

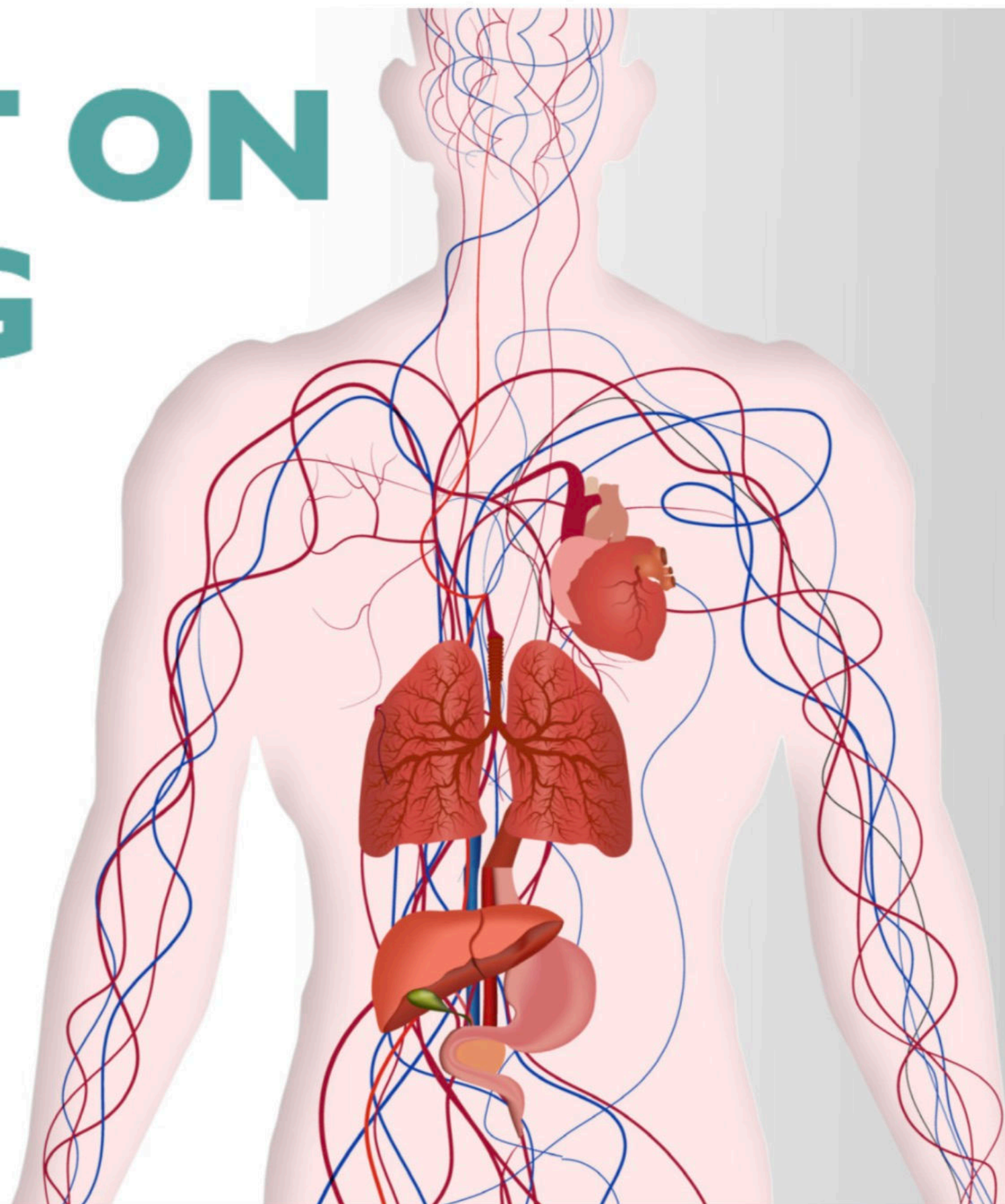


## SPOTLIGHT ON CLEANSING

The role of a full body cleanse  
in supporting health

## VEGAN NUTRITION

How to ensure  
vegan clients avoid  
deficiency



## CBD IN CLINIC

An expert guide to  
recommending CBD





# Altrient®

CUTTING EDGE LIPOSOMALS

## LIPOSOMAL GLUTATHIONE

Altrient Liposomal Glutathione uses the clinically researched Setria Glutathione as key ingredient. Choose Altrient GSH Glutathione for City-dwellers and when working or living in a polluted environment.



- ✓ ACTIVATING GOOD NUTRITION
- ✓ GIVE YOUR LIVER SOME TLC
- ✓ SUPPORTS URBAN 'POLLUTED' LIVING
- ✓ EXPERT NUTRIENT COMPOUND SUPPORTING CELLULAR RENEWAL



Gluten Free



Vegan

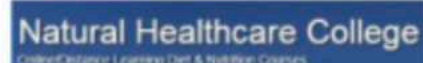
f @AbundanceandHealth @abundanceandhealth

WWW.ABUNDANCEANDHEALTH.CO.UK

Made by LivOn Labs, pioneers in liposomal encapsulation



In partnership with:



# Welcome



There is no doubt that Nutritional Therapists are pioneering in their approach, both when it comes to being at the forefront of nutritional science but also in terms of recommendations when it comes to nutritional supplements as formulations, manufacturing capabilities and ingredient usage advances.

While the mainstream catches on much later, they also like to ride the wave of trends and what may at times by some be considered fads, and two of these are issues we discuss in this issue of *Nutrition I-Mag*.

Starting with veganism, a movement that has been in existence for decades, it is only in more recent years that the wider general public has started to consider it as a potential way of eating and living. You only need to see the success of this year's Veganuary campaign, with 150,000 more sign-ups compared to 2019, to see quite how fast this trend is moving.

Then we have CBD as a major trend that has hit both the natural health sector and now the mainstream. While there are many experts who confirm it offers some important benefits, with the market now being so huge and with so many

brands – of varying quality and integrity – entering the market, it is one that is in danger of creating confusion among the every day consumer in terms of what they should and shouldn't be looking for.

In both these cases, while there is clearly a place for such trends, education is needed to ensure people are aware; if they are becoming a vegan, have they considered their iron needs? And how are they sourcing their vitamin B12? When it comes to CBD, where does it come from? How can you be sure it has been subject to rigorous testing, and that it is free from heavy metals?

Find out more about what experts in both fields have to say on the issues; **click here** to read more about vegan nutrition and then you can **click here** to read our feature on safely recommending CBD.

And don't forget that education is always top of our list of priorities and we were excited to see the ever-popular IHCAN Conference series kick off this month. **Click here** to read about what we have coming up in the series this year.

## Rachel

RACHEL SYMONDS, EDITOR

NUTRITION I-MAG, Target Publishing Limited, The Old Dairy, Hudsons Farm, Fieldgate Lane, Ugley Green, Bishops Stortford CM22 6HJ

t: 01279 816300 e: [info@targetpublishing.com](mailto:info@targetpublishing.com) [www.nutritionimag.com](http://www.nutritionimag.com)

## Meet The Team

EDITOR Rachel Symonds CONTRIBUTORS Rose Holmes, Patrick Holford, Christina Georgallou, Laura Murphy  
SALES & PUBLISHING DIRECTOR Ruth Gilmour e: [ruth.gilmour@targetpublishing.com](mailto:ruth.gilmour@targetpublishing.com) KEY ACCOUNTS DIRECTOR Abigail Morris e: [abigail.morris@targetpublishing.com](mailto:abigail.morris@targetpublishing.com)  
SALES MANAGER Maria Francis e: [maria.francis@targetpublishing.com](mailto:maria.francis@targetpublishing.com) DESIGN/PRODUCTION Amber Sommerville e: [amber.sommerville@targetpublishing.com](mailto:amber.sommerville@targetpublishing.com)  
MARKETING EXECUTIVE Lauren Ashby e: [lauren.ashby@targetpublishing.com](mailto:lauren.ashby@targetpublishing.com) MARKETING DIRECTOR James Rix e: [james.rix@targetpublishing.com](mailto:james.rix@targetpublishing.com)  
ACCOUNTS Lorraine Evans e: [accounts@targetpublishing.com](mailto:accounts@targetpublishing.com)  
MANAGING DIRECTOR David Cann e: [info@targetpublishing.com](mailto:info@targetpublishing.com)

The *Nutrition I-Mag* is published by Target Publishing Limited, the leading publisher and conference organiser serving the natural, complementary health markets, as well as the leisure, education, sport and eco markets.

[www.targetpublishing.com](http://www.targetpublishing.com)

ISSN 2049-4017

Some material may be speculative and/or not in agreement with current medical practice. Information in *Nutrition I-mag* is provided for professional education and debate and is not intended to be used by non-medically qualified readers as a substitute for, or basis of, medical treatment. Copyright of articles remains with individual authors. All rights reserved. No article may be reproduced in any form, printed or electronically, without written consent of the author and publisher. Copying for use in education or marketing requires permission of the author and publisher and is prohibited without that permission. Articles may not be scanned for use on personal or commercial websites or CD-ROMs. Published by Target Publishing Limited. The Publishers cannot accept any responsibility for the advertisements in this publication.



# CONTENTS



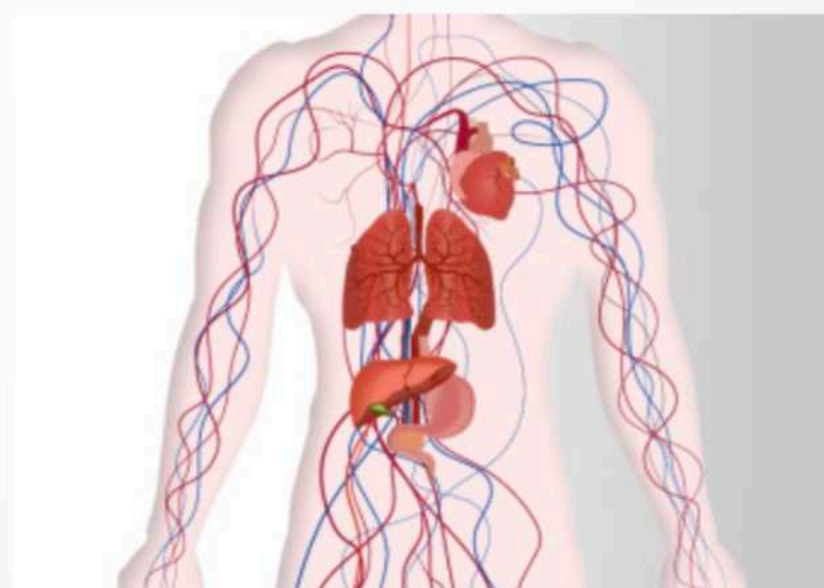
## CBD ADVICE

Ensure you offer clients the right advice when it comes to gaining the benefits from CBD products



## VEGAN NEEDS

We discuss the crucial nutrients needed for those following a plant-based diet



## GUIDE TO CLEANSING

Support your clients through an effective healthy cleanse plan



## COMPANY PROFILE

Education and NPD are among the developments at BioCare



## RECIPES

Take inspiration from the Japanese cuisine with these healthy dishes



## INGREDIENT FOCUS

Supporting joint and bone health with collagen

## NEWS

The latest developments in the world of nutrition

## RESEARCH

We bring you up to date with the latest scientific news

## PRODUCT WATCH

What's new to market

## BANT

All the news from the leading professional body

## EDUCATION

We reveal the dates of a new addition to the IHCAN Conference series

## ASK THE EXPERTS

Nutritional experts answer your questions

## PRODUCT AWARDS

We reveal the winners of the *Nutrition I-Mag* Product Awards

## CPD DIRECTORY

Seminar, conference and webinar dates for your diary

## NUTRITION I-MAG GIVEAWAYS



# OUR CONTRIBUTORS

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



Rose Holmes

Rose Holmes, Dip.ION, BSc (Hons), PGCE, mBANT, CNHC is a Registered Nutritional Therapist, with a special interest in chronic illness, circadian rhythm disruption and healthy ageing. She is the Education and Training Manager at Rio Health and provides training to other practitioners and health professionals on natural therapies.



Isabelle Nunn

Isabelle Nunn MPHARM (Hons) Dip NT GPHC BANT CNHC AFMCP graduate is Technical and Commercial Nutritionist at Kinetic Natural Products Distributor, which distributes brands including Nature's Answer and Garden of Life.



Claire Barnes

Claire Barnes has a diploma in Naturopathic Nutritional Therapy from the College of Naturopathic Medicine (CNM). She works as Technical Advisor at ADM Protexin, manufacturers of the Bio-Kult and Lepicol ranges. It was while travelling that Claire developed her love of juicing and nutrition and started her own juice bar business. When she sold the business, she wanted to advance her knowledge of nutrition and so began her Nutritional Therapy training.



Patrick Holford

Patrick Holford is a nutritionist, author and leading commentator on natural health. He founded the Institute of Optimum Nutrition in 1984, and is the author of over 37 books, translated into over 20 languages, including *The Optimum Nutrition Bible*.



Christina Georgallou

Christina Georgallou is a Physiologist and Nutritional Therapist, currently working with OptiBac Probiotics to support practitioners in their recommendation of probiotics in clinical practice.



Laura Murphy

Laura Murphy BSc (Hons), MSc, Dip CNM NT is a Nutritionist at Nutri Advanced, with an MSc in Public Health Nutrition and a Diploma in Nutritional Therapy. She is a key member of Nutri Advanced's nutrition department, providing technical advice to practitioners, alongside assisting with research and product development. Taking particular interest in gut health, Laura has an ever-growing enthusiasm for nutrition that has developed throughout her extensive education and during her time at Nutri Advanced.





# QUERCETIN

WITH BROMELAIN

NATURE,  
BLENDED  
WITH  
SCIENCE

PER CAPSULE:

QUERCETIN 300MG

BROMELAIN (1200 GDU/G) 80MG

VITAMIN C 60MG

VITAMIN B5 (D-CALCIUM PANTOTHENATE) 5MG

AVAILABLE NOW FROM G&G VITAMINS

[www.gandgvitamins.com](http://www.gandgvitamins.com) • 01342 312811

ALSO AVAILABLE FROM THE NATURAL DISPENSARY



# News bites

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

## European experts issue guidance on diagnosis of coeliac disease

The European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) has issued guidance on the diagnosis of coeliac disease in children.

It has recommended the no-biopsy approach at diagnosis for the majority of children suspected of having the disease; currently, around half of children with suspected coeliac disease undergo a biopsy to confirm their diagnosis but rather than invasive and distressing endoscopy, experts are now recommending that children undergo a two-stage blood test to establish a diagnosis of coeliac disease that would mean the majority who currently have one would no longer require a biopsy.

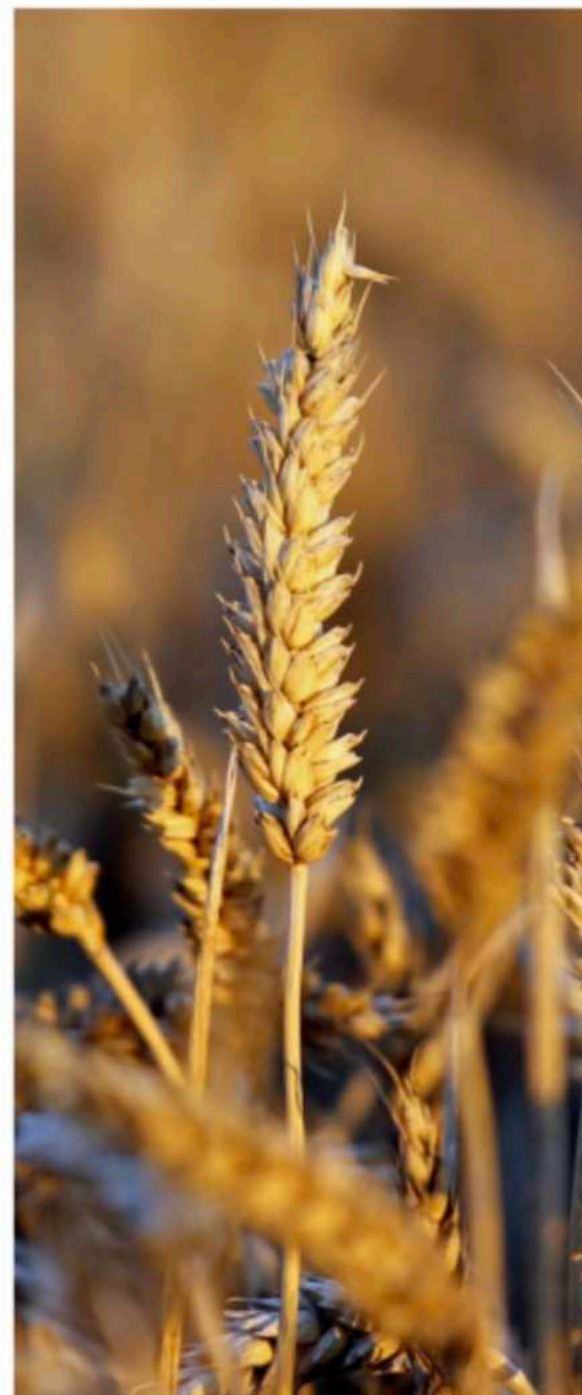
The new advice for clinicians comes as an update to the 2012 guidance published by the society and bring the original guidelines up-to-date.

The new guidance, published in the *Journal of Pediatric Gastroenterology and Nutrition*, recommends that testing for specific antibodies should be performed as initial screening in children with suspected coeliac disease, and that asymptomatic children can be diagnosed without the need for a biopsy, using the same criteria as in patients with symptoms

The decision on whether to perform a diagnostic biopsy should be made as a shared decision between clinicians and parents, and where appropriate, with the child too

Coeliac disease is the most common food-related chronic disease among children in Europe, yet experts now believe that up to 80 per cent of cases are undiagnosed, so the new guidelines are, therefore, aimed at making diagnosis as easy and accurate as possible, to help enable earlier diagnosis and higher detection rates.

Luisa Mearin, Secretary of the Coeliac Disease Working Group and senior author of the new guidelines, commented: "These new guidelines mean that more than half of all children being investigated for coeliac disease will no longer need to have an invasive biopsy. This is a big step forward in our mission to ensure that children can be diagnosed and effectively treated for coeliac disease. It is scandalous that so many children go so long, often up to 10 years, without diagnosis. Removing the need for biopsy in order to achieve diagnosis will reduce the stresses associated with such an invasive procedure and mean that diagnoses are quicker and cheaper for healthcare systems."



## New clinic funded by homeopathic organisation

The British Homeopathic Association has announced it has supported a new clinic offering low-cost homeopathic treatment.

Winchester Homeopathy is based at The Natural Practice complementary health centre, and is run by local GP and homeopath, Dr Tim Foster.

Appointments, including up to four follow-up consultations, are available free of charge, with patients paying only for any homeopathic remedies that may be prescribed.

Dr Foster commented: "I've been using homeopathy alongside traditional medicine for many years and seen how it can help a wide range of conditions – sometimes when other forms of medicine fail. Everyone has the right to choose high-quality healthcare. This new clinic will make homeopathy available to those who most need it but have not been able to access or afford it until now."

Cristal Sumner, Chief Executive of the British Homeopathic Association, added: "With the limited availability of homeopathic treatment within the NHS, services like Winchester Homeopathy are more important than ever. We're proud to be able to bring affordable homeopathic treatment to Winchester."





## Concern raised at online probiotic claims in new paper

Researchers have questioned whether online information on probiotics matches scientific evidence.

In new research published in the journal, *Frontiers of Medicine*, examined probiotics and the online information that exists. The paper highlights how only few rigorous clinical studies have met the stringent criteria required to establish the efficacy and safety of probiotics and so the team assessed the information quality of webpages referring to probiotics and to compare the recommendations available online with the information collected from trusted scientific sources.

A total of 150 webpages returned by Google were evaluated searching 'probiotics' and the researchers then enumerated the health claims mentioned online and the corresponding clinical trials and reviews registered in the Cochrane library. Finally, the conclusions of Cochrane reviews were used to assess the level of scientific evidence of the information available through Google search.

In terms of completeness of information, only 10 per cent of webpages met the criteria, 40 per cent had a cautionary note on benefits, 35 per cent referred to scientific literature, and only 25 per cent mentioned potential side effects.

They commented: "The results of the content analysis led us to conclude that: (1) the most frequent typologies of webpages returned by Google are commercial and news, (2) commercial websites on average provide the least reliable information, and (3) significant numbers of claimed benefits of probiotics are not supported by scientific evidence. This study highlights important biases in the probiotics information available online, underlining the need to improve the quality and objectivity of information provided to the public."

## Definition of personalised nutrition proposed by U.S association

The newly established American Nutrition Association (ANA) has published a proposed definition of personalised nutrition to promote and scale efforts in research, education, clinical practice, and policy.

The ANA proposed the definition to be a field that leverages human individuality to drive nutrition strategies that prevent, manage, and treat disease and optimise health, and be delineated by three synergistic elements: personalised nutrition science and data, personalised nutrition and professional education, and training, and personalised nutrition guidance and therapeutics.

The ANA has published *Toward the Definition of Personalized Nutrition: A Proposal by the American Nutrition Association*, which has been published in the *Journal of the American College of Nutrition*.

They anticipate that this proposed definition will serve the broader nutrition science community by fostering standards and scalability in research, data, training, products, services, and clinical practice, and assist in driving favourable policy.

"This represents a leap forward for the field of personalised nutrition," explained lead author, Corinne Bush. "Defining the term and its contours is a critical step toward embedding it in the core of



the healthcare system."

CEO Michael Stroka added: "With consensus and collaboration, we can advance personalised nutrition science, train personalised nutrition practitioners, and enhance access to personalised nutrition care. Building on the work done by pioneers across many disciplines, this definition can serve as a springboard to embed personalised nutrition in the healthcare system to prevent, treat, and manage disease, and optimise human health."

## Grant funds university heart project

A project by the University of Manchester to predict cardiovascular events has received a grant from the charity, Heart Research UK.

The project aiming to develop a new tool for predicting the risk of a cardiovascular event or death in patients who have already suffered a heart attack has received a grant of almost £150,000 from national charity, Heart Research UK.

People with CVD are up to five times more likely to have a stroke, are six times more likely to die compared to those without, and up to half of them will suffer a second heart attack, but there are currently no methods in place to predict the risk in this group of patients, so there was considered to be an urgent need for such

tools to help assess the risk of future cardiovascular events and deaths in patients who already have CVD.

The project, which will be led by Prof Mamas Mamas (pictured), Professor of Cardiology at Keele University and Honorary Professor of Population Health at the University of Manchester, will use medical data to develop a tool that predicts the risk of a future cardiovascular event or death in people who have already had a heart attack, with the aim of improving care of patients with CVD.

The £147,816 Translational Research Project grant was awarded to the University of Manchester as part of Heart Research UK's annual awards for research into the prevention, treatment and cure of heart disease.





# In Research

**Nutrition I-Mag rounds the latest research studies in the nutrition world. from the natural health industry.**

## Fish oil study confirms importance in heart and brain health

**C**hronic conditions which can lead to cardiovascular and cognitive related issues can be improved with fish oil.

That is according to a new study published in the journal, *Nutrition, Metabolism and Cardiovascular Diseases*, focusing on chronic conditions such as obesity, which contribute to endothelial dysfunction in older adults, and can cause impairments in cerebrovascular perfusion, which is associated with accelerated cognitive decline. Supplementing the diet with bioactive nutrients that can enhance endothelial function, such as fish oil or curcumin, may help to counteract cerebrovascular dysfunction and so the researchers carried out a 16-week double-blind, randomised placebo-controlled trial.

A total of 152 older sedentary overweight/obese adults (aged 50-80 years, body mass index: 25-40kg/m<sup>2</sup>) were involved in the study, which investigated the effects of fish oil (2000mg docosahexaenoic acid and 400mg eicosapentaenoic acid/day), curcumin (160mg/day) or a combination of both on cerebrovascular function (measured by Transcranial Doppler ultrasound), systemic vascular function (blood pressure, heart rate and arterial compliance) and cardiometabolic (fasting glucose and blood lipids) and inflammatory (C-reactive protein) biomarkers.

They found that the primary outcome, cerebrovascular responsiveness to hypercapnia, was not affected by the interventions. However, cerebral artery stiffness

was significantly reduced in males following fish oil supplementation. Furthermore, fish oil reduced heart rate and serum triglycerides, and increased HDL cholesterol. It was found that curcumin did not significantly affect these outcomes, either alone or in combination with fish oil.

"Regular supplementation with fish oil but not curcumin improved biomarkers of cardiovascular and cerebrovascular function. The combined supplementation did not result in additional benefits. Further studies are warranted to identify an efficacious curcumin dose and to characterise (in terms of sex, BMI, cardiovascular and metabolic risk factors) populations whose cerebrovascular and cognitive functions might benefit from either intervention," the study concluded.



## Iron studied for its role in the brain

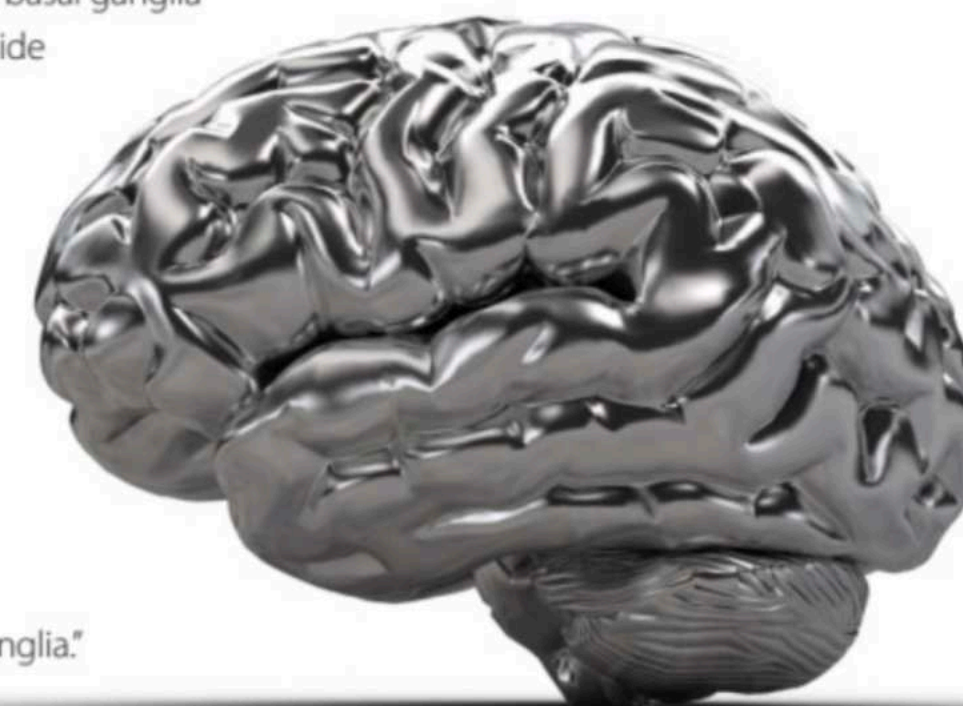
Researchers have confirmed that brain iron is vital to multiple aspects of brain function in young people, including oxidative metabolism, myelination, and neurotransmitter synthesis.

In the results of a study, published in the *Journal of Neuroscience*, researchers took a longitudinal sample of 922 humans aged eight-26 at the first visit, with up to four multi-echo T2 scans each. Using this sample of 1,236 imaging sessions, they assessed the longitudinal developmental trajectories of tissue iron in the basal ganglia. They quantified tissue iron concentration using R2\* relaxometry within four basal ganglia regions, including the caudate, putamen, nucleus accumbens, and globus pallidus.

The team observed significant increases in R2\* across all regions, with the greatest and most prolonged increases occurring in the globus pallidus and putamen. Further, they found that the developmental trajectory of R2\* in the putamen is significantly related to individual differences in cognitive ability, such that greater cognitive ability is increasingly associated with greater iron concentration through late adolescence and young adulthood.

"Together, our results suggest a prolonged period of basal ganglia iron enrichment that extends into the mid-20s, with diminished iron concentration associated with poorer cognitive ability during late adolescence," the study reported, adding that atypical basal ganglia tissue iron levels have been linked to impaired cognition in iron deficient children and adults with neurodegenerative disorders.

It added: "In the largest study of tissue iron development yet reported, we characterise the developmental trajectory of tissue iron concentration across the basal ganglia during adolescence and provide evidence that diminished iron content is associated with poorer cognitive performance even in healthy youth. These results highlight the transition from adolescence to adulthood as a period of dynamic maturation of tissue iron concentration in the basal ganglia."





## Exercise and its benefits to mental health studied by Australian researchers

A new study has suggested that high intensity interval training and continuous moderate exercise offer greater mental benefits to the brain than sustained strenuous exercise.

Researchers from the University of South Australia in Adelaide conducted multiple experiments involving 128 people, whose brains were monitored after a single bout of aerobic exercise on a stationary bike and treadmill.

The experiments ranged from low intensity continuous exercise to high intensity interval exercise, with the heart rate varying between 50-90 per cent intensity.

UniSA researcher, Dr Ashleigh Smith, and her PhD student, Maddison Mellow, found that the greatest changes in neuroplasticity – the brain's ability to rewire or modify its neural connections – occurred with 20 minutes of interval training or 25 minutes of continuous moderate aerobic exercise.

Dr Smith said cycling or running at full speed without mixing up the tempo may elevate the stress hormone, cortisol, blocking the positive effects.

"We already know that engaging in regular aerobic exercise is good for the brain, improving memory, attention and learning," she said. "However, we need to understand why it is so beneficial and what the best exercise, intensity and duration is."

Dr Smith said cortisol appeared to play a major role in whether an exercise was mentally beneficial. She said high cortisol levels blocked neuroplastic responses, yet interval training may allow a sweet spot for cortisol rates to return to normal levels, the researchers say.

Mellow said neuroplasticity drove the brain's development, from infancy to adulthood, helping to learn new skills, form memories and recover from brain injuries or stroke.

"Long-term studies demonstrate that people who engage in regular exercise show greater neural connectivity than those who are sedentary. Research also shows that exercising before learning a new motor skill can help a person learn it much faster," she commented.

The researchers' findings have been published in the *Journal of Science and Medicine in Sport*.



## Ageing and its reliance on selenium subject of new study



Described as the first study on the relationship between dietary selenium intake and leukocyte telomere length in Americans, researchers have indicated that increased dietary selenium intake was associated with longer telomere length.

In the study, researchers explained that growing evidence suggested that lifestyle factors including dietary habits may influence telomere length, which is a reliable marker of biological ageing and predictor for chronic diseases. However, the role of dietary selenium intake in telomere length maintenance is rarely examined.

A total of 3,194 U.S adults older than 45 were extracted from the National Health and Nutrition Examination Survey (NHANES) in 1999-2000 and 2001-2002. Leukocyte telomere length was measured using the quantitative real-time polymerase chain reaction (qPCR). Dietary selenium intake was assessed by a trained interviewer using 24-h dietary recall

method. Generalised linear models were performed to evaluate the association of dietary selenium intake with telomere length. The restricted cubic spline analysis was used to further explore the nonlinear dose-response relationship between dietary selenium intake and telomere length.

After adjusting potential confounders, every 20µg increase in dietary selenium intake was associated with 0.42 per cent longer telomere length in all participants. In the subgroup analyses, dietary selenium intake was related to longer telomere length in females and non-obese participants but not in males and obese participants.

"This study indicated that the increased dietary selenium intake was associated with longer telomere length among middle-aged and older adults in America. These findings require further corroboration from future prospective studies," the researchers said in conclusion.



# New to market

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

## RESEARCH RESULTS REVEALED AS PART OF NEW PROBIOTIC LAUNCH

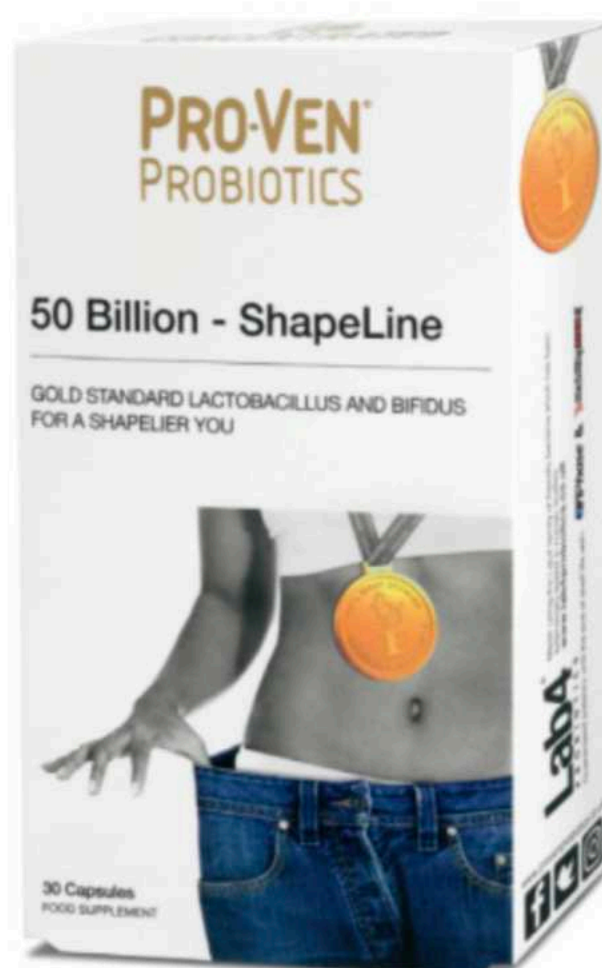
Shapeline is the latest product launch from Pro-Ven Probiotics and launches with newly published research confirming its effectiveness.

New research due to be published by the online journal, *Scientific Reports*, has revealed that Shapeline has significant weight management capabilities, alongside health benefits.

In the clinical study on weight loss, participants of all ages saw a reduction in their weight, waist circumference and BMI after taking one Pro-Ven Probiotics Shapeline capsule every day for six months. To ensure the results were not linked to other factors, participants were not placed on a calorie-controlled diet and made no changes to their lifestyle or exercise regimes. To dismiss any likelihood of an anomaly, the study was repeated with the same target group. These results, carried out over three months,

indicated a higher reduction in weight. Participants lost 5lbs and 2cm from their waist, providing robust and compelling evidence for the effectiveness of Shapeline.

Shapeline is made using 50 billion Lab4 bacteria. Lab4 is the name given to the group of friendly bacteria strains developed by Dr Nigel Plummer and the scientists at Cultech and subjected to rigorous research over the last 15 years.



## EYE CARE FORMULA ANNOUNCED BY HTC HEALTH

A new and improved Eye Care formula has been launched by supplement wholesaler, HTC Health.

The new formula is available in a softgel format and contains a tripled dose of DHA and EPA and increased content of lutein (10mg) and zeaxanthin (0.68mg). It also contains other beneficial eye health components, such as bilberry extract and minerals including zinc (1.5mg). It has been developed from precise specifications and is designed to protect eye health and replenish vital nutrients that can be lost as we age.

HTC Health's eye care product is available to order in bulk, ready for processing or in finished bottles, ready for labelling.



## VEGAN NUTRITION FOCUS IN VIRIDIAN LAUNCH

A vegan multivitamin is the latest addition to the supplement line-up at Viridian Nutrition.

Essential Vegan Multivitamin has been developed by the ethical supplement company to help close the nutritional gap in plant-based diets.

Made with vegans, vegetarians and flexitarians in mind, Essential Vegan Multi contains 27 essential vitamins and minerals, all from animal free sources to provide the nutritional boost for a balanced plant-based diet. In particular, it includes high therapeutic levels of vitamin B12 and iron to support normal energy levels and brain function, vegan-friendly vitamins K2 and D3 for bone strength, and choline for healthy liver function. The formulation also contains biotin, which contributes to healthy skin, hair and nails.

It is formulated to provide 100 per cent active ingredients, contains no binders, fillers or additives, is gluten free and approved by the Vegan Society and certified palm oil free.



## BETTERYOU PLACES SPOTLIGHT ON TESTING WITH NEW KITS

A range of at-home nutrient test kits has been developed by natural health company, BetterYou.

The brand has created Vitamin B12 Test Kit, Iron Test Kit and Vitamin D Test Kit, all designed with convenience in mind. Each test provides detailed results, along with a personal supplementation plan, based upon levels recommended by Public Health England. Unique to the company, any BetterYou customers found to be seriously deficient will also be offered a retest free of charge.

Partnering with a leading UK laboratory, both the Iron and B12 kits requires customers to take a finger prick blood test, in which the sample is analysed by health optimisation company, Forth. For the vitamin D kit, it is a dry blood spot test, with the testing service provided by City Assays laboratory in collaboration with Sandwell and West Birmingham Trust and measures both vitamin D3 and D2, allowing for a 'total' vitamin D level to be determined.





# Rocket. Science.

**Made digestible  
for your clients.**

## Free video series on food and the science of nutrition at [www.ion.ac.uk/fuel2020](http://www.ion.ac.uk/fuel2020)

Do you work with clients who are confused about how to eat well but overwhelmed by conflicting advice?

Our bite-sized videos are being used by practitioners as a tool to help their clients take control of their health by understanding the impact of good nutrition.

At The Institute for Optimum Nutrition (ION) we have been successfully educating people in nutritional therapy for 35 years. So we know a thing or two about how to turn nutrition – which can sometimes seem like rocket science – into rocket fuel for your clients.

Discover small changes which make a lasting impact, and energise their life in 2020.

**Stream at [www.ion.ac.uk/fuel2020](http://www.ion.ac.uk/fuel2020)**

# The Number 1 choice for UK Practitioners

### Scientifically balanced

We use rigorous scientific and clinical research to ensure our supplements are developed with the perfect blend of ingredients at the optimum level of efficacy.

### Finest quality ingredients

We select the highest quality, purest and most efficacious ingredients to go into all our products.

### 365 day satisfaction guarantee

All of our products are backed with a full year guarantee. If you or your clients are not completely satisfied with the quality of a Nutri Advanced product, simply return it to us within 365 days of purchase for a full refund.

### Optimum absorption

For optimum absorption, we use preferred forms of vitamins and minerals to engineer products at the ideal strength and in the right concentrations.

### Advancing nutritional education

We share our wealth of knowledge from the forefront of nutritional research through the Nutri Advanced online resource hub and host a variety of seminars and lectures with leaders in the industry.

### Active body-ready formula

Wherever possible, our products contain ingredients in their best form for your body to use, whether it's the most bioavailable or most active.

Register with  
Nutri Advanced  
and receive  
**50% OFF**  
your first order\*  
\*T&Cs apply



### Reasons why students and practitioners choose Nutri Advanced:

- Contact with our team of fully qualified nutritionists to assist with product guidance, nutrition advice and client queries
- CPD accredited webinars to help you learn how to support specific conditions from the comfort of your home or office
- Access to restricted professional educational literature including technical papers, reviews and protocols
- CPD accredited seminars with world class speakers such as Dr. Jeffrey Bland and archived material featuring Dr. Joseph Pizzorno, Jo Gamble and Dr. Kristi Hughes
- Exclusive trade prices

Register online at:  
[nutriadvanced.co.uk](http://nutriadvanced.co.uk) or freephone 0800 212 742



# FIRST EVER IHCAN CONFERENCE + TAKING PLACE AT THE END OF MARCH

The organisers of the IHCAN Conferences reveal details of the latest development in the form of IHCAN Conference +.

**O**ur first conference of 2020 took place on Saturday, February 29, as we opened the doors of the Cavendish Conference Centre in London for the first of this year's conference series.

During the day, we were thrilled to welcome back world-renowned speaker, Dr Tom O'Bryan, who presented for the day on 'Navigating the gluten-free minefield: keeping clients healthy on a GF diet isn't easy – why GF is a prerequisite in wheat-related disorders, but not the treatment'. It was a fantastic start to the year and there's plenty more in store for 2020.

## A NEW DEVELOPMENT

Which brings us onto the latest development for 2020, the IHCAN Conference +. Taking place on Saturday, March 28 at 155 Bishopsgate (the home of the renowned IHCAN Summit), the IHCAN Conference + will see the normal standard of education from the IHCAN Conferences taken to the bigger stage, with more exhibitors and room to be enjoyed.

During the event, we will be joined by GP Dr David Unwin, FRCGP, the doctor who is revolutionising the NHS' treatment of diabetes with nutrition – in many cases reversing the disease. He is back by popular demand to share his inspirational experiences at the sharp end of an NHS practice. He took the 2019 IHCAN Summit by storm with his easy-to-follow exposition of the evidence for low-carb's ability to seemingly reverse diabetes, backed with stunning case histories, and we can't wait to have him back to reveal more of his front-line clinical work.

We will also be joined by Neuroscientist, Dr Elisabeth Philipps, PhD, who will be presenting 'The Endocannabinoid System & Gut-Brain Axis: CBD Support for a Healthy Gut and Mind'. Elisabeth's extensive academic training includes a BSc

(Hons) in Biomedical Science from Kings College London, a PhD in neuropharmacology from Oxford University and a BSc in Nutritional Medicine. Her presentation last year on CBD and gut health provoked the most questions we've ever had from a conference audience, so she is back with more answers!

## THE REST OF THE YEAR

On Saturday, April 25, we are focusing on cancer, with a fantastic double bill presenting 'Integrative support for the client with cancer', with Dr Linda Isaacs, MD, and Catalina Fernández de Ana Portela sharing their expertise from their respective fields.

The IHCAN Summit will again be taking place at 155 Bishopsgate on Saturday June 27, alongside the annual conference of the Naturopathic Nutrition Association, and we are working hard to secure the best speakers for this. Later in the year, on September 12, we will be welcoming back 'SIBO Queen' Allison Siebecker and Ben Brown, who will deliver 'SIBO: Getting to the underlying cause and preventing relapse with prokinetics'.

The duo delivered a fantastic day in 2019 and this was one of our fastest-selling conferences, so make sure to secure your place to hear their latest iterations in this field.

Rounding off the year on November 21, we will be joined by neurology Professor, Dr Dale Bredesen MD, presenting 'Wit's End: personalised nutrition strategies for Alzheimer's, the world's most complex chronic disease.' Alzheimer's and cognitive decline are complex issues that need multiple-choice answers, and here he will update us on his nutrition and functional medicine-based approach that has been clinically proven to reverse cognitive decline and can easily be applied in an integrative health practice.



## SECURE YOUR PLACE TODAY

Places at conferences are limited, so make sure you reserve yours before it's too late. Visit [www.ihcanconferences.co.uk](http://www.ihcanconferences.co.uk) or call the team on 01279 810080 to book your place; multiple booking, student and member of association discounts are all available.





Integrative Healthcare and Applied Nutrition  
**IHCAN** 2020  
conferences

organised by  
Integrative Healthcare and Applied Nutrition  
**IHCAN**  
magazine

# IHCAN CONFERENCE + SATURDAY 28 MARCH 2020

The same format as the IHCAN Conferences, taken to the bigger stage at 155 Bishopsgate, London



## DR DAVID UNWIN

"Low-carb GP" Dr David Unwin, FRCGP, the doctor who is revolutionising the NHS's treatment of diabetes with nutrition – in many cases reversing the disease – is back by popular demand to share his inspirational experiences at the sharp end of an NHS practice.



## DR ELISABETH PHILIPPS

Neuroscientist Dr Elisabeth Philipps, PhD, backs up evidence-based research information with experience as an IFM-recognised functional medicine practitioner. Her presentation last year on CBD and gut health provoked the most questions we've ever had from a conference audience: she is back with more answers!



## ANNE PEMBERTON

In line with Dr Unwin's discussion on the low carbohydrate diet for NIDDM and Dr Phillip's discussion on the cannabinoid system/gut brain link, Anne will be exploring what the evidence tells us about genetic single nucleotide polymorphisms associated with the low carbohydrate approach and diabetes.



SECURE YOUR PLACE ONLINE AT [IHCANCONFERENCES.CO.UK](http://IHCANCONFERENCES.CO.UK) OR TELEPHONE 01279 810080

SUPPORTED BY



ORGANISED BY





# Nutritional excellence

Each year, *Nutrition I-Mag* calls on our readers to tell us why you believe certain products deserve recognition. And here, we are delighted to reveal the winners of our annual Product 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 who 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

### epigenar Glutathione HPU Formula

This formula combines reduced glutathione, zinc, magnesium, vitamin B6 (as P-5-P), biotin, manganese and selenium to help support methylation pathways.

These minerals contribute to normal functioning of immune and nervous systems, normal cognitive function, normal psychological function, normal DNA synthesis and protection of cells from oxidative stress.

HPU stands for Hemopyrrolactamuria (aka KPU/Kryptopyrroluria), which was identified by Dr Carl Pfeiffer in the 1970s. Although found in all body cells, the highest concentration of glutathione is found in the liver, where it plays a critical role in detoxification and elimination of free radicals. epigenar Glutathione HPU also contains catalase and superoxide dismutase.

Commenting on the win, Stephan Smits, Managing Director at Rio Health, which distributes the epigenar range, said: "The Rio Health Team are delighted that our epigenar Glutathione HPU Formula has won the Best Alternative Product Award from the *Nutrition I-Mag* readership. All of us at Rio Health strive to always provide excellent and innovative products, and exceptional service. We would like to thank all readers who voted and wish happy health to all."



Highly commended: OM Lion's Mane Organic Mushroom Nutrition

## BEST VMS

### Pure Encapsulations Magnesium (glycinate)

Magnesium (glycinate) is a highly bioavailable magnesium chelate that is well tolerated and suitable for sensitive individuals, featuring 120mg of magnesium in each vegetarian capsule.

Like all Pure Encapsulations products, Magnesium (glycinate) is free from wheat and gluten, egg, peanuts, trans fats and hydrogenated oils, GMOs, magnesium stearate, titanium dioxide, carrageenan, coatings and shellacs, artificial colours, flavours and sweeteners, unnecessary binders, fillers and preservatives. Certified gluten free, it is third-party tested for purity and potency.

"To win an award for a staple supplement like magnesium speaks to the quality of Pure Encapsulations. Being hypoallergenic, free from unnecessary additives, and third-party tested to ensure purity and potency resonates with health professionals and has created a tremendous sense of trust," commented Ben Brown, Director of Clinical Education at Pure Encapsulations UK.



Highly commended: Bio-Kult Advanced Multi-strain formula

## BEST NEW PRODUCT

### GoodHealthNaturally HeartPower

HeartPower contains Super BERGAVIT Bergamot 45% to support heart and cholesterol health and is supported by clinical trials to improve heart and CVD risk factors.

Bergamot flavonoids can reduce and control 'bad' lipid levels, i.e. LDL total cholesterol and triglycerides, while helping 'good' HDL levels to increase. Bergamot flavonoids are also known as exceptional metabolic regulators, with the potential to fight metabolic syndrome.

HeartPower is suitable for vegetarians and vegans.

Lucy Redfern, Managing Director at Wholesale Health, which owns the Good Health Naturally brand, enthused: "We're really excited to be launching Good Health Naturally's HeartPower45 in the UK. It's so good to be bringing a traditional remedy used in Italian folk medicine to the wider market, which is supported by clinical trials. To have the importance of such a product recognised by the *Nutrition I-Mag* Product Awards is fantastic – your seal of approval is massively appreciated."



Highly commended: Nutri Advanced Glutathione Plus



Good Health Naturally  
*Because it Works!*

## Support a healthy heart with NEW HeartPower45™

The award-winning **HeartPower45™** exclusively contains high-potency super BERGAVIT™ bergamot 45% and features bergamot fruit extract - used in Italian folk medicine - to help support overall cholesterol balance and heart health.



Maintain healthy  
heart function



Lower and manage  
"bad" cholesterol



Support metabolic  
wellness



Suitable for  
vegetarians and vegans

Available online at [www.GoodHealthProfessional.com](http://www.GoodHealthProfessional.com) or call us on 03337 777 333

For research and study sources, please visit <https://heartpower.work>

\*T&Cs apply. Offer only valid on trade orders of GHN branded products until 30/4/2020.

Get  
**12% OFF**  
your order\*  
with code:  
**NIM12**





# BANT News

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



**D**id you know that BANT launched its own Nutrition Evidence database in 2017 to support its members and others in evidence-based nutrition practice?

Nutrition Evidence is open access to anyone and currently has more than 2,900 subscribers to its monthly alerts, which provide the latest in nutrition science into their inboxes, with curated lists of journal article picks from the Nutrition Evidence Editors.

If you have not yet subscribed to receive this, head over to [www.nutrition-evidence.com](http://www.nutrition-evidence.com) and click on 'sign up'.

Monthly alerts will feature a range of different topics, with expert comment, bringing newly released studies to your attention so you don't fall behind in this fast-moving scientific area. To be able

to continue to provide this free resource, BANT is continuing to forge relationships with peer-reviewed journals and functional and lifestyle institutes, as well as reputable supplement companies who share the same values and commitment to quality research. The team of volunteer indexers are also focusing on building up the resource of blog posts, podcasts, videos and eLearning as the year progresses. These will begin to appear in the database searches, and we will bring some of this content to subscribers' attention through the monthly alerts.

The combined provision of the Nutrition Evidence database, which is eligible for self-directed BANT CPD, and free access to the Natural Medicine's database, ensure that BANT members are at the forefront of evidence-based nutrition sciences development and clinical practice.

## Why join or renew Membership to BANT in 2020?

BANT membership numbers are at an all-time high and so too are the number of activities that BANT undertakes on its members' behalf.

The increased numbers of projects are due both to the rapidly changing professional landscape and also because of the organisation's continued efforts to help its members practice professionally within our well-regarded profession.

BANT new membership is open all year round but renewals are taking place as we speak. Existing members have the chance to complete their renewal before close of play on Saturday, February 29, 2020, all you have to do is go to the BANT website at [www.bant.org.uk](http://www.bant.org.uk)

BANT's volunteer directors, part-time managers and dedicated member volunteers are continuously thinking up ways and projects to help support members in day to day practice and are increasing engagement within professional and regulatory forums.

Pictured right is a snapshot showing why BANT membership is so important.

The screenshot shows the Nutrition Evidence website interface. At the top, there's a navigation bar with links: Home, About, Editorial Board, Expert Reviewers, FAQ, Alert, and Account. Below this is a featured advertisement for 'Good Gut Health Starts from within' by VSI-3, highlighting 430 billion bacteria and its benefits for gut health. A search bar is prominently displayed with the placeholder text 'Enter a term, or leave empty to browse' and a 'Search' button. Below the search bar, there are two columns of content. The left column is titled 'WHAT IS NUTRITION EVIDENCE?' and describes the database as an online collection of high-quality nutritional science and lifestyle medicine research, designed to support practitioners' clinical decisions. The right column is titled 'TRENDING TOPICS' and lists 'Clinical imbalances: Immune and inflammation' and 'Modifiable lifestyle factors: Nutrition' and 'Exercise and movement'. At the bottom, there's a 'Subscribe' button for a free monthly e-mail digest.

The infographic is titled 'Why Join BANT?' and lists 10 reasons for joining or renewing membership. Each reason is numbered and accompanied by a brief description of the benefit.

- GOLD STANDARD**: Established in 1997 as the British Association of Nutritional Therapists, BANT, now known as British Association for Nutrition and Lifestyle Medicine, is an established and recognised professional organisation for Nutrition Practitioners. Nutritional Therapists achieve their professional standards through NTEC accredited qualifications and are registered with CNHC under Professional Standards Authority (PSA).
- REGULATION**: BANT is in continuous discussions with variety of influencers and stakeholders varying from government to regulatory and professional organisations, to advance and secure the standing of the Nutrition and Lifestyle Medicine profession. BANT regularly submits and has published, responses to Government consultations.
- MISSION**: **BANT Aim: For BANT Members to be the 'go to' practitioners for Nutrition and Lifestyle Medicine.** BANT supports members' professional standing through variety of tools and services including Nutrition Evidence Database, CPD, GP Engagement Project and much more.
- PUBLICITY**: **Promoting the Profession and BANT Members**. Dedicated team focused on promoting the profession and its members to the general public via the traditional and social media. BANT members featured on and in Channel 5, ITV, Channel 4, Telegraph, The Times, amongst others. Monthly contributions to healthcare profession publications.
- PROFESSIONAL DEVELOPMENT**: **Supporting Members' Continued Professional Development (CPD)**. Free BANT produced webinars, heavily subsidised BANT Conferences, BANT dedicated Learning Zone, rigorously evaluated external provider CPD offerings. Bespoke, online CPD logging system linked direct to CNHC. 30 hours CPD requirement aligned to HCPC professions.
- PRACTITIONER SUPPORT**: **Unrivalled Practitioner Support**. Free guidance and support on professional practice issues - GDPR, ethical and safety queries. Professional Practice includes information to help practitioners practice safely, legally and ethically and provides guidance and advice on the practice of nutritional therapy.
- EVIDENCE BASED PRACTICE**: **Promoting Excellence in Professional Practice**. Free access via BANT to Natural Medicine's Database and BANT's own Nutrition Evidence Database with nutrition and lifestyle focused studies enhanced by expert reviewers to align with the functional medicine matrix.
- NETWORKING**: **Unparalleled Peer Interaction and Networking**. With over 3,000 members throughout the country and abroad, BANT offers unparalleled opportunities for peer interaction, networking and support via its Local Network community (UK and international), Professional Supervision, Regional Branch events and member only social media forums (Facebook and LinkedIn).
- MEMBER BENEFITS**: **Additional Value for Money**. In addition to all of the member benefits listed above, BANT works with external organisations to offer members a range of discounts and offers to suit most requirements, including supplements, webinars, conferences, leisure, memberships etc.
- EFFICIENT SERVICE**: **A Wonderful Team**. BANT offers all the above (and more) thanks to 9 volunteer directors, 1 full-time and 6 part-time managers and an army of the most amazing member volunteers. BANT members are welcome to contact BANT with any of their professional and membership queries and this amazing team of people will endeavour to respond within 24 hours.



**pure**  
encapsulations

Nothing But Pure®

## Magnesium (glycinate)



- ✓ Well tolerated and highly bioavailable magnesium glycinate
- ✓ Helps replenish low magnesium levels
- ✓ Contributes to normal functioning of the nervous system and the reduction of tiredness and fatigue

Voted **Best Product** (Gold and Silver) by Nutrition I-Mag and True Health magazine.<sup>1</sup> Pure Encapsulations is the highest ranking brand among those surveyed in **Quality** and **Trust**.<sup>2</sup>

[pure-encapsulations.co.uk](http://pure-encapsulations.co.uk)

<sup>1</sup> Nutrition I-Mag© 2019, True Health Magazine© 2019

<sup>2</sup> Nutrition Business Journal® 2016, Kaiser Associates 2014

## Train to be a Nutritional Therapist

At CNELM, we teach undergraduate and postgraduate courses in nutrition validated by Middlesex University:

- BSc (Hons) Nutritional Science\*
- MSc/PG Dip in Personalised Nutrition\*

\* Accredited by the NTEC for nutritional therapy practice in combination with CNELM's Nutritional Therapy Practice Diploma

Available for full or part-time study and Distance Learning

Short courses in Nutrition and Coaching also available:

- Nutrition Coach Diploma
- NLP Practitioner



Course Enquiries:

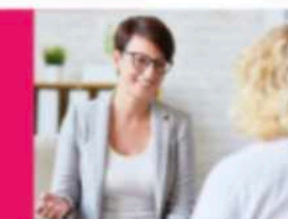
Centre for Nutrition Education & Lifestyle Management (CNELM)

T: 0118 979 8686

E: [info@cnelm.co.uk](mailto:info@cnelm.co.uk)

[www.cnelm.co.uk](http://www.cnelm.co.uk)

## Join the NNA as a Nutritional Therapy Student or Qualified Therapist



The Naturopathic Nutrition Association welcomes all Naturopaths and Nutritional Therapists who have an interest in naturopathic principles and recognise the holistic approach to health and wellbeing. You may join at any time of the year.

### Member benefits include:

- Free listings on our Register of Therapists and Searchable Public Database of member therapists
- Special discounts and promotions including Insurance, Testing Services, IHCAN, and other CPD events
- Options to register with CNHC and GNC
- Access to the Natural Medicines Comprehensive Database
- Unique opportunity to upgrade to Registered Naturopath (ND) with the GNC

### NNA Mentoring Programme

Joining as a student you gain access to our highly regarded mentoring programme specifically targeted at recent graduates and students in the final year of their diploma. The programme is designed to help you set up in practice, hone your clinical skills and address any questions that may arise.

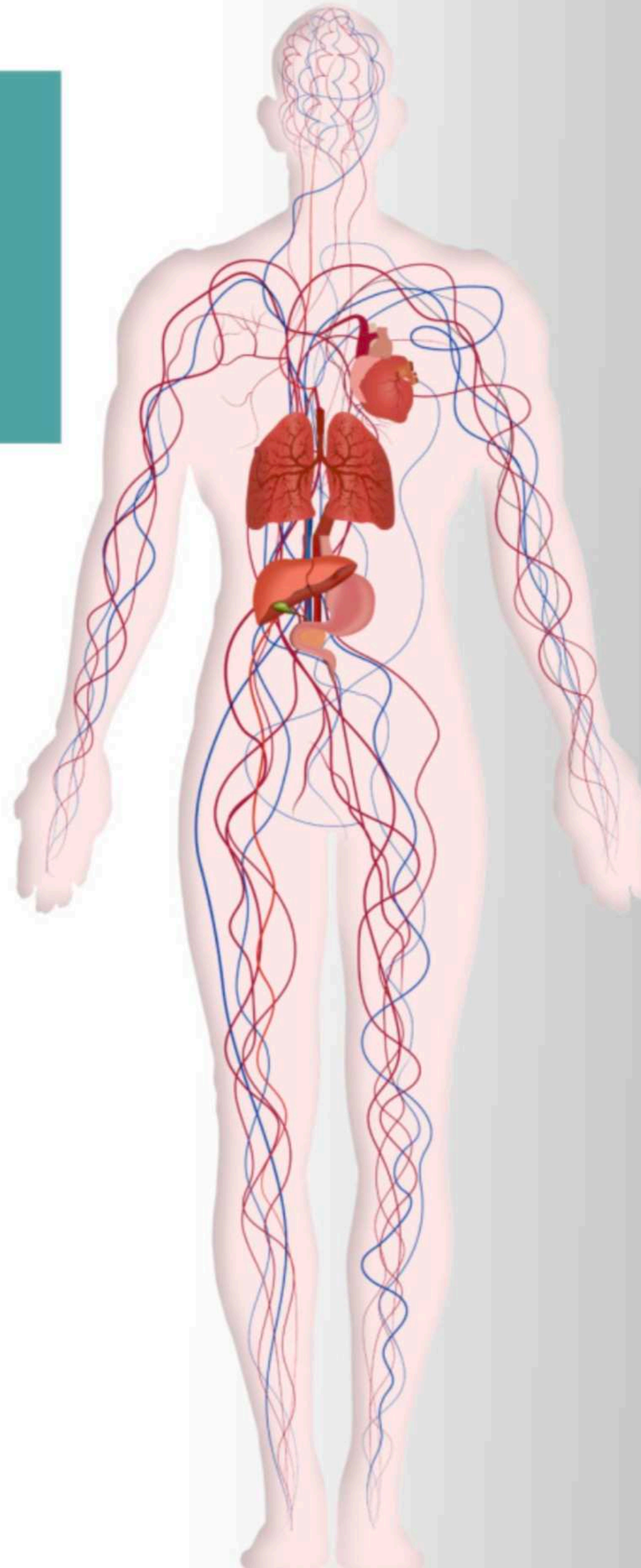
[www.nna-uk.com](http://www.nna-uk.com) | [info@nna-uk.com](mailto:info@nna-uk.com) | 01908 616543

**nna**  
NATUROPATHIC NUTRITION ASSOCIATION



# Clever cleansing

Cleansing isn't just a New Year fad, particularly given the demands that modern living and sedentary lifestyles can place on our systems all year round. But is a regular cleanse something to advise in clinic? And if so, what kind of protocol is to be recommended?



There is little we can do to fully avoid toxins, they are in the air we breathe, in the products we clean our home with, often in the food we eat, among many other sources. In this respect, it makes it clear why many people can present with signs that they are in need of a full body cleanse.

Nutritional Therapist, Claire Barnes, Technical Advisor at ADM Protexin, which has the Bio-Kult and Lepicol brands, agreed, commenting: "It is likely that everyone living in the UK will have some level of toxic load in the body, therefore, supporting our detoxification pathways is advisable for everyone. In fact, no person is without some level of toxic metals in their bodies.<sup>1</sup> The majority of people are unlikely to be considering their toxic load and supporting detoxification on a daily basis and this is where following a cleanse plan every so often could be recommended.

"Whilst some traditional detox programmes, such as juice and water detoxes, have, in fact, shown to do more harm than good in some individuals, current cleanse programmes aim to support the body's natural ability to detoxify through providing the vast array of different nutrients required from the diet, such as antioxidants, B vitamins, healthy fats and fibre."

In fact, the signs of the need to detox are many and obvious, according to Rose Holmes, BSc, Dip.ION, PGCE, MBANT, Nutritionist and Education and Training Manager at Rio Health.

"There are many reasons why individuals may need to detox. Common signs that detox is needed might include fatigue, muscle aches, unexplained headaches, sinus congestion, brain fog, insomnia, sleep disturbances, memory loss, poor concentration, moodiness and sometimes skin rashes, acne, bad breath, body odour and cravings. This isn't to say that everyone who is fatigued needs 'a detox'. However, I also would add that everyone does need to detox. Daily. This is because we are daily encountering toxins which our body must remove," she explained.

"We are daily exposed to toxins via the diet (sugar and additives, as well as pesticides and herbicides in





non-organic foods), skincare products and household products, as well as via the environment. In addition, even minor infections may increase toxin load (for example, endotoxins produced by bacteria). Whilst many believe in the need to detox annually or seasonally, this is a daily need. Since we accumulate toxins daily, we should detox daily. Heavy detox protocols can be useful for certain health conditions but, generally speaking, daily detox is the best way to address the toxins to which we are exposed daily. Periodically, additional detoxification support may help the body to function more optimally."

Amanda Swaine, Dip ION, Nutritional Therapist and Founder of Nutritionist's Blend, agreed, adding: "The amount of pollution we are exposed to today far outweighs that encountered by our ancestors. Even though the body has many mechanisms to naturally detoxify the body, extra support may be useful sometimes for all of us due to the sheer array and amount of toxins we are exposed to during the normal coming and goings of our modern lives.

"Whether or not you need to focus on detoxification specifically can be hard to pin down as symptoms are often varied and vague. Brain fog, low or changeable moods, congestion, headaches, rashes, bad breath, body odour and excessive flatulence are just a few potential indicators. Often these symptoms only make sense when viewed collectively as a pattern emerges, indicating a body struggling to get back to balance."

Barnes continued: "Toxic symptoms may occur when we get to our personal limit of accumulated toxins and are not able to clear them quickly or efficiently enough. The symptoms of toxin overload can present in many different ways, from headaches, mood disorders, issues with sleep, difficulty losing weight, as well as muscle and joint pain. It is also worth considering that individuals suffering with certain conditions, such as chronic fatigue,<sup>2</sup> neurodegenerative diseases<sup>3</sup> and even some cancers<sup>4</sup> may benefit from a cleanse. Potentially, toxin overload may have been involved in the development of these conditions and may continue to worsen their symptoms."

### THE TOXIC LOAD

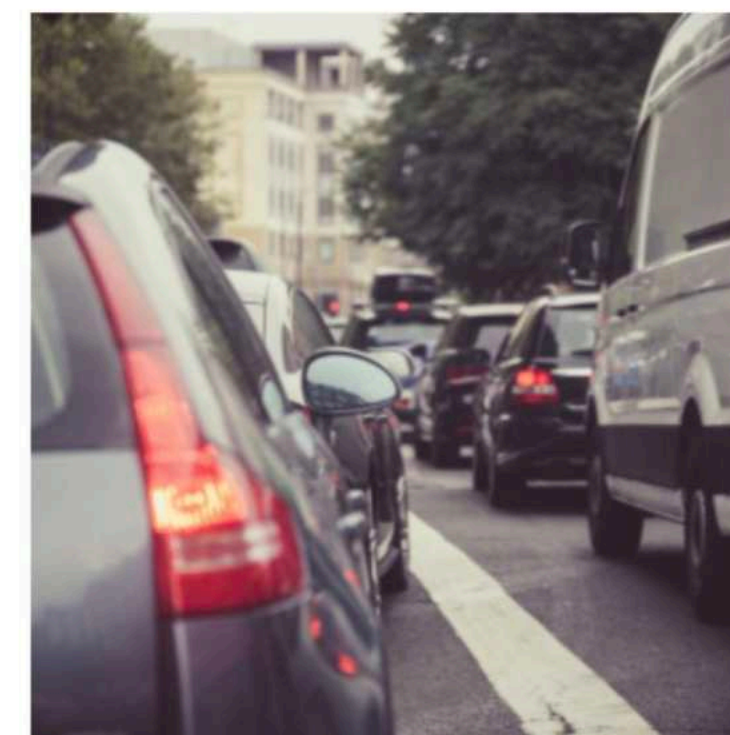
Referring back to the load placed on our systems today, exposure to toxins happens in so many ways.

"In today's modern world, we are constantly bombarded with environmental toxins; paint and cleaning chemicals in the home, radiation from Wi-Fi, traffic pollution and pesticides from fields, to name but a few. Toxins may also enter the body through our consumption of artificial sweeteners, food additives, alcohol, smoking, medications and even the chemicals we rub into our skin and hair," Barnes advised.

"Not only are our body's battling with toxins entering the body from external sources, but our bodies also naturally produce their own toxins, such as urea, carbon dioxide and lactic acid, which must be excreted from the body. In addition to these, the bacteria that live in our digestive tract produce their own metabolites as they feed on undigested foods from the intestines. Whilst the beneficial bacteria produce favourable metabolites, potentially harmful bacteria can produce unfavourable toxins that may have the ability to cross the intestinal lining and enter the bloodstream."

Holmes added: "Exposure to toxins can be via food, infection and environment. We are daily exposed to toxins via the diet (alcohol, sugar and additives, as well as pesticides and herbicides in non-organic foods), skincare products and household products, as well as via the environment. In addition, even minor infections may increase toxin load (for example, endotoxins produced by bacteria).

"Diets high in processed foods, sugar and/or alcohol expose the body to higher levels of toxins than an organic diet high in fresh vegetables and fruit. Individuals with chronic microbial infections also have potentially higher toxicity. Exposure to chemicals in skincare, household cleaning and DIY, as well as exposure via work environment, may impact levels of toxicity. New furnishings, paint and hairdressing/nail salons may increase exposure to toxins.





"Body toxicity increases when exposure to toxins increase or when body detoxification systems become compromised or function less well. In other words, the body requires a detox when the system becomes overloaded, either through raised levels of toxicity, or reduced levels of detoxification. For those individuals who have chronic health conditions (especially those with microbial infections) and those who consume alcohol regularly or to excess, or whose diet is mainly processed foods – these individuals may need a more structured cleanse as their toxin levels are likely high."

A person's dietary choices will play a key role in how 'toxic' we are.

"Too much exposure to things that either deplete the body's detoxification stores and/or affect how well the various detoxification organs work. Combined with not enough of the good stuff to restock the various stores and support or repair the elimination pathways," Swaine advised.

"The perfect storm is a combination of a nutrient poor diet (high in refined carbohydrates, highly processed foods, low in vitamins and minerals, low in fibre), exposure to heavy metals (eating large fish such as tuna or swordfish, food preparation or storage, mercury fillings, traffic fumes), diets high in anti-nutrients (alcohol, other stimulants, some medications), exposure to chemicals and environmental pollutants (pesticides, plastics, cleaning products, beauty products), stress (physical, emotional, work-related, environmental) and a sedentary lifestyle. If you have insulin resistance or are overweight on top, you should consider factoring those into your detox programme too (more on that later)."

And in terms of the benefits, Holmes highlighted many.

"Overall improved body functioning may be the result of a well-thought-out detox. This is because all body cells may function more optimally. As each cell improves function, so energy levels should improve. The results may include better concentration/focus, increased immune resilience, and fewer aches/reduced

pain, as well as less fatigue/more energy. There may be other benefits, such as weight (fat) loss, better mood, and clearer/brighter skin," she explained.

Barnes added: "There can be many beneficial effects to be gained from supporting the body with the nutrients it requires to aid detoxification processes in the body. Many report improvements to feelings of wellbeing, reduction in stress, increased energy, improved digestive function, decreased sensitivities to foods, chemicals and environmental pollutants, reduced pain levels, enhanced cognitive function, improved sleep, improved immunity, improved skin conditions, easier weight-loss and reduced pre-menstrual tension (PMT).

"Studies have revealed that exposure to and accumulation of toxins play a significant role in cardiovascular disease, early cognitive decline, diabetes and other chronic diseases,<sup>1</sup> so by taking meaningful steps to support your detoxification systems all year round, long-term health benefits are also likely."

She continued: "Some individuals are likely to see more benefit than others, for example, individuals who are or have been dependent on alcohol, drugs or exposed to high levels of toxins. These individuals would require a tailor-made detoxification process adapted to their individual needs and bodily processes to ensure toxins are removed from the body safely and in a controlled manner."

And Swaine continued: "Anything that can help give the body what it needs to rebalance itself. Lowering your exposure to toxins (from food, pharmaceuticals, alcohol, environmental pollutants etc), providing the body the building blocks it needs to detoxify the various substances (B vitamins, vitamin C, zinc, quality protein, to name but a few) and supporting the various routes to excretion (visits to the loo, sweating, via the breath) can all be useful strategies. All cleanses should include a wide variety of real whole foods, filtered water and some kind of exercise or movement at a minimum."

## CLEANSING PROTOCOL

"Detoxing should be considered a two-fold programme," Holmes advised. "It is equally about what should be removed, as well as what could be added. Adding a chlorophyll-rich barley grass juice extract, for example, and sufficient water, as well as exercise and dry skin brushing may encourage body detoxification. Removing sugar, alcohol, non-organic foods, processed foods and household and skincare products with 'nasties' can reduce exposure to toxins. Sources of toxin exposure should be discussed with clients so they understand where and how toxin exposure occurs and can take action to minimise these.

"It is also important to ensure the body is shifting any accumulated toxins out of the body. Ensuring optimum hydration and regular bowel movements and encouraging lymph movement (for example, by exercise) can help to naturally detox and cleanse the body, whilst reducing toxin exposure and including chlorophyll-rich drinks/foods can facilitate the detoxification process. The recommended protocol should outline main sources of toxins (for removal) alongside suggestions of replacement foods/skincare."



When looking in greater detail at the specific recommendations, Barnes highlighted the need to support liver function.

She explained: "Detoxification is a natural bodily function that is occurring all the time. The liver serves as the main detoxification organ in the body, but the liver alone cannot fulfil its detoxification role unless many other systems are also working effectively, namely the bowels, kidneys, lymphatic system and the skin.

"Therefore, when recommending a cleanse plan, it's important to ensure that all the detoxification organs are capable of effectively coping with the released toxins. Healing the gut should be prioritised as a leaky gut could lead to the released toxins being reabsorbed into the body. A slow bowel transit, can also mean that toxins are held in the body for longer, increasing the chance of them being reabsorbed. A cleanse plan should look to influence the specific detoxification pathways, including phase I cytochrome enzymes, phase II conjugation enzymes, antioxidant support systems, and metallothionein upregulation for heavy metal metabolism.<sup>5</sup>

Swaine also raised the issue of being overweight, and the effect this can have on a person's ability to detox.

"If you are overweight, losing fat is a useful goal as it can help on a couple of levels. Firstly, by burning fat for fuel, you can reduce your levels of visceral fat, which includes any that may



have been laid down around the liver. Resolving that can help the liver to do its job properly again. In addition, burning excess fat can give you a deeper detox as it can release toxins your body previously laid down with fat for safe keeping," she advised.

"As you strengthen your detoxification capabilities and burn this fat for fuel, those toxins can be released and recirculated to your now more effective liver to have another go at processing and elimination. As you can't burn fat when insulin is hanging around, if you have any insulin resistance, you need to work on resolving that too. A good starting point is during the day, reduce refined carbohydrate intake and create gaps between meals of around five hours, while reducing or eliminating snacking. Then overnight, aim for a 12 hour fast to help your body become sensitive to insulin once again. As a rather brilliant side benefit, this approach to eating should help reset your circadian rhythm, which, in turn, helps synchronise the various rhythms of your body, including your liver, meaning, quite simply, that your body is able to carry out various functions more easily, including detoxification."

Of course, removing caffeine will be part of an effective protocol, and replacing with herbal teas is to be recommended.

"It is essential to remind clients to drink sufficient water or herbal teas," Holmes advised, adding: "Swapping some common drinks like some deluxe coffee drinks, energy drinks, alcoholic drinks and soft drinks for herbal teas can also result in reduced consumption of milk, and elimination of any non-natural ingredients that might be found in these beverages."

"As well as not contributing to toxin-load, natural botanical teas may offer immune support (for example, cat's claw tea and pau d'arco tea), an energy boost (for example, yerba maté or guaraná teas) or other benefits (for example, high antioxidant content of graviola tea or liver/gallbladder support from the 'stonebreaker' tea, quebra pedra)."

Bear in mind too that a detox extends beyond what you put in your body – consideration must be made when it comes to lifestyle.



"The first step to naturally detox and cleanse the body involves reducing your toxic load, such as eliminating food intolerances, food additives, alcohol, smoking, avoiding pollution, pesticides, swapping to organic, filtering tap water and swapping to natural cosmetics, toiletries and cleaning products, whilst also avoiding stress and strenuous exercise," Barnes advised.

"The next step is to support the body's barrier defences, importantly, our stomach acid and intestinal lining using digestive enzymes, live bacteria supplements or fermented foods, prebiotics and bone broth. The final stage is to increase nutrients and fibre predominantly from fruits and vegetables, increase water intake and potentially supplements that can support the body's detoxification systems. Alongside these steps, there are other lifestyle tips, such as exercise, especially sweat inducing exercise, such as running or cycling, having regular saunas, deep tissue massage, getting seven-nine hours' sleep each night and getting outside as much as possible."

Holmes added: "Non-organic foods and processed foods generally contribute to toxin load, as can ingredients in products placed on the skin. Many skincare and household cleaning products contain ingredients that contribute to toxin load. Choosing natural botanical skincare can reduce exposure to chemicals too. Look for natural oils (like rosehip seed oil), which moisturise, nourish, protect and regenerate. In addition to looking for what is included in skincare products, consider what is excluded. Look for product ranges that have no nasties (for example, SLS, PEGs, DEA, TEA, and parabens) as these may negatively impact both skin and whole-body health."

And Swaine concluded: "Get moving. Walking, yoga, the gym, swimming, badminton or whatever works for you. Movement matters when it comes to detoxification as it keeps things moving in your gut, your lymph and more – get sweating. Yes, that could mean more exercise. Or you could try saunas or something else that makes you sweat. The skin is our largest organ and a useful part of our detox line-up."





## KEY NUTRIENTS

Exploring the correct protocol further, there are key nutrients needed to support a cleanse and to allow the body to effectively detox.

"The main food category for detoxification and cleansing will be fruit and vegetables as these foods are high in antioxidants, phytochemicals, fibre and many vitamins and minerals required for detoxification processes in the body. Aim to eat at least seven portions of vegetables and two fruits from a variety of different colours. Fruits such as grapefruit, lemons and oranges contain limonene, an important phytochemical that supports liver detoxification," Barnes explained.

"Cruciferous vegetables such as broccoli, cauliflower, Brussel sprouts, kale and cabbage are particularly beneficial for liver detoxification. Allium vegetables, which include onions, leeks and garlic, are also important to support liver function. Green tea, turmeric, dandelion, watercress and rosemary have all shown to help detoxification pathways in the liver so would be useful to include in the diet during a detoxification cleanse."

Holmes highlighted barley grass, commenting: "Daily support for detoxification can help the body to function more optimally. A well-thought out detox that includes daily support via a chlorophyll-rich drink can increase energy and resilience. Other benefits may include improved capacity to fight off seasonal colds and 'flu, clearer thinking and clearer skin. Weight loss may be facilitated as well since toxins store in fat tissue."

Swaine continued: "Pack in maximum nutrition per gram by eating a mostly real, wholefoods diet full of variety and colour. When it comes to fruit and veg, eat the



rainbow. For extra punch, top up meals and drinks with nature's nutrient powerhouses – herbs, spices, and tea."

No cleansing plan would be effective without placing attention on the gut, as Barnes highlighted.

She explained: "One of the largest detoxification components of the body (and often the most overlooked) is the trillions of bacteria found in the digestive tract. Certain strains of gut bacteria have shown to bind to toxins and heavy metals from food and water.<sup>6</sup> For example, certain strains have been found to bind to heavy metals such as cadmium and lead at the levels commonly found in foods.<sup>6,7</sup>

"Our gut microbes are also important for ensuring healthy regular bowel movements, which is essential in any detox programme given that many waste products including toxins are removed from the body in our stools. They also play a role in helping to support intestinal barrier function,<sup>8</sup> and the gut-liver axis<sup>9</sup> by reducing levels of circulating lipopolysaccharides. Therefore, supporting a healthy microbial balance through the use of fermented foods and live bacteria supplements is recommended.

"Increasing fibre and water in the diet is very important to ensure the removal of toxins through the bowel. Taking a high fibre supplement within a detoxification plan is often recommended. This could be soaked flaxseeds added to porridge in the morning or psyllium husk, which is a gentle water retentive fibre, helping to bulk and soften the stool and assisting gut transit."

Swaine continued: "Having balanced gut bacteria, being good at digesting, absorbing and utilising food and regular trips to the bathroom are also key tenants underpinning your body's ability to detoxify so factor these into your plan as needed."

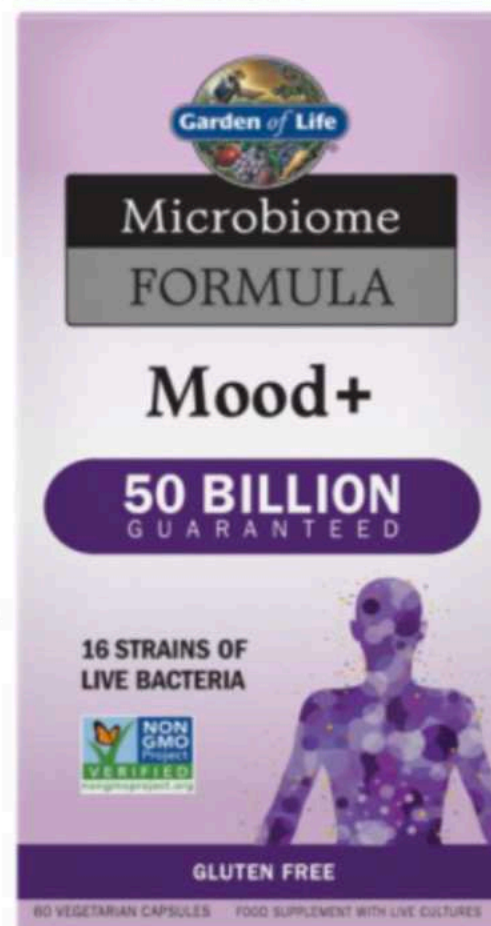




## Dr Formulated Microbiome Formula

Garden of Life Microbiome Formula Mood+ 50 Billion CFU is a unique doctor formulated probiotic formula made with over 70% organic ingredients. Featuring clinically studied strains to support mood, *L. helveticus* R0052 and *B. longum* R0175, 350mg of organic ashwagandha and organic Alaskan blueberries for stress management, and acacia prebiotic fibre. Non-GMO Project Verified, vegetarian and gluten-free, with a shelf-stable promise. All products are also resistant to stomach acid and bile, ensuring proper arrival and activation in the intestines.

Website: [www.kinetic4health.co.uk](http://www.kinetic4health.co.uk)



## NHP - Vegan Approved Premium Supplements

The Vegan Society approved\* range of premium vitamins, minerals and herbs from the Natural Health Practice have all been formulated in association with Dr Marilyn Glenville PHD, the UK's leading nutritionist specialising in female health.

With the emphasis always being on the use of quality, clean and natural ingredients, the NHP range is respected for its formulation values and is totally free from gluten, yeast and dairy products.

Additionally registered with the Vegetarian\* society, the NHP range is also Halal and Kosher certified.

[trade@naturalhealthpractice.com](mailto:trade@naturalhealthpractice.com)

\* Excluding Omega 3 Support  
[www.naturalhealthpractice.com](http://www.naturalhealthpractice.com)



## Organic Amla Blend



Surya Prana Nutrition's Organic Amla Blend has been specially formulated by Kay Katwa, a Nutritional Therapist, for those who are looking for a natural, organic Vitamin C supplement.

This is an organic formulation which synergistically blends Amla, blueberries, rose hips, lemon peel and black pepper,

to provide a wonderful blend of antioxidants.

Each glass bottle contains 60 vegan capsules and each capsule typically provides: 300mg Organic Amla, 200mg Organic Blueberry, 20mg Organic Rosehip, 15mg Organic Lemon Peel and 2mg Organic Black Pepper.

No binders, fillers, artificial colours, preservatives or flavourings.

Available at Natural dispensary. For more information please contact [kay@suryaprananutrition.co.uk](mailto:kay@suryaprananutrition.co.uk)

**CNM** COLLEGE OF  
NATUROPATHIC  
MEDICINE IN CLASS & ONLINE

Training Successful Health Coaches

## Health Coach

*Do Something Life-Changing*

- Improve Your Health
- Change Career
- Help others



01342 410 505

[thehealthcoach.com](http://thehealthcoach.com)

**ANP** Association of  
Naturopathic  
Practitioners

SUPPORTING PRACTITIONERS



**Who can join?** ■ Nutritional Therapists ■ Herbalists  
■ Acupuncturists ■ Homeopaths ■ Natural Chefs

[www.theanp.co.uk](http://www.theanp.co.uk) [info@theanp.co.uk](mailto:info@theanp.co.uk) 0203 319 9315





# Vegan nutrition explored

The vegan trend has taken the UK by storm, with some 400,000 people taking part in this year's Veganuary campaign alone. But amid this growing trend, is there a lack of awareness when it comes to nutritional needs for those following a plant-based diet?



**W**e have never seen more people turning to vegan eating, whether it's simply cutting their animal consumption or going the whole way and following a totally plant-based diet. We know there are many accepted benefits to this, including being better for the environment, for animal welfare, not to mention in many respects, being good for our health.

But with all the hype surrounding veganism, and all the discussion around the benefits, is there a danger that we are losing the important messages around ensuring you are following a healthy and balanced diet, especially with regard to certain nutrients that can be lost by eating plant-based?

In terms of putting into context why vegans can be at greater risk of deficiency, Keeley Berry, Nutritional Expert and Product Developer at BetterYou, explained: "Research has found that 10 per cent of vegans have optimal levels of vitamin D compared to 78 per cent of omnivores. This is because the best food sources of this vital vitamin come from animal products, such as beef, eggs and cheese, as well as fish, so it's important to monitor levels as vegans are more likely to require support in topping up their levels.

"Similarly, studies have shown that plant-based diets can pose an elevated risk of iodine deficiency. This is because the amount of iodine found in vegan foods, such as cereals and grains, is inconsistent and depends on how much iodine is in the soil the plant is grown in."

## NUTRIENTS OF IMPORTANCE

There are some key nutrients that we all require for good health (some more than others), which can be at risk of being lost or being in too low levels for those following a vegan diet. Therefore, educating your clients on this before they start is absolutely imperative.

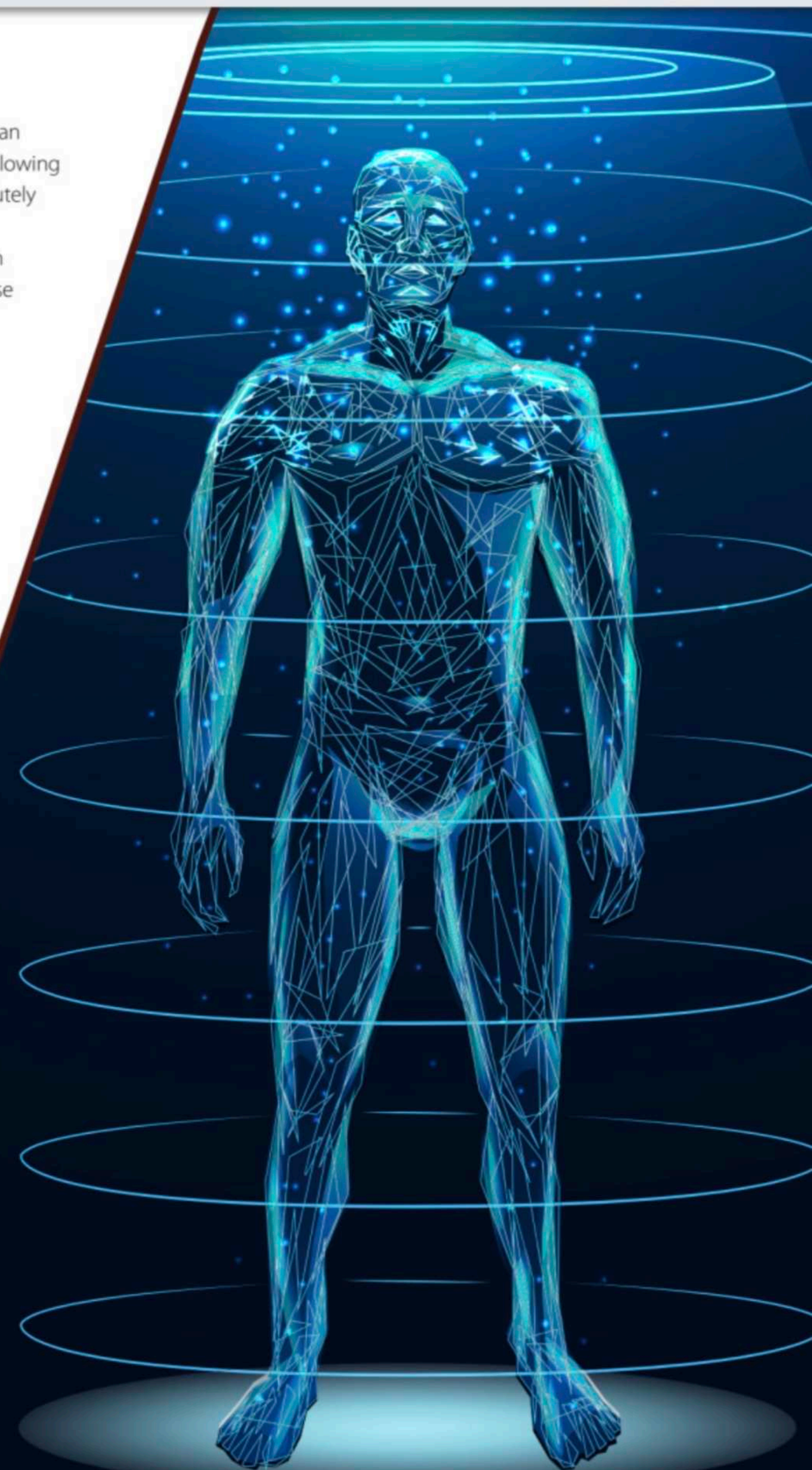
"The risk of B12, iron, iodine, calcium, fatty acids and vitamin D deficiency can be increased for those following a plant-based diet, as meaningful levels of these nutrients are often found in animal-based products," advised Berry.

"When following a vegan diet, people should try to substitute foods where possible, ensuring that their diet has the equivalent nutritional value as before animal products were removed. It can be difficult to maintain nutrient levels through diet alone, so vegans and non-vegans alike will have additional requirements that need to be elevated from other non-food sources. Consuming fortified plant-based milk everyday will help to give those following a plant-based diet a daily top-up of calcium, vitamin D and B12 – with just one cup-full providing on average 35 per cent of the NRV. Also, vegetable and plant oils such as hemp seed oil and chia seeds are great sources of fatty acids, so upping intakes of these will help to support good health."

Egzona Makolli BSc Hons., MSc, ANutr, founder of the Lyfe Roots supplement brand, agreed, commenting: "Well-planned vegan diets can be adequate in nutrition needs but some nutrients should be supplemented, such as vitamin B12, vitamin D and omega 3 fatty acids as these are quite difficult to obtain through vegan dietary intake. A good multivitamin can be beneficial to prevent any other nutrient deficiency, with a good algae omega 3 supplement to provide an adequate amount of omega 3 fatty acids."

Being aware of the potential signs of deficiency among clients following a plant-based diet is key, with Berry explaining: "Low levels of vitamin D can manifest as low mood, headaches and aches and pains, to name a few, and as these symptoms are not exclusive to vitamin D deficiency, it's not surprising that vegans may not attribute these to a deficiency and test their levels.

"Symptoms of a vitamin B12 deficiency may present as continual tiredness, confusion and mood swings, while signs of low iron levels include fatigue, shortness of breath and pale skin. If you have an





iodine deficiency, you will often experience unexpected weight gain, fatigue and dry, flaky skin."

She continued: "It's evident that each deficiency can present a variety of symptoms, which are not necessarily obvious to why they may occur, so if vegans experience any unusual symptoms or begin to suffer with any of the obvious signs above, I would recommend that they visit their GP or test their nutrient levels using an at-home test kit."

And Berry went on to reiterate the importance of food education, as opposed to clients turning to supplements without following a balanced diet.

She advised: "I truly advocate a food-first approach and would encourage those following a plant-based diet to try and obtain as many nutrients as possible through diet before looking for nutritional support. However, modern diet and pressured lifestyles mean that our nutrient intake is drastically lower than ever before. Western diets, which contain processed foods and refined grains, combined with over-farming and increased pollution (which has led to farmland and seas no longer providing the level of nutrition our ancestors enjoyed) means that supplementation of some nutrients including iron, iodine, vitamin D and B12 has become essential.

"Before supplementing, it's important to understand baseline nutrient levels to determine how much nutritional support may be required. For this reason, I advise that people test their levels by either visiting their GP or by using a simple at-home test kit, which are available for nutrients such as vitamins D and B12, as well as iron."

Over the following pages, the experts highlight the most important nutrients to recommend to your clients.

## IRON

Hugely important as a consideration, especially among menstruating women, who generally have a higher requirement.

"Predominantly found in animal-based products such as red meat, iron is vital for combatting tiredness and fatigue due to its support in transporting oxygen throughout the body," Berry explained.

And being aware of barriers to absorption is vital for vegans.

Berry continued: "The iron found in meat products is the most absorbable form of iron available, so whilst vegans consume similar amounts of iron as omnivores, the absorption issues of plant-based iron means that sufficiency should be prioritised, and vegans should look to sustain iron levels from other sources, such as a supplement.

"Research advises that iron intakes for those following a plant-based diet should be increased by 80 per cent, so that adult males and females achieve a recommended intake of 14mg per day and 33mg per day respectively, to account for the absorption issues of plant-based iron sources."







## B VITAMINS

Most crucial of the B vitamins for vegans is B12.

"One of the most important nutrients to consider is vitamin B12 as current science shows that anyone can be low in vitamin B12, but vegans and vegetarians are at a higher risk. Vitamin B12 is essential to many bodily processes and too little can cause symptoms in the long-term but short-term, little symptoms appear. Several studies have shown that vegetarians and vegans are at high risk of vitamin B12 deficiency (Pawlak et al., 2014)," Makolli advised. "As vitamin B12 is commonly found in animal products and fortified foods which are removed in a vegan-based diet, the main source of intake would be fortified foods."

"The current way to prevent any vitamin B12 deficiency is to consume vitamin B12 fortified food or take a B12 supplement as, whilst some plant-based foods contain vitamin B12, current evidence does not show how adequately this is absorbed in humans. It is also important to know that vitamin B12 is shown to be absorbed in smaller doses, and this is why it's important to ensure that foods fortified with vitamin B12 are added to daily intake, such as vegan spreads, breakfast cereals, yeast extract and fortified milks. It's essential to add fortified vegan products such as cereals, milks, breads, soy-based products and tempeh, which can contain an adequate amount of vitamin B12."

Berry went on: "Like iron, meaningful levels of vitamin B12 are only found in meat, fish and some dairy products and unlike some B vitamins, B12 is not found in any plant food other than fortified cereals – so this makes it difficult for those following a plant-based diet to get the necessary amount. Vegetarians and vegans can often be deficient in this energy-boosting nutrient and a research review has suggested that vegans should consume 6µg of supplemental B12 per day."





## VITAMIN D

We must also not forget about vitamin D, with deficiency posing some very real health concerns.

"Vitamin D another essential vitamin which plays a key role in multi bodily processes and is obtained through sun exposure and very few foods contain vitamin D naturally. Vegan diets are unable to maintain normal blood levels through fortified foods and sun exposure, so it is beneficial to consider taking a supplement," Makolli explained.

"Vitamin D3 is commonly found in animal sources, such as fatty fish, and obtained from sunlight exposure, with little intake through winter months. As a general rule, it is recommended to supplement with vitamin D for the whole public, not just vegan-based intake."

Berry also advised to check on the form of supplement vegans are taking, with vitamin D used as an example.

"Many traditional supplementation methods, such as tablets and capsules, often use fillers such as magnesium stearate to bulk out their formulations – this comes from the fatty acid, stearic acid, which can be sourced from animals and fish. Another example of this is caprylic acid and while there are vegetable sources of this such as coconut oil, this filler ingredient can come from animal milk, so it's important that those following a plant-based diet thoroughly check the ingredients listed on any supplement they intend to use," she explained.

"This is also relevant when looking at vitamin D supplements. As mentioned, vitamin D is an incredibly important nutrient for vegans and while the D3 form of the vitamin is far superior to the D2 form, the majority of vitamin D3 comes from the lanolin contained in sheep wool. There are vegan-friendly versions available that come from a lichen source, so again, I would recommend that people are vigilant when purchasing health supplements."

## OTHER CONSIDERATIONS

The experts also advise you as Nutritional Therapists to keep in mind the following when offering support to vegan clients:

■ **Iodine:** Makolli advised: "Iodine is another nutrient which vegans are considered at risk as current studies show that vegans have up to 50 per cent lower blood iodine compared to vegetarians (Leung et al., 2011). As iodine levels found in plant foods vary on the content of soil grown in, foods high in iodine include seafood, dairy products and seaweed. Vegans who do not consume an adequate amount of these foods may consider taking an iodine supplement." Berry added: "Overall, the best naturally-rich iodine sources are dairy products and seafood – so supplementing is likely to be the best way to ensure optimal levels of iodine are maintained."

■ **Essential fats:** Given the most common route for people to obtain these is through oily fish, a lot of thought needs to be put into consuming foods that are plant-based but still rich sources. "Omega 3 fatty acids are essential for cellular functions and can commonly be found in fatty fish. Vegan-based alternatives can be found in flax seeds, chia seeds and walnuts, but it is unknown how successful the conversion of ALA (vegan source) to DHA (fish source) is, so it can be beneficial for a supplementation of algae oil which provides the DHA form," Makolli advised.

Consider how a client may absorb it too and what type of supplement to recommend.

"Supplementing using an oral spray is an ideal way to support optimal health, providing an effective and convenient alternative to traditional tablets and capsules. Helping to plug any nutritional gaps left from following a plant-based diet, intra-oral spray technology also overcomes any digestive absorption issues, delivering nutrients into the body in meaningful quantities," Berry pointed out.





# PERSONALISED NUTRITION ON A WHOLE NEW LEVEL.

*Have you considered integrating personalised nutrition into your practice?*

## DO YOU HAVE CLIENTS THAT STRUGGLE TO REACH WEIGHT LOSS AND HEALTH GOALS NO MATTER HOW HARD THEY TRY?

We offer an in-depth 1-Day Training Program to learn the science of epigenetics and fingerprint reading.

In this training program we complete your own SWAMI personal profile.

Our team will continue to support you with further product training, client referrals and marketing materials.

In return, you'll get to grow your business and earn additional income, all while offering your clients the very best in personalised nutrition.

*For training dates or more information please contact us:*  
[www.sowhatami.co.uk](http://www.sowhatami.co.uk) | 01778 428676 | [info@geneliving.eu](mailto:info@geneliving.eu)



## Full spectrum CBD oil

Available in strengths of 5%, 10%, 15% & 20%

## Nanotized CBD oils & e-liquids

For the highest and best bioavailability and absorption of all oils on the market

## Potency creates value

More actual CBD per millilitre

**#LOVE YOUR LIFE**

**GET 20% OFF** your next online purchase with code **IMAG20**



For our  
full line of  
products visit  
**ULU.com**





# Guide to CBD – a discussion

CBD products have grown to prominence in recent years. But how should Nutritional Therapists approach their application in clinic? And what can we expect from a regulatory perspective. Here, we have gathered a panel of industry experts to discuss the current situation.



**T**he global cannabidiol market is big business and showing no signs of slowing. Once a niche product area, variants of CBD products can be found in all kinds of outlets these days.

According to Hemp Industry Daily, sales are projected to grow from approximately \$1.2bn in 2019 to \$10.3bn by 2024, a five-year compound annual growth rate of 54 per cent.

But with such huge growth, especially into the mainstream, is there still a role to be played for Nutritional Therapists to recommend CBD products? And what standards should be adhered to when recommending any CBD?

And with the news from the Food Standards Agency that suppliers will have until March 31, 2021, to apply for Novel Food status, the market is constantly changing and evolving.

## The Panel

- Rose Holmes, Nutritionist, BSc, Dip.ION, PGCE, MBANT, Education and Training Manager at Rio Health.
- Claudia le Feuvre, Nutritional Therapist and Co-founder of Mighty Green.
- Ollie Briggs, founder of Healthstrong
- Carlo Buckley, Managing Director at CBDfx
- George Kruis, CO-founder, fourfiveCBD







## What is the definition of CBD?

**Rose Holmes (RH):** Cannabidiol (CBD) is a phytocannabinoid (plant cannabinoid) thought to provide benefit to our body's own cannabinoid system, the endocannabinoid system, which is believed to be responsible for balancing other body systems. The endocannabinoid system has receptors in every cell and system of the body. Dysfunction of this system is thought to play a role in many chronic illnesses. CBD oil comes from *Cannabis sativa*, the same plant from which both marijuana and hemp come from. But whereas plants bred for use as marijuana contain high amounts of tetrahydrocannabinol (THC), a constituent with psychoactive properties, hemp is naturally high in CBD, which has no psychoactive properties and is believed to activate different receptors involved in immune health and pain perception. CBD is believed to work synergistically with the other, and there are more than 500 active constituents, including cannabinol (CBN), cannabigerol (CBG) and cannabichromene (CBC) in *Cannabis sativa*. Endocannabinoids are signalling lipids produced by the human body that activate cannabinoid receptors. These receptors are found throughout the body, embedded in cell membranes. There are currently two recognised types of cannabinoid receptor: CB1 (found primarily in the brain and nervous

system), and CB2 (found primarily in the immune system). CB1 receptors have been shown to regulate appetite and metabolism, have a role in motor control and modulate pain. CB2 receptors associate with immune system and function.

**Ollie Briggs (OB):** CBD stands for cannabidiol, just one of the many compounds found in the cannabis plant. CBD oil is extracted from hemp (*Cannabis sativa L.*), which is high in CBD content (and lower in THC, the psychoactive compound found in recreational cannabis).

**Carlo Buckley (CB):** CBD stands for cannabidiol, a non-psychoactive cannabinoid found naturally in the hemp plant. CBD stimulates the body's production of natural endocannabinoids that bind to receptors in the endocannabinoid system, resulting in anti-inflammatory and neuromodulatory effects throughout the body.

**George Kruis (GK):** Cannabidiol (CBD) is a chemical compound found in the cannabis or hemp plant. CBD is just one of many (over 100) different cannabinoids and can sometimes be confused with THC, the naturally occurring but psychoactive component of the cannabis plant. CBD itself has no psychoactive properties and all of our CBD is obtained from hemp plants low in THC.



## Q Why has CBD come to prominence so much in recent years?

**RH:** Although the *Cannabis sativa* plant has been recognised for its beneficial effects for hundreds of years, its use has been restricted as a drug in the UK since 1928. Medical use of cannabis under prescription was legalised in 2018 and CBD oil is legal throughout the UK. Its legalisation was highly debated, and this may have contributed to its prominence today. A common misperception and/or concern regarding CBD oil relates to its botanical association with marijuana. Remember that *Cannabis sativa* is also the source of hemp oil, an oil with known health benefits and with no psychoactive properties. CBD oil comes from hemp plants. Hemp has very low levels of THC, unlike marijuana, which has levels of THC and is considered psychoactive. CBD is non-psychoactive and entirely legal. There is also a rapidly increasing number of CBD products and product types/formats available. Today, CBD oil can be found on the high street and in food products, as well as being offered by a number of established supplement companies. Ongoing research, particularly by Israel, a leading country in cannabis research and development, indicates new discoveries.


**Claudia le Feuvre (CIF):** The rise of CBD has been fuelled by consumer demand, with health practitioners and the medical community catching up to understand the mechanisms of what it is and how it works. According to a YouGov survey in June 2019 last year, six million Britons have used CBD in the previous 12 months

**OB:** There are studies from decades ago into the benefits of CBD, however, it was only after Geoffrey Guy, at GW Pharmaceuticals, began to extract cannabis for medicinal purposes (late '90s/early 2000s) that it started to make news. It became popular in the U.S, the rest of the world caught on and when the US Farm Bill was relaxed in 2018, it boomed. Earlier stories of how CBD/medical cannabis was helping children such as Charlotte (Charlotte's web) and then more recently, Billy Caldwell in the UK also brought it into the spotlight. It does not have any demographics, so no matter what age or health condition, users have opened up to trying it for themselves.





## Q In terms of uses, what areas do you consider well-established where people find benefit?



**RH:** In addition to its recommendation for epilepsy, CBD oil has well-established benefit for several common health issues. Practitioners often suggest CBD oil for individuals who are anxious, in pain or to aid sleep. Since anxiety and pain are common health issues, CBD oil may prove a useful adjunct to many health protocols and is often used also for 'everyday' anxieties, such as public speaking. Whilst pain (for example, in arthritis) is a common health issue for which CBD oil may be recommended, CBD oil has also shown benefit for mental health issues such as depression and neurodegeneration. According to the US PATENT (mentioned on final page) entitled 'Cannabinoids as antioxidants and neuroprotectants', CBD oil may be useful for

Alzheimer's disease, Parkinson's disease, HIV dementia, and any condition for which antioxidants may benefit, including healthy ageing.

**CIF:** The practitioners we work with mostly prescribe CBD to manage insomnia, pain, stress, anxiety and depression. I believe this is a very exciting addition to our Nutritional Therapy toolkit.

**GK:** With over six million people using CBD-based products last year in the UK alone, it is clear there is a large market for CBD and what it is used for. Currently, there is a mass of anecdotal evidence for CBD and with the relaxation of laws around cannabis across the world, there is more and more research around CBD and cannabis. As a CBD company, we are classified as a food supplement company and therefore cannot make any medical claims around the use of CBD. CBD interacts with your body's endocannabinoid system, which is made up of CB1 and CB2 receptors located throughout the body. As a result, CBD is able to be absorbed transdermally, as well as via digestion and sublingual absorption. We do advise that if taking CBD oil by mouth spray then you should avoid drinking anything for 10 minutes either side of taking the oil so that it has the best chance of absorption. When taking capsules, we would recommend taking it with food, preferably healthy fats, as this increases the bioavailability of the product.



## Q Looking at recommending a CBD product, what are the most important factors to take into account to ensure quality, safety and efficacy?

**RH:** Look for where a product which contains only the CBD oil and protective antioxidant (such as vitamin E). Look for companies which can tell you from where their CBD is sourced. Products can be classified in a number of ways, including by extraction process. Whereas CBD isolate is pure CBD extracted from the hemp plant, then isolated from other cannabinoids, full-spectrum CBD is extracted along with other cannabinoids naturally present in the hemp plant. Broad-spectrum CBD is a mix between CBD isolate and full-spectrum CBD. The extraction method is also important, with CO2 extraction considered the gold standard as it doesn't involve use of chemical solvents and better preserves the CBD and other compounds. Raw CBD oil undergoes no further processing or filtration once extracted from the hemp plant. Raw CBD oils are green and thick, packed with plant compounds and cannabinoids. The various compounds act synergistically to magnify therapeutic benefit – this effect is known as the 'entourage effect'. Decarboxylation is a process used to 'activate' the chemical compounds in cannabis so that these may have use by the body, improving therapeutic potential. The decarboxylation technique involves controlling the temperature and increases the potency of the herb. Removing the carboxyl group (decarboxylating) CBDA results in CBD, which is more easily absorbed by the body.

**CIF:** Not all CBD is equal. Ask for lab reports; reputable companies should have these

easily accessible online. Check that each batch is independently tested, check that there is a good blend of various cannabinoids (not just CBD) as the cannabinoids work synergistically and check that THC (the psycho active component) is well below 0.2 per cent. Consider the carrier oil. This greatly affects the user experience and bioavailability of CBD.

**OB:** It is such a minefield, it's essential to use a company or brand that you trust. Find out about how the hemp is grown, extraction method and testing. The World Health Organization has classified it as safe, I just think it's important that users get what is being advertised on the bottle – it's not a miracle cure that some claim it to be but you give yourself the best chance of success if it's a good quality oil. Not all CBD oil is created equal.

**CB:** Firstly, it's important to know that the hemp itself has been grown in an environment free from pesticides, heavy metals and chemicals. Secondly, extensive lab results are critical, and these should be easily and freely available for each manufacturing batch. We have QR codes on the back of our packs where consumers can scan them and directly access our certificates of analysis that not only show the cannabinoid content, the absence of THC but also that the products are free from pesticides, heavy metals, mycotoxins etc. Thirdly, buy products that use broad spectrum hemp extract. That way you benefit from all of the other beneficial cannabinoids, terpenes, and essential oils found in the hemp plant, not just CBD. This is known as the 'entourage effect' and makes the products more efficacious.

**GK:** Look for companies that promote good practice, provide practical advice and who work with the regulatory industry bodies. Check to see if they provide third party lab reports of their products and if product information is readily available and easy to understand. CBD products in the UK must contain less than 0.2 per cent THC by law and we are proud that our product range includes a zero per cent THC CBD oil, in addition to a Banned Substance Control Group tested muscle rub.





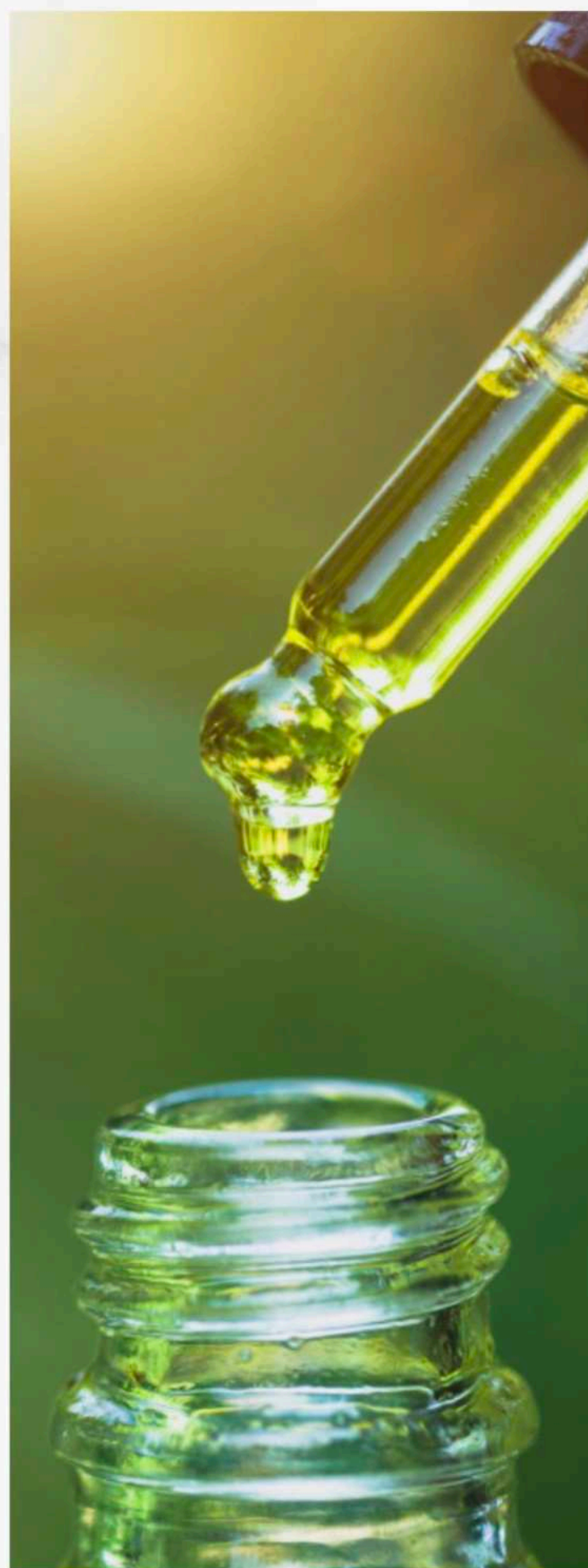
## Q Different percentages and amounts are often on labels – can you explain how it works and the levels to be recommended?

**CIF:** Here is The Mighty Green Protocol to prescribing CBD in your practice, which has been developed by Nutritional Therapists, for Nutritional Therapists: Understand CBD mgs – CBD packaging can seem confusing with various percentages and total mgs. The key is to know how many mg of CBD are in each drop so you can be very precise – 2% 200mg equates to 1mg CBD per drop, 5% 500mg equates to 2.5mg CBD per drop, 10% 1000mg equates to 5mg CBD per drop and 20% 2000mg equates to 10mg CBD per drop; how to take CBD – CBD is best consumed sub-lingually. Encourage clients to hold the oil there as long as they can; start low and go slow – we want to slowly activate the endocannabinoid system (ECS). Some people may notice improvements immediately, others may take 10 days for the ECS to 'wake up'.

**OB:** It is advised to display the amount of CBD in milligrams, the universal unit for all CBD products, which might be accompanied with a percentage from the CBD provider, in which case it would be fine. If you only see a percentage, it could be a concern as it does not always illustrate how much CBD is in the bottle. For instance, if you see 300mg,

you are getting 300mg within the bottle, irrespective of size (could be 10m, 20ml etc). If you see 3%, this does not mean 300mg. In terms of levels, this is very different for each user. Typically, start on a lower dosage and build up, the MHRA advise not to exceed 200mg/day.

**CB:** We prefer not to refer to percentages, as these can be confusing for consumers, particularly those that are new to CBD. A percentage is a relative number and when dosing CBD, it's important to know the milligrams per dose. We therefore stick to milligrams per unit (bottle, jar etc.) and clearly state this on the front of the package. We also state the milligrams per recommended dose on the back of pack. For example, our tinctures/oils come in 500mg, 1000mg and 1500mg strengths per 30ml bottle. We advise starting with the lowest strength tincture/oil and moving to stronger strengths if you need more than one pipette full (one millilitre) per day for the desired result. An individual's reaction to CBD will be influenced by many factors, including their size and weight so there's no one sized fits all recommendation. Usually, it will take a couple of weeks of trial to get to the optimum therapeutic dose for an individual.



## Q From a regulatory perspective, is it an area that needs greater regulation?

**OB:** It's a food supplement so you'd have to apply it industry wide, which won't happen. The on/off discussions are novel food status, which would then require assessment and authorisation under Novel Foods regulations. Brands should be refraining from making any health claims (social media, marketing, packaging etc), labelling correctly and having each batch/product independently tested.

**CB:** Personally, we think that the current level of regulation is the right level. Brands should ensure their products are manufactured to the highest industry standards and obtain the relevant certifications. The laboratories that they use to test their products should have the necessary experience in testing cannabis products and again, have the required quality certifications. Brands should ensure they have packaging that is fully compliant with UK/EU regulations and they should

also make sure they are not making any unapproved health or medicinal claims.

**GK:** We are very keen to see tighter regulation in the industry. Our mission from the start has been to create a CBD brand that offers premium quality products in addition to education, clarity and honesty. It's important to us that our customers know exactly what they are taking, which is why we provide seed to shelf traceability. Unfortunately, the truth is there are currently sub-standard products available which gives the whole industry a bad name. Greater regulation would enable the brands with real integrity to take hold of the market. We work closely with regulatory bodies in the CBD industry and are constantly working to stay ahead of legislation changes which may come into action. Clarity of information is absolutely paramount, in addition to quality products with endorsement and traceability.







# MIGHTY GREEN



For practitioners, **by practitioners**  
Register with us today: [mightygreen.co.uk/pro](https://mightygreen.co.uk/pro)

- Highest quality CBD products
- Practitioner discount
- Commission on client purchases
- Education & support
- **FREE** eBook
- **FREE** CBD dosage & symptom tracker

[www.mightygreen.co.uk/pro](https://www.mightygreen.co.uk/pro) | [www.mightygreen.co.uk](https://www.mightygreen.co.uk) | [support@mightygreen.co.uk](mailto:support@mightygreen.co.uk)



INSTITUTE OF  
HEALTH SCIENCES

## Certificate in Health and Wellness Coaching

- ✓ Build knowledge and skills in evidence-based behavioural change strategies
- ✓ Broaden your client base
- ✓ Improve client compliance and success



# Waterfall D-Mannose®

The Award Winning Bladder Supplement  
with Dedicated Customer Support.



*...it's trustworthy, simple and effective. I really don't know what I would have done if I hadn't of found this product!...*

**Rosie**



★ Trustpilot

*Being able to tackle these intimate problems yourself with a natural product like this is very reassuring and empowering.*

**Patricia**



★ Trustpilot

Sweet Cures has over 17 years' experience in the supply and distribution of glyconutrients. Please visit our website to see our full range of supplements, probiotics and testing kits.



[sweet-cures.com](https://sweet-cures.com)  
01904 789559

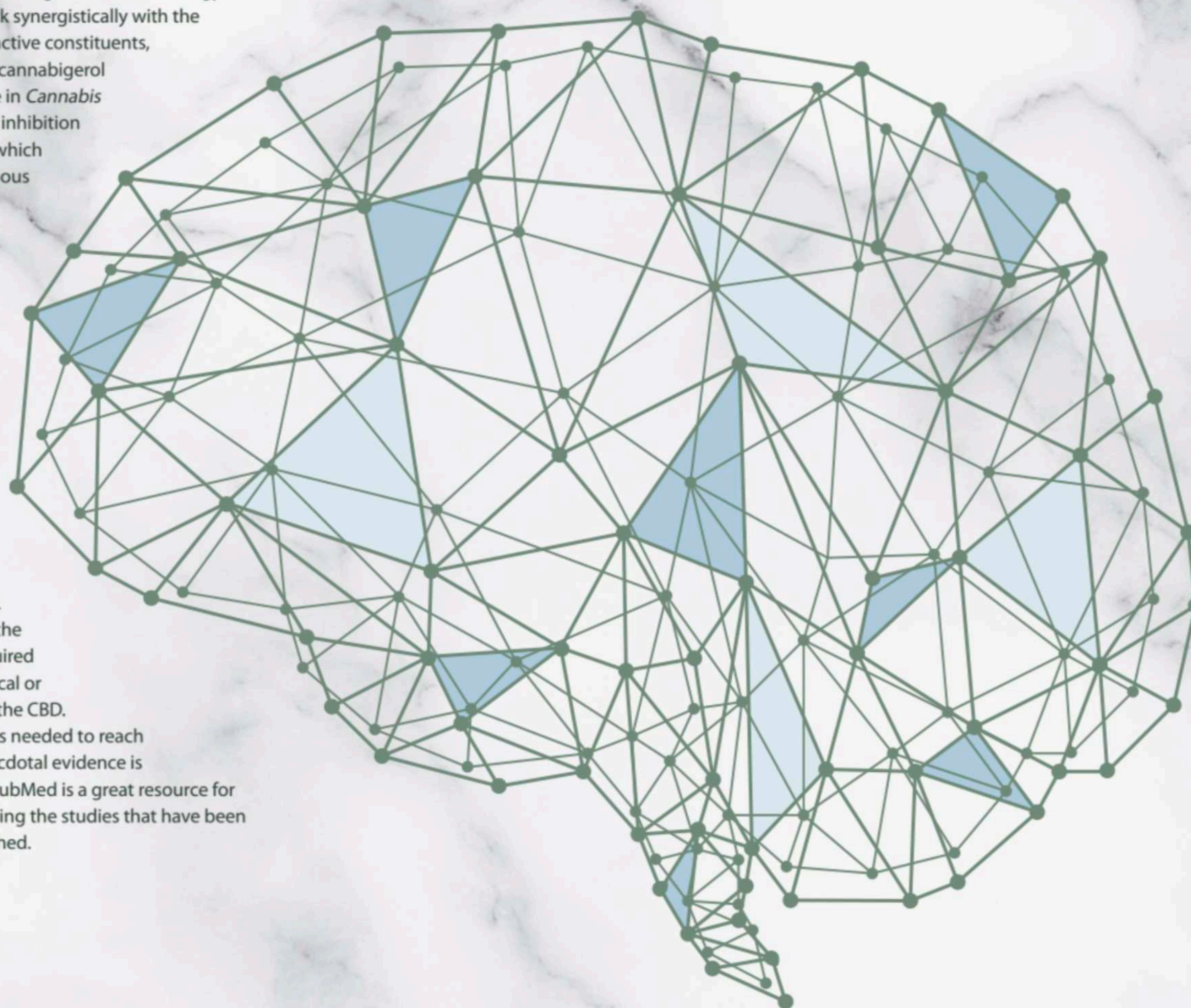


## Q Can you highlight research around CBD that is supporting its use?

**RH:** The U.S Government has a patent (US6630507B1) entitled 'Cannabinoids as antioxidants and neuroprotectants', which suggests its use in limiting neurological damage following stroke and trauma, and in the treatment of neurodegenerative disease, such as Alzheimer's disease (AD), Parkinson's disease (PD) and HIV dementia. The patent further states: 'Non-psychoactive cannabinoids, such as cannabidiol, are particularly advantageous to use because they avoid toxicity... (even) at high doses.' Immune cells can synthesise endocannabinoids and can be influenced by cannabinoid analogues. Cannabinoids can modulate immune reactions in the brain, with a role in the balance between neuroinflammation and neurodegeneration.<sup>1</sup> Evidence also indicates interplay between the endocannabinoid system, the immune system and neural stem/progenitor cells (which contribute to brain plasticity) repromotion of brain self-repair.<sup>2</sup> Cannabinoids are neuroprotective by preventing beta-amyloid-induced microglial activation and CBD is able to modulate microglial cell function and induce beneficial effects in an in vivo model of Alzheimer's disease.<sup>3</sup> Dysregulation of the endocannabinoid system occurs in Parkinson's disease and CB2 receptors in the human substantia nigra were found to be lower in PD patients, indicating levels may serve as a biomarker for this neurodegenerative disease.<sup>4</sup> The endocannabinoid system is altered in multiple sclerosis (MS) and the main effects of the endocannabinoid system in neuroinflammatory diseases, including MS, AD, PD, Huntington's disease and ALS are discussed in a

2018 study published in *Progress in Neurobiology*.<sup>6</sup> CBD is believed to work synergistically with the other, more than 500 active constituents, including cannabiol, cannabigerol and canabinchromene in *Cannabis sativa*. CBD may, by its inhibition of the FAAH enzyme (which breaks down endogenous anandamide, a fatty acid neurotransmitter and brain lipid that binds to cannabinoid receptors), increase levels of anandamide and thus aid reduction of anxiety.<sup>7</sup>

**CB:** There are a growing number of studies that support CBD's use for a variety of conditions. However, none are to the current standards required in order to make medical or health claims relating the CBD. More robust research is needed to reach this point, but the anecdotal evidence is fairly overwhelming. PubMed is a great resource for searching for and reading the studies that have been carried out and published.







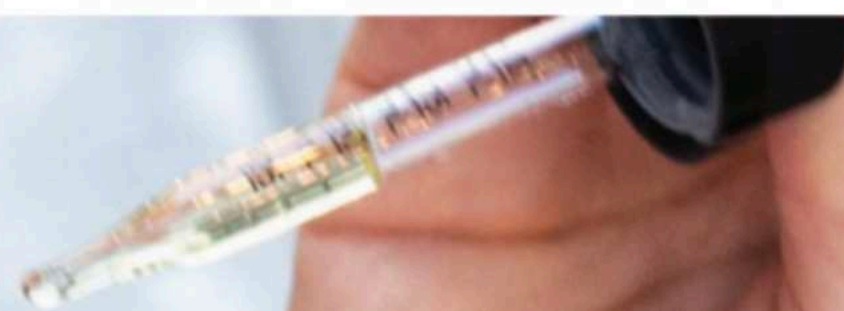
*Feel the Difference Since 2014*



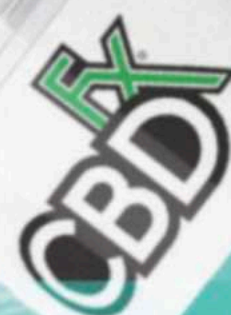
CBDfx was founded in 2014 on the belief that everyone should have access to the remarkable benefits of CBD and we use this as our compass to create the purest and most effective products on the planet to enrich your mind, body and soul. Our mission remains core to everything we do from our partner farms in Kentucky to your practice and clients. Feel the difference with CBDfx.

***Organically grown  
hemp extract***

***Non gmo***



***Extensive analysis***



***Vegan***



***Entire range available through The Natural Dispensary***

**CBDfx.co.uk** **cdbfx\_** **@cdbfx**

**NEWhere UK LTD**  
**11-12 St James's Square,**  
**London SW1Y4LB**



# EXPERT ADVICE

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



Q

Can you break down what the benefits of dry liposomes are, and in what situations are they best recommended?

**ROSE HOLMES EXPLAINED:** Dry liposomes have all the benefits, including superior bioavailability, of other liposomal products but without the bad taste or smell associated with liquid liposomal products. Dry powdered liposomal products are also produced without chemicals, high temperatures or high pressure, as well as being conveniently available encapsulated, with longer shelf life (preservatives free).

The manufacturing process of other liposomal products results in products that potentially contain unwanted substances, such as chemicals, preservatives, flavourings, etc. The dry liposomes produced in, for example, the LipoCellTech process, are free from these unwanted substances. So, dry liposomal vitamin C made with the LipoCellTech process contains only vitamin C and phosphatidylcholine.

Liposomes are tiny spherical sacs consisting of a double ring of fatty acid molecules, phosphatidylcholine molecules. Phosphatidylcholine (phospholipid attached to a choline particle) is a major component of biological membranes and so naturally occurring in the body, where it has a wide range of uses, including to make the brain chemical, acetylcholine. The body 'sees' the liposomes, recognising these as body-own.

Liposomes can be used to enclose and carry substances and so can transport nutrients into tissues. This transportation is facilitated by the cell membrane, which, composed of phospholipids like the liposome, easily blends with the phosphatidylcholine of the liposome, incorporating into the cell via a fusion and 'blending' process,

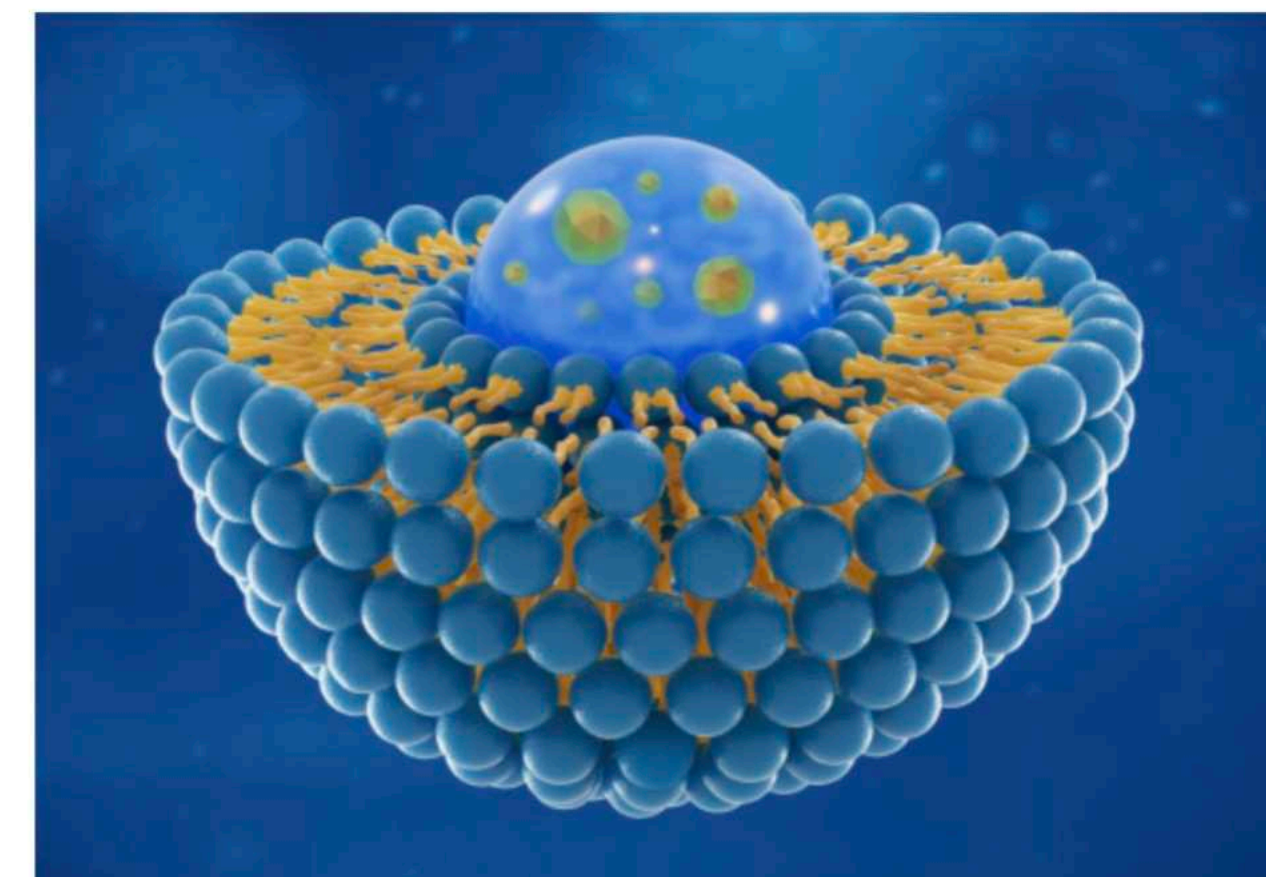
permitting the easy inclusion of the liposome's enclosed active substance into the cell, where it can readily provide benefit.

In fact, the body naturally produces liposomes around ingested nutrients using phosphatidylcholine. This process takes time, whereas providing liposomal nutrients (nutrients contained within liposomes) greatly speeds up the absorption process for the nutrient. Timing of the dose does not require accompaniment or exclusion of food as the absorption via the liposome avoids the digestive processes.

Ordinary, traditional, non-liposomal products generally have low absorption and bioavailability and this fact is clinically well-documented. Liposome science allows improved nutrient absorption and higher bioavailability, and, like other liposomal products, dry liposomal powder products allow this enhanced bioavailability. For example, liposomal vitamin C is 20 times more bioavailable than ordinary vitamin C so a 300mg capsule of liposomal vitamin C delivers the equivalent power of 6000mg (6g).

Liposomal vitamin C is beneficial for chronic pain and fatigue and for any of the numerous health conditions for which vitamin C may benefit – liposomal delivery permits the ample flow of the nutrient into the cells to aid cellular metabolism, detoxification and improved functioning of body tissues.

Because liposomal vitamin C directly enters the cells, avoiding need for passing through the digestive system, there is no issue with bowel tolerance. Large doses of vitamin C are therefore possible and well-tolerated. There is also no risk of exceeding cellular need as anything the cell does not want will be easily excreted.



## ABOUT THE EXPERT

Rose Holmes, Nutritionist, BSc, Dip.ION, PGCE, mBANT, CNHC is the Education and Training Manager at Rio Health and provides training to other practitioners and health professionals on natural therapies. Rio Health is a supplier and distributor of natural products from around the world, and also distributes the practitioner range, epigenar.





## What are the most important nutrients for the mind?



**PATRICK HOLFORD ADVISED:** The dry weight of your brain is 60 per cent fat. The trillions of brain cells are largely made out of essential fats, bound to phospholipids. The binding together of these essential brain components depends on methylation nutrients, mainly B vitamins. These three families of nutrients – essential fats, phospholipids and methylation nutrients – are the brain makers and linked to better mood, mental health and memory.

The most abundant fat in the brain is omega 3 DHA, it makes up 90

per cent of the structural fat. Oily fish contain roughly equal amounts of EPA and DHA. Only DHA, alone or combined with EPA, contributes to improved memory function in older adults (45-plus) with mild memory complaints, concluded a meta-analysis in the *Public Library of Services* journal[1]. The benefit, they say, is apparently driven by DHA, at a daily level between 500 and 1,000mg. There is also evidence of benefit for schoolchildren.[2]

On the other hand, EPA has strong anti-depressant effects. Last

year, a meta-analysis concluded that 'the use of omega 3 is effective in patients with diagnosis of depression'[3]. A similar dose is needed for an effect.

To achieve at least 500mg of both EPA and DHA does mean supplementing them, as well as eating fish. All fish, not just oily fish, are an excellent source of phospholipids, as are eggs. You need both omega 3 and phospholipids for a healthy brain and they are bound together by B-vitamin dependent methylation.

The most abundant phospholipid is phosphatidyl choline (PC), followed by phosphatidyl serine (PS). Both PC and PS[4] have been shown to improve memory, concentration, speed of thinking and protect those with mental illness[5]. Lecithin is a source of PC.

There are a billion 'methylation' reactions every few seconds in your brain. The three most important methylation nutrients are vitamins B12, folate and B6. But you also need methyl groups, which is why methylfolate and methyl B12 works slightly better. Later in life, B12 absorption can become impaired so B12 is especially important to supplement in relatively high doses – from a base of 10mcg to 500mcg if blood homocysteine level is high.

So, for a healthy brain, you want to eat fish, eggs, greens and beans high in folate, nuts and chia seeds and supplement extra omega 3, plus phospholipids and methylating B vitamins. It is especially important for vegans to supplement B12 and a seaweed derived source of DHA.



### ABOUT THE EXPERT

Patrick Holford is a Nutritionist, author and leading commentator on natural health. He founded the Institute of Optimum Nutrition in 1984, and is the author of over 37 books, translated into over 20 languages, including *The Optimum Nutrition Bible*.





## Can you explain the importance of probiotics and the early microbiome?



**CHRISTINA GEORGALLOU EXPLAINED:** Science has clearly demonstrated in recent years that the gut microbiome is fundamental to human health. From protecting us against environmental pathogens and modulating our immune system, to influencing our mental health and our weight, the value of supporting this ecosystem is far reaching. When we consider the constitution of the human microbiome, however, there are multiple elements during the very early stages of life that strongly influence its development: mode of

birth, infant nutrition and antibiotic/probiotic exposure, to name a few (1).

The initial 'seeding' process can be compromised during delivery. A caesarean birth is associated with a decrease in the beneficial *Bifidobacteria* and an increase in pathogenic *Clostridium*, compared to vaginally born infants. Vaginal delivery can also be compromised in cases of premature delivery, vaginal bacterial infections, neonatal intensive care units and the wide use of antibiotics during this time.

There are, however, many ways of safeguarding a child's microbiome in such cases (2).

The neonatal microbiota is highly different in comparison to the adult one, since the former is characterised by rapid changes, however, by one year of age, the microbiome has reached adulthood. It is during this critical period of conditioning, where intervention can have the most dramatic and long-lasting benefits on the final composition of the intestinal microbiota. By promoting a healthy microbiome from birth, we can improve the health of an infant in the short and long-term (3).

Breastfeeding is an important determining factor in establishing the gut microbiome and is a source of short and long-term health benefits for the child (4). And now particular strains of probiotic bacteria are being highlighted for their magnitude of benefit at this early stage of development, in particular, *Bifidobacterium breve* M-16v (5).

*B. breve* M-16 was originally isolated from a healthy infant gut in 1963 and has been commercially available in Japan since 1976. With 36 gold standard clinical trials in over 4,000 new-born infants and young children, M-16v is touted to be one of the most influential strains to enter the UK market. M-16v has been shown to increase levels of beneficial *Bifidobacteria*, and reduce levels of pathogens such as *E.coli* and *K. pneumoniae* that tend to be increased in children suffering with symptoms of colic (6).

Various studies on children with atopic dermatitis, and the associated development of asthma, have seen improvements in their symptoms, with fewer children starting on asthma medication in the probiotic groups (7, 8). And finally, M-16v has demonstrated a reduced incidence of infection in this vulnerable population (9).



### ABOUT THE EXPERT

Christina Georgallou is a Physiologist and Nutritional Therapist, currently working with OptiBac Probiotics to support practitioners in their recommendation of probiotics in clinical practice.





# Collagen and supportive nutrients for joints and bones

Nutritional Therapist, Laura Murphy, investigates the crucial role of collagen to support joint and bone health.

**T**he musculoskeletal system provides form, support, stability and movement to the body. It includes the bones of the skeleton and the cartilages, ligaments and other connective tissue that stabilise or connect the bones, so it is vital that this important structure is supported.

However, being overweight/obese, trauma, lack of physical activity and ageing cause these structures to become more susceptible to damage, and wear and tear, which results in reduced function. It can result in osteopenia and osteoporosis, which are characterised by reduced bone mass, compromised bone strength and increased susceptibility to fractures.

It can also result in arthritis and arthrosis. While arthritis is an inflammatory joint disease, arthrosis is a non-inflammatory joint disease characterised by joint degradation, resulting in pain, stiffness and articular rigidity. It is caused by cartilage damage, where the cartilage gradually wears out and disappears, leaving the bones in contact with each other without a buffering zone. There are a range of essential nutrients that can help support cartilage regeneration and the bone matrix.

## Background

Articular cartilage is a highly specialised connective tissue. Its principal

function is to supply a smooth and elastic surface to absorb pressure and shocks in the joint and to limit friction during movement.

Cartilage consists of water and cells with a rounded shape, called chondrocytes. These are found in a very dense extracellular matrix and are responsible for the synthesis of this matrix. The extracellular matrix primarily consists of collagen, proteoglycans and hyaluronic acid. Healthy cartilage is required for the joint to move without friction and absorb shocks.

## Collagen

Collagen is the most abundant protein in mammals, providing the



principle structural and mechanical support to several tissues.<sup>12</sup> It is the most important component of connective tissues and its function is to give tissues a mechanical resistance to stretching. In bones and teeth, collagen can be found with the addition of mineral crystals, mainly hydroxyapatites.

It is a glycoprotein composed of three amino acid chains, interconnected to form a triple helix. The collagen composition is very specific and is composed of glycine, proline, and a modified version of proline – hydroxyproline. Collagen is a highly crosslinked material and is usually insoluble in water, so it is usually hydrolysed to smaller peptides.

The beneficial effects of oral administration of collagen hydrolysates are possible because the dietary bioactive peptides are able to cross the intestinal barrier, reaching the circulation and becoming available for metabolic processes.<sup>3</sup> Orally consumed collagen hydrolysate has been shown to be absorbed intestinally and to accumulate in cartilage. Specifically, collagen hydrolysate ingestion stimulates a significant increase in the synthesis of extracellular matrix macromolecules by chondrocytes so is involved in cartilage matrix synthesis.<sup>43</sup>

#### Joint health

The effect of collagen hydrolysate on pain from osteoarthritis (OA) was studied in a prospective, randomised, double blind, placebo-controlled clinical trial.<sup>4</sup> The researchers recruited 81 patients with osteoarthritis of the knee or hip and used a complex cross-over design to compare four different nutritional supplements, including collagen hydrolysate (10g in the form of 20 capsules, each 500mg, by mouth). They found that 81 per cent of patients taking collagen hydrolysate achieved meaningful pain reduction, compared with 23 per cent of patients taking egg albumin. In addition, 69 per cent of patients taking collagen hydrolysate had a  $\geq 50$  per cent decrease in the consumption of analgesics, compared with 35 per cent of patients taking egg albumin.

Benito-Ruiz P. et al performed a randomized, double-blind, controlled multicentre trial, where 250 subjects with primary osteoarthritis of the knee were given 10g collagen hydrolysate daily for six months.<sup>7</sup> There was a significant improvement in knee joint

comfort. Subjects with the greatest joint deterioration, and with least intake of meat protein in their habitual diets, benefited the most.

#### Bone health

It is suggested that collagen peptides could enhance bone formation and increase bone mineral density (BMD). It is proposed that the stimulation of collagen formation in the bone could be mediated via signalling proteins derived from collagen peptides. A recent randomised, double-blinded and placebo-controlled study in postmenopausal women demonstrated that specific collagen peptides (SCP) significantly increased BMD in both the lumbar spine and femoral neck.<sup>8</sup> In contrast, no significant changes for these parameters were determined in the placebo group. Subjects in the SCP group showed a 4.2 per cent higher BMD in the spine and a 7.7 per cent higher BMD in the femoral neck, suggesting a clinically relevant effect of the 12-month treatment with SCP.

#### Supportive nutrients – glucosamine and chondroitin

■ Glucosamine sulphate is a simple molecule composed of glucose, an amine and sulphur. It is an important building block needed by the body to manufacture glycosaminoglycan, a mucopolysaccharide found in cartilage and other structural connective tissue. It appears that as some people age, they lose the ability to manufacture sufficient levels of glucosamine. The result is that cartilage loses its ability to act as a shock absorber.

■ Chondroitin sulphate (CS), a term used to denote a group of structurally similar polysaccharides, is a natural component of several tissues in the body, including cartilage, tendon, and bone. CS functions as the most abundant glycosaminoglycan utilised in the formation of proteoglycans found in articular cartilage. As a glycosaminoglycan, CS plays an important structural role in articular cartilage.

Many clinical studies tested glucosamine together with CS and the results suggest that both components may enhance each other's efficacy.<sup>9,10</sup>

The mechanism of glucosamine and CS varies in several aspects. Experiments have demonstrated that CS reaches the joint and distributes into the cartilage and subchondral layers.<sup>11</sup> However,

being a large molecule, CS does not penetrate the cells<sup>12</sup>, and so elicits its anti-inflammatory effect by engaging chondrocyte membrane receptors, whereas glucosamine penetrates cells by means of glucose transporters (GLUTs). Once taken up by cells, exogenous glucosamine is phosphorylated into glucosamine sulphate-6phosphate, which subsequently enters into the hexosamine biosynthetic pathway to generate UDPN-acetylglucosamine (UDP-GlcNAc). UDP-GlcNAc is a substrate for the synthesis of proteoglycans, glycolipids, and glycoproteins but also for protein acylation.<sup>13</sup>

The Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT study) suggests that the combination of glucosamine and chondroitin sulphate may be effective in the subgroup of patients with moderate-to-severe knee pain.<sup>14</sup> In a more recent analysis by Pelletier et al., using data from





participants enrolled in the progression cohort of the osteoarthritis initiative (OAI), there was evidence of a beneficial effect of glucosamine and chondroitin delaying knee osteoarthritis structural progression. Participants who took glucosamine and chondroitin had reduced loss of cartilage volume over 24 months in subregions assessed with qMRI, thus supporting a disease-modifying effect of glucosamine and chondroitin that could not be identified by X-rays.<sup>20</sup> A recent systematic review and meta-analysis of trials of glucosamine and CS concluded oral chondroitin to be more effective than placebo on relieving pain and improving physical function and compared with placebo, glucosamine showed a positive effect on stiffness outcome.<sup>21</sup>

### Methyl sulphonyl methane (MSM)

MSM is a source of organic sulphur, which is an essential nutrient needed for the production of complex proteins within the body – the glycosaminoglycans (GAGs). They are key structural components of joint cartilage, as well as hair, nails and skin. Due to its enhanced ability to penetrate membranes and permeate throughout the body, the full mechanistic function of MSM may involve a collection of cell types.

A small 2011 randomised controlled trial demonstrated that MSM for 12 weeks showed an improvement in pain and physical function in patients with osteoarthritis of the knee.<sup>22</sup> MSM has also been used in combination with other therapies, including glucosamine and CS and this combination, in addition to modification to diet and exercise, was effective at reducing pain and stiffness in sedentary obese women diagnosed with osteoarthritis.<sup>23</sup>

### Manganese

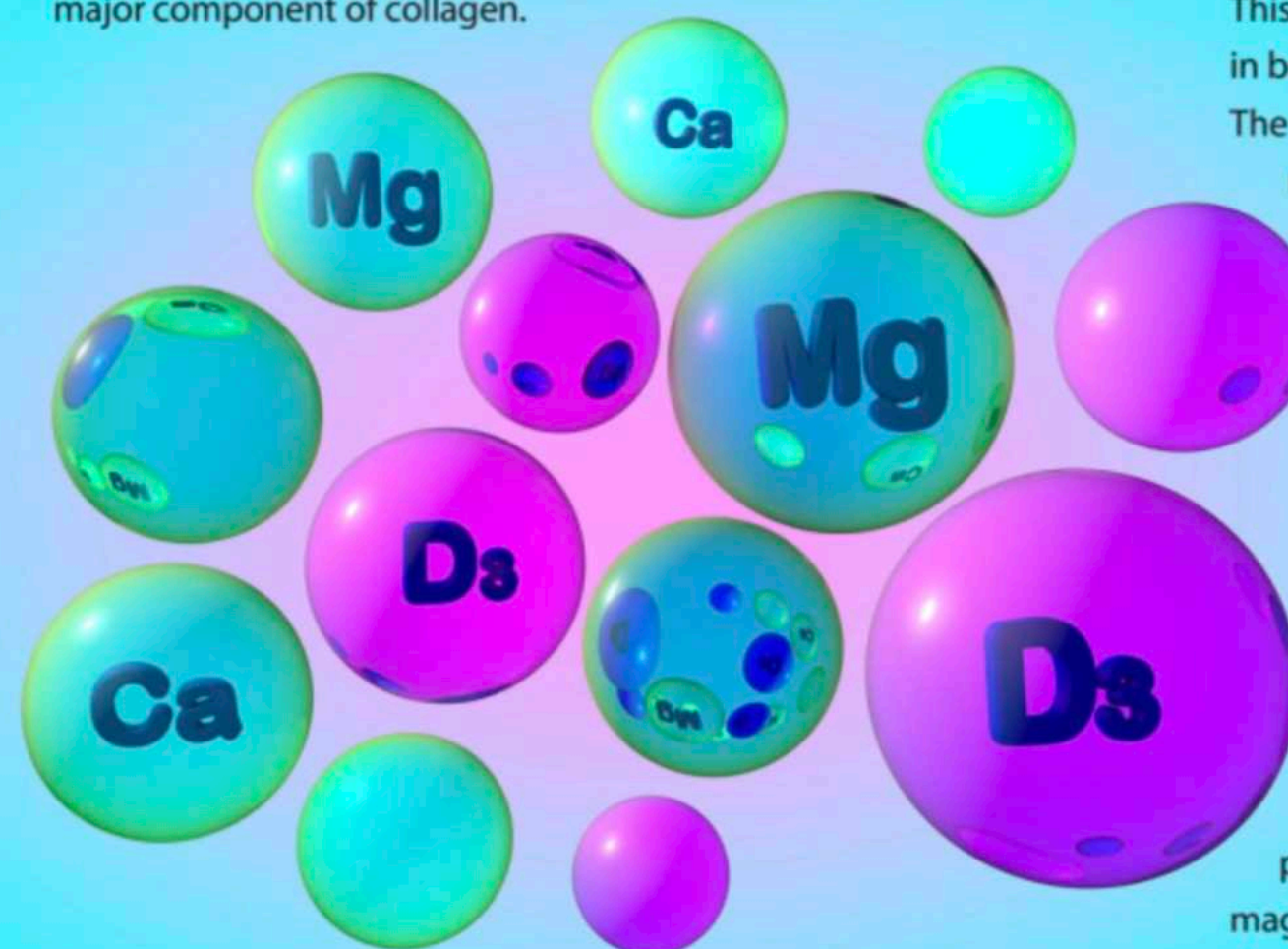
Manganese is an important trace mineral that has been demonstrated to be essential for many species of animal and humans.

Among its numerous functions, the most significant is its effect on proteoglycan or GAG metabolism.<sup>24</sup> Manganese deficiency affects the biosynthesis of GAGs and results in decreases in total and individual GAGs, especially chondroitin sulphate.<sup>25,27</sup> In addition, manganese is a specific activator of glycosyltransferases, enzymes that are involved in the polymerisation and elongation of the GAG chain in connective tissue.<sup>28</sup>

### Silicon

Silicon is not generally accepted as an essential nutrient, however, it has been reported that silicon has beneficial effects, especially on connective tissue and bone formation.

Silicon is found in all GAGs and by binding with collagen and elastin, it contributes to the architecture, solidity, resistance and elasticity of connective tissues, including cartilage. In addition, silicon is a co-factor for the enzyme ornithine aminotransferase, which is responsible for the formation of proline from ornithine. Proline is a major component of collagen.



### Vitamin D3 and K2

Vitamin D is important for the normal development and maintenance of the skeleton.<sup>29</sup> It has also long been recognised that vitamin D boosts calcium absorption from the intestines and its resorption from

the kidneys, thus greatly enhancing levels of available calcium within the body.

Calcium is required for normal growth, development and maintenance of the skeleton, where it provides strength and structure.<sup>30</sup> Vitamin D acts directly on the osteoblasts within bone (the bone building cells) to upregulate their expression of osteocalcin, the Gla (gamma-carboxyglutamic) containing protein that is essential for directing calcium into the bones. The catch is that the osteocalcin needs to be carboxylated in order to get the calcium into the bone. This molecular change allows calcium to tightly bind hydroxyapatite in bone.<sup>31</sup>

The carboxylation of osteocalcin is a vitamin K dependent process, making vitamin K essential for bone mineralisation. If there is a deficiency of vitamin K and carboxylation doesn't occur, then this leads to high levels of uncarboxylated osteocalcin. As a result, not only is calcium not delivered to the bones, which become porous, it is then deposited in the arteries, which become calcified.<sup>32,34</sup>

### Boron

Boron is a trace mineral that appears to support both bone and joint health. It supports bone health as it is required for optimal calcium metabolism.

Studies indicate that boron directly affects the action of parathyroid hormone, resulting in significant alterations in calcium, magnesium, cholecalciferol and phosphorous metabolism. Boron deprivation has been shown to depress ionised calcium and calcitonin and to elevate both plasma total calcium and urinary excretion of calcium.<sup>35,37</sup> It supports joint health as it supports the integrity of connective tissues by stimulating the formation of extracellular matrix.



Laura Murphy BSc (Hons), MSc, Dip CNM NT, is a Nutritionist at Nutri Advanced, joining in 2013 with an MSc in Public Health Nutrition from Edinburgh Queen Margaret University, as well as just completing a Diploma in Nutritional Therapy from the College of Naturopathic Medicine. She is a key member of Nutri Advanced's busy nutrition department, providing technical advice to practitioners, alongside assisting with research and product development. Taking particular interest in gut health, Laura has an ever-growing enthusiasm for nutrition that has developed throughout her extensive education and during her time at Nutri Advanced.



# CPD DIRECTORY

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

## **Making the Most of our Genetic Inheritances**

**Lamberts**

**March 3** – Oxford

**March 5** – London

**March 10** – Tunbridge Wells

**March 11** – Exeter

**March 18** – Newcastle

**March 25** – Brighton

**CPD hours:** BANT six hours

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

**Cost:** £44.95

**Website:** [www.lambertshealthcare.co.uk](http://www.lambertshealthcare.co.uk)

## **Unnatural Selection**

**BioCare**

**March 4** – Brighton

**CPD hours:** BANT four hours

**Speakers:** Alessandro Ferretti Dip ION, MBANT

**Website:** [education@biocare.co.uk](mailto:education@biocare.co.uk)

## **BANT Professional Supervision**

**March 5** – Milton Keynes

**April 30** – Milton Keynes

**CPD hours:** BANT two hours

**Speakers:** Felicia Jones

**Cost:** £30

**Website:** [bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Felicia\\_Jones](http://bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Felicia_Jones)

## **BANT Professional Supervision**

**March 6** – Hereford

**April 3** – Hereford

**May 1** – Hereford

**CPD hours:** BANT two hours

**Speakers:** Debbie Lewis

**Cost:** £30

**Website:** [debbie@debbielewis.co.uk](mailto:debbie@debbielewis.co.uk)

## **BANT Professional Supervision**

**March 11** – Tunbridge Wells

**March 12** – Richmond

**April 16** – Richmond

**April 22** – Tunbridge Wells

**CPD hours:** BANT two hours

**Speakers:** Carmel Buckley

**Cost:** £30

**Website:** [bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Carmel\\_Buckley](http://bant.org.uk/members-area/bant-supervision/meet-the-supervisors/#Carmel_Buckley)

## **Human Nature**

**BioCare**

**March 12** – York

**March 13** – Edinburgh

**March 25** – Cambridge

**March 28** – London

**CPD hours:** BANT four hours

**Speakers:** Marta Anhelush DipCNM, mBANT, CNHC, Chris Newbold BSc, Dip NutTh, mBANT, Emily Blake BA (Hons) MA DipCNM MBANT CNHC

**Website:** [www.biocare.co.uk/education](http://www.biocare.co.uk/education)

## **Understanding the Immune System** **Metabolics**

**March 14** – Belfast

**CPD hours:** BANT eight hours

**Speakers:** Alison Astill-Smith

**Cost:** £100 (10 per cent discount for students)

**Website:** [www.metabolics.com](http://www.metabolics.com)

## **BANT Professional Supervision**

**March 16** – online

**March 18** – Cobham

**March 23** – online

**March 27** – online

**CPD hours:** BANT two hours

**Speakers:** Emma Stiles

**Cost:** £30

**Website:** [emma@emmastiles.co.uk](mailto:emma@emmastiles.co.uk)

## **BANT Local Network Meeting** **Biomedica**

**March 18** – Bicester

**CPD hours:** BANT two hours

**Speakers:** Lucy Peel

**Cost:** £4

**Website:** [bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Rosie\\_Pearce](http://bant.org.uk/members-area/bant-local-networks/local-network-coordinators-list/#Rosie_Pearce)

## **Certificate of Integrative Sports** **Nutrition: Modules 1-3**

**The Centre for Integrative Sports**  
**Nutrition**

**April 21-September 12** – London

**CPD hours:** BANT 20 hours

**Speakers:** Ian Craig, Simone do Carmo, Rachel Jesson, Dr Hannah Moir, Chris Howe, Ryre Cornish, Pete Williams, Alex Ferretti, Katherine Carris-Harris, Paul Ehren, Andy Blow, Charlene Hutsebaut, Henrietta Paxton

**Cost:** £2,300 (BANT and student discounts offered and payment plan available)

**Website:** [www.intsportsnutrition.com](http://www.intsportsnutrition.com)

## **Mitochondria Day** **Biolab Medical**

**April 24** – London

**CPD hours:** BANT 6.5 hours

**Speakers:** Lucy Peel

**Cost:** £135

**Website:** [mitochondria-day.eventbrite.co.uk](http://mitochondria-day.eventbrite.co.uk)



# Building brand BioCare

With exciting NPD, a hugely popular practitioner education programme, and a move into glass packaging, BioCare is forging ahead with plans for a successful future. Tom Farmer, Sales and Marketing Director, talked to Rachel Symonds about the busy road ahead.





**B**ioCare leads the way in terms of its reputation among Nutritional Therapists, both in relation to its advanced product formulations and its cutting-edge educational programme.

But as a company, BioCare is continuing to innovate, to respond to changing health needs, not to mention driving forward its Adaptive Health message. And, with an awareness of the growing environmental agenda, the company is also in the process of moving all its products into glass packaging.

Tom Farmer, Sales and Marketing Director, commented: "We have recognised that we can't just stand still in terms of packaging and we believe we cannot move quickly enough on this."

BioCare's education offering also continues, with Tom adding that it's been a busy and positive year for

the team in this regard.

"We have had over 50 key seminar events over the course of the year with conferences and webinars, and more than 2,500 practitioners attending throughout the course of the year," he commented, adding: "It has really connected with people."

"Our education programme really outlines our core belief that once people understand nutrition, and they understand health, they buy BioCare. That's why education is so key to what we do."

Education in terms of its importance will continue at BioCare, with Tom commenting: "We have huge expertise here but unless we can project that, it is absolutely useless. We want to be the brand that people can talk to, we just have to get out there and educate."

### THE REPACKAGING PROCESS

BioCare's products have traditionally been packaged in plastic, but some months ago, the company began the process of moving its range – which numbers more than 250 – into glass packaging.

"Repackaging is a big job. Over a third of the products that are in our warehouse are already in glass and all our key selling lines have moved into glass. But that process is not good enough in light of the world opening its eyes to the consciousness of environmental issues," Tom advised.

However, he added: "The brand is over 250 products and some of our suppliers don't even have glass available, so it is not a

straightforward solution. We will be rolling them out through the year and our target is within two years to have the whole range in glass."

As part of the repackaging, BioCare has seen this as a good time to examine its existing range, and to look at where products should be redefined, renamed or changed, and this continues alongside the repackaging process.

"As part of the change to glass, it gives us the opportunity to simplify the range," Tom added, explaining: "We have kind of made it hard for ourselves and our consumers in the past in what we have called our products. For example, TH207 is a thyroid product but it doesn't tell people what it is. So, as part of redoing our label to go into glass, we are redefining some of the names for the products."

Tom explained that a key rationale for this was to get its products used by more people, and to do that, people need to better understand them.

"The challenge we had was getting these out to enough people. We needed to make these products understood so that there was far more self-selection."

In terms of the future range, the rationalisation is a big focus for the coming months, but BioCare will also be launching new products where there are gaps.

"We don't believe there is a right number of products for BioCare but there are certain products we perhaps don't need or others that can be updated. In some cases, we have two versions of the same products, so we are in the process of evolving and updating our products – 250 products is probably too many, too many to talk about and too many for everyone to understand," Tom advised.





## THE BIOCARE DIFFERENCE

Practitioners are a key focus for BioCare and as a company, it offers its customers some key benefits, including:

- Invitations to education seminars and events, held around the country and throughout the year, led by the expert BioCare nutrition team.
- Exclusive webinars and videocasts, where you can watch regular online events featuring carefully chosen experts in their field.
- An advanced education library, including clinical protocols.
- Practitioner Referral scheme, where therapists receive a full commission or share the discount with their clients.
- Direct dispatch to your client, where you can order for your clients and have products sent to them to aid compliance.

But Tom added that there is always more they can do to support practitioners.

"There is an awful lot we can do to make it easier to do business with BioCare, making it easier to purchase BioCare products. We are looking at ways we can better support our practitioners; we have our referral scheme, but we have also started to offer business cards, with the practitioner's BioCare code on them so we then know which practitioner the order has come from and it is easy for the practitioner."



## FOCUS ON NPD

In terms of NPD, there have been a handful of new launches recently, although Tom pointed out that for BioCare, that's not much.

"The main development is with the expansion of our methyl range; methylation is a core mechanism going on every single second and it is at the heart of Adaptive Health. Our products around methylation are one of our leading growth areas and it's been a key part of our education."

Within the popular methylfolate range is Methyl Multinutrient, Methyl NutriPowder, Nutrisorb Liquid Methyl B Complex and Liquid Methylfolate.

Another success story in terms of NPD has been the development of the NutriPowders range, which includes Prebio NutriPowder, Multi NutiPowder and Cleanse NutriPowder, with Tom commenting: "We find a lot of our practitioners like powders because they can vary the recommended amounts and this range has done very well."

But going forward, new development will occur, with Tom revealing: "There will be at least 10 products we are launching towards the end of the year. In the spring, we will have a female health focus, particularly around the menopause – we have a lot of questions coming through to the clinical team regarding female health, but we will also be doing more on male health too, with a focus on prostate problems."

In terms of the NPD process, it is a pretty rigorous one for BioCare.

"We are only a business of 46 people and so the process in terms of an idea can start with anyone in the business," Tom explained. "It may be the export team who have picked up an idea for a product, it could be feedback from practitioners at a seminar, or it could be the retail team seeing consumers on the ground."

Once there has been an idea, Tom added that there are certain tests it has to pass before it will be developed; is it worth exploring? If so, then it goes to what it is in terms of formulation. And then where does the company get it from? All of these factors will go into making a fairly complex business case for whether a product will be developed.

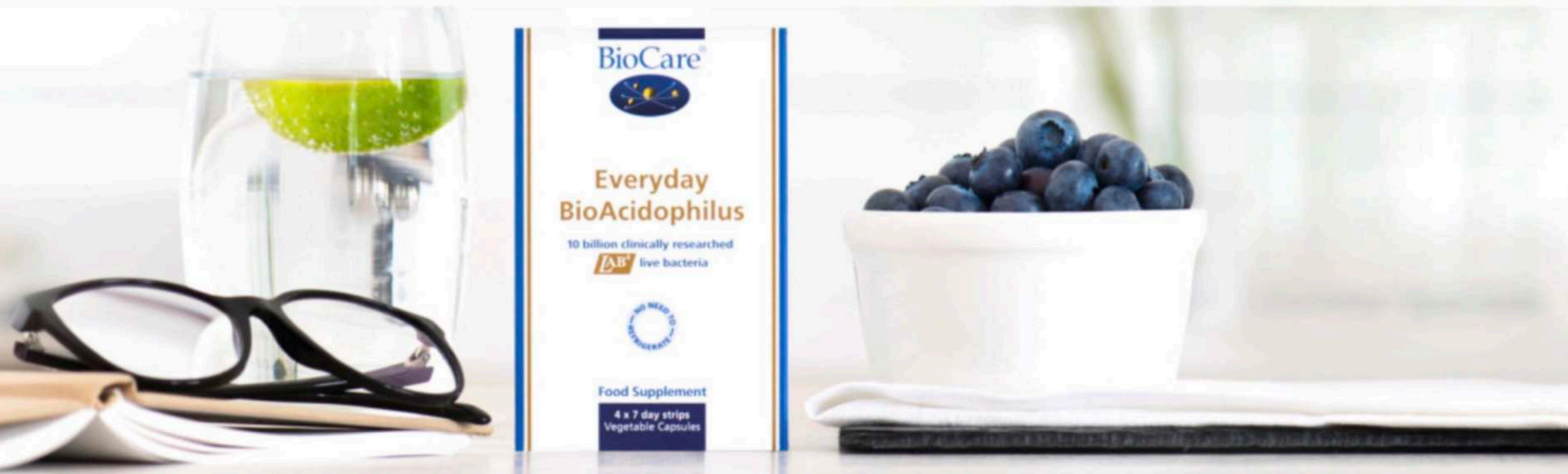


"If it passes the tests, then it goes to a launch plan and that then can be over a year to getting it launched. But we also never hold ourselves to a process – we can skip that if we think the case for it is an obvious one, if we are all on board and we can get it done to our standards," Tom explained.

One of the key areas of work for BioCare in recent years has been educating practitioners on adaptive nutrition and integrative medicine and tying it into Adaptive Health.

"People are understanding and interested in their DNA, taking into account external factors, and once we understand that, we are in a better place to impact it," Tom advised.

"It can seem complex – health is complex. But Adaptive Health as a model is trying to make it as simple as we can, and it is a major part of the talks we have been doing and it is in the formulation of our products."





# Choose Japanese

Healthy recipe ideas from the Japanese cuisine, courtesy of Kimiko Barber and the new book, *Japanese in 7*.



Spinach and tofu jelly



Tokyo roll



Tofu and wakame miso soup





## Spinach and tofu jelly

Serves 4

This is a very pretty, delicious and healthy starter that you can prepare in advance. Kanten (agar-agar) is the Japanese equivalent of gelatine but is made from a seaweed called Ceylon moss and hence is vegetarian. It is also 10 times more coagulant and completely fat and virtually calorie free. Because it is rich in calcium, iron and edible fibre, this makes it an ideal diet food.

### INGREDIENTS:

- 250g (9oz) spinach
- 100g (3½ oz) soft silken tofu
- 2g (⅓ oz) kanten (agar agar powder)
- 1tbsp white caster or granulated sugar
- 2tsp sake

### METHOD:

- 1 Cook the spinach in salted boiling water for 30 seconds and drain very well. With a food mixer or food processor, blitz the cooked spinach into a thick paste. Roughly break up the tofu with your hands.
- 2 Put 250ml (9fl oz) of vegetarian dashi (recipe right) and the kanten in a saucepan and dissolve over a medium heat, stirring. Bring to the boil for two minutes. Add the tofu, sugar, sake and half teaspoon of salt. When the tofu begins to float to the surface, turn off the heat.
- 3 Add the spinach paste and stir once or twice to mix through, then pour the mixture into a mould (15 x 20 x 4cm/6 x 8 x 1½ in) and leave to set at room temperature, before transferring to the refrigerator to chill until ready to serve (kanten sets at 40C/104F, which is higher than normal room temperature). Turn out of the mould, cut into thick slices and serve with a drizzle of tamari.

## Vegetarian dashi

Makes 1.2 litres (2 pints)

Shōjin-dashi is a fish free stock suitable for any vegetarian dishes and features widely in the Shōjin cuisine – Buddhist vegetarian cooking. It can be made with many varieties of dried vegetables such as dried gourd strips, dried soybeans, and kiriboshi daikon (dried daikon), but the most popular combination is dried shiitake mushrooms and kelp. While water dashi is delicate and delicious, for some, it lacks in depth, but with an addition of dried shiitake mushrooms, this vegetarian dashi has a fuller flavour.

### INGREDIENTS:

- 3-4 dried shiitake mushrooms
- 1 postcard-sized piece of dried kelp
- 1 litre (1¾ pints) soft mineral water, or tap water, left to stand overnight or boiled then cooled to disperse any chloric smell

### METHOD:

- 1 Place the mushrooms in a bowl, pour 200ml (7fl oz) of boiling water over and leave for 10-15 minutes to soak.
- 2 Meanwhile, put the kelp in a saucepan with the mineral or tap water and heat over a gentle heat until tiny bubbles begin to appear, which should take about 10-15 minutes. Remove the seaweed immediately, then turn off the heat.
- 3 Strain the shiitake soaking water through a fine mesh sieve and add to the pan. Combine. Strain the dashi through a sieve lined with kitchen paper and it is ready to use. This keeps in an airtight container in the refrigerator for up to two to three days.

TOFU AND  
WAKAME  
MISO SOUP



TOKYO ROLL





# Tokyo roll

Serves 6-8

This is a Japanese variation on the Swiss roll.

## INGREDIENTS:

- 100g (3½ oz) caster sugar, plus extra for dusting and dredging
- 100g (3½ oz) plain flour, plus extra for dusting
- 10g (¼ oz) matcha (green tea powder)
- 4 large eggs
- 200ml (7fl oz) double cream
- 100g (3½ oz) koshi-an (smooth sweet adzuki bean paste)
- Icing sugar, for dusting

## METHOD:

- 1 Preheat the oven to 180°C/350°F/gas mark 4. Grease and line a 33 x 23cm (13 x 9in) Swiss roll tin with non-stick baking paper. Dust with a half-and-half mixture of caster sugar and flour.
- 2 Mix the flour with the green tea powder and sift two to three times. Put the eggs and sugar in a bowl, place over a pan of simmering water and whisk, using an electric hand whisk, until pale, creamy and thick enough to leave a trail on the surface when the whisk is lifted.
- 3 Remove the egg mixture from the heat, then sift half the green tea-flour mixture over and gently fold in with a metal spoon. Repeat with the remaining green tea-flour mixture, then lightly stir in one tablespoon of hot water.
- 4 Pour the mixture into the prepared tin, then tilt the tin backwards and forwards to spread the mixture

evenly. Bake for 10-12 minutes, until well risen and firm to the touch.

5 Meanwhile, place a large sheet of greaseproof paper on top of a clean, damp tea towel. Dredge the paper thickly with caster sugar. Working quickly, turn out the sponge on to the paper, trim off the crusty edges and let it cool down. While the cake is cooling down, whisk the cream until soft peaks form.

6 Spread the cream over the cake and make a line of adzuki bean paste along the long edge nearest to you. Roll up the cake, starting from the long edge with the paste on, with the aid of the paper. Make the first turn firmly so that the whole cake will roll evenly and have a good shape when finished but roll more lightly after the first turn. Place the cake, seam-side down, on a chopping board, dust with icing sugar, then slice and serve.

SPINACH AND TOFU JELLY



TOFU AND WAKAME MISO SOUP







## Tofu and wakame miso soup

Serves 4

Among countless variations of miso soups, this is an absolute classic, especially for breakfast. You could consider it Japan's equivalent of Marmite on toast.

### INGREDIENTS:

- 20g (¾ oz) dried wakame
- 200g (7oz) tofu (either silken or firm)
- 1 heaped tbsp light-coloured miso
- 2 spring onions, finely chopped on the diagonal, to garnish

### METHOD:

- 1 Soak the dried wakame in four tablespoons of warm water for 10-15 minutes and drain.
- 2 Meanwhile, to drain the tofu, wrap it in kitchen paper, microwave (800W) for two minutes, then cut into 1cm (½ in) cubes.
- 3 Pour 800ml (28fl oz) of primary dashi, secondary dashi or vegetarian dashi into a saucepan and bring to the boil over a medium-high heat. Put the miso pastes in a small bowl and mix well, then add a ladleful of dashi from the

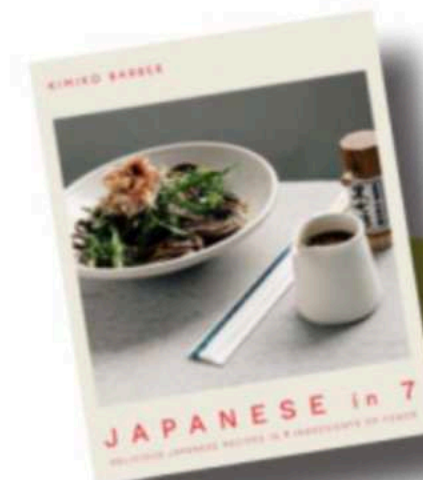
pot to soften.

4 The soup must be served hot, so warm four soup bowls with hot (not boiling) water.

5 Add the wakame, tofu and miso mixture to the pan and let the soup return to the boil for a few seconds, then turn off the heat immediately (never let the miso soup reach a rapid boil as it will spoil the flavour). Ladle into the warmed bowls, garnish with the spring onions and serve immediately.

### ALTERNATIVE FLAVOURINGS

- Tofu and abura-age (deep-fried tofu), with chopped spring onions.
- Tofu and shiitake mushrooms with cress.
- Tofu and mangetout.
- Tofu and broccoli with ground white or black sesame seeds.



TOKYO ROLL



SPINACH AND TOFU JELLY



Recipes taken from *Japanese in 7*, by Kimiko Barber, published by Kyle Books, £17.99.



# I-Mag giveaways



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

## BIO-KULT MIND

Bio-Kult Mind, targeting cognitive function, is the latest product to join the Bio-Kult line-up. It contains live bacteria, bioavailable flavonoids, grape and wild blueberry extracts, alongside zinc, which contributes towards the normal cognitive function.

To celebrate the launch of the second product in the Bio-Kult gut-brain-axis range, we're giving away three Bio-Kult Mind sets to help support your cognitive function!

**I:Win: We have three to give away.**



## NATURE PROVIDES MOUNTAIN BLOOD SHILAJIT

Working in harmony with your body, Mountain Blood Shilajit, which is 100 per cent vegan friendly, contains an abundance of highly bioavailable ionic form minerals, fulvic and humic acids, dibenzo-a-pyrones, plus many more key nutrients.

Used for centuries in Ayurveda, this prized superfood demonstrates nootropic and adaptogenic properties in today's clinical studies. Ideal taken in the morning, many report a boost in energy and focus. Most people are yet to discover shilajit, but numerous articles have extolled its benefits.

**I:Win: We have 10 to give away.**



## MILE HIGH LABS 365CBD THERMABALM AND ARCTIC GEL

With people around the world beginning to discover the amazing benefits of CBD, Mile High Labs is introducing 365CBD Thermabalm and Arctic Gel, hot and cold topicals infused with the natural benefits of CBD. Whether it's cooling down sore muscles after a workout or easing everyday aches and pains by gradually warming the area, these CBD topicals are fast and effective when you need them most, with zero per cent THC. Suitable for use by adults only.

**I:Win: We have 10 of each to give away.**



## PURE ENCAPSULATIONS DIGESTIVE ENZYMES ULTRA WITH BETAINE HCL

Digestive Enzymes Ultra with Betaine HCl contains a high-strength, broad-spectrum mixture of vegetarian digestive enzymes with betaine HCl.

This comprehensive formula provides enzymes that are involved in the digestion of protein, carbohydrate, fat, fibre and lactose. Betaine HCl is an acidic form of betaine, and pepsin is a protein-digesting enzyme.

**I:Win: We have 10 90-capsule packs to give away.**



## PURITION GOLDEN MILK SMOOTHIE

Purition Golden Milk Smoothie contains 800mg of curcumin, piperine, ginger and healthy fats from seeds and nuts.

Getting enough curcumin into your diet to benefit you is tricky and Purition is perfect for ensuring maximum bioavailability. It provides the equivalent of four teaspoons of the turmeric per serving, as well as a blend of sunflower seeds, almonds, coconut, chia and is vegetarian or vegan protein.

**I:Win: We have 5 of the 500g packs to give away.**

