

Seaweed is natural, plentiful and full of goodness – and it could even help in the fight against cancer.

Liz Bestic and **Claire Gillman** report

down
to
earth



weed & wonderful

Ust above the shoreline on the island of North Ronaldsay, the northernmost of the Orkney Isles, roams a rare and ancient breed of dishevelled-looking sheep.

These rather primitive creatures yield some of the finest wool in the world and yet suffer exceptionally low levels of disease. The secret of their robust good health is believed to lie in their unusual diet, which is composed almost entirely of seaweed. The fact that animals are quite prepared to graze on seaweed has led researchers to investigate its nutritional qualities.

Seaweeds are a rich source of antioxidants, such as beta-carotene, and the vitamins B1 (thiamine, which keeps nerves and muscle tissue health), B2 (riboflavin, which helps the body to absorb iron and is therefore good for anaemics) and vitamin B12. They also contain trace elements such as chromium (affects insulin levels), zinc (which helps with healing), iron, potassium, manganese, boron and magnesium.

In Celtic areas of the UK there is a strong tradition of seaweed consumption. In Scotland, carrageen and dulse are still eaten in the traditional way – boiled with milk to make a kind of pudding or served as a soup. Dulse is

still popular in Ireland where it is often mixed with potatoes and butter adding a salty, savoury flavour to fried potato. In South Wales, locals have traditionally boiled and eaten sloke (aka Japanese nori, the small red seaweed that is used in many sushi dishes) as a jelly and it is used to make laverbread. In Cornwall, it used to be eaten cold with vinegar and was known for its good health qualities.

Sea sore

In fact, herbalists have always used seaweed to cure a variety of ailments from ulcers to cuts and grazes. Legend has it in Brittany that the earliest seaweed farmers never worried about the cuts they sustained while handling the knotted tangles of seaweed and kelp they were harvesting to make pain d'algues – seaweed bread – because they knew that the wounds healed with little or no treatment. Today, even in allopathic medicine, NHS nurses use certain dressings which are impregnated with seaweed to promote rapid healing.

Now it seems that seaweed may yet emerge as a major player in the field of cancer-fighting foods. The most recent study showed that a diet containing kelp lowers levels of the potent sex hormone oestradiol in rats and raises hopes that it might also decrease the risk of oestrogen-dependent diseases such as breast cancer in humans. 'We believe the kelp may prevent

“ literally causes cancer cells to self-destruct ”

oestradiol from binding with its oestrogen receptors which could provide protection against oestrogen based cancers,' explains Dr Chris Skibola, an assistant research toxicologist at the School of Public Health, University of California.

The type of seaweed used in the study was *Fucus Vesiculosus* or bladderwrack, closely related to its Japanese cousins wakame and kombu. 'The most profound discovery was that women with endometriosis and severe menstrual irregularities experienced significant improvement in their symptoms after just three months of taking 700mg of seaweed capsules a day,' says Skibola.

Japanese scientists have run more than 500 clinical trials to discover whether there are elements in seaweed which could suppress the growth of tumour cells. Researchers at the Japanese biomedical group Takara Shuzo discovered the polysaccharide known as U-fucoidan, which literally causes cancer cells to self-destruct. Their research showed that when a small amount of this was added to a culture of colon cancer cells half of them died within 24 hours and the rest were completely eliminated after 72 hours.

However, scientists in the field of cancer research are cautious and although they admit the evidence is compelling, they feel more research needs to be completed. Whether or not seaweed has implications for cancer research, there is plenty of evidence to support its many other qualities.

Sea sure

Author Mary Beith who wrote *Healing Threads* – a book describing the traditional medicines of the highlands and islands of Scotland – believes seaweed could be undergoing a renaissance. 'Dulse which is one of the most common seaweeds in this area has long been used in childbirth, to cure goitres and for ulcers. Over a hundred years ago there was an army officer from around here who developed terrible stomach ulcers. They became so painful the army doctors could do nothing for him. Eventually he was sent home to Melmouth to live out his last few months. A local herbalist fed him on a diet of dulse and he went on to live for many decades afterwards and became a local legend!' she says.

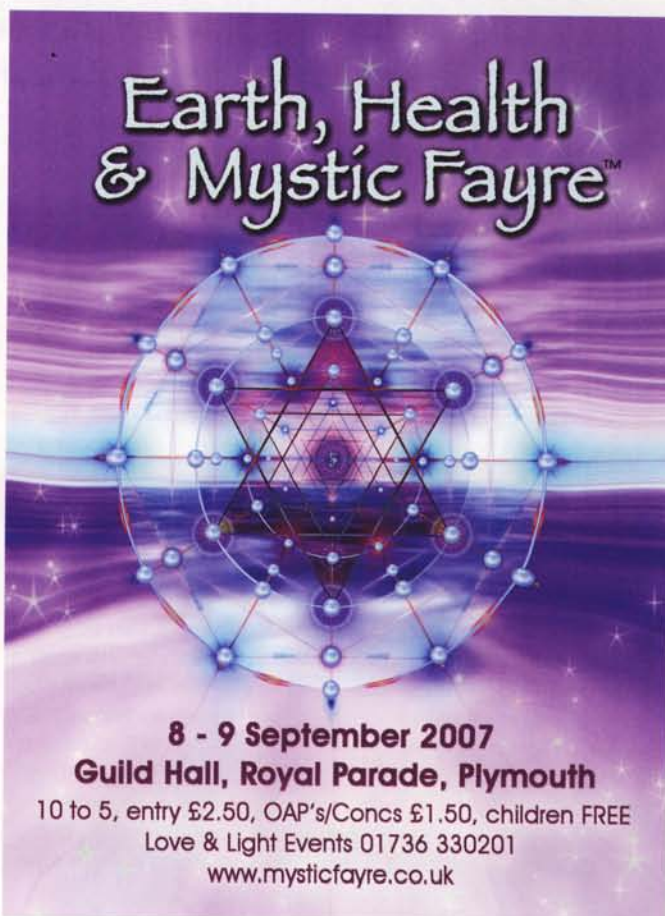
There may even be an application for seaweed in the ongoing fight against obesity. As long ago as the 19th century, bladderwrack tea was widely promoted as a slimming aid. It seems that even in those days people were aware that the high content of iodine in seaweed may be medicinal – seaweed contains around 20,000 per cent more than most inland plants. Iodine does indeed have a direct effect on the thyroid gland, which is linked to metabolism. Native Hawaiians who tend to be stocky and overweight experience very little heart disease or other health problems – they attribute their good health to a diet containing plenty of their native kelp known as Limu.

However, before rushing out to buy up supplies of kelp, a word of caution: high levels of iodine in kelp means that it is not recommended for people who are pregnant, nursing or who have hyperthyroid conditions.

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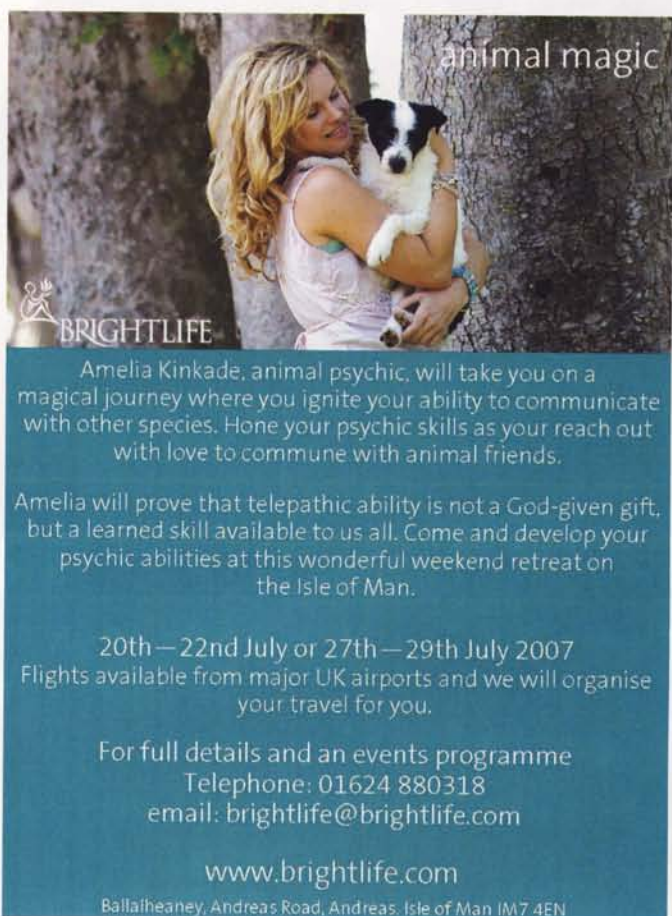
more information

- You can buy seaweed from health food stores and sushi specialists – even Sainsbury's sells a dried variety of seaweed and Tesco sells it in its Nutri Centres.
- Seagreens, a British organic seaweed company, makes an alternative to salt from the Norwegian seaweed, Arctic wrack. It's baked into loaves at Artisan Bread, in Whitstable, Kent and sold mail order – visit www.artisanbread.ltd.uk or www.seagreens.com for more details.
- You can still buy laverbread in certain Welsh seaside towns or by mail order from www.wales-direct.co.uk.
- Why not indulge in a bit of seaweed-foraging of your own? Best locations are away from polluted beaches and the coast of highland Scotland and its isles, western Ireland, South Wales and the West Country offer the best supplies. Hugh Fearnley-Wittingstall's River Cottage (www.rivercottage.net/Shop/HQEvents.aspx) run foraging courses in Dorset if you want to be led by an expert.



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