

**Self Directed Age Management Program
Recent Therapies and Highlights**

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Backgrounder <https://www.aginginterventionfoundation.org/JohnnyAdams.pdf>

History going back farther is in part 3 page 23 here:

<https://www.aginginterventionfoundation.org/AgingInterventionProgram.pdf>

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Disclaimer: These are ideas that I use in my own age management program. It's not my intention to provide specific medical advice, but rather to provide others with information to better understand their health. This is not medical advice including diagnosis and treatment. Always seek the advice of a trained health professional for medical advice, diagnosis or treatment.

You may want to read the most recent first by going to the bottom.

Ultimate Objective: Solve the problem of biological aging for open-ended lifespan – healthy of course!

Top interests to serve the objective: Gene therapy, and resetting the epigenome to a more youthful biological age / cellular reprogramming. Then more effective senolytics, remove or inhibit harmful pro-aging factors from blood and tissues, add youth enhancing factors, restore mitochondria function, microbiome, find your personal Achilles heel and fix it, personalized programs, using existing therapies.

Details before August 2022 see page 23 “*PART 3 see **Aging Intervention Program – System, Therapies, Metrics** Current Personal Therapies And Methods I Have Personally Evaluated and Current Personal Program*”

<https://www.aginginterventionfoundation.org/AgingInterventionProgram.pdf>

August 2022

Jardiance to lower glucose. Measured with a continuous glucose monitor to get the right dose

<u>Dose</u>	<u>Mean</u>	<u>Morning Avg</u>	<u>Max</u>	<u>Std Dev</u>
None	107	98	167	12
10 mg	91	81	142	11
12.5 mg	87	75	121	12

Low glucose continued for a while after discontinuing.

Avg for 3 days was 81.5. Later returned to:

None	111	96	167	18
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10mg Jardiance reduced glucose 14.9%

12.5mg Jardiance reduced glucose 18.7%

So started regularly taking Jardiance 12.5mg 5 days a week.

I used the Nutrisense continuous glucose monitor. It often reads 10-15 high, so must be calibrated with a blood test.

I learned one of the nuances of calibrating it is that it's best if you are fasting. I had not been fasting for the blood tests, so although the numbers might be a bit off I believe given the differences they are close enough for an N=1 evaluation.

These are the things you don't know until you actually use a device. Next time I will fast.

Wed Sept 1, 2022 (2022/09/01)

Klotho test results

From KlothoBios, a

Leonhardt Ventures LLC Company

<https://klothoyears.com/order/>

Circulating Soluble α -Klotho Level = 897.4

That's well above the range for men 18-34.9 years. I must be doing something right.

References Values of Soluble α -Klotho Serum Levels

Measured by Enzyme-Linked Immunosorbent Assay (ELISA) in healthy adults aged 18–85. α -Klotho Picograms Per Milliliter (pg/mL)

	Mean	SD	Reference Interval	5 th – 95 th Percentile	
All (n = 346)	813.8	461.2		340.1	1672.5
Men (n = 143)	728.3	412.0		323.4	1541.8
Women (n = 203)	874.0	485.0		385.4	1750.8
18–34.9 years (n = 167)	932.6	575.6		392.6	2291.8
Men (n = 57)	850.9	566.4		341.2	2282.8
Women (n = 110)	975.9	578.3		427.2	2345.5
35–54.9 years (n = 88)	796.7	317.4		330.2	1364.6
Men (n = 41)	733.9	249.6		324.6	1228.3
Women (n = 47)	851.5	360.2		312.6	1420.0
55–85 years (n = 91)	612.1	198.2		235.8	918.6
Men (n = 45)	567.9	192.5		190.4	851.5
Women (n = 46)	655.5	196.2		260.4	934.4

Data are expressed as means, standard deviations (SD), and reference values (5th–95th Percentiles).

<https://www.mdpi.com/2077-0383/11/9/2415>

Mon Sept 12 (2022/09/12) – Began custom probiotic from Floré/SunGenomics

Wed Sept 14-24 (2022/09/14 - 2022/09/24) – Usual Khavinson peptide round.

Fri Sept 16 (2022/09/16) – Began Breathing for Energy (and health) training program. Not yet doing much with it other than watching the videos and a few early breathing exercises, but definitely breathing through the nose more.

Tues Sept 20 (2022/09/20) – Life Extension Research Panel (CBC/Metabolic and Lipid panel + CRP + A1c)

Phenotypic age vs Chronological age **-8.66 years (younger than chron age)**. It's usually lower, but that's what it was on that day.

Had DNAm blood draws.

**Fri Sept 23 (2022/09/23) – Therapeutic plasma exchange (TPE)
2 liters replaced with saline + albumin**

For me, therapeutic plasma exchange (removing 2 liters of plasma and replacing with saline and albumin) produces the best objectively measured and subjective results of any therapy I have ever had.

But the cost is \$6000, the effects I could detect only lasted about 6 weeks (although I'm hoping may have rebuilt some components and produced long lasting results that I couldn't detect).

I expect removing plasma and replacing with carefully screened plasma from individuals in their early 20s will have even better, and more long lasting and permanent results.

Dr Irina Conboy and Dr Michael Conboy did a study on this.

The process

Phillip Milgram MD oversaw the process. Dr Milgram trained with, and was certified under, Dobri Kiproff MD.

An apheresis machine is connected. Two tubes go in the arms. Two liters of blood are removed from one, and while removed it's replaced with saline and cleaned albumin, then back in the other arm.

Takes about 90 min. Not uncomfortable.

I had the best results of any therapy I have ever had – and I've had a lot. As I understand, my body generated new components, like proteins, electrolytes, hormones, cytokines, etc etc.

I did only a brief set of biomarkers, not a full set like in a clinical study. But enough in this case.

I felt weak for about 3 days, then Monday 9/19 stronger so did moderate weight workout. Felt OK but fell asleep early. This is unusual and there was probably some other reason.

For about 4-6 weeks I could consistently remember 10 digits on the Human Benchmark number memory test. Even when distractions were happening. This is exceptional, and a big marginal difference. That eventually decreased to the usual 8 or 9.

Tues Sept 27 (2022/09/27) Life Extension Research Panel (CBC/Metabolic and Lipid panel + CRP + A1c)

Phenotypic age vs Chronological age **-12.65 yr (younger than chron)**

So it reduced almost 4 yr from the previous week

(but baseline was a little less than usual so realistically it may have reduced a little less than that, but still good)

* Tuesday was a very busy day. Still all kinds of problems rebuilding my computer systems and another challenging item popped up late in the day. But had very good stamina.

Then did high intensity interval workout on the elliptical machine.

Achieved new personal best – 119 strides in 25 sec. Normal range is around 99-111. Going all out I felt like I was not tiring, just kept going and going.

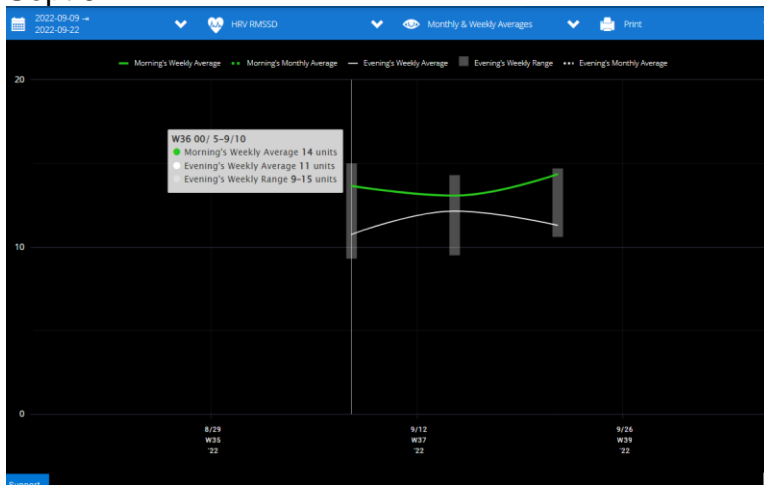
I regained interest in the vigorous physical activities I was active in my late 20s and early 30s.

Drs Irina and Mike Conboy had presented a paper on plasma protein shift toward youth after TPE. I knew two of the subjects in the study and they reported positive effects. I didn't do that test, and took it on faith that my results would be similar.

Clock Foundation DNA methylation results – increased about 1.2 yr. This is within error margin.

Emfit

Sept 9-22



Sept 24-Oct 7



Wed Sept 28 (2022/09/28) Cord plasma infusion 100mL

Fri Sept 30 (2022/09/30) At about 111, exercise stamina/high intensity interval result very good, but lower than Sept 27.

For several days been having very good energy. Been waking up early, around 5 am, can't get back to sleep.

Sat Oct 1 (2022/10/1) when first arose pretty early at about 5:45 AM and kind of tired – Blood pressure 119/84.7 (diastolic unusually high), Human Benchmark reaction time 254.

Oct 4 (2022/10/04) Life Extension Research Panel (CBC/Metabolic and Lipid panel + CRP + A1c), DNAm draws.

Note: For at least the last week extremely busy, arranging shipping, preparing for RAADfest, and rebuilding computer, some conflicts to resolve, kind of stressful. Phenotypic age vs Chronological age **-12.22 yr (younger than chron)**

Phenotypic age vs Chronological age score a littler higher (3.4%) but still pretty good. What was different from last time: Stressful week. CRP higher, which was unexpected as first infusion resulted in inflammation marker reductions.

Oct 5 (2022/10/05) Liquid exosome infusion

Oct 6 (2022/10/06) Resumed Jardiance

Oct 6-9 (2022/10/06/2022 – 2022/10/09) RAADfest. Demanding schedule, I held up well with very good stamina, focus and problem solving.

As of Oct 22 (2022/10/22) Feeling positive subjective effects. Greater interest in the kinds of vigorous activities I participated in when young. But exercise stamina is back to about where it was before TPE.

Will do some more tests soon.

Oct 25 (2022/10/25) Research panel, Oxidized LDL Blood Test, NMR LipoProfile® Blood Test

Began Rosuvastatin 20 mg/day to lower cholesterol.

Nov 1 (2022/11/01) Research panel to verify no out of range liver, kidney etc measures. Not fasting. Phenotypic age calculation -13.83.

Having muscle aches, reducing to 10mg. Will monitor and have blood tests and adjust to find best personal dose.

Nov 8 (2022/11/08) Evaluate rosuvastatin. Started with 20mg/day, reduced to 10 mg/day due to muscle aches and some other effects.

Research panel, Oxidized LDL Blood Test, NMR LipoProfile® Blood Tests.

	Oct 25	Nov 8	
<u>Phenotypic Age</u>	-13.35	-13.74	Getting close to Bill's. Therapeutic plasma exchange seems to be holding
<u>Oxidized LDL</u>	130	99	ng/mL
<u>NMR LipoProfile+Lipids+Graph</u>			
LDL-P	987	511	mmol/L
LDL-C (NIH Calc)	122	96	mg/dL
HDL-C	96	104	mg/dL
Triglycerides	68	48	mg/dL
Cholesterol, Total	230	190	mg/dL
HDL-P (Total)	41.1	41.6	umol/L
Small LDL-P	<90	<90	mmol/L
LDL Size	21.3	21.0	nm
LP-IR Score	<=45	<25	
<u>CBC/metabolic/lipid panel</u>			
Glucose	94	100	Not sure what's up with that It was 91 at the safety check on Oct 31
Triglycerides	70	47	mg/dL
LDL/HDL ratio	1.3	.93	lower is better
T. Chol/HDL Ratio	2.4	2.0	"
Insulin	4.4	4.1	uIU/mL

But there seem to be some negative effects – muscle aches, lower than normal high energy, feeling on edge, less than 100% performance level. Maybe interfered with sleep.

I plan to try a different regimen, reducing rosuvastatin and adding repatha.

Nov 10 (2022/11/10) Took blood, saliva and stool samples for Viome Full Body Intelligence™ Test - Gut Microbiome + Human Cells + Oral Microbiome

<https://www.viome.com/products/full-body-intelligence>

and Floré/SunGenomics microbiome test

<https://flore.com/products/flore-gut-health-test>

Full details on microbiome evaluations appear closer to the end.

Nov 10 (2022/11/10) Began cord plasma derived exosome eyedrops for eye conditions.

Nov 10 to 12 (2022/11/10 - 2022/11/12) Started two day washout. No supplements or age management drugs.

Nov 12 (2022/11/12) Began meditation. Cycling through each day as many days as possible.

- Seated meditation for 10-20 min, qi gong breathing which I have used to increase heart rate variability (HRV). Breathe in for count of 5, hold for 3, exhale for 8.
- Innerbalance device by HeartMath
- Muse headband
- NeoRhythm PEMF headband
- Will continue Sunday Laughter Yoga session. An informal test showed it reduced cortisol somewhat, and subjectively it just lifts my spirits.

Nov 12 (2022/11/12) Began cord plasma derived exosome nasal spray for eye condition, cognitive and general aging.

Nov 12 (2022/11/12) Attended presentation on VSEs. Our west coast group is evaluating them. While showing Eugene Baranov the Human Benchmark cognitive test, I remembered 10 digits on the number memory test. This equals my personal best after using the plasmalogen Prodrone Neuro.

It was surprising as I had a busy day, and driven to San Diego for a meeting.

Though the exosomes were delivered by eyedrops, I suspect it may have something to do with it. (see Nov 10 note)

Nov 12 (2022/11/12)

Ongoing development of gut microbiome program.

Full details appear closer to the end.

See March 2, 2023 (2023/03/02) Microbiome for other methods end results

Per research presented by microbiome scientist Justin Sonnenburg began adding fermented foods (kombucha, kimchi, kefir, sauerkraut, Greek yogurt, ginger, cider, maybe fermented greens but they're expensive) in addition to Floré/SunGenomics custom probiotic.

Began BioGaia Gastrus probiotic with lactobacillus reuteri ATCC PTA 6475 and lactobacillus reuteri DSM 17938. Several years ago I did an experiment with Bill Vaughn. I ordered lactobacillus reuteri 6475 from ATCC and Bill cultured it in yogurt. We did baseline blood tests (simple, CBC/metabolic/lipid panel plus CRP), then ate a couple cups of the yogurt each day for about a month, then followup tests. We didn't have DNA methylation, and didn't think to do inflation or mental or physical tests. differences between the before and after tests did not appear to be. But, years later I put my numbers in the phenotypic age calculator, and found my phenotypic age reduced from -2.02 to -6.71.

Full details appear closer to the end.

Nov 15 (2022/11/15) Mixed umbilical cord plasma nasal spray for cognitive and eye health and therapy. Currently evaluating.

Nov 15 (2022/11/15) Attended lecture at the UC Irvine stem cell research center. Ed Monuki, MD, PhD, and Albert La Spada, MD, PhD. **As a result of their advice I've been drinking much more water and breathing through the nose more** after Dr Monuki advised how important drinking lots of water and nose breathing are for brain cushioning, drainage and other maintenance functions.

Sometime after Nov 12 exosome eyedrops and Nov 15 umbilical cord plasma nasal spray. Tinnitus really started up a lot more, particularly in the right ear. Often more of a piercing sound.

Developed an infection or irritation in the sinuses, felt bad. Began irrigation with waterpik and alternating calcium ascorbate solution, and NeilMed Sinus Relief. Problem went away without further intervention.

Dec 1 (2022/12/1)

Ongoing development of microbiome program. Full details appear closer to the end.

I received microbiome test results for the Floré / SunGenomics probiotic. There was no improvement. I discontinued the probiotic.

Outstanding microbiome scientist Justin Sonnenburg said these commercial tests and probiotics are CRαP (his word). Per his research I've started adding fermented foods (kombucha, kimchi, kefir, sauerkraut, Greek yogurt, ginger, cider, maybe fermented greens but they're expensive) to the diet. Will retest in a few months.

Also taking Biogaia Gastrus which has lactobacillus reuteri 6475.

Full details appear closer to the end.

Dec 14 (2022/12/14) Began Klaire Labs Ther-Biotic Synbiotic Probiotic & a Prebiotic.

Will begin Mercola Biothin Probiotic approx. Dec 17.

Note: as of Dec 17 evaluating these for any side effects and reducing some.

Week of Dec 19 (2022/12/19) Tests in preparation for GDF-11 and klotho injection series. Life Extension Research Panel (CBC/Chem/Lipids/CRP/A1C/Insulin), Zymo DNAm, UCLA IAC Immune Panel, Carotid Intima-Media Thickness Test (CIMT), CNS vital signs, HRV, BP, reaction time, blood pressure.

Dec 20 Starting (2022/012/20) Tuesday early am sore throat, some congestion. Developed into a cold. That day had to do UCLA IAC immune blood draw and deliver samples for shipping etc. Had busy day Friday so instead of powering through and working I stayed in bed almost all of Wed and Thurs. When I went out Thurs afternoon to do a couple quick errands, looking around everything seemed more interesting. It must have been the sensory deprivation. It was telling me more time away from screens and a rest from the relentless Charge to solve aging is needed.

Dec 23 (2022/12/23) Cord plasma infusion

Dec 27 (2022/12/27) Began GDF-11 program under Steve Perry's direction.

<https://gdf11rejuvenation.com/>

Some key biomarkers are slowly trending in the right direction.

HRV increasing, blood pressure decreasing. Lots of dreams, some involve conflict.

Reducing dose to reduce excess REM sleep and increase reaction time.

After getting stable on GDF11 dose plan klotho injections.

Jan 4, 2023 (2023/01/04) Having greater appetite with GDF-11 so eating more and later. Resumed last food at around 6 or 7 pm.

Feb 6, 2023 (2023/02/06) Despite very good general health and good vision – possibly/probably due to athletic and other eye injuries in my early 20s, I have long standing ophthalmic problems.

Today left eye experiencing some problems. Saw ophthalmologist promptly.

Temporarily discontinued GDF11 and vision peptides, and anything that I believe has even a remote chance of contributing to angiogenesis (vessel growth) in the eye which could cause further problems.

GDF-11 Summary of results from 12/27 – 2/3/23

Jan 31, 2023 (2023/01/31) Had started GDF-11 2022/12/27. Some results so far include somewhat improved sleeping heart rate, heart rate variability, lower blood pressure.

Phenotypic age reduced from -9.76 (12/6/22 it was a bit high though) to -13.15 (1/31/23).

1676 pg GDF11 so far. Downregulation process paused.

Biomarker systems: Custom comprehensive spreadsheet developed by Steve Perry to log data and chart results, Emfit <http://www.emfit.com/>, Human Benchmark <https://humanbenchmark.com/>, Omron model BP1450 blood pressure monitor <https://omronhealthcare.com/>. CNS Vital Signs for baseline cognitive. UCLA IAC immune panel.

Occasionally Sznalski tone generator <https://www.szynalski.com/tone-generator/> and Microlife Digital Peak Flow Meter with FEV1 <https://microlifeusa.com/product/respiratory-care/digital-peak-flow-meter/>

The 45 day period shows some positive biomarker changes of:
Levine/Horvath phenotypic age reduced 3.39 years (baseline seemed a bit high though)
HRV up 13.33% from 13 to 15.
Pulse (sleeping) down 7.4% from 67 to 62.
Morning BP Systolic down 2.5% from 118 to 115
Morning BP Diastolic down 3.7% from 80 to 77
Morning Reaction time down 263 to 260, less than expected.
REM sleep up 22.5% from 102 minutes to 125 minutes. Increasing REM sleep is a GDF11 specialty. REM is key for memory, learning and problem solving.

At the beginning while fine tuning dosing I experienced long vivid dreams, often involving a number of people, sometimes confrontational. Not real bad, but not particularly pleasant.

Also near the start experienced waking up around 4:00 AM with difficulty getting back to sleep. Reducing dose improved this.

Increased REM from GDF11 often results in crazy, vivid dreams, but even these have purpose.

Emfit sleep score up 5% from 81 to 85. Top sleep score is 100 and heavily weighted on deep sleep.

Contact me for more details.

Feb 16, 2023 (2023/02/16) Began treatment with retina specialist.

Feb 20, 2023 (2023/02/20) Eating much less, especially limiting sugar. Only healthy foods. Dropped 2 pounds in about a week, 5 in 4 weeks. There seem to be related improvements in Human Benchmark cognitive – number and verbal memory.

Feb 26, 2023 (2023/02/26) Slowing movements and breathing (inhale through the nose), remembering to practice mindfulness - being aware of what doing "in the moment". Examples: pick up an object (car keys, pen, cup etc), feel the texture, weight, contours etc. Slowing down and sensory/taste awareness is especially important while eating. Be aware of surroundings. Stop busy "monkey mind". Seems life is better like that. Yesterday rested and meditated a lot, and a worrisome matter was resolved.

Began daily use of Klaire Labs Ther-Biotic Synbiotic Probiotic and Mercola Biothin Probiotic, along with BioGaia Gastrus.

Feb 27, 2023 (2023/02/27) Began daily Prodrome Neuro 10 drops (approx. 1/2 mL). At bedtime took 1 Prodrome Glia and 3mg melatonin.

Feb 28, 2023 (2023/02/28) Weight is now down to target of 143.4 (this continues later). I'm hungry a lot, but that's OK.

This morning's Human Benchmark reaction time was 258, very very slightly better than usual, but number memory was a very high 10 (like it was after TPE), and word memory was amazing at a score of 101.

Tips of thumbs and two fingertips started getting very sore at the point where dental floss was pressing against them. Typing also caused general soreness. This is bad, and I attribute it to too much CR. Weight around 141.6. starting to eat more. setpoint seems to have been reset.

Mar 28 – went a long while without eating yesterday, weight down to 140.4 – too low.

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Mar 7, 2023 (2023/03/07) Labs.

Last time a second research panel was run by mistake and there were huge differences in marker values. Seems one was not actually mine. So this time I did duplicates and values were close, acceptable variation.

Phenotypic ages -13.91 and -14.21 - younger than chron age.

Mar 8, 2023 (2023/03/08) 100mg dasatinib plus 500 mg optimized quercetin.

Mar 13, 2023 (2023/03/13) Oakvar Longevity Report derived from Nebula genomic analysis arrived. I'm in the 89th percentile of Longevity Genes. Contact me to discuss,

Mar 26, 2023 (2023/03/26) Began acarbose for glucose reduction, and increase mTORC2.

After it ramped up, acarbose reduced my glucose from 116.1 to 107.4 7.5% reduction.

10mg Jardiance had reduced glucose 14.9%
12.5mg Jardiance had reduced glucose 18.7%

Next will use both acarbose and Jardiance.

May 21, 2023 (2023/05/21)

Resumed maintenance dose GDF-11. 10 ag/day

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**June 8, 2023 (2023/06/08) Microbiome
Recap of all microbiome experiments
SUMMARY**

- Following the Viome recommended foods list did not appear to improve gut microbiome profile according to the Viome reports.
- The Sungenomics gut microbiome test returned a score of 41. After using the somewhat expensive Floré/Sungenomics custom probiotic, the re-test score was exactly the same - 41.
- Eating fermented foods (kombucha, kimchi, sauerkraut, kefir, Greek yogurt) throughout the day following much of Justin Sonnenburg PhD recommendations. **Gut microbiome profile improved 27%** according to the Sungenomics microbiome test. 41 to 52, not quite optimal but I'll take the improvement.

As of April 2023

- **Sungenomics gut microbiome score now 67 – all time high.**
Microbiome profile improved another 28.8% beyond the previous score of 52.
- Added daily probiotics (Life Extension FLORASSIST GI with Phage Technology, Klaire Labs Ther-Biotic, Mercola Biothin Probiotic, BioGaia Gastrus), and wildbrine probiotic food on alternate days.
- This is in addition to adding fermented foods to diet – bites of kombucha, kimchi, sauerkraut, kefir, Greek yogurt, wildbrine throughout the day following much of Justin Sonnenburg PhD recommendations.

Contact me for lab reports and other information.

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June 26, 2023 (2023/06/26) HVMN Ketone-IQ

It was a very busy day doing things I had to do, and didn't want to do. Starting to feel like getting some candy or cake or something. Instead drank 1/2 “ketone shot” - the SMALL bottle of HVMN Ketone-IQ. 2 fl oz, 59mL.

The desire for the unhealthy treat subsided so I didn't have any.

June 29, 2023 (2023/06/29) Resuming KLOTHO.

Monitoring glucose with NutriSense CGM.

6/29 .2pg, 6/30 .3pg

August 29, 2023 (2023/08/29) Low cost TPE alternative attempt

Goal: Donate 750mL-1000mL plasma, then have 25 grams of albumin (500 mL of 5% albumin) infused.

NOTE: Albumin solution must be the right osmolarity (total solute concentration within a specific volume of a solvent) otherwise damage to cells will be done.

Best done by compounding pharmacy.

Went to plasma donation center but it was far from home and I do not live in the zip code for which they can accept a donor.

So simply removed 450 mL whole blood before the albumin infusion.

Intended to do an exercise stamina test early that evening. Later late that afternoon took a deep nap (as often do), but when woke up had difficulty getting energized. When eventually jumped on the elliptical machine and started warmup, seemed like the body was clearing things and I should rest so just did about a minute of slow strides.

Next morning Human Benchmark reaction time was 250 ms, about 12 ms faster than usual. Number memory was 8, average. Didn't feel really well or youthful.

Same tests done two days later produced much the same results.

Sept 2, 2023 (2023/09/02) Resuming GDF11 injections

Sept 3, 2023 (2023/09/03) Resuming KLOTHO injections

RAADfest 2023

Attended presentations, offered to help with gene therapy and fundraising.

Purchased from exhibitors and evaluating

BrainTap brain tuning system

AquaTru 4 stage filtration water purifier

Blue Bottle vagus nerve stimulator

Intelligent Threads intelligent sticker sample

60up balance board

Silky Sweet sweetener

Quintessential 3.3 electrolyte and mineral replacement

Dec 8, 2023 (2023/12/08) Felt like coming down with a flu bug.

Took some AlkaSeltzer plus, Airborne, and 5 unit shot of 3000 mcg/mL Thymosin alpha-1. It seemed to help a lot.

Dec 9 12 units of 3000 mcg/mL Thymosin alpha-1 and the others described yesterday.

July 2, 2024 (2024/07/02) Thymosin alpha-1 25 units 3x weekly

After 1-1/2 weeks NLR (neutrophil to lymphocyte ratio) improved 19%, a more robust immune surveillance and reduced inflammation.

After 6 weeks will do NK and other advanced immune markers and compare with baseline.

Currently living in Boca Raton FL working on therapies with the greatest potential for biological age reversal:

- **Reset the epigenome toward youth/cellular reprogramming technology**
Interests include primarily **OSK gene therapy (systemic and targeted organ)**, as well as Engineered Reprogramming Extracellular Vesicles (REVs), Target therapy technologies (3T) for vision, mRNA platform technology, tissue-specific approach to partial cellular reprogramming.
- **Advanced exosomes for systemic age reversal**
- **Therapeutic Plasma Replacement (TPR) – Replace plasma in seniors with thoroughly screened plasma from donors in their early 20s**
- **Therapeutic Plasma Infusion (TPI) – Infuse seniors with thoroughly screened plasma from donors in their early 20s**
and
- **Therapeutic Plasma Exchange (TPE) - Exchange plasma with saline and albumin.**