

# **THE** MODEL **HEALTH** **SHOW**

**EPISODE 682**

**Improve Your Focus, Increase  
Longevity, & Unlock Peak  
Performance**

**With Guest Steven Kotler**

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**SHAWN STEVENSON:** You are now listening to The Model Health Show with Shawn Stevenson. For more, visit [themodelhealthshow.com](http://themodelhealthshow.com). Welcome to The Model Health Show. This is fitness and nutrition expert, Shawn Stevenson, and I'm so grateful for you tuning in with me today. One of the most remarkable anti-aging strategies starting to emerge is not a tactic, it's not a physical tactic, it's not a food that we eat, it's not a certain exercise. It is actually a mental change. And I was blown away to find out about this on this episode today. So, this is going to be something really, really remarkable, it's going to help shift the way you think about aging, but also shifting the way that you're thinking about how you're living your day-to-day life. We're going to be talking with the premiere expert in the science of achieving flow states. Have you ever experienced a state of flow in your life? If you're human, you probably have. You might not have noticed though, being in a flow state, there are certain ingredients. This can feel like time is actually going a bit slower, this can feel like everything is just happening naturally and effortlessly.

And it's not that you're not exerting effort, it's not that you're not doing things, it's just that everything seems to be working with ease and with grace. And funny enough, just last night, I was watching with my youngest son, Braden, who's 11 years old, I was watching *The Last Dance*, this docuseries on Michael Jordan and the Chicago Bulls, and their run at their final championship. And it's taking place in that time period as well, they've got this really cool documentary style access that they had with cameras following them along for that last championship. But they would flash back into the past several times and help to piece the story together. And this actually came out during the early days of the pandemic. The pandemic went through certain phases, as far as the entertainment out there. There was, of course, the Tiger King phase of the pandemic, alright? Shoutout to Carole Baskin. I think they just found that guy, her ex-husband or whatever was missing. Why were we watching the Tiger King, what got into us? It's because everything was so novel and new and just... We didn't know what was going on, so we were just like, "You know what? I'm just going to go with it."

Alright? Leotards, leopard skin, let's do it. I'm talking about the show, not what you were wearing. If you were wearing that, no disrespect. All good. But we went through that phase. We had *The Last Dance* phase. It was a good phase because the people banded together, demanded ESPN, "Release this series you've been teasing us with," because it was supposed to come out months later, but they moved the release date up, they know everybody was kind of hunkered down in their homes, and they released this really remarkable documentary. And the reason I'm bringing this up is that one of the segments that they showed was Michael Jordan in his second year in the league, this was like around 1985, and he essentially willed this team into the playoffs, sneaking in with a losing record as an eight seed, and that put them up

against the titans of the time, the Boston Celtics, alright? Now, they've got four Hall of Famers on that team already, and this new guy to the league, and you see something unfold that had never been seen before. Michael Jordan hit a state of flow in game one, but especially in that second game of the series where he scored 63 points against one of the greatest teams ever assembled.

But they lost the game. And that's part of the story as well, you can have this greatness, this solitary greatness, but it's that team dynamic, ultimately, blending those together that led to that dynasty that they formed later. But to see somebody in flow and if you were able to talk with him even then, and him expressing a state where you're not really thinking about the moves, you're not thinking about how you're dribbling the ball, or how you're going to the rim, or how you're shooting, any of that. It's all just happening. And to see such a display, and we can display that beauty, that flow in so many different aspects of our lives, whether it's in writing, whether it's in teaching, whether it's in speaking, whether it's in whatever the form of play that we might be engaged in or sports or whatever the case might be, there are so many different ways for us to access this flow state. And today, again, you're going to find out how this flow state connects to our longevity and why this might matter more than anything. Now, as you're going to discover, being in a state of flow is a synchronous event with our brains and with our bodies. And so, being able to nourish both of these is one of the foundational pieces that makes accessing a flow state easier. If we're in a healthier state physically, and of course, mentally, again, we're going to break all this stuff down in this episode. But today, looking for a nutritive thing to help to tip us into the state of flow.

This is one of those things that a lot of people are trying to access, this whole category of nootropics has exploded, and people looking essentially for a limitless pill. Now, the reality is, again, this is much more psychology and environment state-based than the nutrition stuff that we might do, or the exercise stuff that we might do. Again, all of these things can help us to flirt with the zone of flow state, but again, we're going to unpack what it really means in this episode. But if we're looking to do this with a sense of efficacy and really fueling our brain... And even for this conversation today, my guest was sitting down in this chair across from me. And as I was in my office in the other room, I was downing the most remarkable nootropic that's actually been utilized for thousands of years in documented human history. And I'm talking about a formulation that's based on royal jelly. Now, royal jelly, and this was published in the journal, *Advanced Biomedical Research*, found that royal jelly has the potential to improve our spatial learning, so being able to learn and to modulate, to manage what's happening spatially within our environment. It was also found to improve our attention span.

Who could use a little bit more attention today? And also, was found to directly improve our memory. And researchers in Japan found that specifically royal jelly has the ability to stimulate neurogenesis, the creation of new brain cells, specifically in the memory center of the brain,

AKA the hippocampus. And again, its use... If we're talking about royal jelly and honey as well, and propolis, the immune factors coming from the hive, we're looking at centuries of documented use. And this is dating back to great thinkers who we even base things around today, if we're talking about systems of medicine and ways of thinking, if we're talking about Hippocrates utilizing these bee products and the ancient Egyptians having some research dating back all the way, again, thousands of years ago, and then having modern day science and the scientific method to affirm its efficacy.

But here's the key. As always, you want to make sure that you're getting it from the right source, because regenerative bee farming is so important today, the population of bees have been absolutely demolished because of the way that we are doing farming practices as a society today. And so, investing in regenerative beekeeping and also getting your bee products from companies who are doing third-party testing for the common toxicants that are found in most bee products on store shelves, we're talking about heavy metals, we're talking about pesticide residues, we're talking about toxic molds, all these things should not be coming along with these remarkable bee products. And so, this is why I'm such a huge fan of Beekeeper's Naturals. Go to [beekeepersnaturals.com/model](http://beekeepersnaturals.com/model), you get 20% off their incredible nootropic brain fuel, but also their Superfood Honey, which is something I have on a regular basis. I absolutely love their Superfood Honey and so much more. Their Propolis Spray, amazing, amazing. That's [B-E-E-K-E-E-P-E-R-Snaturals.com/model](http://B-E-E-K-E-E-P-E-R-Snaturals.com/model) for 20% off store wide. Head over there, check them out. Support your brain and cognitive health, but also support regenerative beekeeping. And on that note, let's get to the Apple Podcast review of the week.

**ITUNES REVIEW:** Another five-star review titled "A true leader," by Donna Debra. "I look forward to each inspiring episode that encourages and educates me while living a healthy lifestyle. Shawn's podcast rejuvenates me mentally and physically, causing me to think outside of the box. He encourages us to do our own research. And I've realized just as we evolve, our health is also evolving, requiring us to make changes as necessary. Please, keep bringing us the science behind the issues. Grateful."

**SHAWN STEVENSON:** Amazing, amazing. Thank you so much for sharing your voice and sharing your insights. That really does mean a lot. And listen, if you have to do so, please pop over to Apple Podcasts and leave a review for The Model Health Show. It really does mean a lot. And on that note, let's get to our special guest and topic of the day. Steven Kotler is a New York Times best-selling author and award-winning journalist and the executive director of the Flow Research Collective. He's one of the world leading experts on human performance. He's the author, actually, of 11 best-selling books, and this includes The Art of Impossible, Stealing Fire, The Rise of Superman, Abundance, and again, several other titles. His work has been nominated for two Pulitzer Prizes and translated into over 50 languages. He's appeared in over 100 publications, including the New York Times Magazine, Wired, Wall Street Journal, Time,

Harvard Business Review and more. And now he's here on The Model Health Show to talk about this remarkable science around flow state and also how this impacts our health and longevity. Let's dive into this conversation with the amazing Steven Kotler. Steven, it's so good to see you. Thank you so much for coming by.

**STEVEN KOTLER:** No, it's my pleasure. Thanks for having me.

**SHAWN STEVENSON:** The first thing I want to ask you about is, what's happening in the human mind, the human brain, human body, when we are in a state of flow, what's actually going on?

**STEVEN KOTLER:** Scale of 1-10, how technical of an answer do you want?

**SHAWN STEVENSON:** I want to go full on balls-deep technical.

**STEVEN KOTLER:** Alright, so, you know when you're sort of describing brain function, you want to know four things, really. You want to know neurochemistry and neuro-electricity, though neuro-electricity is not a term anybody uses. Brain waves, right? But that's the two ways the brain talks to itself and to the body. It uses chemicals, uses electrical signals, so that's communication. And the other things you want to know are neural anatomy, where in the brain something is taking place. And since, as I'm sure you know, very little in the brain happens totally in one spot, it's usually a network effect, so really what you want to know about is functional connectivity and anatomical activity, the network effect of the brain. So, networks, neural anatomy, neuro-electricity, neurochemistry, those are sort of the four things you want to have some idea about if you're talking about what's going on in the brain. So, during flow, flow's an optimal state of consciousness, we feel our best, we perform our best, we see shifts at every one of these levels, big changes. Let's just start with simple neural anatomy. In flow, the pre-frontal cortex, which is the part of your brain that's right back here, right behind your forehead, very potent portion of the brain, does executive control, long-term planning, logical decision-making, morality lives there.

Will power lives there. This portion of the brain deactivates during flow. We used to think it was sort of like an across the board shut down, and I'll talk about why in half a second. Now, we know it's more sort of localized depending on what you're doing, so its task localized, meaning different areas will shut down, not just across the board. Though there's still some debate about that. And it's really about efficiency. So, the first order of business for the brain and the body is save energy. So, in flow, 'cause the brain has a fixed energy budget, and flow, one of its core characteristics is complete concentration on the task at hand, so the brain needs lots of energy to focus on the thing that's directly in front of you so you can get absorbed in and lost in and all that. It shuts down non-critical structures and it re-purposes that energy for attention. A lot of what gets shut down is in the pre-frontal cortex. So, flow is really strange

effects. So, when we're in a flow state, our sense of self disappears, self, self-consciousness, bodily awareness will disappear sometimes, and we have this experience all the time, so like low grade flow states, what's known as micro flow, really common at work.

You go to work; you sit down to write a quick email to a colleague, and it's just supposed to take five minutes. You're so lost in what you're doing, you end up writing an essay, takes an hour. And maybe your whole sense of self didn't disappear, but bodily awareness sure did, because when you pop back in and you're like, "Oh crap, an hour has gone by," you have to go to the bathroom, and you didn't notice. That happens to all of us all the time, right? That's really common. And time distorts in flow. Most commonly, you just get so sucked into what you're doing that five hours pass by in like five minutes, sometimes you get a freeze from car crash. So why are these really weird things happening in flow? Big portion of the reason is the prefrontal cortex is de-activated. Your sense of time, for example, calculated all over the prefrontal cortex, it's essentially a network effect. And as parts of the cortex shut down, there are other things that tell time, strange in the brain, but generally as parts of the cortex shut down, we lose the ability to separate past from present from future, we're plunged into what people call... What is the eternal present, the deep now.

And huge impact on performance, by the way, big impact. Think about anxiety as a huge negative effect on performance. A little bit is okay, primes learning, prime focus, doesn't... But too much really blocks performance and crushes us. And most of our fears, most of our anxieties are not in the present moment, unless you're in action sports, in combat sports, in a combat situation, fighting with your wife, a handful of situations that we encounter in the real world, most of our fears are stuff in the past or stuff in the future, right? It could happen or it did happen, and I want it not to happen again. So, if I remove past and future, stress hormones literally are flushed out of our system and joy, euphoria, all those things go way up. Same thing with your sense of self. Self is a network effect, a bunch of parts of the brain talking to each other, most of them are in the pre-frontal cortex, though some are deeper in the brain. And when those parts shut down, our sense of self, including the voice in our head, that nagging, always-on inner critic gets really, really quiet.

So that's what's going on neuro-anatomically, more discrete levels. At a slightly larger level, you see a coordination between what's known as the frontal control network, cognitive control, which allows you to stay focused on the task at hand, block out all those other distractions and that sort of stuff, and the goal-directed network, which is... So, the network level, those two things, they're either, to use technical words, metastable, which is Scott Kelso's argument, and I am sort of leaning in that direction. Though in a recent paper, we argued that it was synchronous activity 'cause that's what showed up in the data, and my colleague, Richard Husky has sort of found that, though even he sort of doubts his data, 'cause we think it's a metastable system. But that's complexity dynamics and probably not a level you

wanted to go to, so let's switch to neurochemistry now. In flow, we see five of the most potent reward chemicals the body and brain can produce all flood our system at once, and they're performance enhancers and they're pleasure chemicals. And you're familiar with some of them; dopamine, norepinephrine, serotonin, anandamide, endorphins. And when we talk about flow underpinning happiness and well-being and meaning and purpose and joy and all that stuff, these neurochemicals are a large reason why, just to give you an idea of pleasure-wise.

So, when we fall in love, which is one of the best feelings on earth, that feeling of romantic love is dopamine and norepinephrine being cocktailed, it's two out of these five chemicals. So, imagine falling in love plus a whole lot more pleasure, that gets you flow. So that's why when people rate their favorite experiences on Earth, it's always a flow state. These neurochemicals are why, that's why we see this enormous surge in motivation. When McKinsey, the business consultancy wanted to know how much more productive top executives were in flow than out of flow, they did a 10-year study, and the average response was 500% more productive, which is crazy, right? And means you can go to work on Monday in flow, take Tuesday through Friday off and get as much done as your steady state peers, which also tells you at the Flow Research Collective, my organization, we train a lot of companies, that's one of the reasons why, 'cause companies are doing this more and more, companies are doing this and you got to stop, and you're like, "Well, if company A does this and they're a 1000% more productive than the competition because their employees are now being able to spend a couple of days a week in flow versus the comp," right? This is becoming one of those factors in business where you have to do it kind of thing. You also see these same neurochemicals impact learning and memory.

So, quick shorthand, how does learning and memory work in the brain? The more neurochemicals that showed up during an experience, better chance of the move from short-term holding to long-term storage. Another thing neurochemicals do, they tag experiences. Super important, save for later. Flow's this huge dump. Neurochemistry, which is why in studies done by the US Defense Department, soldiers in flow learned 240% to 500% faster than normal, huge spike in learning and memory. All that comes down to this really big surge in neurochemicals. We also see stress hormones and stress chemicals flushed out of our system as we move into flow, resets the nervous system, which has... We've been talking about peak performance aging as we go on in our country. So, there are nine known causes of aging, and they're all linked to stress and information. So, one, flow is a very potent anti-aging medicine, maybe one of the most potent. One of the reasons is 'cause it flushes these stress hormones out of our system and resets the nervous system, and that anything that does that, anything that resets the nervous system is essentially an anti-aging technology. So that's a look at kind of networks, the last thing we want to talk about is brain waves and neuro-electricity.



So, when you and I are in conversation, you're awake, alert, we're talking, your brain is producing a beta wave. It's a fast-moving wave, awake and alert is what it basically means. Below that's a slightly slower wave, that's an alpha wave. This is daydreaming mode, it's basically when the brain is inactive, stuff is shut down, it's a slower wave. And below that is theta, theta is a much slower wave, tends to show up during REM sleep or sometimes during focused attention, which is why you see it so much in flow. Flow takes place on the borderline between alpha and theta. We don't stay there permanently; you're not living there. Every time you make a decision, and flow is a decision-making state, you'll bounce around, you'll go up to beta, you'll come... But the difference between peak performers, when you look at, what is the difference in the brain between peak performers and average people when they're doing something, one of it is, average folks will go into a decision-making cycle. They'll go to beta or high beta, or some of these non-flowy brainwave states, and they'll get stuck there, they'll stay there. High beta is anxiety.

So, like, your brain will start worrying about something and you'll just stay there. But the pros, they may start worrying about it, but they'll get their brain back to this alpha-theta borderline, they can come back to flow. So, I go a lot deeper, but this is a lot deeper than I'll normally go on a podcast.

**SHAWN STEVENSON:** I love it. This is wonderful. Having this... This is a language for us to really start to...

**STEVEN KOTLER:** Well, yeah, and when you're preaching to the choir, we emphasize, at the Flow Research Collective, cognitive literacy. And it's super important.

**SHAWN STEVENSON:** Yes, yes.

**STEVEN KOTLER:** We want to perform at our best, understand what's going on in our brain and our body.

**SHAWN STEVENSON:** Exactly.

**STEVEN KOTLER:** We want to perform. That language is power. So yeah...

**SHAWN STEVENSON:** I'm a big advocate, even physical literacy. Putting some of these practices for our bodies and learning a certain language. But this all really leads to, for me, just even at the tail end of that, being able to access one of the greatest human capacities, which is the capacity for creativity. Right? And you just mentioned bouncing up to like beta...



**STEVEN KOTLER:** Yeah, creativity spikes massively in flow. A lot of it is those neurochemicals. So, creativity is a cognitory process, always. It's the brain taking in novel information, or you're internally generating a novel thought, and it combines with older ideas to produce something startling and new. So, all those neurochemicals surround information processes in the brain. You're going to love the following sentence. When we're in flow, we take in more information per second, so data acquisition goes up; pay more attention to that incoming information, so salience goes up; we find faster connections between that incoming information and older ideas, so pattern recognition goes up, that's your creativity; and we find faster and farther flung connections, so divergent thinking, outside the box thinking, that also happens; and finally, you know, in all of the studies of creativity, creativity is defined as the creation of something novel and useful.

And the useful part means it's not enough for me to have a neat idea, that's not creativity. I have to do something within the world, right? The action matters, and that requires risk-taking. And in flow, the same neurochemicals, especially dopamine, boost risk-taking. So literally they surround the creative process. It's why creativity spikes are the highest in flow, above anything else that's been measured, 400 and 700% depending on which aspect of creativity we're measuring or looking at. And that's what we did, work done at Harvard, work done in the University of Sydney, a couple of other places. And, as you pointed out, the brainwaves, when you're down around alpha theta, those are really creative. Alpha waves have long been correlated with creativity for a really long time. And so, yeah, flow is incredibly great for creativity. And I cut you off 'cause I got all excited.

**SHAWN STEVENSON:** Yeah, I love it. Listen, you know, in that same vein with creativity, it's one of the most efficacious ways to problem solve.

**STEVEN KOTLER:** For sure.

**SHAWN STEVENSON:** Number one, and right now we're dealing with an abundance of problems as a species, but we tend to hammer away at things being in that beta state, like this problem, I'm going to fix this, I'm going to... That kind of thing...

**STEVEN KOTLER:** It's a norepinephrine problem actually. So, the part of our brains, the anterior cingulate cortex, very involved in flow, that if you're gripped, if you're freaked out, if you're scared of the world today, and that's always... Are you producing a lot of norepinephrine, which underpins anxiety. The brain, when you're anxious, it wants logical solutions. Try to do something that's worked a million times. Don't give me anything new, give me the thing that's worked a million times. And when we're in a good mood, when we're not time-stressed, when we're less fearful, that part of the brain, the anterior cingulate cortex, which finds links between weakly associated ideas, or remotely associated ideas, outside the box thinking, is

fully active. So, the more fearful we are, the less creative we are. This plays a big role in peak performance aging, where you really have to stay on top of anxiety levels to really sort of exceed in the second half of your life. That's for sure.

**SHAWN STEVENSON:** What about this phenomenon of people having their best ideas in the shower?

**STEVEN KOTLER:** So that, we have to go all the way back to the sort of Poincare and Wallace, the foundation of creativity. They realized... Poincare was a mathematician in the late 1800s; Wallace was a psychologist in like 1925. They came up with the idea of the creativity as a cycle. It's a four-stage process. There's a loading phase, then it's followed by an incubation phase, which is what happens in the shower, where your subconscious... Your loading phase, you're just thinking about things consciously...

**SHAWN STEVENSON:** So, you're marinating.

**STEVEN KOTLER:** Right. And then you marinate, pass the problem to the unconscious, and the reason the shower works... And this, so you can also... In flow, flow states have triggers, pre-conditions that lead to more flow. One of them is sometimes talked about as deep embodiment. It basically means when multiple senses are active at once, we're much more engaged in the present, right. This is why athletic activity is so... One of the reasons this is so flowy is 'cause when you're doing something athletic, you're using all your senses, there's no time for a whole lot else. Right? So in the shower, in the same way, you've got a lot of sensory information sort of coming in all over your system, so it tends to drive focus towards flow a little bit, but it's also this incubation, so you're just taking your mind off the problem, your subconscious is chewing on it, and then you're being pushed a little bit towards flow, and that's what we think is going on with the good ideas in the shower.

**SHAWN STEVENSON:** That's so cool. And I think that we could... And this is what I love about your work is it's not even a matter of thinking, it's a matter of, we can create the conditions to stimulate or create a much higher likelihood of reaching that flow state.

**STEVEN KOTLER:** Yeah, that's what we do at the Flow Research Collective, and just to put a point on it, so I'll talk about how we train it in a second but let me just say this before we do. Flow is, we're all biologically hardwired for flow, right? Built-in property being human. We all come with peak performance built into us. But at the Collective, we train tens of thousands of people every month, and my point is we do it in 130 countries, everybody from soccer moms and soccer dads to professional athletes and members of the US Special Forces, to companies like Facebook and Accenture, and the San Francisco Police Department, blah, blah. It's a huge, wide assortment. That's my point. And we measure everything. We're total data geeks. On

average, we see a 70-80% boost in flow. And it's not... Yes, our Kung Fu is very good. I think we're the best in the world at this particular thing. That said, we're getting those results 'cause this is so trainable, 'cause we're hardwired for this. So, I said earlier, flow states have triggers, and there's a flow cycle. Like there's a creative cycle, there's a flow cycle. It actually maps onto the creative cycle very closely, and nobody knows, are you looking at the same thing or two different things? We can't...

Nobody's been able to figure that out yet. We don't know. But if you know the flow cycle, it's a map of the process, right, so where am I in this process? And if you know the triggers, what can I do to get more flow or to sustain the flow that I'm getting? That's the toolkit, and once you're armed with that toolkit, and a little bit of cognitive literacy, 78% boost in flow is what's kind of I think available to most of us. That's certainly what all our data says.

**SHAWN STEVENSON:** It's scary good.

**STEVEN KOTLER:** I know. Scary good.

**SHAWN STEVENSON:** It's scary good. And, again, we're addressing... I truly believe that whenever we are faced with a problem, whether it's personally or even as a species, the problem existing is automatically going to have a solution package with it. It's kind of like two sides of the same coin; there's always a way. And then, of course, there's this statement, Where there's a will there's a way. I believe where there's a will there's a thousand ways, 10,000 ways, but it's our ability to think differently a lot of times, but we handicap ourselves when we're trying to, as Einstein said, "Solve a problem from the same level of thinking that created the problem." Right? And so, having this come up right now, where we're dealing with some pretty serious issues as a species, our collective demise, and also seeing this advent of, we just crossed 8 billion people on the planet recently, while at the same time we have plummeting rates of fertility as a species. It's been going down about 1% every year for the past 50 years. And we'll put the study up for everybody. The Scientific American did a great job kind of encapsulating a bunch of different studies to lay it all out.

And so, with that said, paying attention to how long we can live and how long we can live healthily is a big deal. And you saying today, you just blew my mind when you said that this is anti-aging technology, and having the data to back that up, it is so awesome. And this is something, we got the practical stuff out here, go get your steps in, eat healthy foods, but also put on your list of to-dos flow state.

**STEVEN KOTLER:** Yeah, well, so and this is really what's at the center in our country, right, is if you really look at the data on anti-aging and longevity and those sorts of things, the biggest levers, the biggest things that we have available to us are almost all psychological.

**SHAWN STEVENSON:** Facts.

**STEVEN KOTLER:** Right? Mindset has a huge impact on how long we live. Social connection, huge impact on how long we live. Regular access to feelings of master and control, which show up in flow, huge, hugely important to how long and how well we live. And I keep going. It goes on and on and on.

**SHAWN STEVENSON:** Feelings of purpose.

**STEVEN KOTLER:** Yeah, if you actually like... So, peak performance aging in a single sentence, right, this is, if you want to rock, you drop. You want to regularly engage in challenging, creative and social activities that demand dynamic... Dynamic just means all five categories of functional fitness, strength, stamina, agility, balance, flexibility, at once. Dynamic, deliberate play. And we can talk about what deliberate play means in a second and take place in novel outdoor environments. Nowhere in that sentence... Those are all the big levers put together. Now, a bunch of those words are flow triggers, so flow comes baked into that. But nowhere in there did you hear a bio hack, did you hear a supplement, did you hear a dietary suggestion. Like all the things... I'm not saying those things are bad. They're good too, right? But I am saying that most of the stuff that people do, they're reaching for the wrong things first. They're not figuring out that the big levers are elsewhere. The other one is leg strength. Leg strength is the single most important correlate for peak performance aging, for longevity, for maintaining brain function over time, for maintaining body function.

And it's literally the thigh muscle mass. So, it's funny, 'cause people were talking about, Oh, should we test Biden's cognitive function, or all this stuff, right, 'cause we got older. And I was like, well, really, what you want the dude to do is squat, you want to know what his thighs can do? That's probably a better indicator.

**SHAWN STEVENSON:** That's amazing.

**STEVEN KOTLER:** I know.

**SHAWN STEVENSON:** I know my son who's over there, he's got some... You see those thighs? See those busted little pants over there? But that's an indication again of robust cognitive function, and there's this really strange stereotype that the athletes or the jocks are not intelligent.

**STEVEN KOTLER:** The dumb jock.

**SHAWN STEVENSON:** Right.

**STEVEN KOTLER:** Ryan and I were just... Ryan's like off screen. We were talking about this the other day. I grew up in the '70s and '80s, and that was... It was dumb jocks. It wasn't the... The first research that linked brain performance to body stuff was the famous... It's the first major study, it's the study... So, the traditional idea is about aging, right, the long, slow rot theory, all of our mental skills decline over time, all of our physical skills decline over time, there's nothing we can do to stop the slide. We now know that's totally not true. We now know that all those skills are actually use it or lose it skills. And if you keep training then you can hold on to them, even extend them for far longer. So that showed up. One of the first big studies was the Nun Study. It was a study of nuns, and they were looking at who develops Alzheimer's and why, and it was lifestyle factors and all that stuff. They were the first study that showed that exercise preserves cognitive function, and this was like 1995, 1996. I have to go back in the physiology literature, but we were talking about I think that's the study that actually was the first hole in the dumb jock myth. I could be wrong. Maybe there was stuff that came... Before, we were talking about it, I was like, I think that's the one that sort of blew it up.

**SHAWN STEVENSON:** And just to piggyback on that, we've got a study, this was conducted by researchers at Georgia Tech, and it revealed that strength training for as little as 20 minutes can improve long-term memory. And the researchers had study participants specifically train the legs for 20 minutes versus controls who did nothing.

**STEVEN KOTLER:** So how old were the participants, did it say?

**SHAWN STEVENSON:** So, these would be, I would imagine they would be college students. But two days later they had them to do an image recall test, and the strength training test subjects outperformed the non-lifters by 10%. Right?

**STEVEN KOTLER:** You know what spins off of this, it's really cool, and not enough people are talking about it, is we're starting to get to the point that we're being... Like that's strength training, right, and we know like physical stamina, endurance training, is good for certain things, bad for others, strength training for memory. We're getting really specific with these links. And there's still much work to be done, and I'm hesitant to make, this is this, 'cause I don't think we're at that level yet. But this is definitely where the research is. And over the next five to 10 years, we're going to have... You're going to go to the doctor and he's going to say, "Oh, this is your issue, this is your issue, this is your issue," you're going to get like a combination of play these video games and do these exercises in the gym, and it's going to be so unbelievably personalized and specific, it's going to get really neat.

**SHAWN STEVENSON:** Yeah, yeah, I hope that you're right.

**STEVEN KOTLER:** Me too.

**SHAWN STEVENSON:** I hope that you're right.

**STEVEN KOTLER:** Me too. I could be wrong. I've been wrong before.

**SHAWN STEVENSON:** So, I want to ask you, because even with that, when we are engaging in an activity like that, training legs, we're putting ourselves in a territory of certain outcomes. Might not be, again, the direct causative agent for the thing, and the same thing holds true if we're talking about practices that are going to put us in flow territories. So that's what I want to talk about now. What are some of those practices?

**STEVEN KOTLER:** So, let's just start with what I call the peak performance basics. Which are... And this is really like there's 30 years of sort of positive psychology asking the questions. If you want to be at your best, what's baseline? What's non-negotiable? What do we have to have? And then we can get more advanced and talk about flow triggers and stuff like that, but what's basic? I won't linger on a lot of these, because they're very obvious and I know you've covered a lot of them on the show. So obviously, sleep matters. Flow's a high energy state, so you need seven, eight hours a night, regularly. Can you get into a flow state occasionally if you didn't get that amount of sleep? Yes, of course you can. And that happens a lot. But, general rule, if you want to make flow reliable and repeatable in your life, you want to make... Get a sleep seven, eight hours a night. That's just what it is. Hydration and nutrition.

**SHAWN STEVENSON:** Wait, we got to go back on this one.

**STEVEN KOTLER:** Okay.

**SHAWN STEVENSON:** Because there's two things that will come up for me. Number one is we have a reduced activity in that prefrontal cortex when we're sleep-deprived. So, is that moving into that territory? But then it brings up the question of stress that would happen...

**STEVEN KOTLER:** Yeah, we're way... Too much norepinephrine, there's way too much anxiety. And, yes, yes, you do see a reduction of activity in the prefrontal cortex with sleeplessness, but it's the wrong band of... If you're dealing with neuro-electricity, or brainwaves, it's in the wrong spectral bands, it does the wrong thing. So yes, but not exactly.

**SHAWN STEVENSON:** So, sleep deprivation isn't good way to hack your way in.

**STEVEN KOTLER:** You certainly can hack your consciousness and alter your consciousness. People have been using that in mystical systems forever. Right? Sleep deprivation as one way of inducing altered states of consciousness. Not flow. You can alter your consciousness, but it's not ideal for flow. And it is... And seven, eight hours is pretty much non-negotiable. Right? A lot of people tested on things. I always love... This is what I always tell people when I get pushback on that, is I'm like, Look, don't take my word for it. There are IQ tests that are all over the internet for free. One day, when you've slept seven, eight hours, take an IQ test. Wait a couple of weeks until you get four hours, five hours of sleep one night, six hours, and take the same IQ test, and just compare. It's end of conversation, right? It's end of discussion. You're like, Oh my God, I'm that much stupider when sleepy? Holy crap. You won't do it again. It sort of cures that. Especially if you do anything where you need to brain for a living. Right? Just...

**SHAWN STEVENSON:** One of the most eye-opening studies for me, this was years ago I came across this. It was published in The Lancet, and they took physicians and they had them to do a simulated...

**STEVEN KOTLER:** Oh God.

**SHAWN STEVENSON:** Operation.

**STEVEN KOTLER:** Yeah, yeah, yeah.

**SHAWN STEVENSON:** And then they sleep-deprived them for just 24 hours and had them come back and do the same simulated operation.

**STEVEN KOTLER:** Oh wow.

**SHAWN STEVENSON:** They made 20% more mistakes.

**STEVEN KOTLER:** Oh, I'd love to see that study. Yeah, yeah.

**SHAWN STEVENSON:** Doing the exact same thing.

**STEVEN KOTLER:** Yeah, yeah.

**SHAWN STEVENSON:** And it took them 14% longer...

**STEVEN KOTLER:** Longer.

**SHAWN STEVENSON:** As well, to do the exact same thing.



**STEVEN KOTLER:** Oh, I really want to find this too. That's cool. That's a great study there. Yeah. Hydration, nutrition matters. And when I talk about the peak performance basics, let me put a frame around it, there's three things on the physical side, three things on the mental side. On the physical side, to maintain the energy levels we need for peak performance, hydration/nutrition, sleep, and the third one is unusual to people. Maintaining robust social connections. So, we know the importance of social connection psychological. People don't understand there's an energy penalty for not maintaining robust social connections. So, whenever you face a situation, X happens, could be a threat, could be a problem, got to run away, could be a challenge that I want to rise towards. And whenever that happens, and it happens all day long, right, the brain does a very quick calculation, threat or challenge, threat or challenge, right? Part of that calculation is, do you have friends? Do you have people who love you? Do you have backup? If you try this thing and fall down, is somebody going to pick you up again? Right? 'Cause if there's nobody, this is a big problem, and we got to produce a sh\*tload of energy to make sure you can tackle it, and we need a bunch of fear, and that takes even more energy, and you do that over time and you no longer have the energy to get into flow.

So, maintaining... And, you know, I'm an introvert. I don't... Right? I can maintain robust social; I need to talk to my wife for like 20 minutes a day. My wife is an introvert too, so we're both wired that way, but we literally like we can talk to each other for about 20 minutes a day, and I can hang out with my dogs, and that's often enough for me, right? But to maintain... Every day no matter what, I try to make one or two phone calls, just out into the ether. Folks I haven't seen a little while, hey, how are you? I love you, what's going on? That sort of stuff. 'Cause I want that energy level. So that's on the physical side. On the mental side, we've talked a bunch about how anxiety blocks flow. So, there are three. Three of the best long-term anti-anxiety strategies are a daily gratitude practice, regular exercise, or mindfulness. And what I tell people is, and we can talk about the science of why they all work at reducing stress, but like high level they all reduce stress. Daily gratitude actually will make you more flow-prone, too. We did some work with Glen Fox at USC, who is a great gratitude researcher, neuroscientist, and we found that people with regular gratitude practices are more flow prone.

But what I tell people is, if it's a normal day, do one to manicure your nervous system, right? If it's a little stressful of a day, do two of those things. And so, like during COVID, if you worked for the Flow Research Collective, because we're a peak performance organization, I want my people performing at their best, you had to do three a day. So, if you worked for me during COVID, you were working out meditating and doing a daily gratitude practice, you didn't, you know, didn't have a job, basically.

**SHAWN STEVENSON:** I love it. This one right here, you just said gratitude makes you more flow prone. That's one of the most remarkable statements that you shared thus far. That's pretty powerful.

**STEVEN KOTLER:** It's cool. We're doing a really... We're doing a neat study, sometime in the next two or three months, where we're going to look at gratitude as an acute intervention in a stressful situation. We want to test it against like breathing and a couple other, because nobody's ever looked at like, they look at... They looked at gratitude overall, like, you know, it will lower anxiety levels in your life. But we want to know, like an acute situation when we're forcing people to do something scary and dangerous, which is the better, you know, which is the best way to de-stress and drop into flow. We think gratitude is going to be pretty powerful.

**SHAWN STEVENSON:** That's remarkable.

**STEVEN KOTLER:** We'll see.

**SHAWN STEVENSON:** So, this one, these three mental spaces. So, we got...

**STEVEN KOTLER:** Yeah, all those things are just trying to lower the amount of norepinephrine in your system, really, and cortisol in your system, because too much, we'll talk about flow triggers in a second, because this was basics. And you said, how do I manicure flow? I'll give you a couple of flow trigger examples, too. And this will make a little more sense. But stress hormones block flow too much. You're just going to block flow. And you're going to block a lot of other things. Stress hormones block learning, they block creativity, they block flow. They slow down fast twitch muscle response as a general... Unless you're in a full fight or flight mode, there's general, they'll slow down fast twitch muscle response. They lessen the amount of physical strength we can usually summon. Right. There's a big penalty for fear in the brain. A little bit is good. Too much is a problem. So, you got to be constantly doing something to work with your nervous system. Now, in acute situations, you know, in crisis modes, there's other techniques that are sort of better than those three for like, how do you sort of calm yourself down in the exact moment, but over the long term.

And the one thing I want to say is if people are not used to exercising for cognitive function for lowering anxiety levels, you want to exercise until there's a release of nitric oxide. That's what flushes the stress hormones out of your system. How do you know when nitric oxide has been released? It's a gaseous signaling molecule. It's in every cell in the body, basically, when your lungs open up about 20 minutes into a workout, 25 minutes when your lungs open up and it starts to get quiet upstairs, that's nitrous oxide. It's now pushed the stress hormones out of your system. Your lungs have opened up, starting to get quiet upstairs. So, you're exercising for calming down. You have to go until that happens, basically. So that's what you're looking

for. If you're exercising for fitness or whatever, you know, you can get a high intensity workout in 10 minutes, but you may not get that shift.

**SHAWN STEVENSON:** Yeah. Got a quick break coming up. We'll be right back. Few people know that regularly drinking coffee has been shown to help prevent cognitive decline and reduce the risk of developing Alzheimer's and Parkinson's disease. This attribute, referenced in the journal, Practical Neurology, is yet another reason why intelligent coffee consumption makes the list of best neuro-nutritious beverages. Another study featured in the journal Psychopharmacology uncovered that drinking coffee has some remarkable benefits on mental performance. The researchers found that intelligent coffee intake leads to improvements in alertness, improved reaction times and enhanced performance on cognitive vigilance tasks and tasks that involve deep concentration.

Now, why am I stressing intelligent coffee intake? This means acknowledging the true U-shaped curve of benefits and not going ham on caffeine. The data clearly shows that some coffee, a cup or two a day, and the accompanying caffeine is a great adjunct for improved mental performance. But going too far starts to lead to diminishing returns. So, we want to make sure that we're getting an optimal intake of coffee. And again, not going overboard, but also coffee is best when it's not coming along with pesticides, herbicides, rodenticides, fungicides. These chemical elements are clinically proven to destroy our microbiome terrain, so destroying the very microbiome that helps to regulate our metabolism, regulate our immune system, the list goes on and on.

Obviously, you want to make sure that those things are not coming along with the high-quality coffee that we're trying to get these benefits from. And also, what if we can up level the longevity and neurological benefits of the coffee by combining it with another clinically proven nutrient source? Well, that's what I do every day when I have the organic coffee combined with the dual extracted medicinal mushrooms from Four Sigmatic. And if we're talking about optimal cognitive performance and the health of our brain, the protection of our brain, there are few nutrient sources like lion's mane medicinal mushroom that pack these kinds of benefits. Researchers at the University of Malaya found that lion's mane has neuroprotective effects, literally being able to help to defend the brain against even traumatic brain injuries. It just makes the brain more healthy and robust. So again, this combination of medicinal mushrooms plus organic high-quality coffee is a match made in nutrient heaven. Go to [foursigmatic.com/model](https://foursigmatic.com/model), that's [F-O-U-R-S-I-G-M-A-T-I-C.com/model](https://F-O-U-R-S-I-G-M-A-T-I-C.com/model) to get 10% off their incredible mushroom elixirs, mushroom hot cocoa, and mushroom coffees. Again, that's [foursigmatic.com/model](https://foursigmatic.com/model). And now back to the show.

One of the things that you shared with me before we even got rolling is, again, we can do all the things, but if we're hanging on to a barrier of entry into getting into a flow state, we're

missing the point. And we were talking about how the victimhood can be one of those things that acts as a barrier.

**STEVEN KOTLER:** Yeah, this is just peak performance in general. This is the last thing that I should talk about is if you have an external locus of control. Locus of control is do you think you have control over your world, or do you think your world has control over you? Does life happen to you, or do you get to steer a little bit? Internal locus control, you get to steer. I'm in control of my life. Maybe I'm not completely in control of my destiny, but I can shape it a lot and impact it. Victimhood is an external locus control. The world happens to me, and there's nothing I can do. From a performance standpoint, if you have an external locus control, there's almost nothing I can do for you. Period. You've given up all your power. People say that. What they don't realize is that's actual and talking about brain function too. If you have an external locus control and you face a challenge, your brain will often not even like start producing the energy to even tackle the challenge because it knows, oh, this is just something bad that happens to me and that's how life is and there's nothing I can do to fix it, so I'm not going to waste the energy to bother trying. So yeah, the whole cult of trauma bonding that exists in the world today or out of the social justice movement, the whole cult of victimhood, right?

I'm not saying the social justice movement is bad, and I'm not saying that like people dealing with their traumas are bad. No, both of those things are great, but if you're giving up your power to be part of a community, which is what's happening when people are trauma-bonding and whatever, they're choosing social relationships of, oh, we have this in common, we went through this hard thing and let's... Right? Over personal, overpower, over ability to change it and that's dangerous, right? We want the connection because it will help us get over the trauma, right? We don't want to keep our sh\*t buried inside us. We know that is a bad idea, but we have to present it and share it in a way that is not, we can't be giving away our power because it has a direct impact on the brain and on performance and truly on the quality of our life, right? Those are the kinds of decisions you don't think about it a lot, but over years that adds up into a lot of dissatisfaction with your life, really, and a lot of problems. So, thank you for bringing that up.

**SHAWN STEVENSON:** Of course, of course. As I was sharing, it's one of the prevalent things with social media today where, again, we might think that we can escape essentially into these portals. And if our filter is such that we're looking for problems, if we're looking for the holes in everything and looking for a way to keep on putting off and disempowering ourselves from being able to make the change that we want. For example, what came up for me when you were talking about this is I had a great social media share on Instagram. I think it had like 6 million views, which is pretty cool of health psychologist, Kelly McGonigal. And she was sharing these insights about exercise, essentially sensitizing the brain to more pleasure, which is the other aspect. So, making you more sensitive to pleasure and of course, reducing pain, reducing

stress, right? So, it has this two-prong approach that's just recently discovered. And of course, 95% of the folks, and I rarely ever dabble in the comments, but it got so big. And every time I would go into my app, it's just like all comments for that video.

And 95% of people is like, "I feel the exact same way." It's just affirming their experience. But it's those people just like, "You know what? I've exercised before. I just don't agree with this at all. This doesn't make me feel any better, da, da, da." And yes, absolutely. This can be subjectively true for that person. And maybe that's going to handicap them or handcuff them from finding the thing that does help them to access, right? So maybe they've been going to the gym and running on the treadmill. Maybe they're into...

**STEVEN KOTLER:** Yeah, they're probably exercising in the wrong way for how they're wired and the...

**SHAWN STEVENSON:** There's ways to go in a path of discovery.

**STEVEN KOTLER:** Well, this is where the flow triggers come in handy, right? Because everybody's individual. And there are triggers that drive us into flow. Everybody is... There's 26 that we've discovered. There's probably way more, but that's what we've discovered. And they change over time, right? Like which ones are going to work for you now are probably going to be different than what might work next week and five years from now and that sorts of things. But knowing which triggers you're most susceptible to and work best with is a really good way to guide you towards exercise states where there's absorption. And if people are saying, "I don't feel better," what they're really saying is, "I didn't work hard enough to get anandamide and endorphins," which are automatically released during exercise. And the most common endorphin in the brain is 100 times more potent than medical morphine. So, you're going to feel better. Like that's just biology. It's automatic. So, like all you're saying is, "Wow, this exercise was so boring, was so wrong for me. I couldn't get to absorbed it, I couldn't get lost, and I couldn't stick with it long enough to get the kind of neurochemical release." And there are... We've been doing some work with some neuroscientists who study pain and we're looking at pain in relationship to working out in the gym.

And some people really like it and understand that like, you know, this is a good thing. Other people, this is a bad thing depending. And so, depending on your orientation towards physical discomfort in the gym, get different levels of flow, get blocked out of flow, different performance, all that kind of stuff. So, there's a lot of intricacy there, and we're starting to peel it back a little bit.

**SHAWN STEVENSON:** Of course, you know, and also, we put exercise in this pithy box, you know, and you think about our ancestors didn't necessarily have regimented exercise

programs. You know, they were just living. They were training. They were, you know, doing things to, you know, keep the tribe alive. And today we do simulations of things, but I think a more overarching way to really even picture this is through the lens of play. And you said this word earlier because that play, a lot of times it's going to involve what we deem to be exercise as well. It's going to put us more in that territory of a flow state.

**STEVEN KOTLER:** Yeah. Play is massively conducive to flow. Obviously, when animals play, you're just looking at pure flow, right, in animals. From a peak performance, peak performance, aging perspective, we learn better when we play. So, the reason... I gave you that formula earlier, right, that had deliberate play in it. That's essentially a formula, among other things, for lifelong learning. You want to stave off cognitive decline. You want to preserve brain function, stave off Alzheimer's and dementia. What's the medicine? What works? Developing expertise and wisdom. This is why flow matters so much again. So, most of the diseases of aging, cognitive decline, they take place in the prefrontal cortex, which really powerful part of your brain from an evolutionary perspective. It's the newest portion of the brain, which makes it the most vulnerable to sh\*t going wrong. And so, when we learn skills, expertise, or when we learn wisdom, emotional intelligence sort of writ large, either of those, the results are really diffuse networks all across the prefrontal cortex, and the brain is really redundant. It doesn't ever figure out one way to do something.

It figures out like 11 different ways to do something. So that's why there's so much... Lifelong learning matters so much because you're developing expertise and wisdom. And this is what preserves brain function. So, flow automatically, for reasons we can talk about, helps you develop expertise and wisdom. So, it's really good. One of the reasons it's an anti-aging medicine is this. But that whole formula I gave you is for lifelong learning. And we learn better when we play. Deliberate play. So, we've all heard about deliberate practice. Anders Ericsson's idea. 10,000 hours of do the same thing, repetition with incremental advancement, right? Do the same thing over and over and just advance it a little bit. And it turns out that's great for learning certain kinds of skills. You want to become a classical violinist or mathematician or a couple of things, this is the way you want to do it. That's the best way to learn. But in most other situations, deliberate play outperforms deliberate practice. What is deliberate play? Repetition without repetition. And so, I'm going to do the same thing I did before. I'm going to improvise a little bit on top of it. And one, it's way more fun. And so, you get more neurochemicals.

With deliberate practice, if you do the exact thing you're supposed to do, you'll get a little squirt of dopamine. A little squirt of dopamine, which is good. Feel good drug, but not a lot of it. If it's deliberate play, you get dopamine and endorphins and you get a much bigger squirt of dopamine and a much bigger squirt of endorphins. And the more neurochemicals that show up, better chance things are going to move from short-term holding to long term storage.



Also, when you're playing, there's no shame. There's no self-consciousness. There's no embarrassment. There's no fear. All this sh\*t that blocks learning and blocks performance is out of the picture. And when shame and self-consciousness, those things. So, all of those things live in the prefrontal cortex. Right. And activate the prefrontal cortex, which will block flow. So deliberate play is way more flowy than deliberate practice as well. And the thing I like the most about it is with deliberate practice, there's only one right answer. You do the thing you did before with get a little bit better. Right. With deliberate play, there's only one wrong answer. You did the exact same thing you did before.

Everything else is a right answer and everything else is a chance to learn because it's play. Right. When we're going for deliberate practice and we do something wrong, we don't get there, we beat ourselves up. When we're playing, it's all information. We're just learning. We're just... All the time. So, all of these things and, you know, play is better for... I mean, we talk a lot about health and well-being and longevity and impact on the immune system and all those things. It's an incredibly powerful tool, and it's a tool that most adults stop doing. Right. It tends to go away over time and so the exact opposite to be true. In fact, this is maybe the coolest thing. So, in Gnar Country, I taught myself how to park ski in my 50s. Right. And park skiing is a really acrobatic, dangerous discipline that involves doing a lot of jumps off, tricks off jumps and things like that. There's general thinking that if you haven't learned how to park ski over the age of 35, don't bother. Right. It's biologically impossible. By the time you're 45, crazy. And 50, you're just nuts. And I thought that was wrong. And I thought, you know, there's a bunch of science that said that was wrong. And clearly, I tried to prove it in the book, and I think I did.

But one of the reasons I thought it was wrong is you've heard about the motor learning window. Right. If you're a little kid, learn gymnastics or ballet or a language or a musical instrument and that window slam shut almost completely by the time we're 20, 25. That's not actually true. Sort of true. There's some changes in the brain. Those things happen. But really what changes is how we learn. When we're kids, we learn by playing. Right. When we're adults, we learn through work. And there's a very different thing going on in the brain. And it turns out that when you learn through playing that the motor learning window is not as slam shot as it appeared to be. So, if we rekindle this learning system that we had as kids, we actually can reopen that motor learning window, too.

**SHAWN STEVENSON:** That reminds me of that great quote, "We don't stop playing because we get old. We get old because we stop playing." And this is a great segue into your new book, Gnar Country, which we got to talk about the title, first of all. But also in the book, you share this statement, and it was really profound. You said that skiing is the ultimate life hack for you personally. It's the ultimate. You said it's the ultimate life hack for you. Why did you say that?



**STEVEN KOTLER:** So, we were talking about this earlier. So, the most precious resource most of us have is time. Right. Some people could argue it's money, but often money is just a substitute for time. Right. And what money really does is allows you to get stuff done faster one way or another. So, time strikes me as the most sort of precious resource we have. And so, I am always applying filters to my life to help me make decisions. Right. And I love these filters, one, because in crisis situations and difficult situations, I'm not logical. I'm like everybody else. Right. I'm not logical. I'm not linear. I want the quick fix, the fast loose, all that stuff. So, I like to have rules in place that govern my behavior in those kinds of situations, so I know what to do. And I don't sort of do the wrong thing. One of the filters I apply is we do this in our training. We have a training, a performance aging training, and this is one of the first things we do in it, is we make people list their top 10 feelings on earth. What are the 10 things that make you feel the absolute best? They could be activities. They could, you know, be whatever and use that as a filter for how you spend your...

If you have free time, right, why would you waste free time on something that's like 17 or 27 on your list of favorite things to do? First of all, so you start editing out like these lesser pleasures in the favor of, oh wow, these are the things that really make my life rich and meaningful and delightful and produce a lot of flow and all that stuff. And so, skiing has always been my... It's my favorite activity on earth, close second to writing and hanging out with my wife and whatever. But literally, skiing and flow is the best I get to feeling on the planet. And that's literally just the reality of it. Like, you could have moral opinions about that, or you can have a lot of judgements around that, but just that's the flat truth of the matter. One of the things I like about this list is oftentimes we have these things that will make us say, oh no, this is my... Hanging out with my children is my favorite, right? 'Cause society wants us to say those things. You start probing under the hood of that one, and you find out, no, that's actually, in a lot of cases, not true. It's like item... Maybe on the top 10 list, but it's not actually one, two or three. And you're sort of acting like it is 'cause you think you should, but you're sort of going against your wiring in a weird way, and is that the best for you, is that the best example to set for your kids, are you being the best version of you for your kids, if you're...

So those are interesting questions. And I don't have children, so I'm not going to answer them. I'll let people who have children can have opinions on that one, but I always listen to them, and like, Are you sure? 'Cause...

I have these questions a lot, these conversations a lot with people, and... But, yeah, skiing has always been sort of my first filter, and what does that mean? That means like if somebody comes to me with a thing, my brain says, well, is this going to help me ski more or less? 'Cause if it's going to help me ski less, it's probably a no. Right? It's probably a no. There are occasions when I deviate from that, but as a general rule, it's a no. There's a handful of those. I have... I basically only do six things in my life. And everything else is a no. So...

**SHAWN STEVENSON:** You've taken control of your time?

**STEVEN KOTLER:** Yeah, very much so. As much as I possibly can.

**SHAWN STEVENSON:** Yeah, and you've given... Here's the wonderful thing about your book, I shared this with you already, is that there's a story of discovery and a new form of skiing, which again this is not my language. And even that, I would think would be a barrier to discovery throughout the book, but it wasn't. It brought me right in. Immediate interest, I'm trying to find out... You gave a statement that, as you get older, the distance between your ass and the emergency room gets a lot shorter.

**STEVEN KOTLER:** At least according to the voice in my head.

**SHAWN STEVENSON:** Right. So that's the thing, it's like you're going past and battling with these mental barriers, but also the physical showing up part. And you shared this... The things you've been talking about is weaved into the book itself. And one of the most profound things that you talked about was something that you called multi-tool solutions. Right? So being able to leverage your time by stacking things. Things that address two maybe three things at the same time.

**STEVEN KOTLER:** Yeah, multi-tool solution is a single... So, in peak performance, also in peak performance, aging, there's a bunch of stuff you want to do. Really, if you go through my book... Or most book I talk about it a little bit. In here, there's about six or seven things you want to do every day, and I just... We talked about the peak performance basics, so you have an idea of what a lot of those things are. And about six or seven things you want to do every week, which is another way of saying, peak performance is essentially a checklist, right? But it's every day, it's constantly showing up for it. So, there's a lot to do every day in both peak performance and peak performance aging. So, at the Flow Research Collective, the one common... I said we train people up all over the globe and tens of thousands of people and blah, blah, blah, they have one thing in common. They're all busy. Everybody we work with is busy. Everybody's busy. So, we always look for these multi-tool solutions, a single solution that solves multiple problems at once. So really simple example is, if you're interested in peak performance, regular mindfulness practice really matters. Because one, a mindfulness practice lowers anxiety levels, which you have to do to be in flow. Two, flow follows focus.

It only shows u when all of our attention is in the right here right now, so anything that helps us train up focus amplifies our ability to get into flow. So, mindfulness, single problem, single tool, now it solves two problems. It actually solves a whole bunch more problems than just those two, but that's a really sort of simple example of a multi-tool solution, the one I talk

about in the book for training for... I used it to train for park skiing, but I think it's actually a phenomenal peak performance aging tool, is hiking with a weight vest. It's a single... And I did it because... To save time. I have dogs, I hike my dogs every day, that happens no matter what. So, I didn't have... When I was going to train for park skiing, I trained for almost a year. I was busy, I had a lot going on, so I had to find a way... I didn't have time for... And I was already like going to the gym and doing yoga, so like, how am I going to find time for more training? I'm already training... And I was like, oh, wait a minute, I'm hiking my dog an hour a day, let's add a weight vest in. And that was just where it started, and it originally it was, oh, this will help for leg strength.

That was... Right? Leg strength and stamina. And it turns out it does, but it turns out that it's one of the best core training tools I've ever used, 'cause it's on your upper torso. Every time you take a step, right, you're locking your core in. It also, because of that, it's doing balance and agility. And if you're sort of little stretching at the front and back end, now you've got all five categories of functional fitness that need to be trained over time, the use it or lose it skills, the core. One tool that's training all five things. And if you don't use a single tool... So, the World Health Organization has very exact prescriptions for peak performance aging for exercise. We know exactly what we need. If you want to be at your best, you need 150-300 minutes of moderate to vigorous aerobic activity a week, you need two strength training days, and three balance, flexibility and agility days. Now, if you're taking your workout seriously, it's pretty hard to get through anything I just listed in less than 20 minutes, and usually they're about 40 minutes, right? So, you're looking at two hours of workout time a day, five days a week. Or you find a single tool that does multiple things at once, and now you're starting to cook. So those are really...

I just think for time management, multi-tool solutions, having filters for what you're saying yes to and what you're saying no to, knowing sort of what are your core flow triggers and which ones work sort of the best for you, and multi-tool solutions, and the other one is stack protocols. Stack protocol is when you can nestle a bunch of tools inside one another. So, I use saunas, infrared saunas for recovery. Really phenomenal recovery tool, but one of the reasons I use saunas for recovery is I can go into a sauna, I can bring my Theragun into the sauna, so I can massage out my muscles in the sauna, I can meditate in the sauna, and I can also read in the sauna. And for creativity, we find that you want to be reading 25-50 pages a day, this is a peak performance thing, minimum, usually in a book, to load the pattern recognition system, to give your brain the fodder. You can't be creative if you're not feeding the brain the fodder for creativity. And so, reading is really one of the best ways to do that. And so, here's a single tool. A sauna, right, and you do an infrared sauna, they're slow bakes, right?

So, you're like 40 minutes. And I can read my 25 pages, I can do 15 minutes of focused meditation, and I can hit my muscles for five minutes with a Theragun, and I'm in a sauna. So,

I've now... I got four things going on inside a single activity. That's a perfectly stacked protocol. So, we look... At the Flow Research Collective, these are the solutions we're always looking for. That's the stuff I talk about in Gnar Country. I don't think... I think you need to do that to perform at your best over time.

**SHAWN STEVENSON:** Yeah. Busyness is often the reason that people give for not doing the things that they really aspire to do.

**STEVEN KOTLER:** Well yeah. You know I went right at that in the book. You saw that.

**SHAWN STEVENSON:** But in the book specifically, you mentioned that the highest performing people that you have the opportunity to study, they have this one thing in common. They're all busy.

**STEVEN KOTLER:** They're all busy.

**SHAWN STEVENSON:** And so, you've embedded these mental meals, they're not even snacks, throughout this exploration of this new form of skiing, which I want to get to next. And insights like that, right, and it's just like it stood out, and also filters, so being able to process or put our opportunities, our requests for our time, through these mental filters. What are your filters, what are your top things that bring you the most joy in your life? And when you get requests to do things, understand that your time is valuable, especially as you inch towards that finish line of your lifespan, that time becomes something that you should probably consider a lot more of. And you actually did the math on how many more times you have to ski?

**STEVEN KOTLER:** Yeah, so that is where all these... All these started in a weird way, with this sort of calendar that you're talking about. This was 10 years ago now, five years or seven years ago, I realized that wow, when there's like five to 10 inches of powder, this is not a big dump, this is a medium-sized snow, those are my favorite days on the hill, 'cause it allows me to do exactly what I want to do. But those days show up, if I'm lucky, seven times a season. And so, I was like, Well, wait a minute, I was 50 years old let's say at the time I started this, and average male life expectancy is 80. And if this is happening seven times a year, and I'm going to live to be 80, that's 210 more times I get to do my favorite thing on the planet. That's not a particularly big number. That's really motivating. When you look at it that way, and you're like, oh my God, this is my favorite thing. And let's say all my friends who were working on longevity technology and whatever, they managed to add another 10 years to my life, so bonus, right? So now I get an additional 70. It's still 280 times to do the thing that is the most delicious, wonderful thing to me in the world. Again, not a very big number.

Right? And so, I have a calendar where I just cross off the days. So, I know, be grateful, savor them, don't miss one. This has really been about also like, make sure that if these are the conditions... 'Cause sometimes when it snows a lot, driving to a ski area is terrifying. Like you're driving through a blizzard over mountain roads, it's gnarly. There's extra, oh sh\*t, I've got to drive through this stuff to get there, and, Oh, I've got work stuff and whatever, and, Oh, I can go tomorrow and there'll be some left. No, no, no, no, no, you've got 200 left of these days in your life, you don't waste one.

**SHAWN STEVENSON:** Yeah, yeah. So powerful. Now, this brings us to the title. Can you talk about what the title means and also what can people expect in this book?

**STEVEN KOTLER:** Yeah. So, the book is about peak performance aging. And so, one thing... Aging is a fact of life, right, old is a mindset, is one thing I want to point out. The second thing is that a lot of people hear the word old, hear the word aging. And if they're over 50 they've got no problem, they're already... They've sort of started to come to terms a little bit with those words, but if they're under 50, a lot of people are like, oh no, no, those words don't apply to me, I don't even want to think about that, I'm shutting that off. That sort of thing. And the thing I want to tell you is, maybe, maybe you want to do that, but one of the things the book talks about is that peak performance aging starts young. Right? There's stuff you want to do in your 20s, in your 30s, in your 40s and your 50s, and this is like for quality of life over time, for health and wellness and longevity, but there's a lot to it and it's not something that just starts over 40 or 50. The work seems to start a little earlier.

But Gnar Country... So Gnar is action sports slang. It's short for gnarly, and that... Expert athletes, as colorful as the language is, it's a technical language, and it means very specific things, and action sport athletes are trying to stay alive and out of the hospital in dangerous situations. So, these words really have precise meanings, and Gnar is actually described as any environment that is high in perceived risk and high in actual risk. Right? So, I think it's dangerous, and it's actually really dangerous. That turns out... And country is obviously any landscape or territory or whatever. It turns out it's a really phenomenal description of our later years. High in perceived risk, high in actual risk. And it turns out once you start digging under the hood of peak performance aging, what's going on, it's a phenomenal description of the gritty mindset it takes to thrive in the second half of our life. So that's where the title comes from. And I think it's appropriate, especially 'cause it's a little bit of an action sports book.

**SHAWN STEVENSON:** And what are you taking people through in this book?

**STEVEN KOTLER:** So, as you pointed out, the book tracks my attempt to learn how to park ski at age 53, is when the quest starts.

**SHAWN STEVENSON:** What is park skiing versus...

**STEVEN KOTLER:** Park skiing is a discipline in skiing. So, skiing, the way most people think about it, it's like speed skating, right? You stay in contact with the surface of the earth, you move in one direction, you move down the mountain. Park skiing is like figure skating. It takes place above the surface of the earth, it involves doing tricks and spins and flips, and wall rise and rail rise, and riding on boxes and riding on surfaces with your skis, and it's super dangerous... Not super dangerous, it's dangerous, it's very acrobatic, and there's like 11 or 12 different biological reasons that it's supposed to be impossible, as I said, for anybody much over the age of 40 to learn it. And I... There was a bunch of stuff directly... This work just came right... It's not like I stumbled into peak performance aging, it grew right out of my work in flow. And so, there was a bunch of stuff in flow science that says, hey, wait a minute, this stuff is not true. And a bunch of other things from network neuroscience and body cognition, a couple of other whiz-bang fields that I was like, this sh\*t is true. I should be able to onboard really difficult, challenging skills, even in my 50s, and anybody should be able to do it. And I decided to put it to the test.

And park skiing was a really... I'm a skier, I was an expert skier, but I had never been in a train park in my life, I knew no tricks. Well, I had a couple of retro cool tricks from back when I was like 16 years old, really basic ski tricks, but nobody even throws those tricks anymore because that's 40 years ago, those tricks are not even cool. So, it was just a really great way to test these ideas. And what you're going to get in this book, there's two things, but the first thing, and one of the... So, as you know, the book's sort of written like a diary. It goes almost day by day, it's not really, but for the entire period of the experiment, and why is that? In peak performance, like if you want more flow in your life, which is the heart of peak performance, I can tell you these are the flow triggers, the 26, and this is how they work, and I can tell you this is the flow cycle, the map of the process, and this is where you are, and that's all you need plus the peak performance basics, a couple other ideas to be dangerous. And that answer is incredibly not satisfying to most people, 'cause they really want to know about the application, right? Like, Okay, but what happens when I show up at work and I've been sick for two weeks and my boss is in a rage 'cause I haven't been around for two weeks and my knee hurts?

Or I show up in work in a really, really good mood, and then this bad thing happens, and it derails me, and I have to get into flow from... That's what the book gives you, is like a daily recipe. This is where I'm starting, this is the challenge I'm facing. The goal is to get into flow and to use flow to kind of amplify learning in park skiing. So, you have a daily recipe for flow with these different applications, which is a thing that the folks we are lucky enough to train at the Flow Research Collective, have been what people have been asking for years. My fans have wanted this, people we train have wanted this. There's been a really big demand, and nobody's... It's a really hard thing to do, not from a... Anybody could do this, but from a writing standpoint, making it enjoyable for a reader and still useful, is really... It's actually, it's very hard.



This is one of the most technical, but you would never know it from reading it, 'cause the book's a ton of fun, it reads like an adventure story. It's one of the most technical books I've ever written, for that reason.

'Cause I wanted to do this in a way that was engaging and fun and memorable, and nobody had ever really done it. Jim Fixx at the... His book on running... There's something book on running, I can't remember the name of Jim's book, does it in the last chapter. And my editor, he was a runner and was a huge Jim Fixx fan, and he was the one who... Like when I was playing with it, he was like, "Oh, you're doing that thing Jim did, but Jim only pulled it off for a chapter."

You know, we started talking about, Well, okay, how can I do this for a book? How can we sustain this and not bore the sh\*t out of readers, and everything else? So, one, you're going to get a look at the basics of peak performance aging, good overview of very cutting-edge field, just emerging now. Two, you're going to get a deep look at like recipes for flow. These are the flow triggers, this is how it works in this situation, this situation, this situation. And the other thing you're going to go get is probably you're going to laugh a lot, 'cause I tried to make it a funny book. I hope it's a funny book.

**SHAWN STEVENSON:** I mean the distance between your ass and the emergency room was funny as hell to me.

**STEVEN KOTLER:** Good.

**SHAWN STEVENSON:** And so, just to be able... It's masterful. The writing is masterful. You clearly have been doing this for a long time at a high level to imbue those two things together. 'Cause that's what was so fascinating to me, and why I was sharing this with my wife just in conversation, I was like, Babe, I know you think this is a book about skiing...

**STEVEN KOTLER:** Well, that was the other thing, it's like... You know. The number of park skiers in the world... If there's a half a million of us, you know what I mean? It's a pretty damn small community. And if this is just a book about skiing, there aren't enough readers in the world from... You know what I mean? So, I was hoping, and I think I did it, I don't know, but there's... Growing up, I read all kinds of books about professional football, professional... But these are not sports I play, right? And I'm never going to... So, I read a bunch of books about stuff I didn't play, and I loved them. And I was thinking about that barefoot running book that everybody read. How many of us run through canyons barefoot? So, I was thinking about it that way. I was like, well, there have been a whole bunch of books in this community, where people have read about activities outside of stuff they're doing 'cause it's been a good metaphor. That's what I hope I did. If this thing is just for skiers, I definitely did not do my job.



**SHAWN STEVENSON:** Well, this is, again, bringing about very practical things for us to immediately apply. Already this concept of having these filters changed my life. Like, seriously.

**STEVEN KOTLER:** Oh, I'm so great... That's great.

**SHAWN STEVENSON:** And in addition to that, if you could... Again, I know there's 26 triggers.

**STEVEN KOTLER:** Oh, no, let's talk about a couple of them. Yeah. Yeah.

**SHAWN STEVENSON:** But if you could talk about a couple of these flow state triggers.

**STEVEN KOTLER:** Let's talk about a couple. Yeah, I wanted to. So, flow follows focus, only shows when our attentions are right here right now. All the triggers work by driving attention into the present moment. Now, neurobiologically, one of three different things is going on or some combination. We focus attention when we're driving dopamine into our system, norepinephrine into our system, a little bit, too much blocks it, or when we lower cognitive load, which is all the crap you're thinking about at any one time. If I lower cognitive load, your brain will immediately repurpose that energy for paying attention to the task at hand. So that's what all the triggers do. Most of them work by driving dopamine into our system. There's a bunch of different triggers that work this way, and let's just start there.

So, novelty is a flow trigger. 'Cause when we encounter anything novel, we pay attention to it. That's dopamine. Risk. Physical risk, but also emotional risk, social risk, psychological risk, intellectual risk, spiritual risk, also flow triggers. Complexity. When we encounter complexity. So, you look up at a night sky and you see a billion stars and you realize that most of those stars you're actually looking at are galaxies, and you're looking back in time, and you're just overwhelmed by the perceptual vastness of it all. That's complexity. And, again, pushes dopamine into our system. Unpredictability. When unpredictable stuff happens, pushes dopamine into our system. Creativity is a flow trigger. Not really creativity, per se, it's pattern recognition. When we link ideas together, that pushes dopamine into our system. We all know this. If you've ever done a crossword puzzle, a Sudoku, you get an answer right, that little rush of pleasure you get afterwards, that's dopamine.

So, all of these are flow triggers. All of them work incredibly well. The most important of flow triggers is what's known as the challenge skills balance, which is the idea that flow follows focus, and we pay most attention to the task at hand, whatever we're doing, when the challenge of the task slightly exceeds our skill set. So, you want to stretch, but not snap. If I were to say that emotionally, I'd say flow sort of sits on this midpoint between boredom, "There's not enough stimulation here. I'm not paying any attention," and anxiety, "Whoa, way too much stimulation. I can't stop paying attention." In between is this sweet spot. If you speak

physiology, it's the Yerkes-Dodson curve. If you speak flow, it's the flow channel, depending on what your science background is.

But what's interesting about that, and what's cool about it, is the progression ladder. And when you're constantly pushing on your skills, you're using your skills to the utmost, you're a little outside of your comfort zone. So, you want to stay in that sweet spot, you better get comfortable with being uncomfortable, 'cause that's where that sweet spot lives, first of all. But what it means is that on the other side of a flow state because we're using our skills to the utmost, we're growing, we're learning, we're more complex, we're more adaptable, and we're actually wiser. Flow automatically increases wisdom and empathy, and these skills as well.

So, you're getting the whole package, and because there's a global relation of nitric oxide on the front end of flow, which makes it an anti-aging technology 'cause it's lowering stress, and because you're building up expertise and wisdom, so you're fighting off cognitive decline and dementia on the back end, all of these things make it partial in the anti-aging technology. I can go... There's one more thing to get out, if you want me to round up the anti-aging technology thing, or we can go back into the flow trigger.

**SHAWN STEVENSON:** Ah, yeah.

**STEVEN KOTLER:** Okay, so the other thing you need to know about flow as an anti-aging technology is, whenever we produce... Really positive, powerful emotions, have health benefits. So, the most powerful positive emotions that human can encounter, love, connection, a sense of control, we love being in control, and a sense of mastery. And flow, because it advances our skills, you're getting mastery. Flow states have... One of the things we get is it gives us a feeling of control. It's one of the... How do you define flow, how do you know if you're in a flow state? One of the things you have is this feeling of, oh wow, I can control things I can't normally control. From the outside, I look in and I see you in a flow state, you look like you're performing at your best. That's not what it feels like on the inside, maybe it feels a little bit, but what it really feels like is, oh sh\*t, I can control things that I can't normally control. This could be me as a writer, my words are doing things like at six in the morning on a Tuesday that they don't normally do. If we have basketball players, the hoop looks as big as a hula hoop, and they can't miss. Right?

That's a sense of control. When we feel that, that boosts the production of T-cells, which boost the immune system, and natural killer cells, which target sick cells and tumors. So, when we're in flow, and all the neurochemicals that show up in flow that I mentioned, they also boost the immune system. So, you're boosting the immune system, you're boosting the production of T-cells, you're boosting the production of natural killer cells, you're lowering stress levels, etcetera, etcetera, so it make flow a really potent anti-aging medicine. And, obviously, flow underpins

happiness and well-being and meaning and purpose, and those things really matter, and they definitely matter over time, right? Like, you're a lot more willing to engage in frivolous exploratory activities when you're younger. As you age, that clock comes in and you're like, oh no, I don't want to waste time on less meaningful activities. And for a lot of us that starts to happen, not in our 50s or 60s, it happens in our late 20s and 30s, right?

But flow really underpins all that stuff. So really, really potent. But to get more flow, this challenge skills balance is really... So that's, again, one of the things you see in Gnar Country is how to constantly be pushing on the challenge skills balance, and a little bit on how to use a lot of these different flow triggers in different situations and, you know, when to call on them and when not to. And, sure, it's working for me on the ski hill, but it will work for you in a work environment, in a business environment, in your interpersonal relationship. Wherever you want to apply this stuff, it'll work.

I've just used skiing as an example 'cause I've got expert level skills, and I know what the fuck I'm talking about. Right? That was the other thing, is that... This is the other reason nobody has really written this book, is you actually need this kind of weird challenge, where I went from... I have expert ski skills but no skills in park skiing, which is an adjacent activity. So, it allowed me... I know what I'm talking about in skiing, and I just... So, I could apply it to learning from absolute beginner forward. I thought that was really helpful.

**SHAWN STEVENSON:** And you also have the mastery of writing and communicating this. You know what I mean? So, it's a pretty dangerous combination. I'm not going to say this is going to happen, but the fact that you created this as a readable trigger for a flow state, in a sense, because it is novel. There's so many different things going on in it...

**STEVEN KOTLER:** It's a flowy book to read.

**SHAWN STEVENSON:** It's a flowy book to read. There you go.

**STEVEN KOTLER:** You're not the first... So, Mihaly Csikszentmihalyi, godfather of flow psychology. It's funny because flow is really associated with athletics, a lot in artistry, and that's my fault and Mihaly Csikszentmihalyi's fault, because we liked writing about sport examples, and art examples. And it turns out, like flow shows up everywhere. In fact, Csikszentmihalyi pointed out years ago in the '70s, the most common flow state on earth is reading. So, it's a common flow state, and our second most common flow state on earth, two middle managers at work lost in conversation.

**SHAWN STEVENSON:** Interesting.

**STEVEN KOTLER:** Right, like interpersonal flow, when you get... You and your friends start talking and you get so sucked into what you're doing a couple of hours go by. But if you think about those conversations at work, well, there's risk baked into them, because there's always money involved and a little bit of pressure, and so you've got a bunch of those flow triggers baked into those conversations, and that's... So, reading and conversations at work tend to be the places, at least micro-flow, the low-grade version of the stage show up the most.

**SHAWN STEVENSON:** Oh, we got to get people to pick up this flowy book, Gnar Country, right now. Where can people pick up the book and also just get more...

**STEVEN KOTLER:** Get more? Yeah, yeah. Yeah, yeah.

**SHAWN STEVENSON:** Into this information?

**STEVEN KOTLER:** So, the book's available anywhere books are sold. You can get it from Amazon and Barnes & Noble, support your local independent bookstore if you can. If you're interested in learning more about flow, flow training, you want to work with the Flow Research Collective, danger cheesy URL ahead, but it sticks in your brain, getmoreflow.com is where to go. You can go there; you can sign up for a free hour-long coaching call with any of my coaches. So, they'll just literally get on the phone with you, they'll talk about where you are in your life, the stuff we do. Maybe it's a fit, maybe it's not a fit. It's not high pressure at all. We don't... Like people love these coaching calls. I'm not trying to put you into like a sh\*tty marketing situation. In fact, if that that happens to you, you let me know and I'll fire the person who did it. But stevenkotler.com is me, flowresearchcollective.com is that organization. And there's a website for gnarcountry.com. And the thing that's fun on the website, I just want to say, so we developed a whole protocol to teach myself how to park ski, and it worked for me. It worked for Ryan who's sitting off-screen here, who's my ski partner. Both of us got farther faster than we've ever gone before, which was amazing, but that's not...

That's a pilot study. It's a very small pilot study. So, we came back the following year, we re-ran the study with 17 older adults ages 29-68. And if you go to gnarcountry.com, we had a National Geographic photographer/filmmaker follow us around and filmed everything, so you can see a video of a bunch of people who had... Then the difference with them, and one of the things that was really exciting about it, is most of them were intermediates. So, they weren't even like expert level. They came in as intermediates and we still got them zero to 16. It's not that... Park skiing's a great, actually, peak performance aging tool. Action sports are really good for peak performance aging, 'cause they're dynamic motion, they check all those boxes, they hit all the things, that one sentence I gave you earlier, action sports tend to fit in that box. A bunch of other sports do as well, but action sports sit really nicely in that box. But I do think this kind

of Gnar-style mission, where I had unfinished business in skiing, right, so I had extra motivation, on top of like I had my powder calendar, I had stuff from my childhood.

I talk a little bit about that in the book. There was a lot of motivation going in for park skiing, it was a really good activity, but I think what you want to create... You want to find this Gnar-style activity where it'll take your traditional mindset around aging, whatever ideas you have, and just explode the possibility space. That was the real thing that was amazing to me, is like I had a really good... So, portents of mindset. Positive mindset towards aging, I am thrilled with what's ahead of me in my life, leads to an additional seven and a half to eight years of healthy longevity. It's a huge lever. And being exposed to negative stereotypes of aging or having a... Right? So, they've looked at... Ageism is the most common stereotype in the world, and they've looked at the impact of ageism. And if you are exposed to negative stereotypes around aging in your 20s and your 30s and your 40s, by the time you get to your 60s, if you internalize them, you're going to show 30% greater memory deficits than people who are not exposed to negative stereotypes around aging and have a positive mindset towards aging.

So, there's a bunch in the book about how do you change your mindset, and there's a bunch of different techniques, but here's the truth. Mindsets are really fricking hard to change. We hear a lot about, oh, you need a growth mindset, and you need this and this, and people throw it around in positive psychology and all this stuff as if changing your mindset was like changing your underwear. And it's just not. And there are stuff you can do, you got to police your language, mindfulness helps, but I find that a Gnar-style quest... Like once I started learning nose butter 360, some of these other more complicated tricks, whatever I thought might have impossible for me in the second half of my life, exploded. Right? 'Cause suddenly there was a whole where I was like, oh my God, 'cause if this is possible... And this is possible and, as you noticed, I learned a lot of that stuff really fast. That was the other thing that our peak performance aging formula worked so well, that I thought it was going to take me five years. It took me a season to onboard these skills. It was remarkably fast. And once I started... Halfway through the season, I was like, oh my God, what...

And I thought I had a really positive mindset towards aging and what was ahead of me in the second half my life, but I had to totally revisit what might be possible in the face of my own success. That's why this kind of Gnar-style... You don't have to learn how to park ski, but you should pick a challenge that will explode whatever your mindset is. I think that's really helpful.

**SHAWN STEVENSON:** Yeah. And that's why it's so important to stay connected and learn from people like you who are doing these things and expressing what's possible. That's one of the other things, is having healthy examples or models of what's possible for us moving forward, and really changing the culture around aging, aging healthily, and just really getting the most

out of this life. And so, everybody pick up a copy of Gnar Country, and make sure that you are following... Also, are you on social?

**STEVEN KOTLER:** Yes. Steven Kotler on Instagram.

**SHAWN STEVENSON:** Steven Kotler on Instagram. And that website again was...

**STEVEN KOTLER:** Getmoreflow.com. If you want to check out our trainings, flowresearchcollective.com. Stevenkotler.com. There's a Gnar Country website, gnarcountry.com. And you can find me on Instagram. Follow me on Instagram.

**SHAWN STEVENSON:** Boom! Steven Kotler, thank you so much for your brilliance in putting this wonderful flowy book together for us. I appreciate it.

**STEVEN KOTLER:** Thank you, sir. Great hanging out.

**SHAWN STEVENSON:** Awesome. Steven Kotler, everybody. Some of the ingredients in the longevity recipe include right nutrition, smart exercise and movement, great sleep quality, and a few other tasty morsels, but here's the thing. The biggest leverage point to be able to access all of those things, to put them on automatic is a shift in our psychology. As a matter of fact, potentially, the biggest leverage is creating conditions where we can access more time in states of flow. Now, this isn't just me and my hypothesis, this is according to some of the latest science. And so really taking this information in, really starting to think about this, and really starting to look towards, what is, for me, that thing in my life that helps me to access more joy, that helps me to access more of a flow state, so that the other things in my life become about stacking conditions to achieve that flow state. One of the things that Steven and I talked about off-camera is once we get into that state of flow, in addition to that, we want to make it more of a regular thing, we want to make it more of a regular thing that we access, but we have to recover. Being in flow actually, if you're trying to live in it, which is virtually impossible, but if you're accessing it and you're going too far, you just, you realize that you're in flow and you keep on trying to run everything into the ground, you're going to shift your body over into a state of stress.

And so, we need to recover. So, this is where our right nutrition, our sleep behaviors, our sleep hygiene, our movement practices, really engaging and investing in our relationships, are such an important part of the recipe for recovery to then lead us into a state of more flow, so it all really feeds into each other. So, I think this is a really fascinating topic. And if you do as well, please, share this out with the people that you care about. You can share this out on social media, take a screenshot of the episode and tag me, I'm @shawnmodel on Instagram and tag Steven Kotler as well. And let him know, share your voice with him. And I'm going to make sure

that he's going to be checking his DMs when this episode comes out as well, so really share your voice over there on social media. And, of course, you can send this directly from the podcast app that you are listening on.

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