BIOHACKERS

MAGAZINE

ISSUE 19

BIOHACKING THE NATURAL WAY

EXCLUSIVE INTERVIEW

MARK YOUNG

FOUNDER, CEO OF RYZE AGENCY, A FULL-SERVICE ADVERTISING & MARKETING AGENCY SPECIALIZING IN THE BIOHACKING SPACE

INSTILLING BELIEF: MARKETING HEALTH TO OVERCOME NEGATIVITY

AUTHENTICITY: BIOHACKING BEFORE BRANDING

SCIENCE AND OUR VOICES: IS THERE ENOUGH ROOM AT THE TABLE?

Also In Our December Edition:

- *Ultimate Wellness - Prioritizing the Methodology and Experience*
- *The Nature of Longevity (Or How to Live Longer)*
- *Tapping Into The Power of Your Own Stem Cells*
- *AND MUCH MORE!*

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MESSAGES FROM OUR BIOHACKING TEAM

A LETTER FROM THE EDITOR

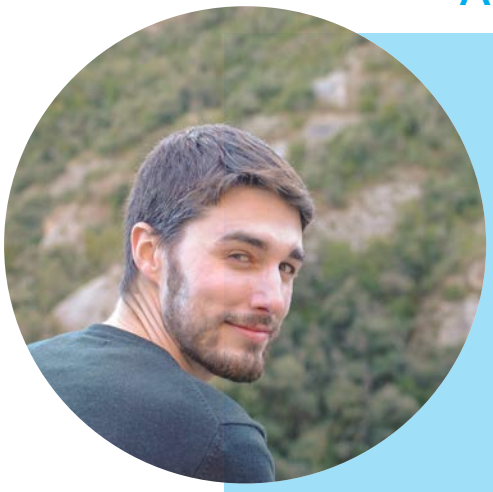
At the end of our lives, do we not all have the will to be able to say that we fully lived our life to the extent of our abilities? In other words, deep down, I believe we all have the desire to leave this world knowing that although we made mistakes and had some pitfalls, we did our absolute best to be the highest level of the person we were made to be. The reason we all have this desire is not a selfish one but in fact an unselfish one. This is simply because when we are optimizing ourselves to function at our premium versions of ourselves, we are in turn providing a stronger, more efficient individual to the benefit of the community as a whole. Then the question arises, how do we know who we are at our maximum level and better yet, how do we reach this upmost level of attainment and fulfillment? The answer can be summed up to one word: Wisdom.

Wisdom is our best friend. It guides us and protects us. It strengthens us and nourishes us. There are many other words for this – Discipline, Knowledge, etc. - but Wisdom is perhaps the word with the most meaning. When humans make it their mission to grow towards something higher, something more transcendent than their baseline selves, they are undertaking the process of acquiring wisdom. Wisdom can be sought many ways - books, orators, experiences. Biohacking in a most fundamental sense is for all intents and purposes an avenue to acquiring wisdom about ourselves both subjectively and objectively, and taking this knowledge to optimize our entire self (soul, mind, & body) for purpose of healthy growth and prosperity. In our forever increasingly busy world full of languishing and slothful distractions, we must continually fight back the urge to give more of our time to these easy, mind-numbing diversions and instead see the present and long-term benefits of allocating our time towards to pursuit of wisdom and optimization, essentially the pursuit of happiness. Prioritize your biohacks and self-growth habits in your life and continue leveling up!

"Having meditated on all this, and having come to the conclusion that immortality resides in kinship with Wisdom, 18.noble contentment in her friendship, inexhaustible riches in her activities, understanding in cultivating her society, and renown in conversing with her, I went all ways, seeking how to get her."

- Wisdom of Solomon Ch.8 , New Jerusalem Bible

About Dallas McClain



Born in the USA, Dallas is a passionate reader of theological and personal development books. He holds a bachelor's degree in Biological Sciences. Teaching English abroad, Dallas has been immersed in various cultures and backgrounds while making friends all over the world. He is a Catholic Christian and enjoys time outdoors while being a tennis enthusiast. He is the Co-founder and Editor of Biohackers Update Magazine. He is currently living in Orlando, Florida with his wife & children, where he enjoys writing, sports, and nature hikes in his free time.

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A MESSAGE FROM COO JEAN FALLACARA

One of the most memorable experiences in my life was being part of a scientific mission underground for 3 weeks.

Yes, you read that right. Living 24h a day for 21 days in a row, without light, in a cave at 1000 Ft under the common mortals favorite playground.

When you want to understand your sensory based and cognitive abilities, nothing could match that experience, not even meditation. When you first turn out the lights, you see nothing, but hear, feel and sense everything that's happening around you.

Put it this way: It's the most dark you're ever going to see. You can't even see your fingers in front of your eyes. Your brain gets completely messed up.

Science says that when people are left in a cave for too long they start to see some lights. That's because their brain needs to supply what it wants.

That spirit of adventure is what made me as I am today, and it is one of the reasons Biohackers Magazine is striving for its mission.

That sense of adventure and wanting to be there, either physically or mentally is probably the biggest tool in the toolbox I want to offer to our community.

Our brain is powerful with over 85 billions neurons and connections. It's the most complex network and we are far from understanding it but Biohacking could bring this world more tools to tap into it and hopefully one day to master it.

Living the Dream…my journey at the magazine.

About Jean Fallacara

Known as Cyborggainz, born in France, Jean is an athlete, entrepreneur, scientist, public speaker and an Art collector. He is the founder and CEO of CyborgMedia, the Managing Director at inTEST Corporation and the COO of Biohackers Update Magazine. He is also the author of "Neuroscience Calisthenics: Hijack your Body Clock." Jean holds a bachelor's degree in biochemistry, a master's degree in immunology and genetics, and an engineering degree in biotechnology. He has also studied neurosciences and brain functionalities, and law and finances. Jean recently graduated from the MIT in XR-VR-MR. He is currently living in between Boston and Montreal after his biotech company was acquired by inTEST Corp (NYSE:INTT) in October 2021.

Website: jeanfallacara.com / Website: cyborggainz.com

ARJUN'S STATEMENT

ध्यायतो विषयान्पुंसः सङ्गस्तेषूपजायते।
सङ्गात्संजायते कामः कामात्क्रोधोऽभिजायते॥
~Bhagwat Gita

The verse was written somewhere between 1st and 2nd century. The translation of this verse explains the cause of mental health problems in the current world. It explains how we lose control and why we get agitated about things that don't even matter.

You are free to find a translation online, my interpretation is this: when we dwell on thoughts about something or someone and spend time thinking, we tend to develop attachments.

Attachments give rise to desire, which is the root cause of many, many negative emotions.

Attachment and desire are good in some cases such as keeping us tethered to this reality and desire can be a great motivation in life. In the form of thoughts, it can be dangerous. Thoughts have a habit of dwelling in the mind and swirling around. Thoughts without actions can be poison, causing much more complex mental health issues.

It is the way our modern society has been set up where we have a lot of time to think, most jobs require us to think, and we are trained to think. So, what happens when you are not at your job? Your brain is not a machine that can be turned off, it will keep working whether you want it to or not.

We need thoughts to leave our minds, we want them to manifest into actions or words. Some ways that can happen are when we move our bodies, when we talk to people or when we write them down.

Once you bring your thoughts to life, you will realize how stupid or meaningless it was to worry about them.

About Arjun Chauhan

Born in India, Arjun is the master of all trades, the Chief Marketing Officer of Biohackers Update Magazine and a soccer enthusiast. He holds a bachelor's in commerce and a Master's in Business administration, specializing in marketing and human resources. He has 6 years of experience in Content Marketing and is always looking forward to gaining more from life. With a passion towards nature, he is currently in the Foothills of Himalayas, in the northern part of India.

“We are all connected; To each other, biologically. To the earth, chemically. To the rest of the universe atomically.”

— Neil DeGrasse Tyson

OUTER

CIRCADIAN BIOHACKING

Make Biohacking Easier for Yourself by Following Nature's Circadian Rhythms.

The seasons and nature's healthy rhythms are part of nature's treasury that shows us the ultimate path towards creating a healthier, happier and more meaningful life. Can we as biohackers learn something from nature to optimize our body and mind?

Health by nature

The last 3 years I have been studying how nature can affect the health of the human body with my mentor Paul Espen Wanvig (Ref. 1), as we all come from nature. (Darwins theory)

What can then be more important than looking back and learning what we can do to optimize our health through nature? By following the rhythm of nature we can become more in sync with our true origin.

Can humans really be the most intelligent species on earth when we are
the species that lives least in harmony with nature?

The more I read research on how important nature is for our health, the more disturbed I become by how far we are getting away from nature in modern society.

It is undoubtedly good for us to be in nature, move in nature, move our gaze in nature, listen to the sounds of nature, grow food, dig in the soil, eat food in its pure form and treat nature with respect.

It worries me that we sit more and more with our faces down to screens, eat industrialized food with content that we could never prepare in our own kitchens, have our circadian rhythm disrupted by false light, have a deficient diet, pollute nature, air and sea and treat disease with medication without talking about natural ways to strengthen our health.

I think it goes too far in the wrong direction, in many directions.

When I think of neuroreflexology, which is the subject I practice, where you can stimulate nerve endings in the surface of the skin to influence the body's various functions via the nervous system, it is completely crazy that there is not more utilization of it. You therefore have the opportunity to restore balance and strengthen the body's functions by pressing on a certain area. Why don't we take nature's mechanisms more seriously?

We can strengthen the body's physical and psychological immune defenses by being in nature. Just breathing in a forest gives us increased activity in the NK cells that fight cancer cells, bacteria and viruses! We should make more arrangements for the population so that they can spend more time in nature.

If you take the time to take a long weekend at the cabin without a clock, PC, mobile phone, TV, artificial light and just be present and enjoy the wonderful silence, calm and balance you are offered, you will be able to experience the wonderful harmonious interaction between forests, mountains, animals, day and night rhythms and all the elements.

The problem is that it is so incredibly difficult to experience this condition in everyday life without us making an active effort ourselves.

Within biohacking there is a lot you can do to optimize your health, some hacks can be easy to introduce into your everyday life while others are more difficult to change your habits.

But by following the circadian rhythms, this process will go easier, it is also a way to better health and get more in tune with the rhythms of nature, not only in a 24 hour cycle but also for 1 week and a year.

Rhythms, 24 hour, week and annual.

I chose my name on Instagram, biohcker.viking because I work based on the way they thought before modern humans with their phones and PCs existed.

What they had to deal with was nature, celebrating the transitions in nature through the different seasons, and where they lived their lives according to the rhythms of the day, without artificial light.

Where today we have the choice to be in full activity around the clock because we have artificial light and can communicate via mobile phone or internet.

The Vikings had no choice and had to live their lives according to the rhythms of the day and the seasons.

Here in Norway, where I live, we are lucky to have great variations throughout the seasons, it is the same throughout the Nordics and North America.

Circadian rhythms refer to a 24 hour cycle. But I also like to extend this to apply for a one-year cycle and a week cycle.

Here is a definition of what rhythm is:

Rhythm generally means a "movement marked by the regulated succession of strong and weak elements, or of opposite or different conditions".

Different conditions are something we can see in nature throughout the year in the different seasons

Winter, spring, summer and autumn.

If we compare this to circadian rhythms, winter will be night, morning spring, day summer and evening autumn.

Circadian: A term derived from

the Latin phrase "***circa diem***," meaning "about a day"; refers to biological variations or rhythms with a cycle of approximately 24 hours.

Circannual: A term derived from the Latin phrase "***circa annual***," meaning
"about one year."; refers to biological variations or rhythms with a cycle of approximately
one year.

Which qualities can we make use of through the seasons and the circadian rhythm?

Winter/Weekend/Night: the time for rest and regeneration.
As in nature, all plants are also in rest mode to gather strength for a new season.
Spring/Monday/Morning: the time when the light returns and we get ready for a new day.
Here is the time to make plans for the coming summer/day
Nature also comes to life with the green color of plants and trees
Summer/Tuesday to Thursday/ Day: the time to put the plans into action
Nature is blooming and in full activity
Autumn/Friday/Evening: the time to let go of what we don't want to take with us further.
And as in nature harvest of what we made during the summer.
When we look at nature through the seasons, they are perhaps how we should try to live our lives, through a balanced style of life throughout the year, week and day.
As one of the top athletes I treated said, "If you want to train a lot, you need to rest a lot."
What separates the best from the second best is often that the best are best at resting when they need to rest. It will also give them a better quality of the training session afterwards.

Try it out for yourself and experience the change.

Where to start?

Changing your routine can be hard in the beginning.

It is completely impossible to not notice any change if you try this out for at least 90 days.

Changing routines can be difficult at first but the most important thing is to start.

And try as best you can to have continuity over time to notice the effect of such a rhythm.

Based on my experiences, it is completely impossible not to notice any difference if you are more in nature every day for at least 90 days.

To help you maximize your health and feel your best, consider adopting these seven habits that help you live in sync with your natural circadian rhythm.

Go Outside In The Morning.

Spend time in the early morning hours in the sunlight. If the weather does not permit spending time outdoors, invest in a high-quality light therapy box, and use it while getting ready in the morning. Allowing the light to enter your eyes in the early morning sends the appropriate signal to your brain to help set your circadian rhythm." This can help with everything from mood and energy levels to even better sleep at night, as exposure to sunlight boosts levels of serotonin, the neurotransmitter associated with good mood. Your routine for good sleep starts in the morning.

Take A Siesta.

If you've ever experienced the afternoon slump — and let's be honest, who hasn't? — you know that there is a lull in our energy levels in the afternoon. This is part of our natural circadian rhythm, and a short slumber might actually be in line with what our body needs during that time. A brief siesta (less than 30-40 mins) can be helpful to help the body keep to its natural time clock.

Eat Within An Eight-To-Ten Hour Period.

Recent research has found that eating between an eight-to-ten-hour window can help get our body in sync with our natural circadian rhythms. "The body starts shifting from energy production in the day to storage and restorative function at night. Eating this way gives the body the 12 to 14 hours it needs to focus all of its resources on restoring and repairing." Eating earlier in the day is also aligned with your body's natural clock, as blood sugar control is actually better in the morning, along with digestion.

Avoid Electronics Before Bed.

As the sun sets, begin to dim the lights in your house preparing for the darkness of night. Turn off all lights for bedtime and avoid blue light (TV, cell phones, screens, etc.) for one hour before bed." Electronics can mess with your body's natural circadian rhythm by suppressing melatonin production, the hormone that influences your body's natural clock and helps you get to sleep. It is a well known biohacker tip to use blue blocker glasses.

Make Sure Your Bedroom Is Dark & Cool At Night.

Creating a good environment for sleep can also help you remain in sync with your natural circadian rhythm. The body starts producing its major sleep hormone, melatonin about 9 p.m. and wraps up production about 7:30 a.m. Creating an environment that contributes to the optimal production of melatonin can go a long way to ensuring that you get the recommended seven to eight hours of restorative sleep." Keeping your room dark is important, as light suppresses production of melatonin. Set your room to a temperature between 60 and 67 degrees to create a drop in temperature in your body, which can help to naturally induce sleep.

Stick To A Regular Sleep Schedule

It can be hard to stick to a regular bedtime when your schedule is constantly changing, but it's important to aim for the same bedtime and morning wake time to keep your body clock regular. Research suggests that establishing and maintaining a healthy routine seven days a week may be better than having to compensate over the weekend. For example, having an erratic sleep schedule during the week and sleeping heavily over the weekend often leaves you feeling more jet lagged than refreshed.

Spend time in nature

Take some time every so often to go on a camping getaway. "It seems that one weekend of camping may be enough to reset your circadian rhythm. Several small observational studies by the University of Colorado suggest that a weekend of sleeping under the stars — without the impact of all that artificial light interference — may actually impact the secretion of our melatonin and help us to fall asleep earlier even after the camping trip."

Engaging in these habits can help regulate your body's circadian rhythm and improve everything from your mood to how well you sleep.

Best systems to track and see how your habits affect you.

The best systems I have come across is HRV measurements by using Autonom Health (ref. 5)

HeartRateVariability (HRV) shows the adaptability of an organism and is therefore a measure for health. A variable heartbeat indicates a good health status, whereas a constant pulse should be seen as a warning sign. Measuring the heart rate for 24-hours uncovers fine differences of the heart frequency pattern.

By this system you can easily see how your change in lifestyle affects your health and sleep.

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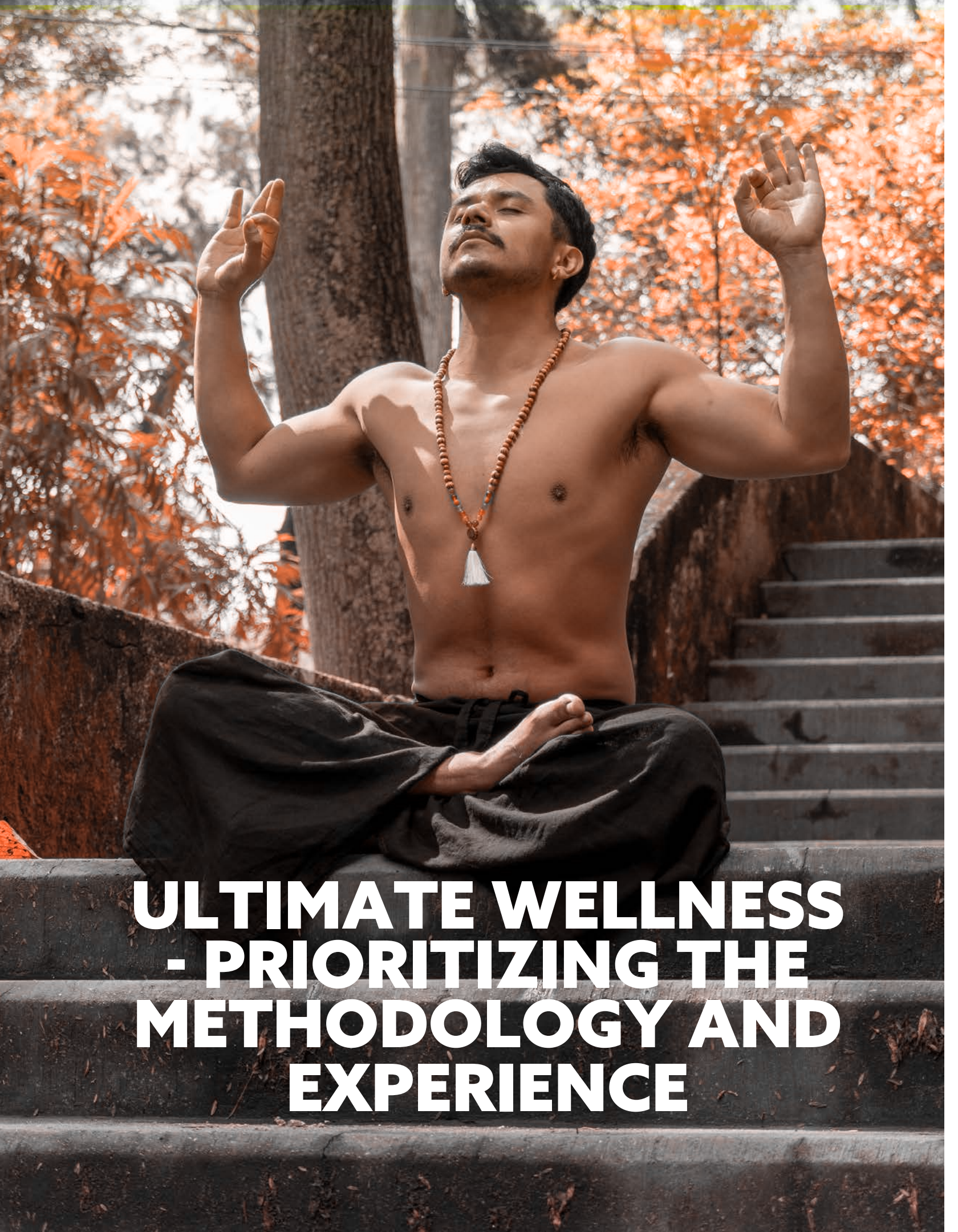
About
Bjørnar Strendo

Bjornar Strendo is a Norwegian biohacker, viking, triathlete, helicopter pilot and NeuroReflexologist. For the last 10 years he has been running his own clinic as a NeuroReflexologist and has dedicated much time in learning as much as he can about how to optimize health both for himself and others.

He also focuses on triathlons and how to optimize his or others performance before, during and after the race. Bjørnar uses a lot of time learning about the importance of the spiritual aspect of life and in biohacking, like meditation and nature's effect on humans.

IG: biohacking.viking



ULTIMATE WELLNESS - PRIORITIZING THE METHODOLOGY AND EXPERIENCE

What is Wellness and Optimal Health?

I believe that our body is designed perfectly and has its own inner healing intelligence to heal itself. And our Health and Wellness is a measurable and manageable project.

There is constant communication between brain and body within:

- blood - travels hormones, nutrients and trace elements
- somatic and autonomic nervous system - brings intelligence to the body, and each cell
- chi energy - constantly travels through the body

The purpose of this communication is to function at 100%.

So if we accept the tenet that our body does not need to be taught how to function, and 100% functionality is normal, we can understand that in an ideal world the body would be in the state of homeostasis - the condition of optimal functioning, with no symptoms.

However, we do not live in an ideal world, we live in a world full of mental stress, toxins, pollution, and unhealthy lifestyle habits. We deal with different kinds of stressors daily. And the root cause of all disease is genetic potential exposed to internal and external stressors. Chronic influence of any stressors leads to malfunction and disease.

I offer a holistic approach for identifying and removing stressors which contribute to dysfunctions in different systems with well selected labs. I help to identify healing opportunities and suggest applying ultimate wellness principles on a daily basis to coach up Vital Reserve and stay in Balance.

Why start now?

No symptoms does not mean you are healthy. In general if someone has any symptoms like fatigue, low energy, insomnia, weightgain or low sex drive,... they manage symptoms until they feel fine.

Managing symptoms does nothing for building a healthy foundation, strong immune system, hormone system balance and other systems balance. In some time symptoms can come back and worsen.

Then people feel the need for instance to drink more coffee, take more pills, in order to feel well again. Then they get diagnoses based on their symptoms and treat them, still doing nothing to coach up vital reserves and functioning.

Our health is our responsibility. We have a choice - self care model which I offer or disease care model which conventional medicine offers. If you choose a self care model, you should start following personalized holistic wellness protocol on a daily basis for preventing disease.

Bank account

I want us to consider that our body is like a bank account, and your individual currency of the body is energy. Your individual body systems are spending money to work at 100%. And in a perfect world the bank account has enough money to support that. But as I said we don't live in a perfect world.

So sometimes we pay unexpected bills that the body doesn't have in the budget, and money in the account starts to run low and we can't cover all the bills that are coming in.

Symptoms are like alerts, but it can't actually tell us who is over spending. It can only tell you that the bank account is in trouble.

So my method as an FDN practitioner is to add money to the body's bank account through 5 pillars of a truly healthy lifestyle - Diet, Rest, Exercising, Stress Reduction and Supplementation. And we trust that once the body has enough money it will know where to allocate funds to address the malfunction.

Focusing on one or two pillars is not enough to help the body move from a state of malfunction to normal function. I suggest a complete system which addresses each tissue and organ simultaneously and far outperform treating something specifically.

It is a way that allows you to heal yourself, which you can apply to any health conditions and symptoms. It's customizable according to your individual metabolic fingerprint so it takes out the guesswork but yet the roadmap is always the same.

Spirit - Emotional - Mind - Body connection

The methodology takes under consideration Spirit - Emotional - Mind - Body connection. I would like to emphasize that I consider angst stress one of the strongest and I believe that any disease starts in the energy body. So total recovery is possible if we overcome emotional trauma meaning disbalances in our energy body.

In a few decades scientists have gone from conviction to absolute certainty that the energy field around the human body and the planet exists - and can be communicated with through frequencies.

Frequencies are the language of cell communication, the key that opens connections and functions in the body. Humanity has always had inner knowing of the power of frequencies or energy to heal.

Sensitive instruments that can detect the minute energy field around the human body have been developed during the last decades. And now we know that every disease, illness and state of health has a specific frequency.

It's the frequency that we can communicate with and interact with. Frequency therapy is non invasive, drug-free, and pain-free. It can now take its place in clinical

medicine and wellness, revolutionizing healing.

I am a Functional Diagnostic Nutrition Practitioner and Pranic Healer. Pranic Healing developed by Master Choa Kok Sui, presents a unique approach used to treat a variety of ailments, from fever to heart conditions to cancer by tapping into pranic or "ki" (chi) energy - the universal force which is our life force.

I consider this technique and knowledge on how to clean and energize our etheric body (internal aura) and chakras as one of the puzzles in the holistic approach to our health and wellness.

Biohacking Market

Practicing Biohacking for myself for up to 10 years, and being the co-founder of BiohackingCongress for more than 4 years, I had issues finding a methodology which includes comprehensive measurement and offers a holistic wellness protocol.

Many health experts and coaches do not explain that the human body is a holistic system. They often concentrate on one specific pillar for health optimisation such as diet or exercising but it is not enough. Or they promote some specific product which they want to sell, or some specific tests without interpretation and guidance.

There are a lot of general recommendations for a healthy lifestyle on different open sources but very often people can get lost or follow those recommendations which sound logical but do not fit to their current condition or individual metabolic typing.

For instance, some dietitian nutritionists can recommend eating leafy green vegetables which is good in general but a person can have a sensitivity to some specific vegetables which causes inflammation and immune system dysfunction or imbalances.

Damage from Food Sensitivity includes: Blunting the Brush Border; Microvilli's ability to secrete enzymes (lactase and sucrase) thus impaired; Impairs the ability to break down sugars; Enzymes that activate pancreatic enzymes are also impaired. Symptoms may be delayed for many hours after ingestion, or a person may have no noticeable symptoms. That is why in my holistic approach one of the obvious lab tests is the Blood MRT test for Food Sensitivities.

Moreover, every food and nutrient not only supplies us with genetically required nutrition, but has a stimulatory or inhibitory effect, on one side or another, of one or more of the Fundamental Homeostasis Controls (FHCs).

Therefore the ultimate effect of a food or nutrient on the body is not dependent on the intrinsic value of the food or nutrient itself. The ultimate effect depends on the impact of the food or nutrient on the FHCs.

There are trillions of biochemical reactions that take place daily, a billion methylation processes every moment we are alive, as part of the innumerable life-supporting processes of metabolism. They occur neither independently nor without the direction of Fundamental Homeostatic Controls.

Therefore, the potential for sufficient adaptation to stressors, continual homeostatic balance, and thereby good health is a measure of the body's ability to manage stressors (spiritual, mental, emotional, structural, biochemical, environmental) through its capacity for the creation, maintenance, and control of energy via the dualistic, diphasic, Fundamental Homeostatic Control Processes / Mechanisms.

Metabolic typing involves the evaluation of interrelationships among Fundamental Homeostatic Controls - the autonomic nervous system, the oxidative system, and 7 additional physiological parameters that influence body chemistry. They are described in the book "The Metabolic Typing Diet" by William Wolcott.

Food can be: stimulating or sedating; acidifying or alkalizing. So I consider diet to be the number one epigenetic influence. And to identify the right food for the individual genetic requirements, it is important to run an online Metabolic Typing test, so I do this with my clients. Following general recommendations like - eat whole foods, be aware while eating, is good but it is not enough.

Another example: some general recommendations for Exercising. Yes, in general moderate exercise a few times per week is important for many reasons, and it is beneficial to one's health to have a daily moving regimen, from joint flexibility to having a healthy heart to reducing depression, and overall health.

However, according to my methodology, different levels of intensity for exercising can be recommended on different levels

of progression on The Hypothalamic-Pituitary-Adrenal Axis (HPA Axis) dysfunction and Cortisol dysregulation.

If the client is in the Exhaustion phase, and has a goal to build mussels, I would recommend not doing it on the current stage, and prioritizing other pillars such as Rest, Stress reduction. It is one of the many reasons why I do not guess - I assess.

Ultimate Wellness events in Faena Hotel Miami

For educational purposes I host a series of Ultimate Wellness events in Tierra Santa Healing House in Faena Hotel Miami. We host this event every other month on the second Friday of the month. You are welcome to join for Your Entire System Reset - Holistic Wellness Protocol with Meditation, Movement, and Biohacking Technologies.

This event will change your mindset and understanding of Wellness and your Health Optimization. You will learn what are the root causes of all imbalances and dysfunctions in your body, how to measure your health, and create an individualized holistic wellness protocol for getting well and staying well naturally, including Diet, Rest, Exercising, Stress reduction, Supplementation.

One more reason to attend is the opportunity to nurture your community. Biohackers consider it one of the most effective ways to increase longevity and prevent illness. This health and wellness meetup gives you the opportunity to connect with like-minded humans who can relate to the healthy journey you are on. Even if you experienced some tough situations during the work day, you can come there, do the meditation with NuCalm and be there with that energy flow, so you can start to be recharged to another state of mind.

Sneak Peak of the Event Sessions

This will be a series of events. And in January it'll be the second event from this series. It's structured with more experiences than sales pitches and combining products with experience. We usually start with some meditation and breathwork. This time we'll start meditation, with NuCalm, a guided meditation device with sound. At the event we explain how we can reduce stress because everything is about reducing stress. Then we hear from some amazing experts on energy healing and experience a device called Healy, which helps to balance the energy body and system of our body through balancing chakras, because our chakras can become congested or depleted.

I'll then explain how we can assess, and how we can create personalized holistic wellness protocols for yourself, which includes diet, rest, exercising, stress reduction and supplementation. We also will have a Q and A session.

I actually teach people how to assess and feel their body and understand what works for them and what doesn't work? I believe education is very important. When I started my biohacking journey, I didn't have such holistic information and selected labs for measurement. I needed to do my own research on how to measure my hormone balance and what I should measure more than hormone balance. Now, I have this methodology as I'm a certified Functional Diagnostic Nutrition practitioner.

There also will be a movement session for Rewiring Your Physical Patterns with Jacqueline Willms, posture and empowerment coach. She's an amazing expert on how to move your body properly to avoid any pain and to balance your body. This session will change your mindset on everyday posture and movement. Our guests will learn movements which they can practice on a daily basis.

We also will have a very interesting session with the founder of the first biohacking skincare company Young Goose. Amitay will tell us about the connection between our skin health and mental health. In particular he will explain in detail what happens to our skin under stress. Our guests will have a chance to experience one of Young Goose's innovations - HRV Body Treatment, which is designed to soothe stress with aromatherapeutic botanicals and adaptogens during mindful meditation with Terahertz Wand by AntiAgingBed. As well as explore more biohacking products and devices such as Anti Aging Bed Cover, an at-home solution, patented sleep technology that fully grounds you while sleeping.

My purpose is to teach people how to manage their health and how to reduce stress to achieve optimal health. This is also the purpose of this event. So this is about education, but I don't want to structure this event with people just sitting and listening to some lectures. I structure the event with more experiences and practical tips so they can implement it in their lives.

Why Faena Hotel?
The Faenas hotel is a world class cultural center, the fanciest hotel in Miami, and they have the Tierra Santa Healing House - SPA, where we are hosting the event. SPA Director Agustina Caminos has created an amazing atmosphere and energy flow there. And the most important reason for choosing this space for the Ultimate Wellness Event is that they emphasize a healthy spirit. Usually people say mind, body, spirit, and emotional connections. But here we put Spirit at the top. We are all souls, and then we are bodies; I don't like to say that I am hungry, I'd rather say that my body's hungry. The Faena atmosphere fosters the supreme environment for prioritizing spiritual health and well being.

Upcoming Ultimate Wellness event will be on Jan 13, 5:30 - 9:30 pm. Tickets are limited, hurry up to RSVP by this link https://www.smila.club/ We host this event every other month, second friday of the month.

Smila

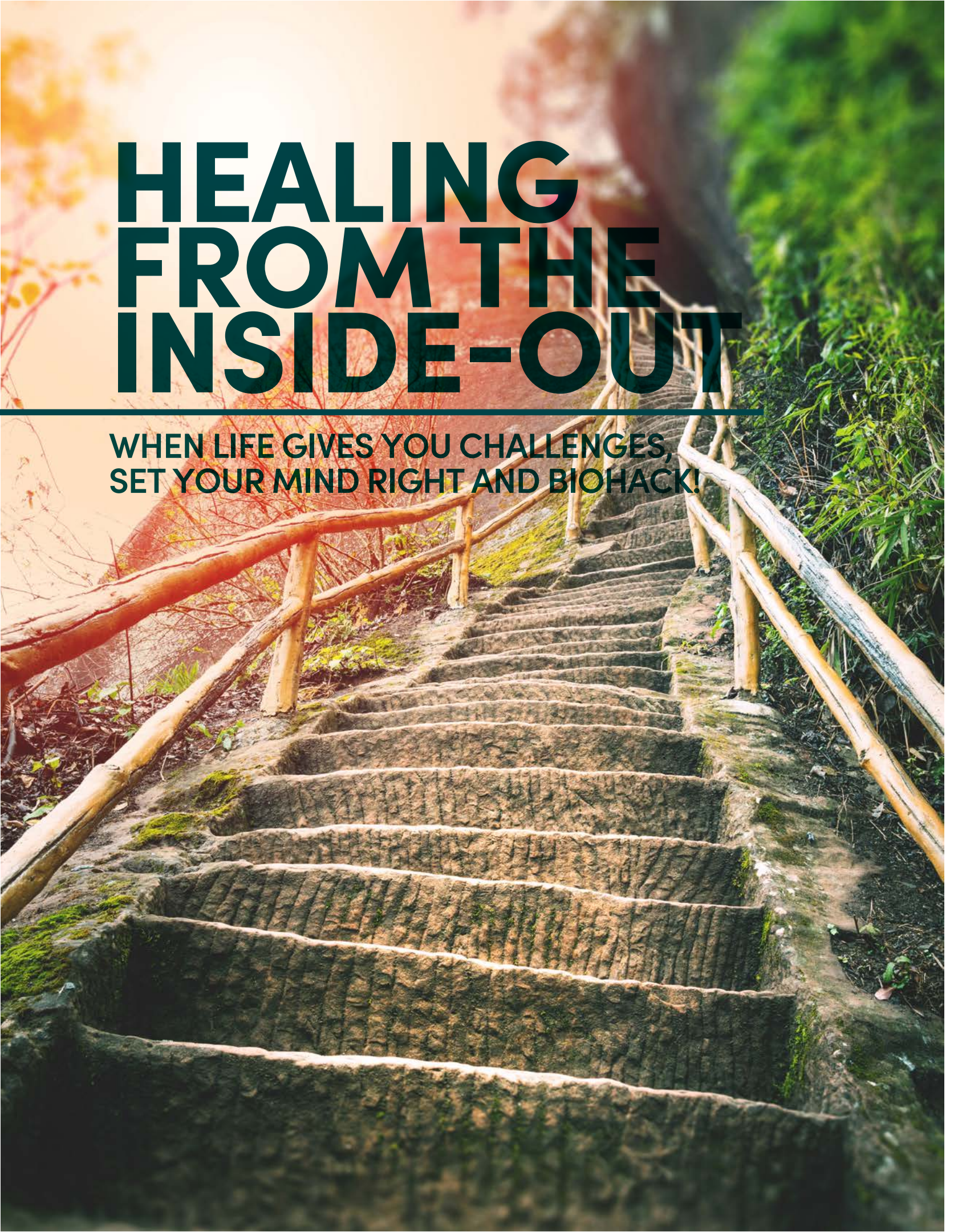
About Julia Smila

Julia is a Wellness Expert, Biohacker, Pranic Healer and Functional Diagnostic Nutrition Practitioner. She is passionate about Transcendental Meditation and has been practicing for over 10 years. Julia's purpose is to teach people how to manage their own health and wellness to prevent disease through stress reduction. She teaches how to assess, feel, and understand your own body.

Julia is the co-founder of BiohackingCongress, the platform dedicated to promote Health Optimization and Longevity. It is the community of top health experts and founders of the best health products and technologies in the Biohacking market.

Julia is driven to breakthrough with a harmonious combination of innovative HealthTech, BioTech solutions and the capability of the human body to promote people's health-span, and well-being.

Website: smila.club
IG: Julia Smila



HEALING FROM THE INSIDE-OUT

WHEN LIFE GIVES YOU CHALLENGES, SET YOUR MIND RIGHT AND BIOHACK!

"Metamorphosis begins with unblocking. This is the next step, to rebuild structure" - Frances Fuller

Who am I? How did I get here?" I remember vividly these questions running through my mind during turbulent periods of my life. Tests and challenges I was not expecting, that ultimately brought me great wisdom. Now, reflecting on my experiences, I believe it was all a miracle I needed for growth. Just as the caterpillar goes through a major transformation before it can fly.

Since the age of thirteen, I was a chronic patient with numerous hospitalizations that required intensive rehabilitation, for the mind and body. I've since learned that the trauma we experience in our youth can be stored in our bodies. The things we don't want to say out loud, which we hold deep down inside, all become embedded within our tissues, affecting us in a way we aren't always conscious of. My trauma manifested into Crohn's disease, and from the medications, I later developed pseudo psoriasis, RA, Reynauds, Osteopenia, and anemia.

These diseases are the easy ones to list because they are physical. The hard ones to say out loud are depression and isolation with a racing mind. It's a disease we can't see and don't always know how to heal or explain to others.

After having children, I was inspired to be healthier for them, and I found my path as a biohacker. I opened my clinic in Tampa, Florida, and changed my path from a medical degree to a Doctorate of Physical Therapy degree. It doesn't stop there, for I am also now a certified Yoga instructor, personal trainer, Neubie Practitioner, Master Dry needler, Graston Technique, Sound Healer, and Mentor – to name a few.

We always know as practitioners the learning journey is never over, so I recently opened a continuing education school for other healers to learn the latest biohacking ways. It is important to attack the root cause from the inside out, which almost always starts in the mind. Broken bones are real as well as typical accidents and we have the tools and modalities to speed up recovery, usually four times faster than traditional clinics.

These are the methods I used to heal myself:

1. Yoga, Sound Therapy, and Meditation
2. Natural Medicines - Marijuana, Nootropics, and Superfood Nutrition
3. Neubie Machine from Neufit - healing and regenerating the body through the Neuromuscular system
4. Salt cave and sauna to heal skin irritation from medications. - Salt therapy, or halotherapy, is so magical for the integumentary system as well as the pulmonary. I have so many posts from Covid patients that swear by halotherapy after almost everything they tried didn't heal their cough.
5. The brain tap headset - which is my current and still favorite device! The mind is a beautiful thing, but can often also be the worst enemy. With this, you can simply shift into a delta or low beta, which is a meditative state for peace and healing. Whatever

it is you're seeking, to stimulate concentration and focus, help with deep sleep, and relaxation this device can help get you there in a safe and effective modality for the family.

6. Traction and vibration therapy is beneficial and effective for pinched nerves and herniated discs, and can help prevent surgery.

I believe living a healthy lifestyle begins with maintaining a strong and fit mind.

Most often, you cannot cut the problem out or prescribe a pill to make it go away. You need therapy from the inside out to treat the root causes. My main goal is to give my clients the ability to do anything as I have done to myself.

My patients call me a force multiplier because I host internships, volunteers, and now CEUs. After all, I need to be part of the bigger picture.

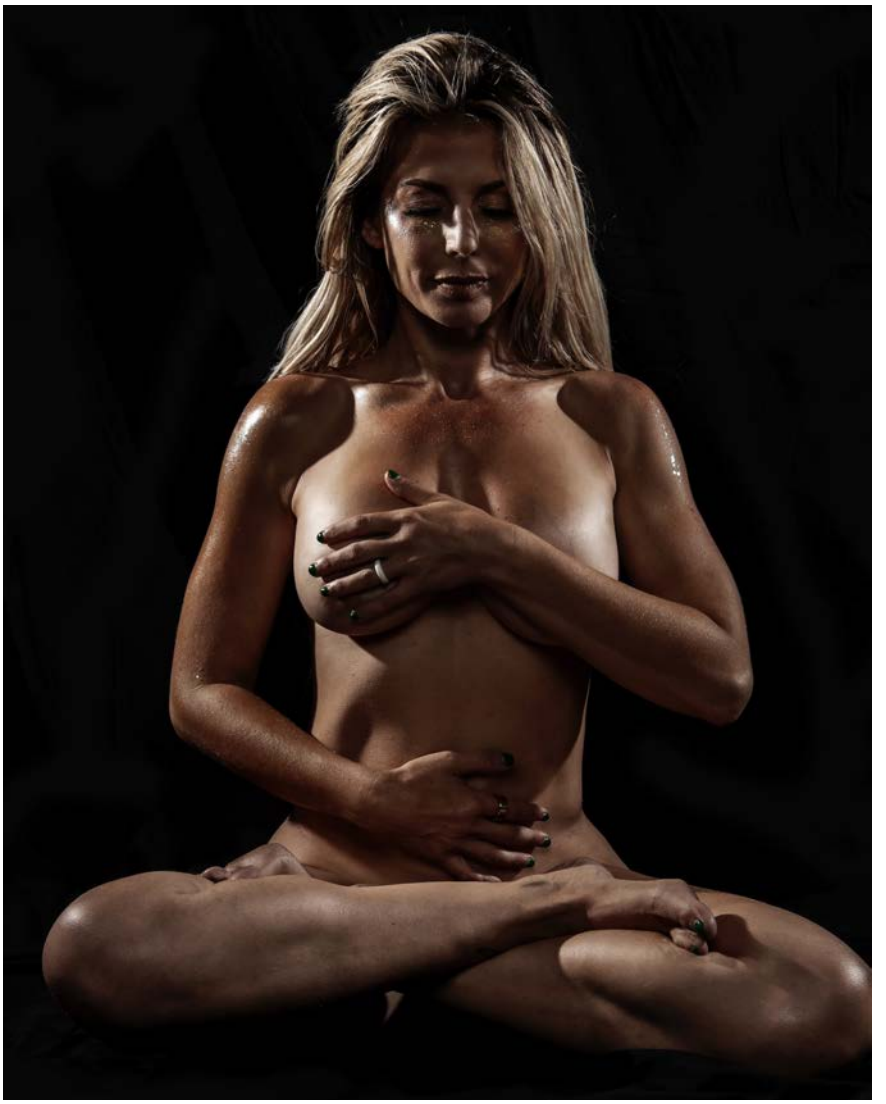
My dream is to support these holistic methods to become known and used, and be a quality standard set up in therapy clinics. It's my goal on this Earth for everyone to feel free... in body, mind, and spirit. I hope people are never to be defined by a diagnosis, and can use the medical community as a guide but not necessarily the final say or diagnosis.

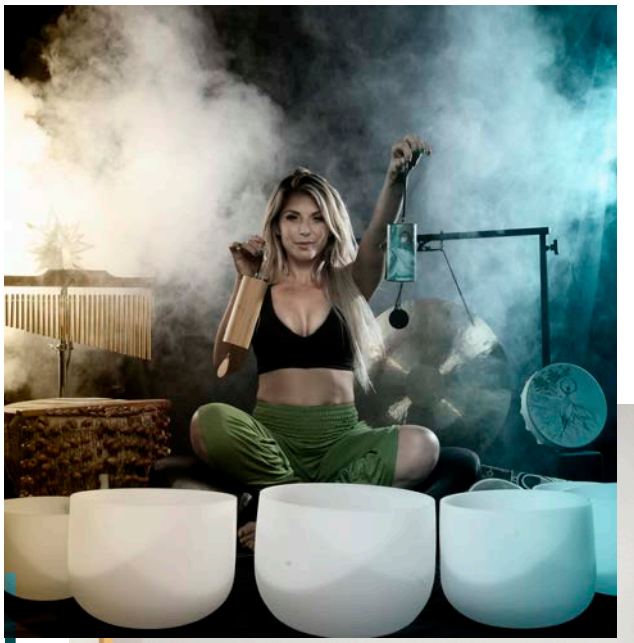
You can break any pattern, you just have to have the desire and implement action. I was hospitalized for nine months, lost the feeling in my left arm, received a colostomy, reversed the colostomy, and became stronger than ever. This is life, and my challenges don't define or cripple me.

I experienced a T-boned car accident that herniated my cervical and lumbar spine. The following year someone front-ended my back in the car while I was taking something out resulting in MCL tears, medial meiosis, and both labrum and glut medius.

The challenges in life will never be over, but how you rise above them is what matters. The hospital also killed my mother overdosing on blood thinner when she was admitted for COPD. They weighed her in pounds but entered the date in kilograms so she overdosed in 3 days with organ failure. All of this was so devastating to me. Of course, I go numb like any human, but to have the tools to boost myself out of the slump has been a blessing. I do not think I would be here today if it wasn't for these modalities whether the diagnosis killed me or myself through depression.

The mind is above all matters. I know this now. This is how I live my life. This is how I treat my patients. To infinity and beyond.






ALWAYS STRENGTHEN
YOUR WEAKEST
SECR
LAST,

About Dr. Lauren Leiva

Dr. Leiva is a multidimensional Doctor of Physical Therapy who merges ancient divine wisdom with modern medicine. Dr. Leiva connects mind, body, spirit, and heart, and truly embodies sacred healing; healing that addresses and pinpoints every patient need. Dr. Leiva pinpoints both the physical and energetic forces of the human anatomy in her Physical Therapy work. Combining both physical and energetic medicine has supported her large variety of patients, from hometown families to NFL players.

Mom, wife, daughter, sister, yogi and Doctor of Physical Therapy, are only titles that express the nurturing capacity of Dr. Leiva. Dr. leiva is more than a title, she is love personified. Her healings, teachings, and expressions, all serve the bigger picture of being the voice for the new generation of highly intentional doctors that are emotional, energetic, AND intellectual. Her capacity to overcome all odds is just as inspiring as her clinical work. Anything you need will be meet with compassion at The Excerscience Center, Tampa, Florida. From hospital bed to successful Doctor of Physical Therapy, Dr. Leiva is the living example of the healer that had to heal first to shed wisdom into the world.

IGs: theexersciencecenter
Website: theexersciencecenter.com

About Writer, Arelis Rodriguez Martinez

Arelis Rodriguez Martinez is a current student at the University of Central Florida studying Creative Writing and Theater. Rodriguez Martinez's studies at the University of Central Florida include perfecting her skills in writing, singing, dancing, and acting, to assist in her goal to create authentic portrayals of diversity in digital media. Rodriguez Martinez also aspires to support minorities in healing trauma through expression.

From Puerto Rico to Florida, Rodriguez Martinez is proud to be a Puerto Rican artist. Her parents and family are her most prized possessions.

The wisdom and culture in all of her work is from the heart of the beautiful island of enchantment, Puerto Rico. Rodriguez Martinez is grateful for all opportunities to give back to her community and continue growing with higher education. Thank you for your attention and blessings to you and yours.

IGs: arelisrodmart

litewater

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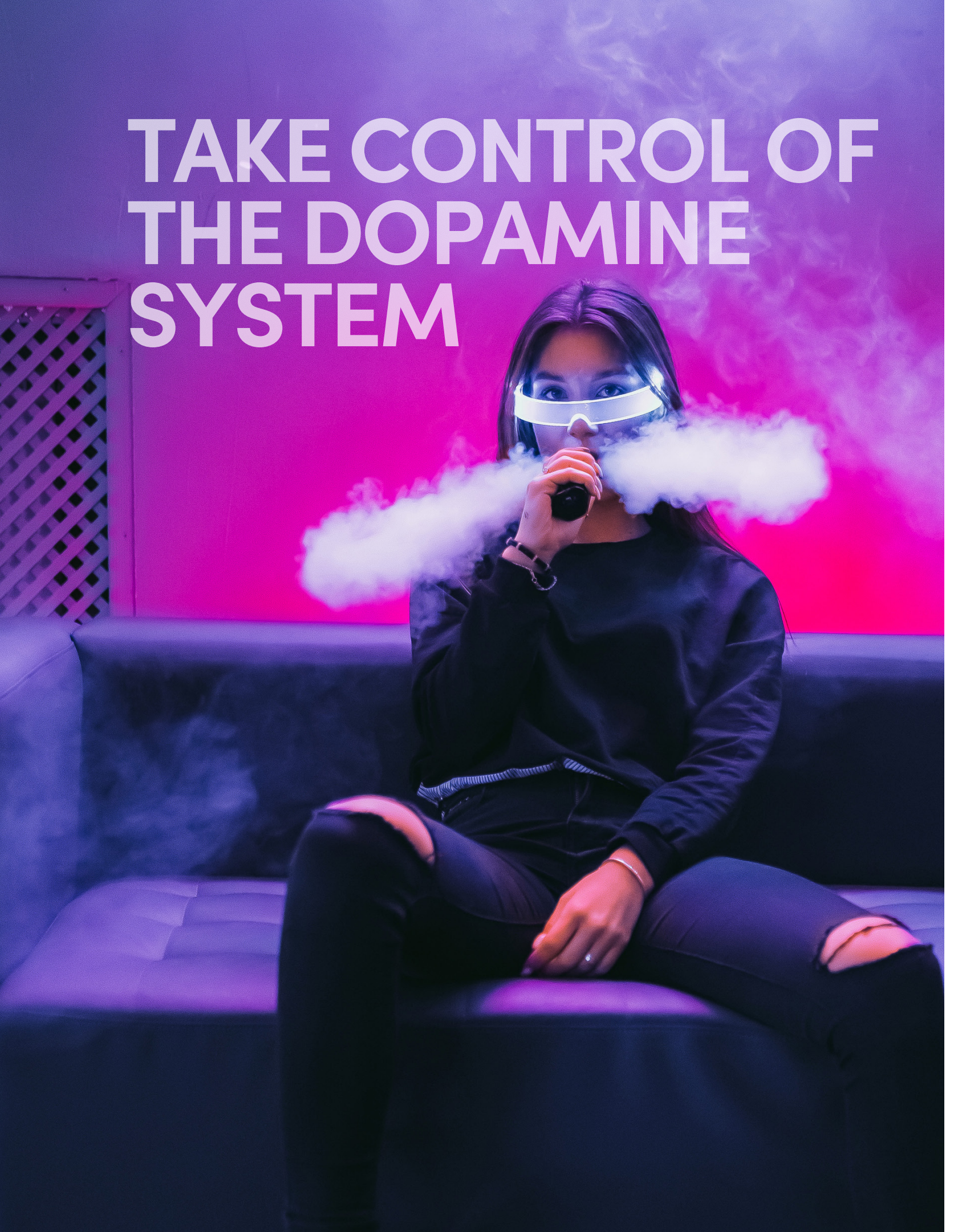
INNER

“One who looks around him is intelligent, one who looks within him is wise.”
— Matshona Dhliwayo


TAKE CONTROL OF
THE DOPAMINE
SYSTEM

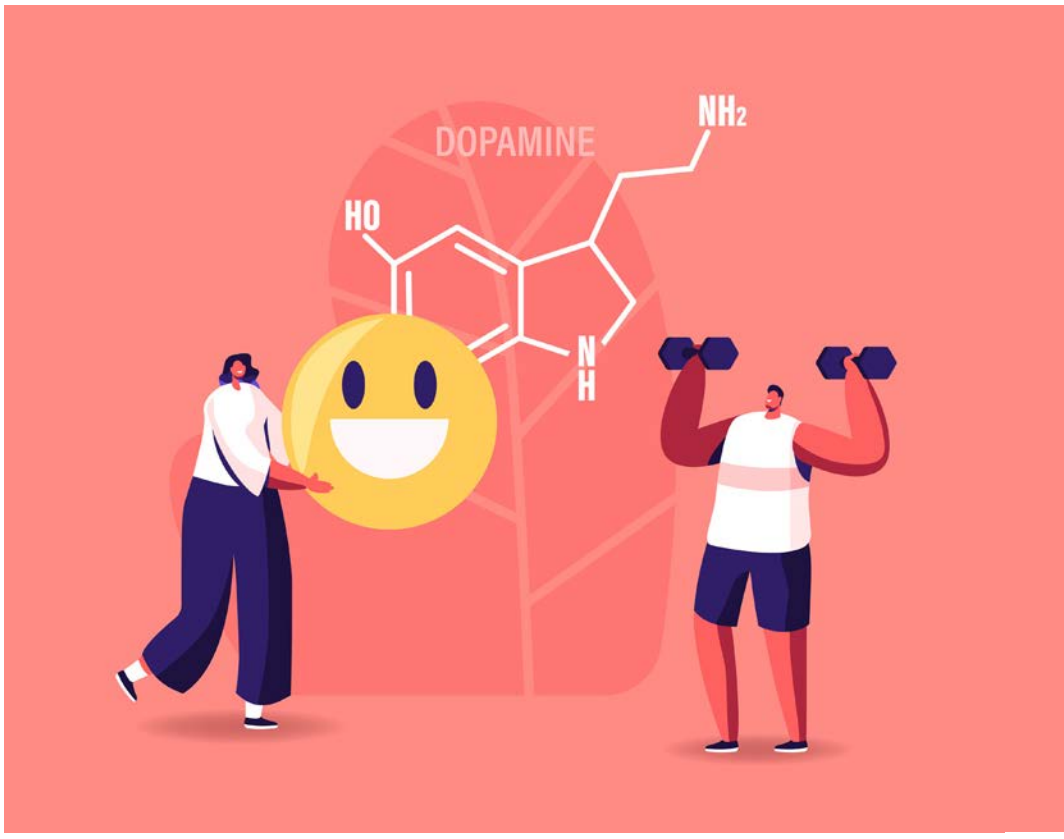
Introduction

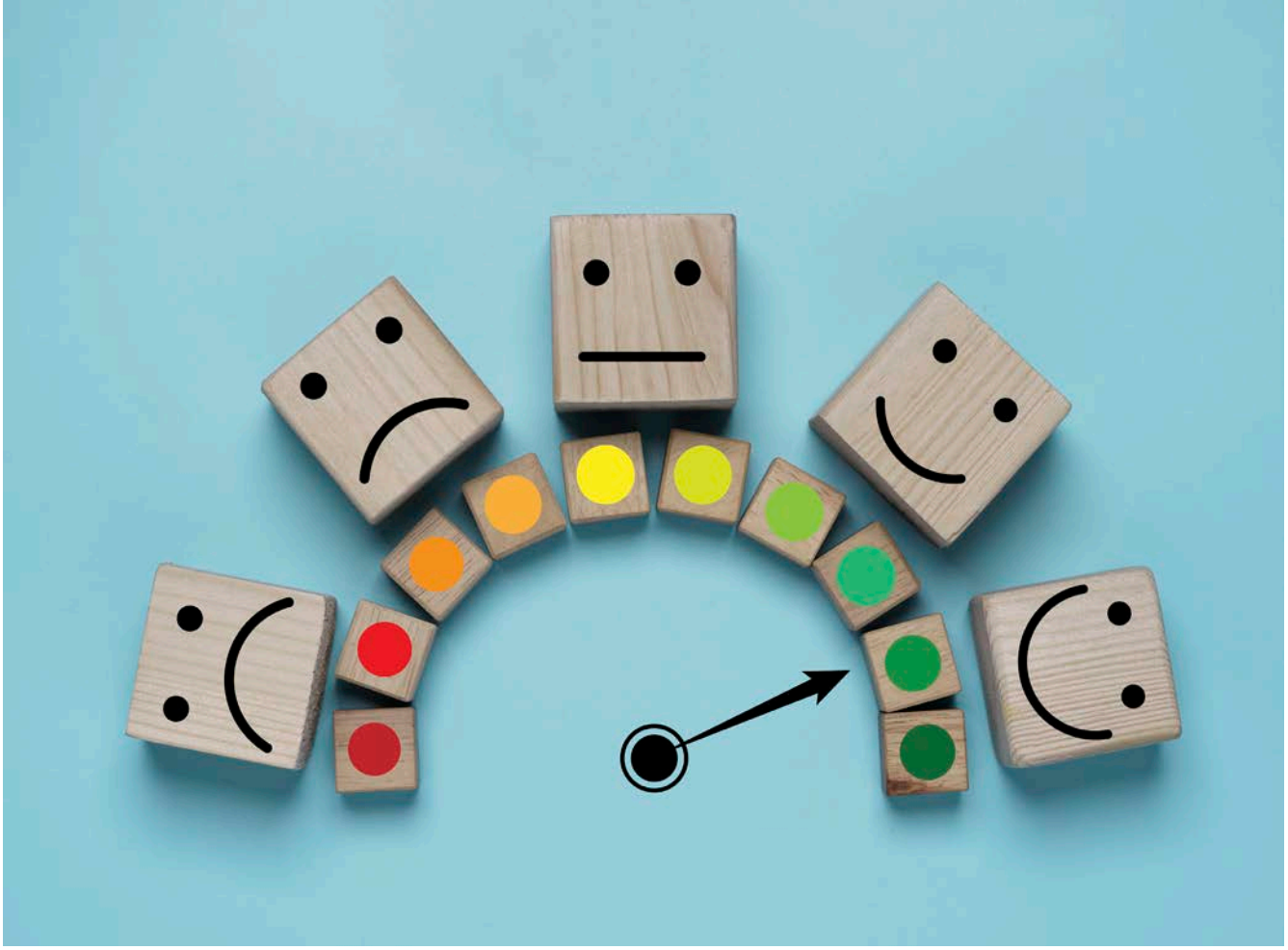
Natural selection dictates that the organisms best suited for their environment will have the most reproductive success, therefore the physiology and psychology of the organisms will naturally evolve to maximize their ability to flourish in their environment. However, the last few decades have exhibited such large and rapid changes to the environment that many of our psychological properties have not yet adapted to maximize the benefit of the current society.

The dopamine reward system is a system that has been present for our entire evolution, and can even be seen in non mammalian organisms. There are a multitude of mechanisms that have been postulated to explain the drastic increases in the incidence of addiction in our current environment, and the dopamine system is the main brain system in the regulation of addictive behaviors. In 2016, it was estimated that 7.6 million people currently had a substance use disorder. These statistics are only demonstrating the rate of clinical addictions to a small subset of substances. Thus, these statistics do not even account for rates of non clinical behavioral and substance based addictions that also exude negative effects, but just not to the magnitude of clinical addictions. The manifestation of addiction can not be facilitated in an environment of insufficient resources. It is extremely difficult to get addicted to something that you cannot access in excess. You can crave it, desire it, and take advantage of its presence, but if it is scarce, it is almost impossible to develop a reliance upon it. Humankind has transformed the world from a place of scarcity to a place of overflowing abundance, and we are beginning to face many negative ramifications in our current environment.

The function of dopamine

Dopamine is a neurotransmitter that has many implications in the human brain. (1) Dopamine states can be discerned into two different categories: tonic dopamine levels and phasic dopamine levels. Tonic dopamine levels are one's levels of dopamine when we are not experiencing any aversive or pleasurable stimuli. Your tonic dopamine levels are the levels experienced during rest. (2) Phasic dopamine fluctuations are transient increases or decreases in the firing of dopamine neurons distinct from their tonic firing pattern. Phasic dopamine increases the amount of dopamine that binds to the postsynaptic dopamine receptors and initiates dopamine's effects on the body. Dopamine receptor activity increases many physiological functions that all for greater motivation, movement, and reward seeking behavior (3). Phasic dopamine increases are a response to a rewarding stimulus, initiating the goal oriented behaviors for the acquisition of the perceived reward. Dopamine does not supply any energy in the form of ATP, rather it is a signal that mediates our willingness to engage in effortful activities. (4) Additionally, dopamine activity during a behavior dictates our memory of a previous experience. Dopamine will fluctuate as we expect, pursue, and obtain a reward, then return to tonic levels. When a reward is perceived, dopamine will increase in magnitude in correlation with our current understanding of the reward. The more rewarding we anticipate an outcome to be, the stronger the phasic dopamine firing will be. The level of dopamine at the time of acquisition is the strongest dictator of how pleasurable the reward is remembered to be. Further, the dopamine fluctuations dictate our understanding of the reward value of the prior behaviors (5). If there is no anticipatory period prior to the acquisition





of a reward, and a reward is acquired unexpectedly, phasic dopamine firing will rapidly increase as a mechanism to remember the behaviors that invoked the reward. For unknown and unpredictable rewards, dopamine firing continues to fluctuate when a reward is obtained to learn and remember the entirety of its value. Dopamine alters our memory by instigating neurosynaptic changes that enhance the likelihood we will remember a specific behavior in the future. The more dopimanergically stimulating a given behavior is, the more likely one is to remember it in the future. (6)

The physiology of the dopamine system

Dopamine exerts its effects through three neural circuits within the brain. The mesolimbic pathway is the pathway by which dopamine activity has large impacts on one's motivation, decision making, and memory. The mesolimbic pathway connects the ventral tegmental area with the nucleus accumbens. Dopamine neurons in the ventral tegmental area secrete dopamine in the ventral tegmental area. Dopamine subsequently is translocated into the nucleus accumbens where it binds to dopamine receptors and evokes movement and motivation towards a goal. Reduced dopamine in the mesolimbic pathway limits the extent to which animals will exude effort to seek a reward. Conversely over activity in the mesolimbic pathway results in extreme craving and desire for rewarding stimuli.(7)

The mesocortical pathway also has a large cognitive and attention oriented impact. The mesocortical pathway also begins with the secretion of dopamine in the ventral tegmental area, however dopamine will travel into the prefrontal cortex. Dopamine receptor activity in the prefrontal cortex is attributed to narrowing attention in the direction of the specific reward, and planning goal oriented behaviors. The mesolimbic and mesocortical pathway makeup what is often referred to as the mesocorticolimbic pathway. The mesocorticolimbic pathway is associated with dopamine's psychological effects, specifically for reward oriented attention, thought, and memory. (8) The other dopaminergic pathway is the nigrostriatal pathway. The nigrostriatal pathway exudes its effects through dopamine communication between the substantia nigra pars compacta and the dorsal striatum. The nigrostriatal dopamine pathway much more dramatically affects one's physiological functions by increasing or decreasing movement. The diseases that over and under activation of the nigrostriatal pathway are telling or the effects of the nigrostriatal system Hyper dopamine in the nigrostriatal pathway is correlated with the onset of

tourettes, a movement disorder that is characterized by sudden harsh movement. Hypo dopamine in the nigrostriatal pathway is a causative factor in Parkinson's disease. Parkinson's disease is characterized by slow and rigid movement patterns. (9) These three pathways work in tandem to modulate thoughts and memories, goal oriented planning and behavior, and physical movement based upon our thoughts and understanding of our environment.

The evolutionary benefits of the dopamine system

Humans lived as hunter-gatherers for 95% of our 200,000 year evolution.(10) Thus, the dopamine system has been evolving for approximately 190,000 years to make us the most dominant and efficient hunter gatherers. Non-westernized hunter-gatherer societies and historic records of these men and women's lifestyle provide valuable insight as to how the dopamine system has profited our reproductive fitness living in a certain environment. Initially, the values of hunter gatherers dictated what was subjectively regarded as pleasurable and rewarding. Evolutionarily we spent the majority of our day focusing on subsistence hunting and farming. The acquisition of resources for food, water and shelter was very rewarding because it was necessary to prolong survival. Additionally, these men and women valued social connections and tribal behaviors, and purposefully fostered many synchronous communities in order to maximize resources and other rewards. Finally, as all humans and animals do, these men and women had an innate drive and pleasure for sexual behaviors to drive the extension of Homo Sapiens. The majority of our physical and cognitive energy was spent pursuing resources, social connections, and reproduction,

and they all relied on proper functioning and regulation of the dopamine system to promote their execution (11). Our external environment was not as abundant in resources as it currently is in the twenty-first century, and the only behaviors that relied on excising the dopamine system were necessary for our survival and ability to live off of the land. We were forced to focus our attention and motivation on specific behaviors that were necessary for survival, and the reward of these behaviors was prolonging life, and increasing the health of ourselves and our communities. Interestingly, the latter actually being the most rewarding pursuit. (12) The men and women that had the greatest rates of reproduction were those who had the greatest motivation to maximize their acquisition of resources from their environment, therefore throughout evolution the genetics for the dopamine system favored those whose dopamine system was most active.

Food seeking behaviors

Interestingly, it is very likely that the most "food addicted" men and women who thrived as hunter gatherers, as they had the greatest motivation and drive to find food. Moreover, the men and women with the greatest propensity for overeating would have eaten in excess when food was abundant, and been more capable of surviving famines. Modern food processing is a recent creation. Evolutionarily the only foods available to us were natural whole foods that could be obtained in the specific environment we lived in, which would vary between locations and throughout the year. The energy density of naturally grown food is much less than what has been created by modern food processing. The dopamine system interacts with a multitude of other psychological and physiological systems in order to discern caloric and nutrient density. As insufficient food was a common cause of ill health and death, foods perceived to have the greatest caloric and nutrient density have the greatest excitatory effect upon the dopamine system. Further, certain tastes and sensations signal potential toxicity and aversion by inhibition of the dopamine system (13). Information from the gustatory system interacts with dopamine neurons to evaluate unknown foods based upon taste (14). Humans have five highly understood and developed tastes that the gustatory system can sense: sweet, bitter, sour, salty and savory. (15) Each taste is associated with specific characteristics of food used to assume its caloric and nutrient content. Sweet flavors indicate the presence of sugar, typically in the form of fructose from fruit, which indicates the presence of energy in the form of carbohydrates. The savory taste indicates the presence of essential protein, typically derived from animal meat, which is abundant in essential micronutrients and macronutrients. Salty tastes signify the presence of electrolytes pivotal for almost all of the physiological processes within our body. Finally, bitter and sour tastes are aversive, and are used to signal potential toxins in foods (16). Sweet, savory, and salty tastes invoke phasic increases in dopamine as they indicate the presence of essential nutrients. Moreover, bitter and sour food invoke a decrease in dopamine firing to establish a harmful and non rewarding value to a food. As there was no information upon which we could discern

the health values of a food, the dopamine system adapted and made predictions based upon taste, and other physiological effects. Dopamine is released to gustatory tastes that indicate energy density. As malnutrition was a greater risk factor than obesity, the more calorically dense a food was perceived to be, the greater the reward value it had.

Social connections

The desire for social connections is a behavior that is highly contingent on dopamine synthesis in the reward pathway. Choosing when and who to interact with is dictated by if we perceive the interaction to precipitate a perceived reward in the present or the future. Socialization is initiated by a phasic increase in dopamine to evoke forward movement towards another organism. (17) Social interactions had a myriad of benefits to our survival and reproduction, specifically the drive for novel socialization. As discussed, there simply was not a large database in which one could procure the knowledge of other communities without physical interactions. Documentation was possible and there have been records of documentation, access and use of documents simply was not an effective way to gain new knowledge. Thus, the acquisition of knowledge was highly contingent upon the circumstances we were put in to obtain knowledge that resulted from our behaviors. The more we attempted to engage with others, the greater opportunity we had to procure information. Further, the more diverse those interactions the more exposure one would have to different kinds of information. Interacting with other communities often provided valuable insight as to different locations and methods for acquiring important resources. Moreover, pertinent dangers and complications in acquiring very essential materials were much more common, and positive affiliations with other communities expanded our support system in times of distress.

Reproductive behaviors

Finally, the dopamine system motivates humans towards reproduction, as dopamine is increased when the prospect of sex arises. While dopamine interacts with many other hormones and neurotransmitters, without the dopamine system no effort would be given towards sexual reproduction. (18) Moreover, it is

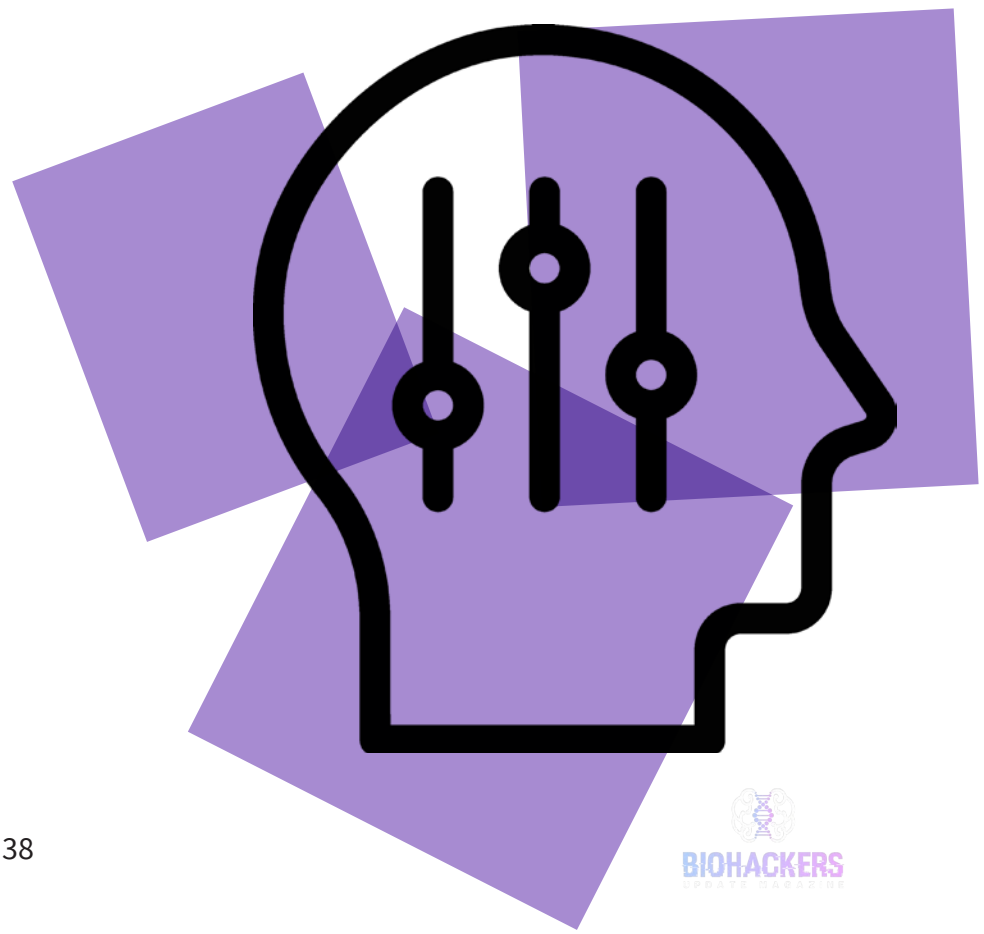
likely the individuals who derived the greatest pleasure from sexual behavior who had the perpensity to engage in sexual behaviors, therefore these individuals had the greatest probability for successful reproduction.

Novelty seeking

Dopamine increases drive behaviors that maximize resources in the present and the future. Maximizing knowledge allows for better decision making ability, as we have a better understanding of our environment, and can better predict the results of our behaviors. Our past experience of different behaviors is used to assess the details and potential of novel, lesser understood, behaviors. Therefore, if we predict a novel behavior may elicit a reward, dopamine levels will rise and we are driven to perform the behaviors we perceive will elicit the greatest reward. After entertaining a specific behavior for a prolonged period of time, the reward of that behavior begins to become predictable. As we continuously experience a situation, the value of the reward begins to diminish, and predictive dopamine release diminishes. (19,20)Consequently motivation to continually pursue the same behavior diminishes, making more novel behaviors seem more salient, as they have a greater ability to evoke dopamine. Seeking novelty had a multitude of benefits, the way in which we learned our environment was through actively diversifying our experiences and interactions to curate information about our environment. A greater propensity to seek novel rewards allowed us to explore different foods that may have provided benefits we were not currently getting. Further, it may not be seeking new foods, but rather seeking different ways and locations in which we can acquire them that might have a greater caloric yield for our energy expenditure. Said tendencies have driven our expansion of knowledge and development of new technologies since the beginning of evolution.

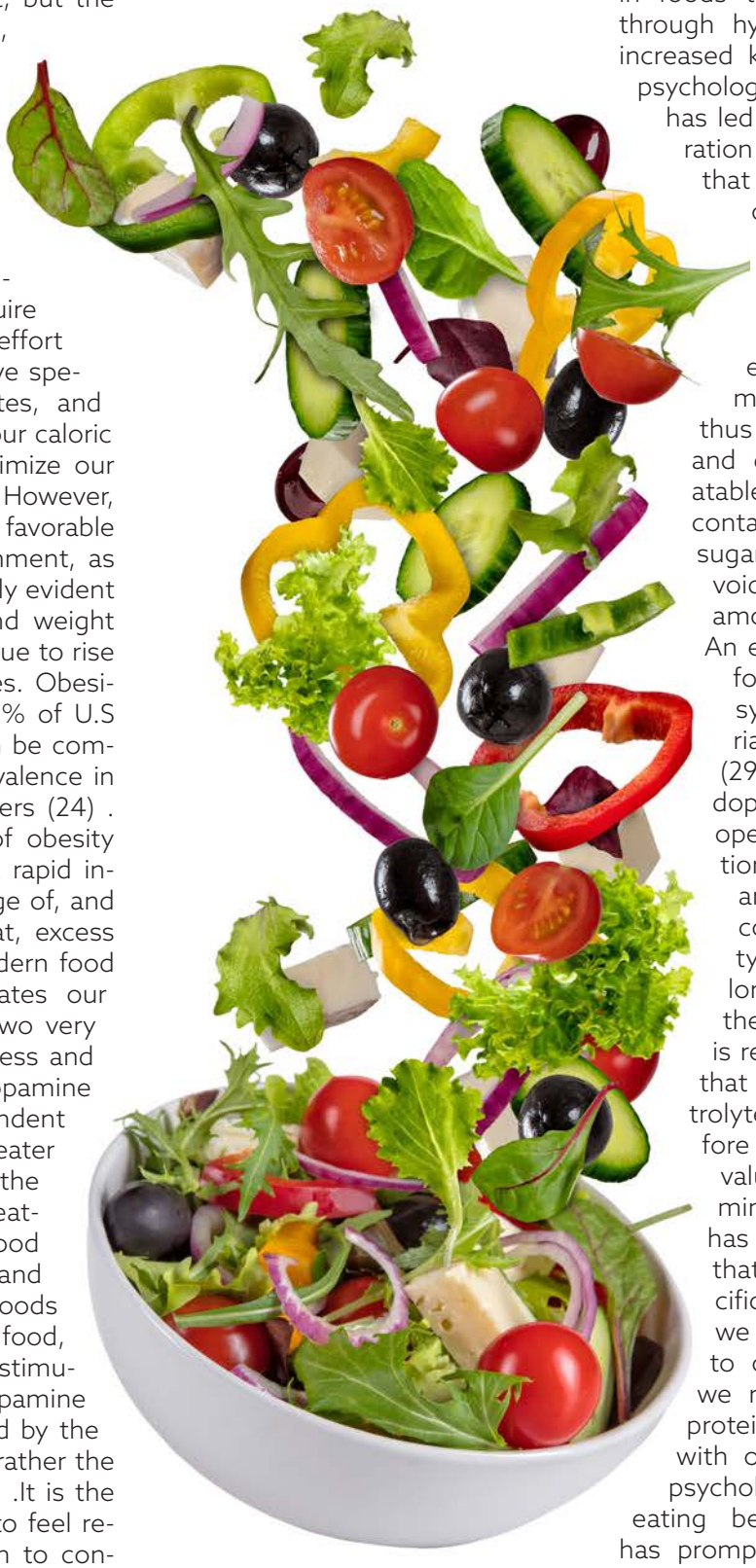
The environmental mismatch,

The modern environment, The wealth of an economy is very tightly correlated with their rates of addiction, depression, and other mental disorders. That is, the wealthiest economies have the greatest rates of addiction and diseases of overabundance. (21) When supply to an addictive behavior increases, so does the demand. Addiction simply does not manifest in an environment that can not facilitate the abuse of a specific behavior. An addiction can be broadly described as the persistent urge to partake in a behavior despite the negative ramifications that accompany it. Dopamine is the chief neurotransmitter demonstrated in the production and persistence of addictive behaviors. (22) Addictions manifest when the natural reward system is overexploited, and no longer enhances the quality of our life, rather it begins to diminish. The abundance of the 21st century enables many addictive behaviors by making the desired behavior effortless and easy to initiate.



Food environment

Food environments around the world are different, but the wealthier a location is, the more abundant their food environment.The most rewarding foods, in terms of dopaminergic activity, are foods that are perceived to be calorically dense, and require the least amount of effort to obtain. Humans have specific propensities, tastes, and instincts to maximize our caloric consumption and minimize our caloric expenditure. However, that propensity is not favorable in our modern environment, as is becoming increasingly evident as rates of obesity and weight related diseases continue to rise as our wealth increases. Obesity currently affects 42% of U.S adults (23) , which can be compared to the <5% prevalence in modern hunter gatherers (24) . Moreover, Our rates of obesity are climbing despite a rapid increase in the knowledge of, and ability to clinically treat, excess body fatness. The modern food environment dysregulates our dopamine system in two very potent ways: food access and food composition. Dopamine release is a cue dependent process, and the greater abundance of food in the environment, the greater the magnitude of food cues such as sight and smell of rewarding foods (25). Unless it is a novel food, food is a conditioned stimulus, therefore the dopamine system is not activated by the consumption of food, rather the prediction of food (26) .It is the cue itself that begins to feel rewarding, and we begin to consume foods out of habit rather than hunger (27) . In addition to our constant immediate proximity to food and food related cues, the food environment is enriched in foods that drive overeating through hyper palatability. Our increased knowledge of human psychology and food science has led to the deliberate curation of food products that elicit the highest excitation of the dopamine system upon ingestion. Additionally, the large excitation in dopamine elicits greatest dopamine deficit thereafter, thus greater food cravings and desire. A hyper palatable food is a food that contains a mixture of fat, sugar, and salt, and is devoid of any substantial amount of protein (28) An estimated 62% of the foods in the US food system meet the criteria of hyper palatability (29). Evolutionarily the dopamine system developed a reward association with carbohydrates and sugar, as foods containing these foods typically were very calorically abundant. Further, the presence of salt is rewarding in the sense that it facilitates our electrolyte homeostasis, therefore salt has a high reward value within the dopamine system. Finally, it has been demonstrated that humans have a specific protein appetite, and we are driven to continue to consume foods until we reach a threshold of protein (30). Unfortunately, with our expansion of the psychology of reward driven eating behaviors, psychology has prompted food companies and food manufacturers to curate the most rewarding foods possible to maximize consumption,



and therefore maximize profits. Moreover, because effort plays a pivotal role in decision making, many companies and industries work hard to minimize the amount of effort required to find rewarding and palpable foods, therefore their reward value is that much greater. Lastly, hyperpalatable foods produce the largest reward deficit after they are consumed (31), which has been demonstrated to induce feeding absent of hunger or physical need, rather as a psychological compensation for the aversive state of a reward deficit. We then are stimulated to seek more food, and the foods associated with the most rewarding feelings are hyperpalatable foods. Furthermore, they are so abundant, there is seemingly no barrier to obtaining these foods in many scenarios. Thus, we begin a cycle of feeding and craving that has given rise to the modern phenomena of food addiction (32).

Social drugs

As the capabilities of the internet continue to expand, its addictive capabilities are becoming much more prevalent. The average time spent online of an adult was estimated at a little under seven hours a day (33) . Moreover, the numbers and anecdotes of addictions to gaming, social media, internet gambling and internet pornography are consistently increasing every year (34). The internet interacts with the dopamine system by providing an artificial sense of social connectivity that far exceeds the social rewards of most physical interactions. The internet provides a platform in which one can connect to many people within seconds or minutes, and novelty is always available. Further, it removes all barriers of social connectivity, novelty, and other reading stimuli to simply just turning on a given device. Thus, the pros-

pect of immediate digital rewards becomes more rewarding than physical rewards due to the absence of effort .

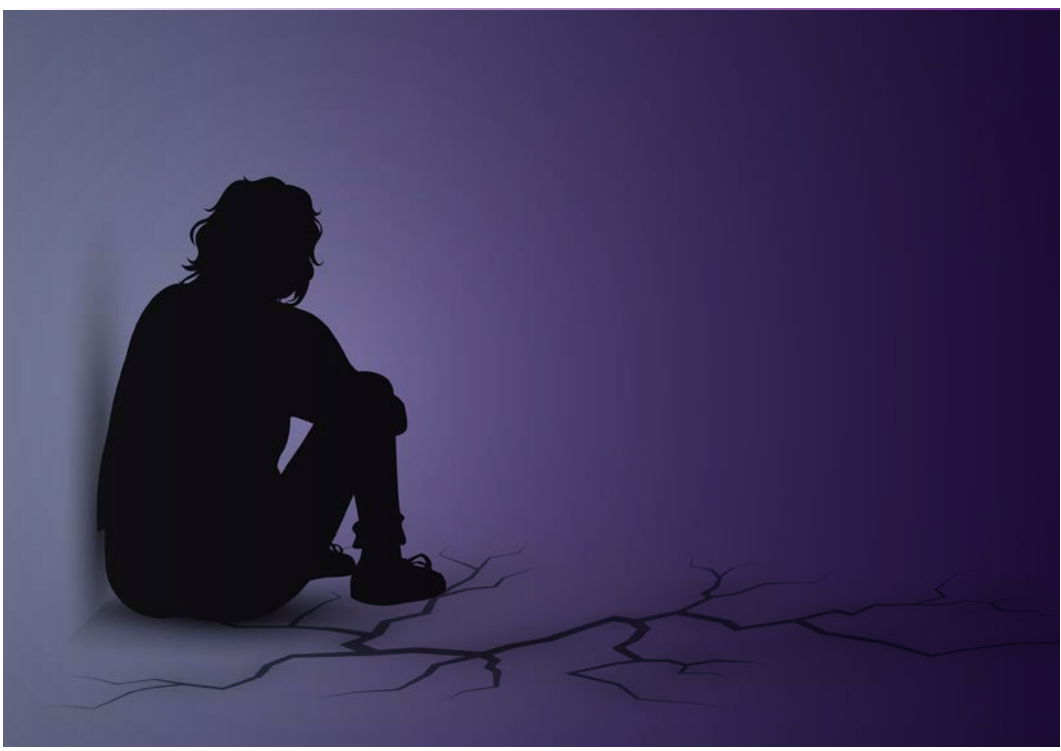
There are specific properties of the internet that make it much more rewarding than most behaviors. The internet is an immediate source of dopamine, therefore initiating internet usage is simple and easy. Moreover, the internet allows for the exploitation of variable reward patterns, which has been demonstrated to be more dopaminergic than expected reward patterns (35). Due to the extreme abundance of content on the internet, certain aspects are much more rewarding than others. Viewing something we regard as being interesting and important increases dopamine firing. If the subsequent item we view is less interesting, dopamine levels will decrease in firing. The subtle decrease in dopamine stimulates a sense of aversion towards one internal state, and drives greater seeking behaviors for dopamine stimulating content. Finally, the internet stimulates the dopamine system for a prolonged period of time, and the overall stimulation of the dopamine system is large. Therefore our tonic levels of dopamine are consistently depressed to counterbalance chronic low level excitation from social media. The internet becomes salient not because it is positively reinforcing, rather it becomes a negatively reinforcing behavior. In absence of the internet, tonic dopamine firing is decreased, akin to a state of clinical depression. Thus, we have low levels of motivation to undertake effortful rewards, therefore effortless rewards like reengaging in social media becomes more salient, further our dopamine deficiency drives craving for rewarding stimuli.

Dopamine as a cause of depression

It might be difficult to conceptualize how high dopamine can cause depression, a state often brought on by low levels of dopamine (36). As addiction and depression often coexist, it is evident that abnormal elevations of dopamine have downstream consequences towards our feeling of well being (37). Recovering addicts often report feelings of anhedonia, or the inability to experience pleasure, and depression is the most consistently reported symptom of abstinence. The greater abundance of the environment, the greater stimulation of the dopamine system. Constant and extreme excitation of the dopamine system causes downregulation of postsynaptic receptors as an adaptive mechanism to maintain normal dopamine signaling in an environment of abnormally elevated volumes of dopamine (38). Until recently, the dopamine system never encountered chronically elevated dopamine levels. The dopamine system adapts to an abnormal environment by putting up as many barriers for dopamine secretion as possible. Consequently, normal rewards feel unrewarding, and our baseline levels of dopamine are so depressed that depressive feelings and symptoms begin to manifest. Without constant stimulation of the dopamine system through specifically rewarding behaviors, pleasure becomes increasingly more difficult to evoke, and a state akin to depression manifests when we are without any stimulus, as process being demonstrated by the fact that the greatest rates of depression are being found in westernized culture, and the introduction of wealth and westernization increases levels of depression in a non westernized society (39) .

How to take control of your dopamine system

The aforementioned information was in no way meant to scare you or illustrate a pessimistic view of the dopamine system. Dopamine is absolutely necessary for all of our daily tasks, short and long-term goals, and inevitably



our mood and satisfaction. My hope with the information above is to elaborate on the ways in which dopamine is affecting our behaviors and decision making, and illustrate the reasons that these mechanisms are within the modern human despite their potential threats in our current environment. Furthermore, understanding the subconscious mechanisms influencing our mood and motivation provides us with the opportunity to take control of the dopamine system to optimize our well-being and life satisfaction. As Author Anna Lembke elegantly describes in her book Dopamine Nation, pleasure and pain will always work in tandem to maintain a stable homeostasis. Pain is simply just a transient deficit of dopamine. Avoiding the inevitable period of recovery that manifests after the pursuit of a reward simply exacerbates the aversive state that manifests. The pleasure pain balance is why recovery from addiction often leads to a depressive state. With that being said, understanding the inevitable provides you with the opportunity to lessen the discomfort by taking much more frequent periods abstaining from dopaminergic stimuli throughout your days, weeks, or months to combat large fluctuations in dopamine. Naturally letting dopamine restore itself ensures we do not overburden the dopamine system in an environment in which it is so easy to do so. There are a few strategies I thoroughly enjoy.

- Purposefully taking periods abstaining from electronic sensory stimuli, such as using your phone, listening to music, or even a podcast. Simply just not using electronics, and instead going outside without any devices.

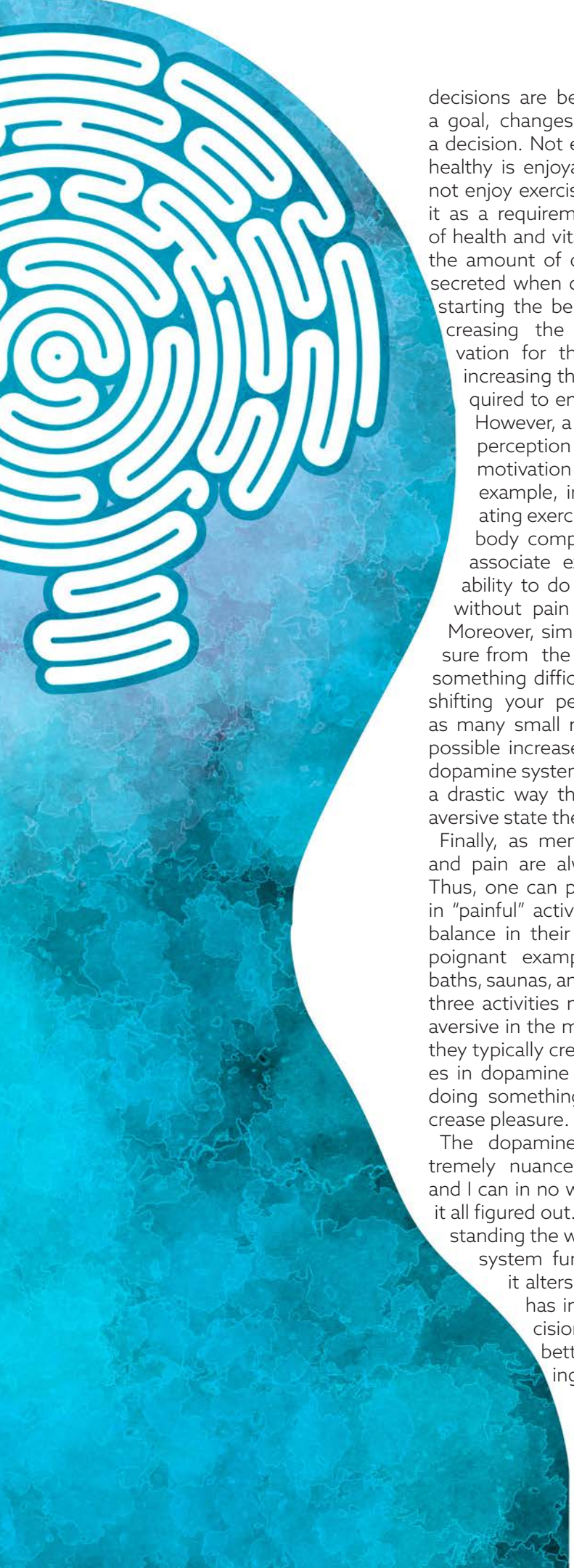
- Avoiding foods that are abnormally enticing, and learning to enjoy the natural taste of foods. After a very short period of time, the drive to seek hyperpalatable foods will begin to diminish, and taste sensations begin to adapt to find reward in less extreme flavors.

- When working towards a long term pursuit such as writing a book or a project, purposely implementing periods in which you are not goal oriented, rather reflecting on your current accomplishments thus far.

- Avoiding layering in multiple stimuli at once, such as food and electronics. Layering in multiple dopaminergic stimuli increases the threshold by which you require to feel pleasure. Instead, try to choose one pleasurable activity at a time, allowing you to feel maximal rewards from both behaviors.

- Intermittent and prolonged fasting or periods of time abstaining from food reward can increase the reward value of any given food. Thus, making it easier to drive pleasure from foods that may not have been highly rewarding before the fast.

Additionally, humans have the ability to alter our perception of a task to make it more pleasurable. To be less abstract, if we desire something such as weight loss, we can make the process easier by deriving pleasure from the pursuit of weight loss. Understanding that



decisions are beneficial steps to a goal, changes the meaning of a decision. Not everything that is healthy is enjoyable. If one does not enjoy exercise, and only sees it as a requirement for the goal of health and vitality, it decreases the amount of dopamine that is secreted when deliberating upon starting the behavior. Thus, decreasing the cognitive motivation for the behavior, and increasing the "will power" required to engage in exercise. However, a simple change in perception can heighten our motivation for exercise. For example, instead of associating exercise with a specific body composition, one can associate exercise with the ability to do day-to-day tasks without pain and discomfort. Moreover, simply deriving pleasure from the fact that you did something difficult today. Simply shifting your perception to find as many small rewards in life as possible increases activity of the dopamine system, but not in such a drastic way that will invoke an aversive state thereafter.

Finally, as mentioned, pleasure and pain are always in balance. Thus, one can purposely engage in "painful" activities to reset the balance in their favor. The most poignant examples include ice baths, saunas, and exercise. These three activities may feel minority aversive in the moment, however they typically create large increases in dopamine thereafter. Thus, doing something painful can increase pleasure.

The dopamine system is extremely nuanced and complex, and I can in no way claim to have it all figured out. However, understanding the way the dopamine system functions and how it alters my mental state has influenced my decision making for the better. Understanding dopamine al-

lows me to derive more pleasure from the small things in life, and maintain motivation to keep moving forward. My hope is that after reading this, you can share the same experience.

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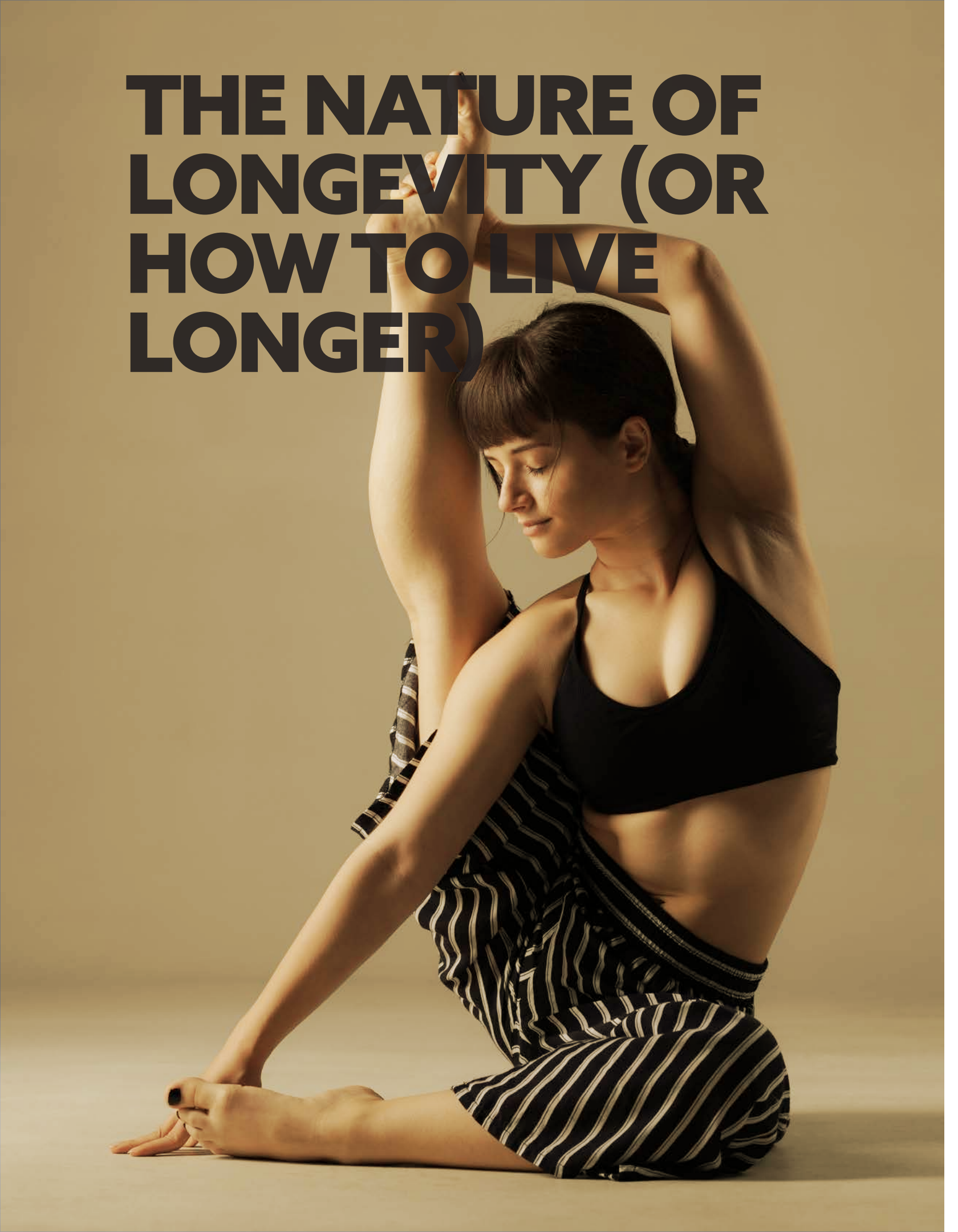
About Calvin Scheller

Calvin is a young student with a passion for learning and writing that is unlike most kids his age. After struggling with his weight, he was introduced to biohacking and hasn't looked back since. In the future, Calvin aspires to make a career using his knowledge of human physiology, and is open to any opportunities for podcasts, article writing, or partnerships. He enjoys reading, writing, weight lifting, and researching in his free time. He currently resides in North Carolina with his close family.

Instagram: calvin_scheller

THE NATURE OF LONGEVITY (OR HOW TO LIVE LONGER)



Confronting death is one of our greatest philosophical challenges. Because what happens after death remains largely a mystery, we as humans try to delay the inevitable–what we don't understand and what we can't wrap our heads around.

So we try to make ourselves live longer. We make advances in science and medicine to see if it's possible to extend the limits of a human lifetime. While the average lifespan has increased slowly over time, we may eventually reach a limit.

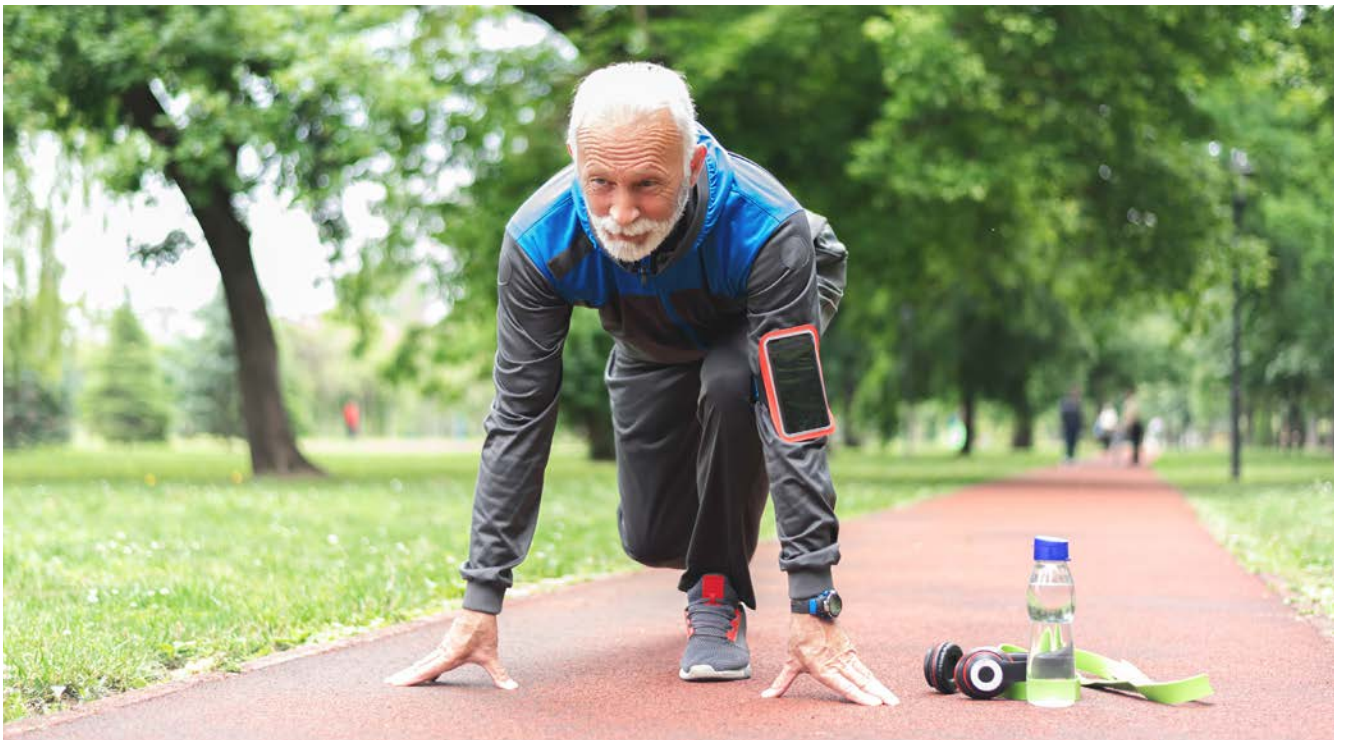
This paper discusses the nature of human longevity and how we can start living longer. It covers aging and its properties as well as possible "solutions" to the aging process. It also asks — crucially — if we should really be trying to live longer.

Human Life Expectancy Has Increased

In 1800, life expectancy at birth in America was 35 years. By 2019, it was 78.9. New advances in the science of aging show promising results for longer life too; Some include: research from Milbank Quarterly showed that life expectancy could rise to as much as 93 in the U.S. by 2050; researchers at the University of Rochester discovered the "longevity gene" sirtuin 6, which helps repair DNA; female life expectancy in East Asia is already nearing 90.

There are even certain health products and healing practices we can adopt to "slow down" aging, or make the aging process a little less painful. Quantum energy and products charged with quantum energy, like those sold by Leela Quantum Tech, are some of those things that can restore vitality, improve your blood, and make you feel more invigorated and in tune with yourself.

Thus, progress in longevity doesn't seem to be slowing. But as humans get better at living longer, it begs the questions: how long can humans live? What will we do with the extra time? What can we do with the extra time, given how our bodies and mind tend to deteriorate as we age?



Aging Is Complex

As we continue to push the boundaries of science and medicine, we can expect to live longer. But aging is nuanced and complex, with many mysteries still to uncover. After all, we live in a world that operates by the mantra of, if it can't be explained, then it mustn't be real...but we know that's not true.

Because humans are finite creatures, the quest to live forever "has always been part of the human spirit," according to Paul Root Wolpe, the director of the Emory Center for Ethics. Discovery, exploration, and expansion are undoubtedly behind the desire to keep on living, but when you dig deeper, it's the fear of death that is the biggest factor of them all.

There is always a fear of the unknown, and death is one of those mysteries of life that remains behind the veil. As we can't unravel and understand this mystery, we're unable to comprehend what it means to not exist. To avoid the discomfort of not

knowing what happens next, or because we develop a sense of "FOMO," we seek to live longer.

We are now in an era where we must ask ourselves, just because we can, does that mean we should? After all, aging doesn't come without challenges.

The Challenges That Come With Longer Lifespans

Despite how much we might want to live longer, we're limited. Most people's bodies start slowly losing function at 80 years old. In the U.S., we get about 75 years of meaningful, healthful life, even if chronologically, we keep aging.

As we age, our bodies deteriorate. This deterioration is a major risk factor for cancer, diabetes, cardiovascular disorders, and neurodegenerative diseases. We can expect that, for the most part, living longer does not mean living fulfilling lives. All we have to do to confirm this is to ask our elderly population about their experience in advanced age. Your bones start to hurt, the mind starts to forget, your vision becomes hazy. We can't really go hiking outdoors anymore–the risk of a fall and a broken hip is too much to swing it.

We grow older, and at the same time, we grow more vulnerable, ironically returning to the fragile states of our infancy: needing assistance with caring for ourselves, for example.

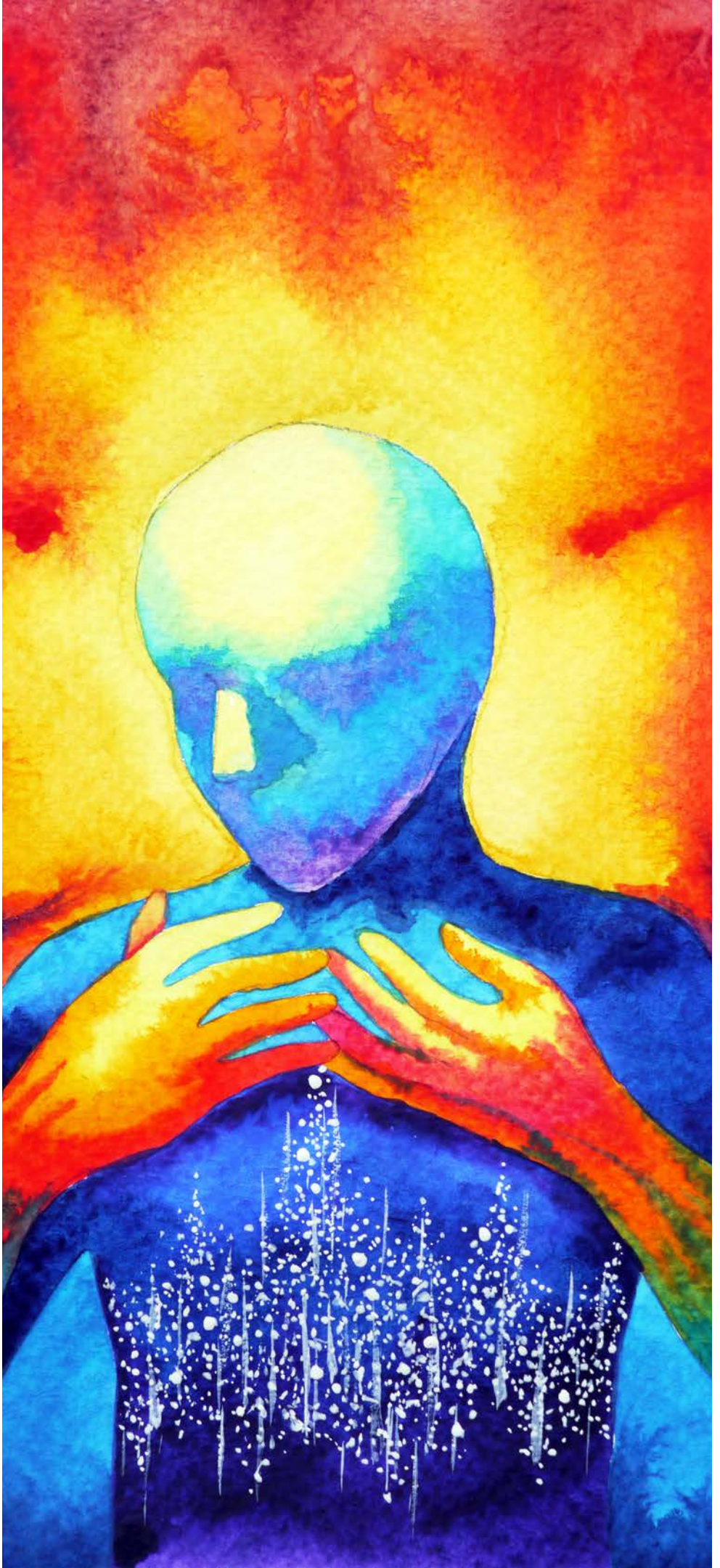
Ian Mitchell, a brilliant research scientist known prominently in the field of quantum healing, recently shared his view on a longer lifespan.

"I don't know that I would want to continue pushing the bounds of longevity because, what's the real need for it?" he asks. "I personally am trying to push my own bounds because I have some things I want to achieve before I leave. And when I achieve those things...I'm good. I don't really need to stick around to eke out a body that can only handle so much energy."

As Ian put it, "nature is incredibly brilliant and elegant," and our bodies are designed to last, mechanically, for only so long. In an experiment he conducted with mice, biological modifications extended their lifespan to an average of 152 (in mice years). For the most part, they stayed within the physical and cognitive capacity of middle age, but at the final 2% of their lives, their quality of life plummeted off a cliff. Organ failure, unhealthy blood (including clotting, white blood cell inactivity, high parasitic load), physical mobility, and more, drastically deteriorate. It was almost as if the body just couldn't handle it anymore and abruptly gave up right at the end.

Physical vs. cognitive evolution

Now, there is a difference between our physical evolution and our cognitive one, and it's important to note that Ian mentions that for humans, we have the ability to evolve our consciousness beyond our 'meatsuits,' as he calls them, and reach a higher level of consciousness that transcends our physical presence on



earth. But our bodies themselves can only handle so much energy to a certain point.

For humans, we can try to manipulate our methylation, ATP function, mitochondrial output, and telomere lengths, but these biological interventions only take you so far. There is an energetic component that you simply cannot bypass–and one that you may not even want to, given the vegetative state it may leave you in that most would not consider 'living.'

What would expanding our consciousness look like? Things like meditation, yoga, and tai chi can help you tap into energies or forces that let you see beyond your physical body. When you call upon and harness these energies, it can be a way for your mind to gain greater control over your body. Rather than reacting to everything with a "fight or flight" response, you can train your body to react with a "rest and digest" response.

Learning to control your body puts your mind and body more in tune. Meditation and yoga can help you reach these goals, but so can quantum energy. Tapping into quantum energy by wearing clothes imbued with it, carrying quantum energy cards carrying proper frequencies for you, or even utilizing a quantum energy multi-dimensional field like Leela Quantum Tech's Quantum and Infinity Blocs can have the same effect on your mind and body as hours and hours of meditation.

What Causes Aging?

If we are to figure out how to live longer, then we must know what causes aging. It's a broad topic, and when we refer to "aging" it could mean different things. Generally, however, aging is narrowed down to two types:

1. Intrinsic
2. Extrinsic

Intrinsic aging

Intrinsic aging refers to the biological aging of cells. The cells that make up your body divide and multiply throughout your life. The more they divide, the older they get. These cells lose their ability to function and are referred to as senescent cells or "zombie cells." These cells aren't dead—it's not the same thing as killing off cancerous cells, for example—they're still alive. But they're no longer proliferating, making them stuck in a sort of half-life, like zombies. The accumulation of senescent cells has been linked to tissue dysfunction, leading some to believe that zombie cells are behind age-related diseases.

Intrinsic aging is closely related to the programmed theory of aging, which states that people are designed to age. Cells only have a certain lifespan, and there's little you can do about it. Under the wider umbrella of programmed theory of aging is the idea that hormones cause aging, or that the immune system is pre-determined to decline. There's some credence to programmed theory, as we've been able to observe that cells do age and eventually stop working. However, this theory rejects the idea that external factors, like smoking or pollution, can contribute to aging even though research has shown that these kinds of factors do impact life expectancy.

Programmed theory is also closely related to genetic theories of aging, which states that life expectancy is based on the genes we inherit from our parents. Genetic theories aim to explain why telomeres, which protect the ends of chromosomes, shorten over time. They also try to account for why stem cells turn into other types of cells to repair tissues and organs. The problem with genetic theories is that only about 20% of lifespan influences genetics, according to Dr. Morgan Levine.

Extrinsic aging

Extrinsic aging refers to damage your body takes on from your environment and external factors.

These include:
- Air pollution
- Smoke from tobacco
- Alcohol consumption
- Poor diet or malnutrition
- Exposure to ultraviolet radiation (UV)

Theories of aging known as error or damage theories are powered by the idea of extrinsic aging. They suggest that aging is caused by cellular changes that are random and unplanned. Some of the concepts that fall under this theory umbrella include:
- Aging is due to a buildup of oxidative stress, or free radicals
- Aging is caused by the buildup of cross-linked proteins, which damage cells
- An organism's rate of metabolism determines its lifespan

Generally, the most widely considered cause of aging is the accumulation of cellular damage over time. Most theories of aging respond to this idea, but differ on how that damage is caused. When it comes down to it, aging is still a bit of a mystery.

Chronological Age vs. Biological Age

A concept that can help us better understand aging is biological age, which was put forward by Dr. Morgan Levine in her book True Age. Your biological age doesn't refer to how many birthdays you've had, but to the state of decline or divergence that your body has undergone. For example, you might be 35 years old but biologically, your body indicates that you're closer to what's normally seen in a 40-year-old. The idea that we have a biological age can also help explain why some people age more quickly than others.

So how do you determine what your biological age is?

There are two ways to find out your true age. One is by looking at clinical data, or the lab tests run by your doctor. Test results on your cholesterol, thyroid, and glucose levels, for example, can be input into online aging calculators to give you an estimate of your biological age.

Another way to find your true age is by looking at modifications to your epigenetics. Epigenetics refers to the changes to your DNA sequence as a result of your behaviors and environment, and they're reversible. They change as you age. Scientists can look at these changes and determine what your biological age is.

Biomarkers or Hallmarks of Aging

We can recognize physical, outward signs of aging. Wrinkles, sore muscles, poorer eyesight, constipation—there's a whole host of symptoms and conditions that we simply attribute to "aging."

What about biological signs of aging? Are there certain hallmarks scientists have pinned down as sure-fire signs of aging?

While research in this area is still ongoing, researchers have identified nine tentative hallmarks of aging related to genetics and biochemical processes. These hallmarks are:

1. Telomere attrition: Telomeres are found on the end of chromosomes and help protect them as they replicate. Over time, telomeres deteriorate and become deficient.
2. Epigenetic alterations: As discussed above, epigenetic modifications can signal aging.
3. Loss of proteostasis: Proteostasis is when your body's proteins are in balance. When proteins undergo stress, heat shock, or oxidative stress, they become unfolded. When the body can't refold them, many unfolded proteins aggregate, which is a sign of aging.
4. Deregulated nutrient-sens-

ing: Nutrient sensing is the cells' ability to adjust their metabolism to the amount of nutrients available. When cells lose this ability, typically in the form of resistance to insulin, it is considered a biomarker of aging.

5. Mitochondrial dysfunction: Mitochondria are responsible for producing our bodies' energy, and some genetic diseases can lead to their dysfunction. Non-functioning or improperly functioning mitochondria can also affect Alzheimer's disease, muscular dystrophy, Lou Gehrig's disease, diabetes, and cancer.

6. Cellular senescence: Mentioned previously, senescence is when cells stop multiplying and dividing but don't die. They remain in the body and their accumulation has been linked to aging.

7. Stem cell exhaustion: Over time, tissues and organs lose their ability to recover from damage and begin to fail. This decline in stem cells and renewal capacity of the body is considered a hallmark of aging.

8. Altered intercellular communication: Cells in our bodies communicate with each other, and when these signals are off, it can lead to some diseases and disabilities associated with aging.

9. Genomic instability: When there are defects in the body's processes that cause cells to divide, it's referred to as genomic instability. One of these defects could be mistakes that don't get corrected when DNA is copied in a cell.

Is It Possible to Slow Down the Aging Process?

For people who want to live longer, a fundamental question is how to slow down aging. Or rather, how to keep your biological age from accelerating past your chronological age. It'd be nice if there was a biochemical intervention to slow down aging, like some magic pill, but research

shows that the best way to make yourself age more slowly is by taking better care of yourself.

Specific things to focus on include:
- Lowering your stress level
- Getting plenty of good sleep
- Eating a plant-based diet
- Not smoking
- Not drinking alcohol
- Wearing sunscreen when you go outside
- Staying properly hydrated
- Exercising regularly

As previously mentioned, quantum energy healing can play a part in slowing down the aging process. By helping to harmonize your energy, you can become more resistant to life's stressors and naturally improve energy levels.

The Infinity Bloc, a device for charging any item with pure and dynamic quantum energy from Leela, has helped a man in his 70s start to regain potency in his five senses. After weeks of using the Infinity Bloc, he noticed his eyesight improving and his sense of smell becoming stronger than it had been in years.

An elderly man regaining his senses is just one example of how Leela Quantum Tech products can assist you with achieving your longevity goals. By using these products earlier on in life, you can start protecting yourself from the harmful effects of toxins that pollute our air, water, and food and ultimately cause our bodies to deteriorate.

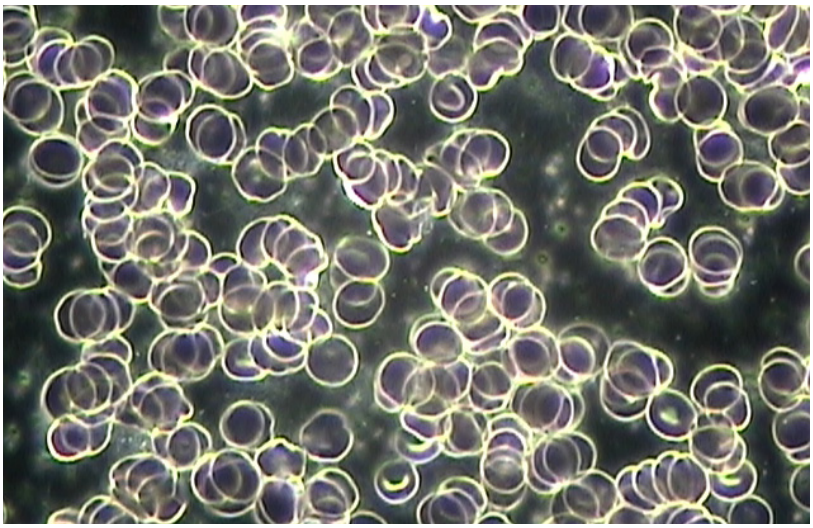
LIVE BLOOD ANALYSIS

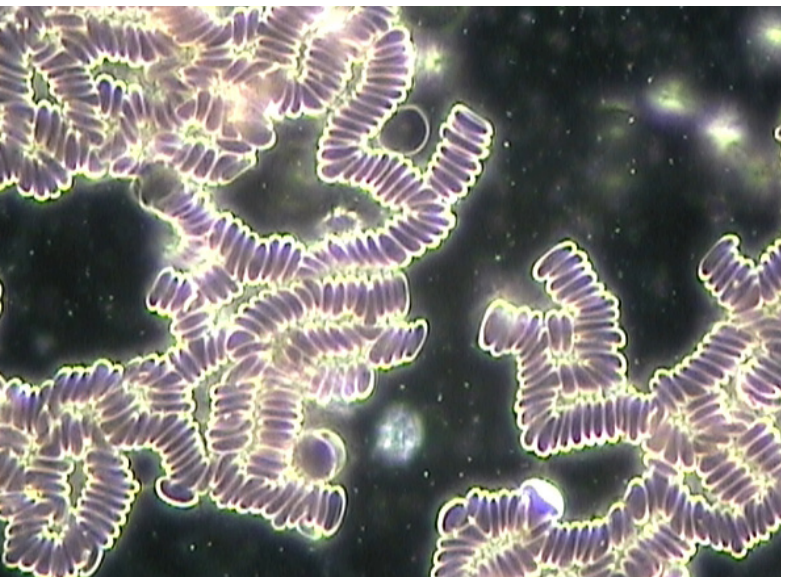
These photos are taken from a test subject and are representative of the incredible blood improvements seen in minutes in all of the placebo-controlled double-blind and single-blond study.

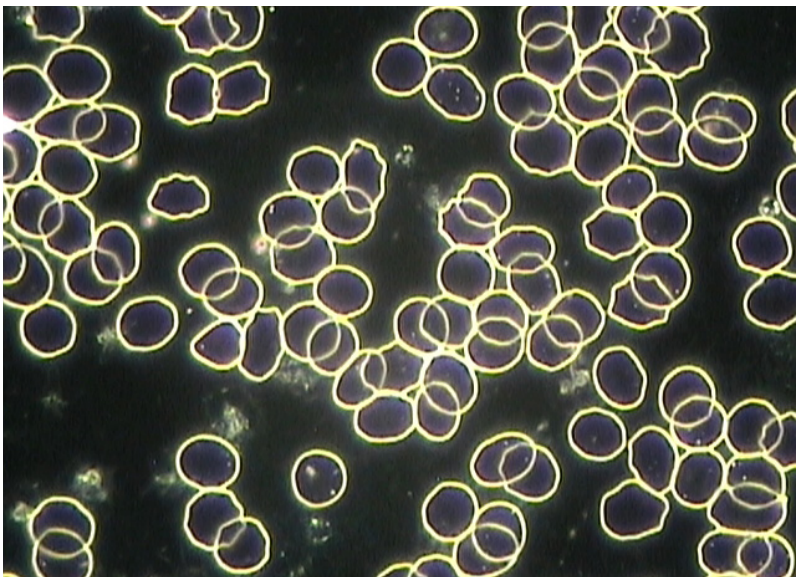
Right: Before (Baseline) Without Wifi

Bottom Left: With Exposure to Wifi

Bottom Right: Wifi Still on but with Leela Quantum Bloc







Can We Reverse Aging?

Some people want to live longer, but there are those who want to go back to being their younger selves. Unfortunately, we're not quite there yet, but there have been some breakthroughs recently.

- Babraham Institute in Cambridge announced a new technique that could potentially reverse the cell-aging process by 30 years. They were able to "reprogram" older cells in a skin wound to behave more like youthful cells. They also removed age-related changes.

- Molecular biologist David Sinclair and his team at Harvard Medical School were able to reset the ages of older mice to become their younger selves again. Mice with poor eyesight and damaged retinas could see again.

Scientists around the globe are hard at work on the reverse aging question, but it may still be some time before we have a safe, effective way to reverse aging in humans.

What About Halting the Aging Process Altogether?

We can slow aging and are somewhat closer to reversing aging, but what about stopping aging altogether? The idea of living forever and existing through the centuries is the stuff of fiction, but could it become a reality?

Halting the aging process entirely is probably not possible, according to a large study published in 2021. The scientists who worked on it concluded that we cannot overcome aging because there are too many biological constraints. They also stated that people aren't living longer because we've slowed the aging process, but because there's been a reduction in mortality at younger ages.

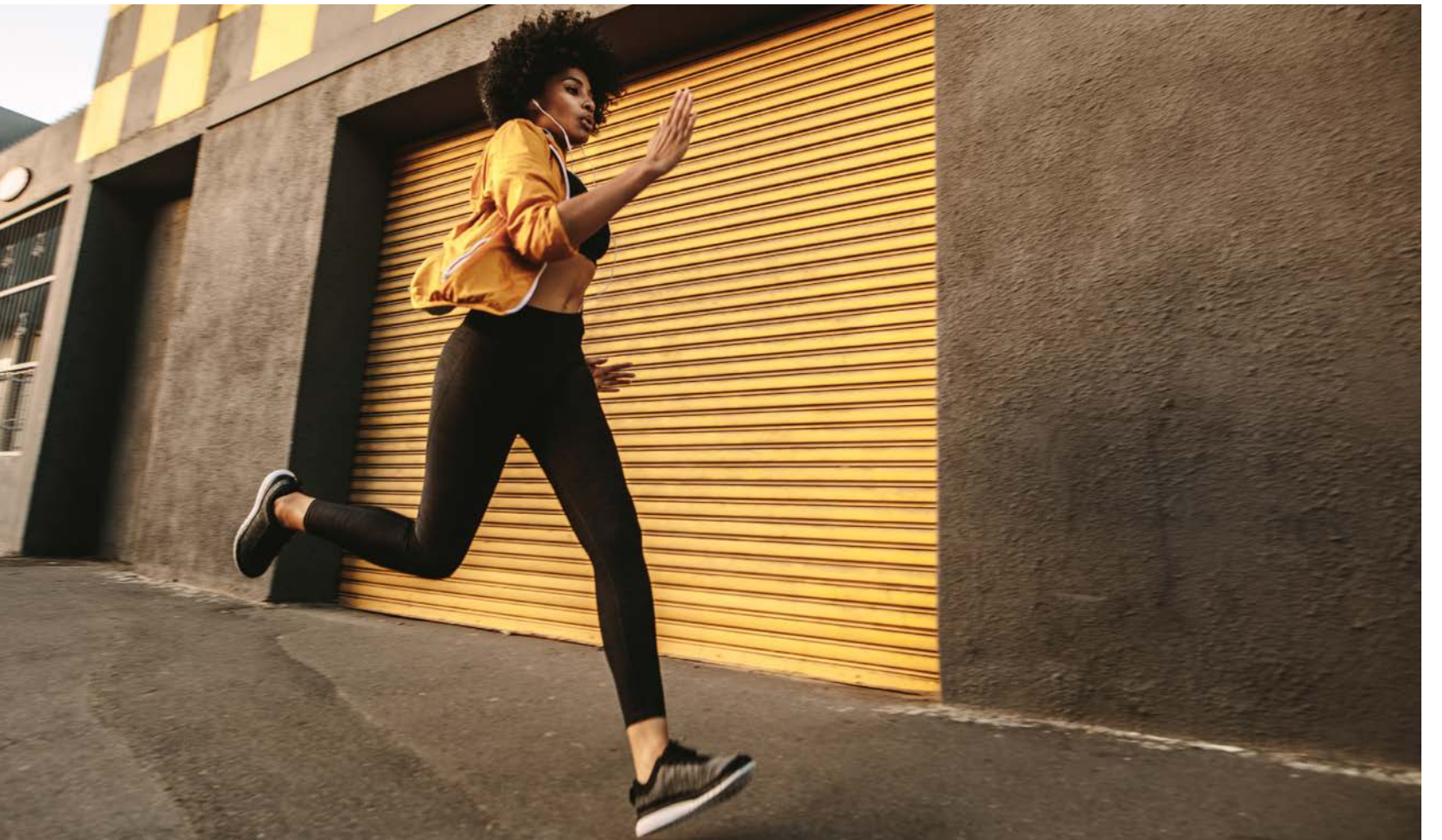
Despite the results of this study, researchers still work on the aging question and continue to make progress, little by little. However, keeping cells from aging altogether is probably the most challenging aspect of anti-aging research. Of the three questions posed (slowing aging, reversing aging, and halting aging), halting aging seems the most unlikely right now.

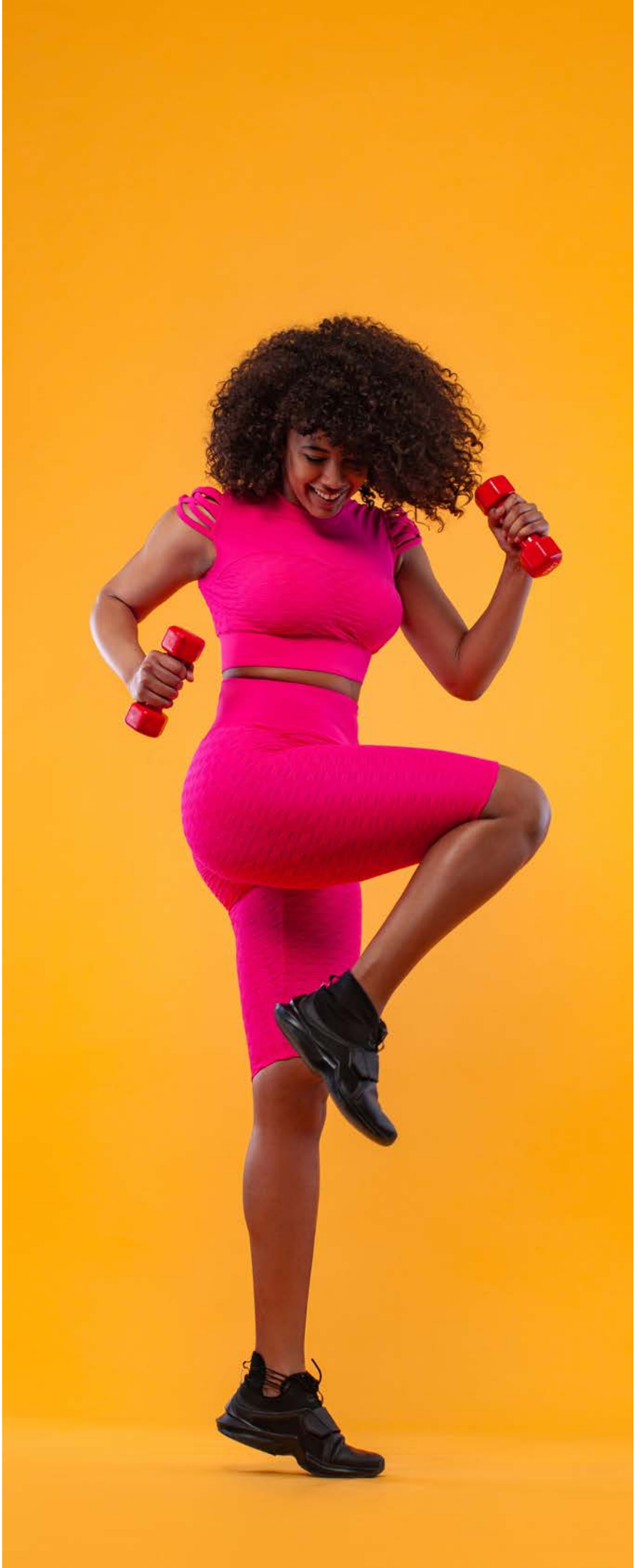
Other Ways to Slow Down Aging

Taking care of yourself has been linked to a longer, healthier life, but there may be other ways to keep yourself from aging.

Blue Zones: Hotspots of Longevity

One mystery of aging is found in the so-called Blue Zones. These hotspots of longevity are geographic areas where most of the population tends to live longer and be healthier than other parts of the world. These five areas were discovered by journalist and author Dan Buettner, who based the concept on the research of two gerontologists who had identified Sardinia, Italy, as a the region in the world with the high-





est concentration of men living to 100 years old.

The five Blue Zones in the world are:

- Okinawa, Japan
- Sardinia, Italy
- Nicoya, Costa Rica
- Ikaria, Greece
- Loma Linda, California, USA

People tend to live longer in these places due to certain lifestyle habits, like eating less meat, having daily rituals for dealing with stress, or having social circles that support healthy behavior.

Relocating to one of these blue zones isn't feasible for most people, though, so let's explore another way to possibly slow aging: carbon 60 supplements.

Carbon 60

Carbon 60 is a molecule that is, fittingly, made up of 60 carbon atoms. It was first developed for use in electronics but in recent years, it's been applied to medicine as well. It has strong antioxidant properties so some people have started using it as a supplement, particularly for anti-aging skin supplements.

Researcher Ian Mitchell specializes in Carbon 60 research and has developed a C60 serum. The serum can boost mitochondrial function to enhance physical performance and slow down aging. Ian has pointed out three specific benefits of C60 linked to aging:

1. It can create powerful neural pathways to grow your brain cells, and Ian's idea of binding C60 to a lipid actually helps the C60 get to your brain.
2. A 2012 research study showed that C60 can double the lifespan of rats. It made them live longer by reinforcing their mitochondria, which helps your body produce energy. Stronger mitochondria make your cells

younger, which has led Ian to refer to C60 as an anti-aging supplement.

3. Normally, when your muscles are firing, you can use between 25-30% of them. In a fight or flight state, you can reach about 80-100%. C60 can help you access more of your muscles, like the Olympic pole-vaulting team Ian worked with in 2021.

Quantum Energy

We're still figuring out scientifically what exactly quantum energy is, but we know that it can help restore vitality, boost our energy and consciousness levels, and put your mind and body in sync. Leela Quantum Tech, the makers of the "Quantum Bloc" technology, are using pure quantum energy not only to hack aging but also overall health.

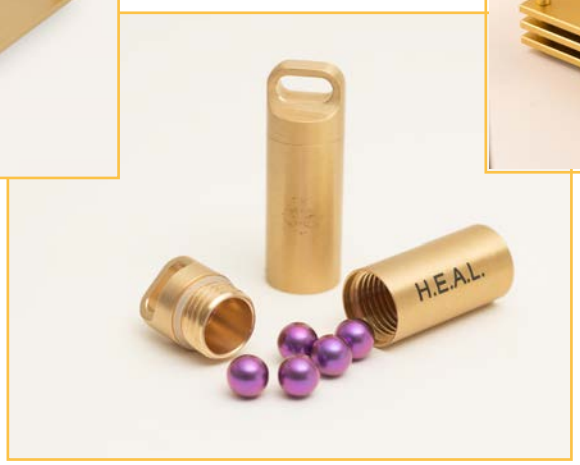
Several studies have been carried out on their Infinity Bloc, Quantum Bloc and other products, with encouraging results. Quantum energy was shown to decrease clogged blood cells, reduce allergic reactions, increase ATP production, reduce stress and parasitic load, and even optimize heart rate variability. It was also shown by the Emoto Institute and others to structure and optimize drinking water. In addition it helps keep electrosmog at bay by neutralizing negative frequencies. It acts as a sort of protective layer from exposure to electromagnetic radiation, even in electric cars where emf exposure is especially high.

While we may not scientifically explain in detail yet what it is or where it comes from, it's been proven that quantum energy affects health outcomes in a positive way.

In a more general sense, the effects of quantum energy can make you feel more energized, more resistant to stress, and more in control over your own body. Stress is a proven factor in aging, and many people still struggle to get it under control. By using products fortified with pure quantum energy, like those from Leela Quantum Tech, you help yourself master stress and feel more at peace, ultimately leading to a longer healthspan.

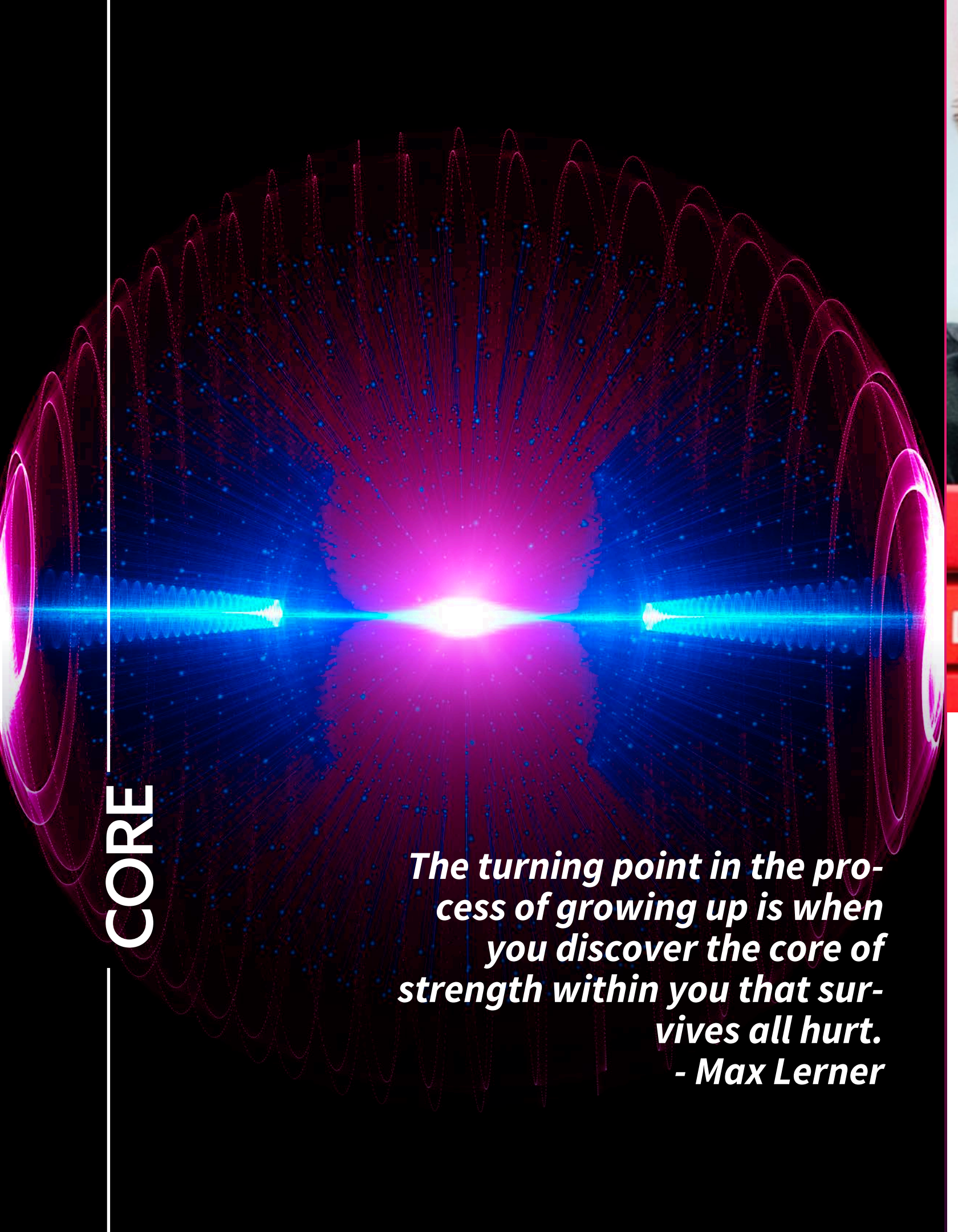
Conclusion

Human aging is a fascinating field of study that's constantly evolving. Scientists continue to look for ways not only to prolong human life but also to understand the underlying causes of aging. While there's still much to learn about this process and the nature of human longevity, we've certainly come a long way already. With advancements in things like quantum energy used for healing and vitality, who knows what we can accomplish?



About Philipp Samor von Holtzendorff-Fehling

Philipp Samor von Holtzendorff-Fehling is a coach, conscious entrepreneur, and energy healer. In parallel to a successful international business career he constantly worked through blockages and barriers that prevented him to truly connect with his true self. With that he started to also see energy fields and developed his unique skills as a healer, and he went through two decades of training in shamanic and other energy healing practices. During his business career he worked as an executive for several well known companies, including T-Mobile International and T-Mobile US where he served as Vice President. He's the founder & CEO of Leela Quantum Tech and Quantum Upgrade.



CORE

The turning point in the process of growing up is when you discover the core of strength within you that survives all hurt.
- Max Lerner

EXCLUSIVE INTERVIEW

MARK YOUNG

FOUNDER, CEO OF RYZE AGENCY, A FULL-SERVICE ADVERTISING & MARKETING AGENCY SPECIALIZING IN THE BIOHACKING SPACE

**Listen to this conversation on our podcast by scanning this QR code or clicking here*

Having been an entrepreneur and marketer for nearly 30 years, Mark has and continues to do and be onvolved in just about everything. A collector of experiences and knowledge, Mark makes it his life's ambition to try everything at least once. To quote his Facebook page, "Do everything." – Mark Young. Entrepreneur. Educator. Author. Philanthropist. Travel Nut. Mark holds many titles.

At the root of everything, however, Mark is an educator and teacher. Disassembling projects, campaigns, or even financial statements, Mark manages to reverse engineer a solution, then takes the time to teach anyone who will stop and listen. And it is no wonder, given the fact that he holds university degrees in nearly every discipline you can imagine. And if you ask him why, he'll simply reply, "Why not?"

All of that said, Mark's most admirable quality is the genuine concern and ownership he takes of his clients' businesses. If there were a way to give more than 100%, this is the guy would find a way to do it. He works the numbers, then works them again, reducing everything to a metric and finding ways to improve.

"Do the right thing for the client, regardless of the cost. It'll come back to you. I promise." – Mark Young

What got you into this space? Also, what keeps you going? What motivates you to keep going in life with making the impact that you're making?

Oh my gosh, what a giant question. So, I'll say two things. To address what keeps me moving in the marketing world there are two things. First, I have a family background in marketing, so that comes in my genes, I guess. But I enjoy more than just the marketing and the art and such. I enjoy the psychology of marketing and the psychology of consumer behavior. I have graduate and post-graduate work in clinical psychology, which was great, but I get to use that on a regular basis to predict human behavior and predict the interactions that people have with messaging and with language. So that's exciting to me. On a regular basis, I get

to interact with people I've never met and predict their behavior and watch outcomes.

To answer your question about what got me into specifically working in the biohacking space, is that was just my personal journey, and I think that is an unusual non-linear journey for most people, right? We get into this biohacking space for different reasons. For me, personally, I did not grow up in an environment where it was particularly healthy. I grew up in an Italian family where food was always plentiful, and everybody smoked. It was just this kind of crazy, unhealthy place. Into adulthood, I will say that I really began realizing that my health is my problem and it's nobody else's.

And I think that some epiphany I had in my early thirties likely gave me the desire to want to share that with everybody. The clients that we deal with here at Ryze, for the most part, they're clients that are helping people be healthier. They're these biohacking, medical device companies, or supplement brands. There are all sorts of different products that lead to healthier lifestyles. For me, to market them and get people to buy them and use them I almost feel like sometimes I'm saving people who are just lying across these metaphoric train tracks. They are waiting for certain demise because they're doing nothing to make their lives healthier. I get to share a message that makes their lives not just longer, but makes the life that they live in those years better. I get pretty pumped up about it.

Great answer. Would you say your ultimate mission is doing what you're doing now? Or do you have a certain purposeful statement that you live by and then you apply to the different avenues that you work on?

There's a book that was written many years ago by Bill Hybels, and he refers to it as what's called a "holy discontent." In brief, what negative thing about the world resonates with who you most? What is the one thing that drives you to action – above all things. Hybels argues that once you find that, do everything in your power to affect it.

I will say my "holy discontent," my one thing that drives me crazy is seeing people live in what I call psychological imprisonment. Right? It's that cage between their ears that keeps them in bad habits. It keeps them in this category of disbelief in all things like "I could never be healthy because ..." or "I could never go back to college because..." or "I will never be loved by anybody because..." They believe these negative statements. For many people absolutely erode any kind of hope: anything that would lead them to a better existence.

I laughingly say that I will die someday regretting the things I did, but I will never die regretting the things I didn't do, because I will try everything before I go.

I was a college professor for many years and I would hear students say things like, "I would love to visit New York, but I'll probably never make it there." I'd look at them and just say, "But you can get in your car and drive to New York."

This limiting belief system stops them from even thinking that's attainable. In my world, I believe anything's possible. I want to spread that message. I want more people to believe that there is so much more of a better life out there. It is true regarding

health. It is true regarding relationships. It is true to the extent that someone just wants to live a more robust life.

I want to be that voice. I want to help in that way.

I'm able to do this by running a marketing agency where I'm able to introduce products and services and messaging to people that help them overcome some of this disbelief. Regarding some of the products we represent, people are just floored. They think "I never thought I would have a good night's sleep because of this," but then we were able to help them find something – with a non-pharmaceutical solution. And to me, that's the exciting part about what we do.

Holy discontent - I love that. It actually reminds me of a quote from Aristotle where he says, "Where your talents and the world's needs cross, there lies your vocation." It sounds like you're saying that your talents are marketing and psychology, and you've found a way to use those to help people. You're going out into the world and tackling the problem of that "cage between the ears," as you say.

Unfortunately, too many people need to be marketed to. You practically need to talk them into believing that they can do something. So, from a marketing perspective, a lot of times we're marketing to people that just need to overcome their own negativity.

It's true. And like you said before, the limits that people impose upon themselves can just be so detrimental. They don't even realize it. But, like you said, anything's possible.

So, going back to the approach of healing and helping people with their health, you mentioned getting people away from pharmaceuticals, and I just want to harp on this for a second by asking what your approach is to healing and how is it different from the traditional approach? Maybe the pharmaceutical approach or the treatment-based medicine approach? And how do you incorporate that into your marketing?

So, I don't want to go on a tirade against pharmaceuticals. Pharmaceuticals have their place in the world; no questions asked. If my arm gets cut off, please provide painkillers, right? But the reality is that I believe that we live in a society where we've created a healthcare system that is more accurately a "sick care" system - and the system is designed to create dependency. Unfortunately, I will poke many people in the eye when I say that we have become a pill popping generation of easy solutions. We take pills for darn near everything.

I was having a conversation the

other day about how type 2 diabetes, for all intents and purposes, is a behavioral disease. The problem is we're so busy just pumping people full of Ozempic that we're not stopping to help people change their belief systems (and, thus, their behaviors). We need a system which says that I can control this and I'm not a victim of a disease. Rather, there are things I could be doing to fix this problem. But we're too busy serving Coca-Cola and French fries to people – rather than fixing the problem.

I want people to realize that these things can come under control. And, like any positive reinforcement feedback loop, one win leads to another win, which leads to another win.

We know that, many times, one negative thing leads to another negative thing; a single failure can lead to the belief that the next thing is going to be a failure, and so on. But success works the exact same way.

I want people to see that life doesn't need to be lived on pharmaceuticals. There's a lot of things that can be done - even using supplements or herbal remedies - that are non-pharmaceutical.

I'll go on a quick science tangent and say that pharmaceuticals are intended to trigger protein functions in the body, right? They are intended to trigger actions or non-actions, to turn on or to turn off different protein systems in the body. And, we all know that the entire body is made up of proteins. Here's the problem though: We only know of and have named approximately 5% of the nearly one million proteins in the entire human body. When a pharmaceutical interacts with one of those proteins, we call it a success. But we must recognize that we do not know how this same drug can interact with the other 95%. In the pharmaceutical world, we call those side effects, right?

For instance, someone is doing one thing to keep his blood pressure in check. It just so happens that this one thing is triggering a hundred other things for reasons unknown. Now he can't sleep or has a chronic cough. Now he's dealing with a dry mouth. Or weight gain. Or lethargy. All of these other "side effects" start having an effect. We've gotten too accustomed to side effects and shouldn't be treating them as "just part of life."

I'll add, we only know of the side effects when we are symptomatic (i.e., the cough, the weight gain). What about the issues they may be causing which have not been detected yet? We call those "recalls."

We must remember that science is always evolving. It's in a constant state of question and answer. But to the extent that we can let the body do what it is that the body was created to do, we're better for it. It was created to survive. It was created to heal. We have, right here on our planet, the majority of the things that we need to keep the body in a functional space. Yet, I think we've become a very lazy generation and we have begun accepting health catastrophes as just a part of life. I don't think that needs to be the case.

So, to the pharmaceutical world, I say, "thank you for the things you've done, but would you please make enough room at the table for the rest of us to have a voice?" There's more to be said than what's being broadcast by big pharma.

I totally agree. I think part of the problem is people have neglected the foundations and the truth that have gotten us far enough to even take the time to research and form medicine the way it has been formed. But because they've gotten themselves

so far away from the truth, they don't know how to go back to the roots. And it could be as simple as doing just the most simple diet or whatever the case may be. And that's what's so fascinating about biohacking: It's a mix of all the future technologies and also the roots of what makes us who we are as humans, being rational and being able to make choices and disciplined choices.

I also wanted to ask one question about your turning point in your life when it comes to taking this viewpoint and this perspective. What is your history with your biohacking experience and how did your perspective change towards this more holistic approach?

So, I have a little bit of an advantage in some respects. I fell into some of this because my father owns an advertising agency based in Detroit and we do a lot of partnership marketing with various brands where he and I both work on projects together. So, he stumbled into working on some of these things first, such as red light therapy, a long time ago. I was introduced to it through that, which was interesting, because I didn't know much about that space and started learning more about it.

Strangely enough, my professional background was actually in higher education. I mentioned I was a college professor and have a background in clinical psychology. I later moved into campus administration and ran nursing schools and various other allied health colleges.

In retrospect, it is funny to me that the academic programs at all of these schools reported up to me. I was the Senior Vice President of Operations at my last college group. So, I guess I am partially responsible for training a lot of these doctors and nurses. Then I ended up coming upon

this side of the industry

The first biohack I ever personally experienced was the Atkins diet, I guess; that high protein, high fat, carbohydrate deprivation diet, - which nowadays we call it keto, or we call it paleo or whatever the current buzzwords are. For some people it's amazing. Some people it's not, but marketers sell it as perfect for everybody. That's not accurate, of course, but it worked very well for me. I ended up losing weight through that diet.

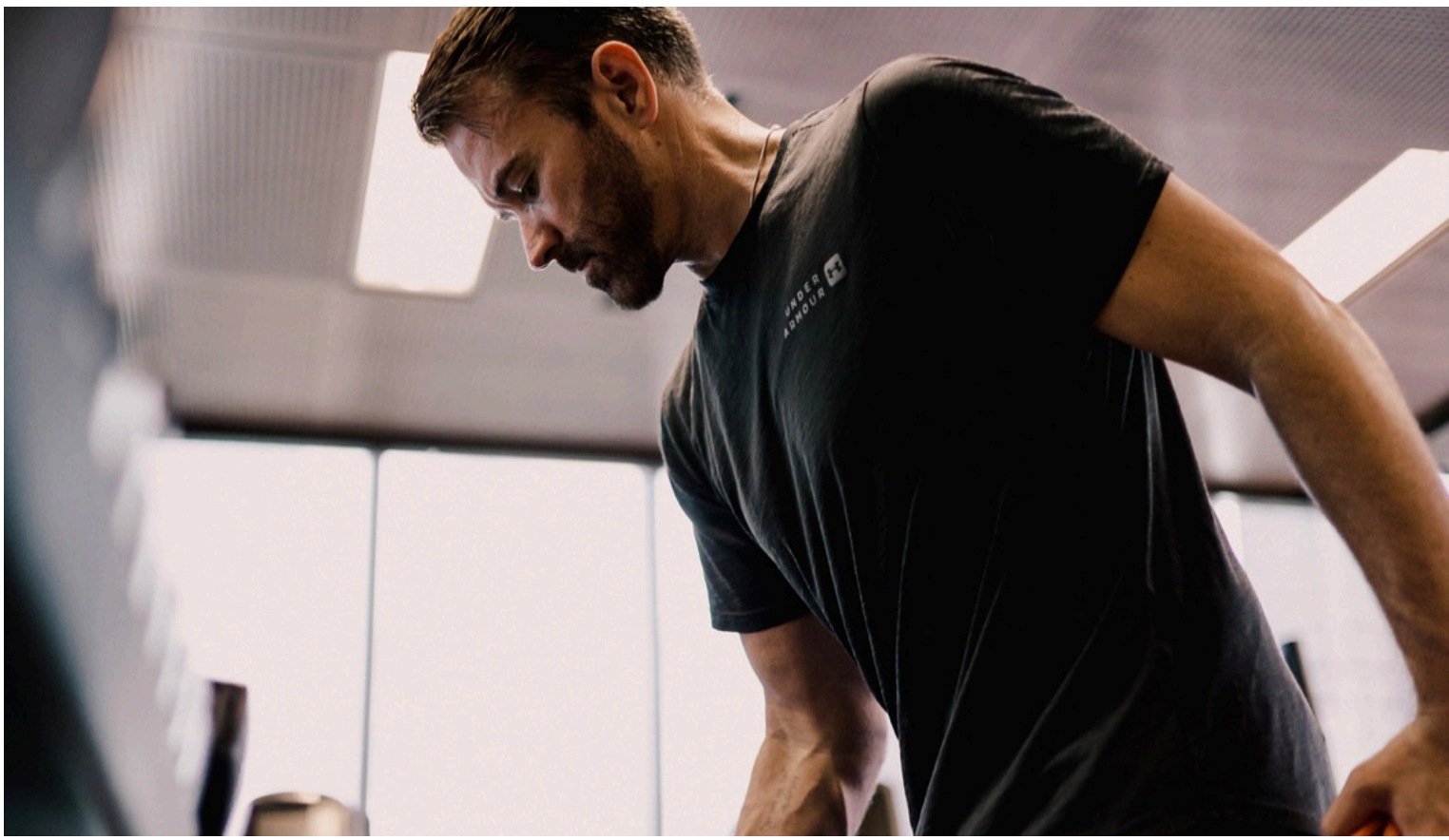
Again, I grew up in a family where health was never a conversation. We, unfortunately, are victims to our families of origin because we learn our first set of norms from them - until we learn otherwise. From that perspective, what I'll say is having had that experience with that Atkins diet and then getting exposed to the red light therapy message over ten years ago, I thought to myself how effective this stuff could be. So, here I am running medical schools, but hearing about red light therapy and how it actually impacts detoxification in joints, relieving pain. It wasn't part of our curriculum, so I was intrigued.

In retrospect, it almost sounded like snake oil, right? It sounds like this voodoo magic, but I'm hearing real people talk about how it really works. Having tried it, I can say, with confidence, that it worked. I still have one of these devices in my office.

Later, I ended up getting involved with a company called Zona Health. Zona Health manufactures the Zona Plus, which is a biohacking device which uses isometric hand grip therapy to lower blood pressure. It's amazing. The common response to hypertension is a pill. That's what everybody does to lower their blood pressure. Then, all of a sudden, I learned that we can lower blood pressure without pharmaceuticals. Clinically proven. I was hooked. This is crazy talk.

From there, life has begun to unravel into this glorious menagerie of impossibilities. I suppose I quickly became part of the "biohacking cult" and have focused my entire career on it. I own a few brands myself, and have made investments in others, but the commonality is always about health, fitness, and beauty. Naturally.

Now, having spent time with and becoming friends with so many people in the space, such as Dave Asprey, Ben Greenfield, Stephen Cabral, Nicole Beurkens, and many others - and getting to know these guys personally - it starts to demystify the whole message. Once you start unraveling this mystery and peeling this onion of personal responsibility and health, it all starts to harmonize. It's not just one thing. It's the first thing. And then it's five more things. Then 20 more



things. Then, all of a sudden, this whole idea of biohacking turns into bio-stacking.

You're making all of these behavioral changes, but then it starts to become a mindset.

I was a former fat kid, I say. I grew up in a world where there was limited talk about the control you had over your own health and fitness. Fitness wasn't a priority, actually. I wasn't an athlete. I was the smart kid. So, why would physical fitness matter? Looking back, it was very defeatist.

Clinically speaking, I was obese, but for all intents and purposes, nobody who looked at me ran screaming. I wasn't a contestant on the Biggest Loser or anything, but nevertheless, I wasn't healthy. As I grew into my twenties it was not something I looked at very closely.

Deprioritizing health, I was focused on my education and my career and these types of things well into my thirties. After a torn meniscus, I became a runner though. It was a turn of events that started me to begin questioning many of my health choices. "If I could be a runner, what else could I do?"

I became this health-focused person. I laughingly say now, at 47 years old, I don't miss a day at the gym. People say, "Oh, you're so committed." It's not that I'm committed to going to the gym; it's because that's where I feel best. That's where I am reminded of what I can accomplish. That's where I learn, over and over, to slay my dragons. I don't begrudgingly pack my gym bag in the morning. Rather, I look forward to that time of the day. I excitedly walk out of the office - regardless of what needs done - because it's a priority in my life. And it's not so that I look good, it's because that's when I feel best.

I think for some people the gym is a penalty: the price they pay for what they eat. For me, it's not

like that at all. It's a celebration of the things that I can do. I'm excited that I can go to the gym. I'm grateful for the physicality. I'm grateful that, at 47 years old, I'm outlifting and outperforming people half my age. Yet, at the same time, it is all about a belief system that I overcame nearly twenty years ago. My former self would have thought this life was impossible.

Dallas:

Wow. Yeah. We all have a story, in a way, from pain to purpose - especially when we're on this topic of biohacking.

You mentioned in the last part of what you were saying about going to the gym and how it makes you feel. I just want to harp on that for a second because biohacking, I think, has this bad connotation with some people. There is this connotation of being very selfish – a community filled with very self-centered people focusing on themselves and everything. But I think it's really a form of self-care that keeps us at our most optimal state so that we can provide the best service to the world ... the best service to our communities. When we're functioning at our best, when we're taking care of ourselves, we're able to be that best person that we can be in all the roles that we have. So, talking a little bit about biohacking, can you take me through your daily routine and what habits you strive to always incorporate?

Mark:

Well, people in our own office laughingly talk about the biohacking community being a cult. It is quite a closed circle, I'll agree. But we need to change that. We need to be talking about this to the general population.

About my own routine, you may not be shocked when I tell you both my home and my office look like a mad scientist's lab. I laugh when people visit. There is always this puzzled look followed by: "What in the world is this stuff?" And I respond with, "What? Doesn't everybody have this in their house?"

So, what are my favorites? Well, I can proudly tell you that some of my favorites are brands that we represent at Ryze Agency.

- Zona Plus – I mentioned my association with Zona Health earlier. In years gone by, my blood pressure took an unexpected turn for the worse. Putting my money where my mouth was, I picked up a Zona Plus and began doing what I had been telling thousands of people to do. And it worked! I would live without it now.

- NanoVi – Sitting right beside me, I have a NanoVi device. It is a device which uses electromagnetic energy to assist in the proper folding of proteins for optimal functioning. I use it for prevention of protein malfunction, but also for athletic recovery.

- Vatellia Life – I started my own supplement company, partnering with a formulator friend. We create supplements which focus on specific indications – taking the guesswork out of supplementation for the average person. It's everything from nitric oxide support, to immunity support products, digestive probiotics, and so on and so forth.

- Beam Minerals – My go-to supplement for mineral deficiency. I can't even explain how this makes such a difference. Most of us are mineral deprived, but these products are great as nutritional supplements, as well as fixing cramping and muscle aches.
- Therasage – What would life be without a personal sauna and red light therapy pad? I mentioned my early beginnings with red light and now, working with Therasage, it feels like my journey has come full circle.
- Hapbee – Always under my pillow is my Hapbee sleep pad. Can't sleep without it.
- PowerPlate ...
- Carol Bike ...
- Spermadine ...
- Energy Bits ... (because who doesn't eat algae?)

I could go on, but you get the point. These things have just become a part of my life.

The truth of the matter is, to the general population, we look bizarre. But I look at people who are sitting at their desk eating McDonald's the exact same way. I think, "Oh my gosh! You're just sitting here at your desk poisoning yourself."

You said something a minute ago; I have to piggyback on it, Dallas.

You made the comment about being in peak performance meaning that you're able to bring your best to the world. I love, love, love that phrase. And as a marketing agency (that specifically works in this natural health and wellness category), I owe my clients that; my goal is to always bring my best to my clients. If I'm eating gross stuff or I'm not working out, or I'm feeling lethargic or brain fogged, or whatever's going on in my own personal life, how do I bring them my best?

How do I authentically tell people that they should be using these healthcare products if I'm not doing it myself?

Our social media director recently made a comment about how when anybody meets me, they know I am "one of them." I hear stories all the time from business owners who have tried to hire an agency and become frustrated. They spend half of their time trying to explain the industry and the science to their agency. The truth is that I (we) understand their products well beyond what the average person does. I'm one of them. It really gives me an insider perspective into our clients and also into the consumer.

Yeah. I totally think that's a great way to walk the talk.

So, it seems like you have a lot going on and are very busy, which is good. Busy is good. But while you're working on all these multiple projects now - and in the early days - how do you remain balanced? How do you just remain mentally, spiritually, and physically balanced?

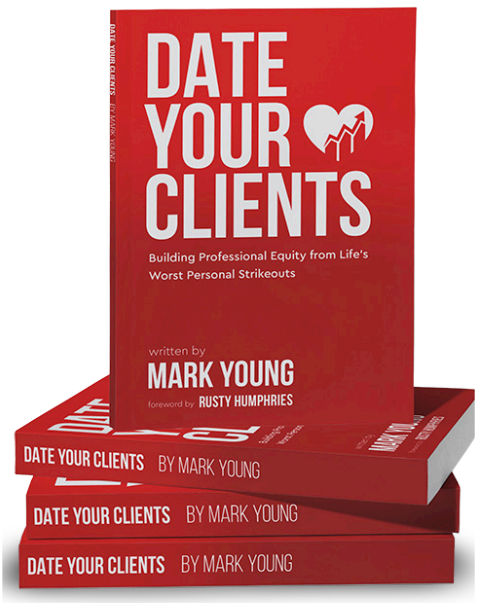
Yeah, that's a great question too, because a lot of times people get overwhelmed with it, and when we get overwhelmed, we tend to just shut down.

For me, I'll say that one of the things that's really interesting is that I'm a recovered workaholic. I am the guy who used to be the first one at the office and the one locking the door at 11 o'clock at night. I was that guy, and I learned it wasn't healthy because I would never work out. I wouldn't even eat. I became infatuated with busyness. And I really thought that was a badge of honor. We have started to celebrate people who are busy and busyness has become confused with heroism in our culture.

I really want to speak against that and say that busy is fine, but balance is better. I can do more in a short day than I can in a long day, as long as I'm taking care of me. I go to a HIIT gym by my house, and there's usually work left on my desk when I go home at night. And I have come to realize that it will still be there in the morning. I'm not going to stay at work and kill myself. I'm going to go work out or I'm going to go out to be social.

I live here in South Florida, just like you do, Dallas. I play beach volleyball and I'm not going to say no to it. I'm going to go play volleyball on the beach - or I'm going to travel.

One of my favorite things to do is to hop on an airplane and go someplace. I work while I'm gone, but it's taken me a long time to not feel guilty about not being in the office constantly. From a balance perspective, I've learned that I can write a client proposal from a hotel room just as effectively as I can write it from my office. I think people need to pay attention to that type of stuff. Taking care of yourself is great, but if I don't enjoy the days I get, why would I want more of them?



It's not about long life, it's about good life.

For sure. And I think the pandemic kind of highlighted a lot of what you're saying with taking care of yourself and being able to work a more flexible schedule and get more done.

You've listed yourself in your bio as a philanthropist, and I want to talk a little bit about this because biohacking, like I mentioned earlier, has that connotation sometimes by the majority as being more selfish and everything. But we discussed that it's actually just taking care of yourself so you can be a better service to the world. So, with philanthropy, what are you doing and how are you tying that in with your mission of getting this new, healthy way of living out to the world?

Great question, Dallas. I have mixed emotions about you bringing that up because my team actually mentioned something about that to me yesterday. They said that they need videos of me to go along with my philanthropy message. But, I told them that I don't want a video of me doing that because I don't want people taking pictures of me serving, because that's not the idea.

So, what would my message be to the world on that? Without being self-promoting, I've been actively involved with my church and actively involved in global humanitarian projects for decades. I've led dozens of teams all over the world, doing relief throughout all sorts of places throughout the world from Africa, South America, you name it. I've also been involved in plenty here at home as well, especially in the cases of hurricane relief here in Florida and the Gulf Region.

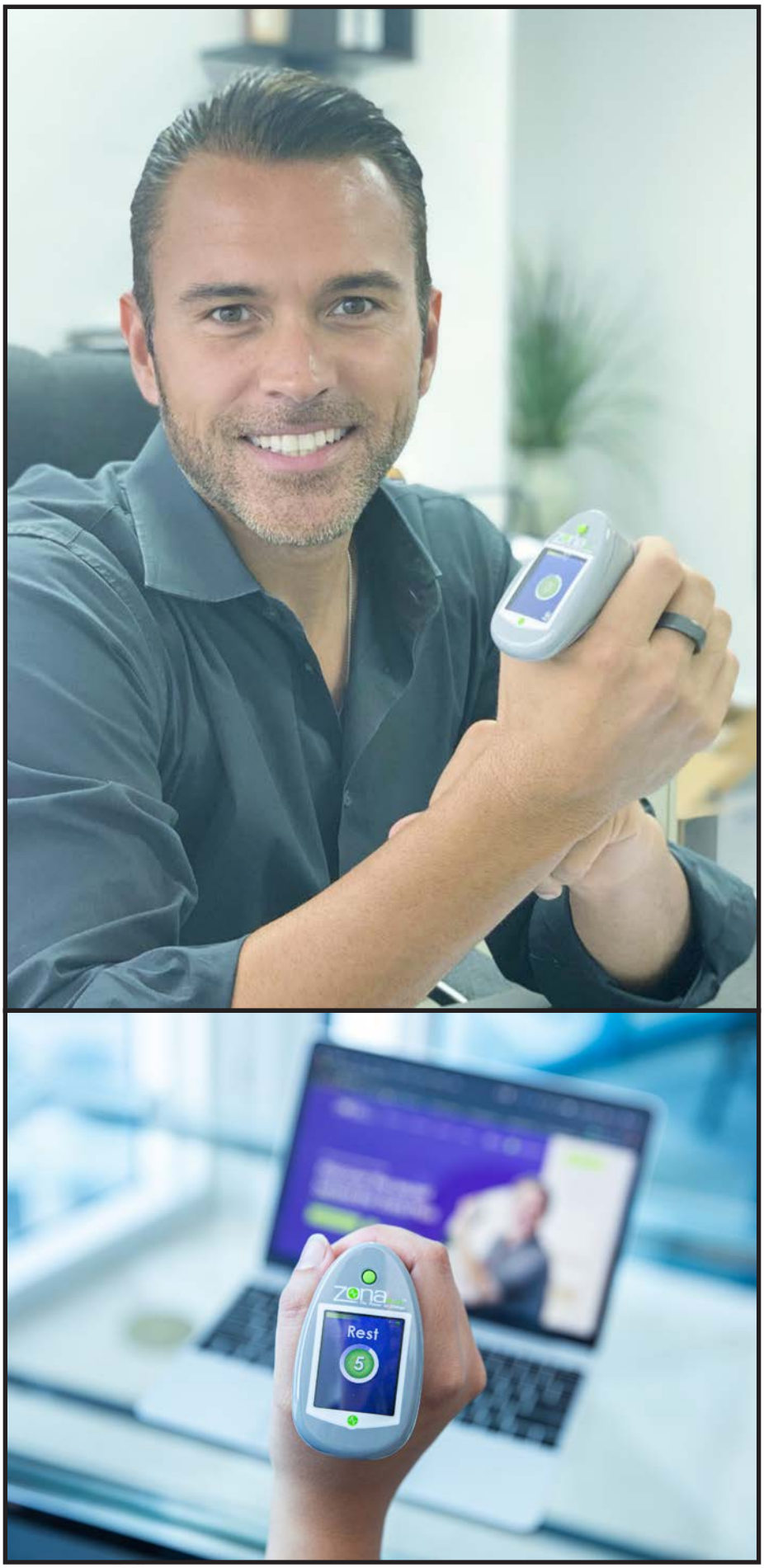
My heart is always bent towards benevolence and making sure that we are living generous lives. But I want to add that over the

course of a person's life, our voices tend to change. In that voice changing, I would say over the last 25 years, my voice has very much been that of an activist. I want to be involved. I want to do. If there's a catastrophe, you're going to find me somewhere in the middle of it trying to help. While I will always participate in those things, my voice, I would say, has matured. Over the last few years, I have grown to realize that I actually have a more powerful voice now. My voice is now focused on recruiting others to make those changes and getting other people involved in those things.

Part of that message, I believe, is speaking truth to disbelieving people. There is often this "cage between our ears," as I call it. This prison that makes people live in disbelief or negativity. My message now, in an effort to make the world a better place, is helping people overcome that cycle of negative belief systems. I'm not talking about inspirational Instagram posts. I'm talking about wrestling those demons and realizing that people stay in those negative belief systems for lack of knowledge.

So, from a philanthropy standpoint, I'm still very active in the things that I always have been, although my priority right now is to use my influence more than my hours or my money. How can I use my influence in that respect? I've been given the ability to speak to larger groups of people, and in that respect, I want to make sure that this message of overcoming is what's heard. I want other people to be inspired to unlock their potential and learn to bring their best versions of themselves to the world every day. To do that, I first must bring my best version to the world – every day, in every way. It has an exponential impact.

Yes, for sure. I totally see the value in that. If you could tell



someone a simple method or element that they could add to their life that would just change them for the better, what would it be, and why?

Start with the basics. Take a walk after dinner. Do something simple. Get the calorie burn. Support digestion. Clear your head.

The reason I use that as an example, Dallas, is because people are often overwhelmed with the number of ways they can start. They are marketed with products and programs until their heads are spinning. Too many people just don't know where to start on this journey to self-improvement. It feels too unattainable or too other-worldly to them.

My message is to simply start with the easy stuff.

I am assuming we're talking to the average person, of course, and not the biohacking community, but many people are overwhelmed by the prospect of losing as little as five pounds. Dietary changes can seem overwhelming and feel like restrictive barriers. Thus, we get crash diets and "get thin fast" solutions. The best diet is one that can be maintained though. And, for some people, that is just one decision at a time.

We don't need to get into conversations about peptides and all this. Just take a walk. Start somewhere. Do something, but start small.

If a person doesn't know where to begin, first of all, call me. We'll talk. But aside from that, there's no reason to try to get the grand slam on the first hit. First get on base.

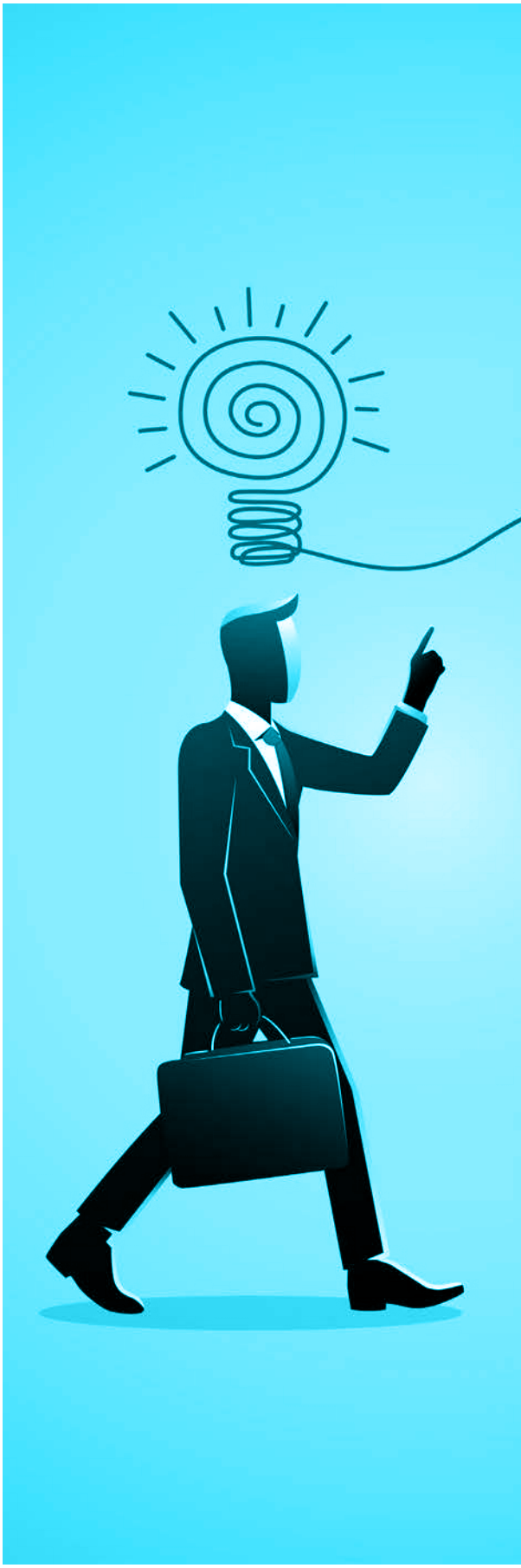
I have a cousin who is one of those "all in" people. If she is going to do anything, it is going to be "all in." And by "all in," I mean full immersion. And it lasts a week. Every. Single. Time.

Totally. To kind of piggyback off of that, a lot of people, I think, start something and do something small, but they don't necessarily have the muscle and discipline to keep it going. I read a book that changed my life, The Slight Edge by Jeff Olson, and that just got me so interested in building up my discipline to make those small, disciplined choices every day and to build myself up. But how do you get someone, in your opinion, to build their discipline up to be able to master that good habitual way of living?

We talked earlier about that pattern of failure, versus that pattern of success, and those vicious cycles that begin. If I do something and it's sustainable, the next thing becomes that much easier and the next thing becomes that much easier. And, in time, all of these things begin to pile up on top of each other. One success leads to another success, right? If I start getting disciplined about a walk after dinner, maybe calorie counting seems better, or maybe more salad seems better. Let those things build on each other in small ways. You'll be surprised at how they just become habits because they're not terrible.

I know people are soon going to be signing up for those gym memberships for their New Year's resolutions. And the intention is great, but with the survival rate of resolutions, isn't it better to just find something – anything – that is sustainable.

That's a great point. Sustainability, because so many people just start a huge project and then they just become overwhelmed instantly. I think a lot of people take that approach of just taking on too much because of the impatience that our society constantly pushes on us – it is this instant gratification. You have to have it right away, and it has to be done right away. You have



to write seven books and be a master author and all this kind of stuff. But it's gradual buildup that leads to success. It's a lot of things behind the scenes for the people that are successful that we don't see.

To talk about the recent pandemic, what did you learn from the pandemic and what advice do you have for the people that are coming out of this pandemic?

Well, in fairness, Dallas, we both lived in Florida, so I'm not sure we were ever in it.

Ha ha, yes, we were very lucky.

I learned a lot of things over the last few years, but what I saw most throughout the pandemic is the fact that Covid exposed the message that healthcare is about personal responsibility. We've heard so much chatter about hospital care and vaccines and such - all of these things people fight about. As the curtain falls on this scene, however, it doesn't matter whether I take a vaccine or whether I don't ... or whether I treat my Covid one way or treat it another ... or whether or not I stay on lockdown ... or wear a mask. At the end of the day, what it boils down to is that people have realized that their personal health is their own responsibility.

What I'm seeing culturally is that people are starting to realize this point; people are waking up. People are realizing that failed medical systems cost the lives of patients, not doctors. The price of malpractice is my life, not theirs. People are asking questions – finally. People are starting to realize there's a personal accountability. It's refreshing.

Additionally, I think people are making better choices with their diets. I think people are making better choices with their exercise. I think people are looking for natural alternatives, because perhaps the pharmaceutical industry has been exposed a bit. And, while all of that information was all available prior to 2020, I think it's all ended up on the stage and people are being forced to make decisions.

Some people won't change. It is what it is, right? Ultimately, what I learned through the pandemic was a reinforcement of the things I already believed. And I believe in the natural state of debate. Debate should do one of two things: It should either open your eyes to the fact that your former opinion was wrong, thus changing your opinion, or it should make you more resolute in the opinion you already held. I learned that I'm more resolute in the opinion I already held. Now I'm 100% percent convinced about anything I believed about the healthcare system and the way that we need to be dealing with our own bodies and minds. I'm convinced of it now because they've proven it to me.

Right, and you hold an important mission of getting this type of perspective and this type of thinking out there. So, my last question is, where do you see the future of medicine in the next few years? And where do you want to be in that part of that journey?

Well, I love that question. I sit on the board of directors for the University of Integrated Health. By sitting on the board of directors for the University of Integrated Health, I hope to see the functional medicine space, the integrated health space, getting a bigger voice in the conversation. People are turning to these types of alternatives. People are talking about systemic issues like inflammation. They're talking about detoxification. They're talking about these natural solutions. I want to see us put out graduates to advocate for this type of healthcare. I'm proud of that.

Now, where do I want my voice? What do I want the future of medicine to be?

I want it to be honest. And I want there to be a fair and balanced voice out there. When surgery is necessary, let's do surgery. But when it's not, quit selling it.

When pharmaceuticals are necessary, let's use pharmaceuticals. But when they're not, let's help people find natural, alternative ways they can deal with whatever ails them.

This references physical health, but it also involves mental health. We are so fast to prescribe antidepressants. I read recently that one third of America has been prescribed some sort of antidepressant or mood stabilizing drug.

What does that tell you about the pervasiveness of pharmaceuticals? And the truth of the matter is that most people don't have a mental illness that's causing that type of debilitation. Most people just have some life situations that need to be fixed, but they lack the discipline, or the skill, to fix them. And because of that, it's easier to go on a psychotropic than it is to actually fix the problem. Think of the pervasiveness of painkillers and how it becomes a lifestyle. My gosh, it doesn't have to be.

It really doesn't. You're so right. I'm sure you know this because you come from the marketing sector. I'm not sure if it's called the "curve of acceptance" or the "law of marketing" or however you want to call it, but if new technology or new things are introduced, there's a curve that looks kind of like a regular bump or hill. And in the first part of the curve, there's the early adopters, the early catch-on people that are trying it and sharing it. And then there's the second group of people that catch on as the curve moves up. And then there's the majority. Now it's like the new thing. Then there's the laggards that come onto it on the lower part of the curve. But what that reminds me of is that this stuff that we're talking about that's so futuristic and helpful with everything is kind of over clouded by the treatment-based medicine, but this stuff is the future. Right now it's in this part of being laughed at or ridiculed. I think it has to go through that process and then eventually it's going to start to take place in the world, take its place at the table, as you said earlier.

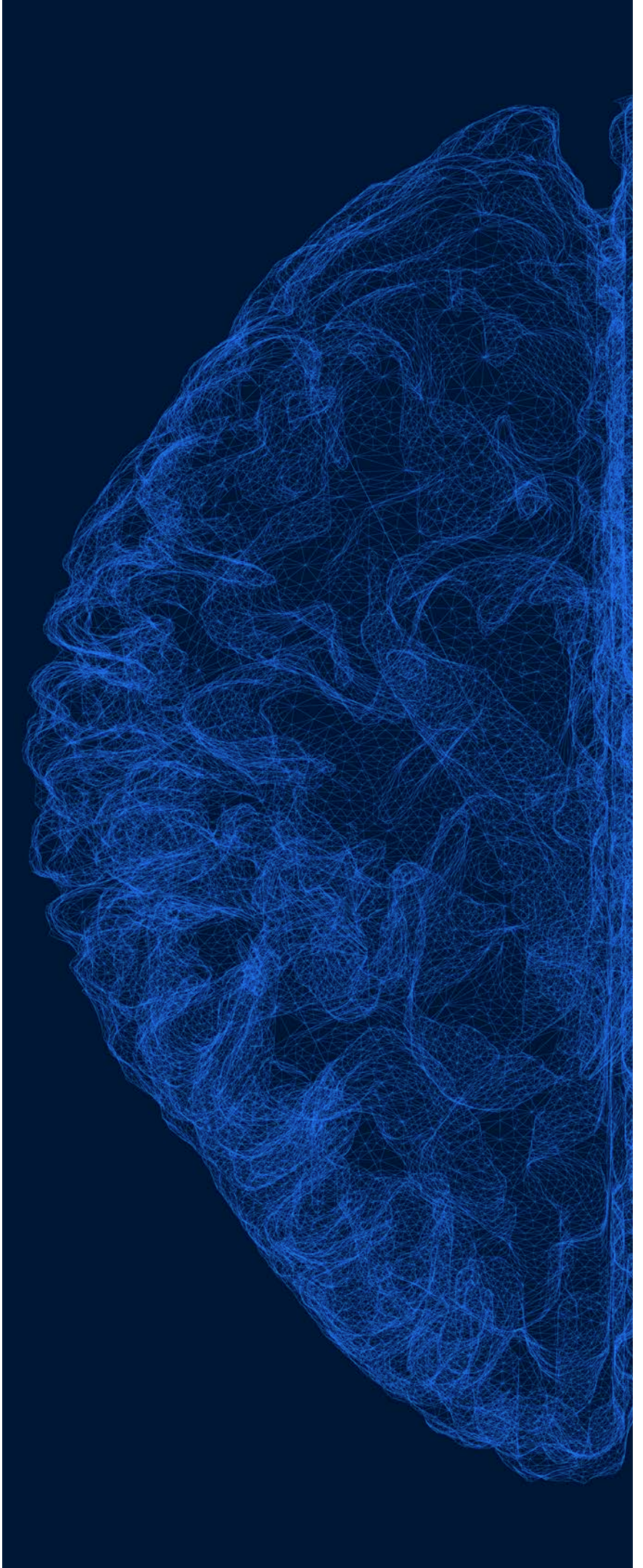
I think that's exactly what it is. There will be an adaptation period and we're the early adapters potentially. Until this stuff becomes mainstream, and that's where the future of medicine needs to be. I'm not advocating for the destruction of the current healthcare system, I'm just advocating for an equal voice. I was talking to a doctor the other day, he's a functional medicine practitioner, and he made a comment that resonated with me. He said, "Well, I work in the functional medicine space, so it's expected that I'm poor."

He was just saying it kind of laughingly. He's got a nutritional supplement that he was trying to launch, and we were talking about what that takes in terms of funding. And then he laid that line on me about being poor because of his space of medicine.

It's so crazy, because think of the people who go into medicine. Certainly, many love medicine, of course, but it's expected that doctors make fortunes - but that's only true for some types of doctors. Talk to a chiropractor about the fortunes that they make. Chiropractors are always trying to do something to make additional money, because there's just not money in it.

I was at a mastermind group last year and one of the comments that was made was that in the medical profession, there are only three universities in the entire United States that require a nutrition class in their curriculum for MDs. I thought, 'That's got to be a joke, right?' Somebody stood up and actually named them and said only one of them requires an entire semester and that the others are just a chapter.

So when I'm having issues with health, who do I talk to about it? Your doctor, of course. But, for me anyway, I know more about



nutrition than he does. He's been trained on the food pyramid, which we've proven is just bad science.

Right. And part of it is I think everyone gets so specialized in some area of knowledge that they lose grips on all the other ways that things connect. Right?

Absolutely. Specializations are amazing, but the problem is that we need to acknowledge that nutritionists also hold a place in that conversation. And functional practitioners hold a place in that conversation. I'll say it again, we've squeezed a lot of these people away from the table and now we're not having good dialogue.

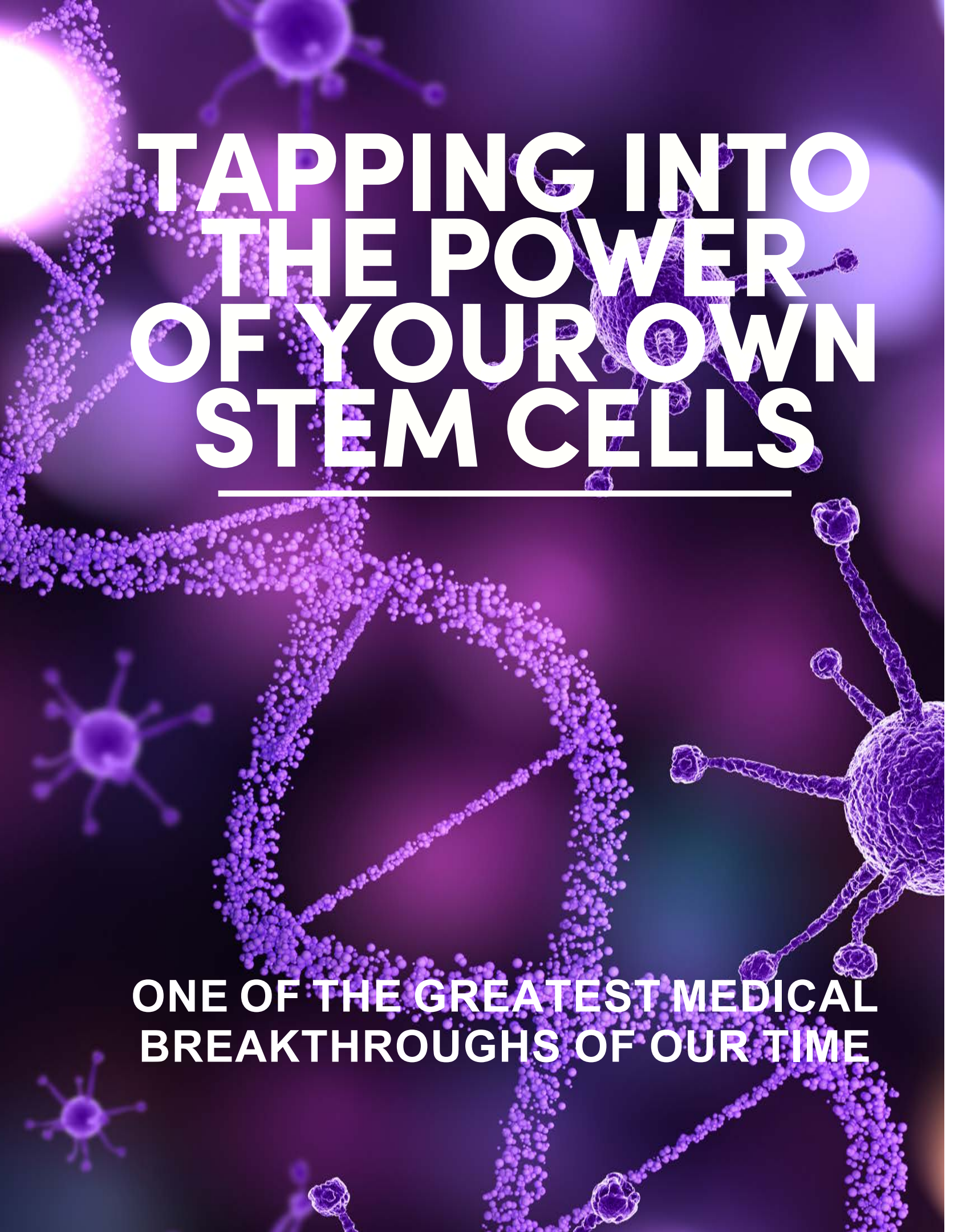
Most definitely. I think we're going to get there, Mark. I think we're going to get there. In our lifetimes, we're going to see some major strides.

For sure. I think so too. And to your last question, I think Covid actually in that respect helped. I think what Covid did was hit the fast forward button on something that was already in process. That fast forward button got pushed forward probably five to ten years faster than how the population would've adapted otherwise. So, in that respect, if I'm going to find a silver lining, that's it.

That's a good way to look at it, honestly.

Well, Mark, I know I've learned a lot. I'm sure our listeners and our readers have learned a lot and it's been an absolute pleasure. I hope we can talk again some time. I'm going to leave you with the last words so people can find out more about Ryze Agency and how to work with you.

Well, I appreciate that Dallas and anybody who's interested in chatting can reach out to me directly. My email address is ***myoung@ryzeagency.com*** - The easier way for people to find me if they're listening, rather than trying to remember how to spell the name of our company, is that they can actually reach me at ***mark@dateyourclients.com***. That's actually the title of the book I recently published. It was an Amazon bestseller earlier this year, so pick it up. I read all of my own emails, so I'll get back with you quickly.



TAPPING INTO THE POWER OF YOUR OWN STEM CELLS

ONE OF THE GREATEST MEDICAL BREAKTHROUGHS OF OUR TIME

It was against all odds that I ended up in the field of stem cell research. As a young boy, I was fascinated with the mind, and I had planned a career in the field of brain research. Years later, as part of my postgraduate studies at McGill university in neurophysiology, I was doing research on epilepsy and memory, and that path seemed to be all but set in stone. Little did I know that a little aquatic botanical would change my trajectory and lead me down an entirely different path altogether. It was my investigation of this unassuming plant that led me to stem cell research, bringing a complete paradigm shift to our understanding of how the body heals and repairs, and ultimately, highlighting the core phenomenon behind the development of age-related diseases.

How It Began

In 1995 I was hired to study an aquatic botanical called Aphanizomenon flos-aquae (AFA), better known as Klamath Lake blue-green algae, for its effect on the brain. The Dietary Supplement Health and Education Act (DSHEA) had just been passed and companies making claims on their dietary supplements needed to have supportive scientific data.

I started by sifting through a plethora of testimonials to try to isolate specific biological effects that would explain the benefits people reported when taking AFA. It rapidly became clear that it had benefits on the immune system, inflammation, and half of the consumers were reporting a feeling of mental energy and well-being, oftentimes experienced as mood elevation. Over the next 3 years my team and I isolated several components from AFA:

1) A polysaccharide that stimulates macrophage activity as well as the activity and migration of natural killer cells (NK cells), while calming down neutrophils causing inflammation in the body.

2) The blue pigment from all blue-green algae called phycocyanin, which has been documented to be a potent selective COX-2 inhibitor combined with a blocker a LTB4, a compound involved in the development of asthma.

3) A yellow extract that acts as a 5-lipoxygense inhibitor.

4) Phenylethylamine (PEA), a neurogenic amine naturally produced in the brain which is also known as "the molecule of love". Deficits in PEA have been associated with Attention Deficit Disorder and other affective disorders.

These discoveries provided mechanisms of action for many of the benefits reported by consumers of AFA. However, while carrying out this investigative work, I came across several cases that could not be explained by the presence of these active compounds in AFA. Cases where people reported significant improvements or even reversal of conditions like insulin-dependent diabetes, congestive heart failure, multiple sclerosis, Parkinsons, emphysema, liver failure and other degenerative diseases. Among all these cases, two stood out and drove my quest to better understand AFA's action in the body.

One was the story of a woman who, when she was 12 years old, tripped while carrying a kerosene lamp. She accidentally spilled kerosene on herself and ended up burning her face, chest and arms; third degree burns. She had spent her entire life deeply scarred until she began consuming AFA at age 60. At first, after a week or so, the scars became slightly inflamed, red and itchy, but to her it felt like healing itchiness. So, she continued taking AFA every day. She also decided to take pictures of herself in the mirror every week, and at the end of one year,

she sent me the photo album. Right there before my own eyes, I could see the transformation, with the very last picture showing no scars. That was evidence that could not be denied or trivialized.

The other case was also notable. Though I had no medical records or evidence, it was hard to believe that someone would write such a letter were it not true. The letter was from an elder of a Native Tribe in Washington in which the man was describing how he had been an insulin-dependent diabetic for nearly 4 decades, and had had a heart attack and several bypass surgeries by age 60. His health was declining fast, and he was preparing himself for death. At that point, someone recommended that he take AFA. In the letter, he described how 6 months later his doctor told him that his heart had recovered and he was now in a condition considered normal for a man of his age, and he no longer needed insulin. His letter to me ended with deep gratitude for being able to continue dedicating his life to his people.

There was obviously something very profound about this product, I wanted to find a way to bring this product to as many people as possible. It was clear that to achieve this, I had to further document these benefits and find a probable mechanism of action. What could AFA be doing in the body that would lead to benefits touching so many different aspects of human health.

For a few years, we carried on with a number of studies in collaboration with Harvard University, McGill University in Montreal, University of Mississippi, and University of Albuquerque and while we got great data, nothing at the end could really explain the various cases of exceptional recoveries that we had witnessed. So, we had no solid explanation... until one day when a colleague sent me an article titled Turning Blood

Into Brain (1). It documented the first observation of a stem cell from the bone marrow traveling to the brain and transforming into a brain cell.

The Discovery of Stem Cells: the Broader Context

When we hear or read about stem cells today, it is almost always within the context of the isolation of stem cells from a source, which could be the bone marrow, the bloodstream, fat tissue, or an umbilical cord, and then the reinjection of these stem cells in the bloodstream or in a specific area of the body. And this is done because of the general recognition within the scientific and medical community that adult stem cells (ASC) have enormous regenerative potential.

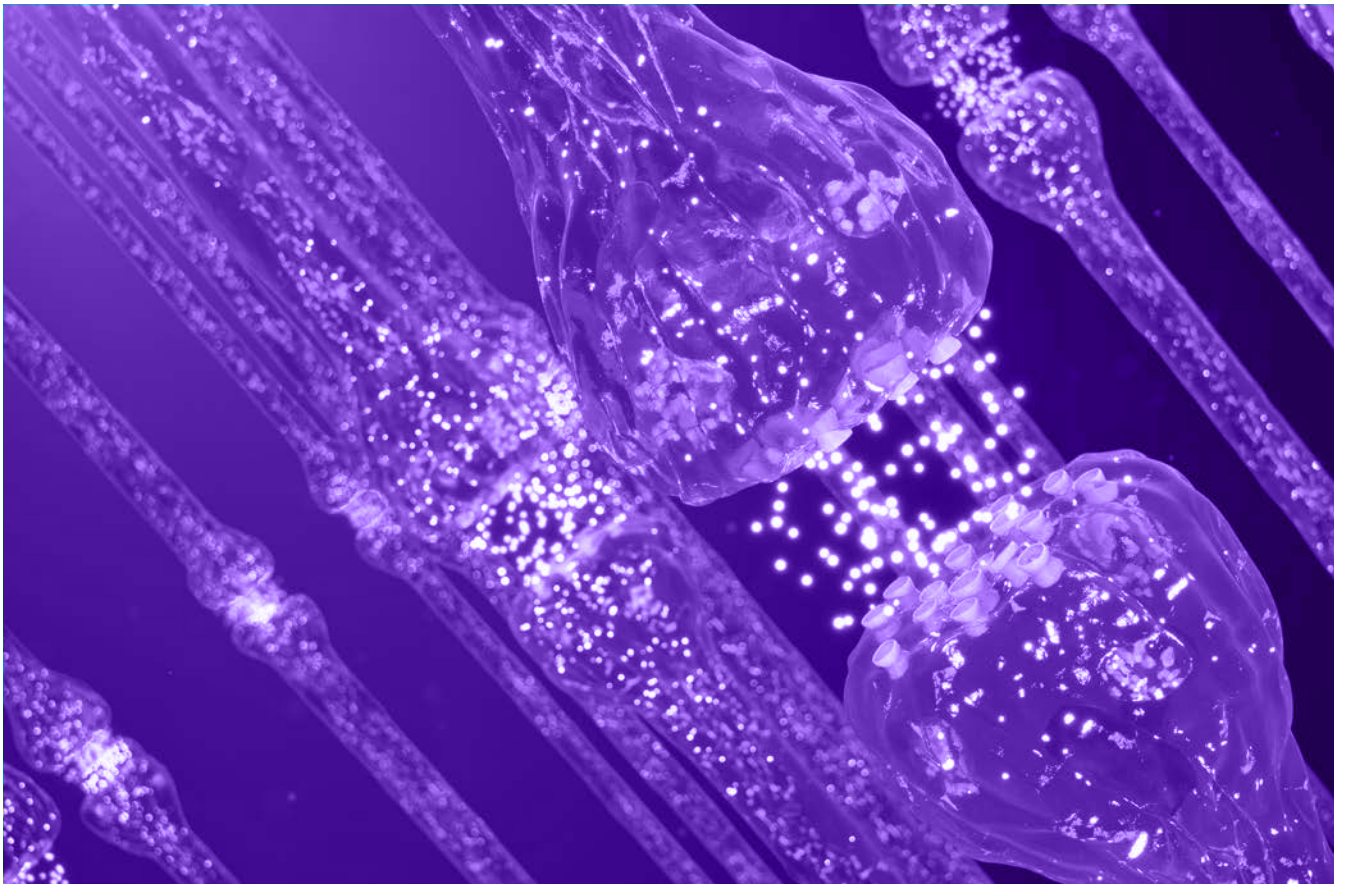
But these stem cells that have enormous regenerative potential are not better or stronger because we take them out of the body and put them back in. So, it begs the question: 1) What is the natural role of stem cells in the body, and 2) is there a way of tapping into the regenerative power of our own stem cells, within the body?

Traditional knowledge since the mid-1900s tells us that ASC are the precursors to blood cells -red blood cells, white blood cells and platelets- and that's it. They do not have the ability to transform into other types of cells and are therefore "lesser" stem cells when compared to embryonic stem cells (ESC). For that reason, all the focus of stem cell research in the early 2000s was about ESC. The problem with ESC is that they carry a very high risk of tumor formation. After more than 20 years of research, no real treatment in humans exists that uses ESC, while millions of people have received treatments with ASC over the past 10 years.

The real potential of ASC was discovered after a series of observations made by various groups of scientists. For example, a group led by Dr. Eva Mezey at the NIH reported in 2001 that ASC from the bone marrow not only have the ability of giving rise to neural stem cells, but they can naturally leave the bone marrow and travel to the brain where they can transform into neurons (1).

Similar observations were made with the heart. ASC from the bone marrow were shown to have the ability of not only transforming into heart cells (2), but stimulating the release of bone marrow ASC was shown to actually reverse the consequence of a heart attack... in 27 days. (3)

Around the same time, similar observations were also made regarding the ability of ASC to become liver cells. Petersen et al (1999) used a sex mismatch protocol in which male ASC were injected into irradiated female mice, and then they triggered an injury to the liver. Using this protocol, it was possible to identify new liver cells originating from

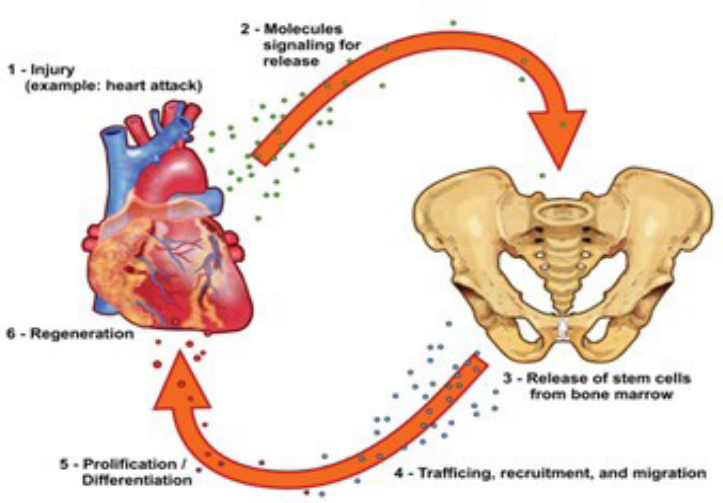


bone marrow ASC, as they contained the Y-chromosome. The study showed that bone marrow stem cells can naturally leave the bone marrow and migrate to the liver to help repair damage to the liver (4).

On the basis of this information, namely that, contrary to traditional knowledge, ASC have the ability to transform into heart, liver and brain cells, Dr. Gitte Jensen and I proposed that ASC from the bone marrow were in fact the repair system of the body (5). This idea, which was considered somewhat ridiculous by many at the time, ended up being spot on; bone marrow stem cells do constitute the repair system of the body.

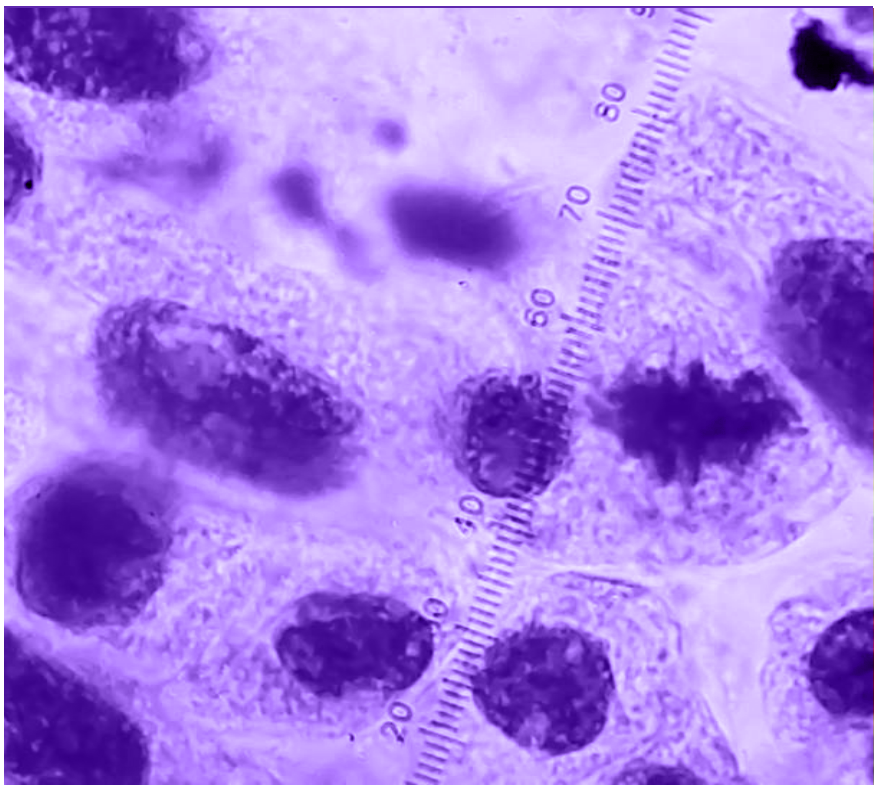
Stem Cells Are The Body's Repair System

In brief, when a tissue is subjected to an injury or a significant stress, the affected tissue secretes compounds like Granulocyte Colony-Stimulating Factor (GCSF), Stem Cell Factor (SCF), interleukin-8, and others that are all well known to trigger the release of stem cells from the bone marrow (6). Within 3 to 5 days after the injury, the number of circulating stem cells can increase up to 10-fold (7,8). Within a few days of the injury the affected tissue begins to release locally another specific compound called Stromal-Derived Factor 1 (SDF1) (9). Stem cells have a receptor on their membrane that is specific to SDF1, and binding to SDF1 triggers the migration of stem cells out of the blood into the affected tissue (10). Upon contact with cellular debris of that tissue, stem cells proliferate and differentiate into cells of that tissue, thereby directly participating in the process of tissue repair (11).



This natural process of repair has been described in many tissues and organs of the body including the heart, muscles, bone, pancreas, brain, skin, liver, intestine, lung ... virtually every organ and tissue of the body! (12) It is the natural process of tissue repair taking place any time the body is exposed to an injury.

(Animation of this whole process: https://www.youtube.com/watch?v=kDEuCQJP87s)



In this whole process, the number of stem cells circulating in the bloodstream appears to be the most important parameter. For example, when the level of circulating stem cells was measured in the bloodstream of individuals who suffered from a stroke, the individuals who had the largest number of stem cells on the day of their injury showed the fastest and greatest recovery (13).

Likewise, when the number of stem cells was quantified in the bloodstream of nearly 500 individuals at risk of cardiovascular

disease and their cardiovascular health was monitored for one year, the individuals with a higher number of stem cells in their bloodstream showed a greater level of health. Conversely, people with fewer stem cells in circulation experienced many more cardiovascular events, such as heart attacks, angina, and arrhythmia (14). In other words, more stem cells circulating in the bloodstream means that more stem cells are available to migrate into tissues in need of repair.

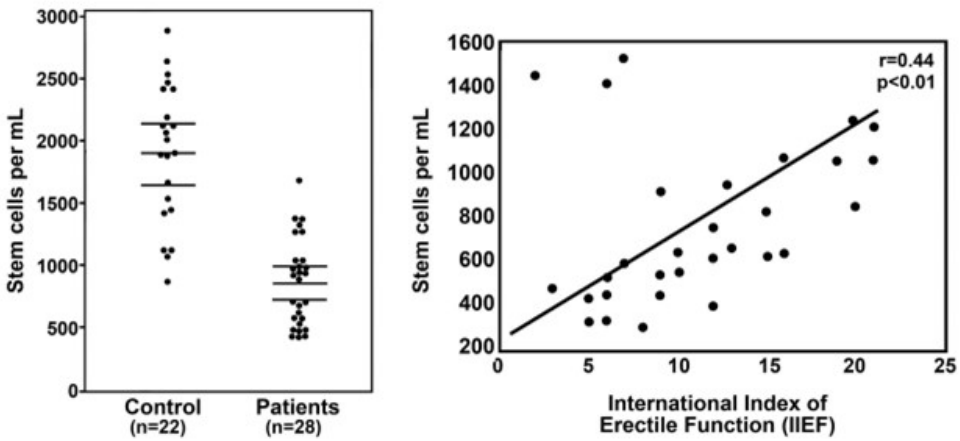
Based on these observations, scientists began studying the impact of Endogenous Stem Cell Mobilization (ESCM) -the release of one's own stem cells and the consequent increase in the number of circulating stem cells- on the development of various degenerative diseases. It quickly emerged that stimulating ESCM and increasing the number of circulating stem cells could significantly improve conditions like heart disease (15), ischemic stroke (16), Parkinson (17), spinal cord injury (18), liver failure (19), diabetes (20), Alzheimer's (21) and other degenerative diseases.

The Renewal System – Stem Cell Decline and Disease Formation

While studying the process by which stem cells contribute to repairing the various organs and tissues of the body, stem cells were seen to play another fundamental role, arguably even more important than repair.

While stem cells were seen migrating in injured tissues, they were also observed migrating into non-injured normal tissue. The extent of the migration was much less than what was seen in cases of injury, but it touched all organs and tissues of the body, indicating that all tissues and organs of the body are in a constant process of tissue turnover. Every day we lose cells and, in order to stay healthy, these cells must be replaced by new cells; it is the role of stem cells to ensure this constant process of tissue renewal.

The magnitude of this daily renewal process is not equal throughout the body, it varies from tissue to tissue. Extrapolating from data coming from numerous studies, we can loosely say that we have a new liver



(Left) Individuals suffering from erectile dysfunction have on average about half the number of stem cells found in healthy comparable individuals. (Right) There is a direct relationship between erectile function and the number of stem cells in circulation.

roughly every 1-2 years (22) a new pancreas every 4-6 years (23), new lungs every 4-6 years (24), half a new heart every 25 years (25) and significant renewal of the brain over one's lifetime (26).

The actual rate of turnover in the various organs and tissues of the body is not by itself important; what matters is to understand that the body is in a constant process of tissue turnover and that to stay healthy, a sufficient number of stem cells must be present in the blood circulation to fully compensate for the normal process of cellular loss. And as seen with repair, the ability of staying healthy as we age depends on the number of stem cells available to participate in this process of tissue renewal.

Unfortunately, and here is the fundamental culprit of disease formation, the number of circulating stem cells declines as we age due to the natural process of conversion of red marrow (that produces stem cells) into yellow marrow (that does not produce stem cells). This process begins early in life and as we pass 30 years of age, we have lost roughly 90% of the red marrow we are born with. At that point, we slowly cross the threshold where the number of circulating stem cells is no longer sufficient to fully compensate for the natural process of cellular loss.

This is when we slowly start to experience aging and when age-related diseases slowly begin to develop. They will not fully be there or even start to affect one's quality of life for another 5, 10, 20 or 30 years, but the process has started. From then on, the development of age-related health problems depends on how many stem cells are available daily to compensate for the cellular loss taking place every day. Disease formation results from the accumulation of daily deficits in our ability to repair.

This whole process has been revealed in many studies linking the development of various age-related health problems with a lower number of circulating stem cells. For example, a linear relationship has been documented between the number of circulating stem cells and the various phases of diabetes development (27). Similar observations have been made with cardiovascular diseases (28,29), atherosclerosis (30,31), Alzheimer's disease (32,33), rheumatoid arthritis (34,35), pulmonary diseases (36,37), erectile dysfunction (38,39), and muscular dystrophy (40).

The bottom line is that a decline in the natural ability of the body to repair itself and carry out the simple maintenance of organs and tissues is one of the main underlying causes for the development of age-related diseases.

The Discovery of Plant-Based Stem Cell Mobilizers

Going back to the early 2000s, as we were working to explain the mechanism of action behind the many reported benefits of consuming AFA, in the back of our minds was the thought that if indeed stem cells constitute

the body's repair system, a plant supporting stem cell release from the bone marrow would be associated with many types of health benefits, as stem cells migrate to the pancreas of the diabetic, the brain of the Parkinson's patient, the heart of the cardiac patient, and so forth. And that is what we had with AFA.

So, we acquired a flow cytometer, developed the assay to quantify small variations in the number of circulating stem cells, and began investigating the effect of AFA on stem cell mobilization. We quickly demonstrated that AFA was indeed acting as a stem cell mobilizer, increasing the number of circulating stem cells by roughly 25% within an hour after consumption (41). But in 2001, at a time when stem cells were still widely considered incapable of becoming anything other than blood cells, the reaction to this discovery was "So what! Putting more stem cells in circulation means absolutely nothing."

It was true. In order to demonstrate that releasing stem cells and putting more stem cells in circulation could really bring health benefits, we had to do two things: 1) describe the mechanism of action, and 2) demonstrate that stem cell mobilization leads to better tissue repair.

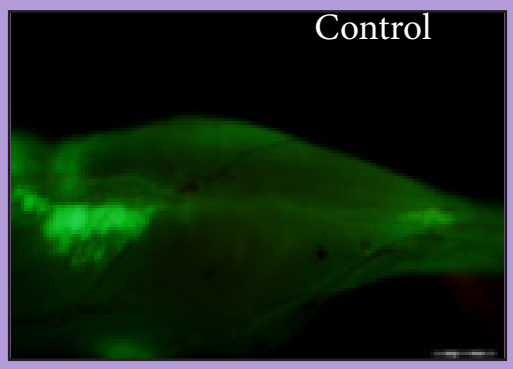
Investigating the general mechanism behind stem cell mobilization from the bone marrow, we hypothesized that AFA might be containing a blocker of L-selectin. We embedded recombinant L-selectin onto the surface of microscopic magnetic beads and incubated these beads with a water-soluble fraction of AFA. If AFA contains an L-selectin blocker, this protocol would allow us to fish it out of the solution. We then applied a magnet on the side of the test tube and rinsed the solution, keeping in the test tube only the suspended beads tied to L-selectin, and the L-selectin blocker if there were such a molecule in AFA. We then broke the bond between L-selectin and the hypothetical blocker using acid/base treatment and then ran the solution on gel electrophoresis. This whole process revealed that

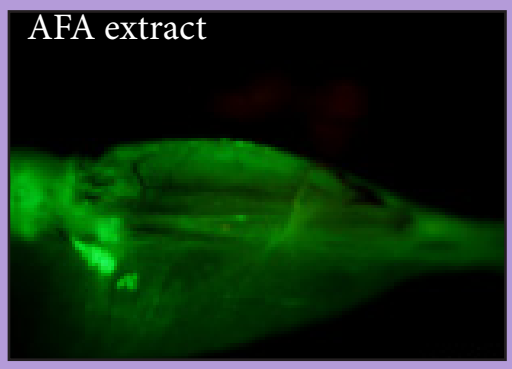
AFA indeed contains a blocker of L-selectin (41).

To prove that Endogenous Stem Cell Mobilization (ESCM) could indeed enhance tissue repair, a mouse model of muscle injury was used. In brief, stem cells marked with Green Fluorescent Protein (GFP) were transplanted into irradiated mice. Through this procedure, any stem cell migrating into a tissue and repairing the tissue could easily be identified, as it would glow green under fluorescent light. The tibialis muscle was injured through an injection of cardiotoxin and the recovery was monitored by whole body imaging. There were two groups, a control group and a group fed AFA extract as a stem cell mobilizer. Stimulating stem cell mobilization significantly enhanced muscle tissue repair (42).

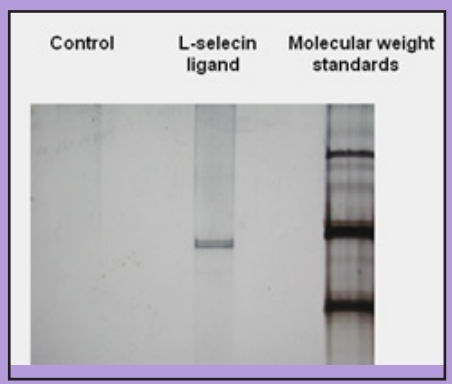
After demonstrating that increasing the number of circulating stem cells with the use of a plant-based stem cell mobilizer could significantly enhance tissue repair, we put our attention on finding other plants that could act as stem cell mobilizers. If stem cells constituted the repair system of the body and we evolved in symbiosis with the environment, there had to be additional plants having an effect on stem cells. We began testing plants and natural ingredients known historically to be associated with a broad variety of health benefits touching many organs and tissues, with the hypothesis that their main mechanism of action was stem cell mobilization. We tested ingredients like medicinal mushrooms, seaweeds, goji berry, gotu kola, and colostrum and found that all of them had an effect on stem cells.

We then extended our quest to remote areas of the world, looking for plants used locally by healers and shamans in Madagascar, Pap-





AFA Extract significantly increased the extent of muscle repair by bone marrow stem cells.



Gel Electrophoresis revealed the presence of an L-selectin blocker in AFA.

ua New Guinea, Congo, the Himalayan region, and South America, and we found a few interesting plants. For example, sea buckthorn berry from the Tibetan Plateau, used in Tibetan, Chinese and Mongolian Medicine for problems of the lung, the heart, the cardiovascular system, pancreas, and to help repair bone fractures and wounds to the skin. When testing a proprietary extract of sea buckthorn berry (Stemberry®) for its ability to trigger ESCM, we found that this extract increased the number of circulating stem cells by up to 40%. (43)

Even more interesting is a unique species of Aloe endemic to Madagascar called Aloe macroclada. Aloe macroclada has been used for centuries in Madagascar as a product called vahona, for various health problems and to keep people strong and active as they age. Learning from Malagasy healers how vahona was prepared traditionally, we developed an extract of Aloe macroclada (Stemaloe®) that we tested on stem cell mobilization. This extract triggered the strongest response that we have seen so far, with an average increase of up to 70% in the number of circulating stem cells (44).

A blend of the top five most potent plant-based stem cell mobilizers (Stemregen®) is currently being studied alongside stem cell injection, and preliminary data shows that this blend alone can improve ejection fraction by an average of 19% after 3 to 6 months of daily consumption.

Let's Wrap It Up

The discovery of the regenerative potential of adult stem cells is probably the most important medical discovery of our time. And while most of the discussion is about the various sources of stem cells and the various ways in which they are utilized, the most impactful revelation is that these regenerative stem cells are in your body already and that since birth, they have played and continue to play a vital role in your ability to heal, repair, and age with optimal health.

Any biohacker holds the belief that the body has an innate ability to repair, and biohacking is essentially a quest to harness this innate ability of the body to repair and function at peak performance, at any level. I have certainly always had this belief, but physiologically speaking what was this ability to repair? Where is it? How can we tap in it? All this work on stem cells provides fundamental answers to these questions.

Your body's ability to repair and regenerate resides in your bone marrow. And this ability is phenomenal, beyond anything we thought possible before. The problem is that this ability to repair drastically declines with age caused by a decline in the number of circulating stem cells. The use of plant extracts documented to support the natural release of stem cells from the bone marrow (putting more stem cells in circulation) may be one of the most profound and effective strategies to recover from injuries and to regain and maintain health as we age.

My Closing Reflections

I remember the day this whole concept unraveled in my head after reading that article "Turning Blood Into Brain." I was awestruck by the thought that we had finally found a way to put an end to disease. I felt like I'd discovered the light at the end of the tunnel, and I couldn't wait to shout it from the rooftops! Disappointed by the slow uptake, and even resistance... twenty years later, I'm reminded that innovation takes time. Today, with stem cells having since paved the way for miraculous breakthroughs in health, and me having heard thousands of recovery stories from people who've used plant-based stem cell mobilizers, it is clear that this promise of change I'd hoped for is in fact underway. We have discovered, at the very least, that stem cells have the potential of significantly improving our quality of life, giving us all the gift of health beyond our years. And at best, we've literally just turned the medical industry on its head. Stem cells are the natural repair system of the body... the power is within you has never rung so true.

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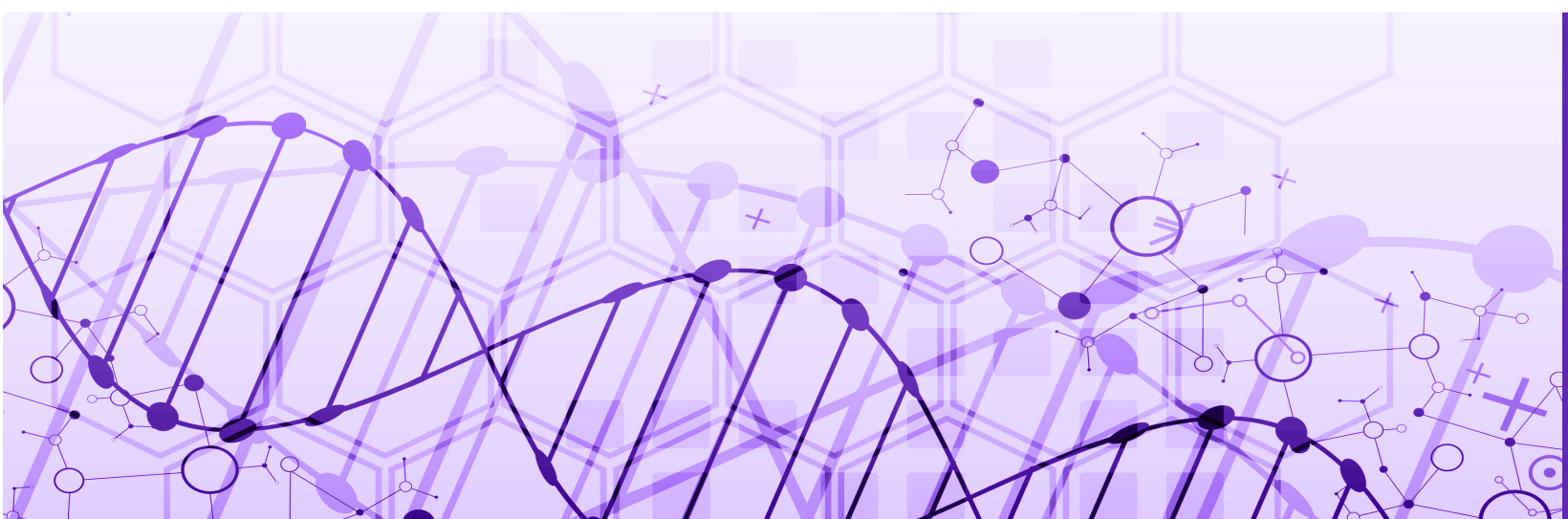

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About Christian Drapeau, MSc

Christian Drapeau holds a Master's degree from McGill University in Neurophysiology. His PhD thesis at the Montreal Neurological Institute touched on mechanisms of epileptogenesis. He is the author of several scientific articles in the field of epileptogenesis and since the early 2000s in the field of stem cell research, where he created a new therapeutic approach called "Endogenous Stem Cell Mobilization," described in his best-selling book "Cracking the Stem Cell Code." Christian has created the concept of "stem cell enhancement" and developed the first plant-based product supporting the natural role of stem cells in the body. He has been director of Research and Development for many companies, and is now the founder and CEO for Kalyagen, where he formulated the stem cell supplement STEMREGEN.

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GINGERBREAD MEN COOKIES RECIPE

The gingerbread men are definitely cookies of the highest character. As Biohackers, we strive not only to improve ourselves daily but also to use the process of external elements to refine our characters and embolden our flavour - much like the process of making Gingerbread men cookies! Everyone in the family will enjoy making them.

Who Invented Gingerbread Men?

Gingerbread men cookies come to us all the way across from England. The Queen Elizabeth was the first person to serve them. She presented visiting dignitaries with gingerbread cookies decorated to look just like them.

How to Make Gingerbread Men Cookies

Now, let's go to the main reason for this article: Let's get to bake!

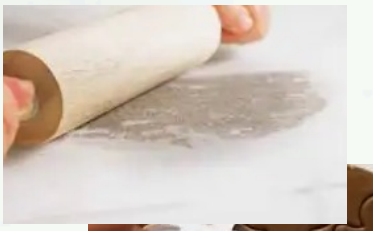
Ingredients:

- Melted unsalted butter, to grease.
- 125g unsalted butter, at room temperature
- 100g (1/2 cup, firmly packed) brown sugar
- 125ml (1/2 cup) golden syrup or molasses
- 2 Tbsp vanilla
- 1 egg, separated the yolk from the white (or Egg replacer)
- 375g (2 1/2 cups) plain flour (Gluten-free Flour can be used as substitute)
- A pinch of salt
- 1 tbsp ground ginger
- 1 tsp mixed spice
- 1 tsp bicarbonate soda
- Plain flour, to dust
- Sugar cooking icing (red and green)
- Smarties, candies, nuts, sprinkles, etc to decorate

Preparation:

1. Preheat oven to 180°C
2. Combine the flour, bicarbonate soda, salt, ginger and spices together in a bowl. Set aside.
3. Beat butter and brown sugar in large bowl with electric mixer on medium speed until light and fluffy. Add molasses, egg yolk, and vanilla; mix well. Gradually beat in flour mixture on low speed until well mixed.

4. Press dough into a thick, flat disk. Wrap in plastic wrap. Refrigerate 4 hours or overnight. This will prevent the dough from sticking to the surface when cutting out the cookies.



5. Roll out the chilled dough on a floured surface. Cut into gingerbread men shapes (or whatever cookie cutter shape you're using).

6. Bake in oven for 10 minutes or until brown. Remove from oven. Transfer to a rack to cool.
7. Let your imagination run wild when decorating these gingerbread men cookies. You can use a simple sugar cookie icing to add gingerbread men features. Then top them with candies, nuts, sprinkles or anything else you like to give these cookies some character.
8. Store cookies in airtight container up to 5 days.

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There is so much support behind our cause and we are eternally grateful. As a new company fresh off the block, we've had our fair share of challenges but because of all of our supporters, we've overcome them and produced, becoming more humble and stronger along the way.

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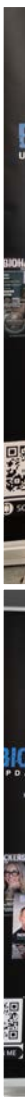
Also we of course have to thank our subscribers, readers and followers on social media for supporting us along the way! You all ROCK!

biohacking CONGRESS

Our Team recently had the chance of attending the biohacking congress in Miami and we were blown away with the groundbreaking biohacks, new-edge technology, inspiring speakers and continual camaraderie. We met so many remarkable people and truly value these connections. The biohacking congress is its own community, and it is certainly growing with the leadership of its fantastic organizers and influencers. We will definitely be at future congresses for many years to come!



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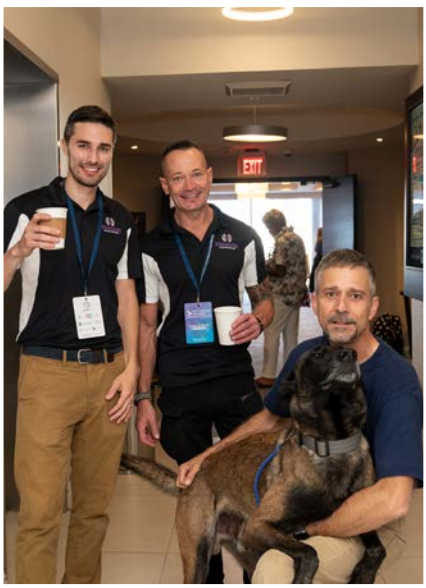

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Known as Cyborggainz, born in France, Jean is an athlete, entrepreneur, scientist, public speaker and an Art collector. He is the founder and CEO of CyborgMedia, the Managing Director at inTEST Corporation and the COO of Biohackers Update Magazine. He is also the author of "Neuroscience Calisthenics: Hijack your Body Clock." Jean holds a bachelor's degree in biochemistry, a master's degree in immunology and genetics, and an engineering degree in biotechnology. He has also studied neurosciences and brain functionalities, and law and finances. Jean recently graduated from the MIT in XR-VR-MR. He is currently living in between Boston and Montreal after his biotech company was acquired by inTEST Corp (NYSE:INTT) in October 2021.

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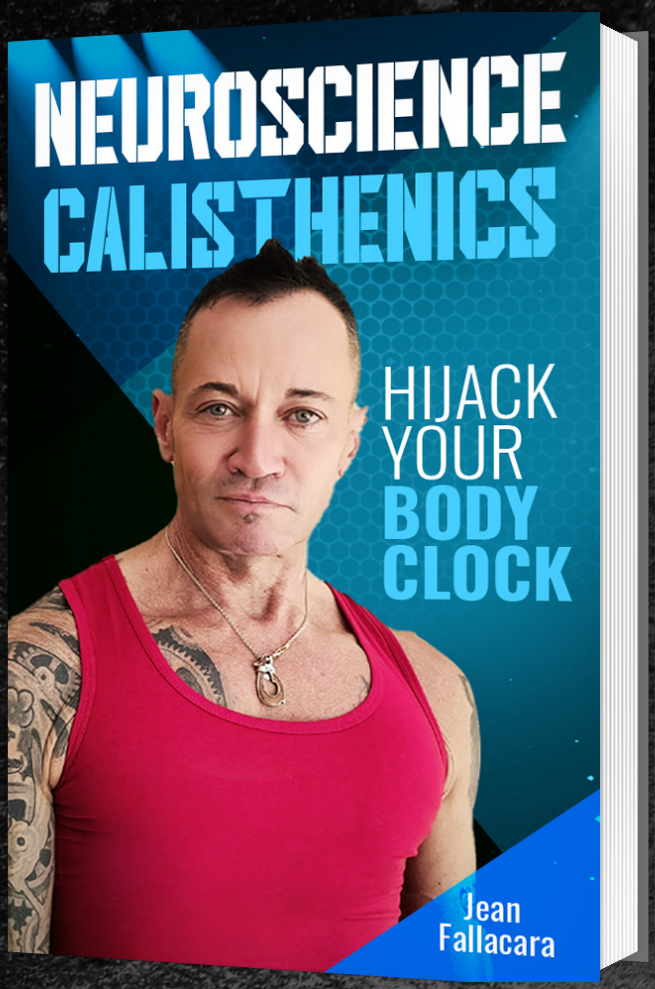

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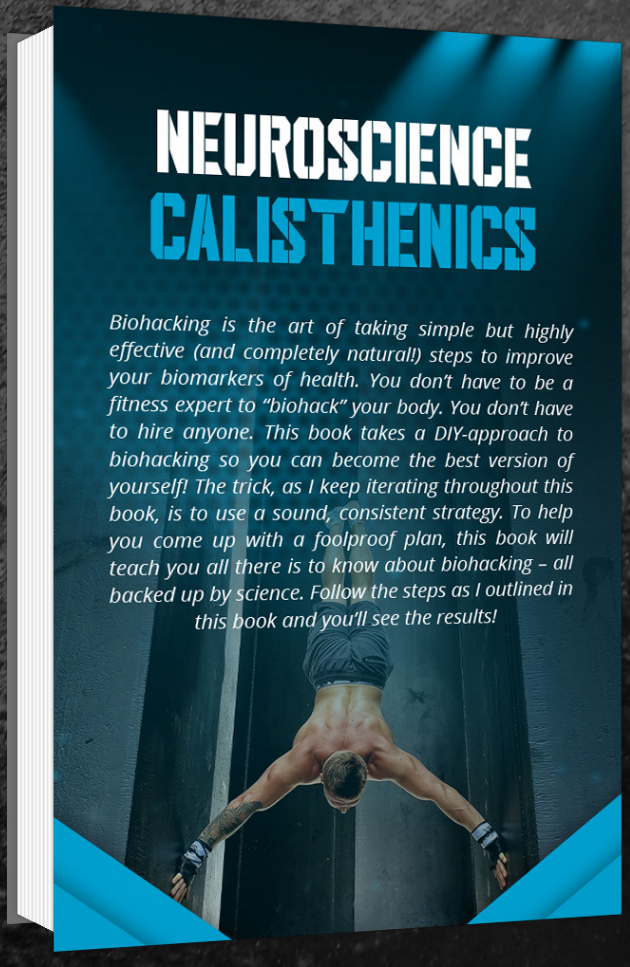

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