at the hip scores of brothers and sisters, aunts and uncles and even cousins, is useful, as well as the scores of direct ancestors.

By getting your dog scored, then, you are adding valuable information to what is currently known about hips in your dog's lines. Not only will your breeder be thankful, but you will be contributing to the overall understanding of hip dysplasia in UK Eurasiers.

### **What do the hip scores mean, and why are there different systems?**

In the UK, dogs are tested under the scheme operated jointly by the British Veterinary Association (BVA) and the Kennel Club. This excellent article explains the scoring in great detail (but, NB,



it's only recommended if you're really keen on academic writing):

[http://www.bva.co.uk/public/documents/Interpretation-and-use-of-BVA-KC\\_Hip-Scores.pdf](http://www.bva.co.uk/public/documents/Interpretation-and-use-of-BVA-KC_Hip-Scores.pdf)

The BVA scheme measures 9 different things. You don't need to know what they are, but for those who are interested:

*Norberg Angle (0-6)*

*Subluxation (0-6)*

*Cranial acetabular edge (0-6)*

*Dorsal acetabular edge (0-6)*

*Cranial effective acetabular rim (0-6)*

*Acetabular fossa (0-6)*

*Caudal acetabular edge (0-5)*

*Femoral head/neck exostosis (0-6)*

*Femoral head recontouring (0-6)*

Scores are given for each hip, on each item, then added together. The total score for both hips together ranges from 0 to 106 and the lower the score, the better.

The X-ray is carried out by your own vet, who then sends it to the BVA where a panel of three experienced radiologists agree scores for each of the nine features.



X-ray of a dog with very good hips



X-ray of a dog with severe hip dysplasia

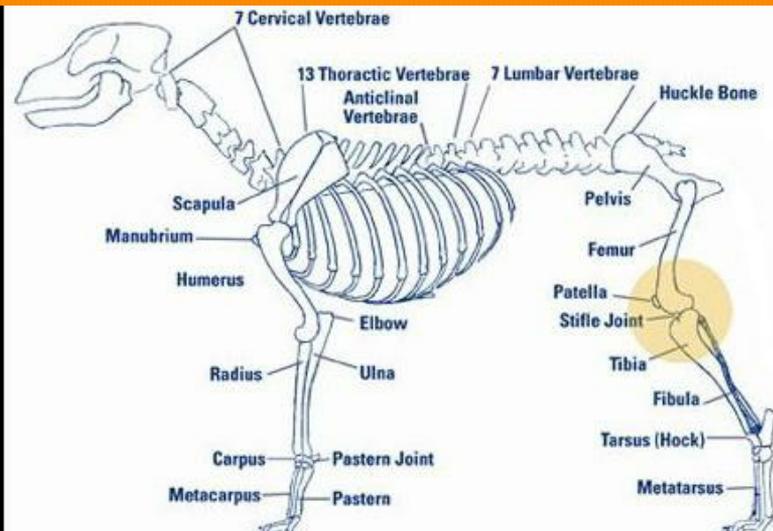
Different schemes with different ways of scoring are used in other countries. The *FCI* scoring mode - used in most of mainland Europe - gives grades ranging from A (excellent) to E (severe hip dysplasia), subdivided into A1, A2 etc, while the *OFA* scoring mode - used in the USA and Canada - names seven grades from 'excellent' to 'severe HD'. (There is also *PennHIP* in the US, but that involves a different method of taking x-rays and is not therefore comparable.)

The three main scoring systems compared:

| OFA        | FCI (European) | BVA (UK / Australian) |
|------------|----------------|-----------------------|
| Excellent  | A-1            | 0-4 (no>3/hip)        |
| Good       | A-2            | 5-10 (no>6/hip)       |
| Fair       | B-1            | 11-18                 |
| Borderline | B-2            | 19-25                 |
| Mild       | C              | 26-35                 |
| Moderate   | D              | 36-50                 |
| Severe     | E              | 51-106                |

### Conclusion

Breeding good hips is largely a matter of chance, or probability, but both breeders and owners can help to increase the probability. In the UK currently (2013) the breed mean score for Eurasiers' hips is 9 and the trend is downwards. Let's all do our part to ensure that the trend continues, and thus reduce the number of dogs having to suffer this painful condition.



# All About Patellas

## Part two in our series on Eurasier Health

by Val Ford, former ESUK Health Coordinator and owner of Louis, Castro and Bella

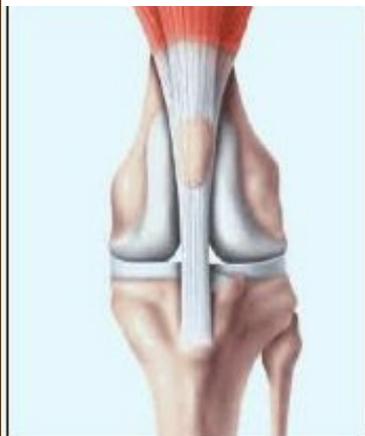
### **So many strange words . . .**

Patella is the correct term for knee cap. In dogs, the knee joint is known as the stifle and (as in humans) it joins the femur or thigh bone to the tibia or shin bone. You might find the plural of patella to be patellae, but more commonly it's patellas. Oh, and just to keep you on your toes, the adjectival form of patella is patellar - so 'patellar luxation' simply means dislocation of the patella . . . though you will also come across the term 'luxating patella'. So that's all clear, then!

### **Where are my dog's patellas and what do they look like?**

Above is a diagram showing the position of the patella on a dog's skeleton.

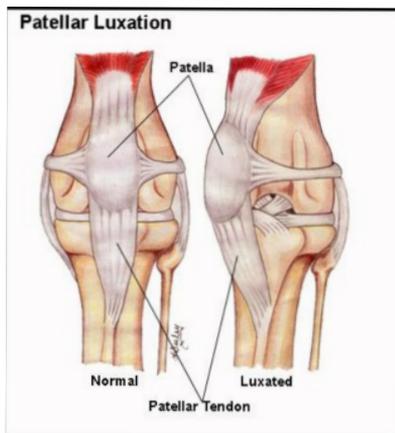
No need to hide your face in shame if you thought the knee joint was where the hock is, rather than further up!



The patella is a small oval-shaped bone lying at the front of the stifle, within the tendon of the quadriceps muscle (coloured red in the diagram). It slides in a groove over the base of the femur and acts like a kind of pulley, extending the knee when the dog walks and runs.

### **What is a luxating patella?**

The colloquial term 'floating knee cap' gives you an idea of what happens when the patella luxates: it pops out of its groove, most commonly to the inside of the knee (medial luxation) but sometimes to the outside (lateral luxation). The condition can result in pain, varying degrees of lameness and inevitably osteoarthritis within the stifle joint. Vets grade the luxation from 1 (slight) to 4 (severe).



### **What are the signs to watch out for?**

Intermittent lameness is usually the first indication of a problem. When running, the dog will suddenly hold the affected limb off the ground and sometimes yelp as the patella luxates, then will move on normally as the patella pops back into its groove.

In more severe cases where the patella is permanently dislocated, the abnormality will lead to a deformity in the limb, which is especially noticeable when viewing the dog from behind. When both patellas are luxated, the dog appears 'knock-kneed'.

### **How common is the problem?**

Luxating patellas are more common in small dogs, but a surprising number of Eurasiers have the problem - at least in North America. Recent statistics from The Orthopedic Foundation for Animals (OFA) show that Eurasiers have the 11th highest percentage of affected dogs out of 110 breeds assessed; interestingly, Chow Chows are in 10th position. There are no comparable figures for the UK, but observation and anecdotal evidence suggest that numbers are much lower, so it seems that breeders here are managing this hereditary condition well.



# All About Eyes

## Part three in our series on Eurasier Health

by Val Ford, former ESUK Health Coordinator and owner of Louis, Castro and Bella

### **So many diseases . . .**

There are several hereditary canine eye conditions and diseases for which screening or DNA testing are available. You might have heard of GPRA (Generalised Progressive Retinal Atrophy), HC (Hereditary Cataract), MRD (Multifocal Retinal Dysplasia) and CEA (Collie Eye Anomaly). Thankfully, none of these - or other similar, serious hereditary problems - currently affect the Eurasier to any great extent. There are, however, three conditions which do feature in the breed in above-average numbers. All breeding stock should be tested for these, and we encourage all owners to have their dogs checked and advise the Breed Health Coordinator and the dog's breeder of the results. The examination can be done by your own vet, but if you have the opportunity - or if there is any concern - a specialist ophthalmologist will provide a more detailed report.

### **Distichiasis is the most common hereditary eye condition in the Eurasier**



Disti . . . what?? The correct pronunciation in English is **dist-ik-EYE-ah-sis**, with the stress on 'EYE'. Sometimes called 'extra eyelash(es)', it refers to one or more eyelashes that grow from an abnormal spot on the eyelid. From their position, these eyelashes tend to grow towards the eyeball rather than away from it, and can cause irritation if they are numerous and long. Often, however, distichiasis involves only a couple of fine, short eyelashes which cause no symptoms and may pass unnoticed in the dog.

### **Entropion and ectropion**

Both these eye disorders involve the eyelid: in entropion the dog's eyelid turns inwards and in ectropion it turns outwards.

Facial shape is the most significant genetic cause of **Entropion**, with short-nosed, flat-faced breeds (Chow Chows included) being most prone. This is because there is more tension on the ligaments of the inner eye in these breeds than would normally be seen and this, in turn, can cause both the top and bottom eyelids to roll inwards towards the eyeball. Inward-turning eyelashes, or the eyelid itself, may cause irritation and may scratch the cornea, leading - if not corrected - to painful ulceration and eventual blindness.



The first signs of entropion are often excessive rubbing of the eye, tearing and discharge. The affected eye(s) will sometimes remain partially shut. The condition is usually already present in puppies but vets may wait until the dog is at least 6 months before diagnosis, because a mild case may right itself as the dog 'grows into' its eyelids. Surgery to correct entropion is a fairly straightforward procedure, involving removal of a small amount of skin from the affected eyelid(s) and sewing back the eyelid into its proper outward-turning position.



**Ectropion** is less common. The main problem here, since the lower eyelid is turned outwards, is increased exposure of the delicate structures of the eye. Hypersensitivity reactions may develop, and frequently recurrent bacterial conjunctivitis - an inflammatory condition of the thin membranes that line the eyelids and cover the surface of the eyes. This condition is more prevalent in dogs with loose facial skin.

Ectropion is usually very obvious, as affected dogs have pronounced droopy lower eyelids, watery eyes, swollen or red conjunctiva and facial staining from an overflow of tears.

The condition rarely leads to serious issues and often treatment of the conjunctivitis is all that's required. However, in more serious cases surgery may be carried out.

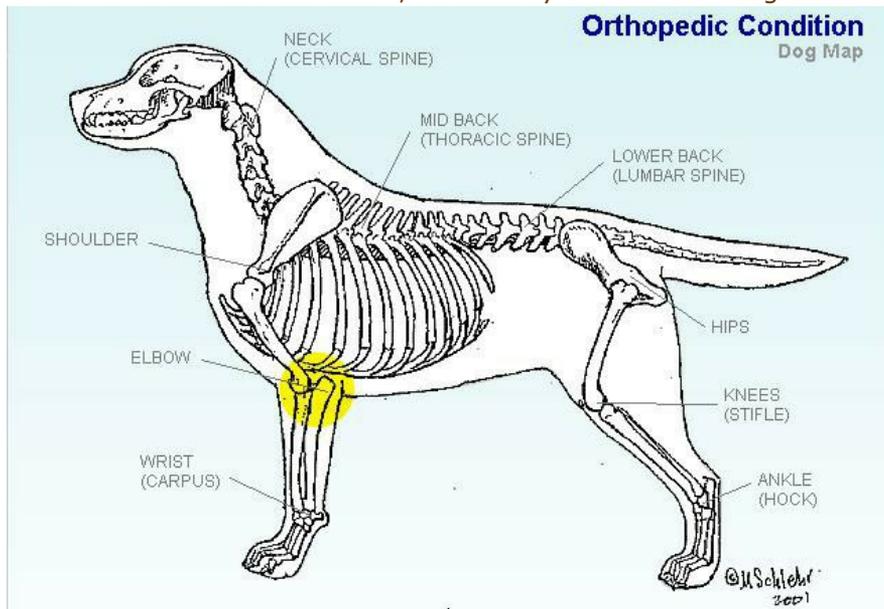
# All About Elbows

## Part four in our series on Eurasier Health

by Val Ford, former ESUK Health Coordinator and owner of Louis, Castro and Bella

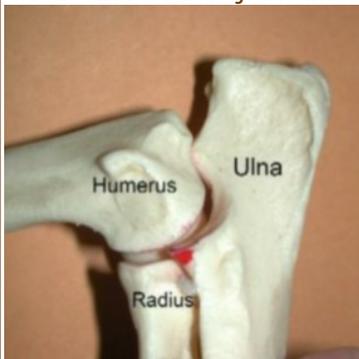
### Where are my dog's elbows?

You would certainly not be the first person to be confused about this! If you think of the dog's front legs as arms, the elbow is the joint between the shoulder and the 'wrist', shown in yellow on the diagram below:



### What kind of joint is it?

Three bones make up the joint of a dog's elbow: the **radius**, the **ulna**, and the **humerus**, so it's more complex than a ball-and-socket joint like the hip or shoulder:



If the three bones do not fit together absolutely perfectly as a result of abnormal development, the consequence is abnormal concentration of forces on a specific region of the elbow joint.

### What is elbow dysplasia?

The term elbow dysplasia is often used as if it refers to a single condition, as with hip dysplasia, but many experts prefer to talk about 'developmental diseases of the elbow' - of which there are four main types, depending on which region is affected. The different conditions need not concern us here; suffice to say that **osteoarthritis** is common to all of them, and that's what causes the dog to be in pain.

### What are the symptoms?

Lameness or stiffness in the dog's front leg(s), which is worse after exercise, is the main symptom. Signs of elbow dysplasia usually appear in puppies at 4 to 10 months of age, but some dogs may not show signs until adulthood.

### What causes elbow dysplasia?

Like hip dysplasia, elbow dysplasia is thought to be mainly hereditary. Environmental factors such as diet and exercise may make an already existing problem worse.

### How does testing work?

Most breeders and owners have their Eurasiers' elbows tested at the same time as their hips, because there is a scheme whereby both can be done together - operated jointly by the Kennel Club and the British Veterinary Association. The dog's elbows are x-rayed and allocated a score between 0 (a radiographically normal elbow) and 3 (advanced osteoarthritis). The overall score is taken to be the worse of the two scores.

### How big a problem is it in Eurasiers and does this affect breeding?

Whilst still a relatively small problem, we are beginning to see an increasing number of cases in our UK population as more dogs are tested. Looking at health data it seems as if elbow dysplasia is more of a genetic problem than hip dysplasia so scanning is very highly recommended.

The Kennel Club recommends that only dogs with a score of zero should be bred from.



# All About The Thyroid

## Part five in our series on Eurasier Health

By Brigitte Mordan-Grimm and Val Ford

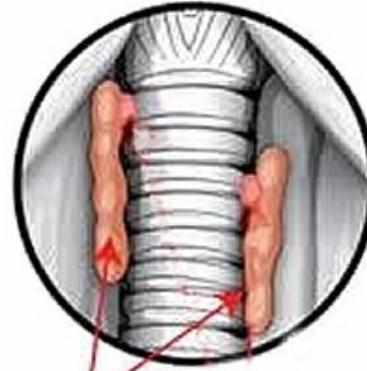
### **Where is my dog's thyroid and what does it do?**

The thyroid is a gland situated in the throat area. It produces and secretes hormones which regulate the growth and level of activity of many other systems in the body.

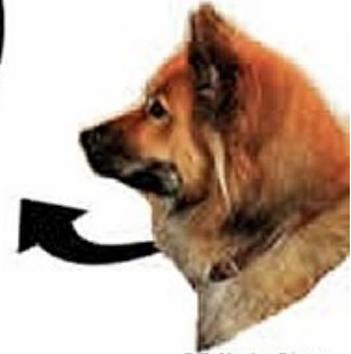
### **What problems are associated with it?**

In dogs, the most common problem is hypothyroidism, in which the thyroid is underactive. This results in a decreased metabolic rate (the amount of energy used when the dog is at rest), and is usually caused by some destruction of the thyroid gland itself.

**Hypothyroidism** usually affects medium- to large-size breeds. Although none of the ancestors of the Eurasier are thought to be predisposed to it, hypothyroidism in Eurasiers is proving to be a significant problem. Research suggests that up to 20% of the Eurasier population worldwide are hypothyroid; in the UK the figure may be even higher as we know that several lines are affected by it, even if not many individual dogs have been tested.



Thyroid glands



© B. Mordan-Grimm

### **What are the symptoms?**

A deficiency of thyroid hormone affects the function of all organ systems; as a result, clinical signs are varied. They may include:

- behavioural changes (fear, aggression, etc.)
- skin abnormalities, such as bald patches or dry skin
- hair loss or poor coat quality
- lethargy, excess sleep
- weight gain
- chills, poor cold tolerance
- slow heart rate
- Constipation
- infertility; delayed seasons in bitches

If your dog is suffering from any of these symptoms and the vet can't find a cause, it's well worth asking for thyroid function to be checked.

### **What does testing involve?**

A blood sample is taken from your dog and analysed in a laboratory. There are several different thyroid tests or panels which can be requested; these include T3 and FT3, T4 and FT4, TSH and TgAA. Don't worry about what they all are; someone on the ESUK committee will be happy to explain them to you if need be and to help you understand the results.

Unfortunately, most labs in the UK, and most vets, have very broad ranges for what is considered to be a normal score on these tests, without reference to the age or breed of the dog or food given. Research in the USA, however, shows that these three factors are very important. Luckily, we have access to a leading international expert who can interpret the results for your Eurasier specifically.

### **What is the treatment?**

Hypothyroidism is easily treated by replacement of thyroid hormone (thyroxin T4) on a daily basis, usually for the rest of the dog's life. The medication is given as a split dose twice a day without food. The dosage has to be adapted regularly and frequent blood checks are therefore necessary. With this treatment, the dog can lead a full and normal life.



# All About Health Testing

## The final part in our series on Eurasier Health

By Val Ford and Brigitte Mordan-Grimm

In the last few Newsletters we have written about diseases or health issues affecting hips, patellas, eyes, elbows and thyroid. You may conclude from this that Eurasiers are rather an unhealthy lot, but that really isn't the case. On the contrary, because the breed has been so carefully developed, and because the Eurasier's natural wolf-like structure has been largely maintained, it has managed to avoid many of the health issues affecting other breeds.

Since the early days, breeders in Germany (as well as those in other countries following the 'German way') have carried out extensive health screening and kept meticulous health records of their stock. Vast numbers of dogs have been tested, not necessarily because there's anything wrong with them, but in order to better understand how a particular health condition develops and is passed on to subsequent generations. We in the Eurasier Society UK want to continue this practice, and that's why we urge our Eurasier owners to get their dogs health tested.

All the diseases and health problems outlined before are known to have a genetic component, but unfortunately, the exact mode of inheritance is poorly understood. It's not a question of saying 'We won't breed from this dog which has bad hips, but we'll use her sister instead and then the puppies won't have any hip problems'. Hip dysplasia often occurs in just one or two puppies in the same litter, while the others are fine and it can skip generations.

Hip dysplasia is used here as an example, but the same applies to all the health problems mentioned in these articles: there are no tests which determine conclusively whether a given dog will develop a particular problem, or - most importantly - whether a given dog will pass the particular problem on to its progeny. On the other hand, it's true to say that the greater the number of dogs tested, the more breeders can do to try and avoid perpetuating the problem. So even if your dog is not going to be bred from, you will be doing the Eurasier breed in the UK and world-wide a great service if you health test him or her and pass the results on to the [Eurasier Health Coordinator](#). Apart from anything else, your breeder will love you forever!

### **Hips and elbows**

Hips and elbows are considered together here as the scheme run jointly by the British Veterinary Association and the Kennel Club offers a discount for testing both at the same time:

<http://www.bva.co.uk/Canine-Health-Schemes/Hip-scheme/>

The link has all the information you need, but here's a quick summary. Your vet will x-ray your dog's hips and elbows (employing general anaesthesia or deep sedation) and send the plates to the BVA for scoring. For each hip joint a score is derived by evaluation of nine separate features, using a set of defined criteria. The final score is the sum of the points awarded for each of the nine radiographic features of both hip joints. The minimum score for each hip is 0 and the maximum is 53, which gives a total range of 0-106. The LOWER the score, the less the degree of hip dysplasia evident.

### **Patellas, eyes, teeth**

Your vet can carry out these tests simply by examining the dog. You should ask for a letter or statement on headed paper stating your dog's name and microchip number, either clearing the dog or specifying the problem. The vet will manipulate the patellas to check for any luxation. Eyes will be closely examined for signs of entropion, ectropion or distichiasis. Ideally, this should be done by an ophthalmologist (eye expert vet), but at the moment we also accept a statement from a normal vet. It's not unusual to find a couple of extra eyelashes; they won't necessarily cause the dog any serious problem, but it's important when breeding to make sure an affected dog is mated to an unaffected one. Finally, it's a good idea to ask your vet for a tooth count, though you may feel able to do this yourself. As with distichiasis, a dog with any missing teeth (that is, missing from birth) should only be mated to a dog with a full set of teeth; some tooth faults, however, will disqualify a dog from breeding.

### **Thyroid**

This is a test for thyroid hormone levels that requires blood to be drawn by a vet and sent to a laboratory for testing. It can either be sent to a UK lab, or alternatively to the US to a specialist lab run by Dr Jean Dodds.

<http://www.hemopet.org/hemolife-diagnostics/veterinary-thyroid-testing.html>

Sending the blood to the US to be tested will give you a 5-panel test (T3, FT3, T4, FT4 & TgAA) and expert interpretation taking the breed, age, gender and feeding regime into consideration. If you choose to test in the UK it is important you ask your vet for a 4-panel thyroid test (T4, FT4, TgAA & TSH), the ESUK Health-Coordinator may be able to assist with a more specific interpretation of these results.

### **When to test**

You can get your dog health tested from about 18 months of age (sometimes sooner). For the girls, because of the sensitive interaction between hormones, it is sensible to have the thyroid blood test and the hip and elbow x-rays done 3 to 4 months after a season. The thyroid test should be repeated every two years, or more often if there is cause for concern.

### **and then ....**

it is very important to send copies of all the test results to the [Eurasier Health-Coordinator](#) and in most cases the breeder of your dog will also be wanting to know the results. In fact, if your Eurasier has any serious illness it is good practise to let us know as it informs our breeding.