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Welcome to the January issue of the Nutrition I-Mag. I expect you have all started to research various detox diets and cleansing supplements so you can have your recommendations ready for all your tired and toxic clients. And if detox isn’t the flavour of the month in your clinic, then I’ll guess that stress and vitality will be a pretty common theme. So to help take the stress out of your clinical preparation work, simply turn to page 24 for an insightful article from Ben Brown, detailing everything you need to know regarding nutritional intervention for stress and vitality!

Higher Nature has a big repertoire of supplements and information aimed at the older woman. This issue, two members of their nutrition team have compiled an excellent overview detailing ways to address handful of common health issues that some of your older female clients are likely to have concerns about. So turn to page 14 for a quick crash course in women’s health.

And this year we kick off the Mentoring Scheme with an article submitted from Anja Springthorpe, a student for BCNH, covering the topical issues that surround children’s health. With more and more children being diagnosed as obese, now is the time for parents to wake-up and dish out some healthy eating advice. Anja reviews the facts and figures around this weighty subject and suggests some easy strategies for parents to follow.

Wishing you a healthy start to 2014!

Susie

SUSIE PERRY DEBICE
BSc Hons, Dip ION
Recession reduces calories eaten but waistlines continue to grow

A series of reports from the Institute of Fiscal Studies (IFS) has been published outlining the effect the recession has had on the food consumed in British homes. Between 2007 and 2012, as the recession hit, spending on food to eat at home dropped 8.5 per cent compared to before the recession, such that the IFS estimate households were consuming 15 per cent fewer calories in 2009 than in 1980. However, this reduction in calorie consumption has not translated into health-promoting benefits as the authors would have predicted; instead obesity levels have continued to increase. It is reported that this may in part be due to the increase in snack foods, soft drinks and food out purchased during the same period, but the IFS also report the overall nutritional quality of food declined, with households switching to cheaper calories. During this period there was a substantial shift away from fruit and vegetables towards purchases of processed foods. The authors conclude that these changes in food selection during the recession have resulted in the average saturated fat and sugar content of food purchases to increase. They comment the results shed light on how economic conditions influence people’s decision-making and how economic policy measures may affect diet-related health problems such as obesity.


Controversy over health claims for vegetable oils

New controversy has been sparked in Canada over health claims for vegetable oils and foods containing vegetable oils. In 2009, Health Canada’s Food Directorate approved the health claim that replacement of saturated animal fats with unsaturated fats, including Polyunsaturated Fatty Acids (PUFAs) leads to “a reduced risk of heart disease by lowering blood cholesterol levels”. Now an article published in the Canadian Medical Association Journal has challenged the evidence in support of this claim. The key points highlighted by the authors draw attention to the fact that only some, not all omega-6 PUFAs may reduce cholesterol levels, and new evidence suggests replacing animal fats with linoleic acid may lower cholesterol, but is also associated with an increased risk of death from coronary artery disease. A review of the safety of the health claim is now being called for...watch this space!


Gut microbiota linked to rheumatoid arthritis

US researchers have suggested that a disturbance in the gut microbiota may play a role in the onset of autoimmune diseases. The study, completed in New York, has linked a species of intestinal bacteria known as Prevotella copri to the development of the inflammatory joint condition, Rheumatoid Arthritis (RA). The authors claim this to be the first human demonstration that the chronic inflammatory disease may be mediated in part by bacteria in the gut. The team used DNA analysis to compare the gut bacteria from faecal samples of patients with RA and healthy controls. Of newly-diagnosed patients, 75 per cent were shown to have more abundant levels of P. copri in their intestinal microbiota, compared to 21 per cent of healthy individuals. High levels of the species had previously been shown to exacerbate colonic inflammation in mouse models.

Homocysteine associated with increased risk of colorectal cancer

A recent study has demonstrated a potential link between high homocysteine levels and an increased risk of colorectal cancer (CRC) independent of oxidative stress. The researchers recruited 168 individuals diagnosed with CRC and 188 healthy controls to the study. The intention was to determine the associations between homocysteine, cysteine, Pyridoxal 5'-Phosphate (PLP) and folate with oxidative stress indicators and antioxidant capacities, and further investigate risk of CRC. While cysteine, PLP and folate were not found to be related to oxidative stress, antioxidant capacities or an increased risk of CRC, elevated plasma homocysteine was correlated with an increased risk of CRC independent of indicators of oxidative stress. Oxidative stress has previously been thought to mediate this association. The authors concluded that these findings support the notion that further research is needed to ascertain the risk factors for elevated homocysteine and whether high homocysteine may be used as a screening strategy for the development of CRC.


Could meal frequency be the key to weight loss?

A new review paper from New Mexico, USA, has investigated the evidence for altering meal frequency to influence body weight regulation. The authors report that since the 1960s, the traditional pattern of three meals a day has been debated. The aim of the review was to assess the impact meal frequency has on body weight regulation, hunger control and blood markers of health in overweight/obese participants undergoing a controlled, reduced calorie, weight loss diet. The current widespread school of thought suggests that eating smaller meals more often will spread out daily calorific intake; however the key findings of the review suggest this is mainly supported anecdotally, with little evidence within the literature to support this theory. Furthermore, more favourable lipid profiles in obese individuals have been observed with reduced meal frequency.


Laughter could be the best medicine!

A new randomised, prospective study from Taiwan has provided evidence of the effectiveness of laughter for mitigating stress on adolescents. The researchers introduced a laughter-based therapy termed the ‘Laughing Qigong Program’ (LQP) to a group of adolescents over eight weeks. Thirty-four students undertook the experimental programme, while 33 control students read or did homework. The students were tested for self-esteem, humour, saliva cortisol, blood pressure, heart rate and mood states, using standardised methods both before and after each session. Results showed mood states and humour to be significantly improved in the laughter group, while cortisol levels were significantly reduced. The researchers suggested this indicated lower levels of stress after completion of the programme. They concluded the LQP to be a non-pharmacological and cost-effective method for helping students manage stress.

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Cleanmarine Krill Oil for Women has been specially formulated with ingredients that help regulate hormonal activity, reduce fatigue, and maintain healthy skin. It combines powerful omega-3 from krill oil with soy isoflavones, vitamins D, B1, B2 and B6, rosemary extract and MCTs. What’s more, unlike fish oils, the omega-3 is more readily-available to the body, sustainably and ethically-sourced and produces no fishy repeat!

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Trend Spotter - Vitality Boosters...

With the festive season over, many people face the new year feeling somewhat lethargic and out of balance. At Cambridge Commodities, it's now that we see a surge in popularity of vitality-boosting ingredients.

**Coenzyme Q10** – is the catalyst that makes it possible for the mitochondria to produce ATP. The mitochondria are responsible for producing around 95 per cent of the ATP produced in the body, making CoQ10 a highly-effective metabolic agent and an essential component in increasing energy levels.

**B-vitamins** – one of the stories of discovery of the B-vitamins was based around the disease ‘Beriberi’ (which translates to ‘I cannot, I cannot’ - relating to severe weakness and exhaustion), once believed to be incurable but found to be simply a deficiency of thiamine (B1). B-vitamins are essential for the elaborate energy-releasing pathway in the body. The four most involved with the cellular energy cycle are thiamine, niacin, pantothenic acid and riboflavin.

**Cordyceps** – also known as caterpillar fungus. Used in traditional Chinese medicine for hundreds of years and now widely-recognised as an excellent treatment for fatigue-related conditions. It first became popular in Western society in 1993, when the coach of record-breaking Chinese female runners attributed their success to the mushrooms. Studies have revealed it increases the cellular energy production and oxygen supply, and supplementation may help lessen fatigue, improve immune function and reduce stress levels.

**Gingko biloba** – traces back nearly 300 million years from the oldest surviving tree species. In cases of fatigue, the adrenals suffer from a significant amount of oxidative stress, leading to increased free radicals. Gingko biloba protects the adrenals, brain and liver from these damaging free radicals. A large number of human studies have supported the fact it increases ATP, which boosts the brain’s energy metabolism of glucose and increases electrical activity, resulting in more energy and improved cognitive functioning.

**Astragalus** – used in Chinese medicine for around 2000 years, known as ‘haung qi’, or chi, because it boosts the body’s energy levels naturally. Astragalus has shown amazing immune system modulating effects in studies. Not only does it increase the number of white cells and in particular the ‘hunter’ T-cells, it also helps identify viruses, bacteria and other rogue cells, so that the immune system can target and expel them.

For more info, visit www.c-c-l.com. Check this space next issue to discover more about the latest UK supplement trends from Cambridge Commodities. Remember you heard it here first!

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Cambridge Nutritional Sciences link IgG testing with migraines

Research in support of IgG testing continues to grow. It is, however, not something which is commonly reported on, and so few clients and practitioners are aware of specific areas and conditions where it has been shown to be beneficial. One such example is migraine sufferers. Two studies, one in 2007 and one in 2010, looking at raised IgG antibodies to food antigens, showed how sufferers benefitted when they followed the resulting restricted diet.

While more research needs to be done, both studies showed the advantages of using this strategy and concluded that elimination diets based on IgG antibodies can successfully control migraines and in some instances, without the need for medication.

For migraine sufferers who have not been tested, this is exciting news and may help to reduce not only the medication they take, but also time lost when suffering and recovering from an attack.

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Cleanmarine Krill Oil Beats 10 Common Symptoms of PMS

A small study has indicated that a krill oil supplement may be effective at reducing 10 of the most common psychological and physical symptoms of PMS by an average of 44 per cent. Results indicated that improvements ranged between 10 and 80 per cent after 90 days of supplementation. The greatest improvement for all women on average was in breast tenderness. The study’s author, Michael Wakeman, concludes; “The results suggest Cleanmarine Krill Oil for women represents a likely safe and effective first stage intervention for PMS and is worthy of further investigation.”
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Contact Cambridge Nutritional Sciences on 01353 863279 or visit www.food-detective.com for more information.
EXPERT ADVICE

Students and practitioners, time to get your questions answered!

There are lots of fully-qualified Nutritional Therapists who have gone on to achieve great success hosting TV shows, lecturing, writing books and running busy private clinics. Now it’s your chance to tap into their wealth of clinical experience and specialist knowledge. It doesn’t matter how simple or technical your question is, just email it to us and we’ll get one of our trained experts to answer it for you.

Q: Get clued up on cleansing

Many clients approach the clinic, wanting advice on how to achieve a realistic and effective health plan for the start of the new year. Are there any new nutritional protocols, nutrients or botanicals that our Nutritional Therapists can include in their advice?

GABRIELLA CLARKE ADVISES:
The first focus should be on digestion and liver function. During the festive season, many of us over-indulge and consume way too much fat-laden, rich food, and of course we all drink more alcohol than we normally would. Milk thistle is the perfect herb to heal and improve liver function and address a sluggish digestive system. A healthy liver and digestive system can also help us to lose those few pounds we may have gained. Milk thistle is best combined with dandelion, which has a detoxifying effect.

The excessive sugar consumption over the holiday season plays havoc with blood sugar levels; sugar can be addictive, especially when we rely on it as a source of energy. The peaks and troughs in our blood sugar levels can be addressed by taking chromium, alpha lipoic acid and cinnamon. These items regulate blood sugar and may help prevent and manage diabetes. For energy; take a high dose of vitamin B12.

We are still in the depths of winter, and the lack of sun means that we will all be deficient in vitamin D. Most adults will require at least 1000ug daily. Vitamin D deficiency not only has a detrimental effect on our bones, but it may also lead to lowered immunity and depression. Vitamin C (1000mg) and 15mg zinc daily help to prevent viruses and infections from taking route. Echinacea is also a very helpful immune-booster.

Many people will choose to go on a diet to shed those festive pounds. There is always the danger that the person is missing out on essential nutrients, especially if the diet is very strict and calorie controlled. Protein shakes make great meal replacements. Super greens such as spirulina, chlorella, barley grass, etc can add an extra energy and nutrient boost. A good quality multi is advisable.

GABRIELLA CLARKE, BSC (HONS), DipPhyt, is a practising Medical Herbalist and runs a clinic in Beaconsfield, Bucks. Gabriella is also a freelance health writer and has been contributing articles to newspapers, magazines and websites for the last six years. She also gives talks and workshops.
SARAH GILL, BSC (HONS), has been a Nutritionist with Nutri Advanced for over eight years, working as a key member of the company’s busy nutrition team as well as co-ordinating the FirstLine Therapy lifestyle programme in the UK. Sarah’s experience in dealing with practitioner enquiries on a daily basis, as well as undergoing regular intensive training with Nutri Advanced suppliers, ensures that her practitioner support and product knowledge really is second-to-none. Sarah is passionate about training students and practitioners in the use and application of nutritional supplements as part of a therapeutic regime.

Q: Prostate health

I have a few male clients with mild prostate symptoms that haven’t yet been diagnosed with anything. Is it still worth treating them?

SARAH GILL ADVISES

Prostate concerns are always a sensitive issue, as men don’t generally like to talk about their symptoms. Yet over 30 million men suffer from prostate conditions that negatively affect their daily life. Most men aren’t even aware of what their prostate is, or what it does, yet prostate problems can be a major cause of ill health and impaired quality of life in middle-aged and older men. Optimal prostate health is essential for preventing common problems such as Benign Prostatic Hyperplasia (BPH), so it is worth trying to target any early symptoms before they progress.

The prostate is a small gland that surrounds the urethra, a tube that carries urine from the bladder to the penis, and symptoms can include difficulty starting urination, reduced stream of passing urine, painful urination, needing to pass urine more frequently (especially at night), a feeling of not quite emptying the bladder and urgent urination. Quizzing middle-aged and older men on their habits can help to give an indication of whether they might benefit from additional prostate support.

Both genetic and environmental influences may affect prostate health. Ethnic origin, family history, smoking and diet may all play a role, and the good news is that it has been suggested that numerous plant constituents may act in the prevention and inhibition of prostate disorders. Saw palmetto, beta-sitosterol and stinging nettles (Urtica dioica) all provide strong support for and maintenance of the urinary tract and prostate gland in men.

Saw palmetto is an extract of the fruit of Serenoa repens, which is rich in fatty acids and phytosterols that act in a similar way to oestrogen, progesterone, and testosterone. The benefit of this is that it appears to inhibit 5-alpha reductase, the enzyme responsible for the conversion of testosterone to Dihydrotestosterone (DHT). DHT has been associated with prostate health concerns.

The combination of saw palmetto, beta-sitosterol and stinging nettle has proven to be an effective combination for supporting men with urinary tract or prostate health symptoms and furthermore can be helpful in preventing the worsening of these often uncomfortable and embarrassing symptoms for men.
ANTONY HAYNES ADVISES

The Gluten Summit was the first of its kind. It was conceived, instigated by Tom O’Bryan ND, and organised by his team. Tom has been pioneering and teaching the information about gluten-related disorders for many years. Over 110 000 people registered and listened to some or all of the presentations. He assembled 29 experts and opinion leaders gathered to prove to the world that it MUST ask; “Could health issues be caused by gluten?”

As a pre-coeliac myself (as opposed to Non-Coeliac Gluten Sensitive – NCGS) and knowing something of the subject, this was not only relevant to many of my patients but also myself; I learnt so much. To have the eminent cast of speakers is remarkable; there is so much for each one of us to take away from this information. I have selected some of the speakers, and this in no way detracts in any way from the others not mentioned here, but space is limited. It is a star-studded line-up.

Michael Marsh, MD, DSc, FRCP, the man who created the different stages of coeliac disease (Marsh I, Marsh II and Marsh III), Dr Mark Houston, MD, MS, ABAARM, FACP, FAHA, FASH, David Perlmutter, MD, FACN, ABIHM, Author of Grain Brain, Alessio Fasano, MD, the man who has put zonulin on the map in terms of gut permeability, Aristo Vojdani, PhD, MSc, MT, an Immunologist of the highest calibre and Chief Scientific Advisor to Cyrex Labs which are now available in the UK via Regenerus Labs, Prof. Marios Hadjivassiliou, MD, Loren Cordain, PhD, the Godfather of the Paleo Diet, Jeffrey Smith, an authority on the GM food issue, and the Cardiologist William David, MS, Author of Wheat Belly. The final name I will share with you is that of Prof. Yehuda Shoenfeld, MD, FRCP, who is a world authority on auto-immune conditions.

Tom O’Bryan interviewed each of these individuals for about an hour each and was able to summarise and pull together the vital information and make it accessible for the lay person and practitioner alike. I cannot encourage you enough to explore more about this seminal event - http://theglutensummit.com/.

Q: The Gluten Summit

The subject of gluten has always been at the forefront of nutritional therapy, but are there any new advances or research that we should be taking note of?

ANTONY HAYNES, Head of Technical Services at Nutri-Link, is responsible for the technical and practitioner support team. He presents clinically-focused workshops, lectures and seminars that practitioners find invaluable. Antony remains in private practice in Harley Street London, where he employs his 18 years of clinical experience in managing the nutritional needs of his patients, which number in excess of 11 000. He is also a successful, award-winning Author of two books on nutrition; The Insulin Factor and The Food Intolerance Bible, and has appeared on television and radio.
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There are times in life when certain age groups require additional nutritional support. Jacqueline Newson and Jenny Bodenham review the essential nutritional demands of women, as they go through the menopause…

The menopause commonly affects women around the age of 52, although this may happen earlier or later. Menopause is considered to have occurred when a whole year has passed without menstruation. The phase leading up to the menopause is called the peri-menopause, during which time a variety of symptoms can be experienced due to fluctuating hormone levels. For 20 per cent of women these symptoms may be so difficult to cope with, that they seek medical help.

Each woman’s ovaries produce approximately two million eggs at birth. This reduces to about 400,000 at puberty, and as women age their egg supply gradually depletes with each menstrual cycle. The menopause marks the time when the ovaries are completely depleted, ovulation ceases and the normal cycle of oestrogen and progesterone stops. This affects the feedback signals to the brain, causing levels of Gonadotropin Releasing Hormones (GnRH), Follicle Stimulating Hormones (FSH) and Luteinising Hormones (LH) to rise.

Most of the menopausal symptoms that women experience are thought to be due to these hormonal changes. As well as this, menopausal women experience a decline in testosterone. Quite often this has an impact on libido and sexual response at this time.

INCREASED CARDIO RISK

Ironically, the reduced levels of oestrogen post-menopause cause a relatively high concentration of circulating testosterone, which can increase Low-Density Lipoprotein (LDL) cholesterol levels and lower High-Density Lipoprotein (HDL) cholesterol levels. It is thought that this may be a contributory factor in increased risk of cardiovascular disease after the menopause. Other possible contributory mechanisms include an increase in fat due to loss of oestrogen; leading to increased insulin resistance, free fatty acid levels, triglycerides and apolipoprotein B. There may also be an increase in LDL oxidation, as there is less oestrogen to act as an antioxidant.

Nutrition Features
**THE BENEFITS OF SOYA**

The fall in oestrogen secretion at the menopause can result in a variety of symptoms, including hot flushes, night sweats, insomnia, depression, aches and pains, vaginal dryness, mood swings and reduced memory. In Asian cultures where soya foods are regularly consumed, menopausal discomfort is virtually unheard of. Asian women are also far less prone to breast cancer and heart disease. Soybeans are rich in isoflavonoid glycosides and the active isoflavones from soya are genistein, daidzein and glycitein; these are converted into their active aglycone forms by fermentation or through action by the intestinal flora.

**PHYTOESTROGENS**

Phytoestrogens such as isoflavones are gentle and thought to interact with human oestrogen receptors, helping to modify the effects of insufficient or excess oestrogen in the body, bringing balance and producing some relief from menopausal symptoms. Phytoestrogens possess both estrogenic activity (agonist) and anti-oestrogenic (antagonist) activity, to provide this hormone balancing effect. Phytoestrogens are found in food sources such as flax seeds, soya products (tofu, soya milk, soya yoghurts), sesame seeds, chickpeas, lentils, dried apricots, alfalfa sprouts and sunflower seeds.

Flax seeds contain a class of phytoestrogens known as lignans, which, similar to soya isoflavones, are acted upon by colonic bacteria to produce the two major mammalian lignans, enterodiol and enterolactone. Both enterodiol and enterolactone are structurally similar to oestrogen and may produce weak oestrogenic and anti-oestrogenic activities.

**ADRENAL IMPACT**

Post-menopausal high levels of FSH and LH cause the adrenals and ovaries to produce androgens, which can be converted into oestrogens by the action of aromatase in fat cells. Progesterone, on the other hand, is almost exclusively adrenal in origin following the menopause. If the adrenals are exhausted before the menopause, production of testosterone, progesterone and adrenal oestrogen precursors will be compromised. However, ovarian production of androgenic oestrogen precursors will remain the same.

Progesterone is an important part of the stress cycle and is needed for conversion to cortisol, so if stress occurs during the menopause, progesterone can be diverted down the cortisol pathway rather than the Dehydroepiandrosterone (DHEA) pathway needed to make testosterone and oestrogen. It can thus lead to an imbalance between progesterone, testosterone and oestrogen at menopause.

While the body is experiencing these hormonal changes it is important to support adrenal function. B-vitamins can be beneficial - in particular, pantothenic acid, as it is highly concentrated in the adrenals and vital for steroid hormone production. Studies involving rats showed that pantothenic acid supplementation could support the production of adrenal hormones during times of stress.

Adaptogenic herbs such as rhodiola and ginseng can also be very useful at this time, as they are thought to stabilise physiological processes and promote homeostasis.

**THE SUGAR CONNECTION**

If blood sugar levels drop, cortisol is activated to prompt the biochemical reactions needed to raise blood sugar levels again. It is important to keep the blood sugar levels steady, as constant dips will place a burden on the adrenals and force progesterone down the cortisol pathway. In addition to this, blood sugar drops can trigger hot flushes. Blood sugar fluctuations are also thought to promote central adiposity and insulin resistance, increasing Cardiovascular Disease (CVD) risk following the menopause.

Simple dietary changes can help to keep blood sugar levels balanced throughout the day. Focus on slow-releasing carbohydrates, balanced with a serving of protein or healthy fats. Instead of refined, sugary foods, such as white bread, pasta, biscuits, crisps and cakes, replace these with whole-grains like oats, brown rice, vegetables and fruits, and add some good quality protein such as lean meat, fish, poultry, eggs, dairy, nuts, seeds and soya. Avoid sugar and stimulants such as coffee, cola and alcohol.

**FAT AROUND THE MIDDLE**

During the menopause, abdominal fat usually increases – this is commonly known as ‘middle-age spread’. This visceral fat is thought to behave like an organ, producing hormones and other substances that have an effect on health. This increase in abdominal fat can disrupt the normal functioning and balance of the hormones. Scientists believe that visceral fat plays a part in the immune system, producing chemicals called cytokines, which can increase the risk of cardiovascular disease if they are produced in excess. Visceral fat is directly linked with inflammation, an increase in LDL cholesterol and a decrease in HDL cholesterol. It is also linked to insulin resistance. According to researchers, visceral fat is thought to accumulate during the menopause due to an increase in the levels of free testosterone, which is caused by a reduction in the production of oestrogen during the menopause.

**CONSEQUENCES TO BONE HEALTH**

Osteoporosis affects an estimated three million people in the UK, with post-menopausal women being at greatest risk due to a decline in protective levels of oestrogen. Oestrogen stimulates the production of the hormone calcitonin, which in turn stimulates bone building and prevents the production of parathyroid hormone that removes calcium from the bones. Low body-
weight, anorexia and a small frame are all risk factors for osteoporosis in later life. Other risk factors include irregular periods, high protein diets, heavy intake of alcohol, smoking, over or under-exercising and some medications.

Acid to alkaline balance is extremely important. Consuming too many acid forming foods and drinks pulls out important alkaline minerals such as calcium and magnesium from the bones in order to buffer the excess acidity. Too much red meat, refined carbohydrates, sugar, alcohol, tea and coffee can all contribute to acidity. Reducing these foods and drinks and increasing alkalisising fruits and vegetables in the diet, will support bone and general health. Additionally, anything that hinders mineral or vitamin absorption may affect bone health. If stomach acid levels are low, calcium remains insoluble and cannot be ionised. Boosting stomach acid and/or supplementing digestive enzymes may be beneficial.

When it comes to diet, while calcium is essential for bone health, dairy products do not suit everyone. For those who have lactose intolerance, poor digestion of dairy products, or simply do not wish to consume large amounts of such foods, alternative sources of calcium include fish, eggs, nuts, seeds, pulses, whole grains and green leafy vegetables. Eating tinned fish with their bones not only bumps up calcium intake, but also provides important omega-3 essential fatty acids.

Magnesium helps to metabolise calcium and vitamin C, as well as helping in the conversion of vitamin D to its active form. Good food sources include green vegetables such as spinach, as well as nuts, sunflower and sesame seeds, legumes and whole grains. Vitamin D facilitates the absorption of calcium in the digestive system. Because the main catalyst for vitamin D production in the body is sunlight, obtaining sufficient quantities can be problematic in the UK, especially in winter! So supplementing vitamin D makes good sense.

Vitamin C is a key player in the manufacture of collagen, which is an essential constituent of the bone matrix, providing the scaffolding of the bone. The best food sources of vitamin C are citrus fruits, berries, potatoes, sweet potatoes and green leafy vegetables. Other important nutrients include boron, zinc and B-vitamins.

Not only can exercise boost the spirits, but also regular weight bearing and muscle strengthening exercise is essential for building healthy bones. Research has shown that the combination of walking, with other weight-bearing exercise, generates positive effects on bone mineral density at the hip and spine.

**GETTING THE BEST OUT OF VITAMIN K**

It is advisable to take a synergistic mix of nutrients to aid calcium absorption and bone formation, including vitamin D, magnesium, zinc, boron and silica. Research suggests that vitamin K2 may play an important role in preventing tissue calcification, and is associated with a reduced risk of coronary heart disease. Vitamin K2 can be synthesised by intestinal bacteria, but the majority of dietary K2 is found in fermented soya products and in small amounts in animal foods such as dairy, fish, eggs and meat from grass-fed animals. Vitamin K is essential for the activation of vitamin K-dependent proteins (gamma-carboxylation) that modify osteocalcin, which moves calcium into the bones, and the matrix Gla protein (MGP), which moves calcium out of blood vessel walls, veins and skin, preventing it being deposited. When MGP is not properly activated, there is thought to be an increased risk of the blood vessels becoming hardened by an accumulation of calcium.

While bone benefits have been shown for both the MK-7 and MK-4 forms, research suggests that the MK-7 form of vitamin K2 may:

- be better absorbed
- last longer in the bloodstream
- be effective at lower doses

The richest food source of the MK-7 form of vitamin K2 is natto, a fermented soybean food commonly eaten in Japan. In the last ten years, several studies have found natto, containing the active component vitamin K2, may increase bone mineral density and reduce bone fractures.
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CHILDHOOD OBESITY
A CLINICAL APPROACH AIMED AT FAMILIES

Obesity rates in the UK are the highest in Europe, and projections indicate this trend to continue for the unforeseen future. Anja Springthorpe, nutrition student from BCNH, explains how to improve the health of future generations…

One out of four adults in the UK is obese, and children have not escaped this worrisome trend, as almost one in three children in England is overweight or obese. This epidemic of childhood obesity in the UK poses significant public health concerns, both now and for the future.

The NHS spent £5.8 billion on diet-related ill health in 2005-2006 alone and with ever-rising obesity numbers, this figure is likely to soar. In addition to the public cost, childhood obesity also places a huge physical and psychological burden on the child, due to increased risk of suffering serious conditions such as type II diabetes, metabolic syndrome, cancers and Cardiovascular Disease (CVD), all of which contribute to reduced quality of life, as well as shorter life span.

DIET AND LIFESTYLE
There is consistent evidence that high intake of energy-dense food leads to a positive energy balance, which manifests itself in increased weight gain and adiposity. The impact of dietary factors on obesity is complex and includes a multitude of macro and micronutrients, but some particular foods appear to play a significant role in the development of childhood obesity.

High intake of sugar-sweetened drinks, added sugar, high glycaemic foods and processed or fast foods, are positively associated with weight gain in children. Interestingly though, it is mainly the saturated fats that have received negative attention. During the 1960s, recommendations suggested that a low-fat diet reduced risk of CVD. This resulted in a five per cent reduction in fat-derived calories, which led to an increased consumption of carbohydrates.

Because the public understanding of carbohydrate quality has been, and often still is, inadequate, a shift of dietary...
pattern towards high glycaemic foods and sugars occurred, which is believed to have contributed to the steady rise in obesity. A recent meta-analysis of 68 trails and cohort studies confirms that sugars are a main contributing factor for childhood obesity, and while we surely all agree that a treat every now and again is nothing to worry about, most children are constantly exposed to these foods and have sugar consumptions well above the recommended 10 per cent of total energy intake. Whether it is the availability of soft-drinks in schools, pint-sized glasses of lemonade with free refill options in many ‘family-friendly’ pubs and restaurants, endless sweets and chocolate isles in supermarkets and relentless marketing from fast-food chains to attract families, it all adds to the excessive intake of energy-dense but nutrient-low food.

EXERCISE
Another significant factor in the development of obesity is lack of exercise. A steady decline in children’s activity levels has been plotted over the last decades, and research consistently shows that a sedentary lifestyle is positively associated with the rising trend in childhood obesity. A recent review of available research since 1964, examining data from 25 million children, found that children today have 15 per cent less cardiovascular fitness compared to their parents’ fitness levels during childhood, which translates into a five per cent decline in fitness for every decade. Televisions, computers and games-consoles often receive the blame for the sedentary lifestyle in children. However, is this really what keeps children indoors? A study which interviewed parents on perceived determinants of childhood obesity suggests that the increase of indoor hours has deeper roots. Parents today are less inclined to let children play outside over safety worries, lack of facilities for children to be active and the fact that expensive sport and after-school clubs are not affordable to all households.

OBESOGENIC ENVIRONMENTS
So, whose job is it to protect children from excessive weight gain? Children have limited ability to make educated choices when it comes to nutritionally balanced meals, adequate energy intake in relation to activity levels and how their diet and lifestyle can affect physical and mental well-being. Children have to rely on parents to receive this guidance. However, the parents themselves may not possess the knowledge about how diet and lifestyle impacts weight and subsequently, health. Parents provide the strongest influence shaping their child’s health beliefs and behaviours, which may explain why children with overweight parents are more than twice as likely to be obese adults, compared to children from non-obese parents. This brings an ethical consideration with it. The adult may very well choose to be overweight, weighing up the advantages and disadvantages based on available information. The child however, is less able to make these considerations, nor is the child likely to challenge the adult when it comes to diet and lifestyle.

Understanding potential solutions to the problem requires understanding of the multitude of factors contributing to obesity. The term ‘obesogenic’ was coined in 1999, and refers to environments which encourage excessive weight gain in predisposed individuals. The ever-rising incidence of obesity in the UK confirms that we are surrounded by such an obesogenic environment. Food insecurity has largely been removed, with increased costs of fruit and vegetables while decreased prices for sugar, refined grains and fat, increased demand of convenience foods, relentless marketing of snacking and fast foods, 24/7 availability of energy-dense foods and the list goes on...

SUMMARY OF MEND PRINCIPLES
1. Encourage mindset shift from weight loss to health living.
2. Formulate easy and realistic weekly diet and lifestyle targets.
3. Educate parents and children about portion sizes and what a healthy balanced diet is.
4. Teach parents and children what weight on the scales means overweight and obese.
5. Limit sugar intake to 10 per cent of daily energy intake. Swap refined carbs for complex carbs.
6. Compensate for treats by having extra healthy meals on treat days.
7. Show parents how to interpret food labels and encourage families to try new foods.
8. Do not eat in front of the TV. Have at least three shared family meals around a table a week.
9. Encourage 10 hours sleep each night.
10. Exercise – boys 80 mins and girls 60 mins per day.

THE MEND APPROACH
1. Emphasis should not be to put obese children on a diet to lose weight, but to achieve a long-term mindset which has weight-loss as a subsequence. MEND discourages the frequent weighing-in approach but instead instils a sense of getting healthy, rather than getting thin.

2. Formulate achievable weekly targets based on the family’s current knowledge about diet and lifestyle, accessibility to resources and financial situation.

3. Educate the family by giving healthy eating advice of what a balanced diet

STEPING TOWARD THE FUTURE
Tackling childhood obesity requires a multidimensional approach aimed at the whole family. This concept has successfully been utilised since 2004 by the Mind, Exercise, Nutrition, Do it (MEND) programme, a community-based health intervention which engages families in the process of weight management by addressing three main components:

1. Mind – education
2. Exercise
3. Nutrition

MEND programme practitioners can base recommendations on the MEND approach.
Mentoring Scheme Feature

Nutrition Features

consists of. Children have been found to achieve long-term lifestyle changes if they have access to education and knowledge. A study published in Psychological Science found that five year-olds that are being read age-appropriate books about digestion, foods and nutrients, followed by conversation about nutrition, ate twice as many vegetables as they normally did\(^\text{11}\).

4. Educate parents and children about ‘healthy weight’. Research suggests that the high prevalence of overweight or obese individuals (25 per cent of the UK population), has shifted perception, resulting that ‘overweight’ is now often perceived as ‘normal’ weight.

5. Recommend the replacement of sugars and refined carbohydrates with complex carbohydrates, with a particular emphasis on the avoidance of sugar-sweetened drinks and high calorific snacks. Although research on the exact impact of sugar reduction in children is scarce, an average loss of 0.8kg has been reported in response to a sugar intake of no more than 10 per cent of daily energy intake\(^\text{12}\).

6. Give allowances for occasional treats and encourage parents and children to agree on a strategy, such as: “If we are going out later for a pizza, let’s have a salad at lunchtime.” Children who are included in the decision-making process are more likely to adhere to weight-loss strategies\(^\text{6}\).

7. Practical advice such as guided supermarket tours explaining how to read and interpret food and drink labels, informal sessions preparing fruit and vegetables with the whole family and encouraging everyone to participate and try ‘new foods’, handing out recipes and educating about appropriate portion sizes, has shown to instil confidence in the parents, helping them implement changes.

8. Encourage the right eating behaviour. A meta-analysis analysing 23 studies of the determinates of excessive calorie intake, found that eating in front of the TV distracts ability to gauge appropriate food intake, resulting in consistently higher calorie intake compared to eating meals on the table\(^\text{9}\). Data from 182 836 children suggest that families that have at least three or more shared meals per week seated on a table, have a 12 per cent lower incidence of overweight children and 24 per cent increase in intake of healthy food compared to families that do not share meals together\(^\text{10}\).

9. Lack of adequate amounts of sleep (less than ten hours/day) in children also increases the risk of excessive weight. It appears that chronic tiredness modulates the endocrine system, resulting in higher calorie consumption during the day\(^\text{8}\). Recommendations on sleep and sleep hygiene should be part of the approach.

10. Recommend exercise. Latest findings based on links between CVD risk and childhood exercise levels suggest that boys require 80 minutes and girls require 60 minutes of physical exercise per day in order to maintain a healthy weight and healthy cardiovascular system\(^\text{11}\).

These recommendations can greatly contribute to an environment within the home setting which encourages a healthy lifestyle with subsequent weight-loss. However, it takes more than just the family setting, to adapt and make changes in order to reduce the childhood obesity epidemic. Reducing the obesogenic environment our children are exposed to requires public health initiatives and even legislative measures. Providing safe and supervised opportunities to exercise for every child, provision of healthy foods in childcare/school settings and more focus on educating children in regards to diet and lifestyle should be top priorities in the attempt to reduce childhood obesity.

ANJA SPRINGTHORPE is a Student Practitioner (BCNH) and studying towards BSc Nutritional Therapy with the University of Greenwich. Upon graduation (Sept 2014) Anja plans to establish a clinic in Northamptonshire and develop her interest in health writing.
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The Pasteurian medical paradigm makes it difficult for clinicians to understand or treat disease effectively, and cardiovascular disease is a good example of this. The circulatory system is intimately related to hepatic, pancreatic, adipose and skeleto-muscular physiology, as well as diet and lifestyle factors, and any truly effective treatment must take this nexus into account. Sarcopenia is an integral component and risk factor, acting via insulin resistance, lipaemias, visceral obesity and the AMP-K / MTOR axis to drive CVD and other diseases. Effective and curative new strategies are presented.

PROFESSOR SVEND AAGE MORTENSEN
HOW A NEW, NATURAL TREATMENT MAY RESTORE CARDIOVASCULAR HEALTH

Poor cardiovascular health and especially heart failure have major costs – not only in terms of lost quality of life but also in the way of massive health expenses for surgery and medical treatment. A relatively new, safe, natural, and seemingly effective treatment may, however, turn out to improve cardiovascular therapy in the future. Danish cardiologist Professor Svend Aage Mortensen will present the results of Q-Symbio and other existing studies on essential nutrition for healthy hearts.

PHILIP RIDLEY
CHOLESTEROL, THE ESSENTIAL STEROL FOR HEART HEALTH

Being supporters of traditional, nutrient dense foods is controversial today, since most of our most nutrient dense foods are those rich in cholesterol and saturated fats. Philip will present evidence that these foods are in fact protective against heart disease, that cholesterol and saturated fats are essential nutrients and that statin drugs may cause rather than prevent heart disease. The hypothesis presented is that heart disease is a modern condition brought on by malnutrition, toxicity and modern processed foods. Philip will also discuss the far reaching implications for public policy.

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“ Thoroughly enjoyed the day and content ”

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“ One of the best conferences I’ve attended ”

ANNE VARCOE, DELEGATE

“ Time-keeping was great, thank you ”

JENNY ADAMSON, DELEGATE
Hyperactivity of the Hypothalamic-Pituitary-Adrenal (HPA) axis has been linked to the development of a wide range of mental health issues, including anxiety, depression and memory impairment.

Research suggests that dysfunction of the HPA axis may be in part the result of nutritional factors, and that dietary change and nutraceutical interventions may help reduce HPA axis hyperactivity and improve mental health and stress-related disorders.

NERVOUS OVERDRIVE
A healthy adaptation to stress is essential for the maintenance of optimal physical and mental health and well-being. One of the major components of the stress response is the HPA axis, which mediates the stress response from the brain and out into the periphery.

Under stress, the brain secretes neurosteroids such as noradrenaline and glutamate, increasing sympathetic nervous system and causing a signalling cascade from the hypothalamus and pituitary out to the adrenal glands.
ultimately increasing the production of cortisol. While a well-functioning HPA axis is essential to good health, chronic hyperactivity of the HPA axis, over-responsiveness to stressful events and high basal cortisol secretion, may be central to the development of a number of serious health consequences.

A TOP DOWN VIEW OF STRESS

Excessive activity of the HPA axis may be driven by exaggerated neuronal activity in the brain, as well as stress-induced changes in brain structure. The neurotransmitters Gamma-Aminobutyric Acid (GABA) and glutamate are involved in regulation of the HPA axis. GABAergic neurons in the hypothalamus can directly inhibit HPA axis via the hypothalamus and ultimately reduce cortisol secretion. In contrast, glutamate activates the HPA axis by way of hypothalamic. Dysfunction of GABA signalling system has long been associated with anxiety. Both GABA and glutamate are produced in the limbic system (e.g. prefrontal cortex, amygdala).

Chronic stress and HPA hyperactivity has also been associated with structural changes in the brain, most notably atrophy of the hippocampus and prefrontal cortex (involved in cognitive function, mood regulation and memory), and hypertrophy of the amygdala (involved in the fear response). This is thought to be in part due to the effects of excessive cortisol secretion on brain plasticity and impairment of neurogenesis, the growth of new neurones.

IMPLICATIONS FOR TREATMENT

Reducing hyperactivity of the HPA axis could be an important treatment focus; indeed research suggests that the degree of HPA axis hyperactivity may predict symptom development and treatment response. Furthermore, improvements in HPA function may correlate with treatment with pharmacotherapy, psychotherapy and overall symptom improvement. And most remarkably, reductions in circulating cortisol may allow regeneration and repair of the brain.

Dietary change and treatment with nutraceuticals has the potential to improve HPA axis activity and offer a viable and safe approach to the management of stress-related illness. Indeed dietary changes have the potential to reduce HPA axis hyperactivity, and a number of nutraceuticals may be able to improve the GABA signalling system and limit HPA activation.

DIETARY CHANGE

Several dietary changes have been proposed for modification of HPA axis function and the management of stress-related disorders. A plant-based diet rich in monounsaturated and omega-3 fatty acids and complex carbohydrates, can reportedly produce consistent improvements in cortisol levels. Indeed, women consuming a dietary pattern closer to the traditional Mediterranean diet, with high monounsaturated fatty acid intake, were found to have lower levels of HPA axis activity. And a number of phytonutrient-dense foods have also been shown to lower circulating cortisol levels, including cherries, cocoa and pomegranate.

Conversely, unhealthy dietary patterns may increase HPA activity and hyper-responsiveness to stress. In a recent study of type 2 diabetics, it was found that there was a significant correlation between low quality foods high in calories, sugar, and fat and HPA axis disruption. Interestingly, lower intakes of potassium and magnesium, as well as a more net acid-producing Western diet have been associated with increased daily cortisol levels and HPA axis activity.

THE BENEFITS OF MAGNESIUM

Magnesium deficiency has been associated with anxiety and depression, although the mechanisms for the effects of magnesium on mood are not clearly understood. A recent exploratory study was able to demonstrate that magnesium deficiency reliably induced altered HPA axis function and increases in anxiety-like behaviour. Magnesium is able to block glutamate and improve GABA neurotransmission, which may explain its ability to reduce HPA axis activity.

A research group at the Medical University of Lublin, Poland have been pioneering investigations into the nutritional neuroscience of magnesium, particularly its anti-depressant and anti-anxiety effects. They recently published a comprehensive review of the history, clinical use and science of magnesium, concluding that "Magnesium preparations seem to be a valuable addition to the pharmacological armamentarium for management of depression."

They note, "The first information on the beneficial effect of magnesium sulphate given hypodermically to patients with agitated depression was published almost 100 years ago." And that since this early observation, "numerous pre-clinical and clinical studies confirmed the initial observations, as well as demonstrated the beneficial safety profile of magnesium supplementation."

LEMON BALM

Lemon balm (Melissa officinalis) is a food and medicine with a long traditional use for relaxation, a use supported by a number of pre-clinical and clinical studies. An experimental study found that by...
directly increasing GABA in the brain, lemon balm was able to lower serum cortisol levels\(^{22}\). The same report also found a direct effect of lemon balm on neurogenesis. Perhaps not surprisingly, human clinical studies have demonstrated an anti-anxiety effect of lemon balm.

In an extemporary study, just 15 days of treatment with 300mg per day of a lemon balm extract “reduced anxiety manifestations by 18 per cent, ameliorated anxiety-associated symptoms by 15 per cent and lowered insomnia by 42 per cent. As much as 95 per cent of subjects responded to treatment, of which 70 per cent achieved full remission for anxiety, 85 per cent for insomnia, and 70 per cent for both\(^{23}\).” This is a rather striking clinical effect.

**THEANINE**

The mechanism of action of theanine, an amino acid found in tea, appears to be in part related to its influence on neurotransmitters, and it has been shown to inhibit glutamate reuptake, block glutamate receptors, increase GABA concentration, decrease noradrenaline and increase serotonin levels\(^{24}\). In a human clinical study, theanine improved the Dehydroepiandrosterone sulphate (DHEAS) to cortisol ratio, suggesting a mechanism for theanine’s therapeutic effect\(^{25}\).

A recent clinic study demonstrated rapid anti-stress effects of theanine (200mg twice daily). A group of 5th-year university students who were preparing for a pharmacy practice placement took theanine or placebo for one week before the practice started and then for 10 days over the practice period. They also had their morning salivary α-Amylase Activity (sAA) measured as a marker of sympathetic nervous system activity. Compared to the placebo-group, sAA was lower in theanine-group and subjective stress was also significantly lower. These results suggest that theanine can effectively reduce feelings of stress, a benefit that may be in part due to theanine’s ability to calm down your sympathetic nervous system\(^{26}\).

**SAFFRON**

Saffron (Crocus sativus) has a long history of use for improving mood and mental health. A traditional Chinese medicine text from the Mongol dynasty for example, states that: “…long-term ingestion causes a person’s heart to be happy,” and considerable modern research supports this traditional mood-enhancing use of saffron\(^{27}\). Interestingly, simply smelling saffron has been shown to lower the stress hormone cortisol and reduce symptoms of anxiety\(^{28}\).

A number of possible mechanisms of action may explain the mood enhancing effects of saffron, including: improvements in the action of the neurotransmitter serotonin, enhancement of brain functions such as of memory and learning, antioxidant effects, protecting the brain against the damaging effects of chronic stress and modulating the GABBA receptor\(^{29-33}\).

There are several human clinical studies that have tested the effects of saffron as a natural anti-depressant and mood stabiliser, with some impressive results\(^{34-41}\). Saffron is not only as effective as anti-depressant medications; it was as well or significantly better tolerated, with no more side-effects than placebo. Furthermore, when used alongside anti-depressant medication, saffron reduced the incidence of sexual side-effects that commonly occur with these drugs. All these studies used just 30mg of saffron extract daily.

**HEALTHY MIND, HEALTHY BODY**

Beyond the effects of psychological and physical stress, hyperactivity of the HPA axis may be the result of poor dietary practices, and the adoption of a healthy diet may improve adaptation and resilience to stress. In particular, a diet that emphasises dietary sources of polyunsaturated fatty acids, and alkaline, phytonutrient-dense fruits and vegetables, has shown promise. Further, the use of nutraceuticals that modulate activation of the HPA axis via the brain, such as magnesium, lemon balm, theanine and saffron, may help cool down the stress response and improve mental and physical health.
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GET COOKING!

WHITE BEAN HOUMOUS WITH PITTA BITES (SERVES 12)

Ingredients
400g can cannellini or butter beans
125g tahini
100ml lemon juice
Finely grated rind of 1 lemon
1 garlic clove, crushed
Pinch of sea salt
2 tbsp olive oil
2 tbsp chopped parsley (optional)
1 wholemeal pitta bread per serving, toasted and cut into fingers

Method
Drain the beans, reserving 2 tbsp of liquid from the can, and place in a blender or food processor with the tahini, lemon juice and rind, garlic and salt. Blend until smooth then, while the motor is still running, add half the olive oil and a little of the reserved liquid if the mixture is too thick. Transfer to a serving bowl and drizzle over the remaining olive oil. Sprinkle with the chopped parsley, if liked, and serve with toasted pitta fingers. The houmous can be stored in an airtight container in the refrigerator for up to three days.
Ingredients

- 1 tsp olive oil
- 1 leek, finely sliced
- 1 garlic clove, crushed
- 400g can Puy lentils, rinsed and drained
- 900ml vegetable stock
- 2 tbsp chopped mixed herbs, such as thyme, oregano, tarragon, mint and parsley
- 200g frozen peas
- 2 tbsp crème fraîche

Method

Heat the oil in a large saucepan over a medium heat, add the leek and garlic and cook for 5–6 minutes until softened. Add the lentils, stock and herbs, bring to the boil, reduce the heat and simmer, covered, for 10 minutes. Add the peas and continue to cook for 5 minutes.

Remove from the heat, allow to cool a little, then transfer half the soup to a blender or food processor and blend until smooth. Return to the pan, stir to combine with the unblended soup, then heat through and season to taste.

Stir together the crème fraîche and mint. Ladle the soup into warmed bowls and serve immediately with the crème fraîche on the side.
And the winners are...

The votes have been counted and we are pleased to announce this year’s winners

Thank you to everyone who voted in the Nutrition i-mag Product Awards 2013. It was, as always, a close contest, with hundreds of students voting for their favourite products from last year. We are pleased to announce the winners and runners-up, so congratulations to them and a big thank you to everyone who voted.

Everyone is recommending Symprove. Are you?

Symprove is a water-based, multi-strain probiotic drink delivering at least 10 billion Colony Forming Units (CFUs) per 50ml measure. Non-dairy and gluten free, its high-speed Unique Delivery System (UDS™) protects these proprietary strains of naturally-occurring bacteria from acids and bile salts as they pass through the stomach, without triggering digestion. These ‘friendly’ bacteria are quickly delivered to targeted areas of the gut and populate. Join the growing numbers of practitioners/clinics involved in the client audit and help to make it easier for your client to take a course of Symprove. Find out more at CAM@symprove.com.

Reishi-MRL 250g Powder presentation with 2g spoon

Reishi-MRL (Ganoderma lucidum) powder is not an extract, but the powder does contain both mycelium and primordia (young fruit body) cultivated into a biomass that is grown on a sterilised (autoclaved) substrate. In a recent study comparing -1,3-1,6 glucan content between Reishi-MRL powder and a Reishi extract in the presence of proteolytic enzymes (in vitro), in the absence of proteolytic enzymes (pepsin and trypsin) the extract exhibited higher values. However, in the presences of proteolytic enzymes, Reishi-MRL exhibited higher values of -1,3-1-glucan content, as well as higher enzymes and secondary metabolite content.*

**Nutrition I-Mag** 31

**Food IgG results in minutes!**

Food Detective™ is a food intolerance testing kit that can be performed in a clinic or given to a client for use at home. Results are obtained in just 40 minutes, so you don’t have to wait for laboratory results in order to identify the problem foods that could be causing adverse symptoms. Food Detective™ tests for reactions to 59 commonly-eaten foods and requires only a finger-prick sample of blood. It is easy-to-use and full instructions are provided in the kit. Contact Cambridge Nutritional Sciences on 01353 863279 for more information or visit www.food-detective.com.

**Best Alternative Product - Winner**

**Nutrimonium – essential GI support!**

Nutrimonium is a tasty, clinically-proven nutritional powder containing glutamine, pre and probiotics with vitamins, minerals and phytonutrients. It has been shown to support an array of GI-related issues by targeting four essential functions:
- Rebalancing gastrointestinal function and gut integrity - Glutamine, zinc, prebiotics and probiotics.
- Supports a healthy inflammatory response - Curcumin, green tea.
- Reduces oxidative stress - Lipoic acid, green tea, betacarotene, vitamin E, selenium.
- Restores micronutrient deficiencies - Magnesium, selenium, iodine, vitamin D.

Nutrimonium comes in handy individual sachets (two week or four week supply) for those on the go, or in a large pot for longer-term use, and can be easily mixed into water, fruit juice or yoghurt. www.nutri.co.uk.

**Nutrition I-Mag** 32

**Best Alternative Product - Highly Commended**

**Delicious, fizzy and free from junk!**

Delicious, fizzy and free from junk! That’s Higher Nature’s new Fizzy Vit C and Fizzy Multi products, which are genuinely unique. True to Higher Nature’s values, there is a buzz of excitement around the new Fizzy Vit C and Fizzy Multi products, as these are the first effervescents in Europe to use Stevia, and are completely free from artificial sweeteners, flavours and preservatives. Fizzy Multi, in new natural raspberry flavour, provides optimum levels of 23 key vitamins and minerals, including important trace minerals, and Fizzy Vit C is a 1 000mg tablet with a delicious orangey taste. www.highernature.com.

**Best VMS - Winner**

**Max B-ND PRL’s ground-breaking liquid B vitamin complex**

Max B-ND – One of your top five go-to supplements from Premier Research Labs. Natural source, fully reduced, bioactive B-vitamin complex. • Ground-breaking full spectrum, end-chain, naturally-sourced, liquid B-vitamin product. • Created by fermentation of whole plant foods, herbs and spices in a proprietary probiotic culture. • With no synthetic starting materials this is a true ‘food matrix’ product. • Biologically meaningful, standardised, bioactive and methylated forms of B-vitamins. • Liquid delivery – no difficult capsules to swallow. • B-vitamin complex facilitates co-dependent action of B-vitamins rather than isolated forms. • Compatible with PRL’s entire ND range for easy compliance. www.prllabs.com.

Max B-ND delivers the full B vitamin range in a liquid, probiotic cultured formulation.
Showcases

The best chelator of toxic Heavy Metals

ACZ Nano is a Zeolite that has been independently tested to be able to safely remove over 1,000 times base levels of mercury and other toxic heavy metals. Mercury is one of the most neuro-toxic substances on the planet. Every person is affected by excess heavy metals and removing them is essential for maintaining health. ACZ Nano will also replace essential minerals, as it is pre-treated with calcium, magnesium and potassium, which it will exchange with the toxic metal. In terms of effect, 6oz of nano-scale Zeolite is equivalent to 1,000 of Micro Zeolite, making ACZ Nano 1000s of times more effective than other Zeolite powders.
www.resultsrna.eu

Max B-ND by Premier Research Labs

Max B-ND, launched in the UK in 2013, is PRL’s liquid B complex that’s rapidly become many practitioners’ favourite ‘go-to’ product. PRL is delighted that Max B was voted best VMS winner in the 2013 Nutrition I-Mag awards, and we’d like to extend a huge thank you to everyone who voted. Max B is an industry first, delivering a full spectrum, end-chain, food state B complex that lends itself to flexible dosage. From January 2013, Max B-ND will be available in a larger 237mL bottle. Call 0800 069 9262 or email info@prleurope.com.

Everyone is recommending Symprove. Are you?

Symprove is a water-based, multi-strain probiotic drink delivering at least 10 billion Colony Forming Units (CFUs) per 50ml measure. Non-dairy and gluten-free, its high-speed Unique Delivery System (UDS™) protects these proprietary strains of naturally-occurring bacteria from acids and bile salts as they pass through the stomach, without triggering digestion. These ‘friendly’ bacteria are quickly delivered to targeted areas of the gut and populate. Want to become a case study? Find out more at CAM@symprove.com “Thanks to everyone who voted Symprove ‘Best New Product of the Year’. Your support means everything to us. Please continue to spread the word about Symprove.”

Reishi-MRL 250g Powder presentation with 2g spoon

In a recent study comparing β-1,3-1,6 glucan content between Reishi-MRL powder and a Reishi extract in the presence of proteolytic enzymes (in vitro), in the absence of proteolytic enzymes (pepsin and trypsin) the extract exhibited higher values. However, in the presences of proteolytic enzymes, Reishi-MRL exhibited higher values of β-1,3-1-glucan content, as well as higher enzymes and secondary metabolite content.* Thank you to all the readers for voting for Reishi-MRL in the recent Nutrition I-Mag awards, the product was voted as Highly Commended’* Comparative Differences in β-1,3-1, 6 Glucan content between Ganoderma lucidum (Reishi) mushrooms (Biomass vs. Extracted) in the Presence of Proteolytic Enzymes –Karmali, A - Clinical Journal of Mycology Vol. IV, Nov 2013.

Thank You from CNS!

We are delighted to hear that the Food Detective™ was Highly Commended in the Nutrition-I-Mag Product Awards 2013. Thank you to all of you who voted for us; this is a great way to start the New Year and we hope the new products we launch this year will be as well-received. As a way of thank you, a Food Detective is up for grabs in the Giveaway so don’t miss your chance!
To register with Cambridge Nutritional Sciences, you can simply contact us on 01353 863279, or visit our website www.camnutri.com.

Nutrimonium – essential GI support!

Nutri Advanced would like to thank everyone who voted our GI formula, Nutrimonium, Best Alternative Product in last month’s Nutrition I-mag. We are absolutely thrilled to receive this award and to learn that you are as pleased as we are with Nutrimonium. It’s feedback like this that makes us even more determined to deliver the highest quality products to meet our practitioners’ high standards in their quest to better their patients’ health and well-being. For more information on Nutrimonium or any of our other formulas, please log on to www.nutri.co.uk or call 0800 212 742 (option 3).
PRODUCT SPOTLIGHT

VeryWise Omega Oils

VeryWise products offer advanced and effective omega-3 formulations as delicious creamy shots. The formulations target general health, as well as providing more specific support for heart, brain, joints and metabolism, and an energy formulation to give that extra boost. The VeryWise range contains high levels of EPA and DHA, which are combined using the unique WisdOM-3™ process with vitamins and many other essential nutrients, to produce a comprehensive, full spectrum nutritional formulation with enhanced absorption, perfectly targeted to a specific requirement.

VeryWise have discovered that we only absorb about 50 per cent of the amount contained in normal fish oils, meaning that for many years people have been getting only half of the potential omega-3 benefits. That’s where WisdOM-3™ comes in. By using a process which mimics stomach action, the EPA and DHA containing fish oil is mixed with water and reduced to tiny droplets which they state; “Results in 100% absorption.” Each product has been flavoured so they are delicious when taken directly as a shot (or from the spoon), or can be easily added to fruit juice or milk. The range includes EnergyWise, OmegaWise, JointWise, BrainWise, CardioWise and MetaboWise.

Caffeine-Free for 2014

The New Year is bound to bring in a flurry of clients wanting advice on how to go caffeine-free as part of their 2014 health kick. Neal’s Yard Remedies has just launched an impressive new range of nine 100% organic and Soil Association certified herbal tea blends. We particularly like the Inner Strength Tea which contains organic elderflower, echinacea and astragalus to help boost energy levels and your immune system, or the After Dinner Tea which contains organic peppermint, meadowsweet, chamomile and fennel to support healthy digestion. Also included in the range is an Echinacea Plus Tea, containing echinacea, peppermint and elderflower, a Vitality Tea with Siberian ginseng, thyme, rhodiola and liquorice, a Detox Tea with nettle, dandelion and burdock and if you are looking to feel rested after a hectic Christmas, then you might like the Night Time Tea containing hawthorn, lime flower, chamomile and valerian root.

New Range of Savoury Nibbles

Bursting with colour, flavour and the finest ingredients, a brand new range of savoury biscuits is set to tempt the taste buds of food fans everywhere. Packed full of flavour, these savouries are created by the Fudge family at the Thomas J Fudge’s Bakery in Dorset, and the range boasts 15 tasty treats, including colourful shards, magnificent melts, fabulous flats and spectacular biscuits, all just ready to be dipped in houmous or spread with nut butter or goat’s cheese. The shards, which are ideal for dipping, dunking or merely devouring, are available in three flavours; Carrot & Coriander, Charcoal & Sesame and Earthy Beetroot & Horseradish. The Flats are incredibly light and are heavily sprinkled with tasty seeds, giving a satisfying, savoury crunch. We thought you would like the sound of the Mellow & Moreish Pumpkin & Sesame Flats and the Crisp & Savoury Seed & Oat Flats. And if those don’t tickle your taste buds, then you might want to nibble on the Black Charcoal Hearts biscuits!
ADRENAL FATIGUE

Life in the 21st century is undeniably fast-paced. With the advances in communication, we are now able to be more productive, more efficient and more responsive than ever before. However, there are signs that our bodies are not able to keep up with this relentless pace, and adrenal fatigue is one way of describing some of these symptoms. Chris Newbold, Head of Clinical Nutrition at BioCare investigates...

Adrenal dysfunction is not medically-recognised, but is probably one of the primary 'sub-clinical' disorders that we see in clinical practice. Adrenal function is essential for both energy regulation and control of inflammation, and in many clients will be a key part of a treatment protocol. Adrenal fatigue occurs when the adrenal glands are no longer able to adequately control the stress response, resulting in an abnormal balance of cortisol and DHEA. This can result in a long list of symptoms, including severe fatigue and mood disturbances.

PATHOPHYSIOLOGY
The adrenal glands are responsible for
the synthesis of the hormones cortisol, adrenaline, Dehydroepiandrosterone (DHEA), aldosterone and the sex hormones, testosterone and oestrogen. There is an existing negative feedback loop that governs the amount of adrenal hormones secreted under normal circumstances. Cortisol is secreted in a circadian rhythm and the cortisol surge in the morning is responsible for the initial burst of energy, increasing blood glucose and cellular energy metabolism as a result.

Cortisol is also released in response to stress (following adrenaline release). At its simplest level, if this cortisol pattern is altered through chronic stimulation of the stress response, sleep and energy levels are disrupted. The pattern of adrenal dysfunction can be very individual. There can be persistent hyper function due to chronic stress. Sometimes the adrenal rhythm is reversed, with low cortisol in the morning and high in the evening.

Continued stimulation leads to adrenal exhaustion, increasing the risk factor for cardiovascular disease, damage to neuron function and organs and immune dysfunction. There are intricate links with other systems in the maintenance of energy homeostasis. The adrenal glands are a crucial back-up of the blood sugar system and cortisol will release stores of glycogen as a back-up mechanism. In fact, if blood sugar problems are apparent, it’s suggestive of a failure in both glucose and adrenal regulation, as the adrenals are unable to compensate. Continual adrenal depletion will impair thyroid function, which attempts to support energy metabolism.

**NUTRITIONAL INTERVENTIONS**

You can support the healthy production of steroid hormones by supplementing pantothenic acid. Vitamin B5 is converted to acetyl CoA - an important molecule in metabolism, energy production, and manufacture of the neurotransmitter acetylcholine and steroid hormones like cortisol. Additionally, liquorice reduces cortisol breakdown, therefore maximising the potential of the natural cortisol produced. Vitamin C contributes to normal cortisol balance and has been shown to counteract a rise in blood pressure, cortisol, and subjective response to acute psychological stress. Short-term support can be supplied by using natural adaptogens like Korean ginseng, which has anti-fatigue properties. It improves energy, stamina and mental performance, and supports the response of the body to stress and glycaemic control.

Also, remember to support blood glucose balance if this is an issue. Chromium helps to encourage the formation of Glucose Tolerance Factor (GTF), potentiating the action of insulin. Supplementation with chromium picolinate prevents hypoglycaemia, reduces insulin resistance and the risk of CVD and type 2 diabetes. In one study, 88 per cent of people reported less fatigue after taking chromium (500 mcg) picolinate for one month.

Magnesium plays a central role in energy production by forming ATP complexes. Specifically, magnesium malate can prevent blood sugar levels from falling excessively in people with hypoglycaemia. Vitamin B3 improves glycaemic control in adults with type 2 diabetes. Cinnamon reduces serum glucose, triglycerides, LDL cholesterol and total cholesterol in people with type 2 diabetes. Alanine converts pyruvate and is therefore critical for the production of glucose and blood sugar management, improving glucose metabolism. Supplementation with L-Alanine has been shown to significantly enhance exercise performance.

Remember also that increasing delivery and circulation of hormones is critical to their efficacy. So ensure healthy nitric oxide regulation and therefore vasodilatation. An important influence of the nitric oxide system has been reported on the endocrine stress response. Citrulline is a precursor for arginine and seems to produce equal or better results in increasing baseline nitric oxide levels. It has been shown to have therapeutic effects on nitric oxide deficiency-related manifestations of mitochondrial diseases.

**DIETARY FACTORS**

Always consider diet to balance blood sugar and reduce the need for adrenal activity. Eat at regular times, anticipating dips in energy - breakfast before 10am, lunch before 1pm and dinner before 6pm. Each meal should comprise a mix of protein, fat and complex carbohydrates. Include six to eight portions of vegetables daily - paying particular focus to dark green, leafy vegetables. Avoid all processed, refined foods, especially those containing sugar and artificial sweeteners, and stimulants like caffeine and alcohol.

Over-exercising can be an additional stressor. Avoid punishing aerobic or cardio workouts and opt instead for yoga, walks in nature, Pilates and Tai Chi. Support stress by concentrating on the things you can control in your life and let go of those you cannot. Consider using a mindfulness/medication approach. Deep breathing techniques can be useful when things become too much.

Adrenal fatigue as part of a pattern of blood glucose issues, present in many clients, alongside energy problems, mood disorders, high inflammation and obesity, and has consequent contributory effects on many conditions. Understanding it and making it a key plank in treatment will lead to better clinical outcomes for our clients.

**Nutrition Protocols**

For more specific advice on protocols for your clients, you can call Clinical Nutrition on 0121 433 8702. You can find protocols, research summaries and much more on the BioCare website when logged in as a practitioner.

**CHRIS NEWBOLD**

Chris worked in the NHS for 12 years before defecting to nutritional therapy. Utilising his wide variety of healthcare experience, he ran a busy practice in Birmingham before working for BioCare as a Technical Advisor. He is Head of Clinical Nutrition at BioCare, overseeing education, the clinical nutrition support line and lecturing widely on a wide range of subjects.
The immune system is one of the most complex and least understood aspects of the human body. It is a highly intelligent and dynamic network of cells, tissues and organs that work together to defend against foreign invaders such as bacteria, viruses, parasites and fungi.

The components of the immune system can only function at its best when it is carefully nurtured with a nutrient-rich diet, regular exercise and plenty of rest and relaxation. You can’t always be in control of the pathogens you may come into contact with, yet you can take charge of strengthening your immune defenses against possible attacks.

MAJOR IMMUNE SUPPRESSORS
As far back as the 1970s, Dr Hans Selye, a pioneering endocrinologist who is often nicknamed the ‘father of stress’, wrote about the significant immune-suppressing effects of stress. Four decades of extensive research later, it is now widely-accepted that chronic stress has an adverse effect on immune function. Selye famously said: “It’s not stress that kills us, it is our reaction to it.” Both physical and lifestyle stress are major immune suppressors. Chronic forms of stress are accompanied by reduced natural killer cell cytotoxicity, suppressed lymphocyte proliferative responses, and blunted humoral responses to immunisation.

It is a peculiar phenomenon that while moderate exercise (daily physical activity of 30 minutes or more) benefits the immune system, more prolonged, endurance-type exercise is commonly associated with the opposite effect. Strenuous exercise, such as long-distance running, is known to suppress the immune system for up to 24 hrs, which can increase the risk of developing an Upper Respiratory Infection (URTI) and reduced performance capacity. Salivary concentrations of key immune factors, IgA and IgM decline immediately after a bout of intense exercise, but usually recover within 24 hours.

IMMUNE SUPPORT
Nothing can match the immune-boosting benefits of a carefully nurtured diet and lifestyle, yet there are always those times when a little extra help is needed. Beta (1-3/1-6) glucans have become a hot topic where immune health is concerned, and research has highlighted the benefits of using this innovative ingredient as a short-term, natural immune boost.

WHAT ARE BETA GLUCANS?
You may already be familiar with the term ‘beta glucans’, which refers to a group of naturally-occurring polysaccharides. These occur most commonly as cellulose in plants, the bran of cereal grains and in the cell wall of baker’s yeast, certain fungi, mushrooms and bacteria. It’s important to note that
there are different types of beta glucans - oats are now well-known to be a rich source of the water-soluble fibre, beta (1-3/1-4) glucan, which has been researched specifically for its cholesterol lowering effects
due to alterations in monocytes, plasma cytokines and improved mucosal immunity6. In a 2011 study, researchers found 10 days of supplementation with 250mg beta (1-3/1-6) glucans to be a suitable countermeasure to protect and boost the immune system following stressful exercise7. Further studies have reported similarly positive results8.

Clinical Application of Beta (1-3/1-6) Glucans

Short-term general immune boost.
Immune protection during the winter months.
Support for immune function during a stressful period.
Immune boost for athletes engaged in endurance/strenuous training.

Whilst dietary and lifestyle factors will always have the major influence on immune function, it is undoubtedly useful to have access to a natural immune boost for those times when you or your clients need a bit of extra help. Current research shows that beta (1-3/1-6) glucans have the potential to offer just that, and whilst it’s not something you would want to rely on, ongoing, they can certainly deliver an effective short-term boost.

RACHEL BARTHOLOMEW
has been a Nutritional Therapist since 2004, and specialises in children’s health. She combines her clinical work with a freelance Consultant role for Nutri Advanced.

www.rachelbartholomew.co.uk

WHAT’S THE EVIDENCE?

In 2009, forty adults were enrolled in a 12 week randomised, double-blind, placebo-controlled trial during the cold/ flu season. A daily dose of 500mg beta (1-3/1-6) glucans was compared to placebo. Results showed that while there were no significant differences in the incidence of symptomatic respiratory infections between the groups, none of the group taking beta glucans missed days off school/work due to colds, while those taking placebo did. Quality of life scores after 90 days of supplementation were also better in the beta glucan group, and they had significantly lower average fever scores than the placebo group. The researchers concluded that beta (1-3/1-6) glucans may modulate the immune system and reduce some risks associated with upper respiratory influenza infections5.

One area that has gained much interest in particular is the use of beta (1-3/1-6) glucans in athletes regularly engaging in endurance exercise, because of the known immune-suppressing effects associated with this. In a 2012 double-blind, placebo-controlled study, researchers recruited 324 marathon runners who were given either 250mg beta (1-3/1-6) glucans or placebo daily. Results showed that beta glucan supplementation significantly reduced the number of days that the subjects reported both general health problems as well as cold/flu symptoms. Researchers concluded this was likely due to alterations in monocytes, plasma cytokines and improved mucosal immunity6. In a 2011 study, researchers found 10 days of supplementation with 250mg beta (1-3/1-6) glucans to be a suitable countermeasure to protect and boost the immune system following stressful exercise7. Further studies have reported similarly positive results8.

In a study published in 2012 in Food Science & Nutrition, daily supplementation for four weeks with 250mg beta (1-3/1-6) glucans was found to be helpful in reducing symptoms and improving quality of life, overall physical health and emotional well-being in allergy sufferers compared to placebo9.

A study published in the Journal of the American College of Nutrition in February 2013 evaluated the effects of supplementation with 250mg beta (1-3/1-6) glucans daily for 12 weeks compared to placebo, in otherwise healthy, yet stressed women. The group taking the beta glucans reported fewer upper respiratory symptoms, better overall well-being and superior mental/physical energy levels. The researchers concluded that daily dietary supplementation with beta (1-3/1-6) glucans may be a useful approach for maintaining immune protection against daily stressors10.

Studies have also linked beta (1-3/1-6) glucans with anti-tumour activity, which is a promising area of development for the novel ingredient11.

CORRECT DOSAGE

Research shows a daily dose of 250mg beta (1-3/1-6) glucans to be associated with immune-boosting effects, with much of the research focusing primarily on short-term (up to eight weeks) rather than ongoing supplementation5-10.

SAFETY CONCERNS

Since beta (1-3/1-6) glucans are associated with immune-boosting effects, current advice is not for use alongside medications that decrease the immune system (immunosuppressants). There are no known side-effects of short-term supplementation with beta (1-3/1-6) glucans when taken orally. Safety has not been established during pregnancy or breastfeeding, and as with all supplements, patients with existing medical conditions or taking prescribed medication should always consult a healthcare practitioner before starting to take beta (1-3/1-6) glucans15.
BANT UPDATE

BANT is the most important professional body for Nutritional Therapists, assisting members in attaining the highest standards of integrity, knowledge, competence and professional practice. BANT has its finger on the pulse for any changes or new developments within this dynamic profession. The latest news from BANT...

BANT SECURES DATABASE DEAL FOR MEMBERS

BANT has secured fully-licensed access to both the Natural Standard and the Natural Medicines Comprehensive Database. For the first time, BANT members will have access to both of these databases for free. The two databases, run by Therapeutic Research, will be merging in 2014 and members will continue to have free access to the new, super database thanks to the deal BANT has negotiated with the company. Access to these databases costs $299 per person if it is bought direct from the Therapeutic Research.

The merged database will preserve content from both resources; users will gain access to over 300 additional ingredient articles, and more than 100 continuing education modules for all healthcare disciplines will be incorporated.

The new resource will also include the following:

• Extensive natural product library that was developed in conjunction with the NIH/ODS Natural Medicines Dietary Supplement Label Database project.
• Interactions severity ratings (red, yellow, green) alongside evidence-based ingredient reviews.
• Comparative efficacy charts and more than 500 medical conditions articles covering more than 3000 indications will be maintained as resources for achieving optimal health and wellness outcomes.
• Consensus statements on complementary and alternative modalities, special diets, exercise and other prevention techniques will continue to be available.
• NaturalMedWatch and Fixed Combination products content will be maintained in the updated product as well.

Find out about Food-State

Henrietta Norton was asked by The Nutri Centre to give a talk at this year’s camexpo exhibition at Earls Court, London. The talk focused on the vast difference between food-state supplementation and synthetic food supplements, as used by approximately 90 per cent of the supplement industry. Food-state technology offers a form of nutrients that the body not only recognises as it does food, but absorbs and metabolises it so naturally, that far lower doses are required for optimum effectiveness. Find out about food-state technology by watching this catch-up video.

Maximising the Benefits of Supplementation

Student Webinar Series Continues

BANT’s Student Network is kicking off the New Year with a webinar that is not to be missed. BioCare’s Alessandro Ferretti will host the online presentation on Monday 13th January, which aims to help students critically evaluate supplements, understand excipients and additives, and the differences between supplement forms. It will cover the bioavailability of different nutrients and their most appropriate use, and how to make effective choices and prioritise and stagger your therapy for optimal results.

This one-hour webinar is free and exclusively for BANT student members. To find out more about joining the BANT student network, email studentwebinars@bant.org.uk.
New for 2014

10 May 2014, Cavendish Conference Centre, London

Following last year’s sold out and successful event, Sports Nutrition Live! returns for 2014. Inviting 185 sports professionals to meet, learn and do business, Sports Nutrition Live! is a unique and personal day’s education dedicated to growing your knowledge of sports nutrition.

Places start from £99, including free products worth over £160. Places are limited and last year’s event sold out with months to go.

Book online: www.sportsnutritionlive.com
Telephone: 01279 810080

Supported by

www.sportsnutritionlive.com
If you need to top up on CPD credits then here are all the available courses scheduled for the next three months...

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<td>The 30 Day Weight Loss Challenge 1 - Introduction to the package, including what foods to prepare and submitting your pre-programme data</td>
<td>Jo Gamble</td>
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<td>Jo Gamble</td>
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<td>Mark Robertson</td>
<td>London</td>
<td>Free</td>
<td>BANT</td>
<td>Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>Energise! – optimising the energy and endocrine system for energy balance.</td>
<td>Alessandro Ferretti</td>
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<td>£60</td>
<td>NNA</td>
<td><a href="http://www.allaboutnaturalmedicine.com">www.allaboutnaturalmedicine.com</a> Tel: 020 8350 4607</td>
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<tr>
<td>27.01.14</td>
<td>Nutri Advanced Ltd</td>
<td>The 30 Day Weight Loss Challenge 4 - The bigger picture of weight loss, tying everything together to boost your results</td>
<td>Jo Gamble</td>
<td>Webinar</td>
<td>£117.23 - £141.19</td>
<td>TBC</td>
<td>Tel: 0800 212 742 (option 1) and quote code W0114</td>
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<tr>
<td>29.01.14</td>
<td>Bionutri</td>
<td>Nutrition Connections of the Human Microflora</td>
<td>Sue McCarigle, Edward Joy</td>
<td>Newcastle</td>
<td>BANT</td>
<td>NNA</td>
<td>Tel: 0121 628 1901 <a href="http://www.bionutri.co.uk">www.bionutri.co.uk</a></td>
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<tr>
<td>30.01.14</td>
<td>BioCare</td>
<td>Energise! – optimising the energy and endocrine system for energy balance.</td>
<td>Alessandro Ferretti</td>
<td>Bristol</td>
<td>Free</td>
<td>BANT</td>
<td>Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>31.01.14</td>
<td>BioCare</td>
<td>Energise! – optimising the energy and endocrine system for energy balance.</td>
<td>Alessandro Ferretti</td>
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<td>03.02.14</td>
<td>Nutri Advanced Ltd</td>
<td>The 30 Day Weight Loss Challenge 5 - Making food fun</td>
<td>Jo Gamble</td>
<td>Webinar</td>
<td>£117.23 - £141.19</td>
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<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detios, Katie Sheen</td>
<td>Exeter</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours</td>
<td>Tel: 01892 554 358 <a href="http://www.lambertsholthcare.co.uk">www.lambertsholthcare.co.uk</a></td>
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<tr>
<td>10.02.14</td>
<td>Nutri Advanced Ltd</td>
<td>The 30 Day Weight Loss Challenge 6 - Carrying goals forward and making the changes part of our everyday life</td>
<td>Jo Gamble</td>
<td>Webinar</td>
<td>£117.23 - £141.19</td>
<td>TBC</td>
<td>Tel: 0800 212 742 (option 1) and quote code W0114</td>
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<td>10.02.14</td>
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<td>Energise! – optimising the energy and endocrine system for energy balance</td>
<td>Alessandro Ferretti</td>
<td>London</td>
<td>Free</td>
<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>12.02.14</td>
<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
<td>Manchester</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<td>Alessandro Ferretti</td>
<td>Sussex</td>
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<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>13.02.14</td>
<td>BioCare</td>
<td>Probiotics in Practice</td>
<td>TBC</td>
<td>Edinburgh</td>
<td>Free</td>
<td>BANT 2.5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>25.02.14</td>
<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
<td>Nottingham</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<td>26.02.14</td>
<td>BioCare</td>
<td>Tired All the Time?</td>
<td>Dr Roderick Lane</td>
<td>Birmingham</td>
<td>Free</td>
<td>N/A Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
<td>Brighton</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<td>28.02.14</td>
<td>BioCare</td>
<td>Energise! – optimising the energy and endocrine system for energy balance</td>
<td>Alessandro Ferretti</td>
<td>Cardiff</td>
<td>Free</td>
<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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**MARCH 2014**

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<th>DATE</th>
<th>EVENT</th>
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<td>Energise! – optimising the energy and endocrine system for energy balance</td>
<td>Alessandro Ferretti</td>
<td>Berkshire</td>
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<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>06.03.14</td>
<td>BioCare</td>
<td>Tired All the Time?</td>
<td>Dr Roderick Lane</td>
<td>Manchester</td>
<td>Free</td>
<td>N/A Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>12.03.14</td>
<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
<td>Newcastle</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<tr>
<td>15.03.14</td>
<td>CAM Conference</td>
<td>BANT AGM and Cardiovascular Health</td>
<td>Paul Clayton, Prof Svend Age Mortensen, Philip Ridley</td>
<td>London</td>
<td>£78</td>
<td>TBC Contact <a href="mailto:info@targetpublishing.com">info@targetpublishing.com</a> Tel: 01279 810080</td>
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<td>16.03.14</td>
<td>Nutri-Link</td>
<td>Profitable Practice</td>
<td>Antony Haynes, Mike Ash</td>
<td>London</td>
<td>£185 + VAT</td>
<td>BANT 6 Hours NNA Contact Clare Tel: 08450 760402</td>
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<td>16.03.14</td>
<td>Nutri-Link</td>
<td>Detoxification and Biotransformation</td>
<td>Christine Bailey</td>
<td>London</td>
<td>£80 + VAT</td>
<td>Contact Clare Tel: 08450 760402</td>
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<td>19.03.14</td>
<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
<td>Cheltenham</td>
<td>£30 includes £30 product voucher</td>
<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<td>20.03.14</td>
<td>BioCare</td>
<td>Energise! – optimising the energy and endocrine system for energy balance</td>
<td>Alessandro Ferretti</td>
<td>York</td>
<td>Free</td>
<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<td>21.03.14</td>
<td>BioCare</td>
<td>Energise! – optimising the energy and endocrine system for energy balance</td>
<td>Alessandro Ferretti</td>
<td>Edinburgh</td>
<td>Free</td>
<td>BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<tr>
<td>23.03.14</td>
<td>Nutri-Link</td>
<td>Gastro Intestinal functionality Workshop</td>
<td>David Quig, Mike Ash, Antony Haynes</td>
<td>London</td>
<td>£49 + VAT Practitioners £36.75 + VAT Student</td>
<td>BANT 5.5 Hours NNA 6 Hours Contact Clare Tel: 08450 760402</td>
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<td>27.03.14</td>
<td>Lamberts</td>
<td>Healthy Ageing</td>
<td>Lorraine Nicolle, Shoela Detsios, Katie Sheen</td>
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<td>BANT 6 Hours Tel: 01892 554 358 <a href="http://www.lambertshealthcare.co.uk">www.lambertshealthcare.co.uk</a></td>
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<td>28.03.14</td>
<td>BioCare</td>
<td>Sports Nutrition in Practice</td>
<td>Mark Robertson</td>
<td>Birmingham</td>
<td>Free</td>
<td>BANT 2.5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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<tr>
<td>31.03.14</td>
<td>BioCare</td>
<td>Sustainable Medicine - Whistle blowing on the medical profession</td>
<td>Dr Sarah Myhill</td>
<td>London</td>
<td>£75, £60 Students</td>
<td>TBC BANT 5 Hours Email: <a href="mailto:education@biocare.co.uk">education@biocare.co.uk</a>. Tel: 0121 433 8774</td>
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**NOTICE:**

- The information is subject to change and should be confirmed with the respective organizers.
- All courses are subject to availability and capacity limits.
- Contact information for bookings and inquiries is provided for each event.
Important Dates to Remember!
Sports Nutrition Live! is back for 2014

Based on the outstanding success of the Sports Nutrition Live! conference last May, Target Publishing, the publisher of the Nutrition I-Mag and Functional Sports Nutrition (FSN) magazine, is doing it again. The one day conference, planned for the 31st May, is being held again at the Cavendish Conference Centre in London, and has BANT and REPs accreditation pending. The event is being sponsored by genetic and functional laboratory testing companies; DNAlysis Biotechnology and Nordic Laboratories, with other suppliers including Bronze sponsor BetterYou and exhibitor Mineral Resources International.

The 2013 event saw the 180-seater Cavendish Conference Centre crammed to capacity, with a long waiting list of hopeful delegates. The event was extremely well-received, so we decided to do it again, with matching standards and fresh topics. The day will be led again by exercise physiologist, nutritional therapist, NLP practitioner and FSN editor, Ian Craig, and he will be joined by internationally-recognised experts on sports nutrition and functional medicine; Umahro Cadogan, Dr Adam Carey and Peter Williams.

The Platinum sponsors, DNAlysis Biotechnology and Nordic Laboratories, provide genetic and functional testing within the fields of exercise, nutrition and health, vital tools for the sports nutrition practitioner. The CEO of DNAlysis, Danny Meyersfeld said: "The Sports Nutrition Live! 2014 conference presents an ideal forum for the further education and training of practitioners wishing to incorporate functional nutrition into their practices. As two companies that provide services integral to this speciality, and with the education of practitioners a foremost priority in everything we do, DNAlysis Biotechnology and Nordic Laboratories are delighted to provide Platinum sponsorship for this event. We are confident about the success of this and future such events, and look forward to a long and close relationship with the Target Publishing Group."

Places start from £99 (inc VAT), which includes the full day’s conference, a healthy lunch buffet and free products worth over £165. Places are extremely limited and already selling out fast, so guarantee your place by logging on to www.sportsnutritionlive.com or telephone the booking hotline on 01279 810080.
New for 2014

FUNCTIONAL
SPORTS NUTRITION
ACADEMY

Functional Sports Nutrition Academy Course 28-30 May 2013

*Functional Sports Nutrition* magazine is delighted to launch the UK’s first academy course focused solely on functional sports nutrition. We have 40 exclusive places available for the three-day course, culminating with a free place at Sports Nutrition Live! 2014.

Why join the academy?

• Hosted by leading sports nutritionist and editor of *Functional Sports Nutrition* magazine, Ian Craig.
• The UK’s only course dedicated to the ‘functional model’
• Free place at Sports Nutrition Live! Included
• Free product worth over £160

About the host, Ian Craig

Editor of leading sports nutrition magazines, *Functional Sports Nutrition* and *Total Sports Nutrition*, Ian Craig MSc, CSCS, INLPTA is an exercise physiologist, nutritional therapist, NLP practitioner and an endurance coach. He was a competitive middle-distance runner for 20 years and is now a more leisurely cyclist and triathlete. Ian specialises in sport from an integrative health perspective and in his Cape Town and UK clinics, merges the fields of sports nutrition and nutritional therapy in an applied way so that both health and performance are considered. In addition to editing this magazine, Ian also lectures and writes extensively in the UK and South Africa on the concept of ‘Functional Sports Nutrition’. Additionally, he is the module leader of the Centre for Nutrition Education’s ‘Competitive Athlete’ postgraduate course and is a lecturer at Stellenbosch University’s Sports Performance Institute.

Places start from £699, including a free place at Sports Nutrition Live! worth £99. Telephone 01279 810080 or log on to www.fsnacademy.co.uk to book your place. There are only 40 places available and they are sold on a first-come-first-served basis.

www.fsnacademy.co.uk

BANT and REPs accreditation pending

Supported by
Advanced nutrition for joint support

NEM® Flex is a well tolerated formula containing a shellfish-free source of glucosamine, collagen and chondroitin from natural eggshell membranes, combined with vitamin C and manganese. Our practitioners have applauded its fast-acting, effective joint support and ability to support flexibility and movement. NEM® Flex is available in a 30 or 90 capsule size.

You can speak directly to our fully qualified nutritional team on freephone 0800 212 742 or email any questions to nutrition@nutri.co.uk.