

InfiniAge™

OMICm Age Optimization*



InfiniAge™ represents InfiniWell's most novel innovation driven by objective genetic data and has been shown to help improve the aging process in the latest research from Harvard University and TruDiagnostic. As we age, our bodies, organs, and cells undergo transformations that impact our well-being and lifespan. These changes are complex, however, in a recent publication which describes the creation of a new epigenetic age algorithm, scientists were able to find novel metabolomic and proteomic associations into the reason why we age. This culminated in a new epigenetic age algorithm called OMICm Age which is the best performing epigenetic clock to date. It is the only epigenetic clock with greater than 90% accuracy of death prediction within 10 years. This epigenetic clock is the driving force behind InfiniAge™.



DEMOGRAPHIC & CLINICAL APPLICATIONS

| MEN & WOMEN | PATIENTS REQUIRING |
|-------------|--|
| | <ul style="list-style-type: none"> • Longevity Protocols • Epigenetic Support • Cardiometabolic Support • Neurological Support |



DIRECTIONS:

Take 2 capsules daily or as directed by your healthcare practitioner.

BENEFITS



Aids Antioxidant Capacity



Promotes Cholesterol Profiling



Optimizes Nutrient Sensing Pathways



Optimizes Mitochondrial Function



Supports Healthy Inflammatory Response



Supports Cognitive Function & Brain Aging

| SUPPLEMENT FACTS | | |
|---|--------------------|-----|
| Serving Size: 2 Capsules Servings Per Container: 30 | | |
| | Amount Per Serving | %DV |
| Zinc (as Zinc oxide) | 5 mg | 45% |
| Calcium (from Calcium alpha-ketoglutarate) | 210 mg | 16% |
| N-Acetyl L-Cysteine | 250 mg | * |
| Lutein | 15 mg | * |
| Eclipse Bio-Age Complex™ | 1,025 mg | * |
| Calcium alpha-ketoglutarate, Uridine monophosphate, L-Ergothioneine, Chokeberry Extract (<i>Aronia Melanocarpa</i>) | | |
| * Daily Value Not Established | | |

Other Ingredients: Magnesium Stearate, Silicon Dioxide, Vegetable Capsule (Hypromellose)



OVERVIEW

An important step in the research was leveraging artificial intelligence to find novel metabolite and proteomic associations to biological aging. During this process, Harvard researchers asked which metabolites, clinical values, and proteins were most predictive of longevity. They found a total of 38 individual factors which were predictive of time until death. Furthermore, they were able to find several nutrition-related biomarkers which we used to design the best in class supplement to improve epigenetic aging. Together, we believe that InfiniAge™ is the strongest combination of ingredients to reverse the most predictive, biological age biomarkers to date.

Based on that information, InfiniAge™ was born. It contains a precise blend of 7 key ingredients, including Calcium Alpha-Ketoglutarate, Uridine Monophosphate, Ergothionine, N-Acetyl L-Cysteine, Lutein (Carotene-2,2,-diol) Aronia Melanocarpa Extract, and Zinc. Many of these ingredients have vast publications which describe a multitude of benefits with regard to the aging process. We have also included what could be considered novel ingredients, relative to longevity, into this formulation as well. Each of these has been specifically identified in theOMICm Age algorithm which can beneficially impactOMICm Age factors.

For instance, in the development ofOMICm Age, we took into effect that individuals who had higher plasma concentrations of Uridine and Lutein were generally associated to have a betterOMICm Age; and as a result, have longer lives with less morbidity. We also included ingredients to change otherOMICm Age measured variables, such as zinc and Aronia Melanocarpa Extract. Zinc and Aronia Melanocarpa Extract help to increase PON1.

Serum paraoxonase and arylesterase 1 (PON1) is an enzyme encoded by the PON1 gene. Serum PON1 is secreted mainly by the liver, although local synthesis occurs in several tissues, PON1 protein is found in almost all tissues. PON1 is also a major anti-atherosclerotic component of HDL Cholesterol (good cholesterol). The PON1 gene is activated by PPAR-γ, which increases synthesis and release of paraoxonase 1 enzyme from the liver, reducing atherosclerosis. In theOMICm Age cohort, researchers found that higher levels of PON1 activity were associated with better aging. Some studies have shown that Aronia Melanocarpa Extract can increase PON1 activity levels by over 15%.

INGREDIENTS

Zinc

Zinc, a nutrient found throughout your body, helps your immune system and metabolism function. Zinc is also important to wound healing and your sense of taste and smell. However, like aronia melanocarpa extract, it has also been shown to support PON1 activity levels. In addition to this, the first trial on epigenetic age reversal (the TRIMM Trial), also supplemented with zinc.¹⁻³

N-Acetyl L-Cysteine

N-Acetyl L-Cysteine (NAC), a derivative of the amino acid cysteine, has been of interest in the context of longevity due to its potential impact on various mechanisms associated with aging. NAC is a precursor to glutathione, a key antioxidant in the body, and it plays a crucial role in mitigating oxidative stress and protecting cells from damage. Additionally, NAC has been investigated for its ability to influence cellular processes such as apoptosis and DNA repair. Some studies, particularly in animal models, have suggested that NAC supplementation may have a positive influence on longevity by promoting healthier aging and reducing the risk of age-related diseases. Nevertheless, the exact mechanisms and its application to human longevity warrant further research to establish a clear causal relationship.^{4,5}

In the creation ofOMICm Age, we see that higher cystine levels are negative for biological aging. This is most likely because cystine is upregulated with oxidative stress.⁶ Supplementations with glutathione precursors might help reduce this oxidative stress burden and improveOMICm Age.



Lutein (Carotene-2,2,-diol)

Carotenoids have long been associated with good vision and anti-inflammatory action. However, there is mounting evidence that carotenoid levels are one of the most highly associated biomarkers to improve epigenetic age algorithms. Not only was this particular metabolite associated with better OMICm Age in the Harvard cohort, it also has been shown to be highly linked to other important 2nd generation algorithms like GrimAge. Uridine and Lutein were the only 2 metabolites selected with positive effects on OMICm Age acceleration.⁷

ECLIPSE BIO-AGE COMPLEX™

Calcium Alpha-Ketoglutarate

Alpha-ketoglutarate, an intermediate in the tricarboxylic acid cycle, has garnered attention in the field of longevity research due to its potential impact on aging. This compound is involved in various metabolic processes, including energy production and amino acid metabolism. Studies in model organisms have suggested that supplementation with alpha-ketoglutarate may support lifespan and modulate cellular processes such as mitochondrial function and mitigating oxidative stress.⁸ Furthermore, it has been shown to influence pathways associated with nutrient sensing and cellular maintenance, such as mTOR signaling. As the exact mechanisms underlying its effects on longevity in humans require further investigation, its translation to practical interventions for extending human lifespan remains an ongoing area of scientific exploration.

Uridine Monophosphate

Uridine is an important building block used in the creation of RNA. While traditionally it has been used to help support brain health, synaptic connections, and cholinergic function; it is also highly linked to longevity and regeneration. For instance, in a cross-species study, metabolomic analysis identifies uridine as a potent regeneration promoting factor across many mammals.⁹ Other studies have also observed significant association of uridine with risk for all-cause mortality.¹⁰

In fact, a separate study of longevity in the Women's Health Initiative (WHI) found that ratios of isocitrate, uridine and lysine were associated with a 2-3-fold higher odds of attaining longevity. Uridine might also show tissue specific anti-aging effects, such as improving intestinal aging.¹¹

Ergothioneine

While ergothioneine has not directly been studied in relation to epigenetic aging, it has many proposed benefits for aging. Ergothioneine (EGT) is a hydrophilic anti-oxidant compound which has been shown to exert anti-aging properties. In addition to its antioxidant effect, EGT has been reported to have anti-senescence, anti-inflammatory and anti-neurodegenerative properties. It is also a compound which is traditionally limited in American based diets. In animal studies, this metabolite has been able to increase mouse lifespan by up to 40%.¹²⁻¹⁴

Aronia Melanocarpa Extract

While serum PON1 is secreted mainly by the liver, local synthesis occurs in several tissues and PON1 protein is found in almost all tissues. PON1 is also a major component of HDL Cholesterol (good cholesterol). The PON1 gene is activated by PPAR- γ , which increases synthesis and release of paraoxonase 1 enzyme from the liver, supporting healthy arterial integrity.^{15,16}

In the OMICm Age cohort, researchers found that higher levels of PON1 activity were associated with better aging. In fact, it was the second most protective protein in the entire algorithm. In a meta-analysis of nutritional ingredients shown to improve PON1 levels and activity, Aronia melanocarpa (chokeberry) extract was the most effective at increasing PON1 activity.¹⁷



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