SUPPLEMENTATION is widely used for both skin disease and joint disease in the dog. However, nail problems can present as an equally debilitating problem to the pet and pet owner alike and is known of the types of supplement that are effective.

The claw of the dog is composed of horn, which is a specialized epidermal product derived from the underlying nail matrix. Whilst horn shares some common keratin and matrix proteins with the epidermis many are unique to the horn itself. It is, therefore, simplistic to use the same range of supplements for nails as for skin.

Supplements can be divided into those that are used to treat disease and those that are merely used to manage nail abnormalities that do not necessarily represent a disease state but possibly only a variation from the normal. Treatment of nail disease is beyond the scope of this article as it involves the use of a whole range of drugs including antibiotics, peripheral vasodilators and immune modulating modalities.

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**Nutraceutical nail supplements: fact or fiction?**

Left: onychodystrophy and onychomadesis of the claw. Insert: onychomadesis and early signs of onychorraphy of claws.

Nutraceutical nail supplements: fact or fiction?

The aim of this paper is to look at nutraceutical supplements in improving nail quality which can, in itself, help in the management of disease. In the same way that some people have perfect nails that require little attention there are individuals that have nails that are soft (onychomacia); have horizontal splits or lamellation (onychoschizia) or are roughened and ridged (trachyonychia) nails. Specific diseases can cause severe variants of many of these changes but milder manifestations can be caused by underlying mental factors such as trauma, excessive wetting or contacts with chemicals or are idiopathic variants of normal.

Changes in nail consistency may be due to the impairment of one or more of the factors on which the health of the nail depends: especially variation in the water content and keratin constituents.

**Essential fatty acids in controlling water loss**

Approximately 15 per cent of the human nail is water. Constant wetting of the nail increases its water content and leads to softening. In dogs, excessive licking or wetting of nails may, for example, out of a walk, could produce this sort of change. If the lipid content of the nail is low once wetting occurs, the nail cannot retain the water, so that over-drying results in increased fragility.

Supplementation with essential fatty acids, especially those high in gamma linolenic acid, has been suggested in man to help reduce this problem. This would certainly suggest that similar neeutrochemicals would be useful in the same way.

**Further reading**

The website for the Medicines and Healthcare products Regulatory Agency provides information on the requirement for regulatory studies that ensure all medicinal products are safely regulated. The website of the Food Standards Agency (http://www.foodstandards.gov.uk) provides information on the regulation of food and food additives. The Agency is advised by the Advisory Committee on Novel Foods and Processes (ACNFP) (http://www.acnfp.gov.uk) and information is available on the relevant consultation processes. The Veterinary Medicines Directorate website provides useful information on what they consider to be non-medicinal products and what constitute a veterinary medicinal product (http://www.vmd.gov.uk/industry/NovelFoodsandProcesses.html). The Food Standards Agency (http://www.foodstandards.gov.uk) provides information on the regulation of food and food additives. 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