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### How to achieve optimum coat condition

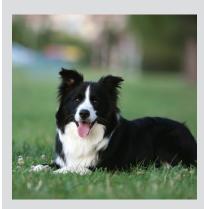
By Ness Bird - Nutrition Adviser and RVN ©

Moulting is a natural process which occurs several times a year, and can also be triggered at other times by hormonal or environmental changes. Usually, there is no cause for concern unless you have noticed your dog scratching, licking or nibbling excessively; or if bald patches, inflamed skin or ear infections are evident. If any of these symptoms are present it is important to seek veterinary advice, as your dog may have parasites or be suffering from an allergic response (to dietary and/or environmental allergens). If your dog is simply losing some coat and is a little scurfy then this is likely to be a natural response by the body to shed and make way for new skin cells and hair follicles. Dandruff is very much more noticeable in dark coloured dogs.

One of the best ways to promote healthy skin and encourage coat growth is to increase our dog's grooming time. Some owners are reluctant to brush dogs with scurf and/or loose hair for fear of making the problem worse. However, this hair and skin is dead; and if left, will begin to clog up the pores. Removing it will help to stimulate the natural oils and create a nice healthy base for new growth. An individual hair takes between six and eight weeks to grow. Once mature, the hair enters a resting phase and remains dormant for weeks or even months before being shed to make room for a new hair. A rubber massage brush is often ideal for scurfy dogs providing it is suitable for your dog's coat type. Some breeds of course require specialist grooming or clipping.

In the event of a heavy moult, most breeds will benefit from several short grooming sessions per day for a couple of days to ensure everything that needs to be shed has been removed. After this, the skin and coat can be fed from the outside with a mild emollient shampoo and conditioner. There are plenty of natural products on the market with conditioning properties. Washing your dog frequently (unless your vet has recommended this as a part of a treatment protocol) can cause the natural oils to be stripped from the coat, but bathing two or three times a year (more if required) is sensible.

It is wise to look at your dog's diet, particularly if your current pet food brand is non-hypoallergenic. Feeding the skin and coat from the inside as well as the outside is a key factor to achieving optimum coat condition. Protein, fat, vitamins and minerals have many functions within the body and they all play an important role in maintaining healthy, supple skin and a rich, glossy coat. The Arden Grange products all include effective levels of important nutrients, as well as natural supplements which may benefit the skin and coat.









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#### Key nutrients for healthy skin and coat:

#### **Protein**

Protein provides the building blocks which make up hair and is an important component of the skin cells. Protein sources for dogs need to be of a high biological value, which means that they are easily broken down into their constituent amino acids. They also need to be high quality (highly bioavailable) so that they are easily digested, and nutritionally valuable. Sources of protein for dogs include: eggs, fish, poultry and lamb.

#### **Fat**

Fats are used for energy, but they are also incorporated into skin cells as fatty acids. Linoleic acid is an omega-6 essential polyunsaturated fatty acid that forms the lipid component of all cell membranes. Its deficiency can result in symptoms such as hair loss, dry hair, and poor wound healing. Omega-3s have many health benefits, and are best recognised for their anti-inflammatory properties and potential to improve allergy thresholds. Krill and fish are natural sources of omega-3 DHA and EPA fatty acids, whilst chicken oil supplies good levels of the omega-6 fatty acids. Linseed (flax) is a good source of both for dogs.

#### Vitamin A

Vitamin A is a powerful antioxidant and controls the genes involved in normal growth, development, healing and immunity. Vitamin A deficiency can cause scaly skin and dull, brittle hair. However, too much vitamin A can also cause problems, and for this reason a high quality commercial complete diet that contains the recommended daily allowance for dogs is the safest means of providing this nutrient. Supplementation should only be carried out under the supervision of your vet if a deficiency has been diagnosed. Sources of vitamin A for dogs include: liver, meat, and oily fish.

#### Vitamin C

Vitamin C is an important dietary antioxidant. It is essential for the synthesis of collagen and is necessary for healthy bodily tissues. Sources of Vitamin C for dogs include: cranberry, liver and kidney. The Arden Grange meat meals include some offal.

#### Vitamin E

Vitamin E has many functions. Primarily, it is an antioxidant responsible for protecting the fats from oxidative damage, but is also recognised for its benefits to the skin. It protects the cell membranes, and ensures the skin remains supple and heals efficiently in the event of a wound. Linseed is a good source of vitamin E for dogs.









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#### **Biotin**

Biotin is a member of the vitamin B family, and is of importance to the skin and coat since it is involved in the synthesis and metabolism of both amino acids (the building blocks of protein) and fatty acids. This safe vitamin has no known side-effects and has been found to improve the condition of dry, itchy skin. A deficiency in biotin can result in alopecia (hair loss). Sources of Biotin for dogs include: meat, liver, oily fish, and egg yolk.

#### **Riboflavin**

Riboflavin is also known as vitamin B2. In the context of dermatology, it is involved in the formation of the hair, skin and nails. Riboflavin is found in wholegrain cereals (such as rice and maize), dairy products and green leafy vegetables, but the best sources for dogs are liver and eggs.

#### Copper

Copper is a mineral which plays an important role in the synthesis of collagen and is involved in the maintenance of hair and skin. It helps to ensure the elasticity of the skin. Sources of dietary copper for dogs include: crustaceans (such as krill), and wholegrain cereals.

#### Zinc

Zinc is essential for the proper function of many of the enzymes, but in terms of your dog's skin and coat health, it is vital to aid wound healing. Deficiencies of zinc may result in poor hair growth and alopecia. Zinc is found in wholegrain cereals, pulses and cheese, but the best sources for dogs are red meat, seafood and eggs.

#### **Supplementation**

Care should be taken when adding extras to an already complete and balanced commercial pet food. Our general advice is to ensure that at least three quarters of a puppy's total daily calorie intake per day is from the complete food, and of course avoid adding mineral rich additions. At least two thirds of an adult dog's calorie intake should be derived from the complete food. Be careful what you are adding too, as you will defeat the object of a healthy main diet if the extras are laden with additives and/or contain less nutritionally valuable ingredients or those which are common dietary allergens.

Dogs with dry skin and poor coats can benefit greatly from essential fatty acid supplementation, and this can be achieved either by using a commercial diet which includes them at effective levels and at the correct ratio, for example, the Arden Grange Adult Salmon & Rice; or by adding a safe proprietary supplement such as Lintbell's YuMEGA; which contains a very effective blend of plant and fish body oils.









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Cod liver oil is a reasonable source of omega-3 fatty acids, but is also very high in vitamin A and D. Excessive amounts of vitamin A can cause itchiness and dry skin which is the opposite of what you want to achieve. Too much vitamin D causes general weakness, diarrhoea, vomiting, and calcification of soft tissue, excessive mineralization of long bones, dehydration, and brittle fur. If you are using cod liver oil, we suggest you use it only on alternate weeks, or to limit consecutive use to a maximum of six weeks.

We recommend using products made especially for dogs, as human supplements can be difficult to dose and may not include the added vitamin E which is needed to counteract the decreased levels that supplementation with omega-3s can cause.

Commercial complete dog foods will always contain the correct levels of vitamins and minerals your pet needs in accordance with the "Nutrient Requirements of Dogs" published by the National Research Council (NRC). However, not all nutrients are the equal in quality. Look for diets like Arden Grange that contain naturally derived vitamins where possible (these have the best bioavailability) and chelated organic minerals. Chelation is a special process which ensures efficient absorption from the gut and efficient transfer to target tissues.

There are a wide range of natural remedies that may be used to help ensure healthy skin and a shiny coat in the event that a helping hand is needed. Choose a company who is licensed to supply to animals such as Dorwest Herbs.

As a responsible and ethical company, Arden Grange fully appreciates that caution must be taken when discussing the potential benefits of nutritional supplements. It is against the law to make medical claims. Whilst the food, ingredients and supplements discussed are safe and natural, and may be beneficial to some dogs, we must highlight that they are not a substitute for veterinary intervention in the case of a sick animal.







