HEALTH CLAIMS & RESEARCH
2024

INTRODUCTION

Ancient + Brave was born from the desire to lead, innovate and approach things differently. We are a mission-driven brand with a pledge to put people and the planet at the heart of our business.

Developed by experts, informed by nature and driven by science, our beautiful blends and efficacious formulas are designed to holistically support your whole-body health. True to our name, our mission is to bring ancient wisdom to the modern world, which is why our products harness practices and ingredients that have been thousands of years in the making.

We expertly blend organic botanicals, innovative nutraceuticals and modern nootropics - always prioritising quality and efficacy. Our award-winning blends and supplements are sustainably sourced, easy to use and offer targeted nutrition.

This document highlights some of the many health claims and studies associated with the natural ingredients we use in our award-winning products, underscoring the numerous benefits they offer when weaved into your daily rituals.

TRUE / WILD COLLAGEN

INGREDIENTS:

100% Grass-fed Bovine Hydrolysed Collagen Peptides

BENEFITS:

+ Highly absorbable hydrolysed type I Collagen peptides.
+ Odourless and tasteless for effortless enjoyment.
+ High quality, sustainably sourced from grass-fed herds in the EU.
+ Key amino acids for cellular collagen formation and renewal.
+ Nourish the body and skin from within.
+ An excellent source of protein

NUTRITION & HEALTH CLAIMS

+ Low fat, fat free, low in saturated fat - Fat: 0.1g per 100g (saturates 0.1g)
+ Low sugar, no added sugar - Sugars - 0.5g per 100g
+ Source of protein, high protein. Protein: 89.5g per 100g
+ Per 100g: Fibre: 0.9g, Salt: 1.2g

SKIN HEALTH

STUDY 1

The effect of oral collagen peptide supplementation on skin moisture and the dermal collagen network: evidence from an ex vivo model and randomised, placebo-controlled clinical trials.[1]

+ AIM: The aim was to investigate the effect of oral supplementation with specific collagen peptides on skin hydration and the dermal collagen network

+ RESULTS: Improved skin moisturisation, hydration, and dermal collagen density and reduced collagen fragmentation.

STUDY 2

Daily consumption of collagen supplement reduces visible signs of ageing. [2]

+ AIM: To investigate the effects of supplementing collagen on skin properties.

+ RESULTS: Supplementation with 50 mL of collagen on a daily basis for 60 days led to a noticeable reduction in skin dryness, wrinkles, and nasolabial fold depth. In addition, a significant increase in collagen density and skin firmness was observed after 12 weeks.

STUDY 3

Collagen supplementation for skin health: A mechanistic systematic review. [3]

+ AIM: A key systematic review looked at all measures of skin ageing including wrinkle number, dryness, moisture and elasticity.

+ RESULTS: Across 10 publications it was reported that all of the studies on collagen peptides, ranging from 8 weeks to 12 months duration, resulted in improved skin health.

STUDY 4

Oral Collagen Supplementation: A Systematic Review of Dermatological Applications. [4]

+ AIM: To review the literature and assess available randomised-controlled trials using collagen supplementation for treatment efficacy regarding skin quality, anti-aging benefits, and potential application in medical dermatology.

+ RESULTS: Results are promising for the short and long-term use of oral collagen supplements for wound healing and skin ageing. Oral collagen supplements also increase skin elasticity, hydration, and dermal collagen density.

STUDY 5

A randomised, triple-blind, placebo-controlled, parallel study to evaluate the efficacy of a freshwater marine collagen on skin wrinkles and elasticity.[5]

+ AIM: Evaluate the safety and efficacy of a hydrolysed marine collagen on aspects of skin health and quality in women between 45 and 60 years of age.

+ RESULTS: After 12 weeks, participants who supplemented with collagen had a significant 35% reduction in wrinkle score from baseline. At week 12, participants reported greater percentage improvements in overall skin score (9%) and wrinkle (15%), elasticity (23%), hydration (14%), radiance (22%), and firmness (25%) scores vs placebo.

STUDY 6

Effects of Oral Collagen for Skin Anti-Aging: A Systematic Review and Meta-Analysis.[6]

+ AIM: A systematic review and meta-analysis of 26 randomised controlled trials involving 1721 patients to assess the effects of hydrolysed collagen.

+ RESULTS: Collagen supplementation can improve skin hydration and elasticity. In addition, the long-term use of collagen yields more favourable effects on skin hydration and elasticity than the short-term use of collagen.

HAIR & NAILS

STUDY 1

Growing evidence of the beneficial effects of a marine protein-based dietary supplement for treating hair loss.[7]

+ AIM: To review the clinical data supporting the use of an oral marine supplement designed to promote hair growth.

+ RESULTS: Five randomised, double-blind studies assessed the effectiveness of oral marine supplement for promoting hair growth. Together, these studies demonstrated the ability of oral marine supplements to increase the growth of hair, increase the diameter of hairs, and decrease hair loss.

STUDY 2

Oral supplementation with specific bioactive collagen peptides improves nail growth and reduces symptoms of brittle nails. [8]

+ AIM: The goal of this study was to investigate whether daily oral supplementation with collagen peptides alleviates the symptoms of brittle nails and improves nail growth rate.

+ RESULTS: Collagen peptides treatment promoted an increase of 12% nail growth rate and a decrease of 42% in the frequency of broken nails. Additionally, 64% of participants achieved an improvement in brittle nails, and 88% of participants experienced an improvement 4 weeks post-treatment.

JOINT HEALTH

STUDY 1

24-Week study on the use of collagen hydrolysate as a dietary supplement in athletes with activity-related joint pain. [9]

+ AIM: To investigate the effect of hydrolysed collagen on activity-related joint pain in athletes who are physically active and have no evidence of joint disease.

+ RESULTS: The main measure of effectiveness was the change from the beginning of the study in visual scales for pain, mobility, and inflammation.

STUDY 2

The efficacy and safety of low-molecular-weight collagen peptides for joint pain in patients with osteoarthritis: A randomised, double-blind, placebo-controlled study.[10]

+ AIM: To investigate if collagen peptides can reduce knee pain in patients with osteoarthritis.

+ RESULTS: Significant decrease in knee pain.

STUDY 3

Collagen hydrolysate for the treatment of osteoarthritis and other joint disorders: a review of the literature.[11]

+ AIM: This article reviews the medical literature on the preclinical and clinical research on hydrolysed collagen for the treatment of osteoarthritis and other joint disorders.

+ RESULTS: According to published research, orally administered collagen hydrolysate has been shown to be absorbed intestinally and to accumulate in cartilage. Four open-label and three double-blind studies were reviewed and showed collagen provided improvement in measures of pain and function in those with OA or other arthritic conditions.

BONE HEALTH

STUDY 1

Hydrolyzed collagen contributes to osteoblast differentiation in vitro and subsequent bone health in vivo.[12]

+ AIM: To investigate the potential health benefits of hydrolysed collagen on bone using translational approaches.

+ RESULTS: Collagen fed mice exhibited a significantly higher bone mineral density than control mice suggesting a nutritional protective effect of collagen.

STUDY 2

Specific Collagen Peptides Improve Bone Mineral Density and Bone Markers in Postmenopausal Women. [13]

+ AIM: The goal of the study was to investigate the effect of 12-month daily oral administration of 5 g collagen peptides vs. placebo on bone mineral density (BMD) in postmenopausal women with primary, age-related reduction in BMD.

+ RESULTS: The intake of collagen peptides increased BMD in postmenopausal women with primary, age-related reduction of BMD. In addition, collagen supplementation was associated with a favourable shift in bone markers, indicating increased bone formation and reduced bone degradation.effects on skin hydration and elasticity than the short-term use of collagen.

MUSCLE HEALTH & SPORTS RECOVERY

STUDY 1

The effects of collagen peptides on muscle damage, inflammation and bone turnover following exercise: a randomised, controlled trial. [14]

+ AIM: To study whether consuming collagen peptides before and after strenuous exercise alters markers of muscle damage, inflammation and bone turnover.

+ RESULTS: Collagen had moderate benefits for the recovery of countermovement jumps and muscle soreness.

STUDY 2

Collagen peptide supplementation in combination with resistance training improves body composition and increases muscle strength in elderly sarcopenic men: a randomised controlled trial. [15]

+ AIM: To assess the influence of post-exercise supplementation with collagen peptides vs. placebo on muscle mass and muscle function following resistance training in elderly subjects with sarcopenia.

+ RESULTS: Following the programme, all the subjects showed significantly higher levels for fat-free mass, bone mass, strength and sensory motor control with significantly lower levels for fat mass. The effect was significantly more pronounced in subjects receiving collagen peptides.

STUDY 3

The effects of collagen peptide supplementation on body composition, collagen synthesis, and recovery from joint injury and exercise: a systematic review.[16]

+ AIM: To study whether consuming collagen peptides before and after strenuous exercise alters markers of muscle damage, inflammation and bone turnover.

+ RESULTS: Collagen had moderate benefits for the recovery of countermovement jumps and muscle soreness.

STUDY 4

Collagen peptide supplementation in combination with resistance training improves body composition and increases muscle strength in elderly sarcopenic men: a randomised controlled trial.[17]

+ AIM: To investigate whether and to what extent a longer-term specific collagen peptides improve markers related to muscular recovery following exercise-induced muscle damage.

+ RESULTS: The results show that combining specific collagen peptide supplementation and concurrent training over a 12 week period significantly improved markers reflecting recovery, specifically in maximal, explosive and reactive strength.

GUT HEALTH

STUDY 1

Effect of a Daily Collagen Peptide Supplement on Digestive Symptoms in Healthy Women: 2-Phase Mixed Methods Study. [18]

+ AIM: To gain a better understanding of the effect of dietary collagen on managing digestive systems.

+ RESULTS: 93% of those who completed the study experienced a reduction in symptoms, which included bloating.

STUDY 2

Collagen peptide ameliorate intestinal epithelial barrier dysfunction in immunostimulatory Caco-2 cell monolayers via enhancing tight junctions. [19]

+ AIM: The effect of Alaska pollock skin-derived collagen and its 3 tryptic hydrolytic fractions, HCP (6 kDa retentate), MCP (3 kDa retentate) and LCP (3 kDa permeate) on TNF-α induced barrier dysfunction was investigated in Caco-2 cell monolayers.

+ RESULTS: Collagen peptides may attenuate TNF-α induced barrier dysfunction of Caco-2 cells by inhibiting the NFκB and ERK1/2-mediated MLCK pathway with associated decreases in ZO-1 and occludin protein expression.

Our landmark clinical trial on True and Wild Collagen for whole-body health

While numerous studies have clearly demonstrated collagen's effectiveness in enhancing skin, hair, and nail health, our commitment to innovation drives us to explore its broader impact. This is why we have invested in a groundbreaking independently run clinical trial verifying the whole-body benefits of True and Wild collagen.

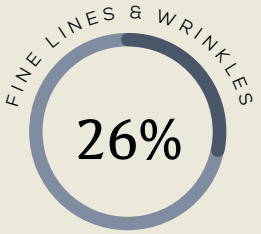
The study is one of the most comprehensive trials of its kind, designed to meet the gold standard for scientific rigour; a double-blind, randomised, placebo-controlled trial. This is the same level of scrutiny applied to pharmaceutical research, ensuring that our findings are held to the highest standards of accuracy, reliability, and clinical significance.

With ninety healthy female participants aged between 35 and 55, the trial was meticulously structured to assess the effects of True or Wild collagen vs. placebo in a real-world setting. Neither participants nor study coordinators knew which product was being taken, ensuring unbiased and scientifically robust findings.

With a precise 10g daily dosage, the study was conducted over twelve weeks, demonstrating the transformative power of consistency. Assessments were conducted at three key touchpoints—baseline, six weeks, and twelve weeks—utilising a combination of bioinstrumental measurements, expert visual grading, and subjective assessments via validated questionnaires to assess broader markers of whole-body health.

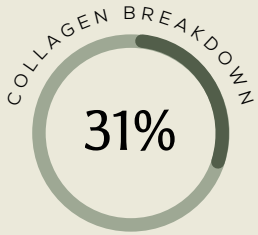
The study received approval from an independent research ethics committee and adhered to the highest standards of clinical research.

100% of Wild Collagen trial participants saw a **137% improvement** in skin hydration

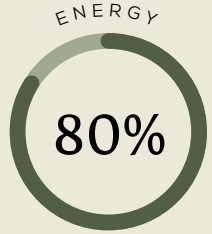


100% of Wild Collagen trial participants saw a **26% improvement** in fine lines & wrinkles

100% of True Collagen trial participants saw a **36% improvement** in skin radiance



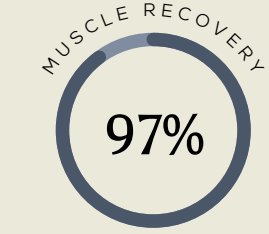
100% of True Collagen trial participants saw a **31% improvement** in collagen breakdown



100% of True Collagen trial participants felt **80% more** energised throughout the day

100% of True Collagen trial participants noticed **77% less** hair breakage

100% of Wild Collagen trial participants noticed **74% less** less joint stiffness & discomfort



100% of Wild Collagen trial participants noticed **97% less** less joint stiffness & discomfort

Double-blind, randomised, and placebo-controlled clinical study in 60 healthy UK females aged 35-55 to evaluate the efficacy of True Collagen over 12 weeks.

RADIANT COLLAGYN

INGREDIENTS:

Raspberry Powder, Chickpea Protein, L-Glycine, Beetroot Powder, L-Hydroxyproline, L-Proline , Chicory Root Inulin, MCT Oil Powder, Natural flavouring, Vitamin C (Magnesium Ascorbate), L-Arginine, L-Alanine, L-Choline Bitartrate, Rosehip Berry Powder, Haskap Berry Powder, Vitamin D3 (cholecalciferol), Zinc, Citrate, Lysine, Biotin.

BENEFITS:

+ Advanced formula of collagen specific amino acids, plant proteins and botanicals.
+ Buffered with vitamin C to promote collagen synthesis.
+ A vibrant blend of antioxidant rich berries to deeply nourish glowing skin.
+ Key phytonutrients to protect cells from oxidative stress.
+ Essential nutrients including zinc and vitamin D to support immune function and optimal daily well-being.
+ Rich in prebiotic fibre to bolster a healthy gut microbiome.

NUTRITION & HEALTH CLAIMS

+ Source of fibre , high fibre . Fibre: 11g per 100g
+ Source of protein, high protein: Protein: 38g per 100g
+ Source of vitamin C, source of vitamin D, source of Zinc
+ Per 100g: Fat: 6g
+ Salt: 0.05g

GLYCINE

STUDY 1

The Sleep-Promoting and Hypothermic Effects of Glycine are Mediated by NMDA Receptors in the Suprachiasmatic Nucleus.[41]

+ AIM: We investigated the site of action and sleep-promoting mechanisms of glycine in rats.

+ RESULTS: The amino acid glycine has been shown to have sleep promoting effects.

STUDY 2

Ganoderma lucidum promotes sleep through a gut microbiota-dependent and serotonin-involved pathway in mice.[42]

+ AIM: The effect and mechanism of the acidic part of the alcohol extract of G. lucidum mycelia (GLAA) on sleep were studied in mice.

+ RESULTS: Results showed that GLAA promotes sleep through a gut microbiota-dependent and serotonin-associated pathway in mice.

VITAMIN D

STUDY 1
Vitamin D: The sunshine vitamin.[43]

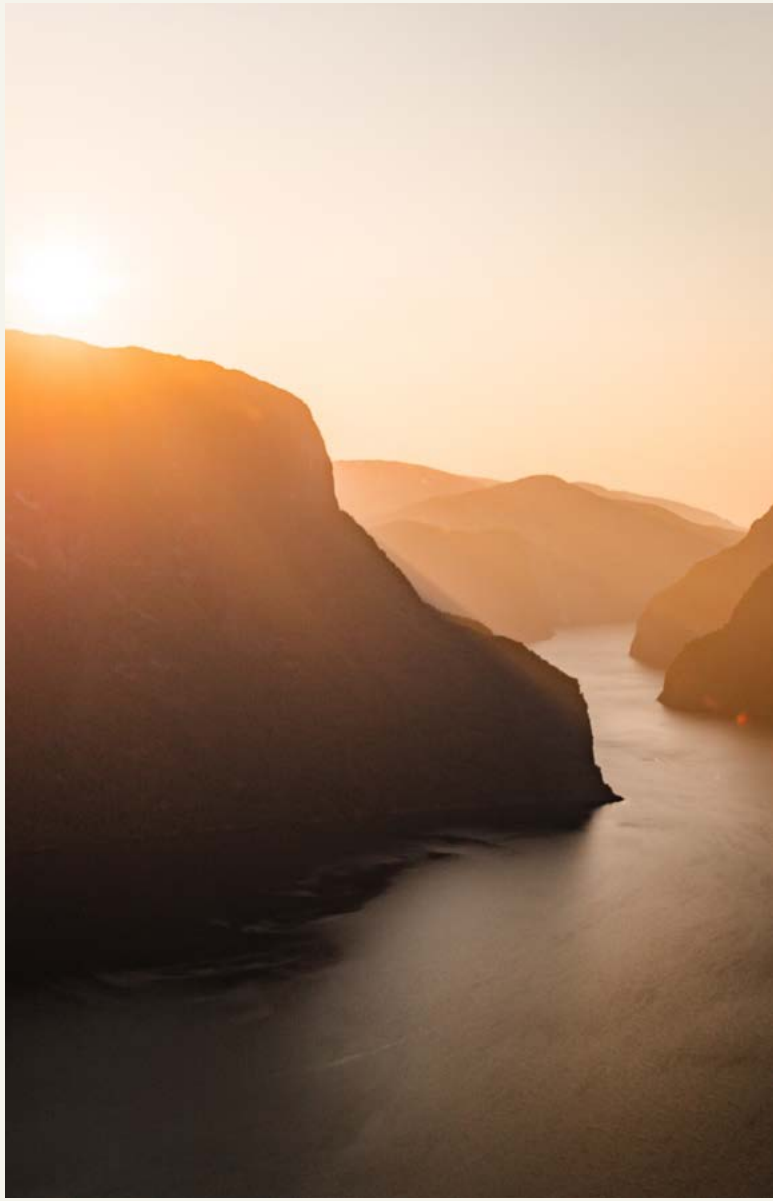
+ SUMMARY: Vitamin D insufficiency affects almost 50% of the population worldwide.

STUDY 2
Vitamin D: its role and uses in immunology.[44]
+ SUMMARY: In recent years there has been an effort to understand possible roles of vitamin D, including its role in the immune system and, in particular, on T cell-mediated immunity. Vitamin D receptor is found in significant concentrations in the T lymphocyte and macrophage populations.

However, its highest concentration is in the immature immune cells of the thymus and mature T lymphocytes. Results show that vitamin D3 can either prevent or markedly suppress experimental autoimmune conditions such as rheumatoid arthritis, lupus, type I diabetes and inflammatory bowel disease.

STUDY 3
Vitamin D: An Evidence-Based Review.[45]

+ SUMMARY: Low vitamin D levels are associated with increased overall and cardiovascular mortality, cancer incidence and mortality, and autoimmune diseases.



NOBLE COLLAGEN

INGREDIENTS:

Type II Collagen, Boswellia Serrata Extract, Vitamin C, Manganese

BENEFITS:

+ Utilises the unique mechanism of action of clinically-proven Type II Collagen.
+ Vitamin C supports normal collagen production for healthy bones and cartilage.
+ Boswellia Serrata is an ancient botanical studied for its therapeutic effects on joint health and inflammation.
+ Key amino acids for cellular collagen formation and renewal.
+ Manganese protects cells from oxidative stress, supporting an active life.
+ Combined in one easy to take capsule for optimal delivery and dosage.

NUTRITION & HEALTH CLAIMS

+ Source of vitamin C
+ Source of manganese

Manganese contributes to:

+ The maintenance of normal bones
+ The normal formation of connective tissue
+ The protection of cells from oxidative stress

Vitamin C contributes to:

+ The normal function of the immune system
+ Normal collagen formation

TYPE II COLLAGEN

STUDY 1

UC-II Undenatured Type II Collagen for Knee Joint Flexibility: A Multicenter, Randomised, Double-Blind, Placebo-Controlled Clinical Study. [20]

+ AIM: To assess the effect of undenatured collagen on knee flexibility in healthy subjects who experience activity-related joint discomfort.

+ RESULTS: A statistically significant increase in knee range of motion flexion was observed in the undenatured collagen group versus the placebo group. In addition, an increase in knee range of motion extension was observed over time in the undenatured collagen group, while the placebo group showed a nonsignificant increase.

STUDY 2

Undenatured Type II Collagen (UC-II®) for joint support: a randomised, double-blind, placebo-controlled study in healthy volunteers. [21]

+ AIM: To assess the efficacy of UC-II in moderating joint function and joint pain due to strenuous exercise in healthy subjects.

+ RESULTS: After 120 days of supplementation, subjects in the UC-II group exhibited a statistically significant improvement in average knee extension compared to placebo.

STUDY 3

Safety and efficacy of undenatured Type II Collagen in the treatment of osteoarthritis of the knee: a clinical trial. [22]

+ AIM: Evaluate the efficacy of UC-II as compared to a combination of glucosamine and chondroitin in the treatment of osteoarthritis in the knee.

+ RESULTS: UC-II treatment was more efficacious resulting in a significant reduction in all assessments from the baseline at 90 days; whereas, this effect was not observed in the G+C treatment group.

STUDY 4

Effects of Oral Administration of Type II Collagen on Rheumatoid Arthritis. [23]

+ AIM: Rheumatoid arthritis is an inflammatory synovial disease thought to involve T cells reacting to an antigen within the joint. Type II collagen is the major protein in articular cartilage and is a potential autoantigen in this disease. Oral tolerization to autoantigens suppresses animal models of T cell-mediated autoimmune disease, including two models of rheumatoid arthritis.

+ RESULTS: AIn this randomised, double-blind trial involving 60 patients with severe, active rheumatoid arthritis, a decrease in the number of swollen joints and tender joints occurred in subjects fed chicken type II collagen for 3 months but not in those that received a placebo.

BOSWELLIA

STUDY 1

Efficacy and tolerability of Boswellia serrata extract in treatment of osteoarthritis of knee-a randomized double blind placebo controlled trial.[24]

+ AIM: To assess the efficacy, safety and tolerability of Boswellia in 30 patients of osteoarthritis of the knee, 15 each receiving active drug or placebo for 8 weeks.

+ RESULTS: All patients receiving drug treatment reported decrease in knee pain, increased knee flexion and increased walking distance. The frequency of swelling in the knee joint was decreased. The observed differences between drug treated and placebo being statistically significant, are clinically relevant.

STUDY 2

A pilot, randomized, double-blind, placebo-controlled trial to assess the safety and efficacy of a novel Boswellia serrata extract in the management of osteoarthritis of the knee.[25]

+ AIM: To evaluate the safety and efficacy of Boswellia in the management of osteoarthritis of the knee.

+ RESULTS: The findings provide evidence that biologically active constituents of BSE act synergistically to exert anti-inflammatory/anti-arthritic activity showing improvement in physical and functional ability and reducing pain and stiffness.

CACAO + COLLAGEN

INGREDIENTS:

Organic raw cacao, organic cocoa, grass-fed bovine hydrolysed collagen peptides, organic beetroot, organic cinnamon, organic carob, organic ashwagandha, organic baobab, pink himalayan salt.

BENEFITS:

+ 2000mg of nourishing hydrolysed collagen peptides in each serving.
+ Antioxidant and mineral rich raw cacao to deeply nourish skin from within.
+ Blended with ashwagandha, an adaptogenic herb known for helping to build resilience to stress.
+ Comforting cinnamon for enhanced flavour and natural sweetness.
+ Rich in prebiotic fibre to support a healthy gut microbiome.
+ Nutrient dense baobab and beetroot for performance and recovery.

NUTRITION & HEALTH CLAIMS

+ With no added sugars. Sugar: 5:07g per 100g
+ Source of fibre, high fibre. Fibre: 30g per 100g
+ Source of protein. High protein: 37g per 100g
+ Per 100g: Fat: 7g. Salt: 0.5g.

COCOA

STUDY 1

The effects of cocoa flavanols on indices of muscle recovery and exercise performance: a narrative review.[26]

+ AIM: To collate and evaluate the current literature investigating the effect of cocoa flavanols (CF) on markers of exercise-induced oxidative stress and inflammation, as well as changes in muscle function, perceived soreness and exercise performance.

+ RESULTS: Supplementation of CF may reduce exercise-induced oxidative stress, with potential for delaying fatigue, but more evidence is required for any definitive conclusions on the impact of CF on markers of exercise-induced muscle damage.

STUDY 2

Cocoa Polyphenols and Gut Microbiota Interplay: Bioavailability, Prebiotic Effect, and Impact on Human Health.[27]

+ AIM: To summarise the available knowledge of the bidirectional interaction between cocoa polyphenols and gut microbiota with their various health outcomes.

+ RESULTS: Cocoa polyphenols interact bidirectionally with the gut microbiota. These compounds can modulate the composition of the gut microbiota exerting prebiotic mechanisms. They enhance the growth of beneficial gut bacteria, such as Lactobacillus and Bifidobacterium, while reducing the number of pathogenic ones, such as Clostridium perfringens. On the other hand, bioactive cocoa metabolites can enhance gut health, displaying anti-inflammatory activities, positively affecting immunity, and reducing the risk of various diseases.

BEETROOT

STUDY 1

Beetroot as a functional food with huge health benefits: Antioxidant, antitumor, physical function, and chronic metabolomics activity. [28]

+ AIM: To provide sufficient evidence for the clarification of health benefits of beetroot, especially in the aspect of biooxidation, neoplastic diseases, some chronic diseases and energy supplementation.

+ SUMMARY: Beetroot, especially the betalains (betanin) and nitrates it contains, now has received increasing attention for their effective biological activity. Betalains have been proven to eliminate oxidative and nitrative stress by scavenging DPPH, preventing DNA damage, and reducing LDL. It also has been found to exert antitumor activity by inhibiting cell proliferation, angiogenesis, inducing cell apoptosis, and autophagy.

In some chronic diseases, nitrate is the main component for lowering blood lipids, glucose, and pressure, while its role in treating hypertension and hyperglycemia has not been clearly stated. Moreover, the intake of nitrate-rich beetroot could enhance athletic performance and attenuate muscle soreness in certain types of exercise.

ASHWAGANDHA

STUDY 1

Adaptogenic and Anxiolytic Effects of Ashwagandha Root Extract in Healthy Adults: A Double-blind, Randomized, Placebo-controlled Clinical Study.[29]

+ AIM: In this eight-week, prospective, randomised, double-blind, placebo-controlled study, the stress-relieving effect of Ashwagandha root extract was investigated in stressed healthy adults.

+ RESULTS: A significant reduction in perceived stress scale scores was observed with Ashwagandha 250 mg/day and 600 mg/day. Serum cortisol levels were reduced with both Ashwagandha 250 mg/day and Ashwagandha 600 mg/day. Compared to the placebo group participants, the participants receiving Ashwagandha had significant improvement in sleep quality.

STUDY 2

Emerging Vistas for the Nutraceutical Withania somnifera in Inflammaging.[30]

+ AIM: This is a synthetic review on the beneficial effects of Withania somnifera in inflammaging and highlights the potential of Withania somnifera in improving the health-related quality of life (HRQoL) in the aging population worldwide.

+ REVIEW: Withania somnifera possesses antioxidant properties that help to hault the progression of inflammaging. Furthermore, the antiinflammatory property of Withania somnifera contributes to modulating the chronic low-grade inflammation characteristic of this aging-related disorder. Additionally, antiaging effects, involvement in DNA damage repair mechanisms, and potential effects on the microbiome are factors that suggest a key role for Withania somnifera in inflammaging.

STUDY 3

Effects of Withania somnifera Extract in Chronically Stressed Adults: A Randomized Controlled Trial.[31]

+ AIM: To support the role of a root and leaf water-extracted ashwagandha extract (WS) in stress reduction by confirming the lowest clinically validated dose for stress management (125 mg/day) in a dose-dependent clinical study in adults with self-reported high stress.

+ RESULTS: Our findings demonstrate the stress-reduction capabilities of this well-characterized aqueous extract of WS (root and leaf) at the low dose of 125 mg/day, in a dose-dependent manner, via the modulation of the HPA axis. .

STUDY 4

Effects of Ashwagandha (Withania somnifera) standardized root extract on physical endurance and VO 2max in healthy adults performing resistance training: An eight-week, prospective, randomized, double-blind, placebo-controlled study.[32]

+ AIM: This study investigated the effects of 600 mg standardized root extract (>5% withanolides) of Ashwagandha (Withania somnifera) on muscle size, strength and cardiorespiratory endurance following resistance training..

+ RESULTS: Ashwagandha caused greater improvement in bench press , leg press and endurance as compared to PB. Also, greater improvements in muscle girth for arm, chest and thigh were seen in both male and female participants with AG.

MATCHA + COLLAGEN

INGREDIENTS:

Grass-fed bovine true collagen, organic lion's mane, organic matcha, organic MCT powder, organic moringa, organic cinnamon.

BENEFITS:

+ 2000mg of nourishing hydrolysed collagen peptides in each serving.
+ Calming matcha for a natural answer to sustained energy.
+ Bright, antioxidant rich Moringa to deeply nourish glowing skin.
+ Adaptogenic Lion's Mane mushroom to dial in a clear mind.
+ Blood sugar balancing cinnamon gives this blend a natural sweetness.
+ Added MCT oil powder for an additional source of fuel and elevated energy.

NUTRITION & HEALTH CLAIMS

+ With no added sugars. Sugar: 1.7g per 100g
+ Source of fibre , high fibre . Fibre: 21g per 100g
+ Source of protein, high protein: Protein: 49g per 100g
+ Per 100g: Fat: 9.1g. Salt: 0.26g

MATCHA

Protective effects of (-)-epigallocatechin-3-gallate on UVA- and UVB-induced skin damage.[33]

+ AIM: The protective effects of (-)-epigallocatechin-3-gallate (EGCG), a major green tea catechin, on the ultraviolet (UV)-induced skin damage (photoaging) were studied in guinea pigs, hairless mice and human dermal fibroblast cultures.

+ RESULTS: OEGCG treatment reduced UVA-induced skin damage (roughness and sagginess) and protected from the decrease of dermal collagen in hairless mouse skin. EGCG treatment blocked the UV-induced increase of collagen secretion and collagenase mRNA level in fibroblast culture. The nuclear transcription factors NF-kappaB and AP-1 binding activities were also inhibited by EGCG treatment.

LION'S MANE

STUDY 1

Improving effects of the mushroom Yamabushitake (Hericium erinaceus) on mild cognitive impairment: a double-blind placebo-controlled clinical trial.[34]

+ AIM: A double-blind, parallel-group, placebo-controlled trial was performed on 50- to 80-year-old Japanese men and women diagnosed with mild cognitive impairment in order to examine the efficacy of oral administration of Yamabushitake (Hericium erinaceus), an edible mushroom, for improving cognitive impairment, using a cognitive function scale based on the Revised Hasegawa Dementia Scale (HDS-R).

+ RESULTS: Significant improvement in cognitive function according to the HDS-R in the lion's mane group compared to placebo.

STUDY 2

Improvement of cognitive functions by oral intake of Hericium erinaceus.[35]

+ AIM: In this study, we tested a randomized, double-blind, placebo-controlled parallel-group comparative study to evaluate the improvement of the cognitive functions by taking supplements containing the fruiting body of H. erinaceus for 12 weeks.

+ RESULTS: Significant improvement in cognitive function according to the Mini Mental State Examination in the lion's mane group compared to placebo.

MORINGA

Health benefits of Moringa oleifera.[36]

+ SUMMARY: Moringa oleifera is a multi-purpose herbal plant used as human food and an alternative for medicinal purposes worldwide. It has been identified by researchers as a plant with numerous health benefits including nutritional and medicinal advantages.

Moringa oleifera contains essential amino acids, carotenoids in leaves, and components with nutraceutical properties, supporting the idea of using this plant as a nutritional supplement or constituent in food preparation. This mini-review elaborates on its health benefits.

CACAO + REISHI

INGREDIENTS:

Organic Raw Cacao, Organic Cocoa, Organic Reishi, Organic Beetroot, Organic Cinnamon , Organic Carob, Organic Hops, Chicory Root Inulin*, Organic Ashwagandha, Organic Baobab fruit pulp, Pink Himalayan Salt*.

BENEFITS:

+ Antioxidant and mineral rich raw cacao to deeply nourish glowing skin.
+ Soothing adaptogenic Reishi mushroom for restoring balance.
+ Hormone balancing hops to help improve sleep and relaxation.
+ Nutrient dense beetroot supports optimal blood flow.
+ Blended with ashwagandha, an adaptogenic herb known for helping to build resilience to stress.
+ Rich in prebiotic fibre to bolster a healthy gut microbiome.

NUTRITION & HEALTH CLAIMS

+ With no added sugars. Sugar: 4.9g per 100g
+ Source of fibre , high fibre . Fibre: 37g per 100g
+ Source of protein, high protein: Protein: 18g per 100g
+ Per 100g: Fat: 6.8g. Salt: 0.5g

HOPS

Hops for Menopausal Vasomotor Symptoms: Mechanisms of Action.[37]

+ SUMMARY: This paper explores the mechanisms of action for the use of Hops for menopausal vasomotor symptoms. In conclusion, considering the negative effects of HRT, prenylated flavonoids extracted from hops can serve as a useful alternative treatment for the alleviation of menopausal symptoms.

REISHI

STUDY 1

Extract of Ganoderma lucidum prolongs sleep time in rats.[38]

+ AIM: To investigate whether Ganoderma lucidum extract (GLE) influences the sleep of freely moving rats and the potential mechanism.

+ RESULTS: Three-day administration of GLE significantly increased total sleep time and non-rapid eye movement (NREM) sleep time at a dose of 80 mg/kg (i.g.) without influencing slow-wave sleep or REM sleep in freely moving rats. These results suggest that GLE has hypnotic effects in freely moving rats. The mechanism by which the extract promoted sleep remains unclear, but this effect appears to be primarily related to the modulation of cytokines such as TNF-α.

STUDY 2

Ganoderma lucidum promotes sleep through a gut microbiota-dependent and serotonin-involved pathway in mice.[39]

+ AIM: The effect and mechanism of the acidic part of the alcohol extract of G. lucidum mycelia (GLAA) on sleep were studied in mice.

+ RESULTS: Our results showed that GLAA promotes sleep through a gut microbiota-dependent and serotonin-associated pathway in mice.

STUDY 3

Exploration of the anti-insomnia mechanism of *Ganoderma* by central-peripheral multi-level interaction network analysis.[40]

+ AIM: We explored the mechanism of the anti-insomnia effect of Ganoderma using systems pharmacology from the perspective of central-peripheral multi-level interaction network analysis.

+ RESULTS: *Ganoderma* exerts an anti-insomnia effect via complex central-peripheral multi-level interaction networks.

TRUE HYDRATION

INGREDIENTS:

Coconut Water Powder, Chicory Root Inulin, Magnesium Citrate*, TriSodium Citrate, Calcium Malate, Pink Himalayan Salt, TriPotassium Citrate, Chromium Picolinate.

BENEFITS:

+ Natural electrolytes sourced from coconuts, for deep cellular hydration.
+ Replenishes and hydrates the skin from within.
+ Supports recovery, mental clarity and performance.
+ An intelligent blend of minerals to help to improve fatigue and support optimal daily well-being.
+ Rich in prebiotic fibre to bolster a healthy gut microbiome.
+ A reinvigorating solution for travel, sauna and morning rituals

NUTRITION & HEALTH CLAIMS

+ Low fat, fat free (0.1g per 100g)
+ Source of magnesium. Magnesium contributes to a reduction of fatigue, electrolyte balance, normal muscle function, normal protein synthesis, normal psychological function, maintenance of bones and teeth.
+ Source of chromium. Chromium contributes to normal macronutrient metabolism and the maintenance of normal blood glucose levels.

STUDY 1

Effect of Hypohydration on Muscle Endurance, Strength, Anaerobic Power and Capacity and Vertical Jumping Ability: A Meta-Analysisn.[46]

+ AIM: To determine the impact of hypohydration on muscle endurance, strength, anaerobic power and capacity and vertical jumping ability using a meta-analytic approach.

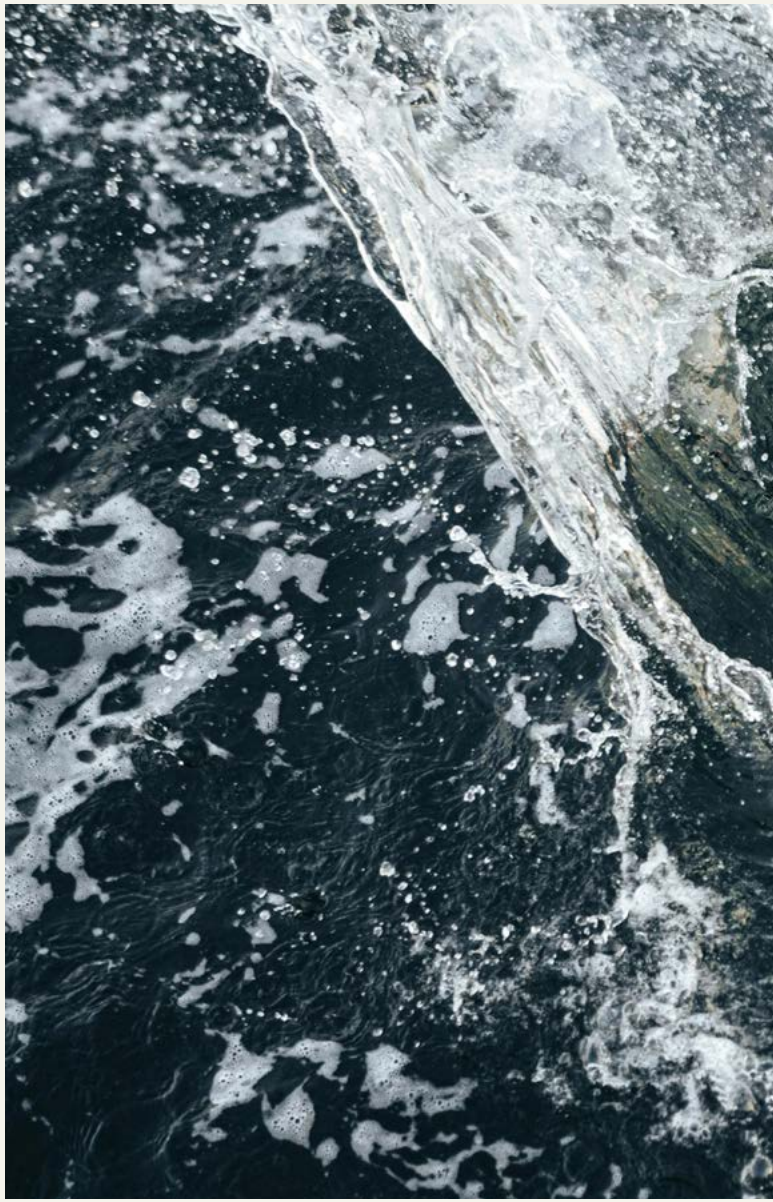
+ RESULTS: Hypohydration, or factors associated with dehydration, are likely to be associated with practically important decrements in muscle endurance, strength, and anaerobic power and capacity. However, their impact on non-BW-dependent muscle performance is substantially mitigated in trained individuals or when hypohydration is induced passively.

STUDY 2

Effects of Electrolyte Supplements on Body Water Homeostasis and Exercise Performance during Exhaustive Exercise.[47]

+ AIM: This study aimed to compare the physiologic effects of regular water consumption to those of electrolyte drink consumption in exercise capacity and recovery after exhaustive exercise.

+ RESULTS: Taken together, these results suggested that the intake of electrolyte water is more effective than the intake of regular water in preventing a decrease in BW and serum electrolytes. Moreover, it is more effective in improving exercise ability and recovery ability.



TRUE MCT OIL

INGREDIENTS:

100% Coconuts (60% C8 and 40% C10).

BENEFITS:

+ Sourced 100% from coconuts - never from palm oil.

+ Highly sought after 60% C8 and 40% C10 Provides a quick energy boost, making it the perfect pre-workout partner.

+ A clean, odourless and tasteless oil to easily power you through your day.

+ An excellent fuel source for brain cells, aiding in enhanced mental clarity.

+ MCT's antioxidant qualities help reduce oxidative damage in the body

NUTRITION + HEALTH CLAIMS

+ No added sugars (0.5g per 100g)

+ Sodium / salt free / no added sodium / salt (0g per 100g)

+ Per 100ml: Fat - 88g

+ Fibre - 0.7g

+ Protein - 0.3g

STUDY 1
Plasma Ketone and Medium Chain Fatty Acid Response in Humans Consuming Different Medium Chain Triglycerides During a Metabolic Study Day.[48]

+ AIM: To assess in healthy humans the relationship between the change in plasma ketones, and octanoate, decanoate and dodecanoate in plasma total lipids during an 8 h metabolic study day in which a first 20 ml dose of the test oil is taken with breakfast and a second 20 ml dose is taken 4 h later without an accompanying meal.

+ RESULTS: MCT oil is more effective than plain coconut oil at raising your ketone levels so your body and brain can run on a super efficient fuel instead of glucose endurance, strength, and anaerobic power and capacity. However, their impact on non-BW-dependent muscle performance is substantially mitigated in trained individuals or when hypohydration is induced passively.

STUDY 2:
Short- and medium-chain fatty acids in energy metabolism: the cellular perspective.[49]

+ SUMMARY: MCTs don't require the enzymes or bile acids for digestion and absorption that other fats need and therefore are broken down quickly by the liver.

STUDY 3
Medium Chain Triglycerides enhances exercise endurance through the increased mitochondrial biogenesis and metabolism.

+ AIM: Male mice were divided into groups and fed with regular chow or an MCT diet for 7 days before training started. They were trained on a treadmill for a period of 2 weeks.

+ **RESULTS:** Collectively, findings indicate a beneficial effect of dietary MCT in exercise performance through the increase of mitochondrial biogenesis and metabolism.

STUDY 4

A ketogenic drink improves brain energy and some measures of cognition in mild cognitive impairment.[50]

+ **AIM:** Fifty-two subjects with MCI were blindly randomised to 30 g/day of kMCT or matching placebo. Brain ketone and glucose metabolism and cognitive performance were assessed at baseline and 6 months later.

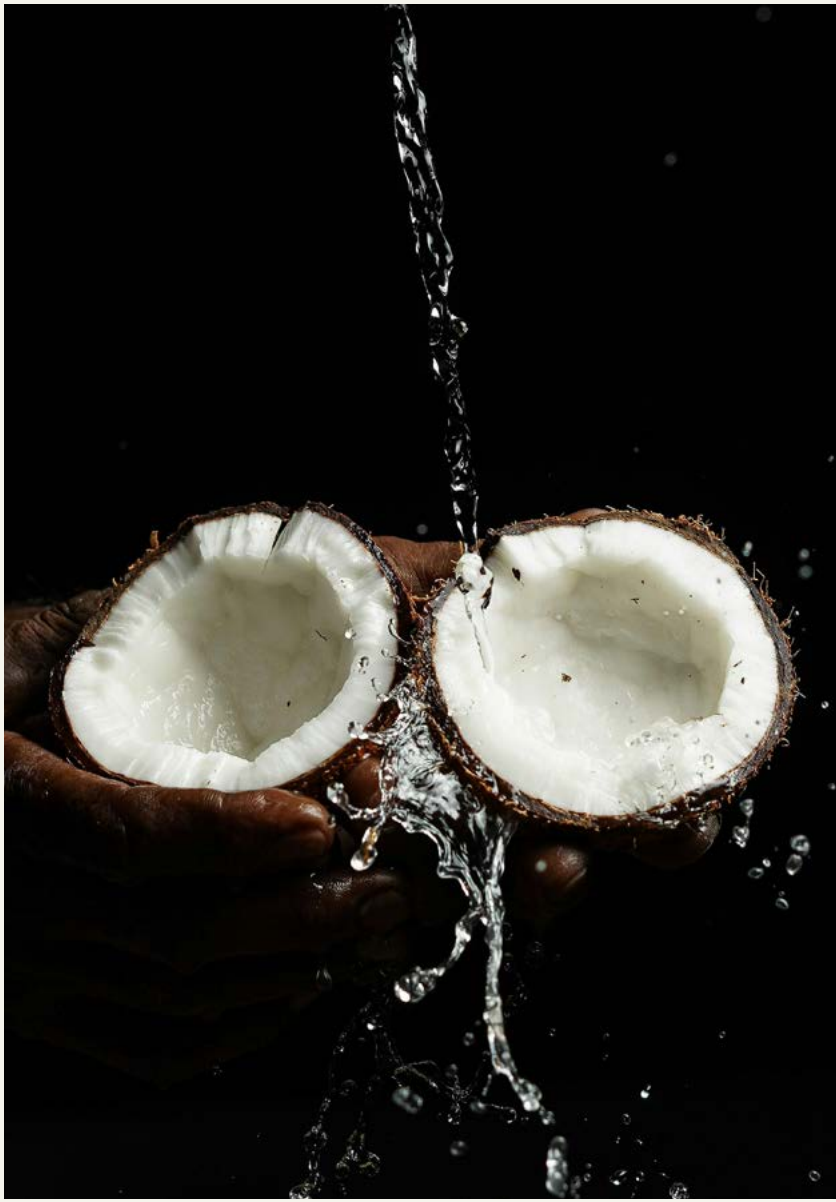
+ **RESULTS:** Measures of episodic memory, language, executive function, and processing speed improved on the kMCT versus baseline. Increased brain ketone uptake was positively related to several cognitive measures.

STUDY 5

Effect of ingestion of medium-chain triacylglycerols on moderate- and high-intensity exercise in recreational athletes.[51]

+ **AIM:** We investigated the effect of 2 wk of ingestion of food containing a small amount (6 g) of MCT on energy metabolism during moderate-intensity exercise and high-intensity exercise in recreational athletes.

+ **RESULTS:** The exercise time to exhaustion at a workload corresponding to 80% peak VO2 was significantly longer in the MCT trial than in the other group. Blood lactate concentration.



TRUE CREATINE+

INGREDIENTS:

Creatine Monohydrate, Taurine, Magnesium citrate (from purified seawater), Vitamin D3 (cholecalciferol) Vegan.

BENEFITS:

+ Reclaim your energy and enjoy your workouts.
+ Magnesium contributes to a reduction of tiredness and fatigue.
+ Creatine increases physical performance when paired with exercise.
+ Vitamin D supports muscles and fortifies your immune system for peak performance.
+ Magnesium supports a balanced nervous system and muscle recovery.
+ Neutral tasting and easy to use in your daily ritual.

NUTRITION & HEALTH CLAIMS

+ With no added sugars. Sugar: 0.1g per 100g
+ Source of protein, high protein: Protein: 68.5g per 100g
+ Per 100g: Fat: 0.1g per 100g
+ Very low salt: 0.5g
+ Source of Magnesium (57mg per serving)
+ Source of vitamin D (0.75mcg per serving)

Magnesium contributes to:
+ A reduction of tiredness and fatigue
+ Electrolyte balance
+ Normal muscle function
+ Maintenance of normal bones

Vitamin D contributes to:
+ Maintenance of normal bones
+ Maintenance of normal muscle function
+ Normal function of the immune system

CREATINE

STUDY 1

The effects of creatine supplementation on cognitive function in adults: a systematic review and meta-analysis.[52]

+ AIM: To evaluate the effects of creatine monohydrate supplementation on cognitive function in adults and explore its potential role in preventing and delaying cognitive impairment-related diseases.

+ RESULTS: Creatine supplementation showed significant positive effects on memory and attention time as well as significantly improving processing speed time. However, no significant improvements were found on overall cognitive function or executive function. Subgroup analyses revealed that creatine supplementation was more beneficial in individuals with diseases, those aged 18–60 years, and females.

STUDY 2

Effects of creatine supplementation on memory in healthy individuals: a systematic review and meta-analysis of randomized controlled trials.[53]

+ AIM: In recent years there has been an effort to understand possible roles of vitamin D, including its role in the immune system and, in particular, on T cell-mediated immunity. Vitamin D receptor is found in significant concentrations in the T lymphocyte and macrophage populations.

+ RESULTS: Overall, creatine supplementation improved measures of memory compared with placebo. Subgroup analyses revealed a significant improvement in memory in older adults (66-76 years) compared with their younger counterparts.

STUDY 3

Creatine electrolyte supplement improves anaerobic power and strength: a randomised double-blind control study.[54]

+ AIM: To investigate the effects of a creatine and electrolyte formulated multi-ingredient performance supplement (MIPS) on strength and power performance compared to a placebo.

+ RESULTS: For their back squat 1RM, the MIPS group displayed significant increase of 13.4% while placebo displayed a decrease of -0.2%. The MIPS displayed a significant increase of 5.9% and placebo displayed a non-significant increase of 0.7%. The MIPS group displayed a significant increase as well in total concentric work and mean power for the maximal repetition bench press test at 80% of their 1RM.

STUDY 4

Creatine-electrolyte supplementation improves repeated sprint cycling performance: A double blind randomised control study.[55]

+ AIM: To investigate the effect of a six-week CE supplementation intervention on overall and repeated peak and mean power output during repeated cycling sprints with recovery periods of 2 min between sprints.

+ RESULTS: A supplement-time interaction showed a 4% increase in overall peak power and a 5% increase in overall mean power from pre- to post-supplementation for the CE group. For the P group, no differences were observed in overall peak and overall mean power from pre- to post-testing. For repeated sprint analysis, peak and mean power output were significantly increased only in the first sprint effort in CE group from pre- to post-supplementation testing. For the P group, no differences were observed for repeated sprint performance.

TAURINE

Association of taurine intake with changes in physical fitness among community-dwelling middle-aged and older Japanese adults: an 8-year longitudinal study.[56]

+ AIM: To clarify the longitudinal taurine intake association with fitness changes.

+ RESULTS: Higher taurine intake positively increased the change in knee extension muscle strength and reduced the decline in knee extension muscle strength in the subgroup analysis of participants aged ≥65 years.

TRUE MAGNESIUM+

INGREDIENTS:

Magnesium Bisglycinate, Magnesium Malate, Magnesium Taurate

BENEFITS:

+ Contributes to a reduction of tiredness and fatigue
+ Supports mood health and cognitive function
+ Promotes healthy bones, muscles and teeth
+ Contributes to the normal function of the nervous system

HEALTH CLAIMS:

Magnesium contributes to:

+ A reduction of tiredness and fatigue
+ Normal energy-yielding metabolism
+ Normal functioning of the nervous system
+ Electrolyte balance
+ Normal muscle function
+ Maintenance of normal bones

STUDY 1

Subclinical magnesium deficiency: a principal driver of cardiovascular disease and a public health crisis.[57]

+ SUMMARY: Because serum magnesium does not reflect intracellular magnesium, the latter making up more than 99% of total body magnesium, most cases of magnesium deficiency are undiagnosed. Furthermore, because of chronic diseases, medications, decreases in food crop magnesium contents, and the availability of refined and processed foods, the vast majority of people in modern societies are at risk for magnesium deficiency.

Certain individuals will need to supplement with magnesium in order to prevent suboptimal magnesium deficiency, especially if trying to obtain an optimal magnesium status to prevent chronic disease. Subclinical magnesium deficiency increases the risk of numerous types of cardiovascular disease, costs nations around the world an incalculable amount of healthcare costs and suffering, and should be considered a public health crisis.

STUDY 2

Magnesium in Human Health and Disease: A Review of Our Current Understanding.[58]

+ SUMMARY: The current scientific literature indicates a number of potential adverse health consequences of low or deficient Mg status throughout the life course, including hypertension, cardiovascular disease, osteoporosis, and depression.

STUDY 3

Dietary Magnesium May Be Protective for Aging of Bone and Skeletal Muscle in Middle and Younger Older Age Men and Women: Cross-Sectional Findings from the UK Biobank Cohort.[59]

+ AIM: Analysed cross-sectional associations between dietary magnesium and skeletal muscle mass (as fat free mass–FFM), grip strength, and bone density (BMD) in 156,575 men and women aged 39–72 years from the UK Biobank cohort.

+ RESULTS: Suggests that dietary magnesium may play a role in musculoskeletal health and has relevance for population prevention strategies for sarcopenia, osteoporosis, and fractures.

STUDY 4

Dietary Magnesium Is Positively Associated With Skeletal Muscle Power and Indices of Muscle Mass and May Attenuate the Association Between Circulating C-Reactive Protein and Muscle Mass in Women.[60]

+ AIM: A study on 2570 women aged 18-79. Associates between intake of magnesium and muscle mass and strength were examined.

+ RESULTS: Our results suggest that dietary magnesium may aid conservation of age-related loss of skeletal muscle mass and power in women of all ages.

STUDY 5

Role of magnesium supplementation in the treatment of depression: A randomized clinical trial.[61]

+ AIM: An open-label, blocked, randomised, cross-over trial was carried out in outpatient primary care clinics on 126 adults diagnosed with and currently experiencing mild-to-moderate symptoms. The intervention was 6 weeks of active treatment (248 mg of elemental magnesium per day) compared to 6 weeks of control.

+ RESULTS: Effects were observed within two weeks. Magnesium is effective for mild-to-moderate depression in adults. It works quickly and is well tolerated without the need for close monitoring for toxicity.

STUDY 6

Magnesium in the gynecological practice: a literature review.[62]

+ AIM: Review and systematise the available evidence about the use of oral magnesium supplementation in several gynaecological conditions and discuss the pharmacological mechanisms that characterise these interventions.

+ REVIEW: The picture that emerges indicates that magnesium supplementation is effective in the prevention of dysmenorrhea, premenstrual syndrome, and menstrual migraine and in the prevention of climacteric symptoms.

STUDY 7

Effect of Magnesium Supplement on Pregnancy Outcomes: A Randomized Control Trial.[63]

+ AIM: This study aimed to assess the effects of consuming Mg supplementation during pregnancy on pregnancy outcomes.

+ RESULTS: In all pregnancy outcomes, the group taking a magnesium supplement plus multimineral showed a better result than other groups, and frequency of complications of pregnancy was fewer than the other two groups and showed a significant difference.

STUDY 8

Association of magnesium intake with sleep duration and sleep quality: findings from the CARDIA study.[64]

+ AIM: To examine the longitudinal associations of Magnesium intake with sleep quality and duration.

+ RESULTS: Magnesium intake was associated with better sleep quality. Participants were also less likely to have short sleep.

TRUE ASHWAGANDHA

INGREDIENTS:

600mg of Organic KSM-66 Ashwagandha root extract

BENEFITS:

+ Help the body adapt to stress
+ High-strength formula
+ Enhance immune resilience
+ Improve endurance and physical performance
+ Profoundly grounding and balancing

STUDY 1

A Prospective, Randomized Double-Blind, Placebo-Controlled Study of Safety and Efficacy of a High-Concentration Full-Spectrum Extract of Ashwagandha Root in Reducing Stress and Anxiety in Adults.[65]

+ **AIM:** To evaluate the safety and efficacy of a high-concentration full-spectrum extract of Ashwagandha roots in reducing stress and anxiety and in improving the general well-being of adults who were under stress.

+ **RESULTS:** A significant reduction in scores on all the stress-assessment scales relative to placebo. Also serum cortisol levels were substantially reduced in the Ashwagandha group.

STUDY 2

Efficacy of Ashwagandha (Withania somnifera [L.] Dunal) in improving cardiorespiratory endurance in healthy athletic adults.[66]

+ **AIM:** To evaluate the efficacy of KSM-66 Ashwagandha in enhancing cardiorespiratory endurance and improving quality of life in 50 healthy male / female athletic adults.

+ **RESULTS:** There was a greater increase in the mean VO2 max with KSM-66 Ashwagandha compared to placebo at 8 weeks and at 12 weeks. The findings suggest that Ashwagandha root extract enhances the cardiorespiratory endurance and improves QOL in healthy athletic adults.

STUDY 3

Neuroprotective effects of Withania somnifera in the SH-SY5Y Parkinson cell model.[67]

+ **AIM:** To evaluate the protective effects of KSM-66 Ashwagandha on 6-hydroxydopamine (6-OHDA)-induced toxicity in the human neuroblastoma SH-SY5Y cell line, as well as the associated oxidative response protein expression and redox regulation activity focused on S-glutathionylation.

+ **RESULTS:** Findings suggest that Ashwagandha acts as a neuroprotectant, thereby introducing a potential agent for the treatment or prevention of neurodegenerative diseases.

STUDY 4

Adaptogenic and Anxiolytic Effects of Ashwagandha Root Extract in Healthy Adults: A Double-blind, Randomized, Placebo-controlled Clinical Study.[68]

+ **AIM:** To evaluate the protective effects of KSM-66 Ashwagandha on 59 participants experiencing stress and anxiety.

+ **RESULTS:** Eight weeks of supplementation of KSM-66 Ashwagandha was associated with a significant reduction of stress levels in individuals and improved overall quality of life.

STUDY 5

Clinical evaluation of the pharmacological impact of ashwagandha root extract on sleep in healthy volunteers and insomnia patients: A double-blind, randomized, parallel group, placebo-controlled study.[69]

+ AIM: To evaluate the pharmacological effect of Ashwagandha on sleep in healthy subjects and also in subjects with insomnia.

+ RESULTS: In all subjects there was a significant improvement in sleep parameters in the Ashwagandha group.

TRUE OMEGAS+

INGREDIENTS:

DHA and EPA-rich Omega 3 oil from the microalgae Schizochytrium sp., Sea Buckthorn Oil

BENEFITS:

+ High in essential Omega 3 fatty acids
+ EPA and DHA support heart function, keeping it performing at its best
+ DHA supports essential brain function, helping to balance mood
+ DHA plays a vital role in preserving clear and healthy vision
+ Sustainable, nature-powered nutrients
+ Bridging nutritional gaps with minimal impact on the planet

NUTRITION & HEALTH CLAIMS:

+ EPA and DHA contribute to the normal function of the heart
+ DHA contributes to the maintenance of normal brain function
+ DHA contributes to the maintenance of normal vision

STUDY 1

Effects of Omega-3 Fatty Acids on Cognitive Function with Aging, Dementia, and Neurological Disease.[70]

+ AIM: To assess the effect of omega-3 fatty acids on cognitive function in normal aging, the incidence of dementia, treatment of dementia and the incidence of several neurological diseases.

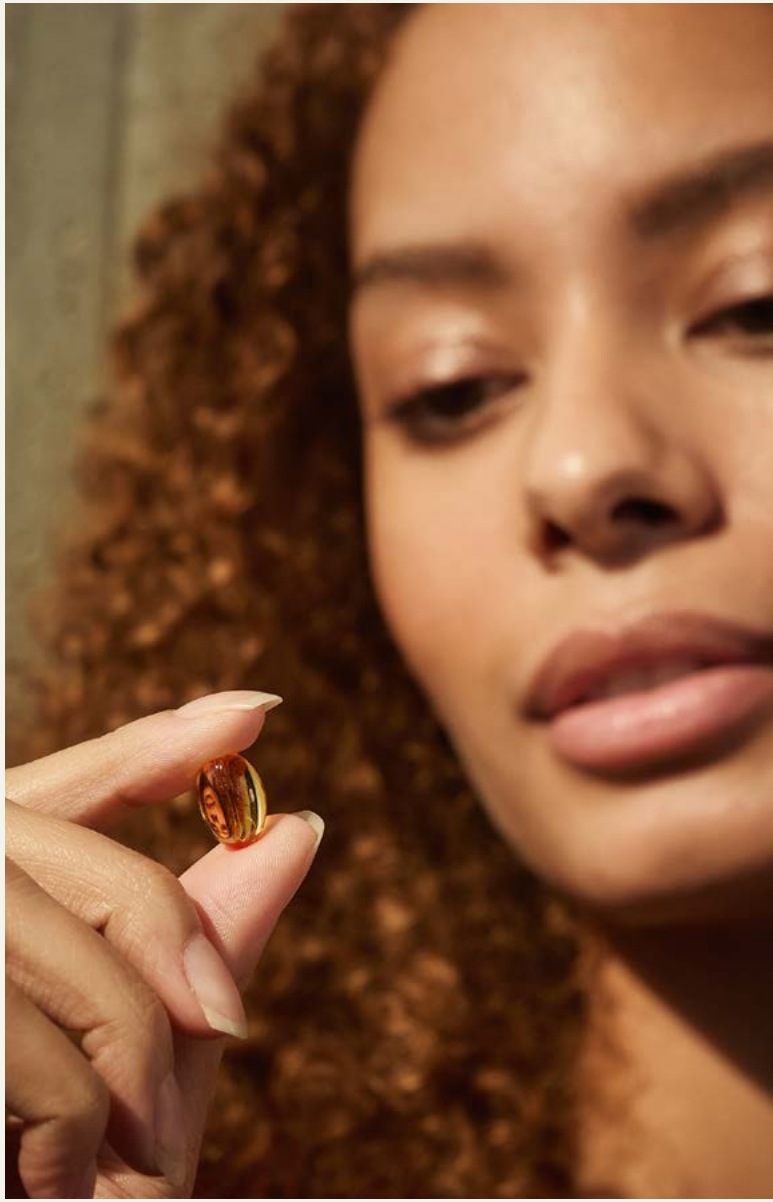
+ RESULTS: Four studies (three cohort and one RCT) suggest omega-3s may reduce dementia risk and improve cognition.

STUDY 2

Cognitive and physiological effects of Omega-3 polyunsaturated fatty acid supplementation in healthy subjects.[71]

+ AIM: To examine the effects of Omega-3 supplementation on some cognitive and physiological parameters in healthy subjects.

+ RESULTS: Omega-3 supplementation is associated with an improvement of attentional and physiological functions, particularly those involving complex cortical processing.



STUDY 3

Efficacy of omega-3 PUFAs in depression: A meta-analysis.[72]

+ AIM: We conducted this meta-analysis of double-blind randomized placebo-controlled trials to estimate the efficacy of omega-3 fatty acids, in the improvement of depression.

+ RESULTS: The meta-analysis showed an overall beneficial effect of omega-3 polyunsaturated fatty acids on depression symptoms.

STUDY 4

Dietary omega-3 polyunsaturated fatty acids and fish intake and risk of age-related macular degeneration.[73]

+ AIM: Epidemiologic studies are inconsistent regarding the association of dietary omega-3 polyunsaturated fatty acids and/or fish intake with risk of age-related macular degeneration (AMD) incidence and progression. The objective was to determine these associations by conducting a meta-analysis of available studies.

+ RESULTS: A high intake of dietary omega-3 PUFA or fish was associated with a reduced risk of developing AMD.

STUDY 5

A Meta-Analysis of Randomized Controlled Trials and Prospective Cohort Studies of Eicosapentaenoic and Docosahexaenoic Long-Chain Omega-3 Fatty Acids and Coronary Heart Disease Risk.[74]

+ AIM: To conduct meta-analyses of randomized controlled trials to estimate the effect of EPA and DHA on coronary heart disease, and to conduct meta-analyses of prospective cohort studies to estimate the association between EPA+DHA intake and CHD risk.

+ RESULTS: Results indicate that EPA+DHA may be associated with reducing CHD risk, with a greater benefit observed among higher-risk populations in RCTs.

STUDY 6

Associations among Dietary Omega-3 Polyunsaturated Fatty Acids, the Gut Microbiota, and Intestinal Immunity.[75]

+ AIM: To review the effect of omega-3 PUFAs on gut microbiota, the effects of omega-3 PUFAs on intestinal immunity and inflammation, and the important roles of omega-3 PUFAs in maintaining the balance between gut immunity and the gut microbiota.

+ RESULTS: This review identifies several pathways by which the microbiota modulates the gut immune system through omega-3 PUFAs. Omega-3 supplementation can be targeted to specific pathways to prevent and alleviate intestinal diseases, which may help researchers identify innovative diagnostic methods.

STUDY 7

Hormonal and metabolic effects of polyunsaturated fatty acids in young women with polycystic ovary syndrome: results from a cross-sectional analysis and a randomized, placebo-controlled, crossover trial.[76]

+ AIM: We aimed to determine the associations between plasma PUFAs and metabolic and hormonal aspects of PCOS to investigate the efficacy of omega-3 supplementation and to support the findings with mechanistic cellular studies.

+ RESULTS: Cross-sectional data suggest that PUFAs modulated hormonal and lipid profiles and that supplementation with omega-3s improves androgenic profiles in PCOS.

STUDY 8

Oral sea buckthorn oil attenuates tear film osmolarity and symptoms in individuals with dry eye.[77]

+ AIM: We aimed to find out whether oral sea buckthorn (SB) oil, containing (n-3) and (n-6) fatty acids and antioxidants, affects dry eye.

+ RESULTS: SB oil attenuated the increase in tear film osmolarity during the cold season and positively affected the dry eye symptoms.

STUDY 9

Effects of sea buckthorn oil intake on vaginal atrophy in postmenopausal women: a randomized, double-blind, placebo-controlled study.[78]

+ AIM: To investigate the effects of oral sea buckthorn (SB) oil supplementation on vaginal atrophy.

+ RESULTS: SB oil showed beneficial effects on vaginal health, indicating it is a potential alternative for mucosal integrity for those women not able to use estrogen treatment for vaginal atrophy.

STUDY 10

Omega-7 inhibits inflammation and promotes collagen synthesis through SIRT1 activation.[79]

+ AIM: Investigate the effects of palmitoleic acid on collagen regeneration.

+ RESULTS: Together, these studies suggest the potential efficacy of SIRT1 in collagen regeneration and indicate that omega-7 is a possible functional food to improve skin health for the prevention of aging.

STUDY 11

Efficacy and safety of oral palmitoleic acid supplementation for skin barrier improvement: A 12-week, randomized, double-blinded, placebo-controlled study .[80]

+ AIM: The aim of this randomized, double-blinded, placebo-controlled clinical study is to evaluate the efficacy and safety of oral palmitoleic acid in improving skin barrier, elasticity, and wrinkle formation in adult women.

+ RESULTS: Oral palmitoleic acid effectively improves the skin barrier function improvement, which may enhance quality of life in aging adults.

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