

Report Cover





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All ReCODE Reports[™] include a table of contents that can quickly navigate to specific sections of the report by clicking the page title or page number.

YOUR RECODE REPORT PARTICIPANT: APOLLO EXAMPLE REPORT DATE: FEBRUARY 9, 2021 **Table of Contents** Your Cognitive Risk Factors The Six Types of Alzheimer's Disease Type 1.5 – Glycotoxicity Type 2 – Trophic Loss Type 4 - Vasculature Type 5 - Trauma Sleep Reviewing the B7 Action Plan40 Raw Results



Your Risk Factors

Your ReCODE index provides a snapshot of the participant's current state of cognitive decline and provides a summarized index of his/her current metabolic state made of all six Alzheimer's subtypes. The index provides a visual goal to move each thermometer to an optimal state.

The goal is not simply to normalize metabolic parameters, but rather to optimize them. This personalized list highlights the participant's primary areas of concern.





The Six Subtypes

The ReCODE Report measures the level or risk and contributors for all six subtypes. Each page provides a description and contributors of each subtype along with a personalized analysis based on genetic and blood results.



HEIMER'S DISEASE



FEB 9, 2021

Optima

Nonoptima

Chronic inflammation, whether due to infections, leaky gut, poor diet, or other factors, is the key contributor to Type 1 Alzheimer's disease.

This type is associated with inflammatory markers such as hs-CRP, and the inflammation may be due to infections (often unrecognized), leaky gut, suboptimal diet, or other factors. Risk for type 1 is increased by ApoE4, chronic infections, trans fats, damage to your gut microbiome, and other factors.

Let's see how you are doing with risk for inflammatory Alzheimer's, so that we can minimize this risk.

1 Your Results

Your hs-CRP (high sensitivity C-reactive protein, which is a measure of inflammation) was 0.4 mg/l, which is excellent — congratulations, your hs-CRP does not indicate high risk for inflammatory Alzheimer's! This is important, because millions of people suffer from chronic inflammation, and this takes a toll, accelerating our aging (which is often called "inflamm-aging" because inflammation is such a common and important feature of aging), increasing risk for Alzheimer's, and increasing risk for other chronic illnesses such as vascular disease, arthritis, and cancer.

The information in the treatment section will help you to keep this inflammation low for years to come, thus helping to prevent further cognitive decline. This includes keeping your gut healthy — avoiding "leaky gut" — keeping your oral health good (pathogens from dental disease, such as P. gingivalis, increase risk for Alzheimer's disease), treating pathogens you may get from ticks (such as Borrelia or Ehrlichia), treating viral outbreaks such as Herpes, and avoiding exposure to inflammatory toxins such as those from specific molds. The "B7" section offers the best approaches for staying healthy and avoiding chronic inflammation and its associated risks.

Although not quite as predictive of inflammation-related disease as hs-CRP, there are other markers that complement hs-CRP, such as A/G ratio (albumin to globulin ratio) and homocysteine. **Your A/G ratio was 2.13**, and the goal is to see this at 1.8 or above. High homocysteine may also be associated with inflammation, although it is most reflective of methylation (which is important in many processes, including detoxification pathways). The goal for homocysteine is 7 uM or lower. **Your homocysteine was 6.7 uM**.

In addition to these laboratory tests, your genetics can also influence your risk for Alzheimer's disease. The great news is that this can be countered very successfully. As an example, regular exercise reduces the risk of the most common genetic risk factor, which is ApoE4, back to normal.

So, let's look at your most important genetic risk factor: ApoE4. Each of us may have 0, 1, or 2 copies of ApoE4, and this is associated with low, moderate, or high risk for Alzheimer's disease. Please remember that none of these guarantees that you won't get Alzheimer's or that you will, so even if you have 2 copies, being on a reversal program should allow you to start the reversal of your cognitive decline. Indeed, there is a wonderful site — ApoE4.info — at which over 3000 individuals from all over the world, all ApoE4+, share information and share their best practices. Most of these individuals are on some variation of ReCODE or PreCODE.

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sk. There are 75 million Americans with 1 copy of Americans — with zero copies. Our goal is to natic individuals on a prevention program so

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Where Do I Start?

ReCODE reports include a personalized starting point for all individuals on the protocol.





Achieve insulin sensitivity and mild ketosis, 1 to 4mM beta-hydroxybutyrate by ketone meter, or 7-40 ACES on breathalyzer (Biosense).

Ketosis is the production of ketones by which you metabolize your body's fats to use as energy, instead of using sugar or other carbohydrates. Ketosis has several mechanisms to enhance cognitive function. The instructions for how to do this are included in your overall program.

Your goal is to work up to a 14-16+ hour daily fast, including at least 3 hours before bedtime utilizing the "KetoFLEX 12/3" diet emphasizing primarily monounsaturated and polyunsaturated fats (high polyphenol extra virgin olive oil, avocados, nuts, seeds, and fatty fish.)

Combining a long daily fast with the recommended diet and exercise 5-6 times per week may be enough to reach your ketosis goal. If you are having difficulty either fasting, transitionally (a month or two to start is often helpful) consider the use of MCT oil or ketone salts or esters to help you extend your fast and reach your desired level of ketosis. Your physician and health coach can guide you with tips to how to optimize your ketosis, which in turn will support your optimal brain function. Use your ketone meter to monitor your progress.



Optimize hormonal support for your brain.

Your profile indicates that optimal hormonal support will be key for cognition, and therefore it is recommended that you consult your physician about the ideal hormonal support.



Remove exposure to biotoxins such as mycotoxins.

Chronic biotoxin exposure is associated with Alzheimer's disease development, so it is strongly suggested, based on your results here, to consult with a biotoxin expert. We can provide suggested experts in your area. It would be very helpful to know your ERMI score (ERMI is Environmental Protection Agency Relative Mold Index) from your home, and Mycometrics (https://www.mycometrics.com/) can provide this. Your ERMI score should be less than 2 to minimize risk that mycotoxin exposure may be contributing to cognitive decline.



Minimize exposure to dementogens.

There are many contributors to cognitive decline: just as we are exposed to many carcinogens (cancercausing chemicals), we are also exposed to dementogens, such as specific toxic metals, organic solvents, pesticides, mycotoxins (toxins produced by mold species), and some medications, among others. Proton pump inhibitors (PPIs), often taken for reflux (GERD, or gastroesophageal reflux disorder), may reduce our absorption of critical nutrients for brain function, such as zinc and vitamin B12. Statins may reduce cholesterol, which is critical for brain structure, too far. Anesthetic agents, some antidepressants, some antihistamines, benzodiazepines, some pain killers (like opiates), and anticonvulsants (seizure drugs), are all drugs that affect cognition and can contribute to reduced cognitive ability.

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Understanding Your Results: B7



The ReCODE Report provides a detailed outline of seven foundational strategies that work together to create neuroplasticity, called the Bredesen Seven or B7.

Introducing the Bredesen 7

The best way to reverse cognitive decline is to combine the personalized aspects of your ReCODE report, which has identified potential future drivers of cognitive decline, with the Bredesen Seven (or B7), the seven foundational strategies that work together to create neuroplasticity – the ability of the brain to establish, maintain, prune, and modify synaptic connections. Each of the strategies alone has the ability to promote neuroplasticity, but when practiced together they create powerful synergy. More extensive information on the B7 can be found in the guides to which you have access on apollohealthco.com.



Nutrition plays a remarkably important role in the reversal of cognitive decline. The goal is to utilize nutrition to support brain health by creating insulin sensitivity, increasing energy (via ketosis), reducina inflammation, improving vascular health, promoting autophagy, and more.



Brain Stimulation becomes even more important as we age to create neuroplasticity - the ability of the brain to establish, maintain, prune, and modify synaptic connections. This remodeling of our brains occurs throughout our lives in response to social and mental stimuli.



Exercise has many mechanisms by which it supports cognition. It increases your brain-derivedneurotrophic factor (BDNF) and increases cerebral blood flow and oxygenation. Additionally, it reduces overall stress, optimizes body mass index (BMI), improves insulin sensitivity, and optimizes overall brain and body physiology in numerous ways



Detox is a multi-step process that involves avoiding "dementagens," chemical agents that contribute to Alzheimer's disease, as well as identifying and addressing current exposures while optimizing detoxification pathways to create resilience.



appropriate during sleep (96-98% saturation is

restorative sleep each night.

optimal) with the overall goal of 7-8 hours of quality



Supplements can support numerous mechanisms to optimize your biochemistry. While they are "supplemental" to the overall program, they can be an important contributor to healing, especially if you're suffering from a specific nutritional deficiency that affects your cognitive health.



Stress, especially chronic stress, can be a key contributor to cognitive decline. While stress is unavoidable, you can learn to control your reaction to it by adopting daily stress management practices. Additionally, consider including mindfulness – the ability to be fully present in a non-iudamental manner - to aid in the incorporation of the B7 strategies.



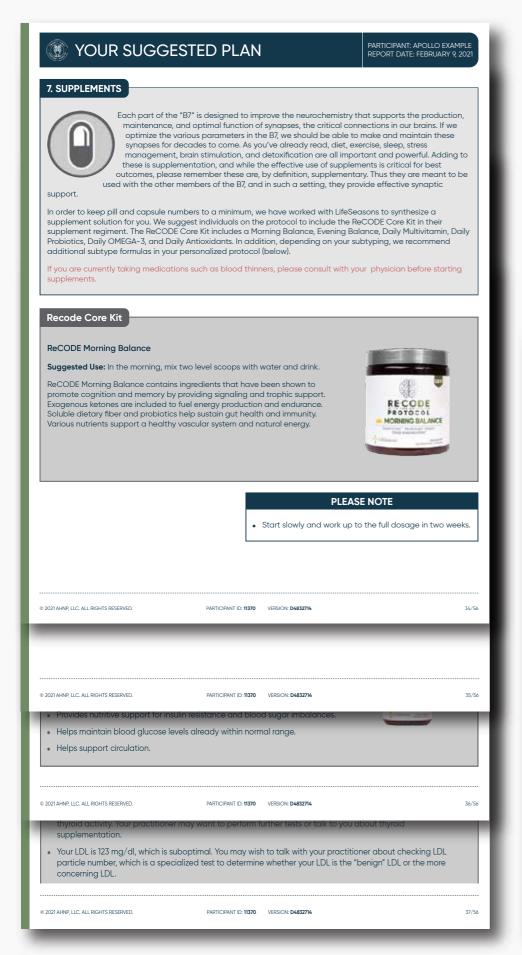


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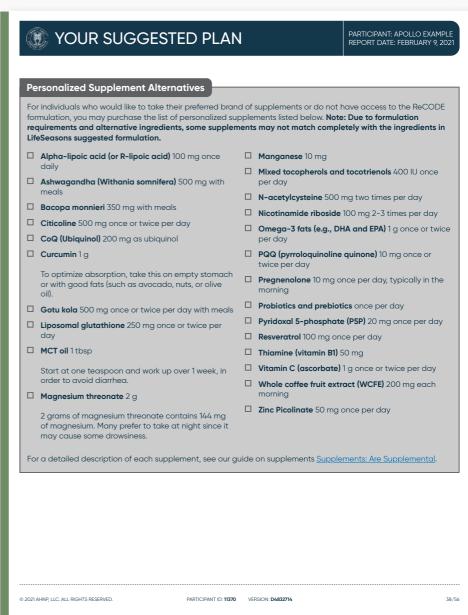
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Your Suggested Plan: Supplements & Personalized Alternatives



Each report includes a personalized list of recommended supplements by LifeSeasons. For individuals who would like to take their preferred brand of supplements or do not have access to the LifeSeasons formulation may purchase the supplements listed in the Personalized Supplement Alternatives.





Your Suggested Plan: Hormone Therapy

The Bredesen Protocol incorporates physician-supported hormone therapy to achieve optimal hormone levels to support brain structure and function. Note, bio-identical hormone replacement therapies should preferably be conducted with a physician specialized in bio-identical hormone replacement.



YOUR SUGGESTED PLAN

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HORMONE THERAPY

Please consult with your physician, preferably an expert in bio-identical hormone replacement, on possible hormone replacement therapies.

- Replacement should be bio-identical
- Target progesterone level for 2-20 ng/ml. Progesterone is usually started at 100mg orally each night.
- Target estradiol level is age dependent: for post-menopausal on BHRT, target 50-100; pre-menopausal target 100-350.

Estradiol should not be taken orally. Best is trans-vaginal or transdermal, following levels. Estradiol can be with or without estriol (Estradiol + estriol is best). Important to monitor carefully for side effects by doing regular mammography and Ob-Gyn examinations.

- Retest **DHEA-Sulfate** in 3-6 months.
- Talk with practitioner about Thyroid (Armour or NP Thyroid or Westhroid or Naturethroid) 60mg; Check basal body temperature or Thyroflex.

Avoid sudden withdrawal of HRT. When planning withdrawal, do so very gradually, over 6-12 months.

Why This is Important

Optimal hormone levels support brain structure and function, and enhance the ability to make and store new memories, as well as inhibiting degeneration.

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Your Suggested Plan: Recommended Reading

Dr. Bredesen and the Apollo Health medical team have curated a specific list of books that can be a valuable reference to support cognition.

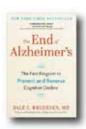


YOUR SUGGESTED PLAN

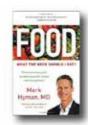
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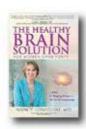
RECOMMENDED READING

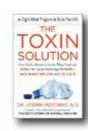
Reversing cognitive decline is now possible – it is happening in thousands of people every day – and this goes hand in hand with optimizing cognition. A finely-tuned brain will bring you all sorts of dividends for many years to come, and this simply means getting several different systems to work together as a network – from nutrition to exercise to sleep to growth factors to brain training, and so on. The books listed here are excellent, readable references to support cognition for decades to come. In addition to general references for cognition, we list specific titles for those who are at risk for a specific subtype of cognitive decline, such as toxic (type 3) or vascular (type 4).

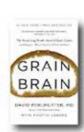












- The End of Alzheimer's by Dr. Dale Bredesen
- The End of Alzheimer's Program by Dr. Dale Bredesen (with Julie Gregory and Dr. Aida Lasheen Bredesen)
- The UltraMind Solution by Dr. Mark Hyman
- FOOD: What the Heck Should I Eat? by Dr. Mark Hyman
- FOOD: What the Heck Should I Cook? by Dr. Mark Hyman
- Grain Brain by Dr. David Perlmutter
- Brain Maker by Dr. David Perlmutter
- The Brain Body Diet by Dr. Sara Gottfried
- The Healthy Brain Solution for Women Over Forty by Dr. Nancy Lonsdorf
- Fat for Fuel by Dr. Joseph Mercola
- KetoFast by Dr. Joseph Mercola
- The Longevity Diet by Dr. Valter Longo (Keep the overall concept of KetoFLEX 12/3 in mind.)
- Ketotarian by Dr. Will Cole
- 31-Day Food Revolution by Ocean Robbins (Keep the overall concept of KetoFLEX 12/3 in mind.)
- How Not to Die by Michael Greger (Keep the overall concept of KetoFLEX 12/3 in mind.)
- Super Immunity by Joel Fuhrman (Keep the overall concept of KetoFLEX 12/3 in mind.)



Report Data

If recommended tests are incomplete, missing tests will be itemized and suggested.

Each report will be provided with the next suggested testing interval.



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You and your practitioner may also wish to consider the following tests:

- Cortisol Serum
- Mercury %ile
- Glutathione (mcg/ml)
- Vitamin E Serum

REMINDER

YOUR NEXT LAB TESTS SHOULD BE COMPLETED AFTER SIX MONTHS

2021-08-09

The following pages include all of your lab results, genetic results, and assessments utilized to generate your ReCODE Report. If available, each result will include a color code indicating whether the result is within the ReCODE Target range, the raw value with units, reported date of the result, and the source of the result.

Target ranges are color coded Green, Gold, and Red. Green results meet the ReCODE Target range, Gold results are within the normal reference range defined by the Apollo Health lab, and Red results are outside of normal range. Please note, these ranges and values may not match your preferred lab's reference ranges. If you are not using the Apollo Health lab and the lab test is significantly different, the ranges and ReCODE algorithm may be inaccurate, so it is important to make sure that compatible lab tests are used.

Please note that best outcomes require bringing lab values not simply to the minimum "normal" levels, but to optimal functional levels—this is well documented, for example, with homocysteine and B12. Please consult with a trained ReCODE Practitioner as these defined ranges are set as guidelines.

Your results may be sourced from various data sources, which may include Apollo Health's partnered lab, trained ReCODE Practitioners, or conducted assessments. Each result will be labeled with a data source, if available.

MEDICAL ADVICE, DIAGNOSIS AND TREATMENT BASED ON ANY REPORTED TARGET RANGES AND VALUES ARE AT THE SOLE DISCRETION OF A TRAINED RECODE PRACTITIONER OR YOUR PHYSICIAN.

Please consult with your trained ReCODE Practitioner regarding retesting procedures.

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Raw Results

The Raw Results section lists and categorizes all of the individual's lab results, genetic tests, and health questionnaire responses. Each result will include the value, protocol recommended range, the date the result was recorded, and the source of the result. In addition, each result will be highlighted with a colored indicator identifying optimal, suboptimal, or abnormal results.

