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Oils & Fats

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Oenothera biennis, the evening primrose.

Anthony C Dweck, technical director of Peter Black Toiletries, takes a closer look at one of nature's most beneficial plants, the evening primrose.

There is a plant that grows wild by the roadside, on railway embankments and seaside places, wherever the ground is poor, that is one of the most miraculous gifts of nature. In some places it is known as the 'Evening Star' in France it is the 'Beauty of the Night', in Germany it is the 'Virginian Night Candle'. It is also known as 'Moth Blossom' and 'Night Opener', but we know *Oenothera biennis* better as the evening primrose. It should be noted that this biennial plant is in no way related to the primrose of the Primulaceae family. The flowers of this plant open between six and seven in the evening, the petals emitting a gentle and subtle fragrance.

Nature's Special Reserve

The plant originates from North America and was first introduced into Europe in 1619 in the Padua Botanic Garden. It may have made its way into England at an earlier date and was probably introduced by John Tredeasant, who was a gardener and herbalist to Elizabeth I. The plant has proliferated, because it is one of the few that not only survives, but actually thrives in poor conditions. Such conditions exist in old quarries, and it is surprising to learn that one of the larger growers (until quite recently) was the RMC Group, who turned its redundant gravel sites into profitable evening primrose crop growing areas.

This plant is a relatively modern discovery and so there is no mention made of the plant by Culpeper, Gerard or Dioscorides.

Evening primrose is edible, particularly the fleshy root which is cooked in vinegar and oil to make a soup. All parts of the plant have a medicinal value, though the emphasis of modern research has been on the oil obtained from the cold pressing of the seeds. The aqueous extract, produced from the infusion of either the whole plant or the leaves, has astringent and demulcent properties. The plant contains tannins, mucilage, some bitter substances and resins, as well as potassium salts.

It is used extensively in the treatment of gastric disorders and liver problems. It also benefits colds, coughs and asthma. Applied externally as an ointment, or used as a poultice, the whole plant acts as a wound healing agent.

The major component, however, is the seed oil, which has proved of immense importance both internally and externally. It contains essential fatty acids (EFA), of which two are of particular importance — gamma linoleic acid (GLA) and linoleic acid. The beneficial effects of evening primrose

Marks & Spencer own label range.



oil could well be related to affording a precursor of the prostaglandins for those individuals whose enzymatic conversion of linoleic acid to GLA is deficient. It is almost certain that it is these vital materials in the body which help in the growth and reproduction of cells. Certainly, an EFA deprivation can lead to eczema-like lesions, hair loss, defective connective tissue synthesis leading to poor wound healing and also failure of the immune function.

Published data comes from many learned papers, including *The Lancet* and the leading teaching hospitals. The existence of three pharmaceutically licensed products also bears testimony to the importance of the oil. One product is specific for breast pain, another incorporates lithium and is specific for seborrhoeic dermatitis, whilst the third is for atopic eczema. The major part of all these is evening primrose oil.

Research is quite emphatic on the specific benefits to the skin of evening primrose oil and reports on its use for psoriasis, skin eruptions, ageing skin and general skin dryness. It is also cited for ichthyosis with marked pruritis. Little wonder that evening primrose is carving a well deserved place in skin care ranges.

The oil produces a profound effect in reducing the water loss through the skin, though this is not thought to be a function of occlusivity. It is more likely to be its epithelial phospholipid structure.

The story would not be complete without mentioning some of the other conditions, where evening primrose oil has proved of immense value. It is of undoubted value in PMS (pre-menstrual syndrome) which, apart from the proof reflected by product sales, was the subject of a conclusive study by St Thomas's Hospital in 1981. The second condition is that of MS (multiple sclerosis), where considerable research is taking place. At the moment, the results are not conclusive but do show some promise. Patients with rheumatoid arthritis have also been clinically tested and well over half experienced an improvement after taking evening primrose oil.

Additionally, a trial carried out on alcoholics showed that there was some regeneration of the liver, coupled with a reduction in the cravings from alcohol withdrawal. This study links quite well with a study carried out on hyperactive children, where the evening primrose oil brought about an increased level of pacification.

There is no doubt then that the benefits of evening primrose are real, but it does raise two provoking thoughts. What else will the investigation of this material reveal? And, as this is only one plant, what would be discovered if other plant materials were investigated with such thoroughness?