A NUTRIENT-SUFFICIENCY PILOT, PROVEN WITH EPIGENETIC DATA

# Measuring Aging

*What biological-age-testing shows when the body is given daily, highly absorbable nutrients: the concepts, the measurements, and what ten people's data looked like over six months.*

The Maui ReSet Pilot Study · Dr. Carolyn Dean, MD ND · 2026

An overview of the Maui ReSet Pilot Study that used nutrients to support structure and function. Biological age testing was performed by an independent lab, TruDiagnostic.

IN BRIEF

# A unique study, measured by an independent lab

On Maui, ten everyday people aged 34 to 79 followed a daily nutrient routine, the seven-formula Maui ReSet Bundle for six months. An independent lab, TruDiagnostic, measured each person's blood before and after, with an at-home finger prick test, reading biological age from the epigenetic patterns of methylation sites on their DNA. This document explains what those measures are, what they track, and what the group's data showed.

**7 of 10**

Improved on at least one epigenetic age clock (6 of 10 on the two age clocks; the seventh on pace of aging)

**10 of 10**

Showed improvement throughout the 19 categories that were measured ranging from 5 categories to 12.

**3 clocks**

OMICm age, Symphony organ age, and DunedinPACE pace of aging, were measured, all from one blood sample

## HOW TO READ THIS DOCUMENT

**We share concepts and data.** We walk you through what biological age, pace of aging, and organ-system aging are, then compare the study lab reports before and after the 6-month study. The nutrients are the tools that shift the test scores. Our belief is that people, as they read our results, will be inspired to follow the study nutrient protocol but not feel that it's necessary to do the expensive blood testing that we used to prove our concept.

**We measure trends.** Epigenetic clocks are risk-and-trend assessments; they don't provide a diagnosis. This is an observational Study, not a controlled trial. The value is in the direction the data moved and the nutrients that drove the changes.

**Every data point represents a lab value.** In this report, each participant is given a pseudonym and the data points are taken from their lab tests. Self-reported symptom scores are labeled clearly.

***Biology is a snapshot taken before and after the study. Comparing the snapshots give us the trend that can be improved upon.***

PART I

# Aging and biomarker testing

The testing incorporates five ideas: biological age, the pace of aging, aging by system, how one blood sample is read, and what the functional markers show.

CONCEPT 1 · BIOLOGICAL AGE

# Your calendar age is fixed. How old your body behaves is not.

Chronological age counts the years since birth. Biological age in epigentic testing estimates how old the body is actually behaving, by measuring about a million methylation patterns on DNA as methyl groups attached to DNA molecules that shift in predictable patterns as we age. Because those patterns respond to how the body is cared for, biological age is a measurable, moving number rather than a fixed one.

**Lower is younger.** A biological age below your calendar age means your body is performing younger than your chronological years. Higher means older. Comparing tests over time shows the trend.

**It's also a percentile** Each reading is ranked against people of the same chronological age and sex, so a result is always relative to peers, not an absolute.

**It moves slowly.** Because it integrates so many body processes, the deep clock, OMICm may be the last one to shift. However, a small move over six months is still meaningful.

**Structure and function.** Nutrients support the normal structure and function where the markers are measured.

## The Deepest Read: Omicm Age

*Developed at Harvard*

*OMICm Age combines methylation-inferred estimates of a million body signals into one whole-body biological age in years. It may be the slowest, deepest layer to change.*

CONCEPT 2 · PACE OF AGING

# How old are your markers and how fast or slow are they moving

Biological age measures the distance you've traveled and a snapshot of aging where you are right now. The pace of aging is a speedometer. DunedinPACE, developed at Duke, estimates how many years of biological aging the body is adding per calendar year, calibrated so that 1.0 equals one year of aging.

### The 1.0 line


*Under 1.0 is aging slower than the calendar; over 1.0 is faster. A move from 1.00 toward 0.83 is a tenth-of-a-year-per-year change.*

**It tends to move first.** Pace of aging is the most sensitive of the three clocks, with change visible in about three months. It is the earliest signal that a new routine is helping to shift hour flight path!

**It is a rate.** A slow pace of aging describes the rate at which your age is slowing.

**Why it leads.** In this study, pace of aging and the nutrient markers were the layers most likely to move within the short six months, exactly as the science of these clocks predicts.

CONCEPT 3 · ORGAN-SYSTEM AGING

# The body does not age at a single, even pace

Symphony Age, developed at Yale, estimates aging with data input across eleven organ systems and averages them into one number per organ system. We group those eleven systems into six Pillars that are supported with nutrients.

### Mind

**Brain · Mental Health**

Cognition, memory, and mood, running on methylation chemistry and healthy circulation.

### Heart & Lungs

**Heart · Blood · Lung**

Oxygen delivery from lungs to blood to heart leans on magnesium, potassium, and essential fatty acids.

### Structure & Movement

**Muscle · Bone · Joint**

Muscle, bone, and connective tissue depend on magnesium, vitamins D3 and K2, and trace minerals.

### Filter & Detox

**Liver · Kidney**

The liver and kidneys, run by the methyl nutrients - B vitamins and methionine, and the minerals they need.

### Metabolism & Hormones

**Metabolic · Hormone**

Blood sugar, energy, and endocrine signaling, depend on magnesium, zinc, and selenium.

### Immunity & Inflammation

**Immune · Inflammation**

Immunity and inflammatory balance, leaning on zinc, vitamin D, and omega-3 healthy fats.

*The eleven systems show up in the following Organ Systems (Blood, Brain, Inflammation, Heart, Hormone, Immune, Kidney, Liver, Metabolic, Lung, Musculoskeletal), grouped into six interactive Pillars.*

**Comparing results**: Two people at the same age can be aging at different rates in entirely different systems. Each organ age is built from the biomarkers relevant to that system. The results point to where support will be most useful.

**A trend, not an organ diagnosis.** An organ-age reading is an estimate, from lab biomarkers, to watch over time and discuss with a qualified health practitioner; it's not a diagnosis.

CONCEPT 4 · HOW IT IS MEASURED

# One blood spot, read at three levels

Sophisticated lab equipment at TruDiagnostic reads a blood sample from an at-home finger prick test, analyzing more than a million methylation sites on DNA. The results are translated into three reports. Each report goes deeper from pace to organs to systems.

1

### TruAge *The biological-age foundation*

Derived from three biological age clocks: OMICm Age; the eleven Symphony organ ages; and the DunedinPACE pace of aging.

2

### Advanced TruAge *The deep layer*

Everything above, plus telomere age, immune-cell composition, an epigenetic-biomarker panel, inflammation markers, and exposure to toxins.

3

### TruHealth *The functional layer*

Nineteen nutrition and health categories combined from 105 biomarkers, scored 0 to 100 where higher is better.

The pedigree of the testing is solid, from Yale, Duke, and Harvard, but tests are not designed to recommend any one nutrient. This study follows the use of 7 different nutrient formulas to establish a trend over time as show in the follow up blood testing.

CONCEPT 5 · READING THE NUMBERS

# The Four Measurements

These four measures do not all move the same way. A green-colored result means a favorable result – you're going in the right direction. or that measure's own direction. Let's begin looking at the Study data.

| Measure | What it is | Favorable direction |
|---|---|---|
| Age clocks (OMICm, Symphony), telomeres | Biological age, in years | Lower is younger |
| DunedinPACE | Rate of aging | Under 1.0 / slower |
| TruHealth categories & markers | Functional status, 0 to 100 | Higher is better (100 best) |
| Advanced TruHealth biomarkers | Individual signals (e.g. CRP) | Varies per individual marker |

*Age clocks and telomeres read the time traveled (lower = younger). Pace-of-againg reads like a speedometer (under one is best); TruHealth reads like a score (higher is better).*

## The timing of change

Change arrives in a certain order. The functional and nutrient markers move first, the organ systems next, and the deepest whole-body clock, the overall systems, are last. So, over a short window the nutrient layer can already be shifting while the deeper clocks haven't yet moved. That sequence is not a contradiction in the data; it is what the science of these clocks predicts, and it is the reason a longer study is the natural next step.

PART II

# The Maui ReSet Study, and the seven formulas

A defined daily routine of taking highly absorbable nutrients, ten real lives, and an independent before-and-after laboratory measurement.

THE PREMISE

# Nutrient abundance covers what the diet leaves out

The question behind the pilot is one Dr. Carolyn Dean, a physician and naturopath, has asked for decades: when the body is given consistent, highly absorbable nutrients at the cellular level, what happens to the markers that track how a person is aging? The approach is optimization, not megadosing with synthetics.

**Minerals are the foundation.** Magnesium alone participates in 600-800 enzyme reactions, including the replication, stabilization, and repair of DNA. The methylated B vitamins and methionine run the chemistry that the epigenetic clocks read.

**Shared raw materials.** The same handful of nutrients are required across many systems with the body drawing on them as a group, which is why a broad daily nutrient foundation is more sensible a few high dose synthetic supplements..

**Highly absorbable forms.** The liquid formulas are picometer-sized, stabilized mineral ions perfect for cellular uptake. The B vitamin capsules are methylated and food-based and vitamin C capsules are food based.

> ***"The body holds up best when it is not running short on the basics."***
>
> **Dr. Carolyn Dean, MD ND**
>
> *Formulator: fifty-year career in how nutrients reach the cells*

*This is a food-based vitamin and stabilized mineral ion approach to structure and function, measured before and after our 6-month Maui ReSet Study. We do not claim to diagnose, treat, or cure.*

THE STUDY

# The pilot at a glance

| | |
|---|---|
| **Duration** | August 2025 to February 2026 (six months) |
| **Participants** | 10 adults, ages 34 to 79 (eight women, two men), from the Maui community |
| **Design** | Real-world observational pilot, n=10. Not randomized, not placebo-controlled, no control group |
| **Testing partner** | TruDiagnostic, an independent lab (TruHealth, TruAge and Advanced TruAge panels) |
| **Sample** | At-home fingerprick blood spot, before and after |
| **Clocks measured** | OMICm Age (Harvard), Symphony Age (Yale, 11 organs), DunedinPACE (Duke) |
| **Daily routine** | The seven-formula Maui ReSet Bundle; general healthy-eating guidance, no forced diet change |
| **Compliance** | Self-reported; symptom scores from a Maui ReSet Study questionnaire |

### For context, not comparison

Larger randomized trials in this field, COSMOS and DO-HEALTH, have reported that everyday nutrients can move epigenetic aging measures. Those are separate studies with different designs; they show the lever exists. This pilot is not presented as beating a randomized trial, and its parameters simply stand alongside them.

THE MEASURES, AND THE ORDER THEY MOVE

# Three clocks, read together

### DunedinPACE

*The speedometer*

Rate of aging. Under 1.0 is slower than a year per year. Moves first, within about three months.

### Symphony Age

*The organ clock*

Aging across eleven organ systems, in years. Lower is younger. Moves next.

### OMICm Age

*The deep clock*

Whole-body biological age, in years. Lower is younger. The slowest, deepest layer; moves last.

THE SEQUENCE OF CHANGE

1

### Symptoms and fuel ease first

Often within one to two months: energy, clarity, and sleep improve alongside the functional nutrient markers.

2

### Organ-system markers shift next

The eleven-organ Symphony reading tends to move before the deepest clock registers a change.

3

### The deep clock moves last

OMICm, the whole-genome reading, reflects the slowest layer to change, so six months captures only its beginning of the shift.

*This order is why the pages that follow lead with the nutrients/fuel and pace of aging layers, where six months shows the most change.*

THE DAILY ROUTINE

# The Maui ReSet Bundle

The pilot followed seven formulas each day, three core minerals and four vitamins, chosen because these same raw materials feed many systems at once.


Maui ReSet Core Mineral

## ReMag®

**Picometer magnesium**

Cellular energy, nerve and muscle, and the DNA-repair and methylation machinery healthy aging relies on. The magnesium base of the whole foundation.


### ReMyte®

**Twelve trace minerals.** Antioxidant-enzyme and thyroid cofactors; electrolyte signaling


### ReAline®

**Methylated B vitamins.** Methylation, energy metabolism, detoxification


### Pico Potassium®

**Potassium.** Fluid balance and nerve signaling; pairs with magnesium


### D3K2 ReSet®

**Vitamins D3 + K2.** Immune and bone support; calcium routing


### Pico Zinc Plus®

**Zinc + copper.** Immune function and antioxidant enzymes


### Vitamin C ReSet®

**Whole-food vitamin C.** Collagen production and antioxidant support

### Added for the second half, and not part of the Maui ReSet Bundle

**Omega-3 Algae A+E®**, **Flora ReVive®**, and **Pico Silver®** are introduced in months four to six. They were not part of the Study Protocol.

*Every line describes support for normal structure and function. The Maui ReSet Bundle is sold by RnA ReSet, where Dr. Dean has a financial interest. (*

PART III

# What the data showed

Ten people, measured before and after the 6-month study reported as 2 age clocks and the pace of aging.

THE HEADLINE

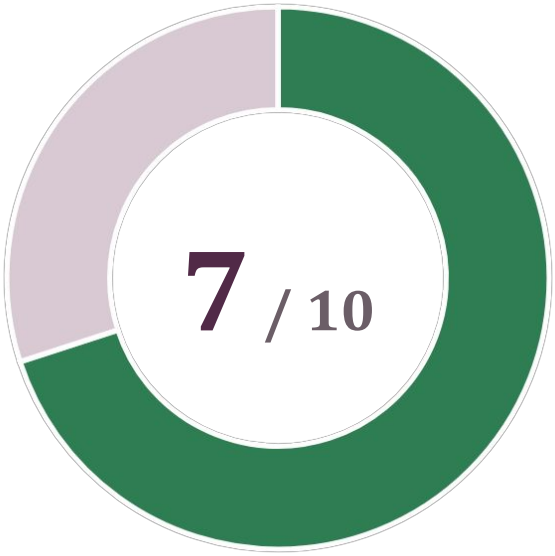
# 7 of 10 moved in a favorable direction

On the two age clocks, six of ten participants registered a younger age on retesting. Counting the pace of aging (DunedinPACE), a seventh participant improved as well.

**On the age clocks (6 of 10).** Helen, Claudia, Suzanne, Sarah, James, and Arlene each registered younger on OMICm and/or Symphony age.

**Including pace (7 of 10).** Grace's pace of aging slowed even as her age clocks rose, the pattern where pace leads the other aging clocks.

**The three not improved on the clocks.** Pauline, Steven, and Emily each had all three clocks rise, likely due to significant, stressful life events during the study window.




*Favorable movement on at least one epigenetic age clock over six months. .*

## Self-reported symptoms improved for all ten

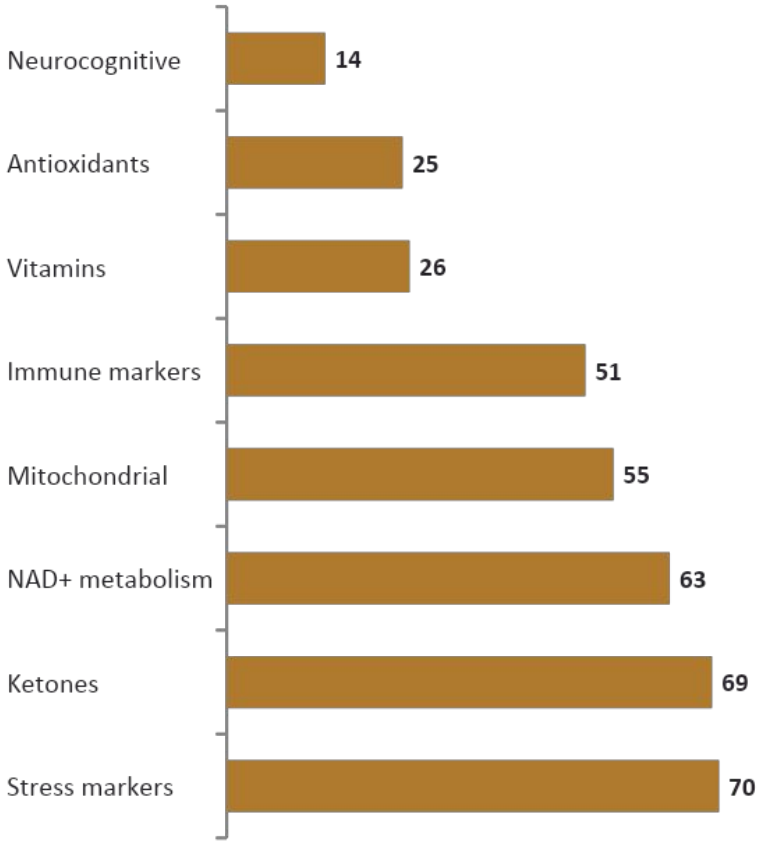
On a separate self-report questionnaire (not a TruDiagnostic output), every participant's symptom score improved over the six months, from a 2 percent change in the oldest participant, blunted by a mid-hospitalization, up to a 79 percent drop. Symptom scores are self-reported.

*The Maui ReSet Pilot Study is a real-world observational pilot (n=10) and is not a randomized controlled trial. Results are hypothesis-generating. RnA ReSet formulas are dietary supplements that support the structure and function of the body; they are not intended to diagnose, treat, cure, or prevent any disease. These statements have not been evaluated by the FDA.*

THE FUNCTIONAL LAYER

# Where the six month study shifted the most: the nutrient fuel

The TruHealth categories are scored 0 to 100 - higher is better, and they sit closest to nutrient input, so they are the layer most likely to move first in the six months. Across the participants, the largest single-category gains were in the energy, stress, and metabolic markers.




*Largest single-participant gain in each category, in percentile points. Higher is better.*

**BREADTH OF MOVEMENT**

**Range of Movement.** Vitamins and Ketones improved for 8 of 10; NAD+ and Stress for 7 of 10. Every participant improved in several categories.

**Read it by direction.** These are higher-is-better scores, so a rising number means more functional improvement in that category.

**No blanket claims.** No single category improved for all ten. The figure shows the ceiling reached, not an average.

*These functional gains are the nutrient fuel layer of the sequence of change, the part that moves first, underneath the slower clocks.*

FACES OF THE DATA · SYSTEM 1 OF 8

# Mitochondrial Function and Cellular Energy

*The cellular-energy layer measured by the mitochondrial marker (higher is better). Six of ten improved on an age clock where younger is better; the energy markers moved more widely.*

J

**James, 77**

**Mitochondrial** 20 → 75

**Symphony age** 72.5 → 71.1 yrs

*Symptoms improved 41% (self-reported)*

## A veteran, energized again

James carried agent orange exposure, long-standing fatigue, small-fiber neuropathy, and tinnitus. Over six months his mitochondrial marker climbed from the 20th to the 75th percentile and his organ-system reading improved. He reports full days gardening again, energized enough that he has to remind himself to slow down.

S

**Sarah, 79**

**Mitochondrial** 14 → 62

**Symphony age** 85.2 → 80.9 yrs

*Symptoms improved 2% (self-reported)*

## The oldest participant, resilient

Sarah, the oldest in the cohort and living with lifelong heart disease, was hospitalized mid-study and still proved resilient. Her mitochondrial marker more than quadrupled in percentile, most of her organ ages sat below her calendar age, and with a beautiful smile, she says she wants to keep going.

*Measured by TruDiagnostic. Figures are each participant's own reported values; symptom scores are self-reported; any medication changes were physician-directed.*

FACES OF THE DATA · SYSTEM 2 OF 8

# Methylation and Epigenetic Age

*The methylation biochemistry is read and tracked on OMICm and Symphony age clocks (lower is younger). Six of ten improved on an age clock.*

H

### Helen, 70

**OMICm age** 63.5 → 57.7 yrs

**Symphony age** 61.9 → 58.2 yrs

*Symptoms improved 56% (self-reported)*

## The largest deep-clock move

Once nearly housebound with nerve and muscle symptoms she feared were neurological, Helen had blood drawn at home because she could not travel to her appointment. IN spite of all that, her deepest clock moved the most in the cohort, and she reports driving and taking long walks again. Her energy, in her words, is fabulous.

C

### Claudia, 53

**OMICm age** 39.4 → 35.1 yrs

**Pace** 0.88 → 0.75

*Symptoms improved 79% (self-reported)*

## A clear shift in clarity

After three decades of anxiety and fatigue that left her feeling, in her words, paralyzed, Claudia's already-younger clock moved even younger and her pace of aging slowed. She describes a distinct change in mental clarity, and her weight dropped thirty pounds.

*Measured by TruDiagnostic. Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed.*

# Pace of Aging

*The speedometer of aging (DunedinPACE; under 1.0 is slower); it's the first layer to move. Five of ten participants slowed their pace; seven of ten improved on at least one clock.*

S

### Suzanne, 50

**Pace** 1.00 → 0.83

**Symphony age** 49.0 → 43.6 yrs

**Immune** 38 → 89

*Symptoms improved 40% (self-reported)*

## Across the 1.0 line

Outwardly upbeat but privately troubled by anxiety and stress at home and work, Suzanne improved on all three clocks, her pace crossing from faster-than-average to clearly slower. Her Symphony age dropped 5.4 years and her Immune score rose from 38 to 89. She reports steadier energy, better sleep, and a much more hopeful outlook.

G

### Grace, 53

**Pace** 0.96 → 0.83

**Age clocks** rose

*Symptoms improved 43% (self-reported)*

## When pace leads

Moving through a turbulent hormonal transition, Grace's OMICm and Symphony clocks rose, yet her pace of aging slowed. This is the teaching case for how the fastest layer can move first. The nutrient foundation appeared to work alongside her physician-directed hormone care. Her symptom score improved early as well.

*Measured by TruDiagnostic. Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed.*

FACES OF THE DATA · SYSTEM 4 OF 8

# Metabolic Flexibility

*Switching cleanly between glucose and ketones, read on the ketone marker (higher is better). Eight of ten improved, one of the broadestver*

H

**Helen, 70**

**Ketones** 19 → 88

*Symptoms improved 56% (self-reported)*

## More fuel available

Helen, the strongest overall responder, saw her ketone marker rise from the 19th to the 88th percentile, the clearest sign that her metabolic engine had more clean fuel to draw on, alongside the deep-clock move shown on the methylation page.

S

**Steven, 34**

**Ketones** 30 → 79

**Biological age** moved older

*Symptoms improved 54% (self-reported)*

## A clearing phase, reported in full

The most complex case in the study group, Steven carried a difficult health history and undertook an unapproved harsh detox mid-study that led to hospitalization. His fuel marker shifted even as his biological-age readings moved older, consistent with an intense detox phase. He was kept on the foundational nutrients so the full picture could be reported including his overall improvement in symptoms.

*Measured by TruDiagnostic. Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed.*

# Cellular Repair and NAD+

*The daily repair economy, read on the NAD+ metabolism marker (higher is better). Seven of ten improved. These nutrients support the enzymes that use NAD+; they are not NAD+ precursors.*

A

### Arlene, 51

**NAD+** 19 → 82

**Symphony age** 41.8 → 39.7 yrs

*Symptoms improved 61% (self-reported)*

## Thriving under real strain

Navigating heartbreak and a high-stress new job, living on fast food and poor sleep, Arlene still saw her NAD+ marker climb from the 19th to the 82nd percentile, the largest single-category move in her data. She reports better sleep from the second night of the study.

C

### Claudia, 53

**NAD+** 41 → 83

## One of the highest endpoints

Claudia at the outset said she thought she would never feel better with a 30-year history of anxiety and depression. Claudia's repair marker (NAD+) reached the 83rd percentile, one of the highest endpoints alongside the deep-clock and pace changes described on the methylation page. She also had the highest symptom improvement of the study at 79%.

*Representative monograms, not real participants. "Measured by TruDiagnostic." Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed and are not attributed to the routine.*

FACES OF THE DATA · SYSTEM 6 OF 8

# Stress Recovery

*The ability to adapt to and recovery from stress is read on the stress marker (higher is better). Seven of ten improved their scores. Nutrients give support for a normal stress response, not a treatment for any condition.*

E

**Emily, 48**

**Stress markers** 11 → 81

*Symptoms improved 75% (self-reported)*

## The sharpest single shift

A strong baseline strained by a relationship breakup and an acute glaucoma episode mid-study, Emily held her ground under real pressure. Her stress-resilience marker moved from the 11th to the 81st percentile, one of the sharpest single shifts we saw.

C

**Claudia, 53**

**Stress markers** 28 → 61

## Steadier, alongside clarity

Claudia's stress marker rose from the 28th to the 61st percentile, part of the reason she described steadier mood and the change in clarity noted elsewhere.

*Measured by TruDiagnostic. Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed.*

# Vitamin Sufficiency

*In the vitamin marker category, eight of ten study participants improved. It was one of the broadest movements.*

S

**Sarah, 79**

**Vitamins** 52 → 78

**Antioxidants** +25 pts

*Symptom -2% (self-reported)*

## Refilling the reserves

Even through a mid-study hospitalization, Sarah refilled her vitamin and antioxidant reserves the body most often runs short of with age. Her vitamin marker rising from the 52nd to the 78th percentile.

P

**Pauline, 56**

**Vitamins** 53 → 68

**B vitamins optimized**

*Symptoms improved 31% (self-reported)*

## Travel stress, then recovery

Working in the wellness field, Pauline took three unexpected mainland trips to be with a dying relative without. Several depleted B vitamins refilled and her thyroid markers normalized, a clean illustration of travel stress appearing in the data and then showing recovery.

*Representative monograms, not real participants. "Measured by TruDiagnostic." Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed and are not attributed to the routine.*

FACES OF THE DATA · SYSTEM 8 OF 8

# Immune Resilience

*Defense and balance, the slowest-moving Pillar, seen on the immune marker (higher is better). Four of ten improved. It was the category that moved the least across the study group.*

S

**Suzanne, 50**

**Immune markers** 38 → 89

*Symptoms improved 40% (self-reported)*

## The biggest immune gain

Suzanne's immune-composition marker rose from the 38th to the 89th percentile, the largest immune gain in the cohort and part of all three clocks showing improvement on the pace page.

H

**Helen, 70**

**Immune markers** 36 → 70

*Symptoms improved 56% (self-reported)*

## Roughly doubled in percentile

Helen's immune reading roughly doubled in percentile, from the 36th to the 70th, alongside the deep-clock and ketone movement that made her the strongest overall responder. Immune balance is the slowest layer to move, so ther gains stood out in a category that changed least across the whole group.

*Measured by TruDiagnostic. Figures are each participant's own released values; symptom scores are self-reported; any medication changes were physician-directed .*

WHAT THE PILOT LEAVES US WITH

# A direction you can work on

This whitepaper follows a set of data about how the body ages. It presents the Maui ReSet Study offering highly absorbable nutrients to a group of 10 and measuring methylation pathways. The benefits the group felt was reflected in the data. It's a proof-of-concept study showing that nutrients can move lab tests right along with improving symptoms. The benefit of the study is that practitioners and individuals can confidently engage the nutrients without having to do testing that

### The concept

Aging shows up first in how cells are fueled with nutrients in the pace of aging data. The testing then indicates movement in the deeper organ and system clocks. The foundation underneath all of it is nutrient sufficiency supporting healthy structure and function.

### The study

Ten people took the seven daily foundational nutrients for six uncontrolled months and sent blood samples from before and after the study to an independent lab reading the clocks and the categories from over a million methylation sites on DNA.

### The data

Hundreds of data points were analyzed. Everyone in the study showed some movement from the pace of aging to the deeper organ and tissue clocks.

### The next step is a longer look

That longer look will be practitioners mounting their own clinical trials with their own patients urging this combination of nutrients that shows great promise. It will be the participants continuing to take the nutrients that is giving them symptom relief that vas validated in their improved blood test scores. Although this white paper presents the lab data, the individual or clinic trials need not use the epigenetic lab testing but could proceed with self-reported questionnaires and follow simple blood parameters to **follow results.**

PART IV

# Considerations, and putting it to use

The same nutrients used in the Maui ReSet Study may influence anyone’s organ systems and general systems.

PUTTING IT TO USE

# Measure, support, and read the trend

The foundational nutrients support every system in unison – as it should be. The body works as a whole, in synchrony, and every organ and tissue supports the rest. Therefore, most people do not need to chase a single organ. Supporting cellular health supports all tissues and all organs. Below is the template for an individual to do their own ReSet Study where n=1.

1

### Discover

Establish where you stand with a baseline blood test or a symptom questionnaire.

2

### Optimize

Support your cells' structure and function with consistent, highly absorbable nutrients and healthy habits, following two phases.

3

### Verify

Measure again and read the direction your health is taking.

**THE ROUTINE, IN TWO PHASES**

### Phase 1 · First 90 days

Build the seven daily foundations of the Maui ReSet Bundle one at a time and develop a daily routine.

### Phase 2 · Through 180 days

Keep the seven going and, in months four to six, add Omega-3 Algae A+E (for essential fatty acids) and Flora ReVive®, with Pico Silver (to cover yeast overgrowth).

*We offer the Biological Age Calculator as a way simple baseline gauge. If you wish you can do the at-home TruDiagnostic testing. However, the test is not required to follow Maui ReSet Protocol.*

# Who developed the tests

## THE MEASURES

OMICm Age (developed with Harvard), Symphony Age (Yale, eleven organ systems), and DunedinPACE (Duke), implemented by TruDiagnostic, an independent lab, creating TruHealth and Advanced TruAge panels. DunedinPACE validation: Belsky et al., eLife 2022.

## THE NUTRIENT SCIENCE (PLAIN-FACTS AND CONTEXT)

NIH Office of Dietary Supplements fact sheets (magnesium, folate, potassium, vitamin D, zinc, vitamin C, selenium, omega-3) for normal structure and function; and, for the aging lever in other trials, COSMOS (a multivitamin-mineral RCT) and DO-HEALTH (vitamin D, omega-3, exercise). These are separate studies that show the lever exists; they are not presented as evidence for any RnA ReSet formulas.

## IMPORTANT DISCLOSURES

**About the study.** The Maui ReSet Pilot Study is a real-world observational pilot (n=10); it is not a randomized controlled trial. It's a proof of concept study. Results are hypothesis-generating and by definition cannot be interpreted as clinical proof of efficacy. Participant names are pseudonyms; per-person figures are their own released lab values; symptom scores are self-reported. Any medication changes were directed by the participants' own physicians.

**About the formulas.** All RnA ReSet formulas are dietary supplements that support the normal structure and function of the body. They are not intended to diagnose, treat, cure, or prevent any disease. Dr. Carolyn Dean is the formulator and founder of RnA ReSet and holds an economic interest in the products. Formulas are sold on rnareset.com. Epigenetic, biological-age testing was performed by TruDiagnostic, an independent lab. These statements have not been evaluated by the Food and Drug Administration. Always consult your healthcare practitioner before beginning any new dietary supplement or wellness program.

APPENDICES

# The underlying data

Every figure reported is a measured value from the study's lab tests and assigned to participants, who were given pseudonyms.

How to read them:

Age clocks and telomere age are measured in years where lower is younger

DunedinPACE is a rate where under 1.0 is slower.

TruHealth categories are percentiles 0 to 100 where higher is better.

CRP and IL-6 are percentiles where lower is more favorable.

Change is is a measure of the final test minus the first test.

Green indicates a favorable move for that measure's direction, red indicates an unfavorable one.

All ten are kept in the final data, life events included.

# The three layers

Nutrient/Fuel and Pace

Organ Systems

General Systems

### Fuel and pace layers — *Moved the most*

Functional categories improved broadly (Ketones and Vitamins 8 of 10 categories). Pace of aging slowed for several participants.

### Organ-system ages — *Moved in the middle*

Symphony readings improved for several participants didn't move for others.

### The deep OMICm clock — *Moved the least*

Roughly flat across the cohort over six months, the slowest layer only beginning to move showing the need for a longer study.

## The lever is real, and the next step should be longer

Larger randomized trials, COSMOS and DO-HEALTH, have shown that commercial, and mostly synthetic nutrients can move epigenetic aging measures; those separate studies show the lever exists. However, the COSMOS trial reported aging slowed by only 4 months. This pilot suggests the same direction using highly absorbable nutrients, and its sequence of change measured in years for 6 of our 10 participants is the clearest argument for a longer, larger, controlled trial.

# The three clocks, all ten participants

OMICm and Symphony are biological ages in years (lower is younger); DunedinPACE is the rate of aging (under 1.0 is slower aging). Change is the final test minus the first test. Six participants read younger on at least one age clock; a seventh, Grace, slowed on pace of aging. The three whose clocks rose, Pauline, Steven, and Emily, each had significant life events during the study. Green indicates a slowing of aging or a slower pace of aging.

| Participant | OMICm age | Chg | Symphony age | Chg | Pace | Chg |
|---|---|---|---|---|---|---|
| **Helen, 70** | 63.5 → 57.7 | **-5.8** | 61.9 → 58.2 | **-3.7** | 0.67 → 0.76 | **+0.09** |
| **Claudia, 53** | 39.4 → 35.1 | **-4.3** | 40.6 → 41.4 | **+0.8** | 0.88 → 0.75 | **-0.13** |
| **Suzanne, 50** | 38.9 → 38.5 | **-0.4** | 49 → 43.6 | **-5.4** | 1.00 → 0.83 | **-0.17** |
| **Sarah, 79** | 72.1 → 72.1 | **0.0** | 85.2 → 80.9 | **-4.3** | 0.99 → 0.94 | **-0.05** |
| **Arlene, 51** | 34.1 → 33.9 | **-0.2** | 41.8 → 39.7 | **-2.1** | 0.67 → 0.70 | **+0.03** |
| **James, 77** | 77.2 → 77.9 | **+0.7** | 72.5 → 71.1 | **-1.4** | 0.83 → 0.82 | **-0.01** |
| **Grace, 53** | 41.8 → 42.6 | **+0.8** | 59.6 → 64.1 | **+4.5** | 0.96 → 0.83 | **-0.13** |
| **Pauline, 56** | 44.7 → 47.6 | **+2.9** | 58.1 → 61.3 | **+3.2** | 0.83 → 0.92 | **+0.09** |
| **Steven, 34** | 32.3 → 37.9 | **+5.6** | 39.6 → 47.8 | **+8.2** | 0.73 → 0.93 | **+0.20** |
| **Emily, 48** | 38.1 → 39.3 | **+1.2** | 42 → 43.6 | **+1.6** | 0.77 → 0.86 | **+0.09** |

*Source: canonical data master (A_headline), verified against the source lab PDFs. Green favorable, rust unfavorable, per each clock's polarity (lower is better for all three).*

# All nineteen categories

Each category is scored 0 to 100, higher is better. The Largest ain is shown as the single biggest participant improvement (the ceiling reached, not an average). The Improved Column shows how many of the 10 participants got better scores. Group change is the mean across 19 categories, so a positive mean shows the wgike group moved up over the 6 months and a negative mean shows that the group moved down. The nutrient/fuel categories rose most; several deeper markers were flat to lower indicating the need for a

| Category | Largest gain | Held by | Improved | Group chg |
|---|---|---|---|---|
| **Vitamins** | **+26 (52→78)** | Sarah | 8 of 10 | **+11** |
| **Amino Acids** | **+22 (45→67)** | Suzanne | 5 of 10 | **+1** |
| **Antioxidants** | **+25 (51→76)** | Sarah | 5 of 10 | **+6** |
| **Fats and Cellular Membranes** | **+16 (50→66)** | Steven | 5 of 10 | **0** |
| **Lipid Peroxidation** | **+32 (40→72)** | Steven | 7 of 10 | **+8** |
| **Serum Lipids** | **+27 (39→66)** | James | 7 of 10 | **+2** |
| **Blood Pressure** | **+17 (67→84)** | Emily | 2 of 10 | **-10** |
| **Metabolic Markers** | **+24 (44→68)** | James | 4 of 10 | **-6** |
| **Immune Markers** | **+51 (38→89)** | Suzanne | 4 of 10 | **-4** |
| **Neurocognitive Markers** | **+14 (56→70)** | Suzanne | 3 of 10 | **-3** |
| **Inflammation Markers** | **+16 (40→56)** | Suzanne | 3 of 10 | **-12** |
| **Stress Markers** | **+70 (11→81)** | Emily | 7 of 10 | **+8** |
| **Toxins** | **+30 (29→59)** | Pauline | 5 of 10 | **+3** |
| **Uric Acid Pathway** | **+41 (38→79)** | Claudia | 4 of 10 | **-2** |
| **Mitochondrial Function** | **+55 (20→75)** | James | 6 of 10 | **+12** |
| **Oxidative Defense** | **+15 (50→65)** | Suzanne | 2 of 10 | **-15** |
| **NAD+ Metabolism** | **+63 (19→82)** | Arlene | 7 of 10 | **+13** |
| **Ketones** | **+69 (19→88)** | Helen | 8 of 10 | **+18** |
| **Supplements** | **+24 (26→50)** | Claudia | 4 of 10 | **-13** |

*Higher is better, so green indicates favorable movement. Every participant improved in multiple categories (range 5 to 12 of 19); no category improved for all ten.*

# Telomere and Inflammation

Taken from the Advanced TruAge panel: Telomere biological age is in years (lower is younger). Six of the group showed some slowing of telomere age. Telomere length is also in the report (longer is generally favorable) but there was little to no movement in the study group. CRP (C-Reactive Protein) and IL-6 are inflammation percentiles where lower figures are more favorable. Six of the group had lower CRP but they were not the same people who had slowed their telomere age. Only two had both slower telomere age and lower CRP values. Only 3 people lowered their IL-6 values. Perhaps a longer study

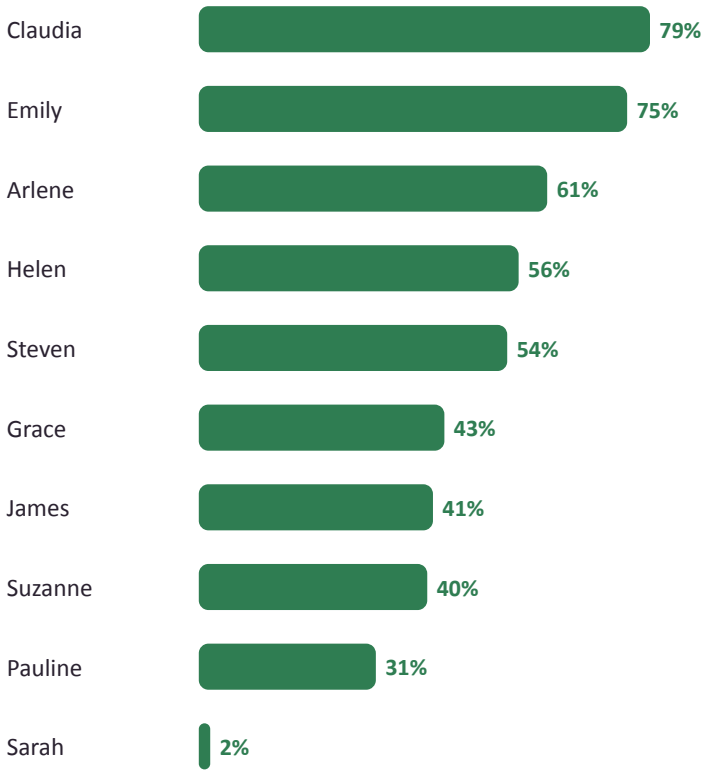
| Participant | Telomere age | Telomere length | CRP %ile | IL-6 %ile |
|---|---|---|---|---|
| **Helen, 70** | 57.7 → 60 | 7 → 6.9 | 17 → 6 | 9 → 22 |
| **Claudia, 53** | 33.4 → 26 | 7.4 → 7.5 | 49 → 59 | 2 → 3 |
| **Suzanne, 50** | 35.5 → 35.7 | 7.3 → 7.3 | 64 → 14 | 53 → 54 |
| **Sarah, 79** | 72.7 → 75.2 | 6.7 → 6.7 | 17 → 35 | 54 → 62 |
| **Arlene, 51** | 34.5 → 30.2 | 7.4 → 7.4 | 0 → 38 | 1 → 3 |
| **James, 77** | 76.1 → 76.5 | 6.6 → 6.6 | 72 → 1 | 79 → 55 |
| **Grace, 53** | 53.2 → 55.6 | 7 → 7 | 63 → 43 | 45 → 41 |
| **Pauline, 56** | 45.5 → 44 | 7.2 → 7.2 | 33 → 8 | 62 → 59 |
| **Steven, 34** | 35.5 → 37.1 | 7.3 → 7.3 | 29 → 84 | 71 → 82 |
| **Emily, 48** | 42.3 → 38.4 | 7.2 → 7.3 | 22 → 20 | 43 → 60 |

*Telomere length is left uncolored because a single short interval is not a reliable read. Smoking and alcohol epigenetic-risk bands are recorded per person in the full compendium.*

# The symptom questionnaire, all ten

These are self-reported scores from the study's own symptom questionnaire, a separate instrument from the TruDiagnostic panels, where a lower score means fewer or less-severe symptoms. Every participant improved. Sarah's small change reflects a mid-study cardiac hospitalization; the figures are shown as reported.

| Participant | Improvment |
|---|---|
| Claudia | 79% |
| Emily | 75% |
| Arlene | 61% |
| Helen | 56% |
| Steven | 54% |
| Grace | 43% |
| James | 41% |
| Suzanne | 40% |
| Pauline | 31% |
| Sarah | 2% |




*Self-reported symptom change over six months (lower is better). Not a TruDiagnostic output. Bars scaled to the largest change.*

# What each nutrient supports

The daily nutrient routine shares raw materials across organs and systems supporting structure and function. The same minerals and B vitamins feed energy, methylation pathways, and antioxidant chemistry.

| Formula | Key nutrients | Supports (structure/function) |
|---|---|---|
| **ReMag**® | Stabilized Magnesium ions | Cellular energy and cofactor for 600-800 enzymes, DNA-repair, recovery, and methylation machinery |
| **ReMyte**® | Twelve trace mineral ions | Antioxidant, enzyme cofactors, thyroid hormone production, and electrolyte balance |
| **ReAline**® | Methylated B's, L-methionine, taurine | Methylation, detoxification, energy, recovery |
| **Pico Potassium**® | Stabilized Potassium ions | Fluid balance, electrolytes, nerve signaling; pairs with magnesium |
| **D3K2 ReSet**® | Vitamins D3 + K2 | Immune function, bone support; calcium absorption and routing |
| **Pico Zinc Plus**® | Zinc + copper | Immune function, antioxidant enzymes, ceruloplasmin production (iron and copper transport protein) |
| **Vitamin C ReSet**® | Vitamin C + berry polyphenols | Collagen production, antioxidant regeneration, immune support |
| **Omega-3 A+E**® (extra) | DHA/EPA + A + E | Membrane structure, a normal inflammatory response |
| **Flora ReVive**® (extra) | Antifungal, soil-based probiotic | Gut barrier, digestive balance |

## The full measured record

Beyond the tables above, each participant's blood sample produced three-reports: 1. OMICm, Symphony (with all eleven organ ages), and DunedinPACE. 2. telomeres, immune-cell subsets, an epigenetic-biomarker panel, and inflammation and toxin exposure markers. 3. nineteen TruHealth categories with 105 test markers. The complete per-person compendium, including the eleven organ ages and immune subsets, is maintained as an interactive HTML companion to this document.