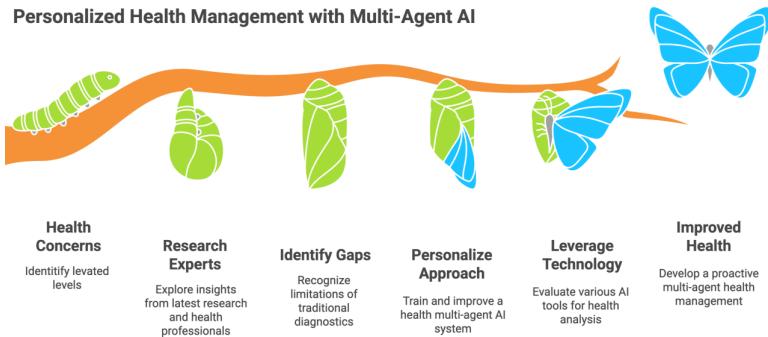




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Personalized Health Management with Multi-Agent AI



My Journey into Orthomolecular Medicine: Transforming Health with Multi-Agent AI Support

Build a personalized Health Coach based on the current state of science



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AI and Cloud Solutions Architect



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In Germany, public health insurance typically covers the cost of a full blood count. For a 35-year-old, the costs would generally be covered by the public health insurance without any additional out-of-pocket expenses.

The diagnosis shows some serious levels of cholesterol. My doctor said I should get my body mass index below 25 and my body fat below 24%. At the same time, I read [Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones](#) by James Clear. So I started to change my diet and exercise plan. I added running and morning exercise to my daily routine, and I cut out red meat and gradually increased fiber, fruits, and vegetables. My LDL stays very stable and my HDL is getting better. My weight is also stable, so I have maintained a BMI of 26 and body fat of 27%.

So I research with the publications of leading experts in Germany like Dr. Ulrich Strunz, Ingo Froböse, Prof. Dr. Bernd Kleine-Gunk, Dr. Helena Orfanos-Boeckel, Jessie Inchauspe, Giulia Enderes. I learned that the "big blood count" is a rather small diagnostic, missing values are vitamins, amino acids and minerals. The "big blood count" integrates two key assessments: the basic blood count and the differential white blood cell count, these assess 15-20 hematological parameters that are critical for the diagnosis of anemia, infections, inflammatory conditions and hematological malignancies. Laboratory fees are only €4.67-€10 for automated analysis of this basic test, BUT:

- Does not include **specific tests** for organ function, such as liver or kidney function, thyroid function, or vitamin and nutrient status.

(5) Build a personalized Health Coach based on the current state of science | LinkedIn

This can lead to incomplete diagnoses, especially in the case of subtle diseases or deficiencies.

- **Reference values** are often based on population averages, which may be undernourished. This can lead to thresholds being considered normal when they actually indicate deficiencies.
- **Traditional dietary** recommendations often emphasize the consumption of carbohydrates, including whole grains. Critics argue that this can lead to excessive consumption of refined carbohydrates, which is detrimental to health.
- **Processed foods** are high in sugar and trans fats, which increase the risk of chronic diseases.
- The **nutrient content** of fruits and vegetables is often lower than expected, due to intensive farming and transportation. This can lead to inadequate intake of essential vitamins and minerals. Due to inadequate nutrient intake from regular diets, the use of dietary supplements is often recommended, after regular diagnostics.

"Laboratory diagnostics for nutrient deficiencies are ignored by health insurance companies, even though they would be the basis for genuine prevention. Instead, we prefer to finance expensive late-stage consequences - a system that rewards illness and punishes health."

- Dr. Ulrich Strunz

Criticism of traditional medicine focuses on the need for more comprehensive diagnostics and a balanced diet. Experts emphasize the importance of individualized health assessments and adjusting dietary recommendations based on modern science.

I've noticed that many doctors still practice traditional medicine. However, specialists in modern oncomolecular medicine are scarce and often fully booked, even for those willing to pay all the costs personally. To fill this gap, I've started to read the books of these experts and use their knowledge as a knowledge base for a multi-agent system. This system allows me to integrate modern reference values and upload my diagnostic results, providing a more personalized approach to LLM management. I am experimenting with various AI systems such as Open AI's ChatGPT, Azure AI Foundry, Perplexity AI, [Dust.tt](#), N8N, Conversational AI.

Perplexity Spaces define the context, instructions, knowledge

By leveraging this technology, I will analyze my health data in the context of the latest medical research and recommendations. It's empowering to have access to cutting-edge information and tools that help me make informed decisions about my health. Despite the challenges in accessing specialized care, this approach has given me a sense of control and proactive engagement with my well-being.

Amino Acid diagram

After delving into "[The Amino Revolution](#)," I took a comprehensive amino acid test provided by [for you](#) to analyze crucial amino acids that form complex proteins and hormones. The Aminogram results revealed levels in the lower range for 8 essential, 4 semi-essential, and 8 non-essential amino acids, accompanied by a detailed report and a personalized supplement plan. The challenge now lies in selecting cost-effective supplement products with optimal coverage.

To address this, I've compiled a comparison table with Perplexity Deep Research of recommended daily intakes (RDI) for essential amino acids (based on biomarker testing) against amounts provided by two popular supplements:

Amino Acid	Recommended Intake (g/day)	Forever Young	ISO-C Whey	Double Wood Supplements	Horbäach Amino Acid Complex	Optimum Nutrition BCAA
		Amino 10 (2 portions, 32g)	Intense Vanilla (3 portions, 90g)	EAA (1 serving)	(1 serving)	(1 serving)
Isoleucin	2.2 g	2.5 g (114%)	4.5 g (205%)	1.2 g (55%)	1.0 g (45%)	2.5 g (114%)
Leucine	4.0 g	5.0 g (125%)	7.5 g (188%)	2.4 g (60%)	2.0 g (50%)	5.0 g (125%)
Lysine	3.0 g	2.9 g (97%)	6.9 g (230%)	1.8 g (60%)	1.5 g (50%)	0 g (0%)
Methionine	1.0 g	1.4 g (140%)	1.5 g (150%)	0.5 g (50%)	0.5 g (50%)	0 g (0%)
Phenylalanine	2.903 g	2.6 g (90%)	2.1 g (72%)	1.2 g (41%)	1.0 g (34%)	0 g (0%)
Threonine	1.0 g	2.2 g (220%)	5.1 g (510%)	0.8 g (80%)	0.7 g (70%)	0 g (0%)
Tryptophan	0.578 g	0.7 g (121%)	1.2 g (208%)	0.3 g (52%)	0 g (0%)	0 g (0%)
Valine	3.453 g	2.5 g (72%)	3.9 g (113%)	1.6 g (46%)	1.4 g (40%)	2.5 g (72%)

Perplexity Pro calculates the coverage of the recommendations per product

Product Details:

- [Forever Young Amino 10](#): 2 servings (32g) at €4.17/day
- [ISO-C® Whey Intense Vanilla](#): 3 servings (90g) at €3.99/day

AI also generates a comparison that allows for clear visualization of how these supplements align with individual amino acid needs. Additional similar products can be easily added to the table for a more comprehensive analysis.

What is the right nutrition diet for me?

As an avid health enthusiast, I've experimented with various fasting methods, including therapeutic fasting and 16:8 intermittent fasting. However, these approaches presented unexpected challenges: I had to stop my exercise program, lost muscle mass, and saw no significant weight change even after three months. For the past year, I've also been incorporating 16:8 intermittent fasting into my routine, but the results are still limited.

In search of a more sustainable solution, I researched the recommendations of Dr. Ulrich Strunz and other medical experts. Their approach advocates a diet low in carbohydrates and sugar (less than 50 grams per day) while increasing fat and protein intake. This dietary shift causes the body to switch from glucose metabolism to ketosis, effectively burning fat stores without sacrificing muscle mass.

Consuming large amounts of fat daily raises concerns about my cholesterol levels, especially if the fats are predominantly saturated fats from animal sources. Studies have shown that low-carbohydrate, high-fat diets can increase LDL cholesterol (the "bad" cholesterol), apolipoprotein B levels, and the risk of cardiovascular events when saturated fats dominate the diet.

Transitioning to healthier sources of fat, such as omega-3, 6, and 9 fatty acids, is a practical solution for reducing cholesterol risks. Omega-3 fatty acids are particularly beneficial for lowering triglycerides and improving heart health. Omega-6 and omega-9 fatty acids also play an important role in reducing LDL cholesterol and inflammation while promoting HDL cholesterol (the "good" cholesterol).

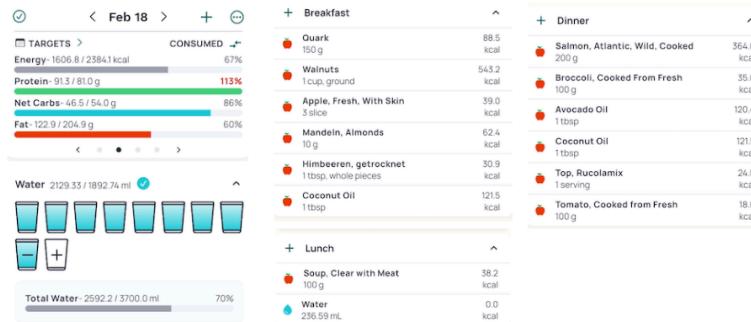
- **Omega-3:** Fatty fish (salmon, sardines), flaxseed, chia seeds, walnuts.
- **Omega-6:** Nuts (almonds, walnuts), vegetable oils (soybean oil).
- **Omega-9:** Olive oil, avocados, nuts like cashews and almonds.

Bone broth has also been shown to help regulate cholesterol levels and protect blood vessels. It contains nutrients such as collagen, glycine, and chondroitin, which may improve cardiovascular health and lower blood pressure. A perfect addition to your keto lifestyle, promoting satiety and metabolic flexibility.



Nourishing Bone Broth: A Keto-Friendly Elixir

I also learned that full-fat yogurt and cottage cheese for breakfast contain saturated fat, which can raise cholesterol levels when consumed in large amounts (>10%). However, yogurt also provides probiotics that promote gut health and may indirectly benefit cholesterol regulation. Studies suggest that yogurt enriched with flaxseed or oil, nuts, blueberries, and raspberries may lower triglycerides and total cholesterol while maintaining healthy blood pressure levels. Flaxseed oil contains lignans, which have antioxidant properties that may reduce inflammation and protect against cardiovascular disease.



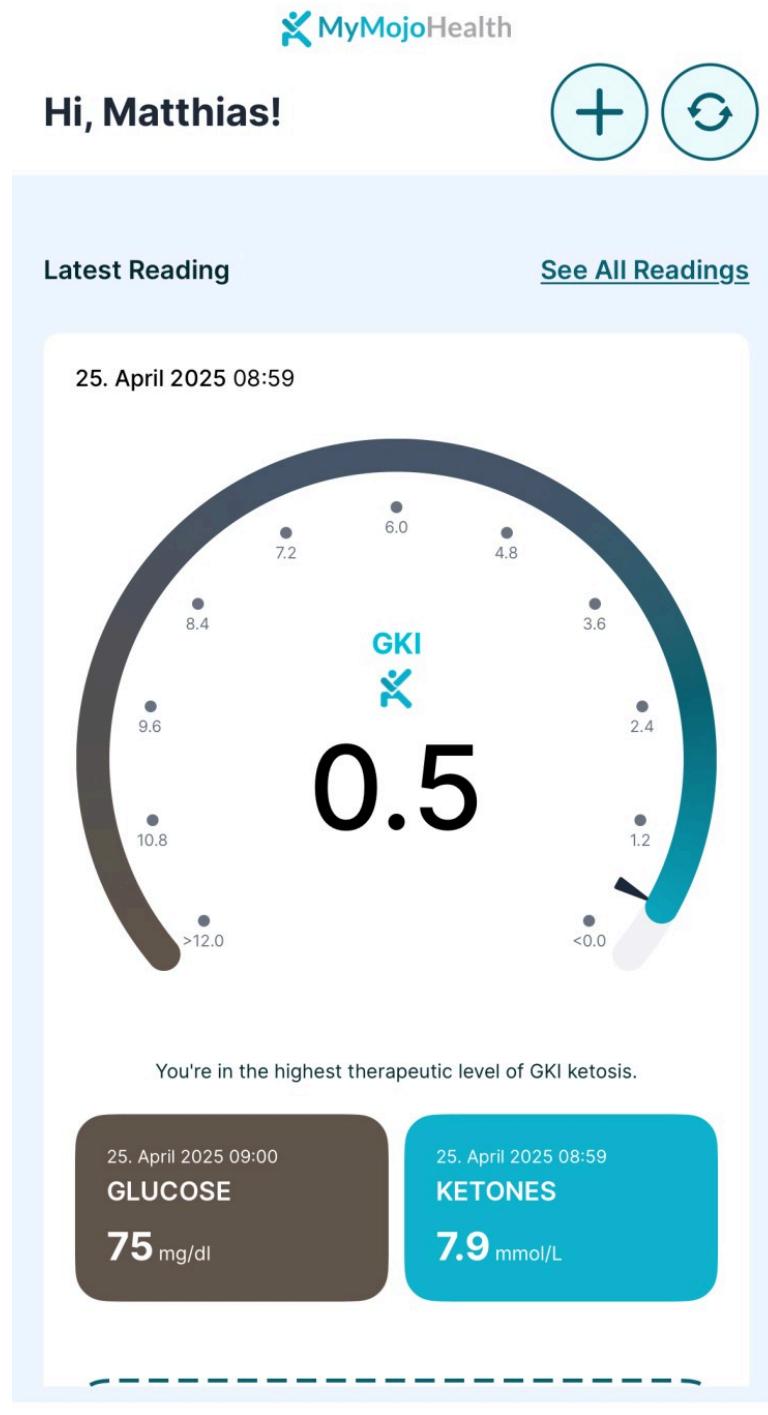
I use Cronometer App to track my Keto nutrition targets

After 4 weeks of following a ketogenic lifestyle, I experienced remarkable results. I lost 6 pounds, reduced my body fat to 19%, and improved my BMI to 20. These changes were not just numbers on a scale; I felt more energized and focused throughout the day. So I learned:

"Keto is more than a diet. It's a lifestyle."

At first, I used urine test strips to measure my ketone levels during ketosis. While these strips are convenient, I quickly realized that after a few days, they no longer provided reliable results. This is because urine ketone levels tend to decrease as the body becomes more efficient at using ketones for energy.

To get more accurate and consistent readings, I switched to a blood ketone meter. This device allows me to measure both glucose and ketone levels directly in my blood, giving me a clearer picture of my metabolic status. The Keto-Mojo also comes with its own mobile app that seamlessly syncs with Apple Health and my keto food tracker, Cronometer. This integration allows me to track my data over time and integrate it for further diagnosis and optimization of my ketogenic lifestyle.



Keto-Mojo Glucose and Keto test device and mobile app

Switching to blood testing has been a game-changer in tracking my progress and ensuring I stay in nutritional ketosis. While blood meters like Keto-Mojo are slightly more expensive than urine strips, their accuracy and reliability make them an invaluable tool for anyone serious about following a ketogenic diet. But I also learned on the hard way:

"Keto is like a marriage, it doesn't work if you cheat."

To enhance my results, I've incorporated several strategies:

- 1. Intermittent Fasting:** I maintain the 16:8 fasting schedule, eating my last meal by 6 PM and breaking my fast after 10 AM the next day.

2. **MCT Oil:** I use MCT oil before starting and ending my daily fasting period, which helps accelerate ketosis and provides quick energy.
3. **Exogenous Ketones:** These supplements have been crucial in quickly achieving a ketotic state, especially when I'm just starting or if I've consumed more carbs than usual.
4. **Consistent Exercise:** I maintain a robust exercise regimen of 1-2 hours daily, which not only supports my overall health but also enhances fat utilization during ketosis.
5. **Bone Broth:** I've incorporated nutrient-rich bone broth into my diet. It's an excellent source of minerals, collagen, and amino acids, supporting joint health and gut function while aligning with ketogenic principles.
6. **Bulletproof Coffee:** I start my day with a bulletproof coffee, blending high-quality espresso with MCT oil and a small amount of bone broth. This combination provides a sustained energy boost, supports ketosis, and helps me maintain mental clarity throughout the morning.

By the six-week mark, I was thrilled to see a major improvement in my metabolic flexibility. My body had adapted to entering ketosis much more efficiently, which allowed me to switch between fuel sources with ease. This adaptation has been so important for keeping my energy levels up and supporting my athletic performance.

I've found that a flexible approach works well for me. I try to stay in a ketogenic state for about 5 out of 7 days each week. This approach helps me get the best fat burning and athletic efficiency, while still giving me some flexibility in my diet on the weekends.

After adopting a ketogenic diet, I experienced remarkable results within 6 weeks. My neurodermatitis completely resolved, as confirmed by a dermatological evaluation. The weight loss led to the elimination of sleep apnea-related snoring. My running routine improved significantly, transitioning to a forefoot technique ("Der kleine Laufcoach" method) with daily 7km runs and HIIT sprints. This change reduced joint stress while maintaining my VO₂max at 47 mL/kg/min. The keto lifestyle not only transformed my body composition but also enhanced my overall well-being and athletic performance.

AVERAGE LEVEL

Above Average



Apr 2024 – Apr 2025



Mikrobiom analysis

After watching the Netflix series "[Hack Your Health: The Secrets of Your Gut](#)" I decided to analyze my microbiome by [for you](#). I booked a health consultant to explain the 21-page report of my microbiome and

amino acid results. The competent consultant's first feedback was that the report was too detailed - a normal gut health test would have been sufficient. She explained that I have a high percentage of the fat-promoting bacteria **Akkermansia muciniphila**. This is likely the main reason why I struggle to lose weight and why my cholesterol levels remain high, despite engaging in 1-2 hours of daily exercise.

To improve my gut health, she recommended cultivating beneficial bacteria that were lacking in my microbiome:

- **Faecalibacterium prausnitzii**
- **Bifidobacterium** species
- **Lactobacillus** species

The consultant also noted the presence of potentially inflammatory bacteria, **Sutterella** spp., which she suggested I could combat with bitter drops. This analysis has provided valuable insights into my gut health and potential strategies for improving my overall well-being.

An AI agent can create a table outlines gut health products with their key ingredients, benefits, approximate costs, and keto-friendly compatibility based on the needs:

Product	Key Ingredients	Benefits	Cost (Approx.)	Keto-friendly
Darmflora komplex	11 bacterial strains, prebiotics	Supports gut health, 22 billion CFUs	€40 for 30 servings	Yes
Präbio Ballaststoffe	Acacia fiber, resistant dextrin	Promotes beneficial bacteria growth	€35 for 30 servings	Yes
High Curcuma	Curcumin extract	Anti-inflammatory, supports gut health	€25 for 60 capsules	Yes
HLH BioPharma Probiotics	Various probiotic strains	Supports gut flora, immune function	€30-50 per product	Yes
Lacteo Fort	Lactobacillus acidophilus LB	Relieves diarrhea, supports gut health	SGD 80 for 100 capsules	Yes

Perplexity Deep Search advise product to supplement the bacteria.

Embracing the Cold: My Journey with the Wim Hof Method and Ancient Breathing Techniques

But also Wim Hof, the Iceman was a true inspiration for pushing the boundaries of human potential. His method of combining controlled breathing, cold exposure, and mental focus has revolutionized our understanding of the body's capabilities. As someone who's experimented with cold showers and breathwork, I can attest to the invigorating effects, though I'm far from Wim's superhuman feats! If you're curious about harnessing your inner strength through cold therapy and breathwork, check out the fascinating **Wim Hof Method documentary** to learn more about this extraordinary man and his life-changing techniques.



Wim Hof method: controlled breathing, cold exposure, and mental focus

Currently I'm preparing for a triathlon. So I combine, daily HIT, strength and endurance exercises, Ketogenic nutrition. Triathlon training demands exceptional respiratory efficiency, quick recovery, and mental resilience. Two increasingly popular approaches among endurance athletes are nasal breathing techniques (associated with James Nestor's bestseller book [Breath](#)) and the book [The Wim Hof Method](#), which combines cold exposure with specialized breathing. Together, these methods offer complementary benefits that can enhance triathlon training and performance through improved respiratory efficiency, faster recovery, and enhanced mental fortitude. For nasal breathing adaptation, experts recommend beginning with short intervals during low-intensity training.

The physiological benefits of nasal breathing—such as improved oxygen utilization, reduced energy expenditure, and lower lactate accumulation—are especially valuable for triathletes, given the sport's multi-discipline demands. By encouraging more efficient and regulated respiration, nasal breathing helps sustain endurance and optimize performance across swimming, cycling, and running.

Beyond athletic performance, I've personally experienced significant improvements in my sleep quality since adopting nasal breathing and losing weight. My sleep apnea and snoring have noticeably decreased. As a result, I'm enjoying deeper, more restorative sleep, with marked improvements in both REM and deep sleep phases. These changes are clearly reflected in my Apple Health data, which shows a positive trend in my sleep patterns over time.

Nasal Breathing and Sleep Quality: Scientific Evidence

My personal experience is well-supported by scientific research. Nasal breathing during sleep is associated with several physiological advantages:

- **Improved Oxygen Absorption:** The nose acts as a natural filter and humidifier, warming and moistening the air before it reaches

the lungs. This process optimizes oxygen uptake and helps maintain stable blood oxygen levels throughout the night.

- **Reduced Sleep Apnea and Snoring:** Studies show that nasal breathing helps keep the upper airway more stable and less prone to collapse, which reduces the frequency and severity of obstructive events like snoring and apnea episodes. Research has found that individuals who switch from mouth to nasal breathing often experience fewer breathing interruptions and report better overall sleep quality.
- **Enhanced Sleep Architecture:** Scientific studies indicate that mouth breathing is linked to lower oxygen saturation and more fragmented sleep, resulting in less time spent in restorative REM and deep sleep stages. Nasal breathing, by contrast, supports healthier sleep architecture and improved daytime alertness.
- **Positive Impact on Sleep Tracking:** These benefits are not just subjective; they are often measurable. Many people, including myself, see improvements in sleep metrics—such as increased REM and deep sleep—when tracking with devices like Apple Health.

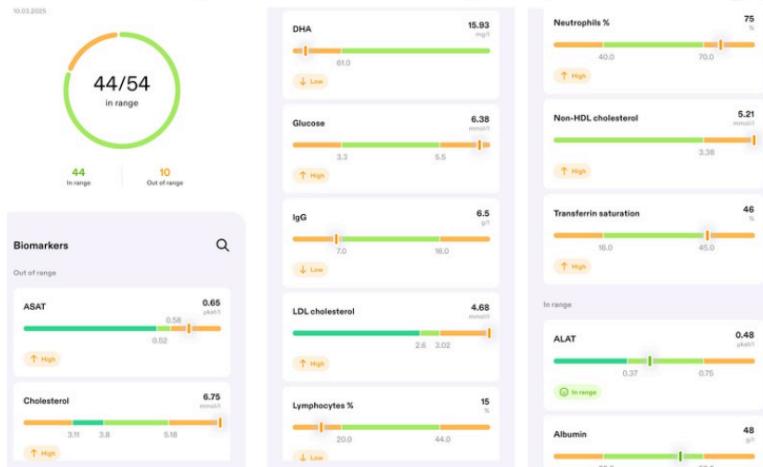
My shift to nasal breathing and weight loss has led to significant improvements in my sleep apnea, snoring, and overall sleep quality. This personal transformation is strongly supported by scientific research, which demonstrates that nasal breathing enhances oxygenation, reduces airway obstruction, and promotes deeper, more restorative sleep. The data from my Apple Health app provides further evidence, showing clear improvements in my sleep patterns over time.

Aware Health Testing: A Modern Approach for Diagnostics

In the pursuit of optimizing my health, I decided to test the [Aware App](#) and its associated blood testing services. Unlike traditional lab reports, which often present results in printed formats with varying units (mg, ml, mmol) and static reference ranges, Aware offers a highly modern and user-friendly approach.

The Berlin Aware healthtech startup provides a convenient and innovative solution for regular blood testing and health monitoring. Using their app and test centers, individuals can track over 60 biomarkers related to nutrition, longevity, hormones, heart health, and more. Here are the key features:

1. Aware offers comprehensive blood tests that analyze more than twice the biomarkers of a standard blood count. These tests cover immune system, kidney, liver, metabolic, hormonal, vitamin, and mineral areas. Aware operates on a subscription basis (€179/year for two tests), with options for additional specialized tests.
2. App booking and results are convenient. Test centers are located and equipped with private booths. Results are available digitally within 48 hours.
3. The Aware App analyzes 54 biomarkers, providing a detailed overview of health. Forty-four were within range, while ten were out of range. The app displays clear visual indicators.
4. Through partnerships like TeleClinic, users can immediately consult with healthcare professionals via video.
5. Unlike traditional labs, Aware allows users to track biomarkers over time electronically. This feature is invaluable for monitoring trends and assessing lifestyle changes.
6. The app provides personalized recommendations based on results.



Health Apps are booming - Here the results of my latest tests in Aware App

Some of the notable out-of-range biomarkers included:

- High LDL and non-HDL cholesterol, which can be a sign of heart problems.
- Low DHA levels, suggesting a need for omega-3 supplementation.
- There was also slightly high glucose, which might mean changes to my diet.

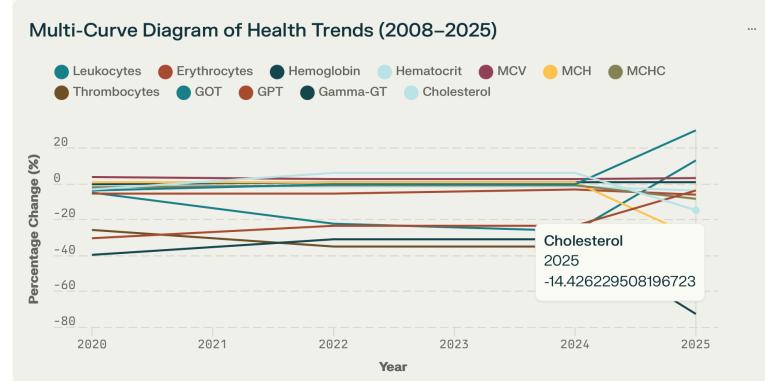
Some of the immune-related stuff like IgG and lymphocyte percentage were lower than expected. The Aware PDF export is way better than traditional lab print-outs for my doctor. It's clearer, more organized, and easier to get to. It includes more diagnostics (like vitamin B12 and omega-3 levels) and visual summaries, which makes it easier to understand the results.

With Perplexity, I can compare the significant values from the last few years of various lab formats and export them as a CSV file:

Health Parameter Trend-Explanation							
Parameter	2008	2020	2022	2024	2025	% Change (2008→2025)	Trend Explanation
Leukocytes (/nl)	7.50	7.14	5.85	5.55	8.50	+13.33%	⬆️ Increased leukocytes may indicate inflammation or immune system activation.
Erythrocytes (/μl)	5.16	4.90	4.90	5.00	4.85	-6.01%	⬇️ Slight decrease but remains within normal range; no significant concern.
Hemoglobin (g/dl)	15.90	15.90	15.10	15.10	16.10	+1.26%	Stable and within normal range; no significant change observed.
Hematocrit (%)	46.60	46.00	46.00	46.00	45.00	-3.43%	⬇️ Slight decrease but remains within normal range; no significant concern.
MCV (fl)	90.30	94.00	93.00	93.00	93.20	+3.21%	⬇️ Stable and within normal range; no significant change observed.
MCH (pg)	31.60	32.00	32.00	32.00	22.20	-29.75%	⬇️ Significant drop; may indicate anemia or other blood disorders requiring attention.
MCHC (g/dl)	35.00	34.30	34.80	34.80	32.10	-8.29%	⬇️ Decrease in hemoglobin concentration; could indicate anemia or hydration issues.
Thrombocytes (/nl)	363	271	237	237	214	-41.05%	⬇️ Significant decrease; though still within normal range, trend requires monitoring.
GOT (U/l)	30.0	29.0	30.0	30.0	39.0*	+30.00%	⬆️ Increasing liver enzyme; recently exceeded reference range (>38 U/l).
GPT (U/l)	30.0	21.0	23.0	23.0	29.0*	-3.33%	⬇️ Stable with slight improvement; indicates relatively consistent liver function.
Gamma-GT (U/l)	58.0	35.0	40.0	40.0	16.0*	-72.41%	⬇️ Significant improvement in this liver enzyme; suggests better liver health.
Cholesterol (mg/dl)	305	296	324	324	261*	-14.43%	⬇️ Though improved, remains significantly above target (>200 mg/dl); continued cardiovascular risk.
HDL (mg/dl)	-	57.3	66.2	66.2	60.0*	+4.71%	⬆️ Increased from 2020 and maintained at optimal level; helps protect against heart disease.
LDL (mg/dl)	-	218	234	234	181*	-16.97%	⬇️ Notable decrease, though still above ideal targets (>160 mg/dl); positive direction but requires continued attention.
Triglycerides (mg/dl)	-	177	162	162	124*	-29.94%	⬇️ Significant improvement to below reference range (<150 mg/dl); indicates better fat metabolism.

Analyse the various lab reports and export it as CSV.

Perplexity generates interactive multi-curve diagrams of health trends based on various data sources, utilizing a coding sandbox for visualization:



Perplexity generate an interactive multi-curve diagram with changes in %

Manus AI

With the rapid evolution of digital health tools, AI agents like Manus are transforming how individuals collect, analyze, and interpret their health data. I want share my practical experience using Manus AI to prepare, understand, and communicate my diagnostic, health, sport, and sleep data—especially in the context of generating comprehensive reports for medical consultations, such as with the Charité Lipid Ambulance, home physicians, and nutrition or sports consultants.

Manus AI allows me to aggregate data from various sources, including Apple Health, sport trackers, and laboratory results. This centralized approach enables a holistic view of my health trends, such as lipid values, cardiovascular metrics, and sleep quality, over time.

One of Manus's most valuable features is its ability to automatically generate structured, medically relevant reports. These reports are tailored for different audiences: specialist clinics (like lipid ambulances), general practitioners, or lifestyle consultants. The reports synthesize complex data into understandable narratives and visualizations, making it easier to discuss findings with healthcare professionals.

Leveraging the latest insights from molecular medicine and metabolic health, Manus AI can suggest individualized interventions—ranging from dietary adjustments (e.g., ketogenic or low-carb diets) to exercise regimens and breathing exercises. This aligns with the approaches advocated by leading experts such as Dr. Ulrich Strunz, Prof. Bernd Kleine-Gunk, and others, who emphasize the synergy between lifestyle, nutrition, and metabolic flexibility.

The screenshot shows the Manus AI interface. On the left, there's a sidebar with tasks like "Physiologische Analyse mit Apple Health un...", "Blutwertanalyse einer 40-Jährigen Frau", and "Workshop-Arbeitsblätter zu strukturierter...". The main area has a header "Physiologische Analyse mit Apple Health un..." and a sub-header "Inhaltsverzeichnis". It lists sections: 1. Zeitliche Entwicklung der Gesundheitsdaten, 2. Kausalitätsanalysen zwischen Schlüsselparametern, 3. Kausaldisparitäten und Wechselwirkungen, 4. Metabolische Flexibilität, 5. Autonomes Nervensystem (Stress-Index), 6. Autonomes Nervensystem (SNS/Parasympathikus/Gangsynapsometrie), 7. Glukose-, Keton- und BOLD-Analyse, and 8. Zusammenfassung und Empfehlungen. Below this is a section titled "1. Zeitliche Entwicklung der Gesundheitsdaten" with a sub-section "Der zeitliche Ablauf zeigt die zeitliche Entwicklung aller relevanten Gesundheitsparameter über den Beobachtungszeitraum von 6 Monaten. Besonders markiert sind die Einflöpfung der ketogenen Ernährung (Tag 0) und des Abtrainings (Tag 60)." To the right, there's a graph titled "Multivariater Zeitreihen: Gesundheitsparameter über 3 Monate" showing trends for various parameters like Blood Pressure (BP), Heart Rate (HRV), and Blood Glucose (BG) over time.

Manus.im

AI agents like Manus are not just passive data collectors—they are active partners in the journey toward better health. By empowering users to

understand and communicate their health data, Manus AI supports more informed, collaborative, and effective medical care. This approach is fully aligned with the vision of modern molecular medicine: individualized, data-driven, and focused on optimizing long-term health outcomes.

Conversational AI

ElevenLabs Conversational AI can be utilized in the medical field, specifically for personalised health consultations. This example involves a virtual consultation facilitated by a HealthAgent, leveraging expertise in modern molecular medicine, focused on insights from Dr. Ulrich Strunz.

The sound quality during the consultation was impressive, ensuring clarity and naturalness in communication. However, the system's rigidity became evident—it lacked flexibility in adapting to nuanced prompts or unexpected changes in conversation flow. This limitation underscores the need for **Multi-Agent Systems (MAS)**.

The screenshot shows the ElevenLabs Conversational AI platform. On the left is a sidebar with navigation links: Dashboard, Agents, Call History, Knowledge Base, Phone Numbers, and Settings. Below these are links for Back to ElevenLabs, Audio Tools, Notifications, and a Low credits section with an Upgrade button. A user profile for Matthias Buchhorn is at the bottom. The main area is titled "Conversation with HealthAgent" and shows a video player with a play button, a timestamp of 0:00 / 4:25, and a progress bar. To the right of the video is a "Metadata" panel with fields: Date (14 Mar, 15:20), Connection duration (4:27), and Cost (credits) (1475). Below the video is an "Overview" section with tabs for Transcription and Client data. The "Transcription" tab contains a summary of a medical consultation between Dr. Ulrich Strunz and a patient about high cholesterol levels. The "Client data" tab shows a "Call status" of Success. At the bottom of the main area is a "Summary" section with detailed medical information.

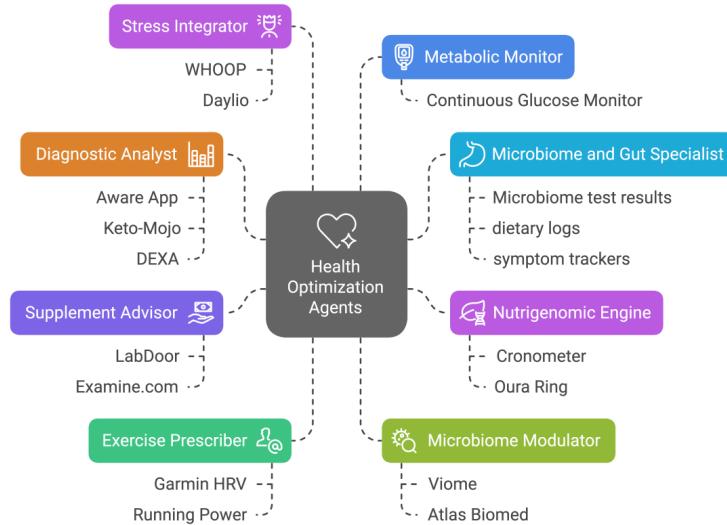
Conversational AI for medical help with a clear focus

Multi-Agent Systems for Comprehensive Health Coaching

The complexity of personalized health optimization necessitates a multi-agent approach, where specialized AI agents collaborate to provide holistic guidance. This AI system mirrors the diverse expertise required in modern molecular medicine:

- **Diagnostic Analyst:** Interprets complex biomarker data, identifying subtle patterns and potential health risks.
- **Nutritional Strategist:** Tailors dietary recommendations based on individual metabolic profiles and health goals.
- **Supplement Optimizer:** Analyzes nutrient deficiencies and recommends cost-effective supplementation strategies.
- **Stress Management Coach:** Monitors HRV data and provides personalized meditation and relaxation techniques.
- **Amino Acid Specialist:** Fine-tunes amino acid intake for optimal protein synthesis and metabolic function.
- **Hormone Balancer:** Interprets endocrine markers and suggests lifestyle modifications to optimize hormone levels.
- **Ketosis Expert:** Guides individuals through ketogenic protocols, adjusting macronutrient ratios for optimal results.
- **Microbiome and Gut Specialist:** Microbiome analysis and gut health optimization of test results, dietary logs, symptom trackers

Health Optimization Agents and Their Functions



Multi Agents and integration with MCP access individual data

By leveraging MCP these specialized agents can seamlessly integrate and share insights, creating a unified health optimization strategy. As explored in my previous article "[Model Context Protocol \(MCP\): The USB-C Standard for AI Integration in Software Development](#)" enables secure, standardized communication between diverse AI tools and data sources. This architecture allows for real-time adaptation of health recommendations based on the latest scientific research and individual biomarker data.

Summary and outlook

This story is about my personal journey in trying to get more advanced medical information and using technology to improve health management, especially when specialized care is hard to find.

Right now, there's no way to access Perplexity Spaces directly through the API. You can't get to the uploaded knowledge from books or links to health communities. The sorting features of Perplexity Spaces, like sorting threads and files by topic or project, are only available through the Perplexity interface and not through the API.

To get around this, I'm planning to use the Multi-Agent System [Dust.tt](#) to create a multi-step workflow with MCP. I'll use [Claude Desktop](#) as the client interface. I'm currently developing a MCP Server to connect to specialist DUST agents. You can find the open-source version of the [MCP server on Github](#). Stay tuned for updates!

The screenshot shows a LinkedIn Health Coach AI interface. On the left, a sidebar lists various health-related sections like 'Health Diagnostics Analysis and Rec...', 'Lab Results Analysis and Recommendations', and 'Improving Health Coach AI Prompt'. The main content area is titled 'Recommendations' and includes the following sections:

- 1. Cardiovascular Health Priority:**
 - Implement a Mediterranean-style diet
 - Increase Omega-3 rich foods (fatty fish, chia seeds, flaxseeds)
 - Reduce saturated fat intake
 - Include more fiber-rich foods (aim for 30g daily)
- 2. Supplementation Protocol:**
 - Vitamin D3: 4000 IU daily (to raise levels)
 - Magnesium: 400mg daily (preferably magnesium citrate)
 - Consider plant sterols supplement for cholesterol management
- 3. Lifestyle Modifications:**
 - Maintain regular physical activity: 150 minutes moderate-intensity or 75 minutes high-intensity weekly
 - Include strength training 2-3 times per week
 - Practice stress management techniques
 - Ensure 7-8 hours of quality sleep
- 4. Dietary Focus:**
 - Increase:
 - Fiber-rich foods (legumes, whole grains)
 - Leafy greens and colorful vegetables
 - Healthy fats (olive oil, avocados, nuts)
 - Decrease:
 - Processed foods
 - Added sugars

At the bottom, a message from @HealthCoach says: "Please focus on Keto diet and Cholesterin."

Dust.tt

My favorite German Health Books

- [Blut – Das Geheimnis unseres flüssigen Organs](#) (2016) by Dr. Ulrich Strunz (Audible incl. in membership)
- [Der Schlüssel zur Gesundheit](#) (2016) by Dr. Ulrich Strunz
- [Strategien der Selbstheilung](#) (2016) by Dr. Ulrich Strunz
- [Forever schlank](#) (2016) by Dr. Ulrich Strunz
- [Neue Wege der Heilung: Gesundheit geschieht von innen](#) (2017) by Dr. Ulrich Strunz
- [Lebensenergie: 77 Tipps für ein gesundes Herz](#) (2019) by Dr. Ulrich Strunz
- [Die Amino-Revolution: Der Alters-Code entschlüsselt](#) (2021)
- [Lebensenergie. Das Wunder des Energiestoffwechsels](#) alles über Erschöpfung, Dauermüdigkeit und Fatigue – und wie wir sie bezwingen (2022)
- [Nährstoff-Therapie](#) (2021) by Dr. med. Helena Orfanos-Boeckel
- [Nährstofftherapie – der Praxisleitfaden](#) (2023) by Dr. med. Helena Orfanos-Boeckel
- [Verjüngende Gene](#) (2023) by Prof. Dr. med. Bernd Kleine-Gunk & Bernhard Hobelsberger
- [Der Stoffwechsel-Kompass](#) (2022) by Prof. Dr. Ingo Froböse
- [Der Glukose-Trick – Das Praxisbuch](#) (2023) by Jessie Inchauspé
- [Darm mit Charme](#) (2017) by Giulia Enders

Unlock Your Health Potential with These 10 english speaking Books

Are you looking to enhance your understanding of health, nutrition, and wellness? Here are ten influential books that can guide you on your journey to optimal well-being:

- Breath: The New Science of a Lost Art** (2020) James Astor: Breath turns the conventional wisdom of what we thought we knew about our most basic biological function on its head.
- Wim Hof Method** (2022): The inspired Tummo meditation offers a unique combination of physical strengthening, emotional cleansing. It can help to find inner balance and at the same time prepare the body for extreme conditions.

(5) Build a personalized Health Coach based on the current state of science | LinkedIn

- **The Textbook of Nutrient Therapy** (2024) by Dr. Hertoghe: A comprehensive guide to nutrient therapy for health professionals.
- **The Plant Paradox Cookbook** by Dr. Steven R. Gundry (2018): Offers recipes and dietary advice for managing plant lectins.
- **The Blue Zones Solution** by Dan Buettner (2015): Explores lifestyle and dietary habits from around the world that promote longevity.
- **Blood and Guts: A Short History of Medicine** by Roy Porter (2002): Historical overview of medical practices and discoveries.
- **The End of Illness** by Dr. David Agus (2012): Provides insights into preventing disease through lifestyle choices.
- **The Telomere Effect** by Dr. Elizabeth Blackburn and Dr. Elissa Epel (2017): Discusses how lifestyle can influence telomere health and aging.
- **Lifespan: Why We Age and Why We Don't Have to** by Dr. David Sinclair (2019): Offers strategies for promoting cellular health and longevity.
- **The Metabolism Reset Diet** by Dr. Alan Christianson (2020): A structured approach to improving metabolic health through diet.
- **The Obesity Code** by Dr. Jason Fung (2016): Focuses on understanding and managing metabolic health to combat obesity.
- **The Circadian Code** by Dr. Satchin Panda (2018): Explores the impact of circadian rhythms on overall health and well-being.

These books offer a wealth of knowledge on nutrition, metabolism, longevity, and more. Whether you're a health enthusiast or a professional in the field, they provide valuable insights to enhance your understanding and improve your health.

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Matthias Buchhorn-Roth Author
AI and Cloud Solutions Architect

2mo ...

Thiemo Osterhaus spoke with Dr. helena Orfanos-Boeckel about the complexity of nutration and supplement therapy in this episode:

<https://open.spotify.com/episode/62JUgWIY01PbQk4p7Q40e2?si=47dcbb9b504e9f> ...more



Nährstoffmedizin ist für jeden! mit Dr. Helena Orfanos-Boeckel #38
Create Your Best Self mit Thiemo Osterhaus · Episode

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Matthias Buchhorn-Roth Author
AI and Cloud Solutions Architect

2mo ...

Ralf Bohlmann inspirited me with his Podcast episode: <https://open.spotify.com/episode/0O6iexBZKFSDUjNcHsJgQh?si=40cc1a816a724605>



Mit KI gesund und fit werden?

Beste Version von dir - Podcast · Episode

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Matthias Buchhorn-Roth Author
AI and Cloud Solutions Architect

1mo ...

The frontend with limited features (MVP) is ready: <https://mabu.red>



blood-test-oracle

Lovable Generated Project

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AI and Cloud Solutions Architect

3w ...

Great Podcast to the topic of personal Assistant for everyone. How to educate with chatGPT and Co. <https://youtu.be/9Maf-Tp6UKY?si=dB6Xkk8MKJbsaJ9b>



Künstliche Intelligenz in der Medizin: Chancen, Risiken und der Weg in die Zukunft | Dr. Andre...

In dieser Episode spreche ich mit Dr. Andre Nemat, einem der führenden Experten im Bereich Digitalisierung und...

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Amazing step-by-step write up, and what an inspiration. Thank you **Matthias!** And great result to show.

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Matthias Buchhorn-Roth Author
AI and Cloud Solutions Architect

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Thank you **Denny** for your feedback.

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2mo ...

Matthias thank you for sharing this detailed and comprehensive write up. You nearly can make these processes and workflows into a service. I bet they are people willing to pay for such services ;)

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Ich freue mich sehr darauf

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(edited) 2mo ...

Thank you **Matthias Buchhorn-Roth** for your community efforts and time! We look forward having you and **Alexander Preis** at **#GlobalAIBootcamp** Berlin!

Jan Bathel Susanne Scheerer Reimar M.

...more

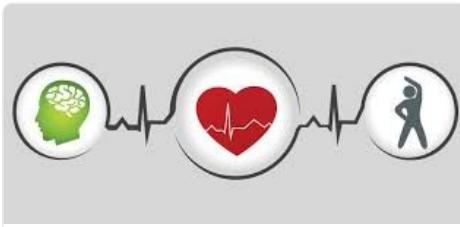
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Matthias Buchhorn-Roth

AI and Cloud Solutions Architect

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