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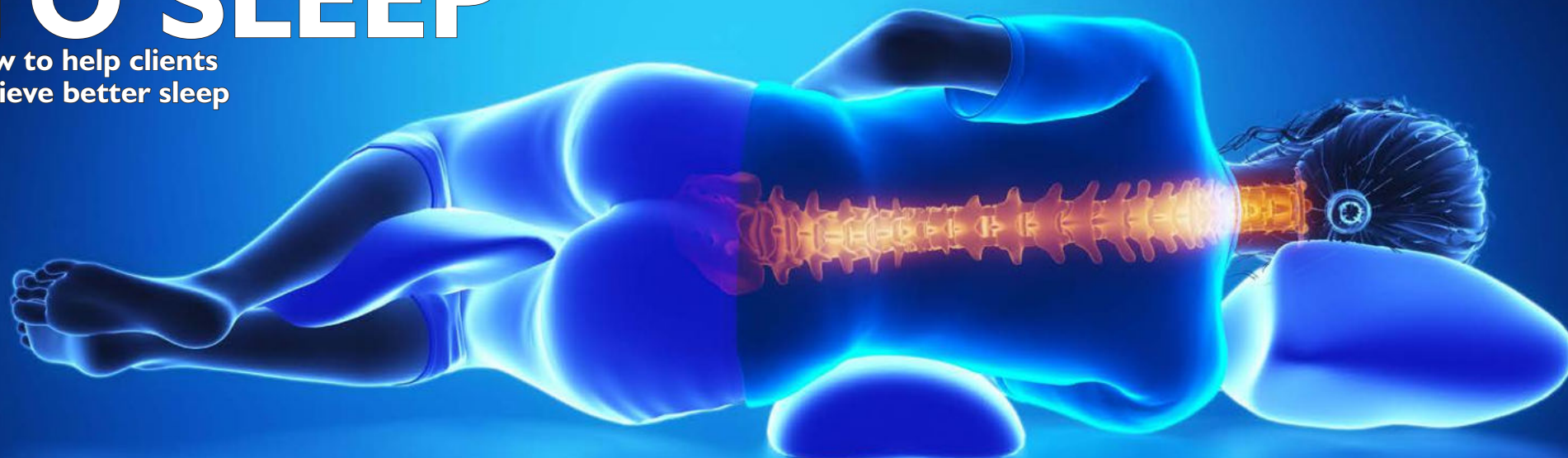
NOV/DEC 2016

AND SO TO SLEEP

How to help clients
achieve better sleep

AGEING ADVICE

Nutritional guidance for avoiding
premature ageing, inside and out



IRRITABLE BOWEL SYNDROME

An expert guide to effectively managing IBS

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Welcome



this magazine is all about.

We are proud to have established partnerships with all the leading colleges in the UK and this extends into our support of the next generation of Nutritional Therapists. And this brings us onto this issue, and the return of our Mentoring Scheme.

As 2016 draws to a close, we can look back on what has been a hugely encouraging year of education.

This year saw some five CAM Conferences, as well as the CAM Summit, held throughout the year, all sell out events attended by Nutritional Therapists and students. What these events demonstrate is that the thirst for knowledge is ever present, and that's what

The Mentoring Scheme was created to offer student Nutritional Therapists the opportunity to begin their writing career in the industry through contributing to *Nutrition I-Mag*. In this issue, Bethany Lynch, who is currently studying a BSc in Nutritional Science with CNELM, examines the issues behind sleep disturbance and the impact it has on our health.

And looking ahead, keep an eye out on www.camconferences.co.uk as the themes and speakers for the 2017 round of events, which includes the CAM Summit, will soon to be revealed.

Rachel

RACHEL SYMONDS, EDITOR

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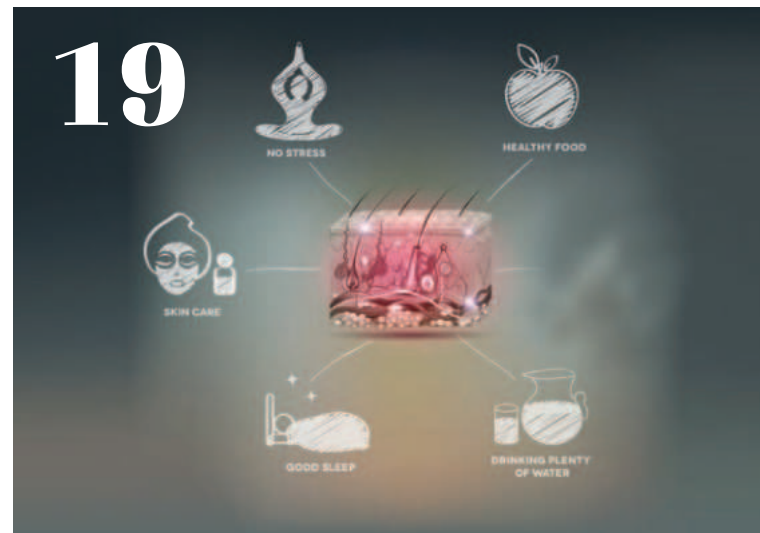
Rosie Millen

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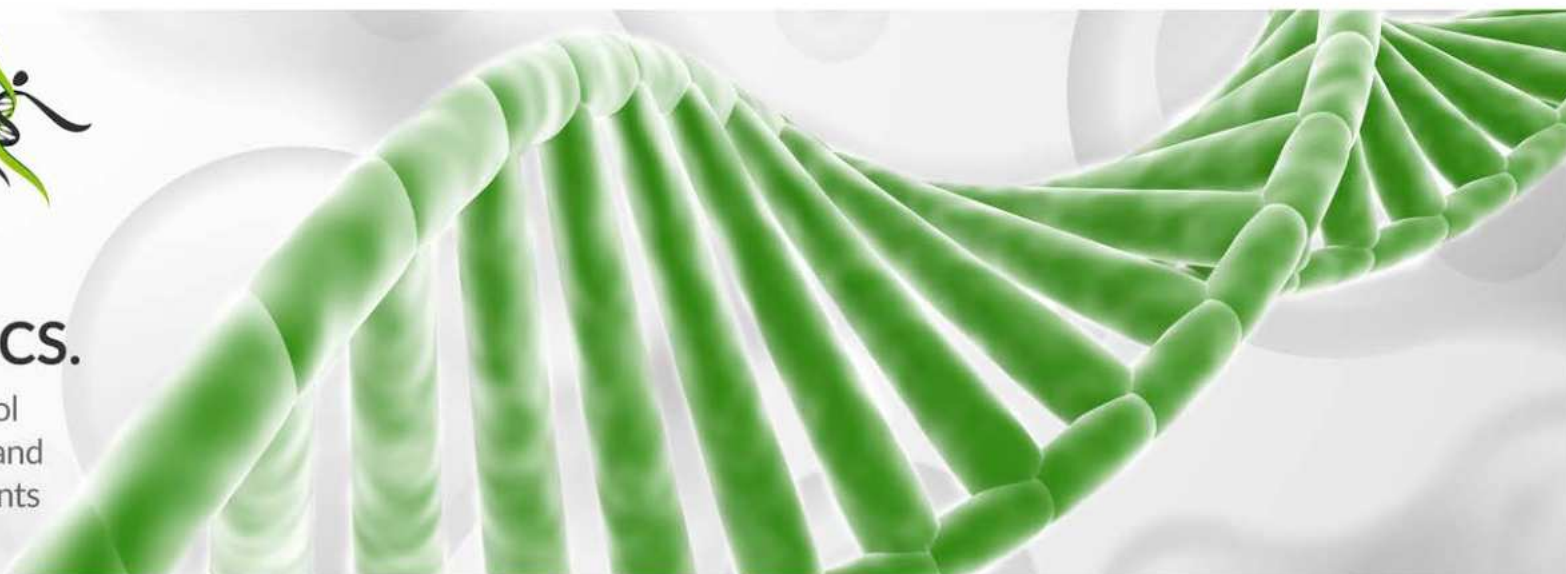
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OUR CONTRIBUTORS

Each issue, *Nutrition I-Mag* brings you contributions from many leading authorities in the nutrition world. This issue, our writers include:



Natalie Lamb

Natalie Lamb Dip NT mBANT is a qualified Nutritional Therapist who studied a three year diploma in Nutritional Therapy at the College of Naturopathic Medicine (CNM) and is a member of The British Association of Nutritional Therapists (BANT). Natalie saw clients in a private clinic in London for two years before joining Probiotics International (Protexin), manufacturers of Bio-Kult and Lepicol granules.



Romina Melwani

Romina Melwani is a Mycotherapist and Nutritional Therapist for Hifas da Terra. Romina's interest in bringing wellbeing at the centre of her life led her to specialise in Naturopathic Medicine. After spending a few years researching the impact of medicinal mushrooms as a means of achieving optimum health, Romina further specialised in Mycotherapy, a therapy using mushrooms for prevention as well as an integrative therapeutic supplement for several pathologies.



Egzona Makolli

Egzona Makolli is a fully qualified nutritionist with a Bachelors and a Masters degree in science related subjects. She is currently Technical and Commercial Nutritionist for Kinetic, UK's leading natural and organic product distributor, working with nutritional brands such as Nature's Answer, Jarrow, Nutiva, Barlean's and Amazing Grass.



Caroline Harmer

Caroline Harmer, nutritionist, colon hydrotherapy instructor and Director of Education for Renew Life UK, believes that digestive health is the foundation to better health. Caroline's hands-on experience using Renew Life formulas is unparalleled, and she offers a very practical, solutions-based approach to improving health.



Katie Pande

Katie Pande is a qualified Medical Herbalist with a BSc degree in Herbal Medicine and is an insured member of the National Institute of Medical Herbalists (NIMH). Previous to studying Herbal Medicine, Katie completed a degree in Plant and Environmental Biology. She is currently Senior Herbal Advisor for Pukka Organic Herbs, where she trains and educates staff and customers on the benefits of medicinal plants.



Bethany Lynch

Bethany Lynch is currently studying a BSc in Nutritional Science with CNELM. She has an interest in children's health and nutrition, diabetes and nutrigenomics.



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A round-up of the news from the natural health industry.

News bites

Functional medicine masterclass comes to the UK



is targeted at both healthcare professionals and students.

Dr Hughes, a renowned Naturopathic Doctor with three clinics in the US, will take the audience through the latest innovations in functional medicine, showing some of her client case studies, including those with common symptoms of pain, fatigue, GI dysfunction, stress and poor sleep.

Practitioners are being reminded not to miss out on a forthcoming seminar around functional medicine.

Dr Kristi Hughes, (pictured), Associate Director of Medical Education at IFM, has teamed up with the nutritional supplement company, Nutri Advanced, to host a Clinical Advances in Functional Medicine Masterclass on November 12.

Being held in London, the event

The full day masterclass costs £149 and students receive a 20 per cent additional discount. Tickets can be purchased through the Nutri Advanced website (www.nutriadvanced.co.uk) or by calling 0800 212 742. Nutri Advanced is giving all who attend a free pot of CurcuDyn and a free pot of Nutri Superfood Plus on the day.

Camexpo organisers thank trade following show closure

After 14 years, it has been announced that Camexpo will close.

Diversified Communications, the organisers of the show, have thanked all those involved in the show's past successes.

According to Carsten Holm, Managing Director of Diversified, the decision was taken following consultation with leading supporters and exhibitors, who agreed that a decline in the audience attending the show over the past few years was unsustainable, making it difficult to justify the cost of attending an event on the scale of Camexpo.

Holm commented: "We are incredibly sad to have come to this conclusion, but unfortunately, Camexpo doesn't attract the same numbers as it used to. Everyone has worked so hard on making the event a success, with a fantastic seminar line-up and more marketing and sales activity than ever, yet the show has been declining and it's difficult to see what

can be done to reverse the consistent downward trend.

"The hardest thing of all is that we will be saying goodbye to so many incredible and supportive friends. You have all been amazing, whether as speakers, exhibitors, practitioners, or supporters. Unfortunately, we will also be saying goodbye to Event Director Zoe Campbell, whose incredible passion and dedication made Camexpo such an important event for the complementary and alternative health sector."

He continued: "Whilst this unfortunately marks the end of Camexpo, the work done by all the amazing practitioners in the complementary and alternative sector is more important than ever. There's a big job to do out there, so please keep up the incredible work. And thankfully there are other great learning and networking events out there, including the successful CAM Summit."

The CAM Summit is part of the CAM Conferences series of events. To find out more, visit www.camconferences.co.uk

Business vision sees Pukka secure new accreditation

Pukka has become a Certified B Corporation business in recognition of its efforts to give something back to all those involved in its practices.

As a Certified B Corp, Pukka is now rigorously assessed on the mission that it was founded on; to connect people, plants and planet through the incredible power of organic and fairly traded herbs. And, by becoming a member of B Corp, this cements Pukka's ongoing commitment to meet higher standards of transparency, accountability and performance, offering a positive vision of a better way to do business.

To achieve the title, Pukka scored 93 out of 200 in its first assessment. The performance standards B Corps meet measure a company's impact on all its stakeholders, for example, workers, suppliers, community, customers and the environment. The score recognises the hard work Pukka has done to pioneer new ways to

ensure that it is making a genuine contribution to global equality, poverty and the environment.

Its efforts include working with FairWild, guaranteeing that the plants used from the wild have been harvested in a sustainable way and that the collectors have been paid fairly for their work, while all Pukka teas are now certified as 'fair' through a new scheme called Fair for Life. Furthermore, 100 per cent of the herbs sourced for Pukka teas and wellbeing supplements are certified organic by the Soil Association. And, as a member of 1% for the Planet, Pukka gives one per cent of its turnover to support environmental causes.

There are now over 1,800 Certified B Corporations from more than 120 industries in 50 countries, with one unifying goal – to redefine success in business. Globally, B Corps have combined revenues of a mid-sized country (over \$29bn), and Pukka has





become the 102nd B Corp in the UK.

Tim Westwell, Pukka co-founder, said: "Sebastian and I started Pukka with the aim of doing good through commerce. Although Pukka has grown to become a leading herbal wellbeing company, this vision is still at our heart. It's wonderful to have it enshrined through being a certified B Corp and to have joined a powerful lobby of other pioneering businesses that share this intent. Watch out world – there are positive changes ahead."

Sebastian Pole, fellow co-founder, added: "Tim and I made a commitment right from the start to be true to our purpose, an organisation which gives something back to everyone who it touches. Our business model was therefore built around doing things the right way. Our membership of B Corp means no matter how big we grow, this commitment will never be lost."

Regulatory role announced at Nelsons



company based in Switzerland. He was responsible for the company's Quality Management System and ensured compliance to global regulations for sites in Europe and US. Prior to Tecan, Richard was Head of Quality for Reckitt Benckiser, leading the global quality team and setting the quality direction for the organisation.

Nelsons has announced the appointment of a new Director of Quality and Regulatory Operations.

Following the departure of Debbie McCullough, Nelsons appointed Richard Bowling to the position, where he will be responsible for maintaining Nelsons high standards towards quality and regulatory compliance, as well as driving the programme for continuous improvement.

Richard brings with him a wealth of experience from his previous role as Global Head of Operational Excellence at The Tecan Group, a medical device

His vision at Nelsons is to support the economic success of the business by delivering high quality health and wellbeing products to consumers and to protect the brands by ensuring compliance to regulations in all markets.

Richard commented: "I am pleased to join the Executive Leadership Team at Nelsons and want to build on the good foundations we already have following a successful FDA audit earlier this year. My first priority will be to develop a clear strategy for Quality and Regulatory for the next five years."

Nutrition Society hosts first conference for students



A student team has organised The Nutrition Society's first two-day national conference for undergraduates and postgraduates.

Students from three faculties at the University of Chester, Medicine, Dentistry and Life Sciences, Health and Social Care, and Science and Engineering, led by Professor Basma Ellahi, Professor of Public Health Nutrition at the University, successfully bid to host The Nutrition Society Student Conference in the city.

Focussing on nutrition and its application, the organisers had anticipated no more than 60 delegates attending, and were thrilled when more than 100 signed up.

The two-day event gave undergraduates, postgraduates and prospective students the opportunity to meet researchers, academics, representatives from the food industry and public health nutritionists. They were able to establish new networks, build on early career development skills and hear experts talk about current

topics in their field of nutrition as applied to animal and human health.

Keynote speakers included Head of Nutrition Science at Public Health England, Dr Louis Levy, and Professor Alan Jackson, former President of the Association for Nutrition, the regulatory body for nutritionists, who works in international nutrition.

The team behind the event explained that ahead of the Student Conference, The Nutrition Society's aim was to bring together students at all stages of study to encourage development, networking, collaborations and a forum to explore

career opportunities.

One of the student organisers, Barbara Bray, said: "I have been impressed by the enthusiasm of industry and academic partners, who requested to be involved and were happy to lend their time and expertise to support students on the day. It is refreshing to see that there is a healthy environment for the next generation of graduates and postgraduates to step into and flourish."

The conference was opened by Dr Chris Haslam, Senior Pro-Vice-Chancellor at the University, who added: "I am extremely proud of both our students and staff for their fantastic efforts in hosting the inaugural Student Conference for The Nutrition Society. Not only was it a coup to win the bid to host the conference in the first place, the team then pulled out all the stops and ensured that visitor numbers far exceeded expectations."

In Research

Nutrition I-Mag rounds up the latest research studies in the nutrition world.

Study examines brain power to lose weight

Researchers have discovered that a person's ability to lose weight may be regulated by the brain.

A new research paper, by Chen et al in *Cognitive Neuroscience*, studied the connections between the executive control and reward systems in the brain, and discovered the ability to self-regulate a healthy body weight may be dependent on individual brain structure.

The findings show that dieting success may be easier for some people because they have an improved white matter pathway connecting the executive control and reward systems in their brain.

The researchers took a group of 36 chronic dieters, with mean body fat of 29.6 per cent, and asked them to make simple judgements on images in order to divert their attention from the real aim of the task. The activity carried out was a food cue reactivity task designed to localise the executive control and reward areas in the brain, using functional magnetic resonance imaging (fMRI).

After localizing the executive control and reward

areas, they then used a diffusion tensor imaging (DTI) to identify the white matter track connecting these areas in order to quantify the integrity within this tract.

The fMRI results demonstrated that dieters showed greater reactivity to food images than control images. The DTI results further showed that those with lower body fat percentages showed greater white matter integrity between executive control and reward areas of the brain.

"Individuals with reduced integrity may have difficulty in overriding rewarding temptations, leading to a greater chance of becoming obese than those with higher

structural integrity," the researchers concluded.

They added that future continued longitudinal research is needed to establish whether repetitive dieting in itself could cause alteration in white matter integrity, exacerbate the executive control and reward communications and result in more entrenched obesity for the individual.



Women and children at heart of global nutrition event

Nutrition in women and children is at the heart of a global research conference.

DSM Nutritional Products will be highlighting the role of women's nutrition in supporting societal and economic development at the Micronutrient Forum Global Conference

DSM will present the latest nutritional science and solutions to address malnutrition and hidden hunger at the 2016 Micronutrient Forum Global Conference, with experts from DSM set to explain why ensuring high quality nutrition, particularly in women and children, holds the key to achieving sustainable societal and economic progress.

This year's Micronutrient Forum Global Conference will focus on the role of women's nutrition in helping deliver the United Nations' Sustainable Development Goals (SDGs), an initiative which aims to end poverty, protect the planet, and ensure prosperity for all.

"Women are the doorway to shaping

healthier futures across the globe. Children who get the right nutrition from a very young age are 10 times more likely to overcome life-threatening childhood diseases. As such, it is essential that mothers and their children have access to the right nutrition during this time, especially in the critical 1,000-day window between the start of a pregnancy and a child's second birthday," explained Mauricio Adade, President of DSM Nutritional Products, Latin America.

"The quality of nutrition and clean, safe water, sanitation and hygiene are all essential variables to ensuring micronutrient interventions have a positive impact on children's development. Collaboration at all levels is therefore needed to meet the UN's SDGs and effectively tackle the hidden hunger that impacts one-third of the global population. The Micronutrient Forum Global Conference is playing a huge role in addressing key issues such as improving hygiene practices and bringing high-quality nutrition to the most vulnerable groups."

Female BMI may impact health of newborns

The BMI of a woman may affect the biological age of their babies, research has found.

Published in the journal *BMC Medicine*, a new study found that higher BMI in mothers before pregnancy is associated with shorter telomere length – a biomarker for biological age – in newborns.

To examine associations between maternal BMI and newborn telomere length, the researchers examined 743 mothers, who were 17 to 44 years of age, and their newborn babies. Detailed information on maternal and paternal age, socioeconomic status, smoking status, parity, ethnicity and pregnancy complications was obtained by use of a questionnaire. To measure average telomere lengths, umbilical cord blood was drawn immediately after delivery from all 743 mother-newborn pairs.





Vitamin D during winter in spotlight with new research



A new study has confirmed that children in northern latitudes need higher amounts of vitamin D to avoid deficiency during winter.

Researchers, writing in the *American Journal of Clinical Nutrition*, set out to investigate the dietary requirement for maintaining the nutritional adequacy of vitamin D in young children. They aimed to establish the distribution of vitamin D intakes that is required to maintain winter serum 25-hydroxyvitamin D [25(OH)D] concentrations above the proposed cut-offs in white Danish children aged four to eight living at 55°N.

The double-blind, randomized, controlled trial involved 119 children, who were assigned to 0 (placebo), 10, or 20 µg vitamin D3/d supplementation for 20 weeks. The researchers measured anthropometry, dietary vitamin D, and serum 25(OH)D with liquid chromatography-tandem mass spectrometry at baseline and endpoint.

The estimated vitamin D intakes required to maintain winter serum 25(OH)D less than 30 nmol/L (avoiding deficiency) and more than 50 nmol/L (ensuring adequacy) in 97.5 per cent of participants were 8.3 and 19.5 µg/d, respectively, and 4.4 µg/d was required to maintain serum 25(OH)D >40 nmol/L in 50 per cent of participants.

Commenting on the results, the researchers said: "Vitamin D intakes between 8 and 20 µg/d are required by white four to eight year olds during winter in northern latitudes to maintain serum

Telomere length, which is measured by the number of DNA base pairs they occupy, is directly linked to the number of times a cell can divide in its lifetime. Thus, longer telomeres allow cells to divide more often, providing a link between telomere length and biological age. Telomere length in adults has been associated with age-related diseases, such as cardiovascular disease, type 2 diabetes and increased mortality, but telomere research on newborns remains limited.

Previous studies have shown that people normally lose about 32.2 to 45.5 telomere base pairs per year in adulthood. The research team found that for each one-point increase in the mothers' BMI, telomeres in the babies were about 50 base pairs shorter. According to the researchers, this 50 base pair shortening of telomere length is equivalent to the length that people normally lose in 1.1–1.6 years of adult life, which may increase the risk of chronic diseases in adulthood.

Professor Tim Nawrot, the corresponding author, said: "Prior to our study, there was no evidence of an association between pre-pregnancy BMI and newborn telomere length, although meta-analyses suggest an association between BMI and telomere length in adults. Our results add to the growing body of evidence that high maternal BMI impacts fetal programming, which could lead to altered fetal development and later life diseases. The public health impact of our findings is considerable as in affluent societies about 30 per cent of women of reproductive age are overweight.

"Compared with newborns of mothers with a normal BMI, newborns of women with obesity are older on a molecular level, because shortened telomere lengths mean that their cells have shorter lifespans. So, maintaining a healthy BMI during a woman's reproductive age may promote molecular longevity in the offspring."

Dries Martens, co-author of the paper, added: "We ruled out many other potential factors that may be associated with telomere length, including parents' age at birth, socio-economic class, ethnicity, maternal smoking status, newborns' gender or birth weight."

The researchers say that their study may be limited by lack of information on paternal BMI as previous research has described epigenetic effects of paternal weight on newborns.

25(OH)D >30–50 nmol/L depending on chosen serum 25(OH)D threshold."

In other vitamin D news, high dose oral spray has been found in a new study to dramatically increase vitamin D levels and resolves deficiency in healthy athletes.

The findings of a study by Ulster University, in conjunction with supplement brand, BetterYou, have confirmed existing literature showing how athletes, despite spending an above average amount of time outdoors, are still at risk of vitamin D deficiency.

The randomised placebo controlled trial looked at the effect of vitamin D on 35 healthy Gaelic footballers using BetterYou's DLux3000 vitamin D oral spray delivering a daily dosage of 3000IU over a period of 12 weeks.

Key findings from the study showed that 72 per cent were vitamin D insufficient, and over a fifth (22 per cent) were classed as clinically deficient.

After 12 weeks of supplementation, mean vitamin D levels were significantly increased by 77 per cent from baseline, increasing mean levels to 80nmol/L, compared to no significant change in the placebo group. Athletes who were vitamin D deficient before the start of the study had boosted levels to 'adequate' after 12 weeks of vitamin D oral spray supplementation.

Authors noted how this was in contrast to previous trials in athletes, again over a 12-week period, which found no significant change in vitamin D concentrations with a 1000IU supplement, supporting the requirement for a high dosage 3000IU spray.

Dr Pamela Magee, principal investigator of the Ulster University study, said: "Our research has demonstrated that supplementation with the DLux oral spray (3000IU daily) is effective in correcting vitamin D insufficiency in Gaelic footballers over the winter months. Vitamin D supplementation had no effect on aerobic fitness, skeletal muscle or lung function in this cohort of athletes over the time period assessed."

Andrew Thomas, founder and Managing Director of BetterYou, added: "This trial shows that even athletes who spend a lot of time outside are at risk of vitamin D deficiency. Deficiency has been linked to a number of disorders as well as a decrease in athletic performance."

New to market

Nutrition I-Mag brings you the latest product developments in the nutrition world.



LEPICOL FOR CONVENIENCE

The makers of the healthy bowels product, Lepicol, have unveiled a new on-the-go format. Due to demand, Lepicol has launched the new Lepicol 14 x 5g 'on the go' sachet pack. This has occurred because the standard pots of 180g, 350g and the 180 capsules don't give people the flexibility to take the product with them whilst on the go.

"Lepicol is well known in the industry as a strong, effective product for maintaining healthy bowels", commented Brand Manager, Hayley Milne. "With our new sachet packs, we are giving our customers much more flexibility and ease to maintain a healthy bowel whilst they're away from home."

TRIO OF SUPERFOODS ADDED TO NATURYA RANGE

Organic Sun-dried Goji Berries, Cacao Powder and Coconut Oil are the latest additions to the Naturya's range.

The three new products represent half of the Naturya Super6, a line-up of six superfoods. They join the rest of the organic products, Hemp Protein Powder, Greens Blend, and Chia Seeds.

Naturya's Organic Cacao Powder is unaltered by over-processing or added sugar. Certified Fairtrade, Naturya's Organic Cacao Powder provides a sustainable future for Peruvian farmers' communities.

Organic Coconut Oil is sourced from Sri Lanka and is pure, raw and light due to only the nut flesh being used, with no husk being found.

Naturya's Organic Goji Berries are hand picked and sun-dried on the Tibetan plains to ensure they are succulent and packed full of their health giving

vitamins and minerals.

Ben Purcell, Naturya CEO, commented: "It's been amazing to be part of the rise of foods that essentially bring direct, specific and tangible health benefits to people. It is undeniably a confusing arena to operate in because the term 'superfood' has been hijacked to mean anything that might look or sound healthy. But we stand by our founding principle that all Naturya foods must be nutrient dense, loaded with essential vitamins and minerals our bodies need, that can be enjoyed easily. And we have a whole lot more to come."



COMVITA UNVEILS IMMUNE ADDITION

New to the Comvita range of winter wellness products is a new olive leaf complex.

Olive Leaf Extract Immune Support capsules have been specially formulated with zinc and copper to help fight a multitude of winter ailments. Comvita has just released the product in a handy 15-capsule pack, perfect for when people are on-the-go.

With a unique combination of oleuropein (66mgs), 11 polyphenols and the natural minerals of zinc and copper, the capsules pack a nutritional punch.

Comvita has gone one step further and added copper and zinc for an extra kick. Combined with the already potent immune enhancing properties of olive leaf extract, these ingredients add something more to combat winter illness.

HIGHER NATURE INNOVATES WITH PET RANGE

A unique range of pet supplements has been developed by Higher Nature.

The clean label products have been formulated with all natural ingredients and are free from artificial colours, flavourings and preservatives and include easy dose, flavour-free powders to mix with meals.

The company has been successfully marketing pet supplements for over 15 years and has now applied its knowledge to create this specific range of supplements, formulated to support all round wellbeing for all breeds of cats and dogs.

There are six products in the range; Vitality to support joint health, Super Omegas, Super Dog, a food state multi for all round health, Calm, Balance Probio, and Soothe.

The range features useful resealable pouches and contains essential nutrients for joints and muscles, heart and brain, anxiety and stress, a healthy gut, skin care and general all round nutrition.

And in support of the charity Blue Cross for Pets, 50p will be donated from the every sale of every product in the UK.



DO YOU DREAM OF A THRIVING PRACTICE IN NUTRITIONAL THERAPY?



In an increasingly competitive market, BCNH gives you a huge advantage – as many of our students have gone on to discover.

BCNH is well-known for its academic and clinical excellence in Nutritional Therapy. We offer part-time BSc (Hons) programme in Nutritional Therapy, in partnership with the University of Greenwich, as well as Level 6 Diploma courses. Both programmes are also accredited by NTEC.

Our courses are designed with flexibility in mind. You can study by attendance, distance learning (online), or a combination of both - whichever method you choose. We use advanced technology to support you and to maintain regular contact, no matter how far away you are. We offer a range of courses:-

- Science Foundation Course
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- Short courses for general public
- Various CPD lectures

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Looking for a job in Nutrition?

We regularly post current roles for Nutritional Therapists on our website and actively look for nutritional therapists we can place in to roles they can thrive in.

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BANT News



The latest developments from the leading professional body for Registered Nutritional Therapists, BANT.

BANT SOUTH WEST REGIONAL BRANCH EVENT: TREATMENT AND MANAGEMENT OF AUTOIMMUNE CONDITIONS

The second South West Regional Branch event of 2016, Treatment and Management of Autoimmune Conditions, took place in Bristol recently.

The event, which attracted 40 BANT members from the region, provided a comprehensive overview of autoimmunity, including interactions between genetic susceptibility, environmental triggers and gut issues.

Members were pleased to welcome a number of top speakers to the South West region. Laura Stirling, speaking on behalf of Regenerus, provided a broad-based explanation of autoimmune conditions, including the triad of autoimmunity. She explained that there are more than 80 autoimmune diseases that we know of and illustrated how an understanding of the gut, together with relevant Cyrex assays, can help practitioners pinpoint underlying causes.

Dr Eve Pearce, a member of the Scientific Team at myDNAhealth, spoke about the genetics and epigenetics of autoimmunity. She illustrated how environmental factors can create the conditions for increased genetic susceptibility to autoimmunity. At the same time, she offered a paradigm of hope through which practitioners can help their clients to positively influence their genes through correct diet and lifestyle, as well as relevant DNA testing to better understand individual genetic susceptibility.

Lucy Blyth, Managing Director at Phi Harmonics (energyDOTS), explored the influence of electro-magnetic frequencies (EMFs) on the development and progression of autoimmune conditions. EMFs emitted from mobiles, computers and Wi-Fi are silent, invisible, but ever present and their effects on the immune system are cumulative. It is virtually impossible to escape exposure from EMFs and Lucy is passionate about working with people to understand and find ways to reduce the toxic effects on the body of high exposure to them.

Members also enjoyed visiting exhibitors Bio Nutri, energyDOTS, Regenerus, Ingeneius, ANH International, doTerra, Mycology Research, Megasporebiotics, Natural Dispensary and myDNAhealth, during a lively networking lunch. A recording of the presentations plus slides will be emailed to all BANT members shortly.

The team is sad to see Melissa Smith, Chair of the South West Branch, stepping down from the role to take up a new position with ANH International. We'd like to thank her for her excellent work and enthusiasm as Chair. Lucy Patterson, BANT's Local Network Coordinator in Bristol, will be taking up the Chair position and we are excited to welcome her on board.

For more information please contact the South West Regional Branch southwest@bant.org.uk



STUDENT NETWORK TEAM UPDATE

Our first autumn webinar was presented by Miguel Toribio-Mateas, Chair of BANT.

Miguel spoke about the 'Mediterranean diet as a naturally occurring model for neuroprotection/brain health', and the webinar was well received, with 65 students registering and 27 attending.

October's webinar, 'BANT Networks: A key member benefit supporting you in your Nutritional Therapy career', led by the Network Coordinators Team, took place on October 18. The Network Co-ordinator Team Leader, Abir Hamza-Goodacre, and two Local Network Coordinators, Tracey Harper and Aileen Smith, discussed the key aspects of this member benefit. The team explained how members of a Local Network support each other at all stages in their career, from student to experienced practitioner. The presenters highlighted the benefits of attending the Local Network meetings, which enable students and practitioners to network, build a local community, increase knowledge sharing, learn new information, as well as help you identify opportunities for setting up in practice. An amazing BANT benefit!

Following the webinar on Local Networks, we are excited to announce that November's webinar will feature Rachel Hoyle, from Nucleotide Nutrition, speaking about 'Physiology and health benefits of nucleotides and its effect on performance'.

Watch out for the BANT e-blast announcements on future webinars. Remember that if you are unable to attend any webinars live, you will be able to access recordings, along with any supporting documentation via BANT website members area.





BANT RECRUITING MEMBERS TO PARTICIPATE IN RESEARCH PROJECT

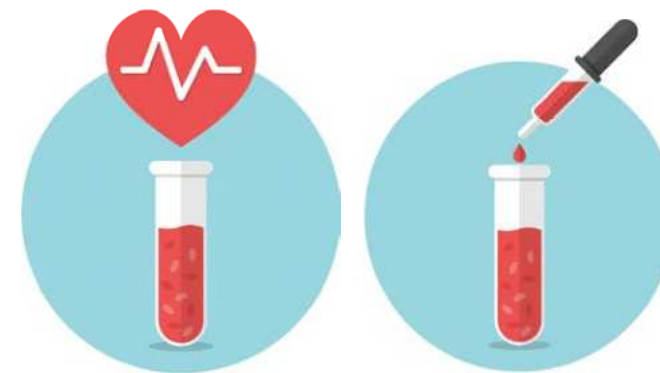
BANT is proud to be working with Oxford Biotech company GlycanAge, King's College London and Croatian National Centre of Excellence in Personalised Healthcare in the 'Effects of Lifestyle Interventions on Changes in Biological Age' research study.

GlycanAge is a pioneering new blood test, developed by an international team of scientific researchers, who have published over 100 peer-reviewed publications in the fields of glycobiology and ageing in the last 20 years. A simple blood draw is needed to provide the sample that is analysed for the individual's levels of glycans.

This new research project, which will be conducted between 2017 and 2018, is looking to recruit 1,000 individuals to take the test and then undergo a lifestyle change, the effects of which will be monitored at three and six months. The study's aims are to objectively determine how much different types of dietary, physical and/or psychological lifestyle changes can improve GlycanAge.

Nutrition practitioners will be working with the research team to recruit and supervise study participants and subsequently evaluate the results of the dietary and lifestyle changes. BANT members who participate will be able to purchase GlycanAge tests at a deeply reduced price. This will allow collection of two to three data points that contribute to this longitudinal study.

BANT members will gain visibility that differentiates them from other practitioners offering nutritional services that don't have an evidence-based scientific tool that allows them to assess the change triggered by their interventions.



Furthermore, by providing objective scientific evaluation of their clinical work, nutrition practitioners will get the opportunity to collaborate with global leaders in the field of biology and ageing and will be able to promote their involvement in the process when the study is published in a high impact scientific journal.

Information on how BANT members can apply to participate in this study will be released shortly via our members' forums – watch this space.

BANT Chairman Miguel Toribio-Mateas, one of the study's principal investigators, said: "The BANT framework of nutrition practice, based on functional medicine principles, provides the perfect clinical environment to assess biological ageing and to intervene by means of simple, individualised dietary and lifestyle interventions. Using reliable markers of biological ageing will help practitioners measure the effects of their recommendations and will enable them to learn more about the types of foods and behaviours most likely to keep us younger for longer. On the basis of these associations, 'anti-ageing' dietary and lifestyle programmes can be developed to suit the individual. I am delighted that BANT has been chosen as the sole research partner for this study and look forward to seeing the results."

For more information, contact Daniel O'Shaughnessy on 07540 722307 or email Communications@bant.org.uk.

SPOTLIGHT ON... YOU

The Social Media Team is looking for students to share their stories on the Student pages of the BANT Website.

We are really interested in hearing what made you decide to study Nutritional Therapy and what experiences you have encountered along the way. We use the Student Spotlight feature to connect with our fellow students and to share anecdotes that strike a chord. We would love to hear from you, so please contact Harriet and Sharon at studentsocialmedia@bant.org.uk.

Please also watch out for the fortnightly bulletins and round-ups of current newsworthy events posted on the Student pages of the website by the Social Media Team.



2016 CAM Conference series comes to an end



With the final CAM Conference of the year round the corner, we take a look back on an educational 2016.

With the fifth and final CAM Conference of the year in collaboration with BANT selling out months in advance, 2016 really has been a year of unmissable education.

With 12 expert speakers presenting cutting-edge research on five topics, we have welcomed a record number of delegates through the doors of the Cavendish Conference Centre, in London over the course of the year.

The series kicked off with Dr Ahmed El-Sohemy discussing 'Nutrigenomics: do our genes determine what we eat?' on March 19. Dr El-Sohemy, who obtained his PhD from the University of Toronto and completed his postdoctoral fellowship at the Harvard School of Public Health, discussed how incorporating markers of genetic variation into studies of nutrition and health aims to benefit those seeking personalised dietary advice by providing sound scientific evidence linking diet and health.

Delegates at this conference said: "Thanks for a great day, it was a subject I had been tentative about and now I feel much more confident."

A fellow practitioner added: "Dr El-Sohemy was a great speaker with good pace and clear communication."

The second event of the year looked at 'Detox – the key to healthy ageing', and welcomed Dr Jean Monro and Dr Joseph Pizzorno on April 9. Dr Monro, who is internationally recognised in the field of allergy and environmental medicine, discussed both 'Detoxification and Hyperthermia Treatments' and 'Neurodegenerative Conditions in Alzheimer's', while world-leading authority on science-based natural medicine, Dr Pizzorno, looked at 'Detoxification: An Old Idea with Modern Research Support' and 'Conventional Laboratory Tests to Assess Toxic Load'.

We focused on the gut and microbiome modulation at the third conference of the year, which took place on May 21, welcoming back Dr Tom O'Bryan as keynote speaker to give his world-first presentation on 'The Neurological Underbelly of the Gluten Free Lifestyle: Potential Benefits. Devastating Dangers'. Naturopath, science writer and speaker, Ben Brown, spoke alongside Dr O'Bryan, and looked at 'Modern Diets, Dysbiosis and Inflammatory Disease: Personalised Nutritional Microbiota Restoration', speaking on recent discoveries that are translating into new, personalised clinical approaches that change the way we think about the microbiota.

The event also brought microbiologist Kiran Krishnan's first CAM Conference appearance, in which he discussed 'The Current Understanding of the Human Microbiome, its origin, development, form and function as it relates to human health and wellness', providing an overview on the different strategies on probiotic bacteriotherapy and an introduction into the role of commensal spore-based probiotics.

September's event, 'Feeding the brain: nutrition for bullet-proof neuroimmunity', saw Dr Dale Bredesen give his keynote presentation on his groundbreaking research, 'The First Effective Treatment for Alzheimer's and MCI'. BANT Chairman and leading researcher, Miguel Toribio-Mateas, joined Dr Bredesen on September 10 to present his research on 'Keeping the brain young: using the Mediterranean diet as a naturally occurring model for neuroprotection', while Dr Francisco Molina-Holgado looked at 'Crosstalk between endocannabinoid signalling and the immune system in brain repair'.

Finally, November's sold out conference focuses on breaking the cycle of stress and chronic inflammation, welcoming

the great Dr William Walsh to discuss 'Brain Inflammation, Oxidative Overload, and Life Stresses in Anxiety and Depression: Individualised Nutrient Therapies to Normalise Brain Function'.

Alongside Dr Walsh, sugar and obesity expert, Lou Lebentz, looks at 'Sugar, Inflammation, Stress: How to treat your 'addicted' clients' and neuroscientist Dr Jolanta Opacka-Juffry, who will present 'Brain Responses to Stress; Early Life Stress and its Long-Term Effects'.

Next year's CAM Conference series already promises to be even bigger and better, with the addition of a sixth conference already added to the line-up. Keep an eye out on www.camconferences.co.uk, where more information will be announced shortly.

MISSED A CONFERENCE?

If you missed out on any of the CAM Conferences from 2016, you can still purchase the post-show downloads and watch the recordings from the comfort of your own home, while still receiving the CPD hours for each event.

For a limited time only, you can take advantage of a new multi-booking discount, meaning that you can save money when purchasing more than one of the conference downloads at the same time.

The post-show downloads are priced at £50 each, but with this new discount, the more downloads you purchase, the more money you save – working out at just £125 when you order all five together, which is half price.

To find out more or purchase the downloads, head to www.camconferences.co.uk/2016downloads or call the team on 01279 810080.

Save **the** dates

Following the success of this year's CAM Conference series, we are excited to announce the dates for 2017 with the addition of a sixth event. Be sure not to miss out on a place by saving these dates and booking tickets as soon as they are available.



SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE SAVE THE DATE

- 18th March:** Nutrients and Gene Expression
- 15th April:** Antioxidants
- 6th May:** Autoimmunity
- 20th May:** Functional Sports Nutrition
- 9th September:** Gut Health
- 18th November:** Ageing



IDENTIFYING IBS

How best to assess symptoms of IBS and the beneficial strategies that can be adopted.

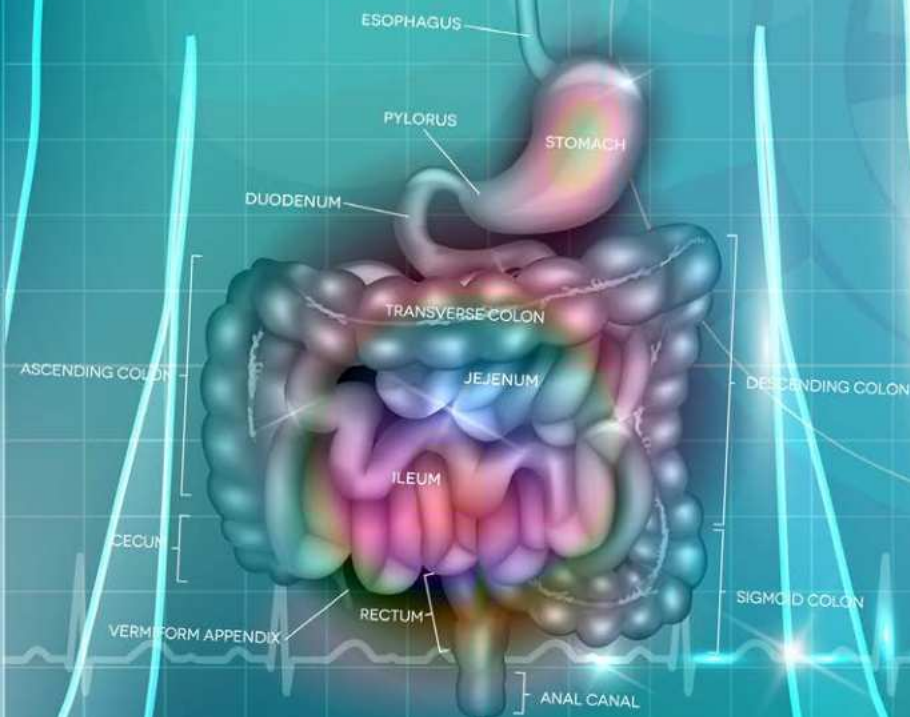


Irritable Bowel Syndrome has become one of the biggest issues surrounding digestive health in recent years. Whether the actual number of cases is on the rise, or that we simply know more about it, and so can recognise the symptoms, more and more people are dealing with the debilitating condition.

It is also one of the most common issues people will seek the advice of a Nutritional Therapist.

One of the main problems with approaching IBS is the multitude of symptoms, and the difference in opinion.

Caroline Harmer, Director of Education at Renew Life, commented: "International conferences have been held to establish agreed upon criteria by which functional bowel diseases such as IBS can be recognised. These conferences have produced the 'Manning Criteria' and the





'Rome Criteria'. The Manning criteria are:

- Stools that are more frequent and looser at the start of episodes of abdominal pain.
- Relief of pain after defecating.
- A sense of incomplete rectal evacuation.
- Passage of mucus with the stool.
- A sense of abdominal bloating.

The Rome criteria added to the above:

- Constant presence of abdominal pain and altered bowel habits
- Presence of remaining symptoms 25 per cent of the time

Although the above criteria are the official ones, in reality, patients presenting with variations of these symptoms may be diagnosed with IBS. These variations may include:

- Constipation with or without pain.
- Pain associated with bowel movements.
- Painless diarrhoea only.
- Alternating constipation and diarrhoea."

Nutritionist Shona Wilkinson, Consultant for Lamberts, added: "The key clinical features of IBS include symptoms such as recurring abdominal pain or discomfort associated with disturbed bowel habit. We know that around one third of patients have diarrhoea predominant IBS (IBS-D) and one third have constipation predominant IBS (IBS-C). The remainder have a mixed bowel pattern (IBS-M) with both loose and hard stools. (1). Abdominal bloating is reported by up to 96 per cent of people with IBS.

"Symptoms can vary so much from client to client. Apart from the above, common symptoms include severe bloating, abdominal discomfort, excessive wind and cramping. There are, however, some associated non-gastrointestinal symptoms such as lethargy, backache, headache, urinary problems, and dyspareunia⁽²⁾."

Claire Barnes, Technical Advisor at Protexin, which has the Bio-Kult and Lopicol brands, added that IBS varies widely in terms of how bad the problem is.

"The symptoms and severity of symptoms can differ significantly between individuals. Abdominal pain and discomfort, alterations of bowel habits, bloating and flatulence, straining and urgency are all common symptoms.¹ Many also suffer with symptoms outside of the gut, such as emotional tension," she explained.

"Given the number of various symptoms and how they differ between individuals, it is unlikely a single cause could explain the development of the condition. Research suggests that many factors contribute and interplay in IBS including stress, infection and an altered gut microbiome."

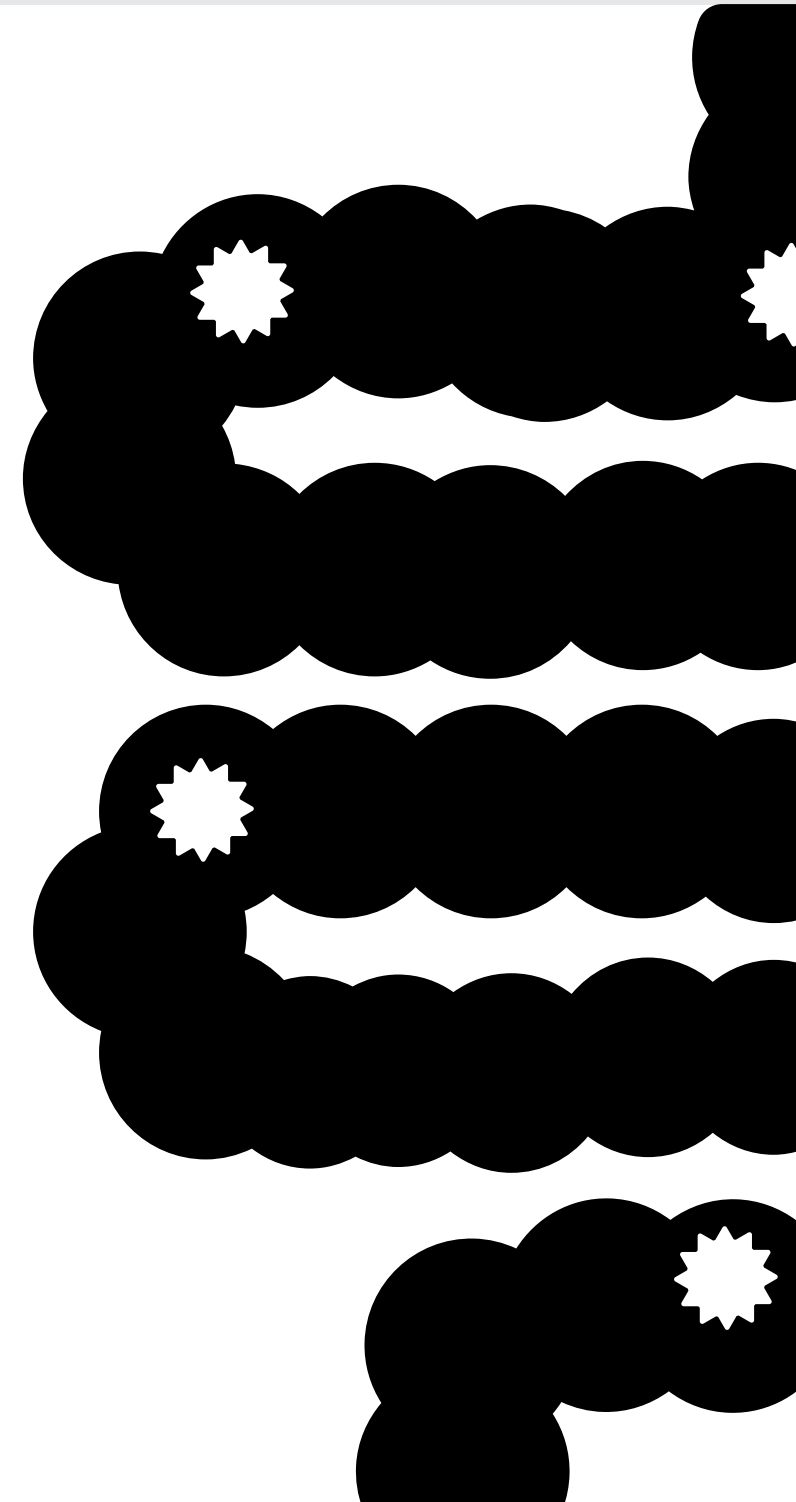
IDENTIFYING THE TRIGGERS

There are a variety of reasons why someone could suffer with IBS, and it needs investigation into what these are.

"We know that there are some reasons why people seem to suffer with IBS," Wilkinson added. "These could include a low immune system, a lack of digestive enzymes, those suffering with stress, those with food intolerances, candida and disturbances in gut flora. There are, of course, dietary factors such as a poor diet lacking in nutrients or excess consumption of alcohol, use of antacids and non-steroidal pain relievers."

She added: "It's worth bearing in mind that IBS affect five to 11 per cent of the population of most countries. Prevalence peaks in the third and fourth decades, with a female predominance. Another abnormality found in most individuals suffering from IBS is increased gut permeability.⁽³⁾"

Barnes added: "It is important that any client complaining of these symptoms seeks advice from their GP so that other illnesses, such as inflammatory





“Many health experts believe that a significant part of the IBS epidemic affecting the UK is due to parasitic and fungal infections.”

bowel disease or bowel cancer, can be dismissed. Diagnosis is made according to recurrent pain or discomfort for at least three days per month in the last three months associated with three of the following: Improvement with defecation; onset associated with a change in frequency of stool; onset associated with a change in form (appearance) of stool. 2”

Harmer pointed towards dysbiosis.

“Dysbiosis is a common feature of IBS symptoms. This is an imbalance in intestinal flora – meaning too many bad bacteria and not enough good bacteria. Gut dysbiosis explains diarrhoea, constipation and pro-inflammatory immune response that is seen in IBS (1),” Harmer explained. “Interestingly, proton pump inhibitor (PPI) medication use is one possible cause of gut dysbiosis that occurs in IBS. Many people with IBS also have acid reflux (GERD) or dyspepsia and are prescribed PPIs to control the symptoms. PPIs lower the amount of gastric acid in the stomach, which can lead to an overgrowth of pathogenic or opportunistic bacteria resulting in dysbiosis. (2)

“Gut dysbiosis can allow unwanted organisms to overgrow and create imbalances and symptoms, including IBS. Many people have reported the onset of IBS symptoms during or soon after recovery from gastrointestinal infection, abdominal surgery or treatment with antibiotics.”

She continued: “IBS is at least partially a disorder of intestinal motility. The normal rhythmic muscular contractions of the digestive tract become irregular and uncoordinated and interfere with the normal

movement of food and waste material. This can mean too much or not enough muscular contractions of the bowel, and result in constipation or diarrhoea.

“The true cause of IBS symptoms may, in some cases, be an undetected parasitic infection, especially *Blastocystis hominis*, giardiasis or amebiasis. Because of the similarity of symptoms, it is not uncommon for *Blastocystis* infection to be mistaken for IBS. (3) Many health experts believe that a significant part of the IBS epidemic affecting the UK is due to parasitic and fungal infections.”

Securing a diagnosis from a GP can be difficult, and may often be the reason people will seek the advice of a Nutritional Therapist in the first place.

Wilkinson commented: “The official criteria for an IBS diagnosis is ‘recurrent abdominal pain or discomfort at least three days a month in the past three months, associated with two or more of the following: improvement with defecation; onset associated with a change in frequency of stool; onset associated with a change in form (appearance) of stool. Criteria fulfilled for the past three months with symptom onset at least six months before diagnosis. Discomfort means an uncomfortable sensation not described as pain’.

But as Nutritional Therapists, you must also be sure you follow certain protocols.

“Practitioners shouldn’t be diagnosing officially, but the symptoms given by the client might lead to the conclusion that IBS could be the problem. This can be done by taking a symptom history, checking for any alarm symptoms and perhaps sending to the GP/consultant for a colonoscopy,” Wilkinson added.

Dr Maday Labrador, who heads up the education at Enzymedica, added that changes in bowel movement patterns, bloating and excess gas, pain in the lower belly and mucus in stools are also signs.

“Many people have digestive troubles once in a

while. Irritable bowel syndrome (IBS) is different, though. What sets it apart is belly pain and diarrhoea or constipation that comes back again and again. But there are no signs of damage in the gastrointestinal (GI) system. And it doesn’t make you more likely to get colon cancer,” she explained.

“Doctors don’t know [the actual cause(s)] yet. One theory is that the signals between the brain and intestines get disrupted. This miscommunication may trigger contractions in the intestinal muscles that result in cramping, pain, and changes in the speed of digestion. Or it may be that the intestinal nerves are extra-sensitive to certain triggers, such as some foods or stress.

FOOD INTOLERANCES

Testing for food intolerance can be helpful in relation to IBS.

“It is certainly worth looking into any food intolerances initially. This should ideally be done by a blood test. There is evidence that the measurement of circulating IgG antibodies to food may be successfully used as a guide to which foods should be eliminated from the diet. Any other form of food intolerance may not be recognised by the clients GP. Eliminating any offending foods is the first action to be taken,” Wilkinson explained.

Harmer added: “There is evidence that food sensitivities and allergies may play a major causative role in IBS, for they are found in one half to two thirds of people with IBS. (4) The most common allergens are dairy products and grains (especially wheat and corn). Other foods that often trigger episodes of IBS are coffee, tea, citrus and chocolate. (5)

“Other substances that can irritate the gut are nicotine and caffeine, and over consumption of alcohol may also trigger intestinal spasms in an IBS sufferer.





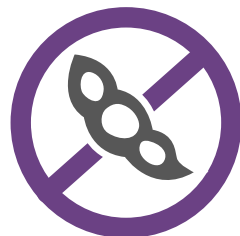
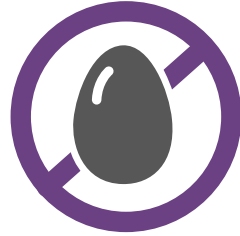
Meals that are high in sugar can also contribute to IBS by decreasing intestinal motility. (6) A high percentage of people with IBS are intolerant to sucrose (table sugar) and also to other forms of sugar such as mannitol, sorbitol and fructose. (7) Also, foods from the cabbage family (broccoli, Brussels sprouts, cauliflower and kale) may be irritating to an IBS sufferer because of their tendency to cause gas."

RECOMMENDED PROTOCOLS

When seeing clients exhibiting IBS-like symptoms, there are various approaches you can take in clinic in terms of a programme.

"A doctor diagnoses IBS when a person has the typical symptoms of the disorder and, if needed, tests have ruled out other possible causes," explained Dr Labrador. "Most people won't need tests, but some people may because of their age and symptoms. The amount of testing you get depends on several things; your age, how your symptoms come on and how severe they are, and how you respond to your first treatment. For example, a 20-year-old might not need tests. But a 50-year-old with new symptoms might need tests because of the higher risk of colon cancer in people over 50."

She highlighted tests that may be carried out, such as medical history and physical exam, a blood test for coeliac disease, complete blood count (CBC), sedimentation rate, which checks for inflammation in the body and stool analysis."



And Wilkinson advised: "It could be worthwhile introducing IBS clients to foods containing live cultures such as kefir, sauerkraut and miso. Remember that these could be new foods to many people and they could find it difficult to incorporate into their daily diet. Increasing water intake is vital to help with a sluggish bowel movement so make sure they are taking in enough water if this is a problem for your client. Recommend that they avoid drinking fluids with meals. This only dilutes the hydrochloric acid and makes digestion not so effective. Drinking a glass of water 30 minutes before or after a meal instead to ensure proper hydration to be able to produce hydrochloric acid is more effective. Waiting a short while after meals before drinking again is also thought to be beneficial."

Ascertaining what the trigger foods are for a person is important so that a client is less likely to consume certain foods will cause symptoms.

Dr Labrador explained: "For example, avoid or limit gas-producing foods (including beans and cabbage), sugarless chewing gum and sweets, caffeine, and alcohol."

Fibre is also going to need to be a consideration.

"Increasing the amount of fibre in your diet can help control constipation. High fibre foods include fresh fruits (raspberries, pears, apples), fresh vegetables (carrots, leafy greens), wheat bran, and wholegrain breads and cereals. Beans such as kidney, pinto, and garbanzo are also high-fibre foods. So are

vegetables such as peas, cabbage, and broccoli. But they should probably be avoided if gas is one of your symptoms," Dr Labrador commented.

Wilkinson agreed, adding: "You may want to look at their fibre intake. Make sure that they are clear on the type of fibre that is best to eat. As we know, cereals and bran contain mainly insoluble fibre. A survey taken suggested that cereal fibre makes the symptoms worse in around 55 per cent of cases (4). A better option is recommending fibre in the form of fruit and vegetables which contain substantial amounts of both soluble (pectins, hemicelluloses) and insoluble (cellulose, lignin) non starch polysaccharides."

You may also want to consider a FODMAP diet.

"Many people find it beneficial to follow a low FODMAP's diet to reduce debilitating symptoms. This can be challenging at first so your client may need plenty of support," Wilkinson explained. "FODMAP stands for fermentable oligosaccharides, disaccharides, monosaccharides and polyols. These are sugars found in certain foods that pull more water into the digestive tract and may not digest properly, causing fermentation. Examples of these sugars include:

- **Fructose:** Found in fruits, honey and high fructose corn syrup.
- **Lactose:** Found in dairy.
- **Fructans:** Found in wheat, garlic and onion.
- **Galactans:** Found in legumes such as soybeans and lentils.
- **Polyols:** Found in stone fruits such as avocados and cherries, as well as sweeteners like mannitol, sorbitol, xylitol and isomalt."

But Barnes emphasised that it is not only the gut that needs to be taken into account.

"IBS is a condition of the gut and the brain, therefore, I would recommend a dietary protocol





alongside lifestyle modifications to encourage relaxation, exercise and sleep improvement. A diet low in fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAPs) may benefit some patients.⁵ Slowly increasing the amount of beneficial bacteria in the diet through fermented foods could help to rebalance the microflora, such as sauerkraut and kefir," she explained.

NUTRIENT DEFICIENCIES

A big area of concern with IBS sufferers is in relation to the risk of nutritional deficiencies due to issues around absorption.

"A disturbance in the balance of the micro-flora of the intestines can cause problems with bowel movements. A healthy bowel has 3-4lbs of live bacteria, which help to complete digestion, as well as make vitamins and kill off any bad bacteria. In addition, the live bacteria can kill off parasites, fungi and viruses. The sufferer may also be having problems with absorption. It may be that due to this, they aren't absorbing their nutrients properly and could be nutrient deficit," Wilkinson continued.

"Lack of digestive enzymes could be worth looking into. We know that poorly digested foods can feed bad bacteria and create an environment which encourages their growth. This can in turn lead to food sensitivities, gas and bloating."

Dr Labrador added: "Malabsorption of nutrients makes you more likely to suffer from iron deficiency and anaemia, according to the IBS Treatment Center. When your body does not absorb enough iron or vitamin B12, anaemia occurs. Anaemia is a blood disorder that occurs when there are not enough red blood cells or poorly formed red blood cells. Anaemia is characterised by fatigue, as the blood is not delivering enough oxygen to the body. With IBS, you

may also suffer from low protein, according to a study published in *Human Nutrition – Clinical Journal*. Low protein can cause mental impairments."

Harmer continued: "People suffering from IBS and related digestive problems often have issues absorbing nutrients. This is more obvious in those suffering from diarrhoea, however, constipation can be associated with problems absorbing nutrients. Many IBS sufferers are low in vitamin B12, which, if untreated, can lead to anaemia. Symptoms of low B12 can include fatigue, lethargy, weakness, memory loss and neurological problems. Severe B12 deficiency can lead to pernicious anaemia, which is an autoimmune condition where the body destroys intrinsic factor, a protein necessary for the absorption of B12.

"IBS is a condition of the gut and the brain, therefore, I would recommend a dietary protocol alongside lifestyle modifications to encourage relaxation, exercise and sleep improvement."

"Causes of B12 malabsorption include gut dysbiosis, leaky gut and or gut inflammation, atrophic gastritis or hypochlorhydria (low stomach acid), pernicious anaemia, PPIs and other acid suppressing drugs, and alcohol.

"It is interesting to note that anaemia is a common symptom seen in people suffering from parasites. Therefore, when treating a patient suffering from low B12 or anaemia, parasitic infection should be ruled out or a parasite cleanse included in any treatment protocol."

Barnes added: "Individuals with the condition often experience a very sensitive gut, which flares up with certain foods. Often this leads to IBS sufferers

avoiding many different foods which could lead to nutritional deficiencies.³ Many suffering with IBS will also be experiencing intestinal permeability where the epithelial lining is inflamed, making it more difficult to absorb nutrients from foods. Interestingly, Tazzyman et al (2015),⁴ conducted a study to find if vitamin D repletion in those with IBS could improve their symptoms, however they were unable to complete their study due to an inability to recruit enough IBS patients who were vitamin D sufficient as a control."

SUPPLEMENT PROGRAMME

Top of the list of supplements to build into an IBS management programme is probiotics.

"Check to see if your client has ever been on a course on antibiotics. Almost every antibiotic causes alterations in the balance of bacteria in the intestine. In any event, a probiotic will probably be your first recommendation," Wilkinson said. "*Lactobacillus acidophilus* and *Bifidobacterium* have been shown to re-establish proper intestinal flora⁽⁵⁾, which is beneficial for helping to restore a healthy gut and could be an effective therapy in the treatment of IBS."

Barnes added: "Live bacteria supplements (probiotics) have been reported to restore the intestinal microbiota and the gut barrier and therefore potentially offer therapeutic support in IBS.⁶ Probiotics further have the ability to inhibit pathogenic bacteria and alter immune activity.⁷ As a by-product of fermenting fibre, probiotics secrete short chain fatty acids (SCFAs) such as butyric acid, which have been shown to nourish colonic enterocytes and enhance mucosal integrity.⁷

"Multi-strain live bacteria supplements, which do not contain any prebiotics may be more beneficial in IBS symptoms due to different species being able to colonise several areas of the GI tract, therefore,





having a wider range of functional characteristics and synergistic effects between the strains.⁸

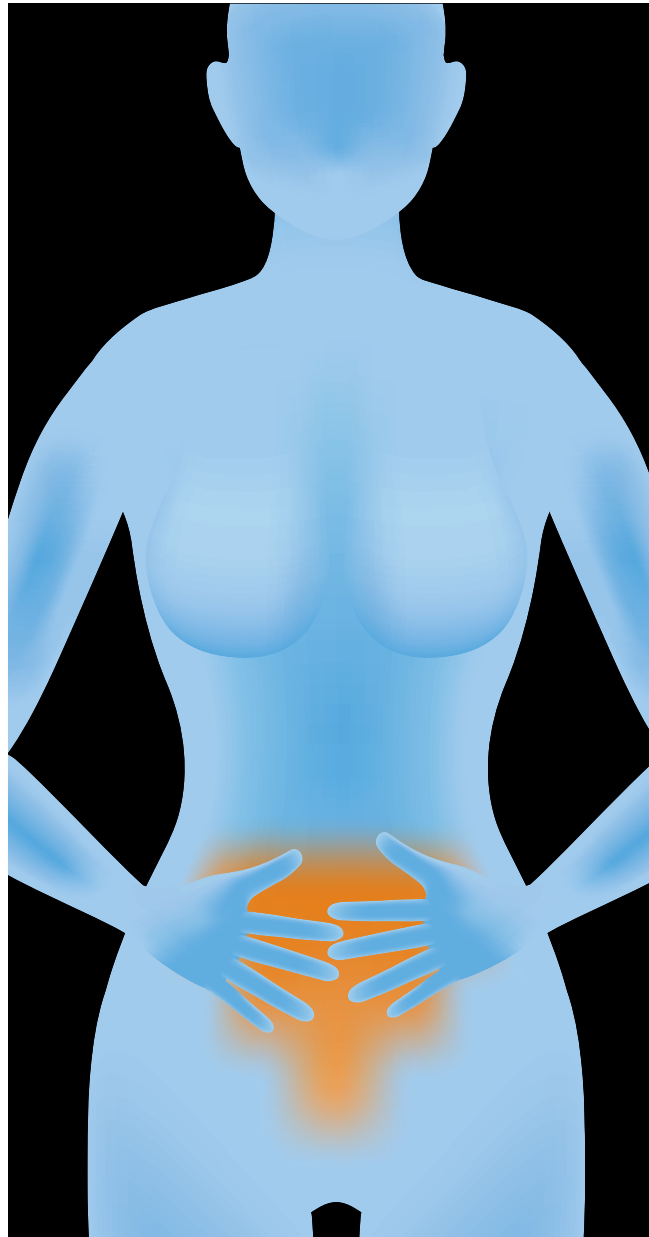
“Numerous studies show improvement of IBS symptoms with the use of probiotics. In vitro and in vivo studies demonstrate the ability of various commensal bacteria to influence many functions associated with IBS, such as motility, visceral sensation, gut barrier integrity, and brain-gut interactions.⁹

In a human trial in 2014, Yoon *et al*, found that IBS patients supplemented with multi-strain probiotics had significant substantial improvement in their symptoms at week four in comparison to the placebo group.¹⁰ Sisson *et al* (2014) completed a study in 152 IBS patients for 12 weeks and found that the group given multi-strain probiotics had significant improvements in overall symptom severity.”

Clients may also need to consider a full cleanse, with Harmer explaining: “When treating IBS or any gut disorder, dysbiosis, bacteria, fungi or parasites are likely to be present. Therefore a 35-day, two part broad-spectrum antiparasitic, antimicrobial and antifungal herbal parasite cleanse which works to destroy parasites, yeasts and unwanted bacteria should be considered. When supporting an IBS patient with a parasite cleanse, it is important to use a mix of soluble and insoluble fibre to help remove dead parasitic material and toxins from the intestinal tract and move it to the colon for elimination. A good fibre supplement will also contain L-Glutamine and healing herbs to help repair the intestinal tract, which is often damaged by unwanted organisms.”

Dr Labrador also suggested digestive enzymes, commenting: “A multispectrum digestive enzyme may be supportive by making it as easy as possible to not only absorb nutrients but also eliminate waste.”

Wilkinson added: “We have seen that a lack of



digestive enzymes can be a contributory factor. Many people find that by taking digestive enzymes or betaine hydrochloride, their symptoms can be improved.”

You may also want to consider supplements that can help to heal the gut.

“Adding in nutrients that help heal the gut is beneficial,” Wilkinson agreed. “Consider adding glutamine to your clients’ supplement protocol. Glutamine has been shown to be very effective in maintaining the integrity of the intestinal mucosa.”

Harmer added: “IBS sufferers may be dealing with food sensitivities, leaky gut or intestinal inflammation. Additionally, *Candida albicans* and parasites can cause considerable damage to the intestinal tract lining. To support repair of the intestinal tract lining, use a high potency powdered supplement containing L-Glutamine, N-Acetyl D-Glucosamine to help rebuild the intestinal mucosa, and soothing herbs like marshmallow root and anti-inflammatory marigold flower and ginger root.”

Curcumin may also be recommended.

“Consider curcumin for its ability to act as an anti-inflammatory. We know that inflammation is a contributory factor and curcumin could be beneficial for this as well as all its other health giving properties,” Wilkinson explained. “Ginger may provide symptomatic relief to help typical IBS symptoms such as pain and bloating.”

Your daily lifestyle should also be kept in mind, as stress is a known contributor to symptoms.

In light of this, Wilkinson suggested: “Cognitive Behavioural Therapy and the teaching of relaxation techniques have also shown to be effective. Remember that stress can exacerbate symptoms dramatically. Be mindful of emotions; some sufferers find IBS symptoms are worse when they are feeling nervous or worried. Seeking professional support about how to cope with worry or anxiety can be helpful.” ●

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Nutrition I-Mag is delighted to be bringing back our Product Awards for 2016

These awards were created to recognise those brands that are leading the way when it comes to innovation and quality within the nutritional supplements and natural health markets and Over the years, they have become highly coveted.

In this issue, we are excited to be able to reveal all those brands in the running for an award, across the various categories.

And then it's over to you, our readers, to tell us what gets your vote. Whatever your reason for voting for a particular product, we want to hear from you. Simply click on the form overleaf or log onto www.nutritionimag.com And we will be revealing the results in our Jan/Feb issue.



BEST ALTERNATIVE PRODUCT/SERVICE

- Cambridge Nutritional Sciences** - Antibody testing kit
- Crystal Spring** - Salt of the Earth Foot Spray
- Pukka Herbs** - Turmeric Lifekind
- Zu Direct** – Nature's Sunshine Vitamin D

BEST NEW PRODUCT

- Higher Nature** - Pets Calm Powder
- Kinetic Enterprises Ltd** - Barlean's Omega Swirl
- myDNAhealth** - Comprehensive DNA Test
- Renew Life** - Ultimate Colon Care
- Renew Life** - Ultra Potent Probiotic
- Rio Trading** - Rio Rosa Mosqueta Rosehip Discovery Set

BEST VMS

- A Nelsons** - Spatone Apple®
- Kinetic Enterprises Ltd** - Amazing Grass Raw Reserve
- Solgar** - Beta Glucans & Elderberry Immune Complex





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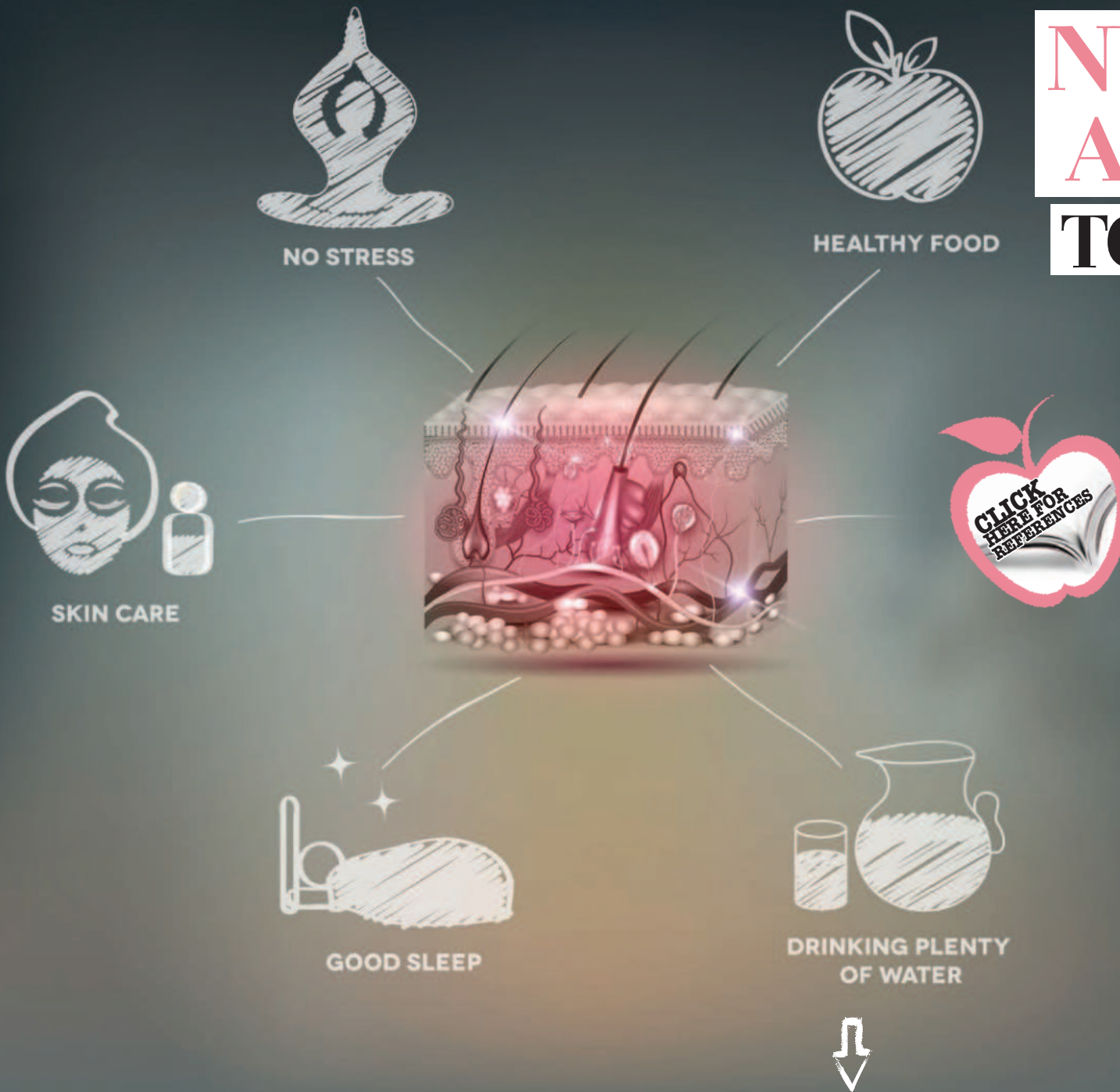
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NUTRITIONAL APPROACHES TO ANTI-AGEING



Nutrition I-Mag examines the science behind ageing, and the important nutritional considerations.

It's something that is inevitable for us all, yet the way an individual ages can vary – quite dramatically – from person to person. The factors involved in this are varied, and includes genetics, diet, and lifestyle.

As a nutritional therapist, it's important to understand the factors that can affect how well our body ages, and the considerations to make to avoid premature ageing. The tell tale signs are, of course, going to start on the outside as our skin is affected greatly by ageing, but you must also keep in mind the effect internally too.

"Manifestations of ageing can be visual, such as skin appearance, height or posture, but also the early onset of age-associated conditions. Symptoms could include cognitive impairment, elevated inflammatory markers, loss of height, macular degeneration or loss of muscle tone," explained Jenny Hall,



Technical Services Assistant at Viridian Nutrition.

“Certain individuals may be genetically predisposed to age faster, however, we can also manage the rate of ageing by optimising nutrition, lifestyle, using ‘clean’ bodycare products and ‘friendly’ cleaning products. There is evidence that an epigenetic effect can be exerted upon genes that can have a negative or positive effect, for example, it is thought that pollutants can contribute to negative outcomes and exacerbate ageing.”

Jenny Bodenham, BA (Hons), Dip.ION, Nutritional Therapist at Higher Nature, also highlighted neurodegeneration, poor cognitive function, depression and anxiety disorders, along with osteoporosis, arthritis, obesity, diabetes mellitus, adrenal disorders and thyroid disorders among the issues to be concerned with.

But why do we age quicker than others?

Hall explained: “The theories behind ageing include:

- Genetic regulation and genetic instability are referenced as contributors to ageing and may explain why it differs across individuals. It postulates that the programmed switching on and off of genes produces physiological changes and that ‘selfish’ genes may contribute to greater genetic stability and subsequently slower ageing.ⁱ Epigenetics is the study of influences on genetic expression, those influences include diet, lifestyle and environment.ⁱⁱ Essentially, the suggestion that what is eaten and how an individual leads their life can affect DNA formation and function.

- Oxidative free radicals are by-products of metabolism, pollutants or toxins. To counter free radical production, the body naturally produces antioxidant enzymes, additional antioxidant compounds are provided from the diet. These factors counter free radicals, however, in some cases, free

radical attack can overwhelm these resources to produce oxidative damage. Oxidative damage can occur anywhere in the body and at a cellular level. Experimental studies link oxidative damage to ageing and age-related diseases.ⁱⁱⁱ

- The neuroendocrine system is the complex connection between the brain and our nervous system, incorporating endocrine glands that produce hormones to signal for physiological reactions. The hypothalamus acts as the master regulator for the pituitary gland, thus initiating and inhibiting the cascade of signalling that directs the hormone production from the adrenals, thyroid and sex organs. It is suggested that as we age, interaction of these systems becomes less efficient and this may lead to deterioration of physiological reactions and potentially age related conditions.^{iv}

- The mitochondrial theory of ageing is based on the suggestion that over time metabolic processes accumulate defects. This is of importance as mitochondria contain genetic DNA, thus reiterating the potential magnitude of such defects. Furthermore, longevity has been shown to correlate with maternal death but not paternal death, suggesting mitochondrial DNA inheritance plays a role in longevity.^{vi}

- Inflammation is suggested to affect ageing, contributing to the term ‘inflamm-ageing’. Given that inflammation is a primary symptom of immune activation, plus its major involvement in chronic conditions, this could have far reaching consequences. It is suggested the variety of sources that trigger inflammation, such as stress, pathogenic infection, illness, etc. may increase the pro-inflammatory status of an individual in a manner that may evolutionarily increase the homeostatic set point. Thus, promoting the onset of chronic conditions

associated with such levels of inflammation.”

Bodenham agreed, adding: “Epigenetics, the study of gene activity changes that are not caused by alterations in the actual DNA sequence, but by lifestyle choices and social and environmental stressors, is becoming an increasingly researched area, with studies suggesting an important role for chronic stress in the process of premature ageing. It is believed that conditions such as anxiety, panic attacks, phobias, untreated depression and social isolation may accelerate the ageing process by shortening the length of each DNA strand. Telomeres cap the ends of linear DNA strands, protecting them from damage. As telomeres reduce in length, a weakening of their structure results, causing cells to age faster and die younger.

“Whilst cellular senescence (cell shrinkage and inability to further replicate) is a necessary mechanism for the elimination of worn-out cells, it also appears to contribute to premature ageing and shorter human lifespans⁽¹⁾.”

PREMATURE AGEING

There are some clear signs that someone isn’t ageing as well as they should be.

Romina Melwani is a Mycotherapist and Nutritional Therapist for Hifas da Terra and explained: “Premature ageing signs and symptoms first of all starts with photo-ageing of the skin. Skin feels dry and wrinkled. Depleted energy levels can also have an impact on accelerating the process of ageing.”

But she added: “Anti-ageing is more than just lotions and potions, it’s about ensuring your body is working to the best of its ability. With mycotherapy, you can be sure the extensive healing properties of mushrooms are working to boost your immune system, detox and reduce inflammation, resulting in that healthy,





youthful skin.”

Egzona Makolli is a Nutritionist and works as Technical and Commercial Nutritionist for Kinetic, and added: “Genetics does play a role in how the skin ages as some individuals are more prone to ageing due to their genetic pattern, which may be because of pigmented spot intensity, although this is a complex ongoing investigation. Living in a country which has a high exposure of sunshine also causes premature ageing because of the UVA and UVB damaging skin cells, which can lead to fine lines and age spots. Individuals who also have any of the factors above are more susceptible to ageing because of the damaging free radicals and oxidative stress on skin cells.”

Long-term exposure to stress must also be borne in mind in terms of a contributory factor to premature ageing.

Melwani added: “Chronic stress effectively increases oxidative stress, genomic instability and mitochondrial dysfunction. Also, a growing body of evidence suggests that reactive oxygen species (ROS) are generated by UV radiation. Therefore, reducing the risk of UV-induced oxidative stress-mediated skin disease or protecting keratinocytes from photodamage may be crucial for skin protection.”

Stress also has an impact on the skin’s appearance, with Makolli explaining: “Stress can be associated with negative facial expressions, which can lead to fine lines and wrinkles. Every time you use a facial muscle through either frowning or being worried, a groove forms beneath the surface of the skin and, as the skin loses its elasticity, these lines stop springing back into their line-free state.”

SKIN DEEP

We know that how we look on the outside can be a sign of how well we are ageing.

“Skin ageing is a normal process, which occurs when changes in the structure and elasticity of the skin take place,” explained Makolli.

“The skin is made up of collagen and elastin, which start to decrease from the age of 25-30 and stops altogether at the age of 40-45. Although changes within your skin are normal, premature ageing can occur when drastic changes happen in the structure and elasticity of the skin, causing fine lines, age spots, loss of elasticity and density.”

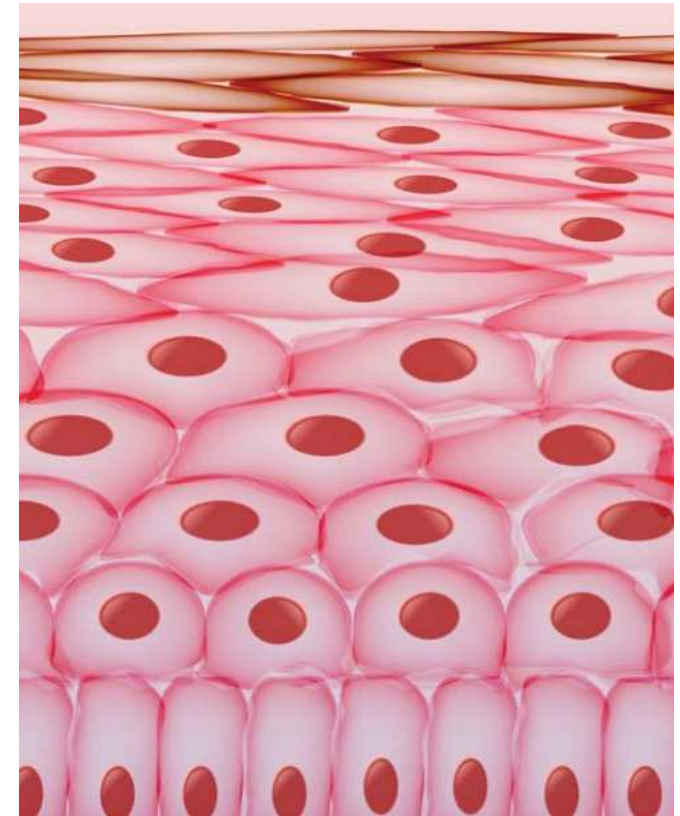
Bodenham also pointed out: “Ageing is believed to be genetically, environmentally and stochastically determined⁽⁷⁾. There is also emerging research linking skin health with the ageing process. Studies have looked at the reasons why the skin of acne sufferers appears to age more slowly than the skin of those who have not experienced any acne in their lifetime. Again, there appears to be an association between the length of telomeres which appears to be different in acne sufferers⁽⁸⁾.”

In terms of the skin, why does this occur?

“Premature ageing occurs when the collagen fibres decrease in number while the elastic fibres thicken into bunches. While some signs of ageing are unavoidable, certain life choices can cause skin to prematurely age,” Makolli pointed out.

“Sun damage is usually the main culprit in skin ageing. It generates high levels of DNA damaging free radicals, which make the skin thinner. Sun damage also quickens the degeneration of important proteins, such as elastin and collagen, which can cause freckles, age spots, spider veins and fine wrinkles, as these proteins lose the ability to repair themselves.

“Smoking causes biochemical changes within the body, which can quicken the process of ageing. As cigarettes release free radicals in cigarette smoke, this can deplete your skin-supporting antioxidants and



contribute to premature ageing. Many studies have shown that smokers are more likely to prematurely age and may develop a yellowing of the skin.”

Alcohol too is no friend to the skin in this respect.

“Alcohol dilates small blood vessels and increases blood flow near the skin’s surface. Over a prolonged period of time, these blood vessels may become permanently damaged and create a flushed appearance and cause premature ageing,” Makolli added. “And pollution can trigger the release of skin damaging free radicals, which can also worsen the effect of sun exposure, hastening oxidative stress.”





THE DIETARY LINK

There is no doubt that poor diet over many years can contribute to accelerated ageing, and it's important to know what the contributory factors are.

"Diet can be crucial in the management of premature ageing. Just as poor dietary choices may contribute to further ageing, smart dietary choices can be nutrient dense, antioxidant rich and supportive of body functions," Hall commented. "For example, a review of 24 clinical trials stated that the use of omega 3 essential fatty acids improved form and integrity of the brain during ageing.^{vi} A further review concluded that optimal DHA intake may limit the impact of stress related ageing on the brain and regulate the regeneration of brain cells.^{vii} Consequently, this shows that the inclusion of fish in the diet or supplementary omega 3 essential fatty acids can be beneficial."

Bodenham added: "Research suggests a role for nutrition in areas such as age-related cognitive decline, and cognitive impairment of both degenerative (Alzheimer's disease, AD) or vascular origin. Vitamin deficiencies such as B6, B12 and folates, as well as antioxidants, may have an effect on cognitive decline⁽²⁾. There is also emerging evidence of overlap between degenerative and vascular disorders, where an association between AD and vascular risk factors, such as arterial hypertension⁽³⁾, diabetes mellitus⁽⁴⁾, atrial fibrillation⁽⁵⁾ and generalised atherosclerosis were found.

"The Mediterranean diet has consistently been linked to optimum health, including reduced mortality and a reduction in risk of chronic diseases, such as cardiovascular disease. A recent study⁽⁶⁾ examined potential links between adherence to the Mediterranean diet and longer telomere length. Data on 4,676 healthy middle-aged women from the

Nurses' Health Study was examined. In this study, the health of over 120,000 US nurses has been tracked since 1976. Participants completed detailed food questionnaires and had a blood test to measure telomere length. Whilst none of the individual components of the diet was associated with longer telomere length, results showed that greater adherence to the Mediterranean diet was significantly associated with longer telomeres."

Looking specifically at the skin, Makolli continued: "Although ageing is a natural process, your diet can play a role in slowing down the process of premature ageing. Your body requires good nutrition for it to run as efficiently as it should. As we age, our body changes not just on the outside but also in how they work and so it's essential to maintain good nutrition.

"Diet can be crucial in the management of premature ageing. Just as poor dietary choices may contribute to further ageing, smart dietary choices can be nutrient dense, antioxidant rich and supportive of body functions."

"The key to slowing down premature ageing in the skin is to support structural health of collagen and elastin, boost antioxidant defences, adding beneficial fats and hydrate the skin with adequate water intake. Whilst there's no set dietary plan to stop premature ageing, there are certain foods which are good for the skin."

Melwani added: "Diet plays a key role in reversing the ageing process. The nutritional values of a well-balanced diet will include the key nutrients such as naturally occurring vitamins A and E protecting us

from oxidation. As we know, ROS can inflict damage to lipids proteins and nucleic acid, leading to premature ageing, so increasing antioxidant foods is key in reversing this process."

Lack of essential fats, specifically a healthy intake of omega 3 fatty acids (DHA) is also important for cell membrane integrity and skin health, as well as support normal brain function.

Keep an eye too on the levels of sugar intake in a client.

"Sugar, in excessive quantities, can seriously damage the health of your skin. If a normal and adequate amount of glucose can provide energy, a bigger quantity can enable their transport to cells and ends up binding with proteins like collagen. As a result, sugar won't undertake its normal function, causing sagging skin and premature ageing. Alcohol is also one of the biggest enemies of our skin. Drinks with alcohol content higher than 10 per cent can contribute to dehydration and premature skin ageing."

Collagen must also be kept in mind when it comes to ageing and a person's dietary approach plays a key role in this.

"Sugar and high-glycaemic carbohydrates are rapidly converted to glucose within the bloodstream, which can cause a reaction called glycation, in which excess sugar molecules attach themselves to collagen fibres. If sugar molecules bind to collagen fibres, which causes them to lose their strength and flexibility, causing the skin to become less elastic and more vulnerable to lines," Makolli explained.

NUTRITIONAL MANAGEMENT

Dietary changes are important in this aspect, and there are many recommendations you could make as a Nutritional Therapist.





"A full nutritional analysis should be conducted with a health questionnaire, which will give the Nutritional Therapist an insight to the client's current health status and dietary intake as this will show whether their diet is rich in certain foods," Makolli explained. "Biochemical analysis can be conducted to find out the oxidative stress of the client alongside digestive analysis and other ageing markers. These will all allow the nutritional therapist to adapt the client's dietary intake and either remove or add certain food groups or supplementation."

So, what to recommend?

"Useful dietary approaches would include the use of organic foods to remove potential toxins from the diet, this would contribute to a 'clean', nutrient dense diet. Furthermore, encouraging an eating plan that is rich in vegetables, fruits, lean meats, legumes, eggs, fish, nuts and seeds will provide nutrient density," Hall recommended. "The encouragement of seven to 11 fruit and vegetable servings in a rainbow of colours supports nutrient density and the consequent provision of vitamins and minerals to facilitate normal body processes and counter oxidative stress. Healthy fats, fish and eggs are associated with improved cognitive function, often an area that is reported to deteriorate with ageing."

Bodenham recommended the Mediterranean diet, which is linked to a biomarker of slower ageing and also associated with lower incidence of cardiovascular disease⁽⁹⁾.

"Reduce red meat and dairy consumption

and use healthy protein sources, including oily fish, free range chicken and eggs, pulses and legumes, eat more fresh fruit and vegetables, steam, poach, grill, stir fry and bake rather than deep frying food and roasting in fat, and use plentiful herbs and spices including garlic, thyme, oregano, basil – garlic features heavily in the Mediterranean diet, both in cooked dishes and eaten raw. Research has found that garlic boosts our supply of hydrogen sulphide, which acts as an antioxidant and promotes blood vessel dilation, helping to support normal blood pressure levels," she explained.

"Use wholegrains such as brown rice and quinoa, the Mediterranean diet favours high consumption of monounsaturated fatty acids, principally from olives and olive oils and omega 3 fatty acids from oily fish, such as mackerel, sardines and salmon, and nuts and seeds, including walnuts and pumpkin seeds. If cooking at high temperatures, use a fat that is stable, such as coconut butter, which does not produce trans-fats."

Makolli suggested: "Oily fish or flax seed oil are great sources of omega 3 fatty acids, which help keep your skin elastic and nourished. Sardines are a great source of CoQ10, which is a powerful antioxidant, and salmon is a source of selenium, which is a mineral that protects the skin from sun damage. Green vegetables, such as kale, greens and spinach, are a rich source of vitamins B, C and E, as well as minerals potassium, magnesium, calcium and iron. These greens are loaded with the antioxidant lutein, which supports healthy skin."



"Avocados are a great source of vitamins B, C and E, as well as mineral potassium. They're also high in beneficial monounsaturated fats, which may help the uptake of fat soluble antioxidants, such as beta carotene, lycopene and lutein. Acerola cherries are one of the richest antioxidants high in vitamin C, which is an essential vitamin in keeping the skin firm. Dark berries, such as blackberries and blueberries, are rich in skin supporting antioxidants anthocyanidins and may aid in skin health. Orange vegetables and oranges are packed with beta carotene, which is an essential antioxidant for the protection of sun damage. You should aim to include all of these foods in your diet on a daily basis."

Melwani continued: "I would recommended to follow an anti-inflammatory diet as this is where oxidation starts. Rated one of the 10 most anti-inflammatory foods in the world, reishi mushrooms would be a key component to use against oxidation and inflammation. Reishi helps build up our stress defence shield from the inside out. This medicinal mushroom was documented before the time of Christ, named 'immortality mushroom' or the mushroom of 'ever-lasting youth'.

"Cordyceps is also another interesting medicinal mushroom, particularly for its ability to transport oxygen to cells. As you may have already heard, cordyceps are considered the most invigorating mushroom of all. Properties range from fighting fatigue to ageing. Cordyceps in the aspect of cellular ageing can be a healing agent on our skin."

She continued: "I would also strongly recommended an antioxidant diet, including





superfoods daily. In order to nourish and prevent the oxidation caused by free radicals to skin, it's suggested to consume fruits and vegetables with high water content. In the ranking of food with the highest water content, we have mushrooms, strawberries, watermelons, melons, grapefruit, tomatoes, lettuce, chard, asparagus and spinach, all of them with above 90 per cent water in their composition and rich in antioxidants, fibre, vitamins and minerals."

Remember too lifestyle changes can help.

"Lack of exercise can contribute to premature ageing as exercise can help boost circulation and tone your muscles, which in turn also benefits mood and energy levels," Makolli advised.

SUPPLEMENT TOOLKIT

Certain supplements can also be useful here.

Hall pointed towards omega 3 essential oils, commenting: "Choose one that is organic and minimally processed. Vegans may opt for marine algae derived omega 3 essential fatty acids. As previously mentioned, beneficial for cognitive function but also for cell membrane structure and to counter inflammation."

She also suggested: "Astragalus is an immune supporting adaptogenic herb that is touted to preserve telomere ends, an important marker in ageing. And vitamin D; getting 20 minutes worth of sunshine becomes harder in the UK in autumnal and winter months. Given the association of sub-optimal vitamin D level and the onset of chronic disease, ensuring a regular dose may be beneficial."

Probiotics can also help, with Hall adding: "Choose a probiotic formulation that includes a number of resistant species with prebiotics. Given the ability of pathogenic bacteria to produce toxic by-products, supplementing with a probiotic can be beneficial in

reducing pathogenic colonies."

Bodenham also supported the use of omega 3 fatty acid supplement to support heart, brain, immune function, and added: "B complex vitamins with folate and TMG to support healthy methylation, an antioxidant complex to combat excessive free radical damage and heart health, coenzyme Q10 to combat excessive free radical damage and support energy produced in mitochondria, heart health, and astaxanthin to combat excessive free radical damage, support eye and skin health."

"Cordyceps has the ability to strengthen cell generation of the telomerase enzyme, which allows skin cells to live longer and with an error-free reproduction cycle."

Melwani suggested extracts of reishi and cordyceps.

"Excess inflammation within the human body creates multiple long and short term imbalances within us. Mushrooms contain a veritable bounty of natural active compounds to support healthy ageing," she commented.

"Reishi extracts have been shown to induce significant reduction of inflammatory cytokines in allergic and inflammatory responses, such as asthma, rheumatoid arthritis, systemic lupus and polymyalgia. Cordyceps has the ability to strengthen cell generation of the telomerase enzyme, which allows skin cells to live longer and with an error-free reproduction cycle. This way, we reduce the skin inflammation – illness – cell ageing vicious cycle.

Melwani also advocates the use of antioxidant enzymes, such as SOD (super oxide dismutase) and laccase, both neutralising free radicals.

For Makolli, a collagen supplement is important.

"Collagen should be taken as this is the major protein which supports firm and youthful skin. As collagen starts to decrease after the age of 25, a collagen supplement can help support collagen production in the skin, thus improve skin strength and appearance," she explained.

"Collagen should be combined with a vitamin C supplement as vitamin C plays a role in the production of collagen as it interacts with amino acids within collagen cells. Vitamin C is an essential nutrient and a powerful antioxidant, which may help boost collagen formation. Hyaluronic acid is a natural component of connective tissue and, like collagen, hyaluronic acid levels decrease with age and a supplement can help maintain the moisture within skin tissues."

She also highlighted certain vitamins that are crucial when it comes to slowing premature ageing.

"Vitamin K2 is essential in preventing the soft tissue calcification and helps to protect elastic fibres in the skin from becoming harder due to calcium deposits. This is because K2 is essential for the activation of matrix proteins, which inhibit calcium from being deposited in elastin fibres and preventing these fibres from hardening and causing wrinkles. Research shows that individuals who cannot metabolise vitamin K may suffer from premature ageing," Makolli explained.

"Vitamin E is an antioxidant which is present in the skin and can be found in various foods such as vegetables and seeds. Vitamin E can be taken as a supplement to help the skin look younger by boosting collagen production." ●

EXPERT ADVICE

Our panel of nutritional experts offer readers advice on dealing with a variety of issues.



THE EXPERTS



NATALIE LAMB Dip NT mBANT is a qualified Nutritional Therapist who studied a three year diploma in Nutritional Therapy at the College of Naturopathic Medicine (CNM) and is a member of The British Association of Nutritional Therapists (BANT). Natalie saw clients in a private clinic in London for two years before joining Probiotics International (Protexin), manufacturers of Bio-Kult and Lepicol ranges.



JULIE LAMBLE BSc hon. Nutritional Biochemistry is a state registered Nutritionist, working for Lifeplan.



YUWA AGUEDO is a Naturopath qualified in Nutrition, Western Herbalism and Remedial Massage. She has a clinical practice in London and is committed to help her clients through sustainable choices. As an experienced lecturer on the nutrition therapy course at the College of Naturopathic Medicine, Yuwa is able to make complex material understandable and enjoyable. She advises for Hifas da Terra.

Q

I see a rise in the number of clients with immune related problems during the winter – what is the general approach to take when dealing with winter illness?

NATALIE LAMB

EXPLAINED: It is not uncommon to see a rise in immune related conditions during the winter, especially from January onwards when vitamin D stores can become depleted. As a preventative, many experts recommend trying to get at least 15 minutes of midday sunshine without sunscreen to top up fat-soluble vitamin D stores over the summer months to last over the winter. Interestingly, a recent study has shown that after just nine weeks of consuming a probiotic supplement, vitamin D levels increased by more than 25 per cent.¹

Up to 70 per cent of our immune cells are located in the gut and supported by a diverse gut flora.² The gut microflora plays an essential

role in supporting the immune system, influencing its state of alertness and optimising the speed and effectiveness of the body's defence response to an infection, such as the common cold. The immune system can need some extra help during the colder months if busy fighting off a variety of winter viruses. One potential solution is to top up levels of the gut bacteria via a good multi-strain probiotic supplement (live beneficial bacteria). Taken for three months, a multi-strain probiotic was shown to significantly shorten common cold episodes by almost two days and reduce the severity of symptoms by 23 per cent.³ It is good to remind our clients that common conditions such as coughs,

colds, sore throats and 'flu are often viral infections that rarely require antibiotics, which are designed to treat bacterial infections, and in healthy individuals symptoms will usually clear up within a week.

I would recommend consuming a varied wholefood diet high in fresh winter vegetables, supplying a mix of essential nutrients such as zinc, vitamin C, vitamin E and selenium, which are well known for supporting the immune system. Good quality protein sources are the building blocks for many immune cells. Slow cooked with culinary herbs, such as sage, rosemary and

thyme are reputed to have additional immune boosting benefits. Simple sugars and refined carbohydrates on the other hand are known to feed unwanted bacteria and yeast in the gut, encouraging their growth over beneficial immune supporting strains. Any form of stress on the body has certainly been shown in studies to imbalance the gut flora⁴ and cause damage to the gut lining. As winter draws in, it is traditionally a time when things slow down, so suggest they allow themselves some quiet time.

[CLICK FOR MORE QUESTIONS](#)



Q

Ahead of the usual influx of people seeking weight loss advice in the New Year, can you advise on the best protocol to follow?

JULIE LAMBLE SUGGESTED: The New Year is a popular time for us Brits to start a fad diet. In fact, a quarter of us miss out on social occasions due to these new eating regimes, as they can take control of our lives. These fad diets usually last a short amount of time and restrict our food intake, resulting in only temporary weight loss.

These diets are therefore not a long-term solution to weight loss and also restrict important nutrients and fibre, possibly leading to deficiencies and digestive problems. The best approach to lose weight is maintaining calorific intake, typically between 1,500-2,000 calories a day and eating a healthy, balanced diet. This consists of a diet plentiful in fish, lean meats, pulses, wholegrains, fresh fruit and vegetables and eating refined and processed foods only occasionally.

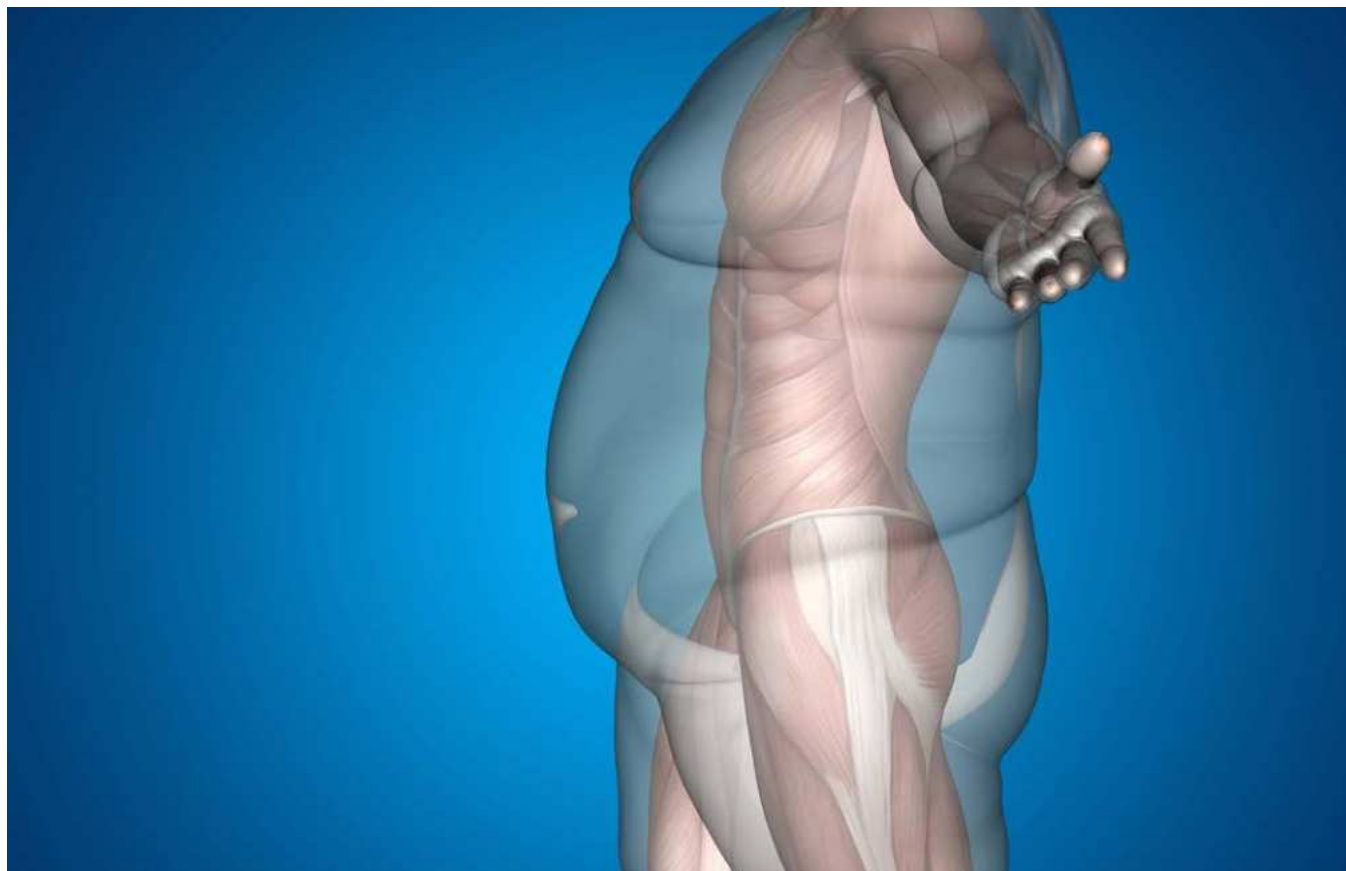
A recent study published in the *International Journal of Food Sciences and Nutrition* (1) has shown that probiotics may promote weight loss and reduce Body Mass Intake (BMI). This study combined data from 25 randomised trials on the impact of probiotic consumption of body weight and BMI on 1,900 people. Subjects that took high strength friendly bacteria for eight weeks or more had significantly increased weight loss, with a greater reduction in BMI from multiple species of bacteria than those taking a placebo. Evidence suggests that probiotics have metabolic effects in the body, reducing appetite and increasing satiety. This is confirmed by the findings that microflora differs in that of obese and slim people, suggesting that friendly bacteria have a role in the storage of fats and energy utilisation. So look out for a probiotic

formula providing 30 billion bacteria per capsule, containing a variety of *bifidobacteria* and *lactobacilli* bacteria, including *Lactobacillus plantarum*, to help maintain a healthy weight.

Glucomannan, sometimes referred to as konjac fibre, is another great natural product which can help to

promote weight loss. This ingredient, found in powders, capsules, drinks and pasta, was approved by the European Food Safety Authority in 2010 (2) to be an effective weight loss aid. Glucomannan administered as a pre-load before meals helps to restrict energy intake, when 1g is taken at each intake. Capsules taken before meals are probably the best way to take this ingredient, since they are easy to use and contain no calories.

A healthy diet alongside these non-invasive treatments is definitely worth exploring as a long-term solution.





Q

I see a high number of women in clinic presenting with symptoms relating to hormonal imbalance. Can you advise how medicinal mushrooms can be incorporated into a nutritional programme?

YUWA AGHEDO ADVISED: Using food as medicine is an established principle in naturopathic nutrition. Looking at the medicinal mushrooms, for instance, shiitake (*Lentinula edodes*), we have a clear example of a medicinal food as it provides a broad array of nutrients; vitamins Bs and D, minerals in the form of trace elements of copper, selenium and manganese, and macronutrients; relatively high protein and carbohydrate, including fibre. Whilst the chemical constituents contained include polysaccharides (beta 1,3/1,6 glucans), glycoprotein and triterpenes.

In terms of the medicinal aspects, we are perhaps well versed on the body of research that has led to the appropriate consideration in using the medicinal mushrooms in cases of immune modulation and integrative oncology. The human response to mushrooms is diverse, so it is perhaps not surprising that alongside the more established effects of the mushrooms, recent experimental research is bringing to light new therapeutic indications for the medicinal mushrooms, the exciting prospect being that there is greater, as yet unexplored potential.

One area of particular interest is the use of these powerful foods to support the reproductive system. In traditional Chinese medicine, cordyceps was and is used to enhance libido and sexual function. Experimental studies have identified that cordyceps may have this effect via two distinct mechanisms. First, it is considered to enhance testosterone release

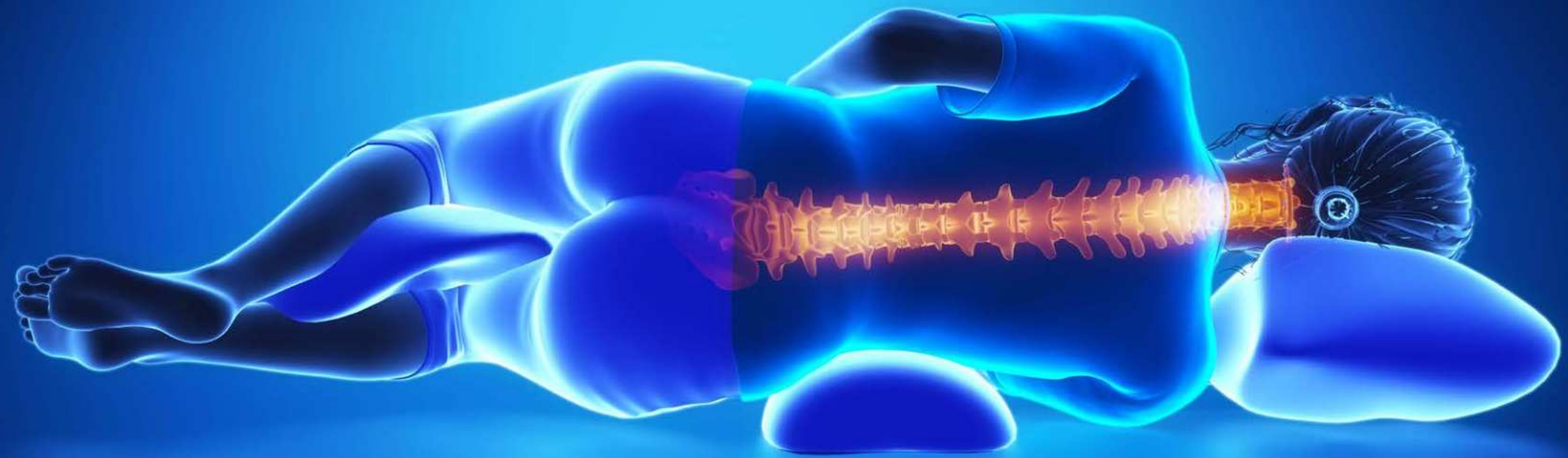
and secondly, a protein fraction of this mushroom exhibited blood vessel relaxing properties by enhancing the production of nitric oxide, which may improve erectile function. Cordyceps is also shown to help with the production of cortisol and other stress hormones. The adaptogenic qualities allow them to influence the body towards homeostatic balance. Another feature of many of the mushrooms, including cordyceps, is they exhibit antioxidant activity, which, of course, conveys benefit throughout the body, including the reproductive system. Having an awareness of the literature exposing the



broader indications of mycotherapy (therapeutic use of the medicinal mushrooms), whilst important is not our only point of consideration. When it comes to the products available for our practical usage, clearly not all mushroom products found on the market are created equal. As with all natural products, we have to question the safety, quality and therefore efficacy of the product we have at hand to use therapeutically. As with botanicals, the environment within which the mushrooms are grown is hugely significant with regards to the quality of the end product. Most of the mushroom life cycle is underground, outside of our sight, where they exist in mycelium form. The mushroom cap that we recognise is called the fruiting body and only exists for a short period of time. It is important to know the quality of the growing medium from which the mushroom is harvested. To use a mushroom therapeutically, it is also important to opt for standardised extracts, so that the dose is clear and consistent with each use.

SLEEP SOLUTIONS

As part of the *Nutrition I-Mag* Mentoring Scheme, Bethany Lynch, who is studying a BSc in Nutritional Science at CNELM, examines the issues around sleep disorders.





We spend almost a third of our lives asleep, so you would think that we would have mastered it by now. Yet, according to the 2013 Great British Bedtime Report, only a quarter of British adults say that they sleep very well most nights. (5)

And this is having a big impact on our health. Here, we look at the reasons some of us struggle with sleep, the effects of this, and the approach you could take in-clinic.

THE SCIENCE OF SLEEP

All life on earth is built around circadian rhythm, which is impacted by multiple external causes, including daylight.

Circadian rhythm is often referred to as the body's internal clock, influencing mental, behavioural and physical changes that happen roughly every 24 hours. These changes are controlled by the suprachiasmatic nucleus (SCN), which is located in the hypothalamus, where the light travels along the optic nerve to the SCN and signals the pineal gland to control levels of the hormone melatonin. Melatonin helps to regulate sleep cycles and plays a critical role in when we fall asleep and when we wake up. It is also an antioxidant, anti-aging, and helps to support the immune system.

A good night's sleep is broken down between Non Rapid Eye Movement (stage one to three, non-REM), which accounts for up to 75 per cent of sleep, and Rapid Eye Movement (stage four, REM), which accounts for the other 25 per cent. Each sleep cycle is approximately 90 minutes long, which translates into roughly five cycles per night based on the average seven to nine hours sleep. REM sleep is often characterised as 'active sleep', when the brain activity is much faster and more similar to waking hours, whereas, non-REM sleep is more peaceful, with hardly

any eye movement compared to faster eye movement during REM sleep.

Stage 1	Stage 2
<ul style="list-style-type: none"> • Approximately five-10 per cent total sleep time. • Brain produces alpha and theta waves. • Muscles begin to relax. • Most likely to experience hypnagogic jerk (feeling of falling). 	<ul style="list-style-type: none"> • Approximately 45-55 per cent total sleep time. • Brain waves slow at the end of this period. • Breathing is relaxed and slowed. • Body temperature drops. • Eye movements usually absent.
Stage 3	REM
<ul style="list-style-type: none"> • Approximately 10-20 per cent total sleep time. • Referred to as deep sleep. • Brain produces slower delta waves. • Muscle and tissue repair takes place. • Various hormones are excreted. • Phase most likely to sleep walk. 	<ul style="list-style-type: none"> • Approximately 20-25 per cent total sleep time. • Brain activity is high. • Eyes move quickly under the eyelid. • Brain consolidation takes place. • Heart rate and blood pressure increase. • Most dreams happen in this stage.

Below is a breakdown of each stage:

COMMON SLEEP DISORDERS

Snoring

According to the NHS, as many as one in four people in England snore regularly. (1) Snoring is caused by an obstruction of the soft palate tissue at the back of the throat. When air passes through, it can cause a snorting or rattling noise. It's more common with age and is usually caused by size and body shape. Weight is one of the main contributors and, therefore, shedding excess fat will usually improve symptoms.

Sleep apnoea

Obstructive Sleep Apnoea (OSA) is a potentially serious condition, which interrupts normal breathing patterns during sleep. It is caused by lack of muscle tone in the upper airway. Sufferers can be starved of vital oxygen from between 10-25 seconds per event, after which the brain will signal the body to wake up and take in air. If untreated, it can occur hundreds of times per night, leading to daytime fatigue and other serious health problems. According to the Sleep Apnoea Trust Association, there are currently 300,000 people in the UK diagnosed with OSA. (2)

Insomnia

As many as one in three people in the UK will suffer from insomnia on a regular basis. (3) It is described as a difficulty in getting to sleep or staying asleep long enough to wake feeling refreshed. The cause of insomnia can be different for each individual. Stress, age and hormone imbalance are just a few of the triggers.

Restless Leg Syndrome (RLS)

RLS, also known as Willis-Ekbom disease, is thought to





affect up to 10 per cent of people living in the UK. (4)

It is a neurological disorder, which causes a tingling or itching sensation and unexplained aches in the lower limbs. Sufferers have a strong urge to move the legs to relieve the uncomfortable sensation, which can result in disturbed sleep patterns. The causes are not always clear but have been linked to nutritional deficiencies, pregnancy and kidney failure. Some neurologists believe there could be a link to the way the body handles dopamine. (4)

SLEEP DEPRIVATION

Lack of sleep can make us feel grumpy, fatigued and in desperate need of caffeine and/or a sugar fix. But why do we need so much sleep to function properly? And what are the effects of long-term sleep loss?

The causes of sleep deprivation may result from poor quality or duration of sleep due to difficulty getting to sleep or staying asleep, waking up during the night or waking up too early in the morning. These are all types of disorders that can be inflicted by a multitude of environmental triggers, sleep walking, restless sleep partner, children, snoring, sleep apnoea, insomnia, and restless leg syndrome.

Sleep is a vital process for the body to achieve homeostasis. It allows the body time to rest, repair muscle, regulate hormones and consolidate memories. Even the smallest disturbances in sleep can affect memory, judgement and mood.

Sleep deprivation has been linked to weight gain, premature ageing of the skin and it can also kill your sex drive, not to mention it can cause accidents and make you feel depressed.

Long-term exposure to sleep loss can also have more sinister outcomes, which often don't present themselves for years to come. For example, heart

disease and cancer are the two of the most common causes of premature death in the UK and long-term lack of sleep has been implicated in the aetiology of both of these diseases. (6,7)

A 2013 study claims that lack of sleep puts you at the same risk of cardiovascular disease as smoking. (6) Dr Monique Verschuren, Lead Researcher on the paper, says that "the importance of sleep should now be mentioned as an additional way to reduce the risk of cardiovascular disease". The role of insufficient sleep is not clear or straightforward but it is hypothesized that disturbances in glucose metabolism, blood pressure, and the immune system all contribute to disease progression.

The World Health Organization classified sleep disturbance, caused by working night shifts, as a potential cause of cancer. (7) Inflammation and disruption to normal immune function are thought to play a significant role. In addition, melatonin, which is produced during sleep, is an antioxidant and may help to protect against cellular damage. According to a study featuring the BBC's Dr Michael Mosely, even a reduction of just one hour's sleep per night can alter the expression of genes associated with inflammation, immunity, diabetes, cancer risk and stress. (8)

The importance of getting a good night's sleep is clear to see. Prolonged sleep deprivation, caused by sleep disorders, can have a profound negative effect on health and even shorten life expectancy.

So, why are so many of us not achieving a good night sleep? And what are the triggers?

TRIGGERS

Physical disturbances, medical issues and psychiatric disorders are all common and well-recognised causes of sleep disorders, but what about lifestyle factors? How do they impact our sleep patterns and quality of

sleep?

■ **Stress:** Stress and anxiety are now recognised as a leading cause of insomnia by the NHS. (3)

■ **Nutrition:** Researchers have found that people who had the most varied diet had the healthiest sleeping patterns. (9)

■ **Stimulants:** Caffeine and smoking interfere with the body's circadian rhythm, caffeine by delaying the circadian melatonin rhythm, and smoking by reducing the total sleep time, increasing difficulty falling asleep and maintaining sleep, and by causing smokers to wake up earlier than desired. (10,11)

■ **Alcohol:** The odd nightcap may help to induce sleep but a 2013 review of over 27 studies found that alcohol reduces REM sleep, which is thought to be the most restorative. (12)

■ **Obesity and exercise:** Increased body weight is associated with a reduction in quality and length of sleep. Four of the most common sleep disorders (as above) have a link to obesity. Regular exercise has been shown to have a positive effect on the quality of life of people suffering with sleep disorders. (13)

■ **Age and gender:** According to the Great British Bedtime report, men appear to enjoy better quality sleep than women (30 per cent sleep very well, compared to 22 per cent of women). Also, sleep quality seems to decline with age, with those aged 45-54 appearing to be the most sleep deprived age group. (5)

NUTRITION AND LIFESTYLE RECOMMENDATIONS

So, what can be done in clinic to help clients experiencing sleep disturbances?

Prioritise good quality proteins containing the amino acid, tryptophan. It is present in abundance in dairy products, turkey, eggs, chickpeas and some nuts and seeds. Tryptophan is the precursor to serotonin





and melatonin and is a great aid for sleep. Glucose is needed for it to cross the blood brain barrier, therefore, a snack containing both would be perfect, especially in the evenings. A good example would be full fat cottage cheese with strawberries and milled pumpkin seeds or warm milk with an oat and seed cracker. Cherries, orange bell peppers and walnuts are high in melatonin and might be beneficial to incorporate into the diet.

Try swapping high carbohydrate foods for ones that are high in fibre, protein and good quality fats. These will stabilise blood sugar levels, which reduces inflammation and also helps cravings for stimulants such as sugar and caffeine to correct low blood sugar levels. This could include swapping white rice and pasta for wholegrains, swapping sugar for xylitol and incorporating oily fish like salmon into the diet.

Magnesium and calcium are minerals that work together synergistically when it comes to the quality of sleep. (14,15) Potassium also works with magnesium, especially if muscle cramps are keeping your client awake at night. (16) Foods high in these minerals include green leafy vegetables, nuts and seeds and wholegrains. Promoting cooking from scratch and incorporating more plant-based products in the diet will help to address any imbalances.

Also, remove processed foods from the diet. They are often high in salt, fat and sugar and rob the body of vital nutrients. Replacing them with a diet rich in wholefoods will incorporate all of the recommendations above and saturate the body with all the nutrients needed to achieve sleep homeostasis.

Another good area to focus on is reducing caffeine intake, especially in the evenings, and replacing it with herbal teas. Valerian has long been used as a medicinal herb for insomnia and other sleep disorders. It can easily be included in a protocol in the form of herbal teas. A systematic review that was published in



the *American Journal of Medicine* in 2006 came to the conclusion that valerian may improve sleep quality but further tests were required to be conclusive. (17)

In addition to diet, lifestyle factors play a key role in the quality of sleep. The Sleep Council UK advises us to keep computers and TVs out of the bedroom, turn off mobile phones or anything with an LED light, keep the temperature around 16-18°C and make the room completely dark. Also invest in a good quality,

comfortable bed. (5)

Removing triggers, increasing exercise, promoting good sleep hygiene practices and a wholefood diet can all help when a client presents with a sleep disorder, but sometimes the cause may not be so obvious – food intolerances, (18) melatonin deficiencies, (19) heavy metal toxicity (20) and genetic mutations (21) are just some of the aetiologies that can contribute towards sleep disorders.





“Sleep is one of the four pillars of health, with significant impact on our daily lives and our future health. Lack of sleep often leaves people reaching for a quick fix in the form of sleeping pills but making small changes to diet and lifestyle can often yield great results.”

NUTRITIONAL SUPPLEMENT SUPPORT

Magnesium is by far the most researched and widely talked about mineral when it comes to sleep. The body uses it to send signals throughout the nervous system and it's a key factor in the production of serotonin, a neurotransmitter that evokes a feeling of calm and wellbeing. It is also needed for the relaxation of muscle fibres and helps to prevent spasms and twitches. Overall, magnesium has a very calming effect on the body, therefore aiding sleep, but most of us

don't get enough magnesium through our diets alone, leaving us with a deficit. Magnesium deficiencies have been linked to muscle cramps, anxiety and depression. (22–24)

Other contributing factors to magnesium deficiency include medication, poor absorption in the GI tract, kidney disease and stress. When the body is stressed, it produces stress hormones, such as adrenaline and cortisol. Magnesium is needed to make these hormones and continued stress may cause magnesium deficit.

A 2013 study of 46 elderly subjects using 500mg/day of magnesium supplementation showed improved sleep quality and physical activity levels. (25) Another similar study on the elderly using the same levels of supplementation showed increased melatonin and decreased cortisol levels, as well as improvement on sleep markers. (14)

Vitamin D3 is also an important nutrient for sleep. It's estimated that one in five adults and one in six children in the UK are deficient in vitamin D. (26) Deficiencies have been linked to excessive daytime sleepiness, although the mechanistic roles are yet unknown. (27)

SUMMARY

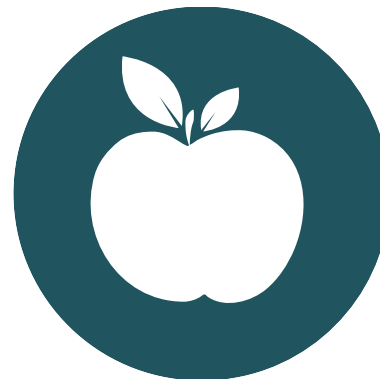
Sleep is one of the four pillars of health, with significant impact on our daily lives and our future health. Lack of sleep often leaves people reaching for a quick fix in the form of sleeping pills but making small changes to diet and lifestyle can often yield great results.

10 areas of focus for a NT

- Stress reduction.
- Stimulant reduction.
- Magnesium.
- Sleep hygiene.
- Weight.
- Vitamin D.
- Nutrient variety.
- Herbs.
- Blood sugar balance.
- Exercise.



Bethany Lynch is currently studying a BSc in Nutritional Science with CNELM. She has an interest in children's health and nutrition, diabetes and nutrigenomics.



ASHWAGANDHA:

AN ANCIENT MEDICINE WITH MODERN PROMISE



THERAPEUTIC USES AND RESEARCH

With a wide spectrum of therapeutic application, ashwaganda root is suitable for the treatment of many conditions. It is regarded as a ginseng but has generally calming and relaxing effects when compared to the fierier Korean ginseng.

Traditional knowledge would suggest its use in mental exhaustion and inflammatory conditions, such as psoriasis, asthma, arthritis and bronchitis. Another useful application is as a tonic for elderly patients, especially those with cognitive impairment (Mirjalili et al, 2009). The Latin name, *Withania somnifera*, also gives a clue as to the traditional ayurvedic use of this plant to treat insomnia.

It is a pleasure to see that modern therapeutic use of ashwaganda bears out traditional knowledge. We now recognise that withanolides and withaferins, both steroidal lactones, appear to be the major active constituents of the herb and therefore responsible for the primary medicinal actions of the plant. First and foremost, ashwaganda is regarded as a tonic herb with adaptogenic qualities. It is indicated for patients suffering from the negative psychological and physical effects of stress. The effect of ashwaganda is to reduce anxiety, exhaustion and weakness, whilst promoting equilibrium and stamina. In times of stress, adrenal hormones rise and create a sense of alertness and, over longer periods, chronic anxiety. Research suggests that the action of ashwaganda to positively affect these symptoms is due to an ability to balance serum cortisol levels (Chandrasekhar et al, 2012).

Another important application is in promoting restful sleep. Again, this use may be linked to the effect of ashwaganda on adrenal hormones. By regulating cortisol levels, ashwaganda likely exerts an effect on circadian rhythm and may be used to improve sleep quality (Kalani et al, 2012). It is likely that the adaptogenic and tonic effects of ashwaganda are due to the presence of the steroidal withanolides in the roots (Bone and Mills, 2013).

As an anti-inflammatory, ashwaganda has shown promise in the treatment of systemic conditions such as rheumatoid arthritis

Katie Pande examines the power behind the herb, ashwaganda.

Ashwaganda (*Withania somnifera*) is an erect sub-shrub that belongs to the nightshade (Solanaceae) family and grows approximately one metre in height. As a perennial flowering and fruiting shrub, it has also earned the name of 'winter cherry'.

With a long history of medical use in the Ayurvedic tradition, ashwaganda can also be referred to by its rather more colloquial name of 'Indian Ginseng'. The name ashwaganda is derived from its purported ability to imbue those who ingest it with the 'strength of a horse'. However, rather less romantically, it may also refer to the characteristic horsey smell of the roots.

Although firmly rooted in ayurvedic tradition, more recently, ashwaganda has appeared in the materia medica of Western herbalists, where it has quickly become valued for its myriad of therapeutic uses. Texts now cite its use as an adaptogen, tonic, immune modulator, gentle sedative, anti-inflammatory and anti-anaemic (Bone and Mills, 2013).

ORIGINS

Ashwaganda is native to the north-western states of India and can be found growing in many areas of South Asia. The majority of commercially harvested crop is still grown in India where the weather conditions and soil favour its propagation.





by inhibiting the production of pro-inflammatory substances, including nitric oxide, in blood and synovial fluid (Singh et al, 2007). In high doses, the powdered root demonstrates activity in reducing inflammatory responses in gout and also appears to provide some analgesic effects (Rasool, 2006).

Although there are a host of other potential clinical applications for ashwaganda, the last one we will mention in detail is its action as an immune modulator. Many studies have looked at the benefits of ashwaganda on depleted immunity in the presence of chronic stress. The majority of these studies involved mice and therefore it is difficult to extrapolate confidently to human clinical relevance. However, it appears likely that ashwaganda has efficacy in incidences of acute infection of both the gastrointestinal and respiratory system. Research suggests Withanolide-A activates macrophage activity and upregulates Th1-mediated immune responses. (Malik et al, 2007).

PRACTICAL CLINICAL APPLICATION

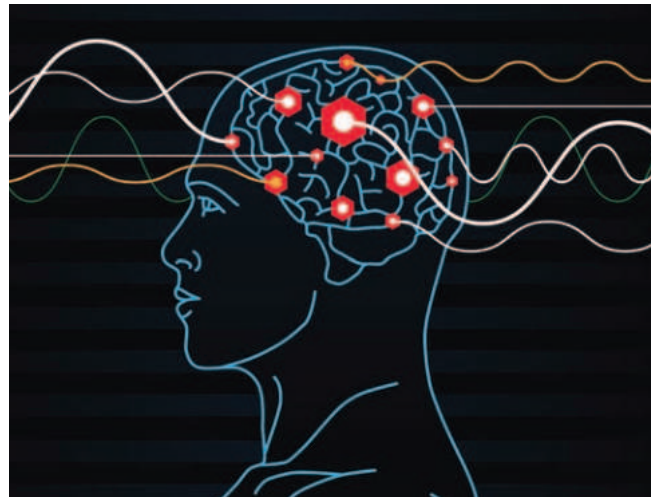
Examining the research in respect of ashwaganda is a valuable exercise and gives us insights into the medicinal use of the herb. However, for practitioners, it is often more useful to consider the practical therapeutic application and how ashwaganda may be used effectively in a clinical context. Perhaps an interesting way to do this is to consider a short case study.

Mrs Rhys is a 45-year-old female, who has recently separated from her partner and been left with the care of their two teenage children. She has a history of anxiety and informs her nutritionist that her sleep has been severely disrupted since the separation. Further questioning elicits that her long dormant atopic eczema has recently started to trouble her, with dry lesions appearing in the flexural surfaces of her elbows. Apart from being pruritic, this causes her no real concern, although she complains it appears unsightly.

Four weeks ago, Mrs Rhys attended her GP who suggested a course of citalopram (an SSRI). Mrs Rhys started the prescription but ceased after three weeks, saying that they made her feel

'disassociated' from her family and friends. Having now consulted a nutritionist, she hopes that there may be some more natural ways to support her health during this turbulent period in her life.

Although time and a slow healing process is required for Mrs Rhys to regain full health, it is likely that her nutritionist will consider a number of other approaches that may be supportive. It is clearly important that Mrs Rhys eats appropriately, addresses lifestyle factors, such as physical activity and she may also benefit from talking therapies such as counselling. Additionally,



there are strong indications for ashwaganda supplementation.

The ability of ashwaganda to affect stress hormones may offer Mrs Rhys some respite from the negative effect of chronic cortisol release. This should not only promote a calmer, less anxious, state but may spill over into improving her sleep quality. It is crucial that issues of poor sleep quality are addressed as they will exacerbate any existing cycle of anxiety and declining health (Staner, 2003). Mrs Rhys' eczema is likely a reflection of her mental state and the physiological effects of chronic stress. By improving cortisol balance, she may also notice a decline in her eczema symptoms. However, the above-mentioned immune

modulating effects of ashwaganda may also play an important role in modulating the IgE mediated hypersensitivity reaction that is implicated in atopic eczema.

If fatigue were a prominent symptom in Mrs Rhys' case history, it may be an indication of an underlying chronic condition, such as anaemia or hypothyroidism. Clearly, investigations might be required to assess the presence of such conditions but ashwaganda has been shown to directly influence thyroid hormones T4 and T3 and enhance serum levels (Panda and Kar, 1998). It is also listed as having anti-anaemic action (Bone and Mills, 2013), which has also shown efficacy in children.

The attraction of the approach outlined above is that Mrs Rhys is being approached and treated holistically. Thought is given to various aspects of her wellbeing and ashwaganda supplementation is recommended not as a symptomatic bandage but as a medicine that targets the core of the disharmony in her body.

ANYTHING ELSE YOU SHOULD KNOW?

Interestingly, ashwaganda may be useful as a support in both recreational and prescription narcotic and alcohol withdrawal. It shows promise in treating male infertility, although more rigorous trials are needed.

It is also worth noting that ashwaganda is a gentle herb with a strong safety record. There are no contraindications expected with long-term use. One speculative caution is that ashwaganda may increase the activity of benzodiazepines, so concurrent use should be avoided.



Katie Pande is a qualified Medical Herbalist with a BSc degree in Herbal Medicine. Previous to studying Herbal Medicine, Katie completed a degree in Plant and Environmental Biology. She is currently Senior Herbal Advisor for Pukka Organic Herbs, where she trains and educates staff and customers on the benefits of medicinal plants.



I-Mag giveaways

We showcase a selection of giveaways on offer to readers this issue.



NUTRI SUPERFOOD PLUS

Nutri Superfood Plus is a green food blend featuring Chocamine, a patented cocoa extract that delivers the goodness of chocolate without the sugar, fat or dairy. Designed to support overall health, Superfood Plus contains a blend of fruits, green foods and vegetables, including kelp, fibre and enzymes, reishi mushrooms and an antioxidant blend including OxyPhyte Grape Skin Extract, turmeric, ginger and green tea.

🎁:Win: We have five to give away, RRP £42



NATURE'S SUNSHINE SYNERPROTEIN CHOCOLATE

A powerhouse of nutrition and energy, this carefully formulated, high quality soya protein with all eight essential amino acids is free from dairy, wheat, yeast, gluten and virtually fat free. Designed by Dr James Scala, Nutritionist to NASA and the US Olympic team. Each serving provides 14g of soya protein and the full range of amino acids and nutrients needed to rebuild muscle and reduce feelings of fatigue. Suitable for vegans.

🎁:Win: We have five to give away.

PUKKA ASHWAGANDHA

Ashwagandha is the primary Ayurvedic tonic for rejuvenating the nervous system. It will balance, rejuvenate and calm the nervous system by moderating stress hormones, it strengthens an exhausted nervous system by helping it relax, whilst also energising the body and mind by nourishing the adrenal glands and the entire hypothalamic-pituitary-thyroid-adrenal (HPTA) axis. It is most often prescribed by herbalists and Ayurvedic practitioners to help those going through periods of physical and emotional stress, anxiety and insomnia.



🎁:Win We have five Pukka Herbs organic Ashwagandha capsules (60) to give away.

New Vitamin C Rosehip Complex

Vitamin C with **Rosehip**, minerals, flavonoids and berry extracts



- ✓ Provides 1g of vitamin C with Rosehip per 5g dose
- ✓ Includes magnesium, calcium, potassium, and manganese, flavonoid extracts and antioxidant rich berry extracts
- ✓ Convenient and great tasting powder mixes easily into liquids
- ✓ Vitamin C contributes to normal collagen formation of the skin and normal function of the immune system



CPD DIRECTORY

If you want to top up your CPD points, take inspiration from these forthcoming events.



BANT Local Networks/Regional Branch Meeting

Presentation on DNA Tests, Epigenetics and Nutrigenomics

[myDNAhealth](#)

October 28 – London

CPD hours: BANT two hours

Speakers: Bernie Williams

Email: simona@novanutridiet.co.uk

Website: bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Simona_Novakovic

BANT Local Networks/Regional Branch Meeting

Presentation On Doterra's Oils, Demos and Practical Applications

[doTerra Essential Oils](#)

October 31 – Bristol

CPD hours: BANT two hours

Speakers: Chloe Smith

Email: lucy@southvillenuitrition.co.uk

Website: bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Lucy_Patterson

Female Hormones

[Lamberts](#)

November 2 – Suffolk

November 8 – Bristol

November 15 – York

November 22 – London

November 24 – Southampton

November 30 – Edinburgh

CPD hours: BANT six hours

Speakers: Lorraine Nicolle BA (Hons), Dip. BCNH, MBANT, MCIM, MSc, Shoela Detsios BSc (Can), ND (Aus), Justine Bold BA (Hons), Dip.BCNH, MBANT, Katie Sheen FdSc, DiplON, MBANT, NTC, CNHC

Cost: £44.95 (delegates receive a £30 product voucher after attendance at the seminar and a BANT certificate)

Email: marcelle.salter@lambertshealthcare.co.uk or david.pereira@lambertshealthcare.co.uk

Telephone: 01892 554 358

Website: www.lambertshealthcare.co.uk

Nervous Breakdown

[BioCare](#)

November 2 – York

November 3 – Edinburgh

November 10 – Birmingham

November 15 – Belfast

November 18 – Manchester

CPD hours: BANT four hours

Speakers: Alessandro Ferretti Dip ION mBANT NTCC CNHC

Email: education@biocare.co.uk

Telephone: 0121 433 3727

Website: www.biocare.co.uk/default.aspx?GroupGuid=1081

BANT Supervision Group

November 3 – Taunton

CPD hours: BANT two hours

Speakers: BANT Supervisor, Elizabeth Bray

Cost: £30

Email: liz@mearecourt.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Elizabeth_Bray

Telephone: 07980 601670

BANT Supervision Group

November 4 – Woolpit

November 14 – Colchester

CPD hours: BANT two hours

Speakers: BANT Supervisor, Fiona Mealing

Cost: £30

Email: fiona@nutritionlink.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Fiona_Mealing

Gut Transformation Programme

[Nutri Advanced](#)

November 4 – online

November 9 – online

November 17 – online

CPD hours: BANT one hour

Speakers: Jo Gamble, Nutritional Therapist and Behavioural Therapist, Sarah Gill BSc (Hons); Mike Wakeman, qualified pharmacist

Telephone: 0800 212 742 option 1

Cost: Have to purchase products to go with the programme

Website: www.nutri.co.uk

BANT Local Networks/Regional Branch Meeting

Discussion Around NT Legislation in Europe

November 7 – Skype

CPD hours: BANT two hours

Speakers: Nitsa Kiliari, BANT European Regulation Coordinator

Email: jessica@fonteneau.co.uk

Website: bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Jessica_Fonteneau





BANT Supervision Group

November 8 – Reading

CPD hours: BANT two hours

Speakers: BANT Supervisor, Kate Delmar-Morgan

Cost: £30

Email: kate@katedelmarmorgan.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Kate_Delmar-Morgan

BANT Supervision Group

November 9 – Manchester

November 11 – Liverpool

November 14 – Birmingham

CPD hours: BANT two hours

Speakers: BANT Supervisor, Dalbinder Bains

Cost: £30

Email: dalbinderbains@yahoo.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Dalbinder_Bains

Nutrieval One Day Training Seminar

Genova Diagnostics

CPD hours: BANT six hours

Speakers: Lorraine Nicolle MSc, Dip.BCNH, mBANT, CNHC

Cost: £119 – student price: £108, requires proof of study and code STUNUT10, 20 per cent educational discount on the running of NutrEval Profile (NUT06)

Email: infouk@gdx.net

Telephone: 020 8336 7750

Website: www.gdx.net

BANT Supervision Group

November 10 – Romsey

CPD hours: BANT two hours

Speakers: BANT Supervisor, Ruth Taylor

Cost: £30

Email: ruth@ruthtaylornutrition.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Ruth_Taylor

Power to Your Practice (student event)

Lamberts

November 10 – London

CPD hours: BANT six hours

Speakers: Lorraine Nicolle BA (Hons), Dip. BCNH, MBANT, MCIM, MSc, Shoela Detsios BSc (Can), ND (Aus), Justine Bold BA (Hons), Dip.BCNH, MBANT, Katie Sheen FdSc, DiplON, MBANT, NTC, CNHC

Cost: £44.95 (delegates receive a £30 product voucher after attendance at the seminar and a BANT certificate)

Email: marcelle.salter@lambertshealthcare.co.uk or david.pereira@lambertshealthcare.co.uk

Telephone: 01892 554 358

Website: www.lambertshealthcare.co.uk

BANT Supervision Group

November 11 – Chesham

CPD hours: BANT two hours

Speakers: BANT Supervisor, Tracey Harper

Cost: £30

Email: tracey.harper4@icloud.com

Telephone: 07747 780035

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Tracey_Harper

Metabolic Balance Coach Training Court (two days)

Metabolic Balance

November 12 – London

CPD hours: BANT 11.5 hours

Speakers: Gerry Gajadharsingh DO; Antony Haynes BA(Hons), DiplON, Gloria Parfitt DiplON DipcPNI

Cost: £875 (price includes certification and registration on the metabolic balance website and network. Also includes the metabolic balance individual programme including blood test for each attendee)

Email: gp@metabolic-balance.co.uk

Telephone: 07976 610157

Website: www.metabolic-balance.co.uk

Advanced Functional Medicine Case Studies

Nutri Advanced

November 12 – London

CPD hours: BANT six hours

Speakers: Kristie Hughes ND

Cost: £149 (students received 20 per cent

discount)

Email: gp@metabolic-balance.co.uk

Telephone: 0800 212 742 option 1

Website: www.nutriadvanced.co.uk

Grow Your NT Business and Brand Online

Biting Fit

November 14 – St Albans

CPD hours: BANT six hours

Speakers: Gwen Warren

Cost: £197 (BANT Members), full price £250

Email: gwen@btinternet.com

Telephone: 07753 832835

Website: www.bitingfit.co.uk

BANT Supervision – Experienced Practitioner Group

November 14 – London

CPD hours: BANT two hours

Speakers: BANT Supervisor, Lisa Patient

Cost: £30

Email: lisa@tonicforlife.co.uk

Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Lisa_Patient

BANT Supervision Group

November 15 – Weymouth

November 18 – London

November 25 – London

CPD hours: BANT two hours

Speakers: BANT Supervisor, Lisa Patient

Cost: £30





Email: lisa@tonicforlife.co.uk
Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Lisa_Patient

BANT Supervision Group
 November 16 – Tunbridge Wells
 November 16 – Shoreham-by-Sea

CPD hours: BANT two hours
Speakers: BANT Supervisor, Carmel Buckley
Cost: £30
Email: carmel@nutritionalsolutions.co.uk
Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Carmel_Buckley

Naturopathic Guide To Joint Health
Nutrigold
 November 16 – online

CPD hours: BANT one hour
Speakers: Dr Elisabeth Philipps DPhil BSc (Hons) BSc Nutr Med, FNTF
Cost: £10
Email: talk2us@nutrigold.co.uk
Telephone: 0845 603 5675
Website: updates.nutrigold.co.uk/

BANT Local Networks/Regional Branch Meeting
 Presentation On The Reversal Of Cognitive Decline
 November 16 – Marlow
CPD hours: BANT two hours
Speakers: Amanda Williams, Cytoplan

Email: helen.bradbury@tiscali.co.uk
Website: bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Helen_Bradbury

BANT Supervision Group
 November 18 – St Albans

CPD hours: BANT two hours
Speakers: BANT Supervisor, Paula Werrett
Cost: £30
Email: paula@thenutritionlink.co.uk
Website: bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Paula_Werrett

BANT Supervision Group
 November 18 – Rochdale

CPD hours: BANT two hours
Speakers: BANT Supervisor, Susan Fruhman
Cost: £30
Email: susanfruhman@nutrisential.co.uk
Telephone: 07887 880 190

Inflammation – The Role Of Epigenetics and Gene Expression
myDNAhealth
 November 23 – online

CPD hours: BANT one hour
Speakers: Dr Shania Lee Mtech Hom (UJ) MARH (UK) IFM AFMCP
Email: practitioner@mydnahealth.co.uk
Telephone: 01603 861 614
Website: www.eventbrite.co.uk/edit?eid=28363469902

Ion Symposium 2016 ‘Ageing Matters’
 November 25 – London

CPD hours: BANT six hours
Speakers: Intro and Summary: Miguel Toribio-Mateas. Keynotes: Professor Tim Spector, Dr Rangan Chatterjee, Dr Najat Youssef, Dr Natalie Riddell
Cost: Early bird £120, standard £140, student £120
Email: info@ion.ac.uk
Telephone: 020 8614 7800
Website: www.ion.ac.uk/events/ion-symposium-2016-ageing-matters

BANT Local Networks/Regional Branch Meeting
 Presentation On Candidiasis – Aetiology And Treatment
 November 30 – webinar

CPD hours: BANT two hours
Speakers: Dr George Georgiou
Cost: Early bird £120, standard £140, student £120
Email: mrigopoulou@hotmail.co.uk

Forthcoming webinars

Target Publishing, which publishes *Nutrition I-Mag*, is hosting a series of webinars for practitioners.
 Register at www.camconferences.co.uk/webinar

How do orally administered live bacteria supplements (probiotics) have an effect on conditions outside of the gut?



Presented by Claire Barnes, NT Dip CNM
 Tuesday November 22, 6.30pm-7.30pm

Many studies have focused on the effects of live bacteria on conditions within the gut, such as IBS and IBD, however, research into their effects on conditions outside the gut have been less studied. Is it possible to know if these bacterial strains can relocate to other areas of the body and what are the mechanisms used to enable them to do this?

In this webinar, we will look at how improving the diversity of the gut microbiome can benefit the microbiota in other areas of the body, such as within the respiratory and urogenital tracts.



Organised by the CAM Conference Team

GO WITH THE GRAIN

Discover new ways to cook with healthy grains from the new book, *Grain Bowls*.



Tofu teriyaki



Falafel and baba ganoush



Grilled peach and black rice



Tofu teriyaki (Serves 2)

INGREDIENTS:

- 115g butter, softened
- 230g (8oz) cooked black quinoa (100g/3½ oz uncooked)
- 200g (7oz) tofu, pan-seared (300g/10½ oz uncooked)
- 150g (5oz) sautéed red (bell) pepper strips
- 2-3tbsp teriyaki sauce
- 40g (1½ oz) cashew nuts, toasted and chopped
- Sea salt and freshly ground black pepper

METHOD:

- 1 Toss the quinoa, tofu and pepper in two tablespoons of the teriyaki sauce. Divide evenly between two bowls.
- 2 Top with the cashew nuts and drizzle with the remaining sauce. Season.



Falafel and baba ganoush



Grilled pach and black rice





Cherry tomato topping Makes 450g (13oz)

INGREDIENTS:

- 275g (9oz) cherry tomatoes, halved (or quartered if large)
- 150ml (5fl oz) olive oil
- ½ red onion, finely chopped
- 2tbsp sherry vinegar
- 1 garlic clove, very finely chopped
- 1tsp sea salt
- ½ tsp freshly ground black pepper

METHOD:

- 1 Gently toss all of the ingredients together in a bowl.
- 2 Store in an air-tight jar in the refrigerator for up to two to three days.

Falafel and baba ganoush (Serves 2)

INGREDIENTS:

- 200 g (7 oz) cooked freekeh (90g/3oz uncooked)
- 100g (3½ oz) ready-made falafels
- 175g (6oz) ready-made baba ganoush
- 80g (3oz) cherry tomato topping (see below)
- 25g (¾ oz) pickled red onions (see below)
- Sea salt and freshly ground pepper
- 1 pitta bread, toasted and cut into wedges



METHOD:

- 1 Divide the freekeh, baba ganoush, falafels, cherry tomato topping and pickled red onions evenly between two bowls.
- 2 Drizzle with the additional olive oil from cherry tomato topping. Season and serve with the pitta wedges.

Pickled red onion Makes 400ml (13fl oz)

INGREDIENTS:

- 230ml (8fl oz) apple cider vinegar
- 2tsp sea salt
- 1 bay leaf
- 1½ tbsp granulated (raw) sugar
- ½ tsp black peppercorns
- 1 large red onion, finely sliced

METHOD:

- 1 Heat the vinegar, salt, bay leaf and sugar in a pan over a medium heat, stirring until dissolved.
- 2 Add the peppercorns. Put the onions in a 400ml (13fl oz) jar and pour the pickling liquid over the top.
- 3 Keep chilled for 30 minutes, then store in the refrigerator for up to one week.

Grilled peach and black rice



Tofu teriyaki





Grilled peach and black rice (Serves 2)

INGREDIENTS:

- 250g (9oz) cooked black rice (100g/3½ oz uncooked)
- 3-4tbsp citrus dressing (see below)
- 150g (5oz) peaches, sliced and chargrilled
- 80g (3oz) sugar snap peas, sliced
- 40g (1½ oz) spring onions (scallions), sliced
- Sea salt and freshly ground black pepper



METHOD:

- 1 Toss the black rice in one tablespoon of the dressing. Divide evenly between two bowls with the peaches, sugar snap peas and spring onions.
- 2 Season and drizzle with remaining dressing.

Citrus dressing Makes 200ml (7fl oz)

INGREDIENTS:

- 125ml (4fl oz) olive oil
- 1 shallot, finely chopped
- 2tsp lemon juice
- 2tsp orange juice
- 2tsp honey
- 1tsp lemon zest
- 1tsp orange zest
- ¼ tsp sea salt

METHOD:

- 1 Whisk all of the ingredients together in a bowl until well combined.
- 2 Store in a sealed jar or container in the refrigerator, and use within a week.

Grain Bowls by Anna Shillinglaw Hampton (Hardie Grant, £12.99).
Photography: Victoria Wall Harris



Tofu teriyaki



Falafel and baba ganoush



The Nature's Sunshine solutions

Discover why **Nature's Sunshine** is bringing something different to the UK practitioner market, and why the business is focused on developing its network of Nutritional Therapists.



So often in the world of complementary medicine, people have come into the sector following a personal experience with a health condition.

This is the case when it comes to Nature's Sunshine Products (NSP); its founder, Gene Hughes, a teacher from Utah, USA, had a troublesome stomach condition. Having discovered the powerful

benefits of cayenne, he started a small business selling herbs and supplements.

This was back in the 1970s, when the sector was far less established in comparison to what we have now. However, through the years, Nature's Sunshine has thrived, and today, it is a leading nutritional supplements brand in the USA. And



2017 marks an exciting year as, in the UK, ZU Direct, the official suppliers of NSP, will be improving the product range currently available over here, with next year seeing the introduction of quality supplementation for the entire family, from adults to children and pets.

But what makes this brand different? And why should Nutritional Therapists work with ZU Direct here in the UK?

Sarah Owen, ZU Direct Operations Manager, explained: "Nature's Sunshine believe that natural health and wellness has the power to change lives, and through their products, they work tirelessly to make it a reality. Nature's Sunshine brings health and wellness to millions of customers every day. When people are healthier, lives are truly transformed.

"In today's world of overhyped ingredients, questionable claims and come-and-go products, Nature's Sunshine is the proven choice for people seeking the lasting benefits of good health."

A POWERFUL DISCOVERY

In was in the 1970s that Gene was struggling with the ongoing stomach condition.

He took the advice of a neighbour, who suggested cayenne pepper for his discomfort, and whilst Gene began to feel much better, swallowing a spoonful of cayenne pepper was quite a challenge.

"Gene and his wife Kristine needed to find a better way to consume the powdered herb, and came up with the idea of putting the powder into easy-to-swallow gelatine capsules. It was revolutionary," commented Sarah.

"With the support of their family, they began a small family business, selling encapsulated cayenne and other herbs and supplements. Helping more and more people with their natural products, and sharing the benefits of their knowledge. And so, Nature's Sunshine began."

Today, there are more than 500 products, all created from nature but rooted in science. At the forefront of this is the unique Lifestyle Analysis, which invites everyone to discover their own



personal lifestyle profile.

Sarah explained: "Each of us are amazingly complex beings, and each of our body systems are intrinsically linked with each other, so when one body system is underperforming, those immediately linked to it are also affected, which has a knock-on effect on overall health. Developed by Nature's Sunshine's own team of health specialists, the Lifestyle Analysis is a quick and easy way to discover which of the body systems may be weak and in need of nutritional support, giving you the opportunity to restore balance to each system."

Following on from this, the company has developed a very innovative approach to developing its portfolio.

"To make the most of this system approach, Nature's Sunshine's team of experts developed the unique range of Key System Products. Each Key System Product contains a carefully selected combination of precisely the right ingredients, in perfectly balanced amounts to ensure you get the best results possible," Sarah explained. "With one unique formulation for each of the nine body systems containing a powerful synergistic blend of pure, naturally sourced ingredients that provide you with the very best supplements you can buy."

So, looking at the product range, what can practitioners expect from the brand?

"From targeted care to daily essentials such as vitamins, minerals, fibre, proteins and antioxidant, to weight management solutions, the naturally efficacious products feature the best raw ingredients the earth offers. We are so proud of these products that we offer a full, no quibble 90-day money back guarantee," Sarah added.

The UK is an important focus for the company, and NSP works closely with ZU Direct to develop this.

"Nature's Sunshine's longevity is proof of stability and wise business management; the brand has been available within the UK market for over 25 years, and is uniquely positioned to meet the growing demand for products proven to improve wellness," Sarah added. "The innovative, high quality products already serve as a global force for good health in 26 markets around the world,

and there's exponential growth to come."

INNOVATING THE INDUSTRY

Having been around since the '70s, Nature's Sunshine has been responsible for a number of firsts in its native USA.

Sarah explained that it was the first company to encapsulate herbs, and its commitment to offering only the finest quality herbal supplements has never wavered.

Since then, The Hughes Center for Research and Innovation has been created. Guided by Nature's Sunshine's Chief Scientific Officer, Dr Matthew Tripp, the centre brings together experts from scientific and medical fields to pursue discovery and understanding of nutritional supplements.

Equipped with state-of-the-art instrumentation, and combining the skills of accomplished scientists, researchers and medical professionals, The Hughes Center for Research and Innovation

creates a unique environment in which to pursue scientific discovery and advancement, and is the hub of Nature's Sunshine's new product development.

Sarah explained: "The Hughes Center utilises advanced technology and innovation to analyse interactions between the body's systems and nutritional supplements at a molecular level, enabling the development of the most synergistic, bioactive and efficacious formulations. Backed by scientific discovery and supported by world-renowned manufacturing expertise, Nature's Sunshine is changing the way that herbal and nutritional supplements are developed."

Looking ahead, there is plenty to be excited about when it comes to NPd.

"Nature's Sunshine product development will continue within the state of the art Hughes Center. Scientists will continue to analyse interactions between the body's systems and nutritional

"Developed by Nature's Sunshine's own team of health specialists, the Lifestyle Analysis is a quick and easy way to discover which of the body systems may be weak and in need of nutritional support."





SUPPLYING NATURE'S SUNSHINE PRODUCTS THROUGHOUT THE UK & IRELAND



supplements at a molecular level, thereby guiding discovery to the most bioactive and efficacious formulations," Sarah added.

Also of critical focus at the business is quality, which, Sarah points out, begins at the source.

"NSP scour the world for the finest herbs and natural materials. On-site vendor inspections guarantee that only the cleanest, purest material becomes part of our products. We cut no corners and regularly reject raw material that does not meet our exacting standards," she explained.

"NSP combines the wisdom of expert formulators with natural health legends to create unique, effective products with proven results. Customers consistently tell us that NSP products work when others fail. Effective products truly transform lives and build loyalty as our customers discover improved health and wellness."

As part of this commitment to quality, Nature's Sunshine uses advanced analytical equipment to conduct more than 600 quality and purity tests on products, and work meticulously to ensure the precise amounts of the right parts of the right plant species are included in every product formula.

Sarah added: "This testing includes HPLC and infra-red analysis of botanical blends and analytical assays for vitamin and mineral label claims."

Furthermore, NSP develops, manufactures, tests and stores products on site and, because the company controls the entire process, they know what's in the products and what is not.

"Nature's Sunshine's rigorous testing, exacting quality control, and self-manufacturing set the highest standards in the industry. Proven quality, expertise and results are why they are trusted and recommended by natural health practitioners and customers around the world.

PRACTITIONER SUPPORT

Nutritional therapists at the heart of the company's philosophy, with Sarah explaining: "Health practitioners are a crucial market for Nature's Sunshine, as they ensure that clients are using the best combination of quality products available to them. This market is fundamentally where the UK business has grown from because, as practitioners, your desire is to share only the best products available with your clients. They look to you for solutions to their health issues, and even some life problems, whether it's assistance with weight loss, energy gain, or improvement with their body systems, your clients (and you) can trust that what's listed on a Nature's Sunshine label is indeed what is inside the bottle. And, what's inside the bottle is created using only the strictest standards in purity and quality."

She continued: "As people all over the UK take more personal responsibility for their own wellness, they begin by looking at what they put into their bodies. With the support of nutritionists explaining the importance of macronutrients, vitamins and supplements, consumers look for quality over quantity. Nutritionists across the country already support their client's needs with NSP's range of natural products to deliver proven, predictable and repeatable results."

One of the key focuses at the company is training and education, which runs through the heart of the business.

"It is our goal to assist you with the training and tools you need to feel confident about answering questions regarding our products, while empowering you to build your practice," Sarah explained, adding: "A few of the ways we do this is by offering specialised tools for Kinesiologists in the form of a testing kit. We also offer a comprehensive range for in depth product training videos, and a specialist online support forum. In addition to all of this, we also provide bespoke practitioner materials, ensuring that Nature's Sunshine helps your practice as well as your clients' health."

As part of this, customer service is also something ZU Direct prides itself on.

"Giving great customer service is something I am incredibly passionate about. Having worked for the company for over 16 years, I am convinced we know what our customers are looking for, and how to deliver it. Particularly as I know how closely we work with our current therapists, understanding how they recommend products and run their business," Sarah explained.

"The therapists we deal with are confident referring their clients to us, as they know we will do our utmost to provide first class products and first class service with a smile." ●

