



# Bionutri®

## Nutrition for the over 60s

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Jan Webinar 2024

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

# What defines elderly?

The UN categorises those who are over 60 as 'elderly'

The UK government defines over 65s as 'late adulthood'

Physiologically – everyone varies

I will focus on 60yrs+



# Why do we age?

Theories:

- Determined by genes
- Wear and Tear
- Mitochondrial damage
- By-products of metabolism e.g. ROS

Ageing can be defined as the time-related deterioration of the physiological functions necessary for survival and fertility

Evolutionary biologists consider aging to be the default state occurring after the animal has fulfilled the requirements of natural selection

We know that environment is key to determine outcomes – lifestyles, what we eat, drink and think and what we are exposed to



The maximum human life span is estimated to be 121 years



# When do we age?

- Some systems start to ‘decline’ as young as 20 years old e.g. collagen and CoQ10 production
- Many start to “feel” it at 40 years old

## Signs of ageing:

- Eyesight deteriorating
- Slower bowel transit
- Hair greying
- Skin becoming more wrinkled and drier
- Lower sex drive
- Aches/pains – joints, back
- Lower energy
- Poorer hearing



# Life expectancy

Life expectancy has always been increasing

1900 – 48 years

1950 – 67 years

2000 – 76 years

2020 – 78 years

(US – statista.com)

Prediction for 2050 is around 81 years old

BUT

What is the quality of life?



# Quality of life?

Nearly 95% of over 60s have at least 1 chronic condition

While nearly 80% have 2 or more

- Hypertension affects 60%
- High Cholesterol 51%
- Arthritis 35%
- CAD 29%
- Diabetes II 27%
- Chronic Kidney Disease 25%
- Heart Failure 15%
- Depression 16%
- Alzheimer's & Dementia 12% (cognitive decline affecting around 25%)

-expected to double by 2050

Obesity affects at least  
40% of over 60s



# Which systems are more vulnerable as we age?

## Cardiovascular system

- Stiffening of arterial walls
- Lowering CoQ10 (worse if on statins = 8 million taking them (BHF))
- Rising cholesterol (peaks in 60s & 70s)
- Increase in oxidative stress



## Muscular Skeletal system

- Collagen decrease
- Senescent cells produce inflammatory factors – promote the activity of osteoclasts
- Lowering sex hormones (especially in women post-menopause)
- Immobile



# Which systems are more vulnerable as we age?

## Digestive System

- Peristalsis less efficient (muscles weaker)
- Slower bowel transit
- NSAID & COX2 inhibitor use
- Development of polyps increases
- Lowering of stomach acid and enzyme secretion
- Ageing affects the secretion of antigen-specific IgA in the intestine, which does harm to intestinal adaptive immunity
- Targeting cells and chemokines, involved with the production and transport processes of antigen-specific sIgA, can promote pathogen-specific immune function

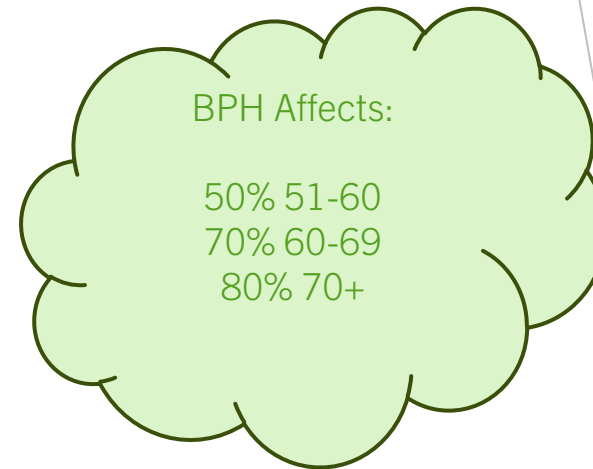




# Which systems are more vulnerable as we age?

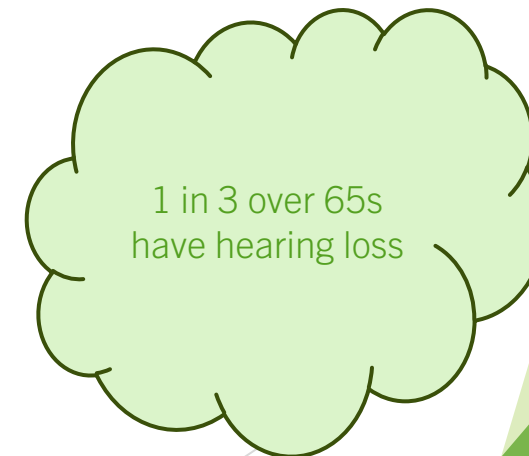
## Urinary Tract

- Increase in uninhibited contractions
- Decreased urinary flow
- Diminished urethral pressure profile (women especially)
- Increased postvoid residual urine volume



## Brain Health

- Frontal cortex shrinks (learning)
- Communication between neurons less effective
- Blood flow in the brain may decrease
- Inflammation increases



## Eyes and ears

- General deterioration in sight and hearing (wear and tear)
- Cataracts and macular degeneration can occur

## It all comes down to cellular function

Cells are the building blocks to tissue.

The organelle called Mitochondria produce 90% of the body's energy. In doing so they also create by-products such as Reactive Oxygen Species (ROS).

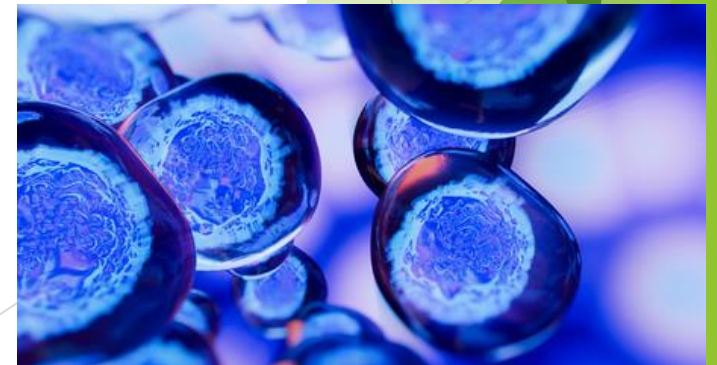
These need to be neutralised to avoid them causing damage to our cells and tissues.

As we age, antioxidants decrease, such as glutathione and alpha lipoic acid.

= our repair systems degrade and become less effective

= DNA, telomere damage & mitochondrial damage

There 37 trillion  
cells in the body



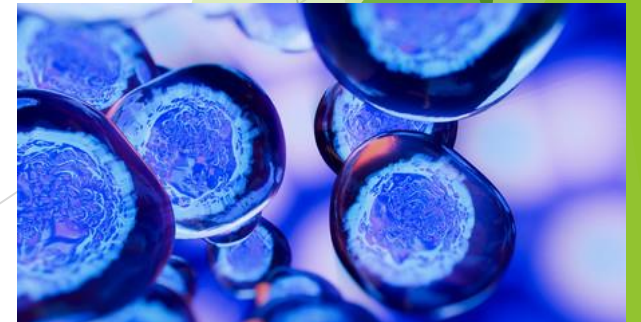
## It all comes down to cellular function

Cells change as we age and are more likely to:

- **Atrophy** – especially in skeletal muscle, the heart, the brain, and the sex organs
- **Dysplasia** – the size and shape of the cells can abnormally change
- **Neoplasia** – formation of tumours, either cancerous or non-cancerous
  - these cells replicate quickly

Organs slowly become less efficient over time e.g. the heart pumps out 1% less blood every year after 30 years old (worse if you are sedentary).

There 37 trillion cells in the body



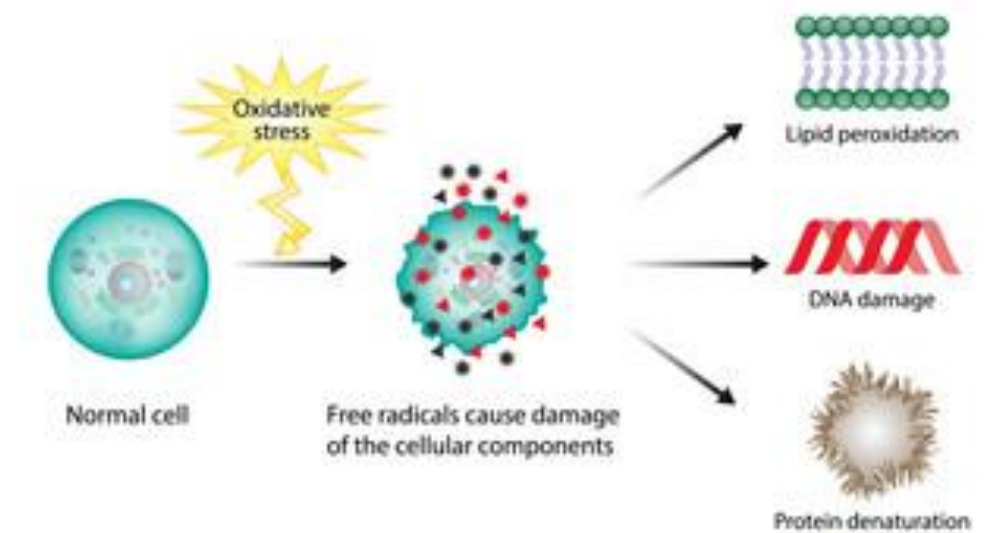
# It all comes down to cellular function

## Reactive Oxygen Species (ROS)

About 2–3% of the oxygen atoms taken up by the mitochondria are reduced insufficiently to (ROS).

These ROS include the superoxide ion, the hydroxyl radical, and hydrogen peroxide.

ROS can oxidise and damage cell membranes, proteins, and nucleic acids.



# It all comes down to cellular function

Stress on the body comes in many forms eg:

- **Metabolic by-products**
- **Environmental pollutants**
- Sympathetic nervous system dominance/excess cortisol
- Oxidised fats & imbalanced omega 3 to 6 ratio
- Lack of micronutrients
- Excess exercise

*“Stressors can damage intracellular macromolecules, including proteins, DNA, RNAs and lipids. This results either in cell reparation or cell death”*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4362434/>

2005 PANDA - 287 chemicals were detected in umbilical cord blood, including 209 of which had never been detected before in cord blood. 180 of these are carcinogenic, 217 are toxic to the brain and nervous system and 208 cause birth defects or abnormal development in animal tests.



# How do endocrine disruptors affect the ageing process?

Endocrine-disrupting chemicals (EDCs) are ubiquitous in our lives, but their harmful effects on humans haven't been studied very much.

EDCs have the capacity to disrupt the production of cytokines, immunoglobulins, and inflammatory signaling molecules, thereby modifying the responses of T helper (Th) cells

A 2022 review:

*“We found that both persistent (polychlorinated biphenyls, perfluoroalkyl and polyfluoroalkyl substances) and non-persistent (phthalates) EDCs exposure could increase an overall risk of ovarian aging, leading to the diminish of ovarian reserve, decline of fertility, irregularity of the menstrual cycle and an earlier age at menopause”*

<https://pubmed.ncbi.nlm.nih.gov/35405219/>



# How do endocrine disruptors affect the ageing process?

A review article by Environmental Research and Technology, Dec 2023:

*“People who developed chronic inflammation and disease due to exposure to endocrine disruptors, mRNA levels of markers of aging (GLB1, p16, p21, p53) and inflammation (IL-6, TNF- $\alpha$ ) were significantly higher, and telomere length was also shortened. From an epigenetic perspective, the key to the biological conditions that accelerate aging are lifestyle habits that create chronic inflammation and insulin resistance”*

*“Accelerated aging is occurring in younger populations, especially due to modernized lifestyles, with the current generation being the first generation to age faster than their parents”*

<https://dergipark.org.tr/tr/download/article-file/3294216>



# Common issues we see in older clients

- Arthritis/inflammation
- Memory loss
- Insulin resistance
- Gut issues – Constipation, diverticular, diarrhoea
- Eye issues
- Tissue weakness inc prolapse
- Prostate issues
- Urinary imbalances
- Low mood & SAD syndrome
- Post menopause – incontinence, UTIs, osteoporosis
- Hearing loss
- Cardiovascular – high cholesterol
- Weight loss & weight gain issues





# Menopause and health issues

When women lose oestradiol, some health risks increase:

- **Heart disease** – the risk increases 4 fold in the 10 years after menopause (meets same risk as men)
  - LDL cholesterol production increases
  - more oxidative stress
- **Urogenital issues** – UTIs, incontinence and painful sex
- **Brain health** – neurotransmitters can become imbalanced
  - less protection from brain cell death
  - higher risk of oxidative stress
  - 50% more depression in women than men in this age group



# Menopause and health issues

When women lose oestradiol, some health risks increase:

- **Skeletal/Muscular** – bone density decreases
  - 1 in 10 women over 60 have osteoporosis (life-long risk?)
  - muscle loss/sarcopenia
- **Metabolic** – body stores more fat (to help increase oestrogen)
  - less calories being burned (from less muscle)
- **Immune** - decreased oestrogen increases susceptibility to infectious diseases



# Menopause and health issues

We can support all of these symptoms!


We can look to other countries that “menopause well”

- **Japan** – consume high amounts of isoflavones and plant oestrogens
- **China** – rural women suffer with less symptoms than ‘city dwellers’ – stress? Pollution?

Ovulating is **KEY** to long-term health outcomes in women. The longer we ‘cycle’ the better.

Japan has very low OCP use (0.9%). UK OCP use is around 30%.

Could that be why Japanese women’s menopause journeys are better?



Webinar:  
“Is it Peri-  
menopause?”

# Key Nutrition – Plant Oestrogens

Isoflavones and lignans

They can have oestrogen-like effects which can be protective. It could be a reason why Japan has lower issues around menopause and longer longevity in both men and women.

*“Phyto-oestrogens and their metabolites from medicinal plants have been shown to mimic the benefits of endogenous oestrogens, and oestrogen-based therapies are considered promising approaches for preventing the onset and progression of neurodegenerative disorders”*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8172769/>



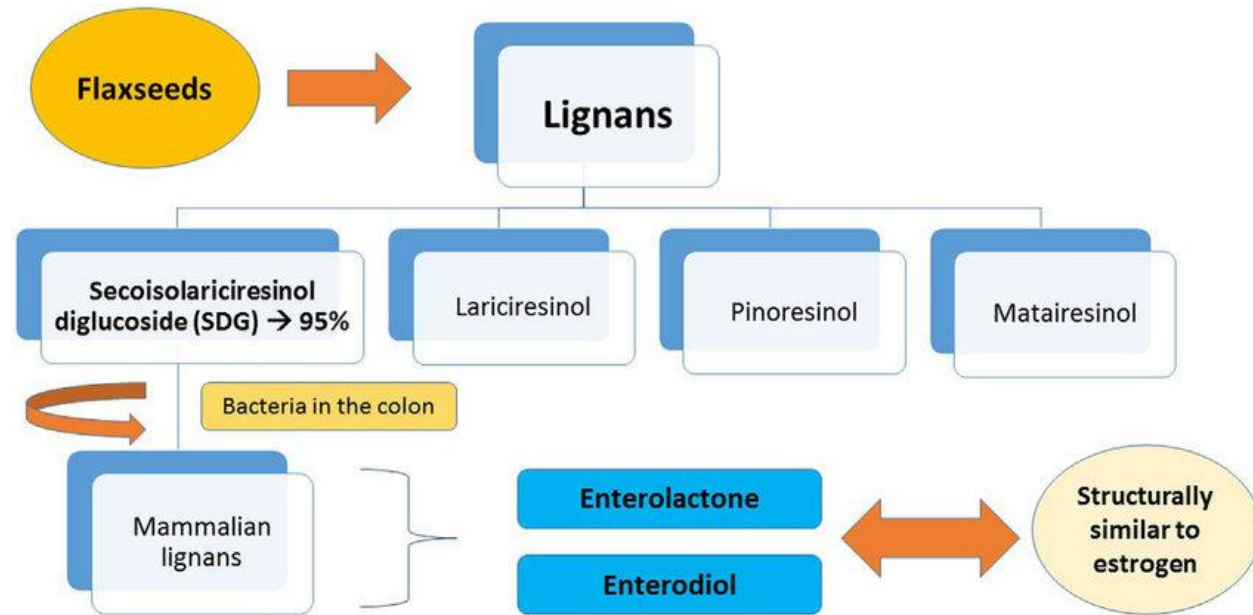
# Phyto-oestrogens

Lignans are associated with the normal homoeostasis of sex hormones of both men and women.

The lignan in flaxseed is called secoisolariciresinol diglucoside (SDG). SDG is a polyphenol. In the early 1980's investigators reported that the level of lignans in the body were lower in patients with breast cancer than in tumour-free patients.

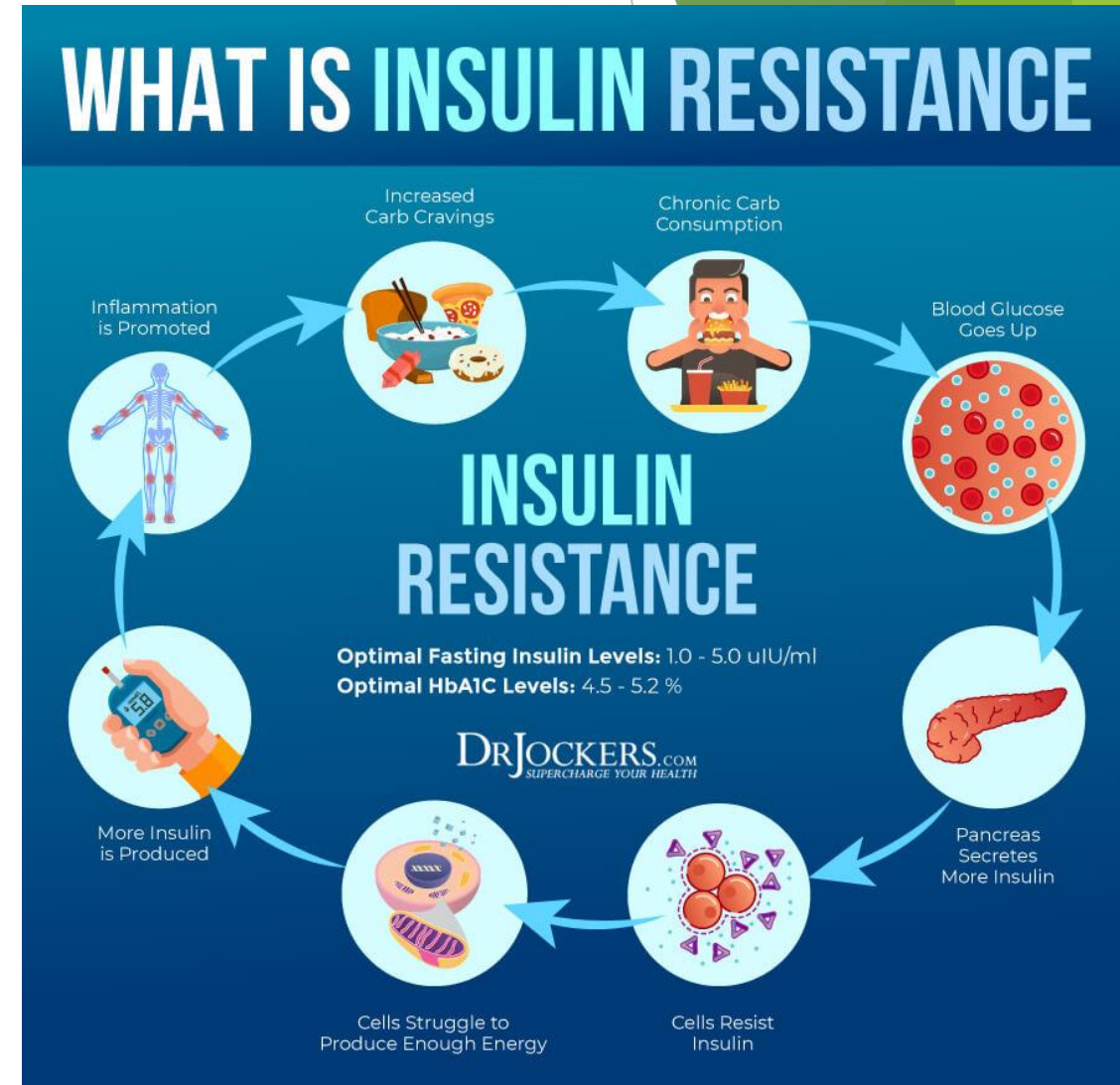
Lignans are not only present in plants, but our bodies can make them through a conversion process in the colon. In humans they are called "mammalian lignans."

Lignans are not oestrogenic themselves but when the plant lignan SDG (from flaxseed hull) is ingested, it is converted in the colon by gut microflora to the mammalian oestrogenic lignan compounds enterodiol (ED) and enterolactone (EL). Many studies have shown the important health benefits that exist due to this conversion of flax lignan in the body. (Setchell & Adlercreutz, 1988).



# Excess weight & Insulin Resistance/Metabolic Syndrome

- Insulin resistance & high triglycerides
- **Imbalanced hormones** - adipose tissue can contribute up to 100% of circulating oestrogen in postmenopausal women. Weight gain in perimenopause & beyond is tricky – fat cells expand while muscle is less metabolically active. Sleep and liver support is crucial, as well as allowing toxins and excess hormones to be cleared out of the body.



## Causes of Obesity

CDC States:

*“The rapidly rising population prevalence of obesity in recent decades has been attributed to an “obesogenic” environment, which offers ready access to high-calorie foods but limits opportunities for physical activity.*

*The obesity epidemic can be considered a collective response to this environment”.*



## Inflammation & excess weight

Excess of macronutrients in the adipose (fat) tissue stimulates them to release inflammatory mediators like TNF- $\alpha$  and IL-6.



This reduces production of adiponectin, predisposing to a pro-inflammatory & insulin resistant state and oxidative stress.



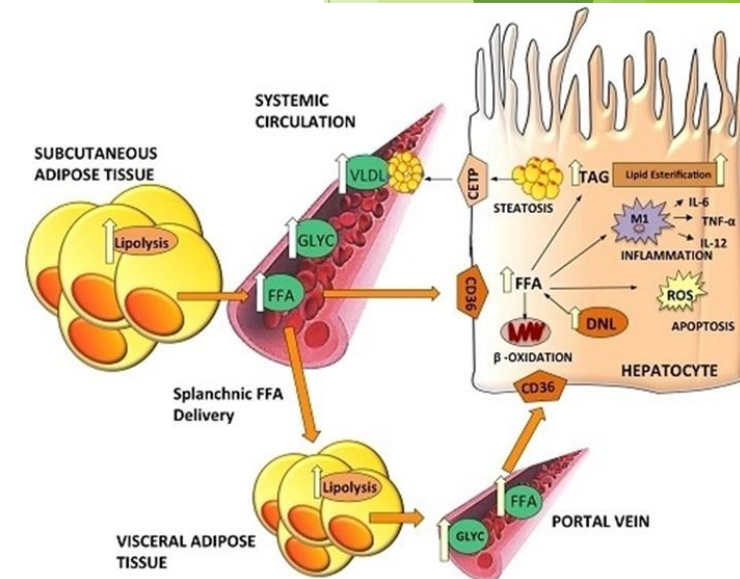
The increased level of IL-6 stimulates the liver to synthesise and secrete C-reactive protein.



**Systemic Inflammation**

Important not to be overweight when young – fat cells once made, cannot be unmade

Adiponectin is a hormone your adipose tissue releases that helps with insulin sensitivity and inflammation





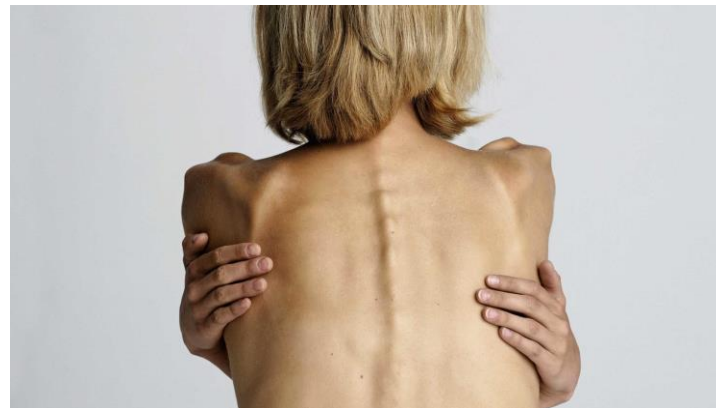
# Low BMI

Adipocytes shrink when there is a deficit in food intake.

Can lead to:

- Malnutrition
- Osteoporosis & dental issues
- Decreased muscle strength
- Hypothermia
- Lowered immunity
- Anaemia
- Lower life expectancy
- Gut dysbiosis
- Mood disorders

Being underweight is categorised by a BMI of 18.5 or less



# Low BMI – what to watch out for

Causes of unintentional weight loss:

- Cancer
- Endocrine disorders – Addison's, hyperthyroidism
- Dysphagia
- IBD
- Dementia
- Viral, parasitical or bacterial infection
- Medications – metformin, some antidepressants
- Loneliness or grief
- Dental issues
- Depression/low mood
- Zinc deficiency
- Cost of food



At least 700,000  
living with an  
eating disorder in  
UK.  
90% are female.

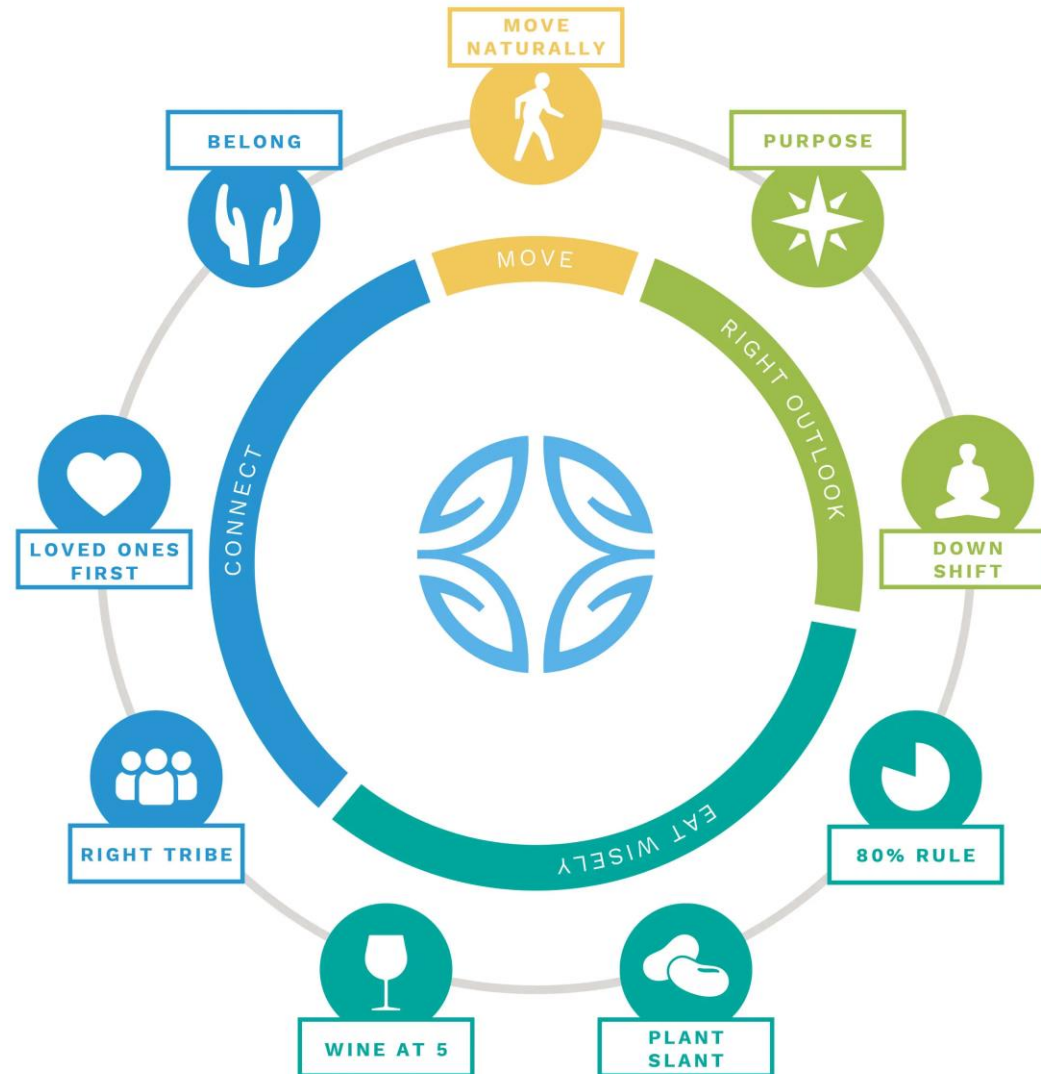
Since 2020, more over 60s  
are not eating enough.  
That's 1 in 10/1.4 million.  
(Age UK)



## Blue Zones®

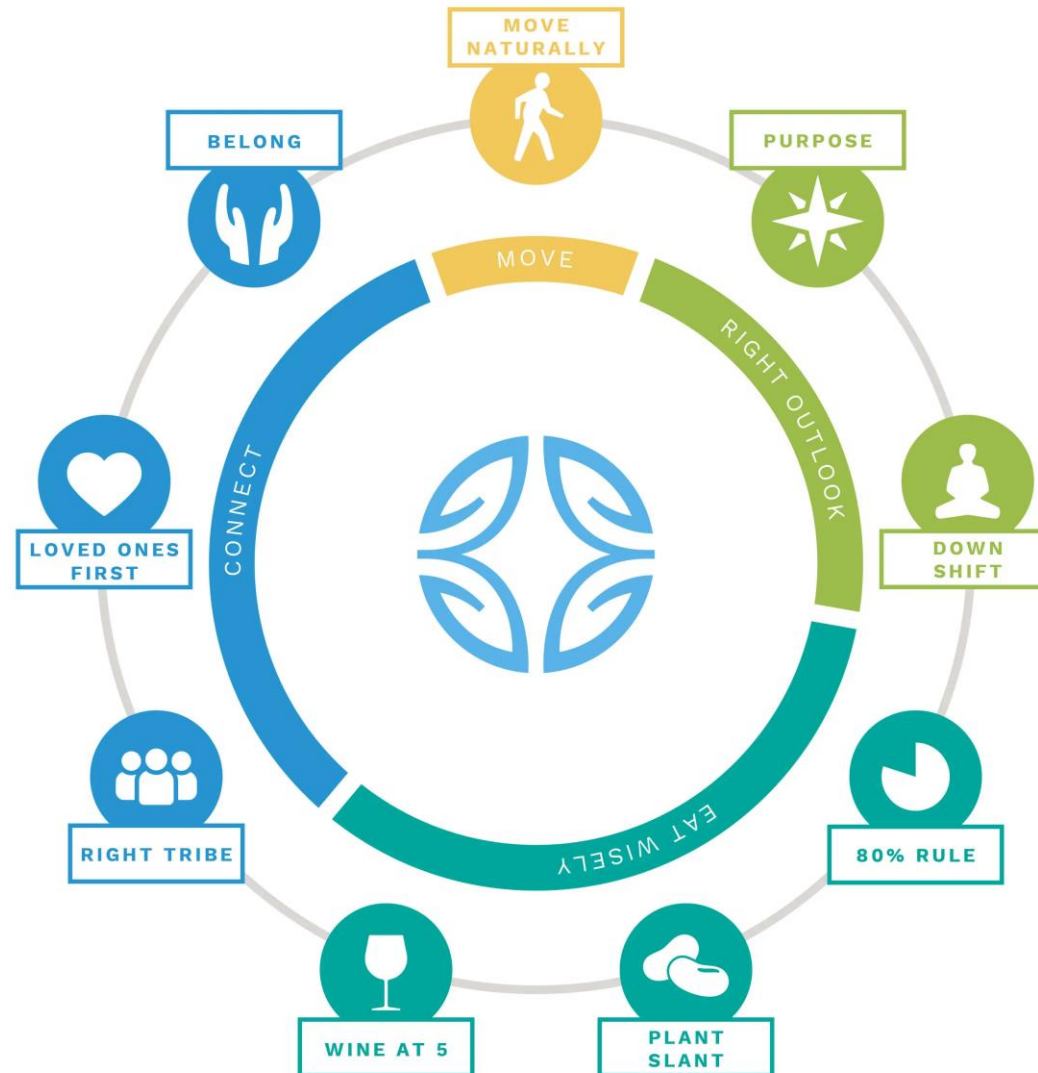
Dan Buettner has researched the places where humans live the longest and healthiest.

Power 9



## Blue Zones®

- Moderate drinking outweighs non-drinkers (wine)
- Plant-based (minimal meat)
- Avoid overeating
- Daily movement (not extreme)
- Faith
- Purpose
- Family first
- Find your tribe
- Minimise stress



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# Community

1 in 4 North  
Americans  
now live alone

## Community

During the COVID-19 pandemic, there was a concern about how social distancing and lockdowns would be detrimental to people's mental health. A study published in the Journal of Social and Personal Relationships showed that - quarantine did result in higher levels of loneliness and depression. The effects were worse for people who needed to isolate for a longer time. This is consistent with previous studies that revealed how important social interaction, relationships and community are for people's happiness and wellbeing.



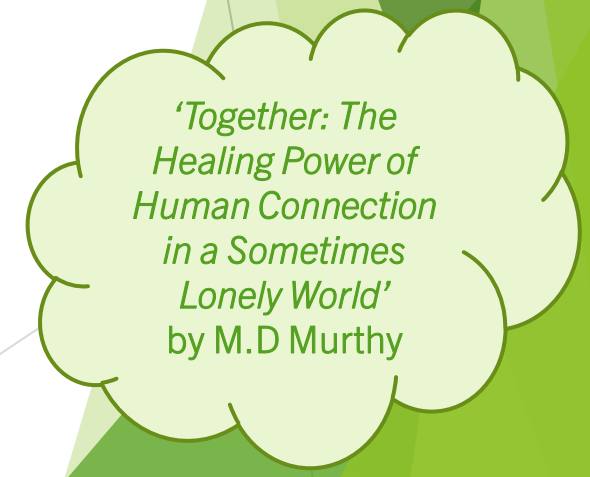
# Community

*“Primates need to belong to an intimate social group, a family or a band, in order to survive; this is especially true for humans. Separated from the group—either finding yourself alone or finding yourself among a group of people who do not know and understand you—triggers a fight-or-flight response. **Your body understands being alone, or being with strangers, as an emergency.** “Over millennia, this hypervigilance in response to isolation became embedded in our nervous system to produce the anxiety we associate with loneliness,” Murthy writes. We breathe fast, our heart races, our blood pressure rises, we don’t sleep. We act fearful, defensive, and self-involved, all of which drive away people who might actually want to help and tend to stop lonely people from doing what would benefit them most: reaching out to others”.*

The New Yorker, Mar 30<sup>th</sup> 2020



The World Health Organization (WHO) has declared loneliness to be a pressing global health threat, with the US surgeon general saying that its mortality effects are equivalent to smoking 15 cigarettes a day



*‘Together: The Healing Power of Human Connection in a Sometimes Lonely World’  
by M.D Murthy*

# How we can affect ageing

**Mediterranean diet** – vegetables, fish, olive oil, wholemeal carbs (12-15% lower risk of premature death)

**If you drink, opt for red wine** – men who drank wine over beer/spirits were 34% less chance of premature death

**Attitude** - pessimistic people had 42% higher risk of early death than optimistic people

**Staying mobile and active** – as little as 13 minutes per day can elongate life by 3 years

**Sleeping well** - sleeping less than 5–7hrs is linked to a 12% greater risk of early death  
- sleeping 9+ hours could decrease your lifespan by up to 38%



# Key nutrients – Magnesium

*“Although more research is clearly needed, we suggest that it is past time to give Mg in appropriate doses and to reduce intake of calcium, glutamate and aspartate for the prevention and treatment of Major Depression, especially Treatment-Resistant Depression, and anxiety, since we can expect rapid improvements in patient health and major reductions in patient expenses without side effects. We did not pay attention to those early Mg and brain pioneers Meltzer and Auer in 1905 and other magnesium researchers over the last 100 years and we may pay the price today”.*

‘Magnesium in the Central Nervous System’

<https://www.ncbi.nlm.nih.gov/books/NBK507265/>





# Key nutrients – Magnesium

A 2013 study. People who are obese had lower levels of magnesium.

Given the importance of this mineral, with over 300 enzymatic uses in the body, it is a crucial to make sure there are adequate levels.

Subjects with the highest intakes of dietary magnesium had the lowest levels of circulating insulin and vice versa, suggesting an important effect. Also, magnesium was shown to be more important for those who were overweight, obese and peri-menopausal.

<https://pubmed.ncbi.nlm.nih.gov/23472169/>



# Key nutrients – Omega 3

*“Omega-3 is important for our brain throughout life, from early cognitive development in foetuses to learning and memory in adults. Brain cells with high levels of omega-3 in their membranes are thought to be better at communicating with other cells, an important process for brain function”. Alzheimer's UK.*



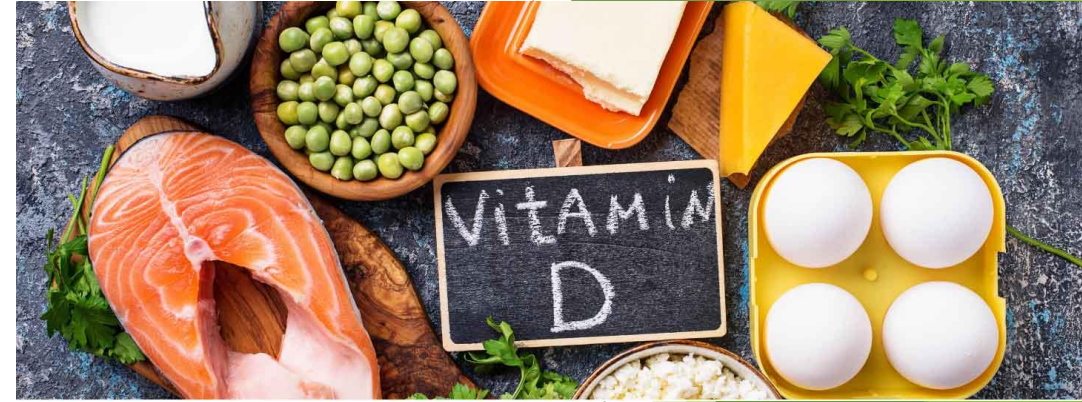
There is an inverse correlation between the consumption of fish and depression.

= the higher the consumption of fish, the healthier the population both physically and mentally.

# Key nutrients - vitamin D

Interestingly, in 2016, a randomised controlled trial of 59 depressed adults were studied over 12 weeks.

- All were given the same anti-anxiety meds.
- All started off with the same vit D levels (11.5ng/ml).
- The control group were given 60,000iu of Vit D every 5 days
- The placebo group were given no vit D



*“No significant correlations were observed between 25(OH)D levels and depression ratings across the course of the study. **Importantly, endpoint escitalopram doses were 4 mg/day higher in placebo than in Vit D patients, and 4 mg/day higher in Vit D deficient than in Vit D sufficient patients**”.* <https://pubmed.ncbi.nlm.nih.gov/35843459/>

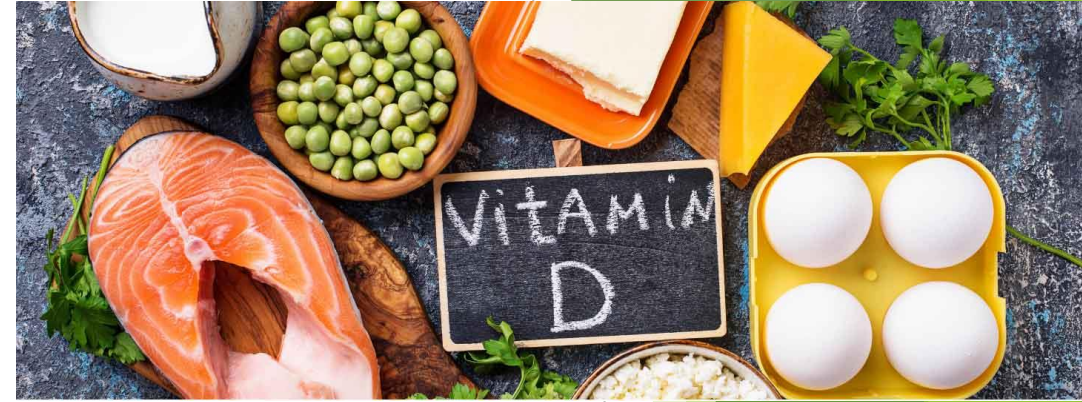
# Key nutrients - vitamin D

Low vitamin D levels may be associated with cognitive decline and symptoms of depression

Current evidence suggests that low vitamin D levels may contribute to the development of diseases of ageing, such as osteoporosis, cardiovascular disease, hypertension, type 2 diabetes, and cancer.

Systematic review of over 80,000 adults over 65 found:

That non-vertebral and hip fractures were reduced by almost 20% in individuals who consumed greater than 400 IU of vitamin D supplementation each day



# Key nutrients - vitamin D

It's recommended that over 70s take 800iu daily (Age UK)

*"Another review examined the past 15 years of literature on vitamin D and falls and found that vitamin D supplementation of at least 800 IUs effectively decreased the risk of falls in the older adult population"*



# Key nutrients – CoQ10

CoQ10 levels are halved at the age of 80, compared to at 20 years old.

Statins can lower the endogenous production of CoQ10 (8 million take them)

The heart, liver, kidneys and pancreas have the richest amount of CoQ10

*“CoQ10 supplementation has also shown therapeutic benefits in animal models of disease and human studies, especially in conditions associated with oxidative stress”*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6770889/>



# Key nutrients – antioxidants

- **Vitamin C and E** - Vitamin E increases the longevity of flies and nematodes when it is added to their diet (Balin et al. 1993; Kakkar et al. 1996).
- **Zinc** – deficiency is common in elderly, especially in men (loss of sense of smell/taste)
- **Selenium** – higher levels associated with longevity
- **Grape Seed Extract (Vitaflavan®)** – helps to prevent age-related cognitive decline
- **Reservatrol** – shown to cause the prevention of ageing. Red grapes and aged red wine (Pinot Noir & Merlot), blueberries (French Paradox)
- **Turmeric** – alleviates ageing symptoms
- **Green Tea** – catechins in green help prevent cognitive decline (neuron-protective)



# Key nutrients – antioxidants

Carotenoids – accumulates in all cells, reduce as we age

- Astaxanthin – fish, blueberries.
  - accumulates in mitochondria and exposes itself to interior and exterior of cell
  - neuroprotective effects
  - quench free radicals before enters the cell
  - crosses the blood brain barrier
- Lutein – kale, collard & spinach
  - eye health, reducing phototoxic activities
- Zeaxanthin – egg yolks, leafy green veg
  - help mitigate frailty risk and age-related declines in musculoskeletal health
  - found naturally in retina
- Lycopene – cooked tomatoes, grapefruit, papaya
  - help to prevent ageing disorders

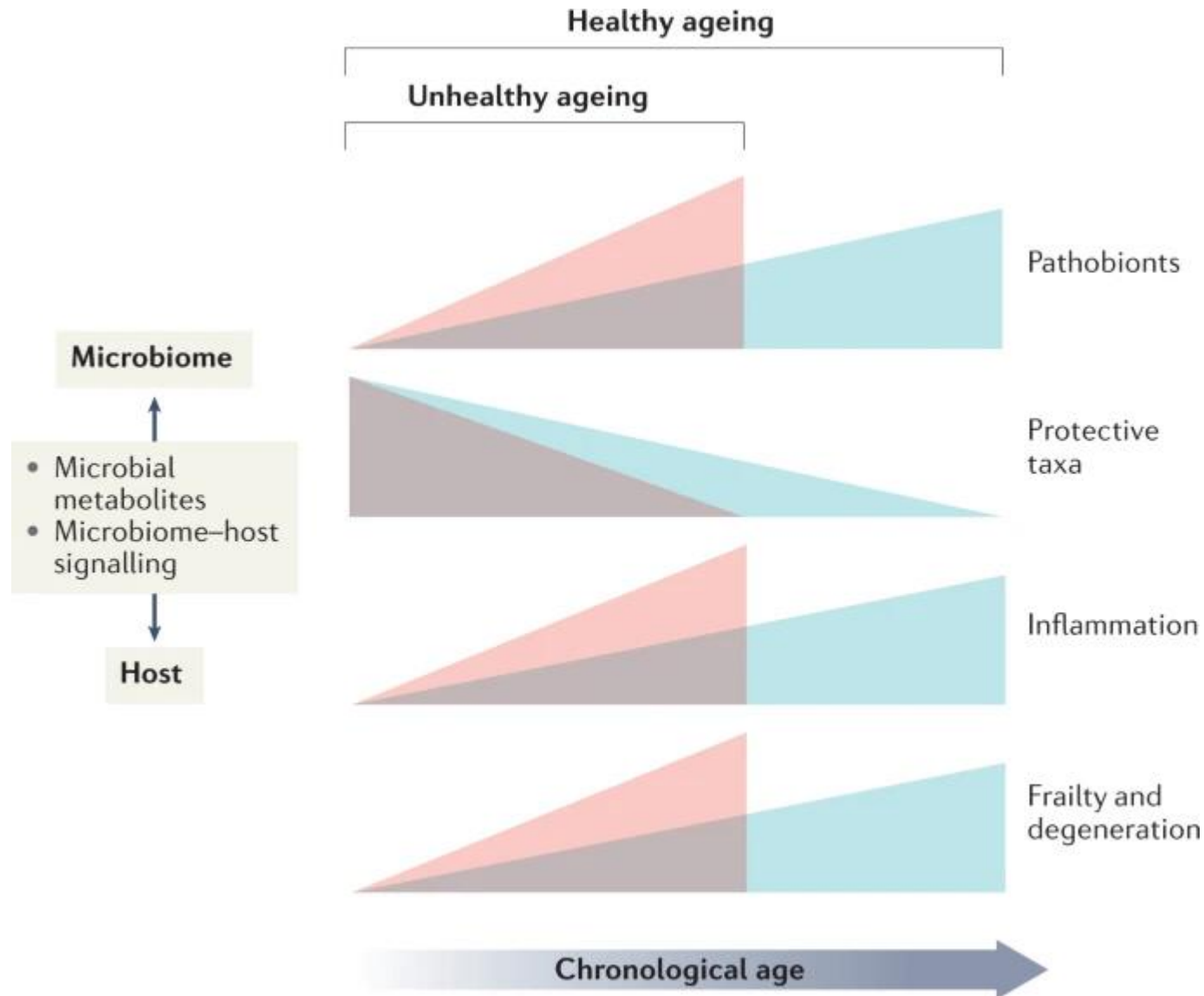
**Bionutri®**

Both astaxanthin  
and lutein are  
found in retina



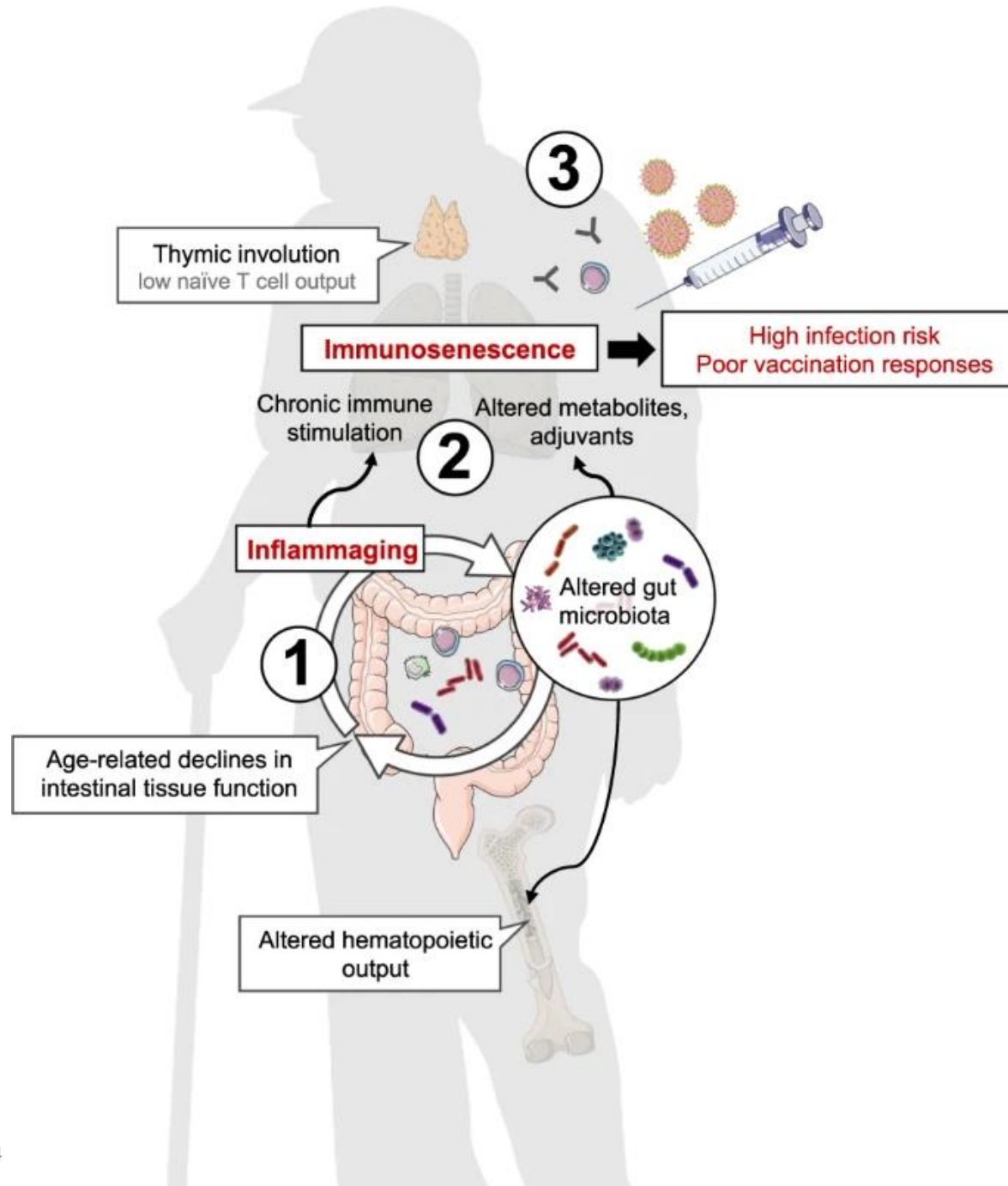


# Ageing the the Microbiome

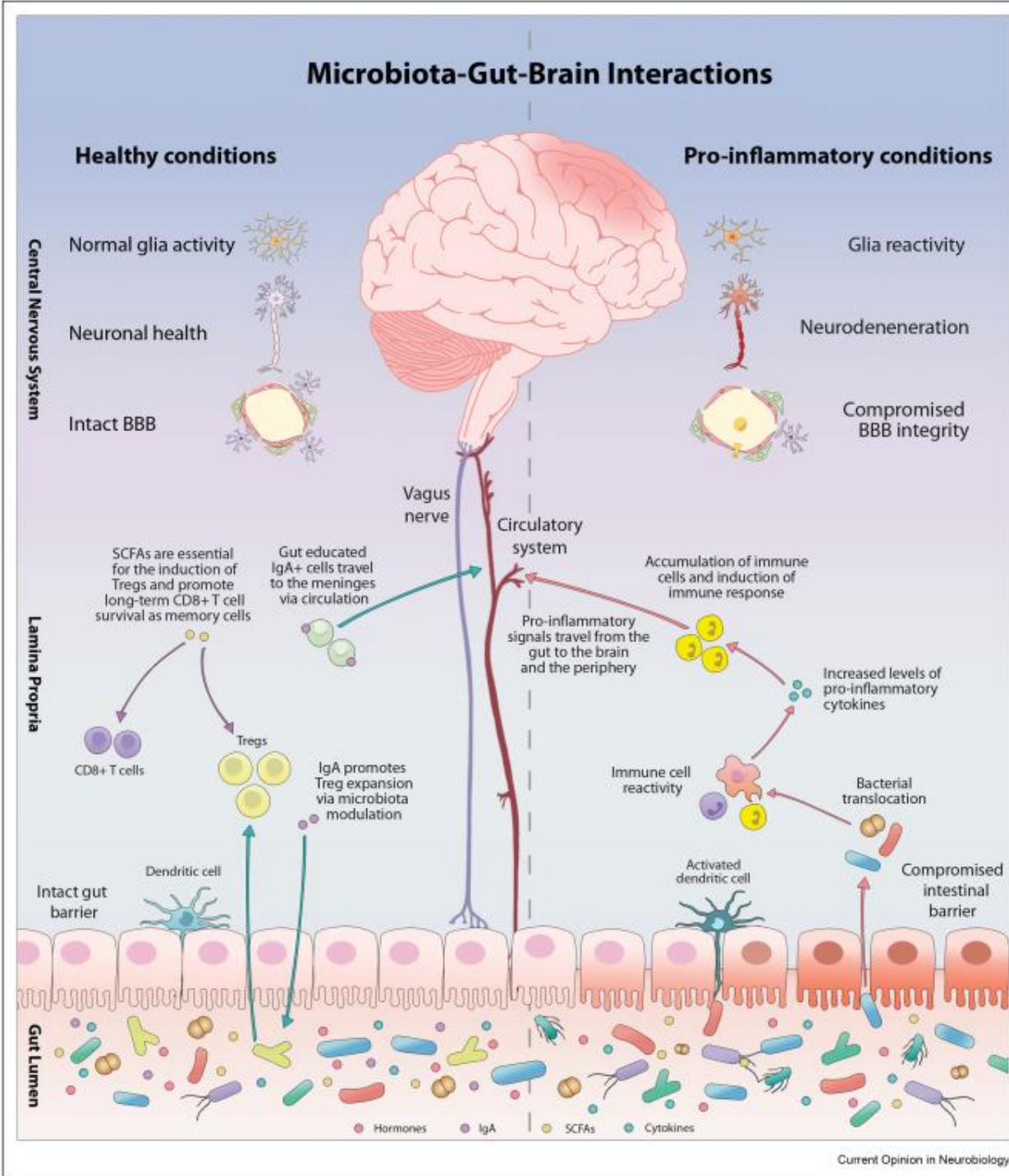


*“Chronological age is accompanied by changes in host–microorganism homeostasis that determine, in part, the rate of physical and cognitive decline.”*

*Lifestyle and environmental effects on the microbiota can delay (healthy ageing) or accelerate (unhealthy ageing) deterioration in the host and foreshorten life expectancy”*



*Age-related changes in gut-microbial communities and associated declines in intestinal tissue function may fuel inflammation, creating a vicious cycle further impacting host-microbiome interactions (1). Chronic immune stimulation as a consequence of systemic low-grade inflammation and changes in the metabolism and microbial stimuli contribute to immunosenescence (2) that together with impaired immune repopulation result in increased infection risk, and poor vaccination responses in the elderly (3)*



## Microbiota-immune-brain interactions: A lifespan perspective 2022

<https://www.sciencedirect.com/science/article/pii/S0959438822001465>

# The modern day cascade

Toxins, pro-inflammatory & low nutrient foods, medications

**ageing** → Poor enzyme secretions, hypochloridria & lower bile flow

Lack of absorption & pathogens proliferate

Lower nutrient status

Poor gut barrier function

Inflammation, dysbiosis, imbalanced immunity

**Mental & Physical Dis-ease and accelerated ageing**

Stress is now well demonstrated to alter intestinal epithelial permeability, permitting bacterial antigens and LPS to enter circulation and become humoral influencers, with wide-ranging effects

# Naturopathic Support for over 60s

Mindful eating and enjoyment

Nutrient-dense foods – Mediterranean

Avoiding ultra-processed foods

Eat bitter foods at the start of the meal

Eating in season, organic and homecooked food

Consider a probiotic – titrating

**HEALTH & WELLBEING**   
 Sleeping and feeding times are important determinants of overall health. Sleep 7-9 hours ideally starting before midnight. Eat regular meals and avoid snacking.

**EAT A RAINBOW 7 a day**  
 (5 veg and 2 fruit)

**EXERCISE**   
 Keep moving and stay active. Use the stairs, walk whenever you can. Walk an extra stop. Park further away. Stand rather than sit at your desk.

**SALADS & VEGETABLES**   
 Unlimited salads, leafy greens and vegetables, excluding root vegetables.

**DRINKS**   
 Drink water, tea (black, green fruit and herbal infusions), avoid drinks that are high in sugar or artificial sweeteners including fruit juice.

**OILS**   
 Use olive oil as your everyday fat for both cooking and seasoning, and butter in moderation. Avoid margarines and trans fats. Eat raw nuts, seeds and avocados.

**FRUIT**  
 Eat 1-3 palm-sized portions of fruit a day. Berries in abundance and local and seasonal fruit.

**OTHER VEG**

**PROTEIN**  
 Make fish, poultry and eggs your principal sources of protein, and eat lean red meat, bacon and other processed meats only occasionally. Eat pulses (lentils, beans, chickpeas) and nuts and seeds as vegetable protein. Limit dairy to a small matchbox of cheese, half a cup of live unsweetened yoghurt or a small glass of milk a day.

**THE WELLNESS SOLUTION**

**BANT**  
 British Association for Nutrition and Lifestyle Medicine  
 THE SEAL OF EXCELLENCE FOR NUTRITION HEALTH PROFESSIONALS

# Lifestyle Support

## Movement

- Induce new stem cells to grow and supports inflammation
- Resistance training – increase muscle mass
- Bodywork – osteopathy, physio, PT, massage

## Sleep

- Slow-wave sleep best for ‘cleaning’ itself. 7-8 hours.
- ‘Screen’ hygiene

## Learn something new

- Creates synapses and can help to support brain health

## Manage Stress

- Mindfulness and meditation
- Tai Chi, Qi Gong, getting in nature
- Community and sense of worth



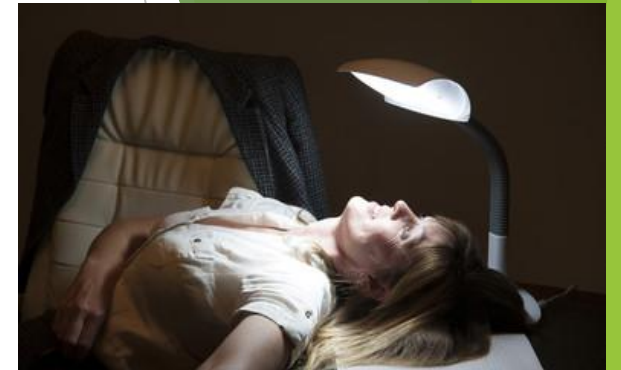
2,956 people study in 1992-2010, found that the majority had retired around age 65.

But a statistical analysis showed that when people retired at age 66 instead, their mortality rates dropped by 11%

<https://hbr.org/2016/10/youre-likely-to-live-longer-if-you-retire-after-65>

## Support for Low mood

- ✓ SAD Lamp
- ✓ Referral for emotional support  
CBT, counselling, EFT, flower remedies
- ✓ Use affirmations and set a regular routine daily
- ✓ Look at vitamin D levels
- ❖ Limit/avoid under-nourishing foods  
Highly processed foods, simple carbs, alcohol, sugar intake, processed meats, stimulants e.g. coffee



# Supporting Brain Health

A study on 3,000 older adults showed that healthy lifestyle factors (physical activity, not smoking, not drinking heavily, following the Mediterranean-style diet, and engaging in mentally stimulating activities) — can have important benefits.

- People who engaged in 4-5 of these behaviours had a 60% lower risk of developing Alzheimer's compared to those who only followed 0-1.
- People who followed 2 or 3 of the activities had a 37% lower risk

<https://pubmed.ncbi.nlm.nih.gov/32554763/>





# Supporting Brain Health

Ageing allows the change in the structure of synapses which affects neural networks.

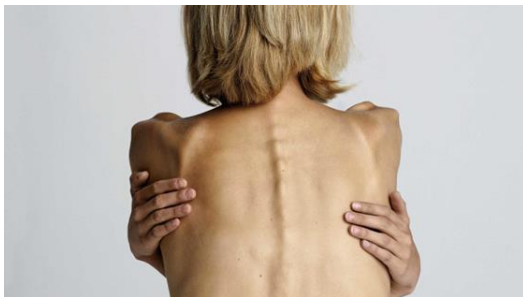
Support:

- Mediterranean style diet with an emphasis on fruits, vegetables, fish, nuts, unsaturated oils (olive oil)
- Balancing blood sugar
- Ginkgo biloba, turmeric & gotu kola
- Learn new things
- Stay active
- Be part of a community
- Avoid heavy metals – amalgams, filter water



# Supporting Weight Gain

- Over 70s
- Mental health disorders
- Eating disorders
- Cancer patients
- Post-injury
- Post-viral



Many underweight will need specialist intervention.



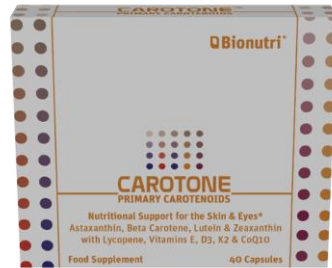
## General tips:

- ✓ Eat regularly (every 3 hours)
- ✓ Blend foods – soups, smoothies
- ✓ Protein-rich
- ✓ Fat-rich (full fat, nuts, seeds, coconuts)
- ✓ Focus on healing gut lining and feeding good bacteria

(careful with nuts/seeds if there is diverticulitis)

## Supporting Eye health

- ❖ Beta-carotene
- ❖ Lutein
- ❖ Astaxanthin
- ❖ Zeaxanthin



- Reduce screen use
- Stay hydrated
- Support blood sugar levels
- Good sleep
- Regular eye checks

Sue did a webinar:

[Eye Health](#)



# Supporting the cardiovascular system

**Mediterranean style diet** - fruits, vegetables, fish, nuts, unsaturated oils (olive oil)

**Walking** for 45 minutes can help reduce blood fats

**Avoiding snacking** and fast 14 hours overnight

**Key nutrients** – omega 3, magnesium, vitamin C, CoQ10, lycopene, artichoke, garlic, red foods – beetroots, cranberries, rosehip

If on statins,  
recommend  
CoQ10



# Supporting the muscular skeletal system

Resistance exercise – help prevent bone density loss

Improving stomach acid levels – support absorption

Anti-inflammatory herbs – turmeric, boswelia, ginger

Reducing pro-inflammatory foods

Key Nutrition - Vitamin D3, C, K2, magnesium, calcium, zinc, glucosamine, chondroitin, rosehip, rutin

“Exercise interventions may be able to reduce the onset and progression of age-related musculoskeletal conditions”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9514541>



# Supporting the gut



## Constipation/improving bowel transit

- ‘Squatty Potty’, walking, massage,
- Hydration – water
- Fibre - especially apricots, pear and apple purees, dandelion root and chicory, resistance starch

## Diverticular or bowel removed – increase absorption

- Plant enzymes, apple cider vinegar, eating ‘pre-digested’ foods e.g. soups
- Increase bitter and green foods – rocket, watercress, artichokes
- Avoiding seeds
- Assessing any allergies or intolerances – looking at immunity

## Titration probiotics – for those who are sensitive



# Supporting with herbs

**Ginseng** – “true” ginseng, antioxidant (ginsenosides), adaptogen, tonic, immunomodulating, cognition-enhancing, slightly stimulating, increases resistance to environmental stress



**Nettle Root** – kidney health, supporting kidney qi, mineral-rich, men – hydrolysable lignan (prostate balance), energising



**Passion Flower** – non-psychotic, aids sleep, hypnotic, very low side effects



## Navigating polypharmacy

**Optimise nutrition** – nutrient dense foods, antioxidant rich

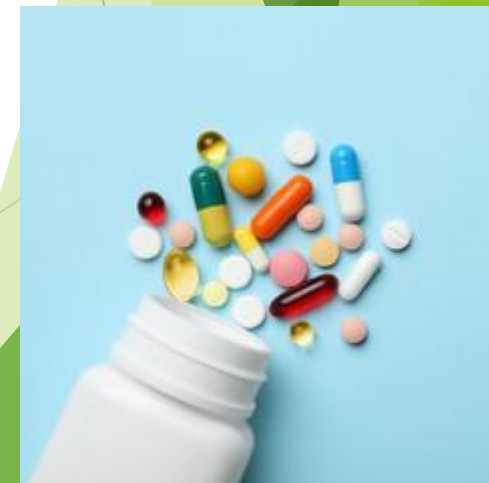
**Minimise empty calories** – white bread, tea, biscuits. Make easy swaps.

**Food first** – include spices and herbs, seasonal, organic

**Utilise herbal teas**

**Fermented foods** – microbiome support

The statistics on prescriptions dispensed in the community show that people aged 60 or over are now given an average of 42.4 prescribed items a year (BMJ)





## Navigating polypharmacy

- Kefir complex
- EcoDophilus
- Neuralactin Plus
- Magnesium complex

Generally safe with medications

Always check with a medical doctor



## EcoDophilus®

Resident dominant bacteria (*L. acidophilus* & *B. lactis*)

- Reduces risk of pathogenic proliferation
- Colonises small and large intestine
- Help balance inflammatory processes

Transient (*L. bulgaricus* & *L. kefir*)

- Enables other good bacteria to flourish
- For sensitive clients and long-term maintenance
- Dose can be increased in cases of gastroenteritis
- Can be titrated for difficult complex cases



FOS free

## Key Supplements

### EcoGest® (1 cap)

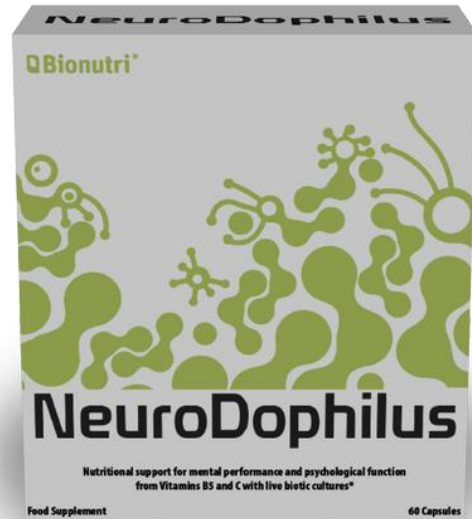
- Pineapple concentrate 325mg
  - Papaya concentrate 270mg
  - Gamma oryzanol 300mg
  - L. acidophilus (CUL60 & CUL21), B. bifidum & B. lactis 3 billion
- Aids digestion from a variety of foods when eaten at mealtimes
  - Supports microbiome
  - Taken on an empty stomach, may support clearance of protein fragments
  - Can aid the breakdown of mucus



## Key Nutrients – nervous system support



**Stress & energy**  
Magnesium Malate & Citrate  
Vitamin C  
B vitamins



**Gut-brain Axis**  
5 billion Bifidobacterium  
2.5 billion L. rhamnosus  
2.5 billion L. helveticus

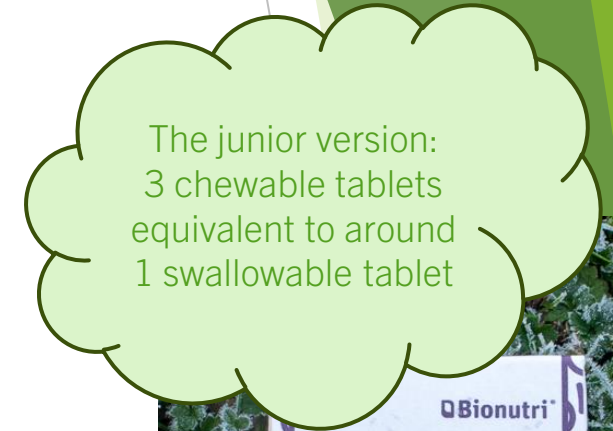


**Calming an overactive nervous system**  
L-theanine  
Hydrolysed casein  
B5 50mg

## Key Supplements

### Elderberry Complex (larger swallowable version – per 2 tabs)

- Elderberry Extract **1g**
  - Potassium ascorbate (vitamin C) **260mg**
  - L-lysine **400mg** & vitamin B6 **10mg**
  - Beta Glucans 1, 3, 1, 6 **72mg**
  - Zinc Citrate **32.4mg**
  - Vitamin D3 **800iu**
- Supports the immune system
  - Beta-glucans support immune tolerance
  - Contains a good dose of zinc and vitamin C
  - Elderberry, alongside beta glucans supports tolerance to seasonal and environmental overload



The junior version:  
3 chewable tablets  
equivalent to around  
1 swallowable tablet



# Key Supplements

## Nettle Plus

- Nettle Leaf & Dandelion Root
  - Dong Quai
  - Hibiscus & Blueberry
  - Alpha lipoic acid – water and fat soluble
  - Grape Seed Extract (Vitaflavan®)
- 
- Blood purifier
  - Aids anaemia
  - Balances inflammation
  - Liver, kidney and prostate support
  - Hair and skin support



# Key Supplements

## Garlic Complex

- Freeze dried slow-release garlic (18 hour)
  - Rosemary Oil
  - Thyme Oil
- 
- Thyme may help to balance inflammation - cytokines
  - Immune supportive
  - Reduces proliferation of pathogenic growths in the gut
  - Lung supportive



# Key Supplements

## CT Plex (2 caps)

- Glucosamine Hydrochloride 1000mg
  - Rosehip Extract 200mg
  - Magnesium ascorbate (vitamin C) and vitamin B6
  - Rutin 100mg
  - Quercetin 50mg
  - Grape Seed Extract (Vitaflavan®) 20mg
  - Green Tea Extract 20mg
- 
- Major tissue support for tissue integrity and repair
  - Help to alleviate pain in muscular skeletal system





# Key Supplements

## Vitamin C Complex (2 caps)

- 1000mg potassium & magnesium ascorbates
  - Pomegranate, Plum and Blueberry extracts
- 
- Vitamin C can help to reduce histamine production
  - Protects against the development of chronic disease
  - Adrenals have a very high concentration of ascorbate (vitamin C)
  - Plays a vital role in connective tissue, the endocrine & immune system
  - Levels deplete with excess stress and age
  - Formulated to match how it's found in nature (with broad-spectrum polyphenolic compounds)



# Key Supplements

## Carotone®

- Zeaxanthin
  - Astaxanthin
  - Lycopene and Lutein
  - Beta carotene & CoQ10
  - Vitamin E, D3 & K2
- 
- Especially supportive for eyes health and protection from skin damage
  - Potent antioxidant for cellular health
  - Mixed in avocado oil as the fatty acid profile is the perfect carrier for lipid nutrients



## Key Supplements

### Omega 3 Fish Oil

- DHA 500mg
- EPA 100mg
- Vitamin D3 400iu and 5mg Vitamin E

- Helps regulate inflammatory processes
- Helps to increase LDL particle size
- Helps to lower circulating triglycerides
- Vital for nervous system and brain health



## Key Supplements

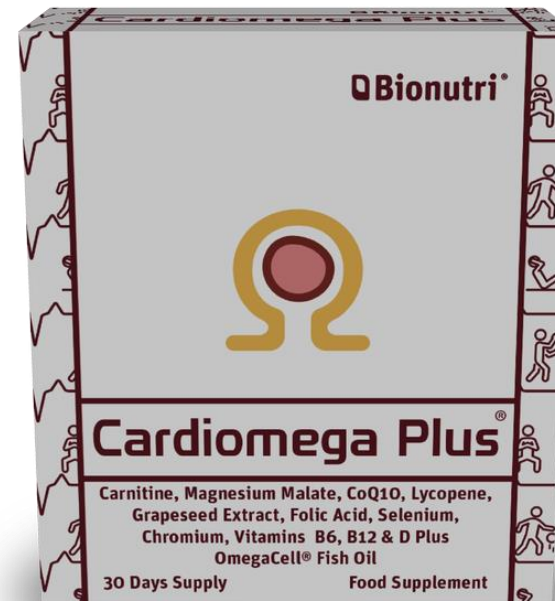
### CardiOmega Plus

#### 1. Antioxidant Plus (1 cap)

- N-acetyl Carnitine
- CoQ10 30mg micellised
- Magnesium Malate 190mg
- Lycopene & Grape Seed Extract
- Vitamin B6, B9 & B12
- Selenium & chromium

#### 2. Fish Oil (1 cap)

- DHA 500mg – EPA 100mg
- Vitamin D3 and E



# Key Supplements

## Phyto-Epicell®

- Chamomile & Green Tea Extracts
  - Milk Thistle, Dandelion Leaf & Root
  - Vitamin B3
  - L. Plantarum 3 billion
  - Limonene, Papain & Bromelain
- 
- Supports healthy cell turnover in gut
  - Broad-spectrum botanical uses
  - Supports all epithelial tissues in the body
  - Liver supportive



# Key Supplements

## Lignan Plus

- Flax Lignan SDG 35mg
  - Limonene 80mg
  - Red Clover Extract
  - *L. bulgaricus* 2 billion
  - *L. plantarum* 2 billion
- 
- Healthy hormone balance for men and women
  - Especially helpful for peri-menopause and beyond
  - Nutritive and non-accumulative



## Liver Support

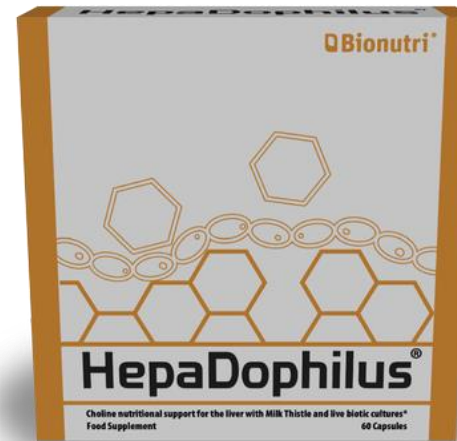
### Taracyn®

- Dandelion root, Choline, Artichoke, Turmeric root, amino acids
  - L. plantarum
- ✓ Cravings, constipation, fat malabsorption, hormone & blood sugar balance



### HepaDophilus®

- Milk Thistle, Choline
  - L. acidophilus, L. plantarum, L. rhamnosus, L. casei (10 billion)
- ✓ Sluggish liver, dysbiosis, liver cell health



Make sure elimination pathways are open before targeting the liver. Especially the bowels.

## Natural Processes

Ageing  
Menopause  
Hypochloridria  
Lower antioxidants  
Slower mitochondria

## Stress

Emotional  
Physical  
MMC  
Vagal nerve  
Community/Connection  
ROS

## Genetics

Iridology

## Poor Gut Health

Assimilation  
Enzymes  
Low HCL & Bile acids  
Detoxification (liver)  
Excretion  
Peristalsis  
Poor eating habits  
Pre/probiotics

## Inflammation

Dysbiosis  
Insulin resistance  
Ultra-processed foods  
Liver health  
Omega 6



## Hormones

Stress  
Sex  
Thyroid

## Medications

PPIs  
Antibiotics  
Statins  
Blood thinners  
NSAIDs

## Insufficient Micronutrients

Calcium  
Magnesium  
Zinc  
B12  
Iron  
A, D, E, K  
Protein



# Food for thought, a snippet from Blue Zones...

*“My thoughts returned to the blue zones, where I’d learned the priceless value of slowing down, of engaging in long conversations with a neighbor, of unrushed family dinners, of eating low off the food chain, and of cooking at home. I recalled the counterintuitive joy of getting out from behind my steering wheel and back onto my feet. Of walking to the places I need to go—and if they were too far away, of moving closer to them. Of gardening instead of weight training. Of getting closer to family, to beauty, to nature, and to the rhythms of life that have set the tempo for the human species for the past 25,000 generations”.* **Dan Buettner**

# Relevant Webinars on-demand

*Ageing Gracefully* – <https://www.bionutri.co.uk/new-page-59>

*Aching Joints* - <https://www.bionutri.co.uk/aching-joints-banner>

*Constipation* - <https://www.bionutri.co.uk/constipation-banner>

*Cholesterol* - <https://www.bionutri.co.uk/cholesterol-webinar>

*Cardiovascular health* - <https://www.bionutri.co.uk/cardiovascular-health>

*Cell Health* - <https://www.bionutri.co.uk/cell-health>

*Supporting the Genitourinary System* - <https://www.bionutri.co.uk/genitourinary-system-banner>

*Herbs, menopause & perimenopause* - <https://www.bionutri.co.uk/herbs-the-menopause>

*Improving Libido* - <https://www.bionutri.co.uk/improving-libido>

*Mediators of Inflammatory Response* - <https://www.bionutri.co.uk/mediators>

*Nutrition & the blood brain barrier* - <https://www.bionutri.co.uk/fibromyalgia-1>

# Practitioner Support (technical support)

**Practitioner area on our website** – [www.bionutri.co.uk](http://www.bionutri.co.uk)

- upcoming free webinars
- previous CPD webinars
- product info
- technical team contact details

**Practitioner Facebook group & page** – [facebook.com/bionutriuk](https://facebook.com/bionutriuk)

- fellow practitioners
- responsive help from technical team

**1:1 Technical Support** – via Zoom, Teams, phone, email

- Sue McGarrigle ND, mBANT, mGNC      [suem@bionutri.co.uk](mailto:suem@bionutri.co.uk)
- Edward Joy, Herbalist                      [ed@bionutri.co.uk](mailto:ed@bionutri.co.uk)
- Rosie Rayner, ND, mANP                      [rosie@bionutri.co.uk](mailto:rosie@bionutri.co.uk)



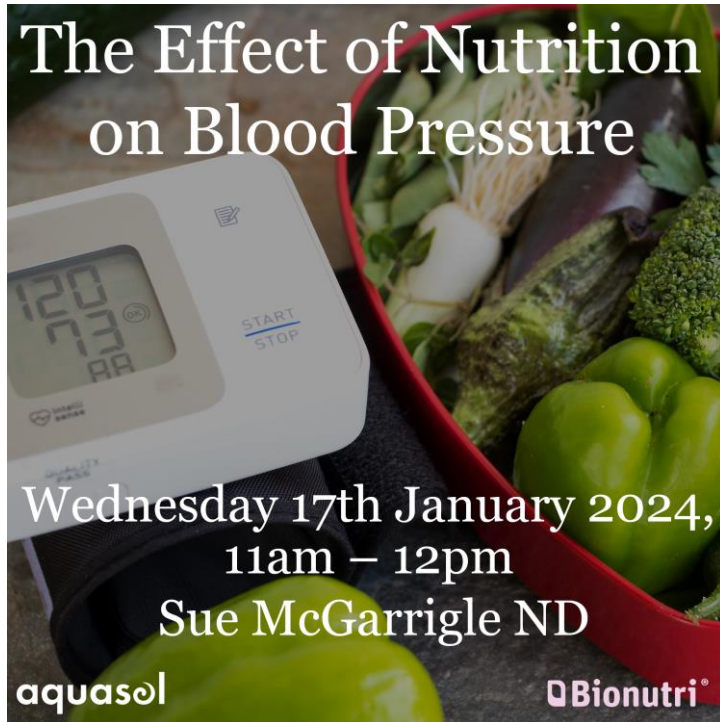
## Thank you

- ▶ Sister company Aquasol →
- ▶ We don't use gluten or yeast-containing ingredients
- ▶ Samples for sensitive clients & kinesiology
- ▶ [www.bionutri.co.uk](http://www.bionutri.co.uk)
- ▶ @bionutriuk



# aquasol

# January webinars



The Effect of Nutrition  
on Blood Pressure

Wednesday 17th January 2024,  
11am – 12pm  
Sue McGarrigle ND

aquasol Bionutri®



Herbs for circulatory  
health

Wednesday 24th January 2024  
Edward Joy

Bionutri® aquasol



A Spotlight on  
Knee Health

Wednesday 31st  
January 2024  
11am – 12pm

Sue McGarrigle ND

aquasol Bionutri®

# References

- NHS
- Clinical Naturopathy: An evidence based guide to practice by Sarris & Wardle
- The Ultimate Herbal Compendium, by Kerry Bone
- <https://emergency.unhcr.org/protection/persons-risk/older-persons#:~:text=An%20older%20person%20is%20defined,over%2060%20years%20of%20age>
- <https://medlineplus.gov/ency/article/004012.htm#:~:text=No%20one%20knows%20how%20and,predetermined%20process%20controlled%20by%20genes>
- [www.bluezones.com](http://www.bluezones.com)
- <https://www.sciencedirect.com/science/article/pii/S0047637421000932#:~:text=The%20endogenous%20production%20of%20CoQ,et%20al.%2C%202019>
- <https://www.ncoa.org/article/the-top-10-most-common-chronic-conditions-in-older-adults>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4399494/>
- <https://www.mayoclinic.org/healthy-lifestyle/healthy-aging/in-depth/aging/art-20046070#:~:text=joints%20and%20muscles-.What's%20happening,your%20coordination%2C%20stability%20and%20balance>
- [https://www.jogc.com/article/S1701-2163\(23\)00433-4/fulltext](https://www.jogc.com/article/S1701-2163(23)00433-4/fulltext)
- <https://www.ncbi.nlm.nih.gov/books/NBK10041/>
- [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1472849/#:~:text=Lower%20urinary%20tract%20symptoms%20are,\(particularly%20in%20women\)%2C%20and](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1472849/#:~:text=Lower%20urinary%20tract%20symptoms%20are,(particularly%20in%20women)%2C%20and)
- <https://www.nia.nih.gov/health/brain-health/how-aging-brain-affects-thinking#:~:text=As%20a%20person%20gets%20older,in%20the%20brain%20may%20decrease>
- <https://www.frontiersin.org/articles/10.3389/fimmu.2022.1029948/full#:~:text=Additionally%2C%20aging%20affects%20the%20secretion,promote%20pathogen%2Dspecific%20immune%20function>
- <https://www.bmj.com/content/337/bmj.a1132#:~:text=The%20statistics%20on%20prescriptions%20dispensed,up%20from%2022.3%20in%20201997>
- [https://www.healthline.com/nutrition/13-habits-linked-to-a-long-life#TOC\\_TITLE\\_HDR\\_11](https://www.healthline.com/nutrition/13-habits-linked-to-a-long-life#TOC_TITLE_HDR_11)
- <https://medlineplus.gov/ency/article/004012.htm#:~:text=No%20one%20knows%20how%20and,predetermined%20process%20controlled%20by%20genes>
- <https://www.health.harvard.edu/mind-and-mood/12-ways-to-keep-your-brain-young>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8704126/>
- <https://www.yalemedicine.org/conditions/enlarged-prostate-benign-prostatic-hyperplasia-bph#:~:text=About%2050%25%20of%20men%20between,over%2070%20years%20of%20age>
- [https://www.theguardian.com/global-development/2023/nov/16/who-declares-loneliness-a-global-public-health-concern#:~:text=The%20World%20Health%20Organization%20\(WHO,smoking%2015%20cigarettes%20a%20day](https://www.theguardian.com/global-development/2023/nov/16/who-declares-loneliness-a-global-public-health-concern#:~:text=The%20World%20Health%20Organization%20(WHO,smoking%2015%20cigarettes%20a%20day)
- [https://www.nccih.nih.gov/health/coenzyme-q10#:~:text=Coenzyme%20Q10%20\(CoQ10\)%20is%20a,liver%2C%20kidneys%2C%20and%20pancreas](https://www.nccih.nih.gov/health/coenzyme-q10#:~:text=Coenzyme%20Q10%20(CoQ10)%20is%20a,liver%2C%20kidneys%2C%20and%20pancreas)
- <https://academic.oup.com/nutritionreviews/advance-article-abstract/doi/10.1093/nutrit/nuad115/7275720?redirectedFrom=fulltext>
- <https://www.medicalnewstoday.com/articles/does-selenium-really-slow-aging#:~:text=Some%20experts%20consider%20telomere%20length,a%20high%20level%20of%20selenium>
- <https://www.medicalnewstoday.com/articles/263332#:~:text=Grape%20seed%20extract%20is%20very,preventing%20cognitive%20loss%20with%20aging.%F2%80%9D>
- <https://www.sciencedirect.com/science/article/pii/S0753332221009483#:~:text=Anti%20Daging%20effects,cardiovascular%20diseases%2C%20and%20other%20diseases>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10563689/#:~:text=Lycopene%F2%80%90rich%20foods%20are%20found,of%20aging%20and%20aging%20disorders>