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Ben Stollack, and Craig Krolbeck on the Ringer NFL Draft Show,

where we talk about all things NFL Draft,

and, more importantly, how to fix your mediocre team.

Check out the Ringer NFL Draft Show every Tuesday and Thursday.

Today, we go wading in the murky waters of 2023 wellness trends.

We're talking cold plunges, fitness trackers,

recovery scores, and, on the more prosaic side,

the real science of coffee and alcohol.

Today's guests are Brad Stollberg and Steve Magnus.

They are the co-founders of The Growth Equation,

a multimedia platform dedicated to health,

excellence, and well-being.

They are the authors of Peak Performance,

Do Hard Things, and The Practice of Groundedness.

And I have for quite a while considered them to be ideal guides

to this hype-filled world of biomarkers, biohacks, and fitness.

Before we get to that conversation,

I want to take a step back and place this conversation

in the 100-year history of fitness fads and wellness

innovations in the West that have led us here.

If we were all doing this podcast in the 1920s and 1930s,

I would probably be telling you about The Daily Dozen.

The Daily Dozen, a household phrase referring to a series

of stretches, lunges, twists, squats, body curls,

popularized by a guy named Walter Camp.

These calisthenics were widely practiced in schools,

in homes, in military training.

They were the fitness routine of the era.

Fast forward a few decades, and if we were doing this podcast

in the 1950s, I'd probably be breaking down

the science of hula hoops, given the hula hoop craze that

sucked in people of all ages 80 years ago.

If, again, we were doing this the 1960s,

you might hear me make fun of the vibrating belt machine.

Maybe you can picture the vibrating belt machine

in your head and immediately start

laughing, this sort of automated massage machine that

jiggles your body and supposedly burns fat.

By the 1980s, we move firmly into the VHS era of fitness.

Pilates and aerobics for women are

taking off the latter powered in part

by Jane Fonda's famous workout videos. Like hula hoops, this was a way to dance and play and theoretically lose weight at the same time. And unlike the vibrating belt machine, which very likely repelled potential mates within a square mile, aerobics at least mainstreamed leotards in a way that made you look good and feel good. In the last 40 years, we've seen the rise and fall of so many fitness fads, Taibo, shake weights, Bowflex, Nordic track, for eight minute abs. Or if you were a hitchhiking serial killer getting picked up by Ben Stiller, and there's something about Mary, seven minute abs. The cheap thing for me to say here would be that if you recognize any of those names, their demise is a sign of their ridiculousness. And yeah, I think you probably could tell a story of fitness culture and fitness technology as a story of people ridiculously devising ever more complex means of saying not just, hey, I've got a nice body, but also the means by which I forged this body are cooler than the means by which you obtained yours. But I don't want to purely denigrate here. I don't want to be cheap. I do think there is something subtly profound about the idea

as a culture.

We're like a country that knows it needs its daily protein, but we keep getting bored of meat.

that we need to constantly refresh our fitness diet

And so every decade, somebody has

to invent a new source of protein to keep everybody alive.

When you cut through the hormones and the dopamine and the adrenaline and the metabolic and the vocabulary,

the basics of fitness are so incredibly basic.

And yet we seem to need new and exciting rules, new delivery mechanisms for ancient wisdom.

Yesterday, it was vibrating belts and calisthenics.

Today, it's cold plunges and recovery scores.

Tomorrow, who knows?

Wood shopping, long jumps.

I don't think change is purely ridiculous.

I think change is a part of culture.

I think change is culture.

But what I want to know is, is fitness culture

moving us toward activities that actually

make scientific sense?

Or has American fitness evolved toward bullshit?

I'm Derek Thompson.

This is Plain English.

[? Music playing.?]

Brad and Steve, welcome to the show.

Thanks so much.

Hey, Derek.

Thanks so much for having us.

So for whatever reason, wellness hacks are always in season.

But it does seem to me, just as a casual consumer of Twitter,

Instagram, TikTok, that we do seem

to be reaching a new peak in bro wellness influencer.

And I wanted to bring you guys on because you're very good at looking comprehensively at this space.

You are careful.

You are anti-hype.

You are pro-science with a small s,

which I would define as you believe in the process of science,

you believe in the findings of science,

but you also believe in the nature of uncertainty.

And the fact that just because there is a study,

that we can call the study, that comes to a conclusion,

does not mean that whatever nutritional or behavioral

intervention that was discussed in that study

thus has to become the new law that we have to govern our wellness mornings by.

So I wanted to have you guys on to educate me

on some of the tips that I see flying around the internet.

The first one is cold plunges.

Steve, why don't you get us rolling here?

I see a lot of people on the internet,

ordinary people submerging themselves in ice baths,

saying that this is the morning intervention that

is going to change everybody's life.

In my corner of the world, cold plunges and morning

cold exposures have been repopularized

by, among other people, Andrew Huberman

of the Huberman Lab podcast.

They've totally taken off in social media.

What does the science tell us about cold plunges?

Yeah, this is one of those things

where I'm not sure it would take off unless we had Instagram

to post it to everybody.

But I think the science is pretty clear.

And there's a couple of things that I want to get at here.

First, there's things that actually

occur like the hormonal response.

So if we think of jumping into a nice bath or a cold plunge

or what have you, if you get this surge of hormones

and neurochemicals, so adrenaline, dopamine, beta

endorphins, all sorts of good stuff,

and there's a feeling attached to that,

we feel more energized.

And I think what is interesting here

is that we get lost in what I call kind of like biomarker

madness, which is we point to the hormones and say, man,

that gave me a 500% increase in adrenaline

or a 200% increase in dopamine according to the study,

so it must do something.

But I think we lose context around here

because if I went for a walk, if I literally went

for a 15-minute easy cycling ride down through the neighborhood,

I'd get a several hundred percent increase in adrenaline.

If I did a hard workout, if I went to the track

and did some intervals, I would probably

get somewhere around a 10 to 15 times increase in adrenaline.

Same goes with dopamine to a similar extent.

So I think here the key is not to get lost in the hormones,

but to get to the functional results,

like what actually is changing.

And there, I think, if we look at the science,

especially on the psychology and mood,

it's a little bit more nuanced in the sense

that, yes, it shows that in the short term,

you get some changes in mood and elevation.

And a lot of the studies actually

show that it's more a decrease in negative affect

or negative mood than increase in positive

because, essentially, the shock, the stress response

distracts you or takes you away from anything

bad you were thinking about because you just

jumped into a freezing cold plunge.

So I think on that, it's the short term.

So what I would say is, if it makes you feel better, go for it. Is that causing any sort of long term change?

Most of the research, especially when we look at long term mood, depression, things like that, is there's A, there's not much research, and then B, most of it shows that in terms of jumping in cold water, it's more swimming in cold water than just sitting in cold water.

And then the other, I think, key component here

that is talked about a lot is the metabolic aspect, which is the, hey, does this help you lose fat?

Does this help you burn calories?

And again, I think the science, we need to almost take a step back and separate

And the reality is this, is that yes, jumping in cold water increases caloric burn a little bit, mainly through shivering or trying to heat your body because it's really freaking cold. But the effect of that is, unless you're

sitting in there for an hour, the effect

is a handful of calories.

hype from reality.

Most research says 15, 20 calorie burn difference from shivering and sitting there after the ice bath.

And the other thing on this that I think

we have to separate the hype is, a lot of times,

other podcasters or researchers will

bring up this idea of cold activates

this thing called brown fat, which brown fat is pretty simple.

It's more metabolically active fat.

So babies have a lot of brown fat.

So it means it burns more calories, right?

Adults tend to have a very small amount of brown fat, so much so that activating it will tend to burn, again, an additional maybe 10 to 20 calories over a day, based on most research.

And if you look at, OK, cold water activates brown fat, but does that cause any sort of functional change? I would say the research at this point points us to it's a nice bioplosable theory, but in terms of functional results, there's not much there yet.

So it is not accurate to say, go freeze yourself an ice bath,

and this will help you with weight loss, because the data just isn't there.

And it's not that plausible, either, I would say.

Brad, is it useful for us to distinguish between cold plunges and ice baths for athletes that are recovering from a sport or some vigorous activity during a competitive season and cold plunges or some other cold exposure for someone who is training before any kind of season or just going through their sort of normal week of exercising and mixing in some other activities to make them feel better and healthier?

Yeah, there is a big difference here.

So I think that the best use case for a cold plung

is for an athlete in a competitive season whose priority is feeling really fresh.

And what I mean by that is you've got a tight turnaround.

You've got a game Monday night and then another game Tuesday night.

And after that game Monday night, you're sore.

You're beat down.

You're playing an 80, 160 game season.

Then for many people, an ice bath,

so a little separate from a cold plunger, proper ice bath

with generally 15, 20, even 25 minutes,

is shown to reduce inflammation and markers

of muscle breakdown.

And many athletes also report feeling a decrease in soreness.

So that's all great.

Now, the issue, Derek, is if me or you say, well,

after we go to the gym for a hard hour workout,

we don't want to be sore, so we ought to take a cold plunge.

Well, it's not so simple because what the research here

shows is that at the same time it helps us to feel less sore,

it also blunts adaptation to exercise,

which is really fascinating.

And this is very similar to taking an NSAID, so like Motrin

or Advil after a hard workout.

We also, we see that with that kind of intervention,

again, we feel better, but we don't adapt as well

because there's a purpose to the inflammation

into the muscle breakdown.

That's all these triggers telling our body

that it needs to adapt and to grow.

So we don't want a short circuit that.

Steve, back to you on this.

If you go to Hooperman Lab, the claim here

seems to be that cold plunges, they

cause a significant release of adrenaline and noradrenaline

in the brain and body.

They cause a prolonged release of dopamine.

You mentioned both these things.

They increase metabolism as the body

is shivering to increase core body temperature.

And then finally, he talks about activating

brown fat thermogenesis, which is a wonderfully

multi-syllabic and Greek series of words that

makes me feel really smart when I say brown fat

thermogenesis.

I'm really doing something for my body.

Can you give me just a sense of what

the most important problem or lack of context

is with this theory of what cold plunges do?

Because I guess I'm hearing two totally mutually,

they can be true together.

But I'm hearing two things.

One is that the benefits of it causing

a significant release of adrenaline and noradrenaline,

you can get those from a lot of different activities

or the release of dopamine.

You can get that from a lot of different activities,

yoga, going for a walk.

And then with the brown fat thermogenesis,

it sounds like that's a really cool sounding word that

actually equates to $25\ \mathrm{burn}$ calories a day, which

is a number of jumping jacks that I can do while you

answer this next question.

So give me a sense of whether I have the right idea here

of what the problem is with this representation

of the benefits of cold plunges.

I think you summed it up in the beginning question, which

is, it's not to cure all for everything.

And that's what we tend to hype things up as like, oh,

if I do this, I'm going to burn calories, feel better,

get rid of my depression, and recover

from exercise like no other.

And the reality is, it's just more nuanced, is if jumping in an ice bath or cold plunge makes you feel better, then great, go for it.
But it's not the magic cure, lots of things work.
And I think in terms of the metabolic brown fat stuff, again, I would say we get seduced by the science-iness of it.
Because we say, oh, look at all these great things it does, this complicated stuff.
And then we say, OK, it must do something.
I need to add this to my repertoire.
When reality is, what actually matters?
And I think getting to that functional impact, where it might activate brown fat, but is it enough calories where it's worth sitting in there for 10 minutes, 20 minutes, 30 minutes

I mean, for some people, they might say yes.

And that's, go for it, great.

an hour, whatever it is?

But the data shows it makes a very small bit of difference.

And if you're OK with that, go for it.

If you hate jumping in cold things

or it doesn't make it makes you miserable, then don't do it.

Because some guy told you that you get this huge surge in hormones.

Can I add just two more things real quick, Derek?

Absolutely.

So this tends to happen with these health and wellness trends,

also, is that they get lifted out of context

from where they originated.

So you look at the history of a cold plunge,

and it goes all the way back to ancient Greece and Rome.

And then more recently, in Scandinavian and Nordic countries.

countries.

And what's fascinating is those cold plunges,

they all happened in a community setting.

So you'd go to the bathhouse, or you'd

go to the open water swim at the solstice,

and you would do it in a big group of people.

And it would be tied to ritual, and it

would have almost more of the spiritual meaning

of welcoming in the season.

And that's very different than spending \$8,000 on a bathtub, putting it on your back duck, and waking up at 5.30

in the morning.

So that's the first thing.

And the second thing I wanted to add

is I think the goalposts move on this guite a bit.

So someone will cite this study, and then a scientist will say,

well, actually, that study had 15 people in unmatched controls.

And then they'll say, oh, well, it's not about brown fat.

It's actually about mental toughness.

And there is some valid through line

to say that, hey, getting in a freezing cold bath early

in the morning is hard to do.

And by doing hard things, we get stronger.

However, there are so many hard things.

And what I would say is a parent of two young kids,

getting my kids out the door to school, that's enough.

That's my hard thing for the morning.

And perhaps if you have a life of great ease

and there's a sense of a lack of physicality

or a lack of any pain, then this could

be a phenomenal intervention.

But so is deadlifting, so is running a hard mile,

so is getting your kids out the door.

Let's move on to caffeine.

I want to talk a little bit about caffeine, not only

because unlike cold plunges, which I never do,

caffeine is something I do every day.

And I've seen a lot of really interesting and sometimes

conflicting information about the benefits of using caffeine,

delaying caffeine, removing caffeine from your life entirely.

So Brad, let's start with a big, relatively open-ended

question here.

To the best of your knowledge, what

are the most important short term and long term

effects of caffeine?

By short term, I mean essentially one day.

And by long term, I mean if you're

doing this every day, the cup of coffee,

the two cups of coffee, the three cups of coffee,

do we have a sense of the cumulative effects

on a person's health across their life?

OK, so let's start with short term.

So short term for most people, and there's

going to be individual variation,

caffeine is an ergogenic aid.

It arouses you both physically and psychologically.

It leads to better focus.

That is the acute short term benefit.

That's why so many people enjoy caffeine and coffee.

Within the one day period, we also

know that caffeine can disrupt sleep.

The National Foundation of Sleep tends

to say that you want to try to cut coffee out by noon or 1.

But again, there's a lot of individual variation.

I can have a coffee at 3 and sleep just fine

throughout the night.

Now, caffeine for some people can

lead to upset stomach, feelings of restlessness,

and feelings of anxiety.

If every time you have coffee, your stomach hurts

and you feel super anxious, and that's the only thing that

makes your stomach hurt and you feel super anxious,

then it doesn't make sense to drink caffeine.

For the rest of us, I would argue that it is by far

the most health-promoting, and I'll

get to that in a second, slash at least neutral performance aid

that there is.

Also, on the psychology side, there's

a really nice ritual to making coffee,

whether it's in the morning, whether it's

the afternoon pot of coffee.

And we need more good rituals in our day.

They help mark time, especially for people

that work from home, and it's a chance to step away

from your computer from the Zoom.

So let's look at long-term.

This is one of those things like eggs, where every five years

it switches, right?

Caffeine is bad, caffeine is good, caffeine is bad, caffeine

is good.

The most recent big meta-analysis-type studies

show that caffeine seems to be correlated

with an increase in longevity, meaning people

that drink a lot of coffee tend to live a little bit longer.

It also is shown to have some protective effects

against neurodegenerative diseases, such as Parkinson's.

However, what I read from this is that it's neutral.

And here's why.

These studies, there are so many confounders. So the type of person that is drinking three, four, and some of these studies, five cups of coffee a day, they might have some other things going on. They might be highly educated. They might be really driven and ambitious, hence they're drinking five cups of coffee per day. But what it makes me pretty confident to say is that there's no long-term chronic negative effect of caffeine.

Couple exceptions.

I'm not a physician.

I approach this from a performance and public health angle.

If I were a physician and I put that hat on,
I would say that you'd want to look
at people that have hypertension, high blood pressure,
and then people that are at risk for cardiovascular events
or strokes.

And if you're in those buckets, then it's worth a conversation with your doctor. One guick follow up for you, Brad, before I jump to sea to talk a little bit about some of the hormonal effects within the day. The best research that we have in the effects of caffeine, are they from RCTs or are they from big cohort observational studies where we're basically just asking people or trying to mark this group of people, had no caffeine, this group of people seemed to have one to two cups, this bin had like three to five, and then trying to tease out the effects, even though it's impossible to control for all of the variables that aren't being looked at by this observational study. Long term health, observational, right? We're not randomizing people at age 20 and having a group of coffee drinkers and not coffee drinkers for the next 60 years. Short term performance, there are a lot of RCTs, particularly in the athletic world, where we know that caffeine compared to a placebo often really does lead to an increase in performance.

And we see that not only for physiological reasons,

but also for psychological.

Performing at your best, it requires a lot of focus.

The ability to really hone in, and caffeine

seems to help with that.

Steve, on the physiology, does the up

that we get from caffeine automatically imply a dip

below baseline energy later in the day?

Is that just the way the drug works,

or is that a misunderstanding?

So I think there's two things going on here.

This first, a lot of that dip theory

is tied to this hormone called cortisol,

which follows this natural cycle.

When we wake up, we get a dump of cortisol

to keep us energized, and that goes down as well.

The theory around caffeine exacerbates that.

If you look at the research, there's quite frankly

been no study to put this theory to test.

But when we look at studies that have looked at cortisol levels

and caffeine intake, it marginally changes it.

Now, the other part of that that is really important

is caffeine works, essentially, by binding and replacing

what's called this molecule called adenosine.

And as adenosine accumulates, we tend to get more fatigued.

So that's how caffeine works.

So one of the other withdrawal things that happens

is, as caffeine kind of wears off,

it almost increases and brings that back into flow.

I would say, is that something that you should worry about?

For most people, probably not, because by the time

that wears off, the half-life of caffeine is pretty long,

by the time that wears off, it's not the afternoon slump.

It's more the, hey, I'm going to bed slump,

so it's not a big deal.

And then the one caveat I'll bring to this,

and we know this more from the exercise performance world

than just the general caffeine and productivity,

is that in exercise, there is actually

some really good research that is starting

to show that, thanks to genetics, we actually

have what's called fast metabolizers of caffeine

and slow metabolizers.

And in athletic performance, fast metabolizers generally

get a bigger bump in performance, and slow metabolizers get a smaller bump in performance. And the theory on that is pretty simple, is that fast metabolizers, essentially, get more of the positive impacts.

Well, slow metabolizers, that positive impact of energy and central nervous system stimulation doesn't go as high, so some of the drawbacks of caffeine show up.

So there is that caveat that could occur or could apply to the everyday person, but it hasn't really been studied in the productivity world.

I'll share my coffee hack here.

It is 1.5.

I do a cup of coffee in the morning, full calf to get going, and then I do a half calf coffee in the late morning, around 11 AM.

And I really do find, personally, that however my body metabolizes caffeine, that 1.5 offers the perfect arc of energy throughout the day.

Brad, do you have a coffee regimen? Well, as a parent of two young kids, the answer is yes.

But I've always loved coffee.

I love ritual.

So for me, making a pot of coffee in the morning, lighting some incense, sitting down with a book, it's just how I get my day started.

And the coffee also, of course, helps to wake me up and get things going.

I'm sipping on a coffee right now, and we're recording this at 3 PM local time.

I tend to find that as long as I'm not drinking coffee

after 4, it doesn't really disrupt my sleep.

But there's a lot of individual variation there.

So for me, it's, I don't know, a cup in the morning, and then I tend to have a cup in the afternoon

and then I tend to have a cup in the afternoon.

Steve, before a big run, are you sipping on a red eye or what?

So I come to things from the athletic background.

So I hated coffee.

And the only time I would have any sort of caffeine is before a big race or performance growing up, because it's a big performance enhancer.

But when I transitioned to writing more,

I realized that, hey, this helps my writing and get stuff done.

So similar to you, I've just kind of dialed in.

And most of mine is I do writing in the morning,

so I have a cup of coffee before the writing.

And then if I slump in the afternoon,

well, I'm just replying to emails

and doing kind of meaningless stuff.

So I don't really care.

But what I would say there is there's

a big individual difference.

And the other thing that is important here

is as well as that we used to think, oh, to maximize the effect,

you had to withdraw from it for a while.

But more recent research shows that that probably isn't true $% \left(1\right) =\left(1\right) \left(1\right)$

and that you're going to get the boost.

Even if you took two weeks off coffee and then took it,

you'll get similar performance boost.

I totally bought that, I suppose, expired myth.

I've always assumed that if I really wanted, for example,

to I'm going on book leave in a few weeks,

and if I really want to have the most efficient book leave

possible, what I need to do is withhold on caffeine

for the three weeks before.

And then suddenly, when I have that first cup of coffee

on day one of the book leave, I'll just write the entire chapter

in a day and a half or something.

But you're saying the most recent evidence

that we have suggests that that's a little bit mythological.

Yeah, and I want to be clear here,

as most of the evidence on this timing

is more athletic performance and things like that.

But it's similar.

But that used to be the theory.

I mean, athletes would withdraw from caffeine

and be miserable the week before a big race

and then take their caffeine before the race

because they thought it mattered.

But more recent evidence has shown that literally the overnight

kind of not having coffee obviously

does you'll have the same performance benefit

as if you fasted off of it for a week or two.

Brad, I want to move on to alcohol.

As with caffeine, this is very much a part of my life.

I'm sitting a few feet away from a bunch of wine.

I love cocktails.

I love coming up with new recipes for cocktails.

I love experimenting with recipes for cocktails.

I love whiskey on its own, even without a cocktail.

But I try to not pretend that my fondness for alcohol

has anything to do with physiological health.

There's a line from the play The Normal Heart, which

is one of my favorite plays in the world, by Larry Kramer,

where the main character says, sugar

is the most important thing in my life.

All the rest is just to stay alive.

That's how I feel.

There are things that I do to stay alive, fitness, eating well.

And there are other things that are important to my life

that I try not to lie to myself and say, oh,

this is about staying alive.

No, it's about making life taste damn good.

That's how I feel about my vices, anyway.

So I want you in that spirit to give me

the unvarnished truth about alcohol.

I have, of course, read several studies

showing that one glass of red wine a day because of whatever

of its magical ingredients is good for your heart

in the long term.

I don't guite know how to feel about those studies.

I want them to be true.

But maybe that fact that I want it to be true

is a signal that it is not.

Are these studies that alcohol might

be physiologically good for us?

Are they true or are they bullshit?

All right, so the short answer is it's probably

closer to bullshit.

Now, you could make an argument that if somebody is stressed

out at the end of a long day and they're really uptight,

they're holding their shoulders high,

that having a beer or a glass of wine or a whiskey

is going to calm them down and de-stress them.

And the benefit of de-stressing will outweigh

the cost on the rest of their body.

That's the argument to be made.

However, when we look at large, really high-quality data sets, there was one that was just published this year in The Lancet, really reputable medical and public health journal.

Researchers found that even at under five drinks a week, so less than one drink a day, which is that kind of typical thing that you hear, alcohol was associated with significantly more mortality than those that abstains completely.

Now, you mentioned physiological effects of alcohol. I want to separate that from physiological effects of having a beer in a group of your friends, which

might be very positive.

So it's important to say, alcohol itself seems to not be something that you do because it's healthy.

However, if alcohol is a social lubricant, $% \left(1\right) =\left(1\right) \left(1\right) \left($

if it brings you together in community,

if it's a ritual, and if you're drinking a moderation,

we can get into what that means.

And if you don't have a substance use disorder, then I'd say that alcohol might be a net benefit on somebody's life.

But those are big ends, drinking a moderation, not having a substance use disorder, and doing it as a part of a community.

I think it's so important to say that because we are not bags of hormones.

We are social beings.

We are relational beings.

Our health and our identity and our happiness draws from our environments and from those around us,

relationships, support.

And there is some research that suggests that if you look exclusively at the people who live the longest lives in the world, most of those communities have folded alcohol into their life, not just one drink a year, but often one drink a night, two drinks a night.

They drink in a way that is moderate,

or they also drink in a way that is extremely social.

And so this vice, as it is, is a kind of,

it sustains people's ability to be

unfolded into networks of social fitness.

Tell me a little bit about this research.

I believe it's called Blue Zone Research.

Yeah, so Blue Zones was led by a gentleman named Dan Butner.

And he became fascinated with these areas

across the world, where there was a high density of people

that lived to be 100 or more.

And he went in and basically did some ethnographical,

anthropological type work where he spent time with these people.

He observed their behaviors.

And what he found is that in a number of Blue Zones,

alcohol was a part of the culture.

Now, very interestingly, and with what we're saying,

these people didn't get hammered.

They had a drink or at most two, and they did it always

as part of community gatherings.

It's part of rituals, it's part of holidays,

it's part of dinner every night.

So where we get a lot of this, hey, alcohol

seems to be associated with longevity.

It's not somebody having a beer alone in their basement.

It's somebody drinking in community.

I'm quoting exactly from the Blue Zone paper

that I pulled up right after our conversation.

It says, quote, people in all Blue Zones accept adventists,

drink alcohol moderately and regularly.

Moderate drinkers outlive non-drinkers.

The trick is to drink one to two glasses per day,

says preferably Sardinian Cananu wine with friends

and or with food, and no, you cannot save up all week

and have 14 drinks on Saturday.

So again, this is an observation.

This is not an RCT.

This is not saying our prescription to live to 100,

no matter what your genes are, are

to have this particular Sardinian wine

one to two times a day at 5 p.m.

That's not what it's saying.

It's just pointing out that clearly drinking alcohol

moderately, including one or two drinks every day,

was no impediment to people living to 100

in these Centaurian Blue Zones.

Let's comment on the Blue Zone paper, Brad.

Yeah, and I want to make sure to represent the science and alcohol really well, because it's such an important topic.

I will say that, again, there's a more recent paper in the Lancet, Big Med Analysis, that shows that as little as five drinks a week is associated with increased mortality.

So now, if you just care about maximizing how long you're going to live, you could say, all right,

I'm going to shoot for less than five drinks a week.

Seven to five, pretty close.

The second thing that I want to say,

to bring us back to where we started about these health trends, is that we've got this amalgamation of whole plunge and cut out caffeine in sobriety, even though I don't have an addiction problem, is a moral badge of superiority.

Or I'm going to really optimize, because if I have a drink or two,

I wake up the next morning groggy with a headache.

And to your point, I think that it kind of misses the boat,

because life is about so much more than optimization.

Like, if everything in your life becomes work,

then what's the point of staying alive?

If we're forcing ourselves to wake up at 5.30

to get into a cup of freezing water,

if we're not having caffeine, even though we enjoy it,

it's ritual, it arouses us, because we

want to say that we're tough.

And if we're completely cutting out alcohol,

even though that can be a really good part of ritual

in community, then it's like everything becomes work.

And then next up, we might talk about this,

but we're tracking our sleep.

And now suddenly, we have a sleep score.

So even sleep becomes work.

So I think it's just really important to Steve's point

earlier, when people are making things

sound super complex in science, to ask, what's the so what?

And then in this case, even if there

is some so what on alcohol, that zero drinks across the entirety of your life might help you just be so focused and optimized and ready to crush it all the time,

well, I don't want to be a robot in my life.

It would be a very bad podcast host behavior if I did not mention the fact that just a few weeks ago, we had Mark Schultz and Robert Waldinger, who are in charge of the Harvard study, who pointed out that their big conclusion about what made for a good life was social fitness.

It was social fitness, not just physiological fitness, but social fitness.

And this is where I think it's really worthwhile to be nuanced about alcohol and be very clear about two different things.

That on the one hand, people are probably lying to themselves when they hold up a glass of Cabernet Sauvignon and say, this is medicine.

It's not.

It's not medicine.

It just tastes fucking great.

And if it tastes great, and it tastes great with people, and drinking is something that you enjoy doing with lots of people, and it helps to knit together a wonderful group of friends that builds your social fitness, and it doesn't lead to these kind of dependency issues that you've talked about, then it probably

is beneficial in the big picture.

I want to move on, Steve, to something

that is certainly a lot more modern trendy than alcohol.

That's fitness trackers.

So fitness trackers.

I have a lot of friends who play basketball.

They cycle.

They run.

They use fitness trackers, whether it's Apple Watch or Whoop, to read out stress scores and calorie burn scores and recovery scores and exercise minutes and the number of hours that you stand up.

I would love you to help me separate fact from fiction here. What are these fitness trackers good at counting that is useful to count in the first place?

And what are fitness trackers misleading or outright bad at counting?

The simple answer is this.

The simple things they're good at counting,

the more complex or the more what I'd say black box algorithm where it's a score where you have no idea what it's taking into account, the less good those things are. Those things don't do justice.

So what does that mean?

Things like counting steps.

They're generally all pretty good at those.

Heart rate generally depends a little bit.

The risk-based stuff isn't as accurate as a strap.

But it's going to get, unless you're

training for the Tour de France or something,

it's going to do a pretty good job.

But as we get further and further away from that, things like the fitness scores, the recovery scores, the predictive algorithms on what you can perform or if you should train hard today or take a recovery day, the more you get into those, the less accurate they are and the less meaningful they are.

And as an endurance athlete, this is very near and dear to my heart because I've spent way too much time experimenting with this and sometimes deliberately overtraining to see what my watch tells me and if it gives me some good data.

And generally on the simple stuff,

it's all right on the complex stuff, throw it away.

And then the other thing that I'd really like to point out here is that a lot of times we get almost like addicted to these numbers.

We start making them the kind of masters or dictators instead of them formers.

So we see the score, the low recovery score, and we go, oh my gosh, like I shouldn't train today, should I get out the door?

Like should I just sit on my couch and get an extra nap? And that anxiety like leads to worse performance. And as I spent a long time coaching college distance runners, and my test used to always be like, if I could have someone take off the watch for a runner day and they could do it, they'd be all right. But a lot of times what happened is you'd ask them to take off the watch and they'd get anxiety.

And I'd have runners who were like, OK,

I'll take off the watch and not use it. And then hide it in their shorts and pull it out later on the run so they could still get the data. And one other thing that I'd point on this, there's a fascinating study that took some of these fitness scores and essentially manipulated them. They changed the score to make it seem like it was either really high or really low. And what happened is on cognitive performance, so tests of reaction time, individual scores would change based on the false data. So if someone said, you're really recovered, all of a sudden they'd have really quick reaction times like their cognition had improved, even though the score hadn't changed at all and it was like a moderate score. So I think it's really important to understand that these impact our psychology. And if I was using some of these, I would just simply say, am I in control of it or is it in control of me? And if it's in control of me, I might need to step back and consider my use of some of these trackers. I appreciate the nuance there because I was about to turn to Brad and say, couldn't we say, as we just have for alcohol, that these scores might be numerically wrong, but substantively beneficial. Because if I become yoked to the idea of a recovery score of just making up a number here, 16.7, if I become anchored to a relatively high recovery score, it might encourage me to be more mindful of sleep. It might encourage me to work out more. The fact that, for example, I have an Apple Watch and it tells me how many steps I take every day, I think has overall gotten me to walk more. I'll anchor to a number of like 10,000 steps, even if it's totally made up, even if that number is not magical at all, simply having it in my mind says, okay, well, if I'm at, you know, 1700 steps today and it's 7 p.m., that's pathetic, I need to take this dog for a damn long walk. Brad, what would you say sort of piecing this together?

The fact that the numbers, as Steve said, as they get more sophisticated, might be more numerically off, but there might be a sort of psychological benefit to raising the baseline of our overall activity? Yeah, I mean, I was just gonna say exactly what you alluded to is you kind of paired those two things together. So getting anchored to a step count, the step count's gonna be really accurate. And we know that the more that we walk throughout the day, the better it is for us. A recovery score, that comes from a black box algorithm. And human performance is so complex. And by performance, I don't necessarily mean winning a gold medal, I just mean showing up and being a good podcast host, writing a great column for The Atlantic. And I really do think that those recovery scores, for better or worse, they create such self-fulfilling prophecies and such anxiety about the score that I really don't see them as beneficial. Now, if you are somebody that really struggles with alcohol, three, four drinks a night, and wearing an order ring or a whoop helps you cut out your alcohol, then it is the best \$400 that you could spend. If you're already high performing, and you're not struggling with substance abuse, or you're not struggling to get an exercise, and you're wearing this thing, but you're obsessing over the score, then I think that it tends for most people to get in the way. In particular in sleep, where there's a fair amount of research that shows the individuals who use sleep trackers, particularly if they come at sleep from wanting to optimize it, they end up sleeping worse. Whv? Because they get really anxious about sleeping. And they feel judged if they don't sleep well. So like I was alluding to earlier,

now sleep basically becomes work.

Like the one thing that is truly supposed to be the deepest rest of our day, sleep becomes something to win at, and something to work at.

I mean, I just had to jump in there because I bought a jawbone, black jawbone maybe seven years ago.

And I've always struggled with sleep.

I haven't slept well my entire life.

And I bought the jawbone,

and I would remember I was at a hotel,

and I had had this little wearable for maybe two weeks.

And as I was falling asleep or as I woke up,

I always felt like the jawbone was judging me

for not being able to fall asleep.

Like I was anthropomorphizing this machine

for having a low sleep number when I had a bad night's sleep.

And I literally took it off and threw it in the trash bin

of that Marriott or whatever and just left it there.

I was like, this just doesn't serve me.

It's just making me way more anxious.

I'm sure that the path to better sleep

is gonna flow through something else.

Brad, jump in there and then we'll go back to Steve.

Yeah, so what I was gonna say too there on sleep

is it gets back to not letting the device control you $% \left\{ \mathbf{n}_{i}^{\mathbf{n}}\right\} =\mathbf{n}_{i}^{\mathbf{n}}$

or your behavior.

Because what I would say is, Derek,

if you started to experience feelings of depression

or anxiety or the type of fatigue

where you're falling asleep during the day

or behind the wheel of a car,

then I'd say, yeah, like you really need

to pay attention to your sleep.

You should probably talk to a sleep doctor or a psychologist.

However, if you're not experiencing those things,

I would say, holy crap, man, you are fricking prolific.

You write two great columns a week.

You host this podcast.

You write books.

Like however much you're sleeping

is probably the right amount for Derek Thompson right now,

regardless of what this device says.

I, you know, we've been circling around this idea and then Steve named it so well, biomarker madness that you can become so focused on the micro that you lose sight of the macro that you can become obsessed with, you know, I'll say it again, brown fat thermogenesis, nor adrenaline, a fitness score of, oh, I was aiming for 16.7 and I got 15.2. It seems to me like we become very attracted to these bright and shiny objects that come to represent the definition of health and lose sight of the basic and fundamental truth

Brad, do you have a list of small things, a small number of things that people can do that you think just make all the difference or most of the difference in health and wellness? Yeah, I do.

And this comes from decades of public health research and what I would say is they all run contrary to biomarker madness.

And I would call these things simple, but not easy. So the first is a lifetime of regular physical activity. And this is defined as 30, 45 minutes or more a day of moderate or more intense physical activity. This doesn't need to be CrossFit or running a marathon or powerlifting.

This can be a brisk walk,

of health and wellness.

but you wanna be moving your body every day

for at least 30 minutes.

Number two on this list is avoiding highly processed foods.

The reason for this, highly processed foods are associated with high levels of body fatness. And we know that high levels of body fatness

are associated with decreased longevity

and decreased function.

So eat well, move your body.

Number three would be no tobacco.

And I guess if I was truly wearing my public health hat,

I'd put that number one.

Nothing has a more negative impact on our lives than tobacco.

So if you do smoke, if you do use a vape pen,

you might really enjoy it.

It's so hard or at least it can be so hard to guit.

But before you prioritize your cold plunge

or your fitness device,

try to get help coming off of tobacco.

Number four would be moderate to light to no drinking.

Again, we're not here to make friends.

So currently what the research says is under five drinks,

you're probably in the clear, under five drinks per week.

In that five to 10 range,

purely biological meta-analysis says it starts to be unhealthy.

However, if it's part of a social group,

you don't have dependency issues,

you're not getting in the car

after you have more than one drink,

then as you discussed, it could be a net positive.

And then the fifth thing is a sense of belonging and community.

This is so important.

There was a large study out of BYU a couple of years ago

that showed that the risks of loneliness

are on par with smoking and obesity.

So those are the big five

that any public health practitioner will talk about.

So it's regular movement, right?

It's avoiding highly processed foods,

maintaining good lean body mass,

no tobacco, no to very light drinking in social connection.

And I say simple, but not easy

because we can sit here and talk about these

and Steve and I aren't gonna have a podcast

that gets seven million downloads

saying hang out with your friends and go on brisk walks.

But the truth is a lot of these people

that are doing all this optimization,

they're not doing these five things.

And the thing that always gets cut out Derek

is the social fitness and belonging.

Why? Because living a life of devout optimization

tends to become a very lonely affair.

Especially if you throw in things

like intermittent fasting or ketogenic diet.

So now I can't go out to restaurants.

I can't join my friends for a beer.

I can't go to the cafe because I'm not drinking coffee.

I'm freaking tired all the time

because I wake up at 5.30 in the morning to coal plunge.

And it's like, my God, are we missing the forest

for these biomarker madness trees?

I feel like as someone coming at this subject

from the outside, I have become skeptical of syllables.

I've almost become, and I acknowledge

this is absolutely a bias.

I've become biased against language

I find overly complex in the fitness space.

It's not that I don't think Andrew Huberman

who is a fantastic podcaster is wrong about most things.

I think he's right about most things.

But something deep inside of me is like

telling me that if something about fitness,

about our bodies, which are these ancient, ancient machines,

if it's true, then you can say it simply.

If it's true, then it's old.

And if it's old, then it's kind of boring

in all likelihood.

And that the fitness basics and the health basics

and the life hack basics, they all have to be old.

And therefore, in a way, they almost do have to be

kind of boring to be the most true.

Steve, am I on to anything here?

You know, I think you're spot on there.

The rule of thumb I have is the more kind of jargon

that's used, the more my antenna should go up.

I'm like, hey, am I being sold something?

And we often use that, we often, you know,

make it more complex to sell something

when the reality is like the simple stuff works.

And if we do the simple stuff,

if we kind of nail the basics,

that will get most of us like 95% of the way there.

And the reality is most of us aren't trying to compete

for an Olympic medal where we need to

eke out the minor tenths of a second.

So if we just kind of nail those basics

that Brad talked about, you know, we'll get there.

And actually Audi, even the high performers you see with,

I've been very fortunate to work with a lot of Olympic level, professional level athletes.

And what they're really good at is like doing

the consistent boring stuff like all the time.

They never get tired of it.

They just like do the work that actually matters.

And too often, I think from the outside in,

we see the like minor stuff of them like,

oh, messing around with jumping an ice bath or whatever.

And we're like, that's the key.

And it's like, no, the key is they were at practice

with their coach and teammates for three hours this morning,

like perfecting their jump shot or whatever it is.

And too often, we kind of miss that message

and grasp onto the shiny object and say,

oh, this will make me more like LeBron or whoever it is.

Guys, I love this.

I had so much fun.

I learned so much.

And I really, one of the things that I love about this podcast is being able to come away with a new kind of framework

that I can apply to new subjects.

And the idea of biomarker madness

and this sort of jargonophilia that has emerged

from the Fitness Bro crowd is definitely something

that I'm gonna have my eye on for.

And I'm really grateful for both of you

for making those points as clear as possible to me.

Steve, Brad, thank you so much.

Thank you, Derek.

Thank you for listening.

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