

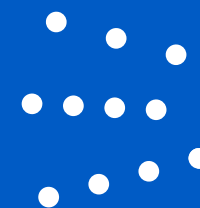


THE SCIENCE BEHIND SEASONAL ALLERGIES

Expert advice to helping
manage hay fever

Antioxidants in-depth

An in-clinic guide to the
importance of antioxidants



CBD – an update

With changing regulations,
experts discuss the future
of the CBD category

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Welcome



The last year has been like no other for us all, both personally and professionally, and as students, particularly those nearing the end of your studies, it is likely to have proved particularly challenging; changing how you study and the access you have to the resources you are used to is one issue, as is planning for the future and wanting to get your nutritional therapy career started at a time of such uncertainty.

What we do know is more people than ever are thinking about their own health, and anecdotally, we hear from practitioner

friends that they are busy with consultations – in the main, virtually. We also know supplement usage is up; according to the Health Food Manufacturers' Association, daily supplement consumption rose some 20 per cent last year.

All this points towards what we in our sector knew – the power of nutrition

in our long-term health. And this makes it an exciting time for you as students, especially as you take your first steps in your nutritional therapy career. But as final year students, you may need a helping hand, and arriving just in time, we are delighted to be able to announce the BioCare Graduation Award.

The award, being run in partnership with *Nutrition I-Mag*, have been created to offer you all the support you need to start practicing, with BioCare not only offering financial support, but also making available a huge amount of its nutrition resources to help you. We are really excited to be partnering with BioCare on this and encourage you to enter – **click here** to find out more about the award, and how you can enter.

And finally, at the time of writing, the UK is still under lockdown, which means currently no in person events can take place. However, the IHCAN Conferences has adapted to be able to continue delivering you the education you want, and we have another virtual event this month. **Click here** to find out more and keep an eye on www.ihcanconferences.co.uk, where we will continue to make announcements on future virtual and in person events.

RACHEL SYMONDS, EDITOR

Rachel

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OUR CONTRIBUTORS

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



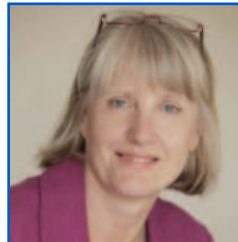
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Katherine Pardo BSc (Hons), Dip ION is Head of Nutrition & Education at Nutri Advanced. After beginning her career as a writer and editor for healthcare publications, Katherine trained as a Nutritional Therapist, graduating from London's Institute of Optimum Nutrition in 2001. She went on to practice as a Nutritional Therapist before becoming Nutrition Team Manager at Nutri Advanced, where she heads the team of nutritionists, writers and researchers who develop Nutri Advanced's range of innovative products, programmes and educational resources.



Adrienne Benjamin

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Hannah Braye NT, DipCNM mBANT, CNHC is a Nutritional Therapist, having studied at the College of Naturopathic Medicine (CNM), where she graduated with an award for outstanding performance. She is a member of BANT and listed on the Complementary and Natural Health Care Council (CNHC)'s approved accredited register. She is Head of Technical Advice at ADM Protexin, manufacturers of the Bio-Kult and Lepicol ranges.

News Bites

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

SUPPLEMENT USE RISES 20 PER CENT DURING COVID-19 PANDEMIC, STUDY FINDS

New data has revealed that there was a 20 per cent in daily supplement consumption at the start of the Coronavirus pandemic.

That is according to the Health of the Nation 2021; Lockdown Focus, conducted by 3gem on behalf of the Health Food Manufacturers' Association (HFMA), which found that nearly 20m people in the UK are now using supplements on a daily basis, an increase of nearly 20 per cent since the last survey in 2019.

This research, which included over 10,000 adults in the UK and is one of the largest of its kind, covering a comprehensive gender, geographical and age representation, also found that more than 70 per cent of adults are now taking a food supplement, with one in three claiming to have introduced a supplement as a result of the Covid pandemic. Of these new supplements taken, vitamin D was the most common dietary addition at 63 per cent, followed by vitamin C (39 per cent). There has also been a shift among the younger demographic, with 77 per cent of those aged 18-24 now consuming supplements.

The research also revealed the reasons why people are turning to supplements: 61 per cent for general health and wellbeing, 24 per cent for vitamin deficiency, 21 per cent for joint health, 20 per cent to optimise health and 20 per cent to support their immune system.

Furthermore, numerous studies since lockdown have highlighted an increased consumer interest in health and wellness, and this was reflected in this survey; 42 per cent of people surveyed said that their food supplement purchases were most influenced by personal research, and when they do seek out information, 88 per cent of people stated that they find it easy to find and research the right information on supplements. Notably, 40 per cent stated that information about immunity had influenced their choice of food supplements.

The HFMA's Executive Director, Graham Keen, commented: "The findings from this latest survey confirm that our industry continues to play a vital role in helping our nation to be healthier. And our products have probably never been held in more esteem by consumers, and perhaps more understood by Government and regulators, than they are right now."

Esther Mills-Roberts, HFMA Communications Manager and a Registered Nutritionist, added: "Lockdown has shone a light on the importance of adequate micronutrient intake with respected scientists, such as Professor Philip Calder, publishing more work on the value of supplements in supporting immune function. These are critical times for public health and nutrition, with both health strategists and scientists calling for further research on key nutrients."





Study reveals confusion about health effects of ultra-processed foods

People find it difficult to distinguish between foods classed as ultra-processed and other processed foods, according to a new survey.

The poll, undertaken by YouGov on behalf of the British Nutrition Foundation (BNF), revealed that 70 per cent of British adults had not heard of the term ultra-processed food before taking the survey, but 36 per cent state they are trying to cut back on some kind of processed foods.

The new research set out to analyse people's understanding of processed and ultra-processed foods and the role they play in the diet. The term 'ultra-processed foods' is usually based on a food classification called NOVA, which defines ultra-processed foods as those made by industrial processing and that often contain additives such as colours, flavours, emulsifiers or preservatives.

More than one fifth of the survey respondents (21 per cent) say that a healthy, balanced diet shouldn't include any ultra-processed foods, however, the survey reveals a lack of understanding of which foods are included in the ultra-processed definition. When given a list of foods and asked which they would classify as ultra-processed, just eight per cent selected canned baked beans, nine per cent low fat fruit yogurt, 12 per cent ice cream, 19 per cent pre-packaged sliced bread from a supermarket, 26 per cent ready-made pasta sauces, and 28 per cent breakfast

cereals with added sugar, despite all of them being classed according to NOVA as ultra-processed.

Sara Stanner, Science Director at the British Nutrition Foundation, commented: "There's an increasing amount of research on ultra-processed foods and health, and the term is being used more than ever. But most people still have not heard of the term and are not clear about what it includes. Many foods that would be classified as ultra-processed may not be recognised as such and, while many ultra-processed foods are not healthy options, this isn't always the case. As well as less healthy items like crisps, cakes, sweets, chocolate and sugary drinks, which many of us need to cut back on, ultra-processed foods can include sliced wholemeal bread and vegetable-based pasta sauces, which can be a useful part of a healthy, balanced diet."

The survey also revealed that 69 per cent say they agree with the statement that it's better to cook from scratch than use processed foods but 53 per cent agree that a healthy, balanced diet can include some processed foods and 49 per cent say that processed foods can be convenient and help save time.

Stanner added: "What we should really be concerned about is how healthy a food is overall, and the balance of our diet as a whole."



ONLINE PLATFORM LAUNCHES LIFESTYLE MEDICINE SERVICE

A new online platform has launched to educate the nation on developing healthy lifestyle habits.

Plant Based Health Online (PBHO) has launched what it calls a new healthcare service focusing on healthy lifestyle habits to improve the health of the nation and reduce the impact of Covid-19.

Described as the UK's first CQC registered online multidisciplinary lifestyle medicine service focussing on improving individual and public health, and reducing the impact of underlying health conditions, the evidence-based approach to healthcare includes helping patients transition to a more sustainable whole food plant-based diet alongside physical activity, restorative sleep, alleviation of psychological stress and fostering social connections.

Founded by Dr Laura Freeman, MBChB, MRCP, DRCOG, CCFP, DiplBLM, and Dr Shireen Kassam MBBS, FRCPath, PhD – certified lifestyle medicine doctors with extensive personal and professional experience in using lifestyle medicine to optimise health and wellbeing – the multidisciplinary approach offers access to doctors, dietitians, nutritionists, personal trainers and health coaches, and enables people to

access the right expertise and support to make lasting lifestyle changes.

Dr Kassam commented: "PBHO will be using plant-based nutrition as one of the tools to help patients regain their health, because we recognise that unhealthy diets are one of the top causes of ill health in the UK – and adopting a plant-based diet is one of the healthiest choices there is. However, this service is not just for vegans. It's a service for everyone who wants to improve their personal health, the health of their family members and of course the health of the planet. PBHO staff will meet patients wherever they may be on their journey to a healthier lifestyle".

Dr Freeman added: "To date, most medical schools offer very little training in nutrition or lifestyle medicine. But by encouraging people to adopt healthier choices, we are putting preventative medicine first. With a focus on evidence-based dietary and lifestyle advice, we can promote improved physical and emotional health – whether a patient is a plant-based eater or otherwise. Not only will this create a convenient and easily accessible service to boost patient wellbeing, it will also help us play our part in reducing chronic disease in the UK."

NUTRITION SCHOLARSHIP ANNOUNCED

A new scholarship has been announced by The Health Sciences Academy (THSA) for those wishing to study nutrition.

The organisation says that with 22,435 email enquiries into health and nutrition training in the past year, many related to the pandemic, it has launched the Nutrition Accelerator Scholarship, designed to make professional health education more accessible and affordable.

The scholarship, which will run until December 31, 2021, involves access to a certification of choice, with 1,000 places available to prospective nutrition students.

The program will be led by Maurice Castelijin, Co-founder and CEO of The Health Sciences, with support from Alex Ruani PhD(c), doctoral researcher, Chief Science Educator and Co-Founder at THSA, and Michelle de la Vega, PhD and Vice President of Science Education at THSA.

THSA offers certifications in health and nutrition science, with a global student population of 34.4 per cent from the UK, 18.4 per cent from the US and Canada, and 47.2 per cent rest of the world. Its most popular certification is the Nutritional Therapist course.

The criteria is those with restricted income, being able to allocate sufficient learning time and to complete within a maximum of six months.

Castelijin commented "The Covid-19 pandemic has highlighted the need for better health education, and access to it. A recent survey by Public Health England found that seven in 10 adults are motivated by Covid-19 to make healthier lifestyle changes and invest in their personal health. However, most people are unable to afford or access good health education programs.

"The scholarship program is designed to remove these access barriers, and help people learn, and in turn educate themselves and others around good health practices. We want to be the start, middle and end of people's journeys, offering them the education, support and information they need to become certified health and nutrition professionals."



Shift in health and wellbeing sees rise in demand of gut products

A gut health brand has forecasted continued growth for the sector amid the dramatic upshift in commercial potential for prebiotic products through 2021.

The team at Clasado, developer of Bimuno, has shared insight into where it believes the category will progress over the coming 12 months and what the future may have in store for prebiotics.

Per Rehné, CEO at Clasado, commented: "The seismic shifts in health and wellbeing over 2020 have really accelerated a lot of the trends we have seen in health and nutrition. In the sector, we often talk about the science of gut health as if it's siloed from the consumer and develops independently of the population. However, we are seeing that this is not the case as individuals become much more engaged with their health. We saw a similar pattern previously with probiotics and it seems likely that prebiotics are following the same upward trajectory.

"What's proving different for brands in the supplement and functional food space now is that through the challenges of 2020, the public is taking health into their own hands and is proactively educating themselves on gut health like never before.

They are actively seeking products such as supplements and functional foods that can support good gut bacteria and this of course brings abundant commercial opportunity for brands and manufacturers. We saw this demand spike first-hand with our own range of finished consumer supplements.

"We expect that functional food brands will really embrace prebiotics in 2021. The category combines the convenience that the consumer seeks with the nutritional science that is engaging shoppers around the world."



ION announces focus on brain health

A new clinic focused on the brain has been announced by the Institute of Optimum Nutrition (ION).

ION has opened its first Brain Bio Clinic, which specialises in optimum nutrition to support mental health concerns such as depression, anxiety, learning and behavioural issues (in both children and adults), psychotic disorders and cognitive decline.

With a personalised approach to nutritional therapy at its core, the clinic identifies biological and physiological imbalances and offers tailored dietary and supplementation recommendations for each individual to get to the root of their problem.

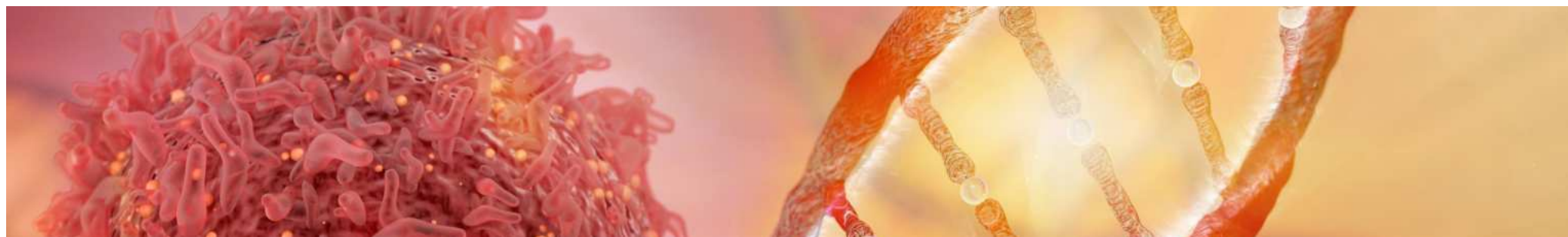
Nutritional Therapist for Mental Wellbeing, Lorraine Perretta, a Fellow of ION and the author of *Food for Thought*, commented:

"There is no doubt we are seeing the impact of the pandemic on the mental health of the nation here at the clinic, with more people suffering from anxiety and insomnia than ever before. Our personalised approach is at the very heart of the work we do. Every person is different and therefore every solution needs to be tailored to their individual needs. We deal with the full spectrum of mental health issues from mild anxiety to psychotic disorders, but always with the same personalised approach."



In Research

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



Cancer replaces heart disease and stroke as biggest cause of death among diabetics

Imperial College London has published new research suggesting that cancer has become the leading cause of death among people with diabetes.

The results come from an 18-year-study of more than 300,000 people with diabetes in England, from scientists from Imperial College London and published in the journal, *The Lancet Diabetes & Endocrinology*.

The research, funded by the Wellcome Trust, reveals that between 2001-2018, heart disease and stroke were no longer the leading causes of death among people with diabetes, as they were 18 years ago.

In the study, researchers from Imperial's School of Public Health looked at anonymised primary care data from 313,907 people in England with diabetes between 2001-2018 and linked this with death

data from the Office of National Statistics. The study revealed death rates for those with diabetes declined in the study period by 32 per cent for men, and 31 per cent for women.

The team explain that deaths from heart disease and stroke have reduced across the whole population, including those without diabetes.

Dr Jonathan Pearson-Stuttard, lead author of the study, commented: "Improvements in risk factors such as smoking and blood pressure, along with progress in medical treatments, have contributed to large falls in deaths from heart disease and stroke. The improvements have been even greater in those with diabetes. This has resulted in vascular conditions accounting for around 25 per cent of all deaths in those with diabetes, compared to 45 per cent 20 years ago. In contrast, improvements in cancer death rates have been much more modest, with

improvements in those with diabetes lagging behind the general population.

"It is striking that cancer is now the leading cause of death in England among people with diabetes and the leading contributor to excess death compared to those without diabetes. Added to this is the fact the UK continues to lag behind other EU countries in terms of cancer survival rates."

The findings also showed people with diabetes were more likely to die from dementia, liver disease, or respiratory disease in 2018 than people without diabetes.

The team have called for guidance around the treatment of diabetes to be updated to ensure patients and clinicians are aware of the breadth of conditions they are at higher risk of, including cancer, dementia and liver disease. They add that the reasons for cancer being the leading cause of death are

unclear, but could be linked to the fact people with diabetes are more likely to be overweight, and excess weight is a leading risk factor for cancer.

The researchers also highlighted limitations of the study, such as the inability to differentiate between type one and two diabetes in the data, and the fact around 20 per cent of people with diabetes in the UK are undiagnosed.

Professor Edward Gregg, senior author of the study, added: "This study is another reminder that as people die less from cardiovascular diseases, diabetes still leads to a wide range of other problems. The diversification of the big contributors to death here included cancers, dementia and respiratory diseases. This, and the current experience with Covid-19, is a reminder that we need to take an increasingly broad view about what prevention means for people with diabetes."

Exercise recovery boosted by cherries

New research has confirmed that Montmorency cherries can offer positive benefits, post-exercise.

Researchers at Northumbria University and St Mary's University, in London, have revealed just how effective Montmorency tart cherry juice products can be in helping people recover after exercise. For more than 10 years, Professor Glyn Howatson, a research leader and Professor in Human and Applied Physiology, has led research into the positive effects of drinking Montmorency cherry juice before and after strenuous sporting activity. As a direct result of his team's research studies, elite athletes have used Montmorency cherry products in the run up to, and during, the 2012, 2016 and 2021 Olympic Games to help athletes recover from intense bouts of training, strenuous competition, and injury.

The latest research was a meta-analysis of 14 previously published studies, which concluded that taking Montmorency tart cherry in the form of juice, powder, or tablets has a significant effect on improving the recovery of muscle strength and reducing reported muscle soreness

after exercise.

The supplementation included one to two servings per day during the length of the study, ranging from seven to 16 days, including pre-exercise, day of, and post-exercise.

"In previous studies, we found tart cherries to have significant benefits on recovery after strenuous exercise involving runners, cyclists and team sports players, however, there are some inconsistencies in the scientific literature, and therefore we wanted to clarify the effectiveness and identify the factors most affected by tart cherry supplementation," Professor Howatson explained.

"Although the overall picture shows a positive response, the variations in the response to tart cherries in some published studies are likely due to the differences in study design, dietary control, the study participants and the type of exercise. For instance, tart cherry products seem to be more beneficial for exercise that is more metabolically challenging."

The findings have been published in the *International Journal of Sport Nutrition and Exercise Metabolism*.

Confidence in vaccine programme rising

Research has suggested that global confidence in the Covid-19 vaccination programme is rising.

The research from Imperial College London's Institute of Global Health Innovation (IGHI), in collaboration with YouGov, found that people's willingness to get vaccinated against Coronavirus is rising and more than half of those surveyed (54 per cent) would take a vaccine if it was offered to them next week. This is an increase from November, when the same survey, which ran across 15 countries and included 13,500 people each time, showed that just four in 10 (41 per cent) would be willing to get vaccinated at the time.

However, the survey has highlighted major differences in attitudes towards vaccines across the world. People in the UK were the most willing to have a Coronavirus vaccine overall (78 per cent), followed by Denmark (67 per cent). While France had the highest proportion of respondents who stated that they would not take a vaccine (44 per cent), the number of French people surveyed who strongly agreed that they would take a vaccine has doubled from just 15 per cent in November to 30 per cent in January.

The UK also had the biggest increase in the share of people who strongly agree that they'd take a vaccine, from 41 per cent in November, shortly before the first approval of

a Coronavirus vaccine, to 70 per cent in January. Whereas in four countries – Australia, Japan, South Korea and Singapore – willingness to take a vaccine has decreased since November, with Japan showing the least willingness to currently get vaccinated (33 per cent), followed by Singapore (35 per cent).

Dr David Nabarro, Co-director of the Institute of Global Health Innovation at Imperial College London and WHO Special Envoy on COVID-19, commented: "It is very encouraging to see that as a number of safe and effective Coronavirus vaccines are being rolled out across the world, there has been an apparent positive shift in people's perceptions of these products. As vaccines will play a vital role in controlling the pandemic, leaders must act now to help more people understand the benefits of being vaccinated against Covid-19 and make sure that no one is left behind."

Melanie Leis, Co-project Lead from the Institute of Global Health Innovation, added: "Openness and transparency are vital to ensure that governments have access to the best evidence to inform policy. All of our data are freely available, and we hope that our ongoing efforts to monitor the situation globally and offer country comparisons will enable better international collaboration, which is essential in the necessary strive toward vaccine equity."





Vitamin D fortification needed to address deficiency

Research has suggested that vitamin D fortification is needed to address deficiency.

The study, published in the journal, *Nutrients*, looked at a Dutch 'model diet' to simulate the dietary shifts needed in order to optimise the intake of vitamin D and to minimise the carbon footprint, considering the popularity of the diet. Scenarios were modelled without and with additional fortified bread, milk, and oil as options in the diets.

The researchers found that the baseline diet provided about one fifth of the adequate intake of vitamin D from natural food sources and voluntary vitamin D-fortified foods. Nevertheless, when optimising this diet for vitamin D, these food sources together were insufficient to meet the adequate intake required, unless the carbon emission and calorie intake were increased almost three-fold and two-fold, respectively. When vitamin D-fortified bread, milk, and oil were added as options to the diet, along with increases in fish consumption, and decreases in sugar, snack, and cake consumption, adequate intakes for vitamin D and other nutrients could be met within the 2,000 calorie limits, along with a relatively unchanged carbon footprint.

The researchers explained: "Achieving vitamin D goals while reducing the carbon footprint by 10 per cent was only possible when compromising on the popularity of the diet. Adding vitamin D to foods did not contribute to the total carbon emissions. The modelling study shows that it is impossible to obtain adequate vitamin D through realistic dietary shifts alone, unless more vitamin D-fortified foods are a necessary part of the diet."

Microbiome research project announced

A new research project to understand how microbiome modulation technologies could improve sleep, stress and anxiety has been announced.

OptiBiotix has revealed it is jointly funding new research exploring the potential role its microbiome modulation solutions could have on sleep, stress and anxiety.

The new project, which will be jointly funded by the Italian-based research institute, Fondazione Edmund Mach – Centro Ricerca e Innovazione ('FEM') and the University of Southampton, will examine how prebiotics such as SlimBiome and WellBiome, and probiotics like LPLDL can support the human body in effectively managing sleep, stress and anxiety during a period of stress-induced sleep disruption.

Stephen O'Hara, CEO of OptiBiotix, commented: "At OptiBiotix, we are excited to explore how our science-backed prebiotic and probiotic technologies positively impact the human microbiome in ways that haven't yet been fully investigated."

The research will be carried out by a PhD student in the School of Human Development and Health (HDH), which is internationally recognised for its multidisciplinary research in nutrition, metabolism and the microbiome, in the Faculty of Medicine at the University of Southampton. As part of the agreement between OptiBiotix and both academic institutions, the project will include a double-blind, placebo controlled human study.





New to market

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

Plant-based protein focus for Cytoplan launch

The nutrition experts at Cytoplan have announced the launch of a new vegan protein powder.

Multi Protein+ is described as Cytoplan's most comprehensive vegan formula, an all-in-one nutrient formula perfect for active, health-conscious people to support muscle maintenance, digestion and immune health in just one scoop.

The new product has been 12 months in development and provides a blend of plant-based protein derived from brown rice, pea, hemp, pumpkin, sunflower and chickpea protein to give a full spectrum of amino acids.

Combining a comprehensive multivitamin with optimum levels of nutrients, including coenzyme Q10, B12 and vitamin D3, the science-based protein powder has been created with prebiotics and probiotics to support the immune system and aid digestive health.

Made using natural ingredients, the blend is free of gluten, soy, GMO ingredients, does not contain animal products and is free from both dairy and lactose.



Hello hibiscus

Aduna has unveiled its latest innovation in the form of Hibiscus Superfood Powder.

Described by the brand as a vibrant new superfood, it is rich in nutrients, polyphenols and antioxidants and has been made available by Aduna as a 100 per cent pure and organic powder to fortify smoothies, juices and other health-boosting recipes.

The product is a 100 per cent natural and organic, sustainably sourced superfood made from dried Hibiscus Sabdariffa flowers (Roselle) and is a source of fibre, calcium, iron, plant protein, polyphenols and antioxidants.

The hibiscus flowers in Aduna Hibiscus Powder are harvested and processed in Egypt, creating sustainable incomes for almost 100 rural households and ensuring the added value from processing remains within the country.

AYURVEDIC HERBAL RANGE ANNOUNCED

An Ayurvedic practitioner has announced the launch of a new range of organic herbal teas.

Organic Apoteke has been developed by Dr Nitasha Buldeo, who is also a Doctor of Skin, with the aim being to create herbal, potent blends to nourish and renew, reduce skin ageing, aid digestion, strengthen the nervous system and encourage toxins to leave the body quicker.

The teas are based on the roots of Ayurveda and follow Ayurvedic guidelines in the way the herbs are combined. The collection includes AntiOxidant Tea, Nourishing Night Tea and Detox Tea.

For Organic Apoteke, it is important the entire process is compostable and sustainable, from the recycled card box, and biodegradable cellulose tea bag, while the herbs are also air and sun dried in small batches and mixed in small volumes. As such, no foil or vacuum sealing is used.



VIRIDIAN EVOLVES PORTFOLIO WITH VITAMIN C RANGE

A new range of supplements focused on vitamin C has been developed by Viridian Nutrition.

The ethical vitamin company has created the range of seven vitamin-C rich formulations from naturally sourced ingredients. The advanced formulations include Extra C in 550mg and 950mg capsules, which feature high potency, clinically tested vitamin C and offer enhanced absorption, and Vitamin C + Zinc (available as a powder and 500mg capsules), which provides a buffered solution and therefore gentle on the stomach. There are also products featuring acerola cherry in the form of Organic Acerola Cherry C Powder and Organic Acerola Liquid C. And finally, the range includes Viridikid Vitamin C Drops.

Like all Viridian products, the Vitamin C range contains 100 per cent active ingredients, no binders or fillers, no sugar or artificial additives. They are non-GMO, non-animal tested and palm-oil free. The supplements are all vegan and suitable for those following a plant-based diet or lifestyle.

THE VIRTUAL EDUCATION KEEPS COMING

The organisers of the popular IH CAN Conferences announce further developments with virtual and in-person events.



Following the success of our two virtual IH CAN Conferences – and with in-person events still paused due to the pandemic – we are delighted to announce another event on Saturday, March 13.

A full schedule of speakers for the day will be released soon at www.ihcanconferences.co.uk/virtualevent, but we're leading off with CPD in a specialist field that's never been more important. With record numbers of people being left with post-viral fatigue – or long Covid as it's being called by a medical profession still suspicious of CFS/ME – we all need a refresher on how to effectively deal with one of the most debilitating conditions there is.

And so, we're delighted to welcome Elaine Wilkins, founder of The

Chrysalis Effect, a program that has revolutionised life for so many CFS sufferers, as a presenter. Elaine, once herself bed-bound with chronic fatigue, argues that Covid-19 and long Covid could stimulate a drastic rethink of the current medical system, which has shown it has no idea how to deal with CFS – and, before Covid – has shown no real interest in doing so.

Personal mentoring, support and coaching are critical for recovery from CFS. Fittingly for a virtual event, Elaine's coaching-based integrated healthcare model is perfectly designed to be delivered online, and she'll explain how her WellBeing Coaching and CFS Recovery can be operated by practitioners successfully, despite lockdowns.

IMMUNE FOCUS

Furthermore, research microbiologist, Kiran Krishnan, will also be taking to the virtual stage with his talk, 'The Microbiome's Control of Immune Function'.

The world has lived through an unprecedented time with the pandemic spread of Covid-19. In an effort to decrease our susceptibility to other harmful viral infections, this is an opportunity to collectively educate patients on the power of preventative healthcare and to get a better understanding of our natural defences.

The microbiome and the immune system are inextricably connected, and the immune system would cease to function without the microbiome. The microbiome acts as the 'Neighborhood Watch' for the



immune system, allowing for effective surveillance of a mucosal system that is over 3,000 sq ft in surface area and inhabited by over 40 trillion microbes.

This presentation will provide a review on the components of the immune system, the kinetics of our immune response and the critical support and check-points managed by the microbiome. One of our most powerful tools in fighting invading pathogens is having a healthy microbiome and Kiran's talk will illustrate exactly what this means.

Look out for the keynote speaker to be announced shortly.

FIND OUT MORE

For more information, and to book your virtual ticket, visit www.ihcanconferences.co.uk/virtualevent or telephone 01279 810080.



Diamond Sponsor



CONFERENCE CATCH-UP

Wondering what a Virtual IHCAN Conference is like? Here is a recording of Ben Brown's session from last September's event, exclusively for *Nutrition I-Mag* readers:

ImmunoDophilus®

Immunodophilus is a powder in a sachet to mix in cold water or other cold beverage which makes a pleasant tasting drink from its fruit base of **Pear pulp** and **Pomegranate juice**.

An intensive 5 day course of 50 billion live cells of lactic acid bacteria, including *L-Kefir*, *L-acidophilus*, *L-gasseri* *L-bulgaricus* and the highly regarded LAB4® proprietary blend.

With complex plant fibres like **Larch arabinogalactans** (non-starch polysaccharides), **apple pectin** (a soluble fibre), the juice of **pomegranate** and **pear pulp** that collectively contribute to intestinal health.

Immunodophilus contains **Vitamin B6** and **Vitamin C** that contribute to the normal function of the immune system.

Immunodophilus is non Dairy and is suitable for vegetarians and vegans.

For more information about this unique Bionutri formulation, follow the link or QR code at the bottom of the page

www.bionutri.co.uk/immunodophilus



Webinars

Every Wednesday since the beginning of the first national lock-down, Bionutri have presented a weekly webinar attended by hundreds of nutrition and healthcare practitioners and students throughout the UK, Ireland and across Europe.

Our aim is to continue our long held belief of sharing the most up to date research and insights with our colleagues who work in practice.

Over the months, whilst many practitioners have been working from home we have pooled our resources to ensure we are providing accessible, impartial and well founded scientific information with our technical team working hard to produce new content every week.

Each of Bionutri's Webinars offers an hour of CPD, accessible to registrants up to a week after the event, to either watch again or catch up

Already this year we have had **Sue McGarrigle NT** presenting talks on **Nutrition Support for Addiction** and the **Role of Lignans in Supporting Hormone Health**. Providing a botanical twist to nutrition, **Edward Joy** has presented a series of talks on **The Immune System, Vitamin C** and the **Cardiovascular System**.

See the list of our March Webinars to the right here. To join us for any of these events which are free to attend, you can just follow the link or the QR Code to sign up. Simply sign up for a weekly notification on the week's up coming talk.

www.bionutri.co.uk/webinars-2021

Anitoxidants by Edward Joy
Wednesday 3rd March
11am -12pm

Migraines by Sue Mc Garrigle
Wednesday 10th March
11am -12pm

Circadian Rhythm by Edward Joy
Wednesday 17th March
11am -12pm

Benefits of Pears by Sue Mc Garrigle
Wednesday 24th March
11am -12pm





Championing nutritional excellence

In our search for the best nutritional products, we are delighted to reveal the winners of the annual *Nutrition I-Mag* Products Awards.

Recommending products to your clients every day, you as Nutritional Therapists quickly become familiar with those brands that are superior in their quality, efficacy and ethics. And we believe it is those brands that deserve recognition for their excellence, which is why we set up the *Nutrition I-Mag* Product Awards. Late last year, we revealed all the products

that were shortlisted for an accolade and then we put it to you, our readers, to tell us what you believed should win – and here, we can reveal those that won or were highly commended.

We thank you all for taking the time to vote, and extend our congratulations to those who were successful.

BEST ALTERNATIVE PRODUCT

FunctionalDX

FunctionalDX is revolutionising blood testing and analysis for functional medicine and integrative healthcare practitioners. Its world leading FunctionalDX blood science technology is more accurate, more accessible and the single most comprehensive blood analysis on the market today.

FunctionalDX health reports provide the modern practitioner with the world's most advanced blood interpretation technology and knowledge to help you get to the root cause of your clients' health concerns and optimise effective therapy options. The comprehensive assessments offer a multitude of clinical applications from fertility to cognitive and cardiovascular health.

Jonathan Cohen, FunctionalDX Founder and Director, commented: "We are delighted to be recognised by our practitioners and are proud to accept this award."

"FunctionalDX is committed to revolutionising health reporting so our practitioners can continue to provide health transformations for their clients. Together, we're using technology to lay the cornerstone for a healthier world."



FunctionalDX
Revolutionising Blood & Health Reports



Highly commended: Bio-Kult Mind

BEST VMS

Pure Encapsulations Liver G.I.

Liver-G.I. provides a comprehensive blend of phytonutrients and nutritional factors. Featuring N-acetyl-L-cysteine and alpha lipoic, it also contains milk thistle and turmeric extracts, as well as broccoli sprout extract standardised to sulforaphane. Providing the amino acids, glutamine, glycine, taurine and methionine, Liver G.I. also features chlorella, the most studied green super food.

Commenting on the win, Joanna Dziedzic, Nutritional Therapist and Business Development Manager at Pure Encapsulations, said: "The team at Pure Encapsulations are very honoured to be the recipient of *Nutrition I-Mag's* Best VMS award for Pure Encapsulations Liver-G.I. It's great to see that the readers share the passion and trust in our commitment to providing the biggest range of free-from, professional food supplements."

"Liver-G.I. is a preferred choice by health professionals, and this prestigious award reflects that. Thank you everyone who voted for Pure Encapsulations Liver-G.I. this year!"



Highly commended: Altrient Liposomal Vitamin C

BEST NEW PRODUCT

Nutri Advanced MegaMag PeriMeno Plus Magnesium Powder

MegaMag PeriMeno Plus is the newest product in the popular MegaMag range of powders.

It can be taken from the earliest stages of the perimenopause, supporting a smoother transition through to the end of a woman's reproductive years.

The product features a combination of well-researched herbs, including ashwagandha, rhodiola, sage, shatavari and red clover. Ashwagandha supports optimal cognitive function, as well as relaxation, and rhodiola is an adaptogenic herb used to support cognitive function, low mood and burnout. Sage is a herb with a long history of use for supporting excessive sweating, a symptom common during the perimenopause. Shatavari and red clover are two herbs with a long history of traditional use in women's health.

Katherine Pardo, Head of Nutrition & Education at Nutri Advanced, commented: "Thanks so much to *Nutrition I-Mag* for this award. It's the most recent introduction to our MegaMag range of products, and although we knew there was a big gap in the market for a product that offered real relief to the many thousands of women suffering in the years running up to, and around the menopause, I think even we

were taken aback by the success it's had. The sheer amount of enthusiasm amongst practitioners and their clients for it, and the feedback we've been getting is just amazing!"



Highly commended: Wellness Formula Herbal Resistance Liquid with Echinacea, Coptis & Yin Chiao



LIVER-G.I.

- ✓ Featuring n-acetylcysteine and alpha lipoic acid
- ✓ Milk thistle and turmeric extracts, as well as broccoli sprout extract standardized to sulforaphane
- ✓ Provides the amino acids glutamine, glycine, taurine and methionine. With chlorella, the green super food

Voted three-times **Best Food Supplement** by health professionals and their clients.¹ More health professionals choose Pure Encapsulations than any other brand.²

¹ In the U.K. and Ireland, as voted by health professionals and their patients, True Health Magazine© 2020, Nutrition I-Mag© 2020, IHCAN Magazine© 2020

² In the U.S., determined as most recommended among brands surveyed, Nutrition Business Journal© 2016, 2020

See what's in our products, and what's not, at pure-encapsulations.co.uk

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NutriLink

Linking Science and Nutrition



Nutri-Link is Proud to Recommend Cognitive Enhancer from Biotics Research Company

A nutritional formula designed for cognitive function and acetylcholine requirements to provide the brain the nutrients to function at a higher level. Use where the need for Neurological Support has been determined.

Cognitive Enhancer supplies 100mg Acetyl-L-Carnitine HCL per capsules along with GPC choline (50% glycerylphosphorylcholine) 100mg, Ginkgo (Ginkgo biloba leaf extract) 25mg and Huperzia Serrata (aerial part extract (1% huperzine A)) 5mg.

Tel: 0333 577 0404

Email: info@nutri-link.co.uk

Web: www.nutri-link.co.uk

Introducing the BioCare Graduation Award



Shaping a healthier society

Nutrition I-Mag is delighted to announce the launch of the BioCare Graduation Award, supporting the practitioners of tomorrow, every step of the way.

How would you like to be the recipient of the new BioCare Graduation Award, which includes a £1,000 bursary, one to one mentoring, free BioCare products and more?

This is all on offer with the launch of this exciting new award from BioCare, which is being run in partnership with *Nutrition I-Mag*.

If you're a nutrition student who is graduating soon, you may be asking yourself the following questions:

- What resources do I need to set up my practice?
- How do I develop myself into the type of practitioner I want to be?
- How do I know which products to recommend?
- Who can support me with my first clients?

■ How do I maintain my CPD?

It's understandable you have such questions and that's why BioCare is here to help. Because BioCare has, for more than 30 years, cared – it cares about helping people around the world be the healthiest version of themselves, and it cares about supporting the next generation of practitioners.

Practitioners are at the core of the BioCare brand, and the team are passionate about providing you with support and education to enable you to play your part in shaping a healthier society. With years of experience working with practitioners, the company has a breadth of clinical experience. Coupled with its drive for sharing knowledge, BioCare wants to be here for you, as your trusted experts, as you make the transition from nutrition student to practitioner.

WHAT'S ON OFFER?

If you're a nutrition student studying in the UK and graduating in 2021, then you are eligible to apply for the BioCare Graduation Award.* And the good news is there are three awards being given away.

Each winner will receive £1,000 cash towards college fees or the set-up of your business, £250 worth of free BioCare products and one-to-one coaching, including support with resources for clinic practice, mentoring, guide to BioCare CPD accredited education and BioCare Essentials product training. The winners

also receive a free print subscription to *IHCAN* magazine for one year, as well as free lifetime subscription to *Nutrition I-Mag*.

The winners will be announced at the IHCAN Summit in London on June 26.

To be in with a chance, simply complete the online form on the BioCare website, which can be found at www.biocare/student-graduation-award before the deadline of May 31, 2021.

*Ts and Cs apply. Visit www.biocare/student-graduation-award for full details.



THE BIOCARE DIFFERENCE

All applicants registering for the award will be set up with a BioCare trade account, which you can start using straight away, even before graduating. The range of account benefits include:

- Free access to BioCare's expert nutrition team for clinic support, client cases, general nutrition queries and product advice.
- Access to the Referral Scheme, where you can recommend BioCare products and receive a referral payment.

- Competitive trade discount – 33 per cent off RRP.
- Free, CPD approved nationwide education events.
- Free extensive online resources – a wealth of education and product support.
- Free delivery on orders over £25.
- Same day dispatch – when ordered by 2pm.
- Direct dispatch to your clients.

Find out more at www.biocare.co.uk



How would you like to receive the BioCare Graduation Award?



Shaping a healthier society

Includes a £1,000 bursary, one to one mentoring, free BioCare products and more!

With years of experience of working with practitioners, we have a wide breadth of clinical experience. Coupled with our drive for sharing our knowledge, we want to be here for you, as your trusted experts, every step of the way as you make that transition from nutrition student, to practitioner.

If you are a nutrition student studying in the UK and graduating in 2021, then you are eligible to apply for one of three BioCare Graduation Awards*!



What can you win?



- ✓ **£1,000 cash towards your college fees or the set-up of your new business**
- ✓ **£250 worth of FREE BioCare products**
- ✓ **One to one coaching that includes:**
 - Support with resources for clinic practice
 - Mentoring support
 - Guide to our CPD accredited education
 - Our Essentials product training
- ✓ **A FREE print subscription to IHCAN magazine for one year**
- ✓ **A FREE lifetime subscription to Nutrition I-Mag**

How do you enter?

Simply complete the online form on our website at:

www.biocare/student-graduation-award before the deadline of **May 31, 2021**.

*T's and C's apply.

By registering you will also be set up with a BioCare account, which you can start using straight away, before graduating!



Allergy assessment

Hay fever is on the rise, and with its strong link to other allergic conditions, it can leave people experiencing a raft of uncomfortable symptoms. And so *Nutrition I-Mag* has gathered a panel of nutrition experts to recommend the right protocol for clients.



Away from the world of Covid-19, which has dominated so much in the last year, we mustn't forget that other health conditions continue to bubble away, and by way of example, springtime sees the arrival of the pollen season.

Millions of people – and rising, according to estimates – suffer with hay fever, and far from being just some sniffles and sneezing, for some people, seasonal allergic rhinitis can be hugely debilitating, lasting for

months and affecting their lives in many ways.

It is also an area in which nutritional therapy can play a key role, in two ways – as a preventative, to get the body as strong as possible prior to the onset of symptoms so that a person can mediate their symptoms, and then during the season, to help dampen down the symptoms that people develop.

Hannah Braye, a Nutritional Therapist and Head of Technical Advice

at ADM Protexin, manufacturers of Bio-Kult and Lepicol brands, commented: "Hay fever (also known as allergic rhinitis) is very common and affects 10-15 per cent of children and 26 per cent of adults in the UK.¹ Prevalence has trebled in the last 20 years.²

"One potential explanation for this increase is bio-diversity theory, which suggests that as we have lost increasing amounts of bio-diversity from the natural environment and moved further away from traditional

ways of living, our interaction with a wide range of micro-organisms, necessary to enable healthy development of the gut microbiome and immune system, has significantly decreased.³ As such, as we are seeing large reductions in the diversity and richness of the human gut microbiome. This potentially results in an imbalance in immune responses that favour the development of immunoglobulin E (IgE)-mediated allergies, such as hay fever.⁴ Increasing exposure to environmental factors such as air pollution and new man-made chemical compounds, along with increasing stress levels and diets increasingly low in protective nutrients may also be implicated.⁴ All of these factors, along with the over-prescription of antibiotics in recent years, are likely to have had a negative impact on the gut microbiome⁴ and therefore the immune system.”

Dr Marilyn Glenville PhD, a leading Nutritionist and author, continued: “It is thought there has been a significant rise in people suffering from hay fever. And it is now more common for people to develop hay fever later in life when they had never suffered with it before.”

Max Wiseberg, founder of the pollen barrier balm, HayMax, continued: “Hay fever is indisputably on the rise. A recent report predicted that hay fever rates in the UK are set to double by 2030, as a result of soaring temperatures, urban pollution and increasing urbanisation. And up to 30 per cent of adults and 40 per cent of children now suffer with hay fever in the UK [1].

“The changing global environment may also play a role, as plants that release more pollen into the air start to grow in Britain and as trees and plants bloom for longer in a warmer climate. There are also new pollens that we haven’t been exposed to before, such as ragweed, which only recently travelled to the UK and originates from the tropical and subtropical regions of the Americas.”

Nutrition expert and author, Patrick Holford, continued: “The incidence of hay fever has risen dramatically, in particular in cities due to pollutants, such as exhaust fumes, which prime the immune system to react. During the summer, the air in polluted areas contains more free radicals due to the action of sunlight on oxygen molecules, so city-dwellers breathe in more pollutants.

“The rise may also be driven by environmental changes: fewer infections in childhood, living away from environments such as farms, which seem to inhibit the development of allergies, and modern changes in diet and lifestyle (for example, over-heated, poorly ventilated homes).”

FIGURES ON THE RISE

The data points towards a hike in cases, but what are the reasons behind this increase?

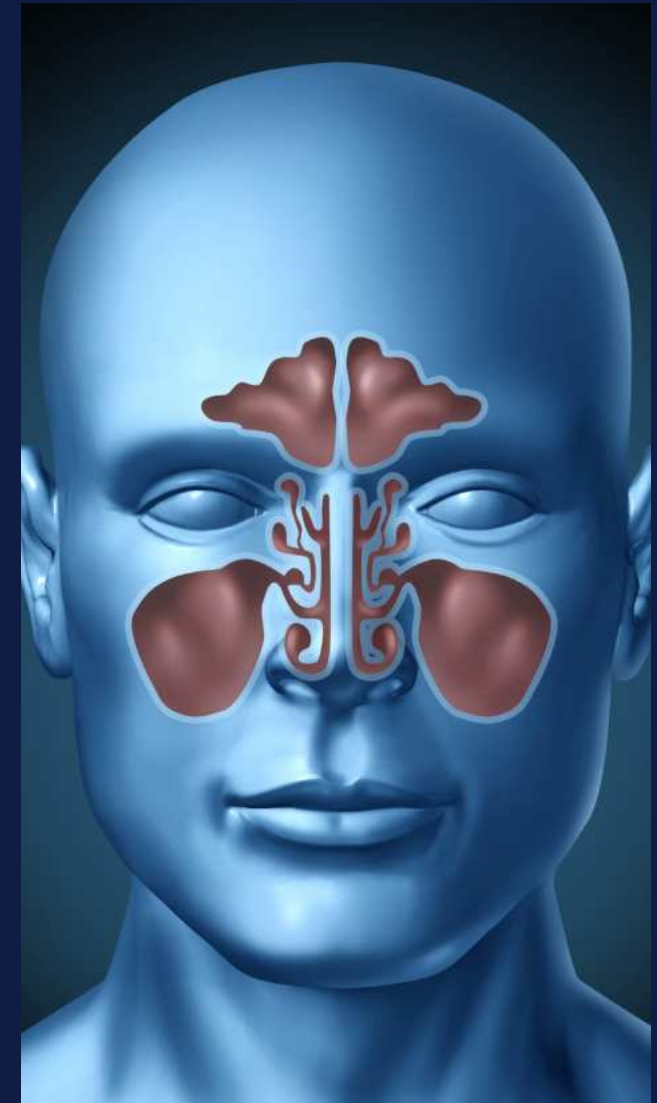
Alice Bradshaw, Head of Nutrition Education and Information at Terranova Nutrition, commented: “There are many theories on why allergic conditions (including hay fever) are more prevalent these days. Changes in environmental toxic load, including pesticides, xenoestrogens and even excessive exposure to blue light, have been proposed as possible contributory factors. Poor gut health and the stress of today’s fast paced modern life may also be influential.

“There seems to be an increase in allergic reactions and intolerance, which some nutritional experts have correlated to the rise in gut problems in the general population. What role does the gut play here? Evidence suggests that an imbalance within the gut microbiome may be linked to allergies, including hay fever. Dysbiosis is a key factor that makes a person more susceptible to environmental and food allergies as it is linked to an elevation of histamine, a compound involved in immune and inflammatory responses. Many people with allergic conditions, asthma or poor gut health (inflammation) may also suffer with hay fever. There may also be a genetic determinant to who is likely to suffer with hay fever as this condition tends to run in families.”

And Roz Crompton, Homeopath and Marketing Manager at Helios Homeopathy, added: “It is reported that one in four people in the UK are suffering from hay fever compared with one in eight in the early ‘80s. There are several factors that may explain or contribute to the increase in hay fever sufferers;

- We are noticing and reporting hay fever more. It is possible that 100 years ago, with serious illness such as TB and typhoid around and no National Health Service in place, symptoms of hay fever would have been dismissed by most people as not worth reporting.
- Air pollution is a possible culprit. Hay fever was virtually unknown before the 19th century and of course there were no cars in the 1800s so exhaust fumes could be a contributory factor.
- In the last four years, there has been a spectacular increase in pollen levels, according to Beverly Adams-Groom of the National Pollen Research Unit, which may be related to climate change, with the milder temperatures the UK has been experiencing in spring. In the last few years, there has been plenty of rainfall in April/May, coupled with good weather in June coinciding with the flowering season.
- Hygiene hypothesis – basically, allergies are on the increase because we are too clean. This theory states that in our over sanitised, disinfected world, our immune system is simply not getting the ‘work out’ it needs to develop

properly in childhood. As a result, our bodies fail to distinguish between harmless allergens such as pollen and dust and harmful bacteria and overreact.”



CUT THE RISK FACTORS

Some elements of hay fever can be controlled, and others not, but we do know there are some people who are generally more susceptible to it.

"One idea is that it might be hereditary, a genetic trait that runs in families. Most people that have it are likely to have parents that have it too," Holford advised.

"Another idea is that it might be due to your immune system not exposed to allergens. If you weren't exposed to many parasites or microorganisms as a child, say by not being out in the countryside, then in later life, your body is more likely to mistake harmless things like pollen for bacteria. So, living in a city, not playing in rural areas as a child could increase your risk of getting hay fever."

Crompton added: "You are more likely to get hay fever if there is a history of asthma, eczema or hay fever in one or both parents. Hay fever usually begins in the early teens, but symptoms can often improve with age."

Wiseberg continued: "Possible triggers could include having a serious infection or moving to a more polluted area. The main factors are having a mother who smoked during the first year of their life, having a relative with asthma or allergies, or suffering with other allergies, asthma or eczema. A lack of sleep can affect things: an NPARU study showed that people who slept at least seven hours a night suffered significantly milder symptoms than those who slept no more than five hours each night."

Braye continued: "A genetic background in terms of a family history of atopic disease has been the strongest risk factor for the development of allergic symptoms, irrespective of the varying prevalence and environmental risk factors in different societies.³ Therefore, having a close family member who suffers with hay fever, or if you or a close family member suffers with other atopic conditions (e.g. asthma, eczema, food allergies) is a large risk factor. Environmental factors such as living in urban areas with increased air pollution, exposure to allergens through employment, poor diet and bacterial/viral infections are also frequently quoted as adjuvant factors for allergic sensitization and possible causes of the increased prevalence⁵."

And in terms of the most common symptoms if someone is a hay fever sufferer? There are some classic signs but there can

also be more unusual ones not necessarily associated with hay fever.

Crompton commented: "The potential range of symptoms can vary hugely, from a mild sensation of irritation to great distress and discomfort. Any combination of the following can occur: red, bloodshot eyes that water and/or feel gritty, intense itching of the eyes and eyelids, puffiness and swelling of the eyelids, dry itchy sensation in the throat, palate and/or ears, variable mucus discharges from the nose that can be watery, or thick or the nose can be blocked and congested, and wheezing and coughing.

"Some less well-known symptoms are itchy and sensitive skin, which is caused by pollen coming into direct contact with the skin, loss of smell caused by lack of air reaching the smell receptors that are located high in the nose, which, in turn, can lead to loss of taste, facial pain caused by blocked sinuses, and sweating. This can be a result of the body's production of excessive amounts of histamine in order to push out allergens such as pollen.

"Histamine contains inflammatory properties so, to counter this, the adrenal glands release cortisol. However, because the release of histamine is so extreme during a bad attack of hay fever, sometimes the adrenal glands cannot keep up, which leads to a whole host of problems, including excessive sweating."

And is there concern around any long-term impact on a sufferer's health?

"Hay fever can significantly impact quality of life for a sufferer. There seems to be a link between hay fever and other conditions such as asthma and atopic skin conditions. Additionally, a hay fever sufferer may be more sensitive to odours and chemicals in general. As hay fever is part of a spectrum of health conditions associated with histamine intolerance, sufferers may also experience other allergic conditions," Bradshaw commented.

Dr Glenville turned the focus on associated conditions, commenting: "Asthma symptoms, such as wheeze and breathlessness, which can get worse if asthma is present. Some people have asthma symptoms only during the hay fever season."



PRACTITIONER PROTOCOL

We then move to discussion around the kind of advice practitioners should be offering clients, both preventative and when talking symptomatic.

Starting with dietary considerations, Bradshaw advised: "A practitioner can work with a client to support overall immune health, optimise digestive health and address issues such as food intolerance, histamine overload and general inflammation. Suggestions for dietary changes may include limiting foods and beverages that contain high levels of histamine. These include wine, chocolate, cheese, tomatoes, spinach and aged meat.

"Tea and coffee should be replaced with herbal teas and ginger and nettle teas may be particularly helpful as they can modulate inflammation and reduce histamine levels. Other helpful foods include onions, garlic, pomegranate and chamomile. Managing stress levels and ensuring good sleep hygiene is also important for reducing histamine.

"Supporting liver health and detoxification pathways prior to the hay fever season may also be another useful strategy. Increasing cruciferous vegetables in the diet and adding liver supportive botanicals such as milk thistle and dandelion is a relatively easy addition for clients to make."

Dr Glenville pointed out: "Nutritional support to help treat symptoms of hay fever works on quelling the pro-inflammatory histamine, released from mast cells in the skin and lining of the air passages. This triggers the body to produce increased mucus, dilation of blood vessels and itchiness, as the histamine sensitises nerve endings.

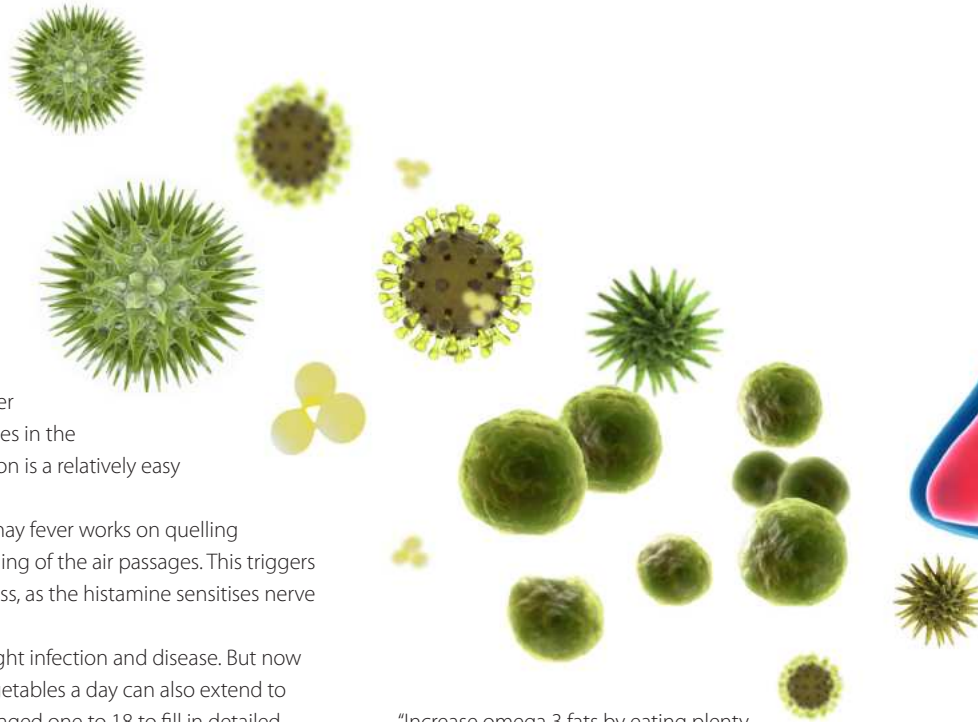
"We know that fruit and vegetables contain antioxidants that can help fight infection and disease. But now it seems that the health and immune boosting benefits of five fruit and vegetables a day can also extend to allergies like hay fever too. In one study, they asked parents of 690 children aged one to 18 to fill in detailed questionnaires about their children's eating habits. The children were tested for the 10 most common allergies and those who ate the most fruit and vegetables had up to 60 per cent lower risk of developing hay fever. Top of the menu were tomatoes, oranges, apples and grapes."

She continued: "Other research has suggested that EPA, an omega 3 fatty acid found in oily fish like mackerel and sardines, as well as nuts and seeds and legumes, can reduce risk of hay fever. Carotenoids are a family of plant pigments, the most popular being beta-carotene. A lack of carotenoids in the diet is thought to promote inflammation in the airways. Good sources of carotenoids include apricots, carrots, pumpkin, sweet potato, spinach, kale, butternut squash, and collard greens."

Holford reminded that an 'anti-allergy' diet should be followed prior to hay fever season starting.

He advised: "Avoid mucus-forming, pro-inflammatory foods, such as dairy and meat. Further reduce your allergic potential by avoiding highly allergenic foods, such as wheat, gluten (rich in wheat, rye and barley) and yeast. Kamut wheat products, however, tend not to produce 'intolerant' reaction seen with modern wheat. Get tested for food intolerances so that you know if there are any other foods you need to avoid.

"Up your consumption of fresh fruits and vegetables. Have at least three servings of fruit, a large mixed salad and three portions of vegetables daily. Choose local, organic produce. Local because there will be less depletion of antioxidant nutrients and organic to avoid pesticide residue, which itself is an allergen.



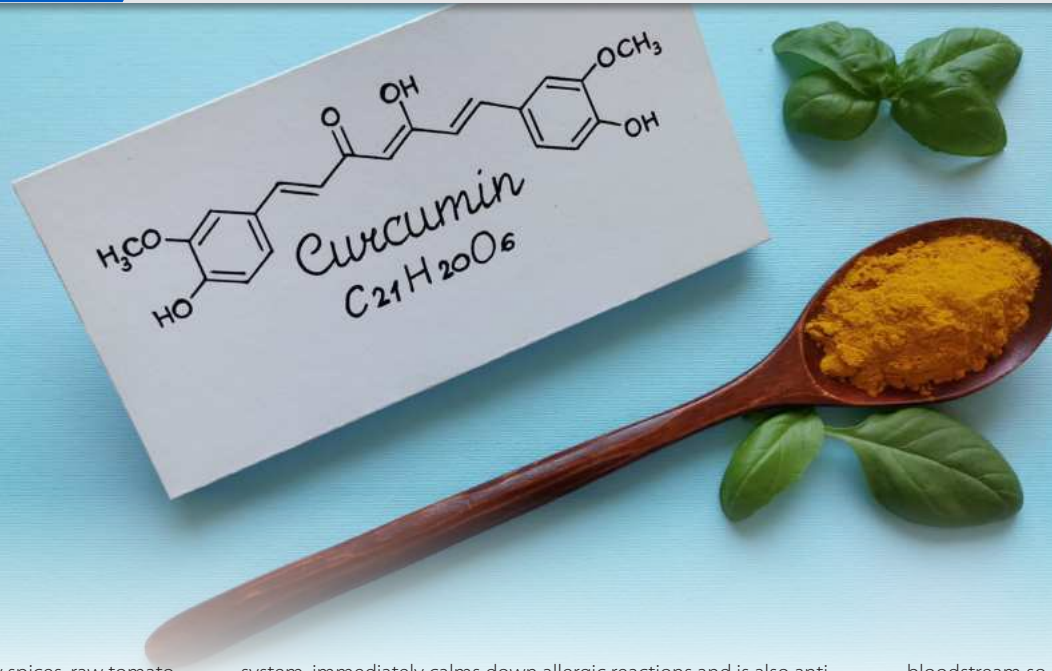
"Increase omega 3 fats by eating plenty of unfried, unbreaded oily fish, such as anchovies, mackerel, sardines, wild or organic salmon, kippers and fresh, not tinned, tuna. Also, add plenty of freshly ground linseeds and pumpkin seeds to cereals, salads and soups every day. Avoid alcohol – it's a major gut disruptor which increases your allergic potential. Drink two litres of pure, filtered water a day."

Crompton continued: "A truly holistic approach to overall health should be taken when preparing for the hay fever season. Foods that are high in histamine, such as smoked meats, walnuts, cashew nuts, dairy and foods containing artificial colourings should be avoided.

"The immune system has to work extra hard when suffering from hay fever in order to fight off the allergens. As this puts it under a great deal of strain, immune system boosters such as echinacea and black elderberry, along with high potency vitamin C and zinc, are recommended. Also, foods rich in quercetin, such as apples, and omega 3, both of which can really help reduce inflammation."

And Dr Glenville pinpointed certain foods to avoid at particular times of the year.

"Certain foods have been found to cross react with pollens, making symptoms worse. For example, if someone is allergic to birch pollen, their hay fever may be made worse by apples. Here are some typical pollen and food combinations that may make symptoms worse:



- **Birch (March to May):** Triggers – celery, curry spices, raw tomato, raw carrot, apples, pears, kiwi.
- **Grasses (May to August):** Triggers – oats, rye, wheat, kiwi, raw tomato.
- **Weed (May to August):** Triggers – raw carrots, curry spices.
- **Mould (September to October):** Triggers – yeast.”

When considering supplementats to recommend, what do the experts advise?

Braye suggested: “Vitamin D deficiency is common worldwide and may be an important environmental risk factor in the development of allergic disease. Epidemiological studies have found an association between low serum vitamin D levels and the incidence of allergic disorders.¹⁶ It exerts its immunomodulatory effects through vitamin D receptors which are found on a variety of immune cells such as B and T cells, dendrites and macrophages, thereby influencing the allergy-related inflammatory response.¹⁷

“When hay fever begins in spring, many people’s reserves of vitamin D may be low following the winter months. Supplementing vitamin D over the winter months is recommended by Public Health England for all individuals in the UK¹⁸ and can help ensure adequate levels come hay fever season.”

And Holford recommended: “Vitamin C is the most important anti-allergy vitamin. It is a powerful promoter of a strong immune

system, immediately calms down allergic reactions and is also anti-inflammatory. Foods that contain vitamin C typically also contain antioxidant bioflavonoids such as hesperidin, rutin and quercetin, and these bioflavonoids may actually help the body absorb vitamin C – another good reason to eat vitamin-C-rich foods.

“Quercetin is another bioflavonoid and is a potent antioxidant that promotes a healthy inflammatory response. Take 500mg three times a day if your symptoms are severe, then drop down to 500mg once a day once your reaction is under control. The best results are achieved by supplementing 250mg twice a day, with some bromelain (a digestive enzyme from pineapple) and vitamin C.”

He also suggested MSM for its ability to reduce symptoms of both the upper respiratory tract (including nasal congestion) and lower respiratory tract (including cough), and glutamine to restore healthy mucous membranes and reduce allergic potential.

He went on: “Curcumin is the natural anti-inflammatory agent found in the spice, turmeric. A placebo-controlled trial gave 241 patients who suffered from allergic rhinitis either placebo or curcumin for two months. ‘Curcumin alleviated nasal symptoms (sneezing and rhinorrhea) and nasal congestion through reduction of nasal airflow resistance’, said the researchers. Also, measures of inflammatory markers (TNFalpha and IL4,6 and 10) reduced significantly. The problem with curcumin is it’s not very absorbable into the

bloodstream so it’s best to choose supplements that have a proven high bioavailability.”

And Dr Glenville also suggested: “Hay fever is associated with inflammation and omega 3 oils are useful because they help to control inflammation in general. They help the body produce anti-inflammatory substances so look for an omega 3 fish oil, with high levels of both EPA (about 700mg) and DHA (about 500mg) per day. As well as taking an omega 3 supplement, I would also suggest a good herbal supplement containing turmeric (which has a long history of use in Ayurvedic medicine for the treatment of inflammatory problems), black pepper (which acts as an anti-inflammatory), olive leaf, ginger, hops and quercetin.”

Wiseberg added: “Quercetin is thought to limit the release of histamine. As well as being found naturally in many foods, it can also be taken in a capsule. Butterbur is a herbal extract available in capsules, believed to have an antihistamine-like effect on hay fever symptoms. A 2005 medical study found that butterbur was as effective as antihistamines in treating hay fever symptoms.

“Nettle is available in capsule form. Nettles are thought to be able to reduce the amount of histamine in the body caused by allergies. The recommended dose is two 300mg capsules daily, to be taken when you experience symptoms. It can also be drunk as an infusion or made into soup.”

GUT FOCUS

Looking in further detail at the role of the gut, there is increasing research about the connection with issues such as hay fever.

"Recent research points to a central role of the microbiome in allergic disease. It is well established that the microbiome can modulate the immune response. In the GI tract, the microbiome has been shown to be important in developing either effector (attack) or tolerant (regulatory) responses to different antigens by balancing the activities of Th1 and Th2 cells.⁹ Bacterial dysbiosis in the gut is associated with chronic inflammatory disorders. Thus, the microbiome can be considered a therapeutic target for treating inflammatory diseases, such as allergic rhinitis," Braye explained.

"For example, it is thought that fermented foods containing lactic acid producing bacteria (LAB) are able to promote deviation away from a pro-allergy phenotype via a mechanism of immunoregulation.¹⁰ Therefore, regularly incorporating traditionally fermented foods such as sauerkraut, kimchi, kefir, live yoghurt, miso and kombucha, which contain live bacteria, in the diet may therefore be beneficial. For example, dietary studies have suggested that long-term consumption of live yogurt can reduce some of the clinical symptoms of allergy in adults with atopic rhinitis or nasal allergies, and can lower serum levels of IgE.¹¹⁻¹³ In addition, a growing body of evidence shows promise for the use of live bacteria supplements in the management of hay fever."

Dr Glenville added: "Previous studies have suggested that having the correct balance of gastrointestinal microbes is the earliest and biggest stimulus for the development of gut immunity. The establishment of such a balance in infancy is thought to reduce the likelihood of having allergic reactions to harmless substances in the environment."

Supporting the gut with probiotics is also to be recommended.

"Research suggests that live bacteria supplements may benefit hay fever sufferers via interactions with the immune system, which modify the natural course of allergic disease.²⁵ A study published at the end of 2019²⁶ showed that live bacteria supplementation for eight weeks with a multi-strain product by individuals with hay fever reduced overall

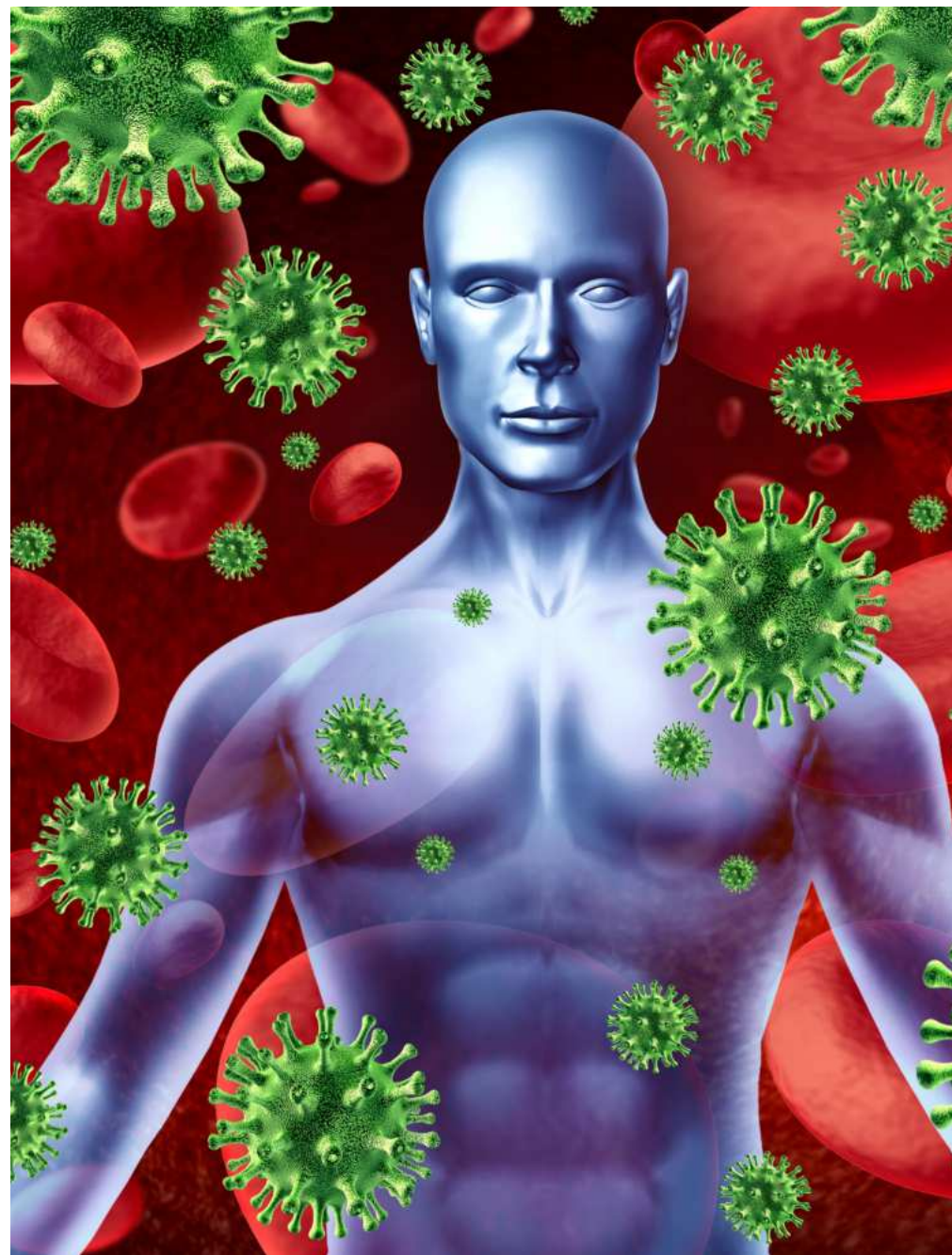
symptom severity, the frequency of medication use and improved quality of life," Braye advised.

"The purported mechanism of action is modulation of the immune system. Interestingly, the study examined changes in systemic and mucosal immune gene expression in individuals and classified them as either responders or non-responders to live bacteria supplements based on improvement in symptoms. It was found that key T-cell immune genes were expressed differently between responders compared to non-responders and differences in biological processes and pathways were evident in the nasal mucosa.

"These findings are similar to a 2017 study¹⁴ that found that supplementing with a multi-strain live bacteria formula containing *Lactobacilli* and *Bifidobacterium* species for eight weeks helped to alleviate hay fever symptoms and improved quality of life during allergy season in hay fever sufferers, potentially due to enhanced T-reg levels.

"A recent 2020 study using a mixture of *Bifidobacterium longum* and *Lactobacillus plantarum* in subjects with perennial allergic rhinitis for four weeks also found that total nasal symptom score and rhinitis control assessment test changes from baseline to week four were significant between the intervention and placebo groups. Allergen-specific IgE levels and serum IL-10 levels were significantly different between the intervention and placebo groups, as were IL-10/IL-4 and IL-10/IL-13 ratios. Live bacteria supplementation also reduced urinary prostaglandin F2α and leukotriene E4 levels²⁷."

Holford added: "A study published in the *American Journal of Clinical Nutrition* gave 173 sufferers, during hay fever season, either two capsules of probiotics providing three billion units of bacteria or identical placebos in this randomised controlled placebo trial. At the end of eight weeks, those taking the probiotics had improved (less symptoms) by 68 per cent, compared to the placebo group, which reported 19 per cent improvement. So, those on probiotics had improved by 49 per cent compared to placebo. So, consider taking a probiotic supplement during hay fever season. This study used a combination of *Lactobacillus* and *Bifidobacteria*."



SUPPORT WITH HOMEOPATHY

While you won't necessarily be qualified in advising around homeopathic products, this is an area really worthwhile bearing in mind as a potential support to a nutritional therapy protocol.

Crompton advised: "As a homeopath, I recommend my patients come for an appointment at least two months before they usually get hay fever symptoms. Often, giving the person's constitutional remedy i.e., a homeopathic remedy that matches the person in their entirety, can really reduce hay fever symptoms and continued constitutional treatment can in many cases stop hay fever returning.

"Homeopathic remedies are prescribed by matching the remedy as closely as possible to the person's symptoms. For example, *allium cepa*, the humble red onion, is one of the most common remedies used based on the homeopathic principal of 'like cures like'. We all know what it's like to chop a strong red onion, streaming, irritated eyes and nose, a common hay fever symptom. When this remedy is given in homeopathic form, it can relieve those symptoms. The following remedies and combinations are the most frequently prescribed during the hay fever season:

■ **Allium cepa, euphrasia and aabadilla 30c:** This combination has a long history of traditional use to relieve the most common hay fever symptoms of sore, irritated and streaming eyes and nose. Sneezing, wheezing and an irritated throat, with or without a tickly cough.

■ **Arundo 30c:** Hay fever begins with itching and burning in the roof of the mouth and eyes, which can spread to the nostrils and can cause pain at the root of the nose, lots of sneezing.

■ **Nux vomica 30c:** The main theme running through this remedy is irritability. The person who may need this remedy is impatient and acutely sensitive to pollen. Stuffed up nose, alternating sides, intense itching of the ears, nose and eyes and the unsatisfied urge to sneeze.

■ **Natrum muriaticum 30c:** The most characteristic symptom of *natrum muriaticum* is that discharges have the consistency of raw egg white. The catarrh is usually white or clear and can be extremely profuse. There is often repeated violent sneezing – especially in the mornings, a loss of smell or taste, and itching in the nose. The eyes can be watery, and the throat can be dry and sore."



PRECAUTIONARY MEASURES

Although not nutrition related, there are also some lifestyle switches that can be recommended to help people minimise their symptoms.

"Stopping the pollen getting into your body is a good strategy for dealing with symptoms. If it's not in your body, you can't react to it! Use an organic drug free allergen barrier balm, which can be applied to the nostrils and bones of the eyes in the morning and throughout the day. It has been proven to trap over a third of pollen particles before they enter the body [2] where they can cause symptoms," Wiseberg commented.

"There are some practical things you can do to reduce your exposure to pollen. Wear wraparound sunglasses when outdoors to prevent pollen particles coming in contact with your eyes. Tie your hair up and wear a hat when outside to prevent pollen particles being caught in your hair. Close windows and doors to prevent pollen blowing into your home. Consider using an air filter/purifier with a HEPA filter to capture the pollen. Vacuum the house regularly (especially beds and fabrics) to remove pollen particles and damp dust surfaces to remove dust and prevent it being dispersed back into the air."

Braye added: "In sensitised individuals, hay fever can be tricky to avoid, particularly at certain times of year. However, there are certain steps sufferers can take to

help limit exposure to potential allergens:¹⁹ Many people see their symptoms improve when avoiding or reducing exposure to house dust mite and pets (as well as pollen).

"Tracking the pollen count in the area and, where possible, avoiding spending lots of time outdoors when it's at its highest is likely to reduce exposure and irritation. Rain washes pollen from the air so counts should be lower on cooler, wet days. Although beware of thunderstorms when pollen counts are high.

"Some experts now believe pollution level forecasts may be just as important as pollen counts for hay fever sufferers going forward so they can make informed decisions and take steps to reduce exposure. Try irrigating the nasal passages using a neti-pot and saline solution, to remove pollen residue and help clear any stuffiness. Pets, specifically dogs and cats, can carry pollen on their fur/hair, which can be transferred after petting/stroking them. Wipe pets' coats with a damp microfibre cloth to remove pollens when they have been out."

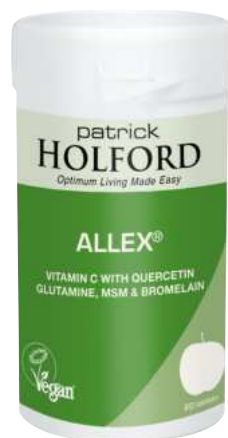
"Although beneficial effects of live bacteria supplementation have been shown, even when commenced at the height of allergy symptoms,¹⁴ it is hypothesised that they may be even more effective when taken for a period prior to hay fever season as a preventative measure¹⁴."



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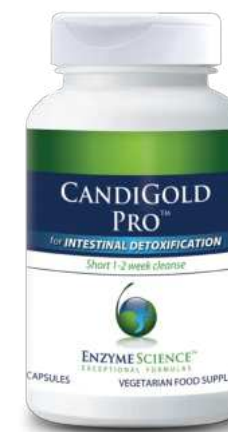
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CBD – the road ahead

Novel Food Regulation is set to change the way the CBD market operates, but what will this mean for those recommending products in clinic? Experts highlight the issues to be aware of.

CBD has been a market in solid growth for a few years, and as such we have seen huge expansion of the category into all manner of products (CBD chocolates anyone?). But there has been huge concern among industry and reputable brands that there are a lot of products now available lacking in quality and testing standards.

And so we arrive in 2021 with the soon to be implemented Novel Foods status being applied to CBD products. This means that any brands wanting to launch a new CBD product can only do so once they have successfully applied for Novel Foods approval. Without it, the products cannot be legally sold.

While reputable brands within the sector have long called for some

kind of regulation, how Novel Foods regulation will change the market remains to be seen. But what is for certain is the sector will evolve, and it's important for your clients to be aware of the standards they need to keep in mind when taking a CBD product.

Paul Hembery is Founder of CBD brand ULU, offered different perspectives.

"In some respects, Novel Foods is a welcome move in the marketplace, particularly when it comes to product integrity and testing. The process is complex and is proving a challenge, particularly with Brexit in the middle. The negative to it is that it risks pushing CBD into a synthetically produced isolate pharmaceutical product, which is a far cry from the origins of the oil that has been used for decades. This will also lose the benefits of full

spectrum CBD that has a varied range of cannabinoids present that create the entourage effect," he commented.

"Of course, a well-controlled isolate can in future be used in foods, so there will be an expected increase in CBD drinks and foodstuffs on the market. The concern is that this will take CBD into a superficial area, where the use of CBD will be for marketing purposes with no tangible support benefit for consumers."

But it seems it could be a market in which product development slows as the demands of the regulation are realised.

Jenny Logan, Product Development and Training Manager at Natures Aid, commented: "We have been preparing and planning for this since the requirement to have a valid Novel Food application by the end of





March this year was announced by the FSA. Our raw material supplier submitted their Novel Food application to the European authorities in April last year and has since submitted to the UK authorities. Once this application has been validated, we will submit our own dossier referencing theirs and showing our own product is safe and stable. We are on track to have everything submitted and fully validated before the deadline set by UK FSA.

"We have three strengths of CBD Oil and a CBD Gel. We are looking at developments, however, it will not be legal to launch any new products before gaining full Novel Food Approvals for CBD."

She continued: "Whilst the first deadline we all must meet is March 31 this year for a validated Novel Food application, this is not the end of the story. Once the application is deemed to be valid, it needs to be fully assessed and checked by the FSA. This could take 12-18 months – even longer if they come back and request further information. The law allows us to keep our original products on the market, with a validated application, however, nobody is legally allowed to launch any new products until after this full authorisation has been granted. So, whilst we have some ideas for NPD which we will be working on in the background, we can launch nothing until our full approval is

gained – which could be up to two years away."

George Kruis, co-founder of FourFive, described the UK as leading the way in regulating CBD, which, he believes, "will lead to greater consumer confidence".

"With the likes of Amazon now listing CBD products, we believe that the many more retailers will follow suit. This will make CBD more accessible. With more regulation in the short-term, we believe there will be a drop in the amount of companies, however, once we are through Novel Foods, we may see many more mainstream companies enter the market.

"We have spent a year putting our Novel Foods dossier together to ensure that we ticked all the boxes when it comes to regulation. We have input dossiers to the FSA and EFSA and are awaiting approval in the coming weeks. As a company that prides itself on product quality and testing, we welcome compliance."

Brands are also adapting to the regulation, with Robert Clark, from Nature's Plus UK and Ireland, commenting: "Due to the pandemic, there is increased focus on products that support stress, anxiety, relaxation and sleep. Therefore, the CBD market is performing well. We have adapted by utilising pure cold pressed filtration methods. Further to this, our oils are fully organic."

LOCKDOWN DEMAND

CBD has continued to prove in demand during the Covid-19 pandemic, but with restrictions in people being able to see their practitioner, it's important to communicate issues around safety and quality when it comes to using CBD.

Logan advised: "Initially, we noticed that sales dropped dramatically. I think everyone was focussed on immune health. However, as the time has gone on, with no real end in sight, the sales have recovered and then grown steadily, especially during this most recent lockdown in the UK. We always said that a lockdown over winter would be harder for people, and people are no longer simply focussed on their immune system, but on all aspects of their health and wellbeing."

Hembery added: "The UK CBD market is evolving, with a greater variety of products and an increase in consumer interest. The pandemic has seen an increase in people looking for support for concerns with sleep and anxiety. That reflects what is known nationally about the impact of Covid."

Kruis went on: "The pandemic has seen health and wellness be at the forefront of people's minds, which has led to positive growth in the CBD market. I think this will be a trend that continues and with more positive research and studies into CBD and its benefits, we hope that the growth will accelerate."

Claudia Le Feuvre, Nutritionist and Co-founder of Mighty Green, also pointed out: "Here at Mighty Green, we have noticed that people are primarily buying CBD drops to help with anxiety and sleep. Our CBD and Arnica Skin Balm is also proving popular to help manage pain. We are partnering with manufacturers who have invested in and submitted their Novel Food applications."

UNDERSTANDING QUALITY ISSUES

The CBD market is huge in terms of the number of products available, and there are some questionable brands operating in the more mainstream market and certainly online that perhaps don't adhere to stringent standards.

But it is really important to be aware of this as there are concerns some CBD can contain heavy metals, among others.

"With the amount of new CBD companies that have entered the market in the last two years, competition has been high. As a result, I believe some companies have rushed to get to market without going through the necessary hurdles that come with making a good quality and highly tested product," Kruis commented.

"In general, the companies that are looking to go through Novel Foods are of good quality and have put the time in to make a product that will pass compliance, however, some of the companies that are trying to cash in on the short term gains are cutting corners in product quality and testing. There are still brands that will not have the correct amount of CBD within the products and still may have varied amounts of THC, which clearly can be a concern. We welcome Novel Foods and believe it will give some much-needed governance to the CBD market."

Hembury continued: "There has been a notable improvement in product quality in the marketplace. Only two years ago, there were many rogue products that either had high levels of THC or pesticide residues. Testing is key, and due to improvements in transparency, the market quality has improved."

And Logan added: "There have been many reports showing that there are products on the market which do not contain the level of CBD they claim to have, as well as tests which have shown that some products contain levels of THC above the legal limit. These issues will continue to exist until after the end of March 2021, when we have been told Trading Standards are expected to crack down on companies who do not have a valid application lodged with UK FSA."

So, is it the case that the market will be 'cleaned up' when Novel Foods regulation comes into force, and how

do the experts think the market will evolve?

"I believe the market will continue to grow. The demand for CBD products has grown consistently since they first came into the market, and once the public can be assured of their safety, via Novel Food applications, then more people will feel confident enough to try them. More companies who have experience in producing high quality food supplements have launched products, and I think this trend will continue, as more high quality products reach the consumer," Logan commented.

"Packaging of these products is now moving away from the images of cannabis leaves, and becoming more professional, providing further reassurance to the consumer."

Hembury continued: "The market will continue to grow, and as more understanding and acceptance of CBD arrives, consumers will be able to have more confidence in using CBD products. There will be a dramatic increase in beverages and food items into the market following Novel introduction. Consumers will want to understand if those products offer them any benefits. There will also be an increase in research and medical collaboration to understand further how CBD can be used as a plant-based alternative to pharmaceutical and often addictive solutions.

"We have many new developments in the pipeline. It will be an exciting year ahead as new solutions are developed. Our objective is to provide support and results for the consumer."

And Le Feuvre suggested: "CBD is consumer driven and many have now come to rely on CBD. As the stigma around CBD falls away, the floodgates will open! The Brightfield Report suggests the CBD market will become larger than the vitamin C and D markets combined."

Clark finished: "I think that the initial high level of interest and focus has subsided somewhat, but CBD has a place in the natural products marketplace. I think that growth will be on cold pressed organic products."



IN CLINIC GUIDANCE

In terms of being a Nutritional Therapist and making sure you are recommending quality products, what do the experts suggest?

"If you are going to use a hemp product, it is important to select one that is organic," Clark commented. "The cannabis plant is quite interesting. It grows very quickly and can be used to clean up contaminated soil, it acts like a sponge and can draw impurities out of the ground. It has even been used at Cherbobyl to absorb nuclear radiation and toxic metals!

"Therefore, always select an organic product. If you don't, you may well be getting things that you don't want, and these can include impurities, heavy metals and pesticide residues!

"The other issue to consider is the range of compounds within the product. Many cheaper products just focus on extracted CBD. However, other phytocannabinoids are also important, CBG and CBN, for example. High levels of terpenes are also beneficial, and these are often lacking in low-cost products."

Le Feuvre, as a practitioner herself, advised: "I'd recommend NTs look at the Certificate of Analysis, particularly noting THC levels, and ensuring there is a broad array of cannabinoids. We have a support centre for practitioners and dosing guidelines and trackers for practitioners to

give to their clients. Accuracy of analytical testing is still an issue in the market. That's why Mighty Green uses PhytoVista Labs, which is considered the gold standard for calibration."

And Logan also pointed out: "Look for a company which is on track for a fully validated Novel Foods application, and one which can provide testing certificates for every batch they produce showing not just the stated levels of CBD, but also compliance with the legal limits on THC.

"Ensure that the product carries the required warnings on pack about not exceeding 70mg CBD per day and speak to your suppliers about their product, any training they can provide and the status of their Novel Food application."

Hembury agreed, adding: "As with any products, supplier integrity is key. If you want to see lab reports, they should be available as required. The market has made significant improvements in recent years and all notable brands place great importance on the quality and integrity of their products. CBD has no known history of creating addiction or overdose risks."

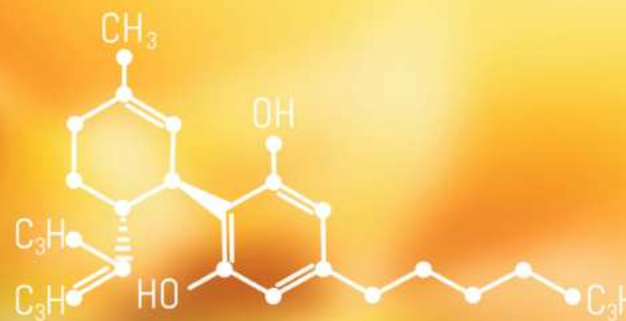
Being a brand that can demonstrate its quality standards is going to be key going forward.

Hembury commented: "We have a medical partnership with the

Harley Street Hospital and will continue with our partners to research the understanding and support mechanisms that CBD Full Spectrum can provide, even if this means moving toward a prescriptive solution. At ULU, we will have products that are aligned with novel as required in addition to our oral healthcare solutions. It should be noted that skincare products and vape oils fall outside of novel requirements."

Clark continued: "Make sure you focus on reputable companies, there were a lot of fly-by-night companies out there that used cheap, low-cost ingredients. One should always check the assay, these should be freely. It is important to check the levels of CBD, CBG, CBC and terpenes. The assay should also show that the product is free from pesticide residues."

Kruis added: "We by law cannot give any medical advice on products because we are a food supplement company. If you are a therapist looking to try CBD, we strongly recommend going with brands that show readily available testing certificates on their websites and can happily talk you through their seed to shelf process. Our products are batch tested by third party labs and our pro sport range is further tested for banned substances through leading testing body BSCG in America. We were the first product in Europe to pass the BSCG certification process."



CBD
cannabidiol

A new day dawns for hemp

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Here are the facts about NaturesPlus oils and what makes them so unique:

THE IMPORTANCE OF ORGANIC

Hemp plants are extremely effective at cleansing soil and absorbing impurities and for this reason, are widely used to prepare soils for the growing of other crops. This unique property means any hemp used from a non-organic source can be saturated with impurities, chemicals and other nasties.

NaturesPlus ensures its Hempceutix pure oils are 100 per cent EU and USDA certified organic throughout the entire process to guarantee a pure, clean and concentrated nutritional activity.

WHY COLD-PRESSED?

NaturesPlus Hempceutix pure oils are produced using a unique patent-pending, cold-pressed method, which allows for an exceptionally high level of phytonutrients, synergistic terpenes and phyto-cannabinoids without the use of synthetic solvents, chemicals or alcohols, banned in organic products.

CLEAR TESTING

NaturesPlus employs a high degree of testing, which helps confirm quality and nutrient concentrations.

The comprehensive lab assays show that the company not only has over 100 per cent of the label claim of active cannabinoids (including CBD), but also a true full spectrum of synergistic phyto-cannabinoids and terpenes. Its testing confirms the absence of pesticides and

herbicides to the limits of EU's stringent organic certification standards.

WHAT DOES FULL SPECTRUM MEAN?

The NaturesPlus lab assays show that Hempceutix pure oils contain nutritionally effective CBD. However, the activity of hemp depends on far more than CBD content alone.

Nature provides many other terpenes and phyto-cannabinoids that are vital for optimal bioavailability and nutritional activity. This is known as the 'entourage effect', and it is Mother Nature's way of delivering powerful nutrition to the body's endocannabinoid system.

But why is full spectrum beneficial? Remember that the whole is greater than the sum of its parts. Hempceutix pure oils provide much more than just CBD. They provide synergistic hemp phyto-cannabinoids and terpenes, many of which have been shown to enhance CBD nutrition in ways that should not be overlooked:

PHYTOCANNABINOIDS:

- CBC
- CBG
- CBN

TERPENES:

- Mercene
- Beta-caryophyllene
- Humulene

Hempceutix pure oils are vegan and allergen free. They are perfect for anybody and may even be given to some pets†. Available in 50ml bottles in three strengths, they have calibrated droppers for precision dosage.

In a base of organic coconut and hemp seed oils, Hempceutix pure oils have a clean, peppery taste and don't need to be masked with flavourings. All Hempceutix pure oils are independent third party tested so you can rest assured you and your clients are getting exactly what it says on the bottle!

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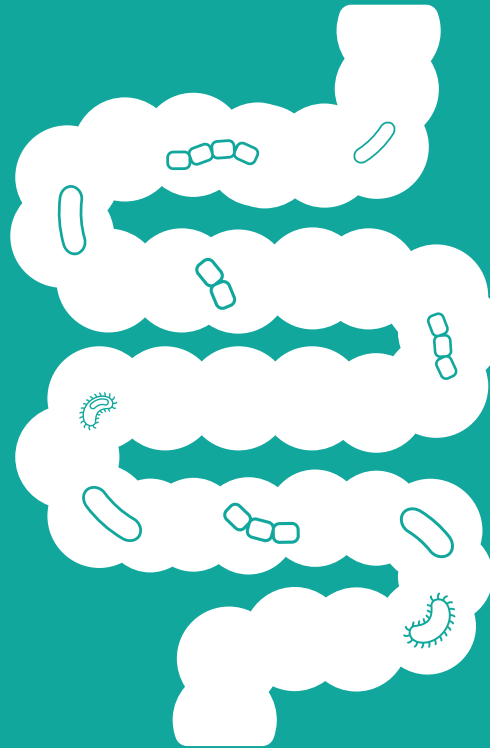
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Antioxidant advice

*Nutrition I-Mag brings
you an expert guide to the
importance of antioxidants
and their correct
application in clinic.*



We need antioxidants for so many functions in the body, not to mention for their ability to protect our cells from free radical damage. Yet when we consider the effects modern dietary habits have on our antioxidant levels, it could be safely considered that many people are simply not getting enough.

To effectively recommend a healthy dietary protocol for a client, it's critical to first understand the mechanisms of an antioxidant, the factors that affect our intake, and how to increase our levels.

Justine Stenger is a certified functional medicine health coach, certified therapeutic chef, and a qualified Bredesen practitioner. She is a Nutritional Consultant to BodyBio and explained: "An antioxidant is a compound that inhibits oxidation. Oxidation is the loss of an electron, a chemical reaction that creates free radicals. High levels of oxidation create free radicals that damage our cells, leading to premature ageing and disease. Antioxidants are abundant in plant foods and they can protect your cells from free radicals by donating an electron. Examples of antioxidants include vitamin C, vitamin E, selenium, carotenoids, beta carotene, lutein, and zeaxanthin.

Alice Bradshaw, Nutritional Therapist and Head of Nutrition Education and Information at Terranova Nutrition, continued: "Antioxidants are generally defined as compounds that are able to reduce and/or neutralise radicals.

Free radicals are unstable molecules that damage DNA and cells; they are thought to contribute to the ageing process and many degenerative health conditions. Certain nutrients (including vitamins A, C and E and the minerals, copper, zinc, and selenium) have antioxidant properties alongside their other vital roles and many botanical compounds exert antioxidant properties."

Nutrition expert and author, Patrick Holford, also pointed out: "Oxygen is chemically reactive and highly dangerous. In normal biochemical reactions, oxygen can become unstable and capable of 'oxidising' neighbouring molecules, known as free oxidising radicals. Chemicals capable of disarming free radicals are called antioxidants."

So, we know what they are for, but what direct effect can be seen in a person's health status if they have fundamentally too low levels?

"The body produces free radicals through normal metabolic processes. Exposure to chemicals, tobacco, air pollution, alcohol, high blood sugar levels, consuming rancid fatty acids, and radiation all create oxidative damage and deplete antioxidant levels," Stenger commented.

"Antioxidants protect our cells from free radicals. Antioxidants neutralise our cells from oxidation and protect us from the development of chronic and degenerative ailments, such as cancer, arthritis, ageing, autoimmune disorders, cardiovascular and neurodegenerative diseases."





LACKING LEVELS

Western diets are certainly lacking in some key nutrients, something that may have been exacerbated during the Covid-19 lockdown and the changes in diets that we have seen.

"Many factors deplete antioxidant levels primarily by stimulating free radical production. Among the most common are smoking, alcohol consumption, exposure to household chemicals, fried and refined foods and pesticides," Bradshaw commented. "Although good quality meat can be a source of antioxidant nutrients and compounds, antioxidants are predominately found in foods of plant origin, meaning that individuals with a low intake of fruit, vegetables, nuts and seeds are unlikely to be consuming adequate amounts of antioxidants."

Holford added that many people are lacking in antioxidants.

"In the modern world, we are exposed to many free radical forming substances. It is therefore suggested that we include some antioxidants in our diet to combat this," he commented.

"Factors that increase the production of free radicals in the body can be internal, such as inflammation or external, for example, pollution, UV exposure, and cigarette smoke. This will deplete the body of antioxidants as they need to be utilised by the body to disarm the free radicals."

Stenger continued: "The standard North American diet is abundant in processed, engineered, brown and white dead foods that provide very low levels of antioxidants. Poor farming practices have also negatively impacted the antioxidant levels in plant foods. Wild plants and organically grown plant foods contain the highest levels of antioxidants. Eating a diet rich in colourful, wild, and organically grown plant foods will significantly improve antioxidant status."

"Fruits and vegetables that are dense and rich in colour are highest in antioxidants. Some high antioxidant foods include berries, dark leafy greens, sumac, artichokes, dark chocolate, red cabbage, black beans, and pomegranate. Researchers have found that wild blueberries have more than double the amount of antioxidants than farmed blueberries. Wild fruits and vegetables in general have been shown to be higher in antioxidants."

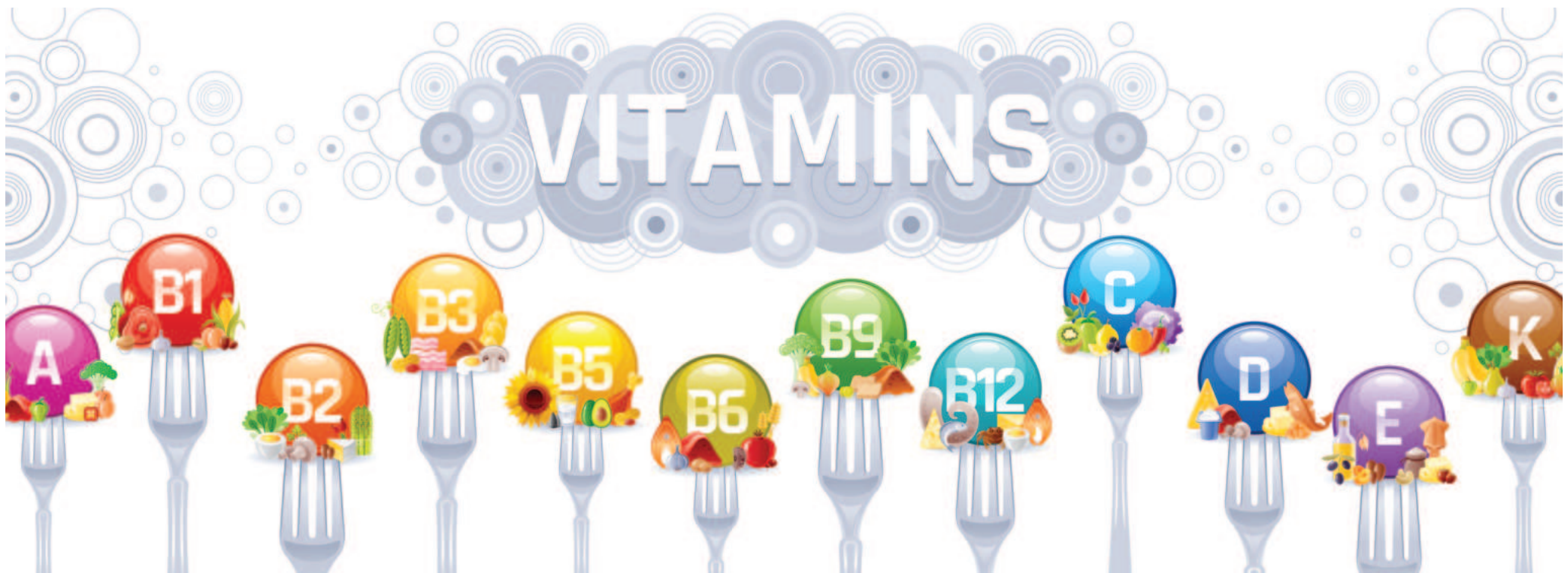
"Fruits and vegetables that are dense have also been shown to be higher in antioxidants. The heavier the vegetable, the better. My general recommendation is to eat six to nine cups of a rainbow of vegetables and fruits to ensure adequate antioxidant intake. If you are interested in learning more about antioxidants, a great book to read is *Eating On The Wild Side*, by Jo Robinson."

And looking in greater detail, what specifically do we need in terms of antioxidants?

"The main players are vitamins A, C and E, plus beta carotene, the precursor of vitamin A that is found in fruit and vegetables. The best sources of antioxidants are plant-based foods, especially fruits and vegetables. Foods that are particularly high in antioxidants are often referred to as a superfood or functional food," Holford advised.

"Every year, more and more antioxidants are found in nature, including substances in berries, grapes, tomatoes and broccoli and in herbs such as turmeric and ginkgo biloba. The best fruits are berries and cherries. Eating a variety of these foods everyday will help support the body."





SUPPLEMENTARY SUPPORT

With the best will in the world, you will know as Nutritional Therapists that the common diet is lacking in antioxidants. Which raises the question as to whether a specific antioxidant supplement should be recommended.

Stenger advised: "Supplementing with antioxidants has been shown to prevent damage to cells caused by free radicals. However, some studies have shown that supplementing with excessive amounts of antioxidants could cause more harm than good. Intake of antioxidants after exercise could potentially down regulate endogenous antioxidant production."

Bradshaw went on: "To benefit from antioxidants, a nutrient-rich and varied diet is essential. In other words, a diverse range of antioxidant nutrients are required by the body. Each antioxidant has a limit to its effect and no one single compound in isolation is a broad-spectrum antioxidant. The most versatile antioxidants are fat and water-soluble (such as lipoic acid, which also recycles vitamin C and E back into their active forms).

"Supplemental antioxidants have been the subject of controversy for some time. This is mainly due to poorly designed studies, a misunderstanding of interpretation of these studies and the assumption

that antioxidant supplements are a replacement for dietary antioxidants. This is, of course, not the case and numerous studies exist to show the benefits of antioxidants when taken in supplemental form. There are many instances when a person may need supplemental support, such as when managing a health condition or an increased exposure to toxins or free radical producing factors."

She continued: "The careful use of antioxidant supplements is certainly something that has been shown to be greatly beneficial for many individuals. Supplements should be carefully designed to contain a balance of nutrients. Additionally, consumers should be aware of appropriate doses. When choosing botanical compounds for antioxidant support, consumers should also consider the methods used to prepare the raw material. Fresh freeze drying offers the most protective and beneficial way to retain the freshness and original composition of any botanical compound, without the damage caused by methods such as air drying or solvent extraction."

And Holford continued: "Given the unquestionable value of increasing

your antioxidant status, it is wise to make sure that your daily supplement programme contains significant quantities of antioxidants, especially if you are middle-aged or older, live in a polluted city or suffer any other unavoidable exposure to free radicals. The easiest way to do this is take a comprehensive antioxidant supplement. Formulas containing a combination of the following nutrients: vitamin A, beta carotene, vitamin E, vitamin C, zinc, selenium, glutathione and cysteine, plus plant-based antioxidants like bilberry.

"There are reports that state certain antioxidants taken in high doses can cause more harm than good. My personal advice is to start by eating a diet high in antioxidants and to keep taking an optimum nutrition-style multivitamin. Then, if you are getting on in years and want to stay healthy, or if you are suffering from a condition, for example, heart disease, where the evidence shows that reducing oxidation may help, then also supplement an all-round antioxidant supplement containing CoQ10, lipoic acid, glutathione or N-acetyl cysteine, resveratrol, anthocyanidins, vitamins A, C, E and beta-carotene, plus zinc and selenium."

EXPERT ADVICE

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



I see many clients with issues around stress, especially in the last few months – what are the most important factors to consider in terms of the effect this has on their overall health and their additional nutrient needs?

KATHERINE PARDO ADVISED: Stress is something we are all far too familiar with at the moment. Although the human body is generally equipped to deal with short-term exposure to stress, long-term stress can take its toll on us, both physically and mentally. In fact, it's difficult to over-emphasise the negative health effects of chronic stress; it's a major risk factor for many of the chronic illnesses we are faced with today, from depression, anxiety and heart disease, to IBS, type 2 diabetes, chronic fatigue and more. And yet it's impossible to avoid, especially right now! So, how do we achieve balance?

I find the notion of the 'stress bank account' a useful way of thinking about it. In order to have a healthy 'stress bank balance' you can make regular withdrawals, but you must make regular deposits too, or you will soon be in debt. The deposits help to bring the stress response back into balance and calm things down; they build resilience and switch off the stress response, rather than letting it rage continuously.

Stress withdrawals, things that draw on your body's natural reserves that protect against the damaging effects of stress, include things like processed or junk food, refined sugar, caffeine, alcohol, smoking, poor sleep, chronic illness/pain, relationship or financial difficulties, over-exercising, over-work and over-use of screens and devices.

Stress deposits, things that nourish the body's natural

reserves and increase resilience, include eating healthy, organic whole food, regular meals, time spent in nature, healthy sleep, supplementing with key nutrients, relaxation exercises, mindfulness, reading a book or watching a film, taking a bath, movement and exercise, regular time off work, and connecting with family and friends. These are all forms of self-care – habits and rituals that will help to protect us in the face of ongoing stress.

One of the most important nutrients I would consider supplementing with in order to top up the adrenal bank account would be magnesium. Prolonged stress drains the body's reserves of magnesium and it's very difficult to get adequate amounts, even from a healthy diet. Numerous studies back up the importance of magnesium for a healthy stress response, as well as its anti-depressant and anti-anxiety effects. Other key nutrients to consider would be B vitamins, zinc and vitamin C, all of which have strong evidence for use during stress. To support healthy stress hormone balance, I would also consider using adaptogenic herbs such as rhodiola, ashwagandha, ginseng and cordyceps. And to help alleviate the feelings of anxiety and nervousness, I would recommend using milk protein hydrolysate, one of the calming components in milk, as well as the amino acid, L-theanine, which is a naturally-occurring amino acid found in tea that helps to induce feelings of alert calmness without any unpleasant side effects.



ABOUT THE EXPERT

Katherine Pardo BSc (Hons), Dip ION is Head of Nutrition & Education at Nutri Advanced. After beginning her career as a writer and editor for various healthcare publications, Katherine trained as a Nutritional Therapist, graduating from London's Institute for Optimum Nutrition in 2001. She went on to practice as a Nutritional Therapist before becoming Nutrition Team Manager at Nutri Advanced, where she heads the team of nutritionists, writers and researchers who together develop Nutri Advanced's range of innovative products, programmes and educational resources. With nearly 20 years' experience in the industry, Katherine is a regular contributor to publications such as *Nutrition I-Mag*, *True Health* and *Natural Pharmacy Business* magazines.



What considerations need to be made around gut healing, and what are the most well-researched supplements to recommend as part of a client protocol?

DR MARILYN GLENVILLE SUGGESTED:

A person's diet has a profound effect on the health of the gut. For a healthy gut, a person needs a diverse ecosystem of bacteria and these will flourish on a wide variety of food.

Unrefined foods are important as beneficial bacteria will thrive on the fibre. Fermented foods can be useful such as kefir and sauerkraut in order to promote the growth of these important microbes.

Foods that should be avoided are refined foods, where there is a lack of natural fibre which should be contained within the foods. Other culprits can include fizzy drinks, too much alcohol, too much coffee or tea, spicy and high fat foods, like chocolate and drinking lots of liquids with meals, which dilutes the digestive fluids and makes it harder for food to be digested.

Probiotics are important and digestive enzymes can also be helpful for improving absorption. There are also some herbs which can be particularly useful for soothing the digestive system:

■ **Ginger:** Ginger has a number of digestive benefits in that it can help to prevent indigestion, gas and bloating. Ginger also acts as an anti-spasmodic and it relaxes and soothes the intestinal tract. It is also known to reduce anxiety, which, for some people, can worsen gastrointestinal symptoms.

■ **Slippery elm:** Slippery elm helps calm and soothe the digestive tract by coating the lining of the intestines to reduce irritation and to calm the inflamed mucous membranes in the intestines. Slippery elm has this calming and soothing effect because it contains mucilage, which becomes a

gel when combined with water.

■ **Marshmallow:** Like slippery elm, it contains mucilage, which can reduce irritation in the digestive system and can form a protective coating over irritated and inflamed intestinal mucosal membranes.

■ **Licorice:** Licorice helps to heal the irritated surfaces of the intestines and also has an anti-spasmodic effect so lessening abdominal cramps.

■ **Chamomile:** Chamomile can reduce spasms and control 'nervous' reactions in the gut, making it less sensitive to food and other triggers. It also has an anti-inflammatory effect and can improve peristalsis (the muscular movement of the stool through your intestines).

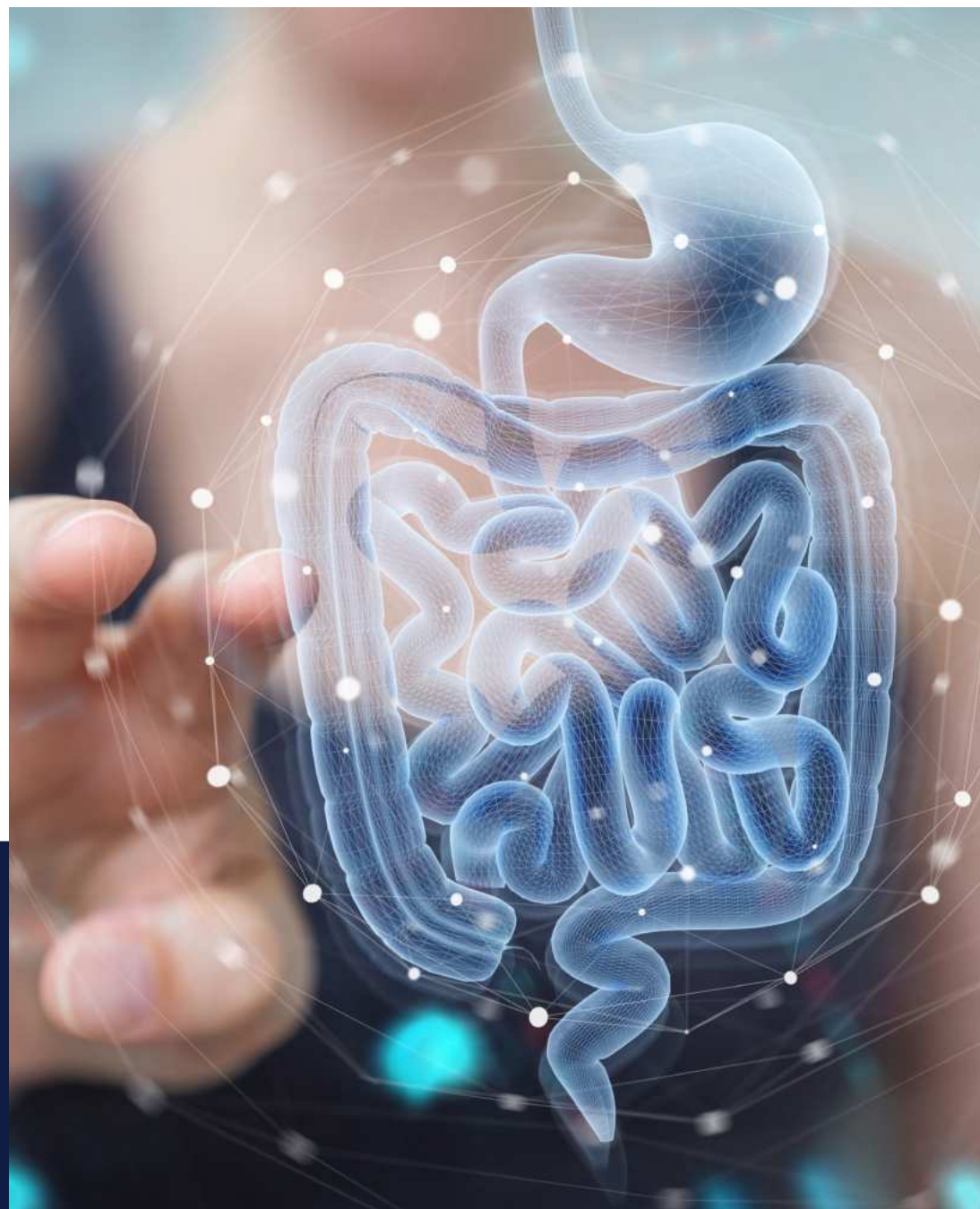
■ **Fennel:** Helps prevent and relieve flatulence, as well as soothing the digestive tract and reducing cramps and spasms.

■ **Peppermint:** This herb has had the most research and it can help eliminate or reduce spasms, bloating, trapped wind, constipation and diarrhoea.

ABOUT THE EXPERT



Dr Marilyn Glenville PhD is one of the UK's leading nutritionists. She is the author of 16 internationally bestselling books, including *The Natural Health Bible for Women*. Dr Glenville runs clinics in Harley Street, London, Kent and Ireland by phone and Skype.





When assessing female clients with recurring UTIs, what are the key considerations to make in terms of nutrients of importance?

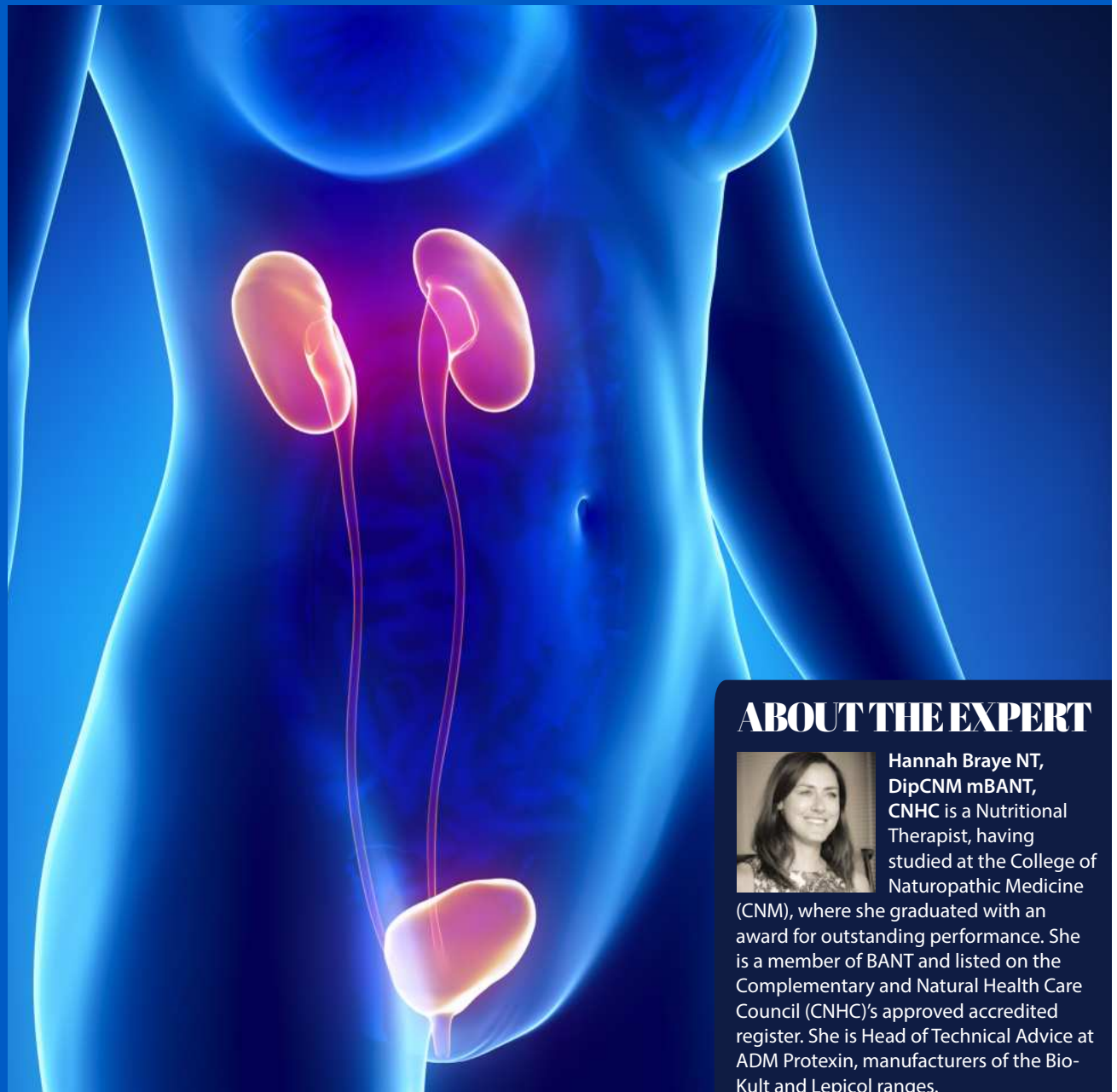
HANNAH BRAYE

EXPLAINED: Urinary Tract Infections (UTIs) are infections of any part of the urinary tract causing inflammation. They occur due to a combination of the pathogenicity of the organism (most commonly *E. Coli*) and the susceptibility of the host (i.e., lowered immune function). Dietary intervention to support the immune system is, therefore, recommended.

Poor nutrition associated with a deficiency of protein, vitamins and minerals has been shown to cause a decline in immune functions and results in susceptibility to infection.¹ Studies have also shown that those suffering from UTIs tend to consume less fresh fruit and unsweetened berry juices than those without UTIs.² Increasing fruit and vegetable intake and ensuring good quality protein is, therefore, advisable to ensure adequate amounts of important immune supportive nutrients, such as vitamin C, vitamin A and zinc. Proanthocyanidins (specifically those with type A linkages) from cranberries have been shown to help block bacterial adhesion to uroepithelial cells,³ but may be more easily consumed at

therapeutic levels as a supplement, rather than in dietary form. Vitamin D is another important nutrient to consider for immune function. Supplementation is recommended for all individuals in the UK during the winter months to ensure adequate levels.

The composition of our gut and vaginal microflora also plays a pivotal role in modulating the immune system and protecting against pathogens. Frequent consumption of fermented milk products containing probiotic *Lactobacilli* species have been shown to protect against UTI recurrences,² and probiotics have been shown to restore the gut and vaginal microflora.⁴ Supporting the microbiome through a good quality probiotic supplement may therefore be of benefit. Certain *Lactobacilli* species have been found to be of most benefit.⁵ For example, *Lactobacillus acidophilus* PXN 35 and *Lactobacillus plantarum* PXN 47 have been shown in vitro to significantly inhibit *E.coli* and *E.faecalis* growth,⁶ and in human clinical trials, to reduce the incidence and severity of UTIs, when taken on an ongoing preventative basis.⁷



ABOUT THE EXPERT



Hannah Braye NT, DipCNM mBANT, CNHC is a Nutritional Therapist, having studied at the College of Naturopathic Medicine (CNM), where she graduated with an award for outstanding performance. She is a member of BANT and listed on the Complementary and Natural Health Care Council (CNHC)'s approved accredited register. She is Head of Technical Advice at ADM Protexin, manufacturers of the Bio-Kult and Lepicol ranges.

The benefits of probiotics – weight loss and beyond

Nutritional Therapist, Adrienne Benjamin, discusses the latest research confirming the link between probiotic supplements and managing expanding waistlines.

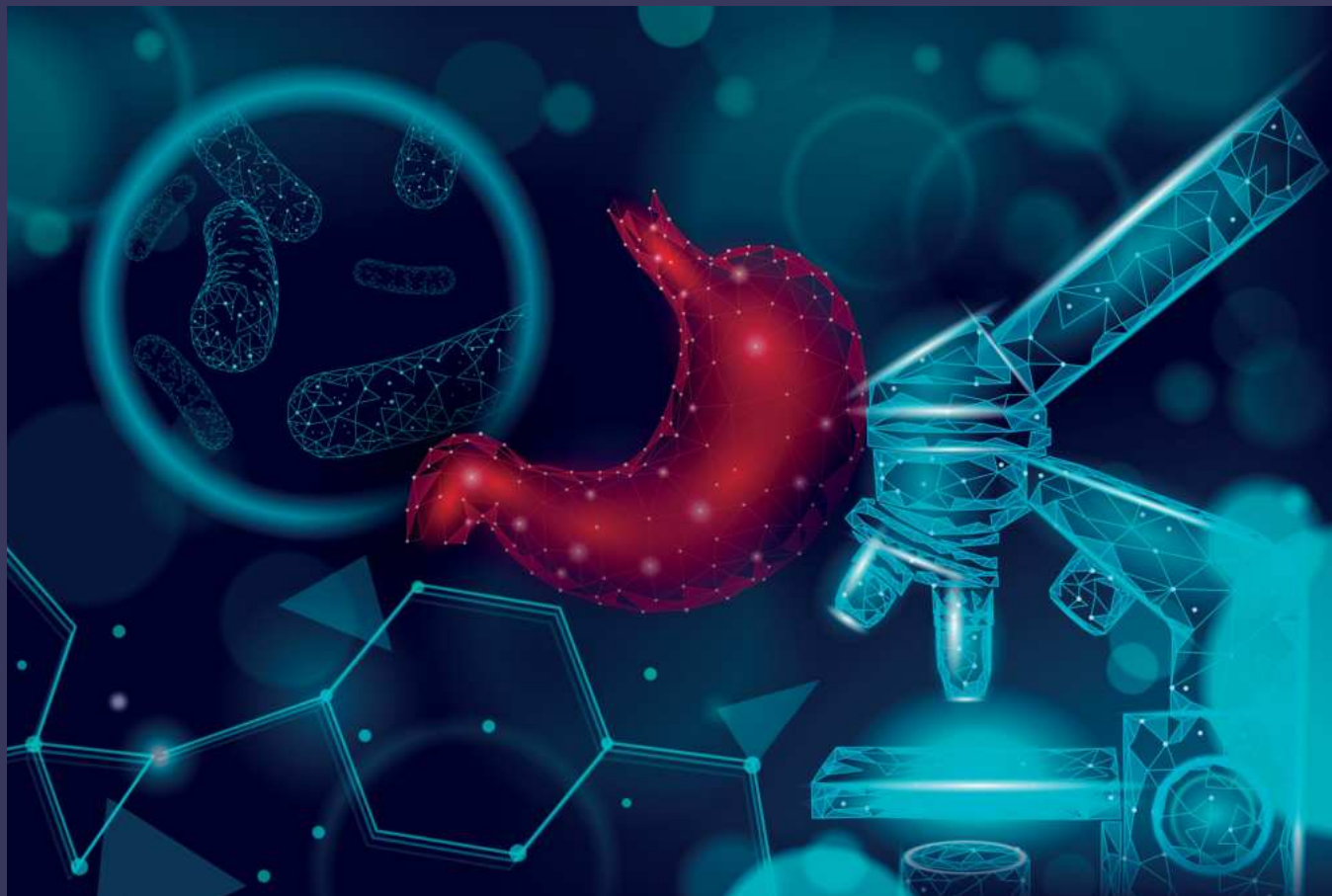
The link between dysbiosis and obesity is well-recognised and almost 40 per cent of the adults in the world are considered to be overweight, with most continuing to gain weight each year.¹ In the UK, the figure is over 50 per cent and the costs to individual quality of life and to the healthcare system are substantial.²

Further, when people do lose weight, maintaining that weight presents a further challenge and more than half of the weight lost by an individual is regained within two years and more than three-quarters within five years.³

This situation has led the World Health Organization (WHO) to include overweight and obesity as one of its main health focuses for the 21st century.

The strategies shown to work for weight management include regular exercise, measuring macronutrient intake and making lifestyle changes – but many people are not willing to make these changes. As a result, there is an increasing focus on investigation of other approaches to weight loss and weight management and there is growing evidence to support the use of probiotic bacteria to aid weight loss and reduce cholesterol levels.





THE RESEARCH

Two key recent meta-analyses on the effects of probiotics in weight management showed a mean weight loss of 0.6kg – between them, these two reviews included 40 studies with a duration of between three and 24 weeks and the average sample size was 58 people.^{4,5}

In this context, Cultech began a research project to create a probiotic consortium capable of imposing beneficial metabolic effects in humans. The primary aim was to improve understanding of how we can support metabolic health and help to reduce overweight and obesity by targeting the human microbiome. This research project is the largest study to date to investigate the impact of probiotic bacteria on weight loss. It clearly indicates the potential use of beneficial bacteria to target the human microbiome and help to support weight loss and impact the worldwide overweight and obesity crisis.

During an initial screening phase, the potential function of the proprietary probiotic bacteria was predicted

according to their genetic make-up, and those most likely to impart beneficial effects were combined to create the Lab4P consortium – a blend of five bacteria strains containing *Lactobacillus acidophilus* CUL60, *Lactobacillus acidophilus* CUL21, *Bifidobacterium bifidum* CUL20, *Bifidobacterium animalis subsp. lactis* CUL34 and *Lactobacillus plantarum* CUL66.

DNA was extracted from these proprietary probiotic strains and sequenced for the construction of complete genomic sequences. In silico genome analysis using RAST, software was used to identify genes encoding potentially beneficial proteins such as bile salt hydrolases (BSH) that are capable of modifying bile acids and associated with reduced lipid absorption in the gut. Gene activity was subsequently confirmed by exposing the bacteria to physiologically relevant levels of bile acid and monitoring the generation of modified bile acids.⁶

Bacteria were selected for further testing in experimental models of the human intestine on the basis of genetic composition and activity. Firstly, bacteria were applied to a Caco-2 tissue-culture model of human intestinal epithelial cells and were shown to inhibit the uptake and transport of exogenous radiolabelled cholesterol.⁷

Secondly, a consortium of these bacteria (Lab4P) was administered to experimental mice receiving a high fat diet (to induce obesity) and significant prevention of weight gain and reductions in plasma cholesterol levels were observed after just two weeks.⁸

Finally, assessment of Lab4P in experimental models of the human intestine indicated the potential to regulate cholesterol transport/metabolism and obesity and these data provided sufficient evidence of efficacy to progress the Lab4P probiotic consortium to the human testing phase.

The impact of Lab4P has now been assessed in two human feeding studies and the first of two Lab4P human studies was performed in 220 obese and overweight healthy volunteers, who were instructed to take a single capsule per day (containing either 50bn live bacteria or an identical placebo) while continuing their normal free-living lifestyle.

After six months, anthropometric indices such as body weight and waist circumference were compared to measurements taken at the start of the trial and the probiotic group had experienced a significantly weight loss (≈3lb) and had thinner waists (≈1cm) than participants receiving the placebo. Subgroup analysis indicated that overweight participants lost more weight than the obese and older participants lost more weight than younger subjects. Blood levels of harmful small dense LDL-cholesterol were also significantly reduced.



CONCLUSION

In summary, this study (the largest of its kind to date) showed that six-months' daily supplementation with Lab4P was able to reduce bodyweight, waist circumference and blood cholesterol levels in overweight and obese individuals in the absence of any enforced dietary or lifestyle restrictions.⁹

A follow-up double-blind placebo-controlled study involving 70 free-living overweight subjects aged 45 or over confirmed these initial findings. This study was done over nine months and those participants taking the Lab4P probiotics daily for this period experienced an average weight loss of 7lbs and an average one inch reduction in waist and hip circumference.¹⁰

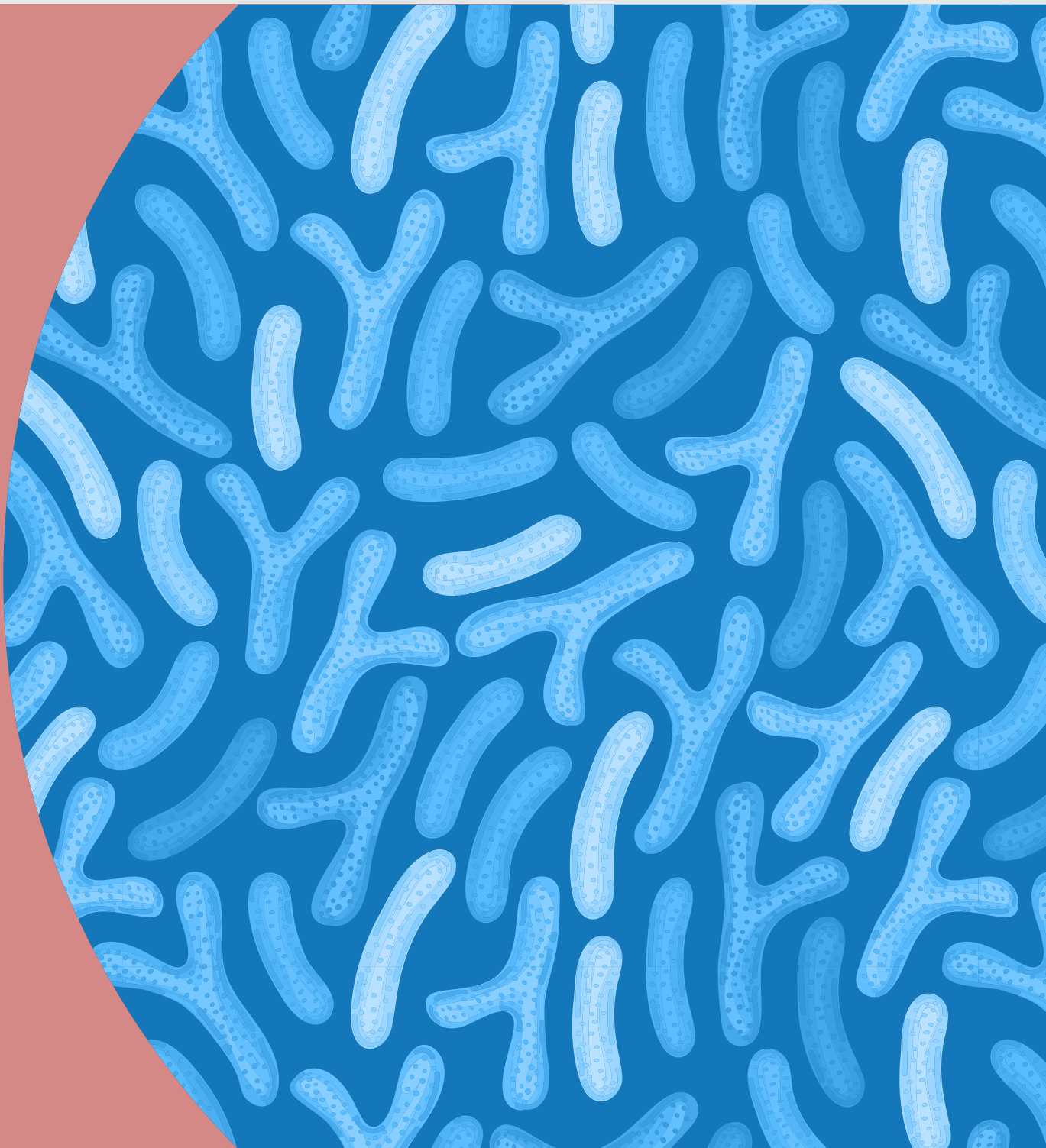
A three per cent reduction in body weight over a six-12 month period is regarded as substantial, while clinical guidelines state that five per cent weight loss is considered to lead to significant health improvements – and this second clinical study found that 40 per cent of the Lab4P group reached the five per cent annual weight loss.

Professor Julian Marchesi, from the Department of Metabolism, Digestion and Reproduction, Faculty of Medicine at Imperial College London, and one of the authors of both clinical studies, commented: "In an era when it seems the majority of people are battling their weight in one way or another, the news that taking a daily probiotic can help achieve lasting weight loss, as well as providing all other benefits of good bacteria, whilst requiring no other changes to lifestyle, will be welcome news to many people. The Lab4P consortium is particularly beneficial for those who want to lose weight over a longer period of time, in a healthy and sustained way, without having to make any changes to either dietary intake or exercise patterns."

This is one of the first successful repeat probiotic weight loss studies to confirm clear reductions in body weight and waist circumference in overweight adults, and continued research into the Lab4P consortium is indicating a potential range of metabolic benefits.



Adrienne Benjamin is a Registered Nutritionist and Marketing Manager at ProVen Probiotics and is committed to understanding (and sharing) the ways in which the gut and the microbiome support health.



The Hifas da Terra difference



In a year that has seen unprecedented demand for nutritional supplements, Hifas da Terra has continued to innovate with an impressive R&D programme. Rachel Symonds found out more about the plans ahead for the mycotherapy specialist.

One of the clear trends that has emerged during the course of the last year as the Coronavirus pandemic has taken hold is the heightened awareness around caring for our own health. As a consequence, we have seen increased demand for nutritional supplements.

This has certainly been the case at Hifas da Terra (HdT), a business that specialises in mycotherapy products, but while others have focused solely on supply, this company has continued to develop new products to meet the growing and changing needs of practitioners and their clients, not to mention demonstrate its commitment to research.

Hamida Abdi MSc, Marketing Consultant at Hifas da Terra, commented: "The pandemic has had a devastating effect on many industries around the world, not only physically but also our emotional and psychological wellbeing. Our customer base has remained strong and loyal. The demand for our products has remained the

same, and we are really grateful for that. We have showed our gratitude by offering free education, webinars, training sessions, discounts and much more.

"2021 is a very exciting year for Hifas da Terra – we are developing and planning new product launches as we speak."

A snapshot includes reformulated products: the BioLine was redesigned and Bio-Defense was reformulated. Askortabo K and MicoFive+Chaga have also been reformulated. New products include the new MicoOnco Soap, designed to use as a daily therapeutic soap with reishi, calendula and lemon and a base of coconut oil and is used in Hifas' Onco Care protocols to prepare the skin for MicoRT and MicoQT.

"MicoCorio PSK, our latest launch introduced to the UK market, is the first mushroom product with trademarked, guaranteed levels of PSK. Mico Corio PSK Extract contains vitamin B12 that contributes to the normal functioning of the immune system," Hamida revealed.



EXPANDING R&D

For Hifas da Terra, continuing its commitment to developing new products, and investing in research to demonstrate their efficacy, is a key focus.

"Hifas da Terra prides itself on being a biotechnology company focused on research and innovation specialising in the development of nutraceuticals from certified organic medicinal mushrooms. HdT has an active R&D department, and is constantly researching mycotherapy applied to human health, animal health and regeneration of the environment, developing new and improved products, and collaborating with professional institutions to undertake clinical trials to better understand and validate the therapeutic use of medicinal mushrooms, as well as developing new ways to support and educate practitioners to more confidently recommend HdT's extensive range of products," Hamida advised.

"Here are some highlights:

■ **Research and clinical trials in development/ongoing:** The Nursing Home Study, IMMA English mushroom database and Neurofood project.

■ **The following research and clinical trials have been completed:** Research on maitake and coriolus in colon cancer ('In Vitro Anti-proliferative and Anti-invasive Effects of Polysaccharide-rich Extracts from *Trametes versicolor* and *Grifola frondosa* in Colon Cancer Cells'); cordyceps trial in cyclists; and reishi stress, anxiety and insomnia study. Also, CRC-Folfox, a pilot study for the evaluation of the benefits of formulas with medicinal mushrooms in patients with colorectal cancer who present peripheral neuropathies due to chemotherapy treatment. Lastly, MicoArthro project, a pilot evaluation of the efficacy, safety and tolerability of a mycotherapy protocol for osteoarthritis of the knee."

This focus on R&D has seen HdT develop close

working relationships with nutritional therapists and this is an important connection for the business.

Hamida commented: "Practitioners have played a crucial role in the development of Hifas da Terra as a company. They have been our voices and understood that our product profoundly changes people's lives. We are grateful for their continuous loyalty and support that has been extended to us for the past few years.

"HdT offers a range of support for practitioners. The standout is the health@hifasdaterra.com 'health inbox', where practitioners can get free therapeutic advice, protocols, and mycotherapy recommendations by email from HdT's in-house team of mycotherapy specialist advisors and biomedical department.

"Free professional registration on our website provides access to a number of different educational resources, including a cache of professional webinars on different health topics and mycotherapy, with answers to participant questions included. There is also a practitioner discount scheme and commission system so practitioners can set up a user code, which allows their clients to buy directly from our website while the practitioner receives a 20-25 per cent commission on their purchases."

And as part of this, training is an important part of HdT's work.

"HdT provides regular free webinars on specific health complaints and aspects of mycotherapy, such as application for Covid-19 prevention and support, presented either by professionals in the field being presented or the HdT team. We have also recently introduced live group trainings for practitioners on how to use mycotherapy in their practice, both in general and specifically for integrative oncology," Hamida added.

PRODUCT EXCELLENCE

Among the range at Hifas da Terra is Mico Rei, rich in beta-glucans, vitamins and minerals, Mico Leo, the mushroom for memory and gut health, which helps to protect and heal the gastrointestinal tract and is helpful for allergic conditions and digestive issues, and Mico Five + Chaga, the ultimate immune system modulation blend, ideal for balancing an underactive immune system and contributes to modulation of autoimmune conditions.

Hamida added: "Lastly, Vitamin C (Askorbato K-HdT), the potentiiser and a powerful antioxidant. Along with vitamin C and potassium bicarbonate, Askorbato also contains olive leaf extract and dried grape extract, giving this formula a high content of polyphenols and resveratrol, which adds an antioxidant value and facilitates the access of beta-glucans to the cell receptors."

And although there are now a range of mycotherapy products on the market, Hifas da Terra is one of the originals and it is an area the business holds vast expertise in. It is these factors, among others, that sets the brand apart.

"HdT has the largest private fungal stock in Europe and carefully researches and selects those mushroom strains with the most beneficial active compounds for each of its products. HdT is unusual in the fact that we not only grow all of our own mushrooms from these proprietary strains, but they also are GMP certified, which

means that all supplements are produced to pharmaceutical standards," Hamida advised.

"We also standardise and guarantee the level of each active compound in all our products, rather than providing general estimates of total polysaccharides. HdT also employs patented full spectrum extraction processes to provide the most concentrated mushroom products on the market, including the highest dose of liquid mushroom 'super extract' available, the MicoOncoCare range, specifically designed for use alongside primary oncological treatment."

She added: "HdT is also the only company that has third party medical trials undertaken by the Medina Foundation on our pure concentrated extracts, which demonstrates their safety to be used alongside medications due to the confirmed very low risk of interaction with CYP 450 enzyme pathway (the main drug metabolism pathway)."

And HdT's efforts have been backed up, with Hamida adding: "HdT not only pioneers the development of innovative nutritional supplements for both human and animal health, but also has been awarded 13 distinctions for innovation, business excellence, and commitment to the revitalisation of rural areas and conservation of the environment.

"HdT also plants more than 120,000 mycorrhized chestnut trees annually, making them not just a carbon neutral company, but an oxygen positive one."



Making the vegan switch

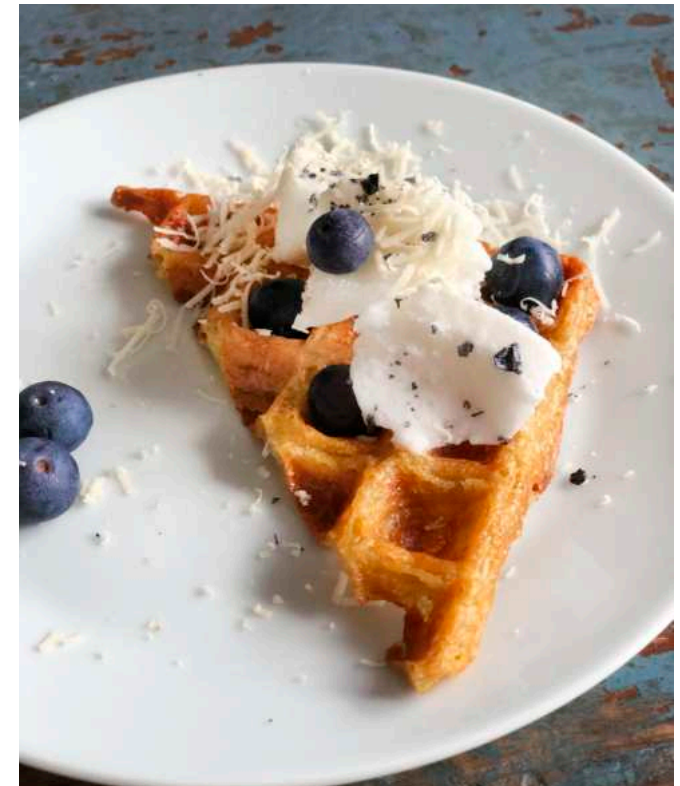
Laila Madsö guides you to joining the shift to plant-based with her new book,
How to be Vegan in 28 Days.



Salt-baked beets with beetroot hummus, chickpeas, spinach and hazelnuts



Red Thai curry with butternut squash, coconut milk, lime and wild rice



Vegan waffles



Salt-baked beets with beetroot hummus, chickpeas, spinach and hazelnuts

Ingredients:

- 1 large beetroot
- 1 large yellow beetroot c
- Coarse salt/sea salt
- 100g chickpeas, from a 400g tin
- 1 or 2 handfuls of baby spinach
- Extra virgin olive oil
- Juice of 1 lemon
- Beetroot hummus
- 100g hazelnuts, roughly chopped (optional)

Method:

- Preheat the oven to 180°C/160°C fan/gas mark 4.
- Place the beetroots in a roasting tin with a generous layer of coarse salt/sea salt in the bottom. Cover with foil (optional) and bake for about one hour, or until tender. Allow the beets to cool before removing the skins and dividing them into quarters.
- Meanwhile, mix the chickpeas and spinach in a bowl. Toss them in olive oil and lemon juice, along with a pinch of salt. Spread some beetroot hummus onto a plate, place the beets on top and then add the chickpeas and spinach. Sprinkle with chopped hazelnuts, if desired.

RED THAI CURRY WITH BUTTERNUT
SQUASH, COCONUT MILK, LIME AND
WILD RICE



VEGAN WAFFLES





Red Thai curry with butternut squash, coconut milk, lime and wild rice

Ingredients:

- 200g wild rice, pre-soaked
- 1 butternut squash
- Rapeseed oil
- 2tbsp red curry paste
- 4 lime leaves, dried or fresh
- 6 mushrooms, thinly sliced
- 2 shallots, finely chopped
- 1 stick of lemon grass, finely chopped
- 1 red chilli, finely chopped
- 1 x 400ml tin of coconut milk
- Sea salt
- Juice of 1 lime
- 1 bunch of coriander, roughly chopped

Method:

- Cook the wild rice in a 1:3 rice to water ratio for about 45 minutes.
- Meanwhile, peel the squash and remove the seeds, then cut into cubes.
- Heat a little rapeseed oil in a pan over a medium heat and fry the curry paste and lime leaves for a couple of minutes. Add the squash, mushrooms, shallots, lemon grass and chilli and fry for another minute. Add the coconut milk and cook for 20 minutes, or until the squash is tender. Season with salt and lime juice and scatter over the coriander.
- Serve the curry alongside the rice in a separate bowl.

SALT-BAKED BEETS WITH BEETROOT
HUMMUS, CHICKPEAS,
SPINACH AND HAZELNUTS



VEGAN WAFFLES



Vegan waffles

Ingredients:

- 200g wholegrain spelt flour
- 1tsp baking powder
- 1tsp Ceylon cinnamon
- ½ tsp salt
- 450ml oat or almond milk
- 100ml aquafaba
- 1 x 400g tin of white beans, any type
- 2tbsp plant-based margarine

Method:

- Use a hand blender to mix all the ingredients together into a smooth batter. Leave for 10-15 minutes. Whisk again for 10 seconds and cook in either a preheated waffle iron or a hot, dry frying pan. Serve with salty spreads and toppings or make a sweet dessert topped with coconut, blueberries and vegan parmesan.
- Sprinkle with some sea salt, if possible black charcoal salt for the colour.

SALT-BAKED BEETS WITH BEETROOT
HUMMUS, CHICKPEAS,
SPINACH AND HAZELNUTS



RED THAI CURRY WITH BUTTERNUT
SQUASH, COCONUT MILK, LIME AND
WILD RICE



How to be Vegan in 28 Days
by Laila Madsö (Headline
Home, £18.99).

I-Mag giveaways



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



AlchemLife

Win a range of natural herbal supplements and discover the AlchemLife brand.

AlchemLife is committed to helping people around the globe stay naturally healthy for life by offering natural support for a variety of ailments, including cold and 'flu, joint stiffness and pain, digestion and gas.

The prize is made up of six PhytoRelief (12 lozenges) Immune Support, four PhytoRelief sample boxes (three lozenges) Immune Support, two PhytoCid (15 capsules) Digestive Support and three FlexiQule Oil Rub (50ml) Joint Support.

I:Win: We have one set to give away, total retail value £108.41.

GOOD HEALTH NATURALLY LIPOSOMAL GABA WITH L-THEANINE AND ASHWAGANDHA

Good Health Naturally's unique combination of GABA, L-theanine and ashwagandha, offers effective nervous system support, helping with anxiety, stress and sleep.

Nutrients are delivered using liposomal delivery for superior bioavailability. GABA (gamma-aminobutyric acid) works as a calming neurotransmitter, supporting relaxation and sleep and L-theanine, found naturally in green tea, is a well-known anti-anxiety nutrient which can induce calmness. Research shows ashwagandha may be useful for managing stress-related conditions and insomnia.

I:Win: We have five to give away.



Cytoplan's Women's Health Bundle

Cytoplan's Women's Health Bundle has been put together by the brand's Nutritional Therapists to contain the essential everyday supplements a woman needs.

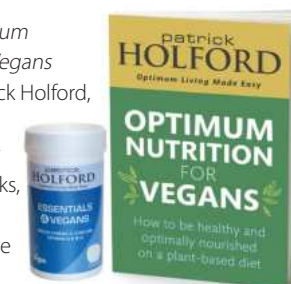
Designed to support the start of your Cytoplan journey, Women's Wholefood Multi, Acidophilus Plus and Omega Balance create a combination of key nutrients at a reduced price. The Women's Health Bundle contains Women's Wholefood Multi, Omega Balance, and Acidophilus Plus.

I:Win: We have one to give away.



PATRICK HOLFORD OPTIMUM NUTRITION FOR VEGANS AND ESSENTIALS4VEGANS

In new *Optimum Nutrition for Vegans* (Piatkus), Patrick Holford, bestselling author of over 35 health books, shows you how to achieve optimum nutrition while following a vegan diet. This book features 100 delicious, easy recipes that will nourish your body and your brain. And Patrick Holford's *Essentials4Vegans* is a combination of the four nutrients that are hardest to get on a vegan diet – vitamin B12, vitamin D, omega 3 DHA and the phospholipid, choline.



I:Win: We have three sets featuring the book, plus new Essentials4Vegans.



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