

Biological Age Protocol[‡]

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Biological age, as assessed through DNA methylation patterns, is an emerging biomarker associated with various age-related changes.

This protocol presents an integrated dietary, lifestyle, and supplementation framework designed to support key pathways involved in biological aging, including methylation, mitochondrial function, oxidative stress, and metabolic resilience.

In a 12-week pilot study conducted by Denise Furness, PhD, implementation of this multi-modal protocol was associated with a slower pace of aging and a mean reduction in biological age of 2.3 years.¹ While preliminary, these findings support the potential for targeted nutrition and lifestyle strategies to modulate epigenetic aging.

This protocol is intended for healthcare professionals as a structured framework that can be adapted according to individual patient needs, clinical history, and laboratory findings.

DIET

Eat organic or spray-free, wild or free-range foods as often as possible. Aim to consume the following foods and servings each day:

- **VEGETABLES: 6 servings per day**
Include: 2 servings of cruciferous vegetables, 2 servings of leafy greens and 2 servings of colorful vegetables (purple, orange, yellow, red).
- **FRUIT: 2 servings per day**
Include: organic berries, organic apples, bananas, citrus and stone fruits; limit consumption of the Dirty Dozen.
- **PROTEIN: 1.6 - 2 g of protein per kg of optimal body weight per day (0.7 - 0.9 g per lb), spread out over the day**
Include: lean meat, fish, eggs, dairy, plants rich in protein and protein powder as needed. On average, for most people, 5-10 eggs is recommended per week.
- **WHOLEGRAINS: limit to 4 servings per day**
Include: oats, quinoa, brown rice, twice cooked white rice, barley, buckwheat and couscous. This can be increased if you have a heavy training load. Get most of your carbohydrates from vegetables, legumes, nuts, seeds and fruits.
- **NUT & SEEDS: 2 servings per day**
Include: pumpkin seeds (pepitas), chia seeds, flaxseeds, Brazil nuts (2 per day max), walnuts, almonds, nut butter (no added sugar) and seed butter. Other sources of healthy fat include avocado, extra virgin olive oil, grass fed butter, organic coconut oil.
- **FERMENTED FOOD: 1 or more servings daily**
Include: yogurt, sauerkraut, kefir, kimchi, miso or tempeh. If you have histamine sensitivity, do not include fermented foods.

[‡]This statement has not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.



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DIET CONTINUED

Eat organic or spray-free, wild or free-range foods as often as possible. Aim to consume the following foods and servings each day:

- **HERBS & SPICES: use liberally, daily**
- **LIMIT OR AVOID:**
 - Coffee: limit to 2 cups per day (not after 2 pm). Drink herbal tea as desired.
 - Alcohol: limit to 2 standard drinks per week.
 - Avoid highly processed foods, added sugars and refined grains. Twice-cooked starch is acceptable.

LIFESTYLE

Aim to complete the following habits each day:

- **INTERMITTENT FASTING:**
 - Have your last meal approximately 3 hours before bed; avoid snacking before bed.
 - Aim for a 12 - 16 hour fast between dinner and breakfast. A morning drink, such as water, herbal tea or black coffee (something that doesn't increase blood sugar) is not considered to break the fast.
- **HYDRATION:**
 - Start the day with a hydrating drink before coffee.
 - Drink filtered water throughout the day.
 - Aim to drink 250-300 mL per 10 kg of body weight (8 – 10 oz per 22 lbs) or more if exercising or using the sauna.
- **ENVIRONMENTAL EXPOSURE:**
 - Minimize plastic food and drink containers.
 - Do not reheat food in plastic containers.
 - Minimize exposure to chemical-laden household cleaners, fragrances, skincare and beauty products.
- **SLEEP:**
 - 7 - 9 hours each night.
- **STRESS:**
 - Include: breathing exercises, meditation or mindfulness for 5-10 minutes daily.
- **EXERCISE:**
 - Aim to move for at least 30 minutes a day.
 - Walk most days and incorporate strength training 3 times per week, such as lifting weights, body weight exercises and resistance style training such as Reformer Pilates.

SUPPLEMENTS

Low intake of various essential nutrients is common among US adults.² Clinicians are encouraged to identify nutritional inadequacies through dietary evaluation and/or lab assessments and support adequate nutrient intake through diet or targeted supplementation in addition to the formulas listed below.

Consume the following supplements each day:

PRODUCT RECOMMENDATIONS [†]	SUGGESTED USE	
	BREAKFAST	DINNER
<p><u>B-Complex Plus</u> Order code: BCP1 / BCP6</p> <p>A balanced combination of functionally interrelated B vitamins provides wide ranging benefits, including methylation, nerve support and cellular energy production[‡]</p>	1 capsule with breakfast	
<p><u>Ubiquinol-QH 100 mg</u> Order code: UQ16</p> <p>The active antioxidant form of CoQ₁₀; supports energy metabolism, ATP production and antioxidant status[‡]</p>	1 softgel with breakfast	
<p><u>Resveratrol EXTRA</u> Order code: REE1 / REE6</p> <p>Combines resveratrol with polyphenols from red wine and grape seed for enhanced support of healthy cellular function and aging[‡]</p>	1 capsule with breakfast	
<p><u>Liver-G.I. Detox</u> Order code: LGD1 / LGD6</p> <p>A nutrient-rich matrix of vitamins, minerals, protein, carotenoids and botanical extracts stimulates both liver and gastrointestinal detoxification[‡]</p>	2 capsules with breakfast	
<p><u>Mitochondria-ATP[^]</u> Order code: MATP41</p> <p>A blend of nutrient cofactors to support mitochondrial function, ATP production and antioxidant support; features nicotinamide riboside chloride (NR) to support NAD⁺</p>	2 capsules with breakfast	2 capsules with dinner

Available for download at PureEncapsulationsPro.com/Protocols

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[†]Not all study participants received this product.

1. Furness D and Taylor P. *Australasian College of Nutritional & Environmental Medicine Journal*. 2025 Sep 44, 3:51-58.2
2. Drake V. *Micronutrient Inadequacies in the US Population: an Overview* [Internet]. Linus Pauling Institute, Oregon State University. 2017.

[‡]Denise Furness is a paid consultant for Pure Encapsulations.

The information contained herein is for informational purposes only and does not establish a doctor-patient relationship.

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