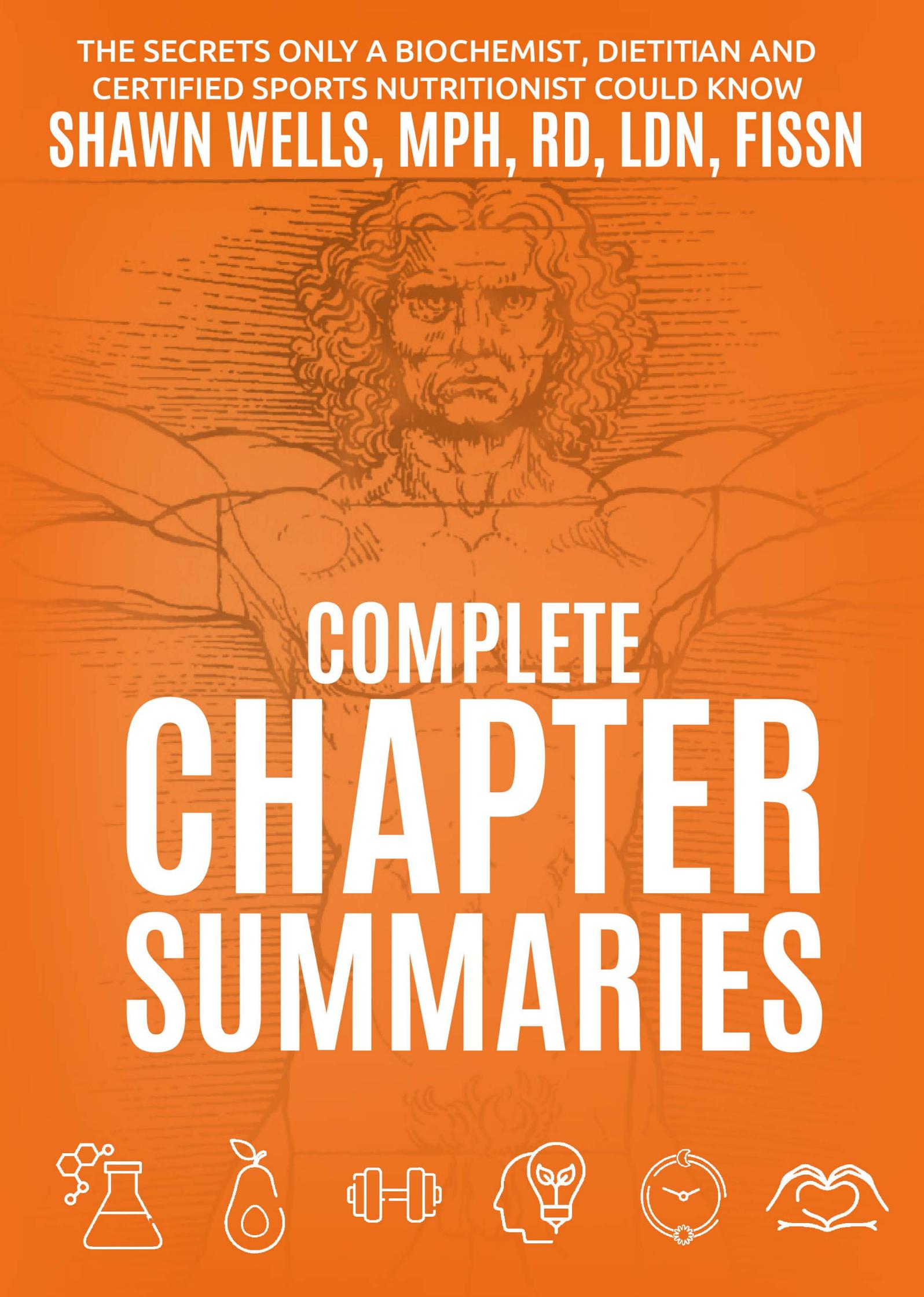


THE SECRETS ONLY A BIOCHEMIST, DIETITIAN AND  
CERTIFIED SPORTS NUTRITIONIST COULD KNOW  
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**COMPLETE  
CHAPTER  
SUMMARIES**



## Experiment Summary

- We all have our own bio-individuality; what works for one person may not work for another so before we can make changes, we need to understand our foundation. We cannot live truly energized lives if we are not living authentic ones. Get real about who you are and where you are in life.
- One of the biggest factors in our energy levels is our mitochondrial functioning, as mitochondria are the powerhouses of our cells. We can test our mitochondrial health through the following three blood biomarkers: hsCRP, HbA1c and OxLDL.
- Hormesis, when done in the right amount, triggers certain biochemical pathways and physiological adaptations that make us more resilient when facing future stressors. When done too much or for too long, however, they can become a stress on the body, adding to our “stress bucket.” The greater your allostatic load, the less likely you are to respond positively to hormesis and the worse off you are. On the other hand, positive stressors, known as eustress, support bio-resilience, strengthening activity and energy. Distress does the opposite and leads to a lack of energy.  
  
Psychological flow means being completely absorbed, focused and involved in whatever you are doing and deriving enjoyment from being fully immersed in that activity. Flow, when we are in alignment with our creativity and our joy, is what we should seek and where we achieve the greatest success.
- Much of our stress comes from being distracted. Practice mindfulness by focusing on one thing at a time and staying fully present. Reframing stressful situations can allow us to find focus and choose the elements over which we have control, creating a new response. Begin experimenting with meditation, exercise, nutrition and

breathing to create an environment which supports parasympathetic dominance.

This takes time to achieve.

- Along with purpose, you must have passion; passion keeps us in our flow and purpose gives us our “why.” We also need to see where that “why” not only serves our needs and goals, but also helps our families, communities and the world beyond our front door. The true secret to feeling energized is to be of service and show up for other people.
  
- Changing your life starts with experimentation, starting with the choices you make first thing in the morning and ending with the last decision you make before bed. When you experiment, change one thing at a time and evaluate the outcome. Take your time. If you “shotgun” a lot of changes, you will have no idea what’s working and what’s not. If something doesn’t work, tweak or move onto the next hack.

## Nutrition Summary

- Most people think of a diet as something that's a short-term quick fix. That is why I prefer to use the word lifestyle, which connotes that you are agreeing to make choices for the long run. This allows us room to be flexible—because the concept of “healthy” is individual and variable, each of us must find a definition based on experimentation over time. A lifestyle is not all or nothing; it is tailored to meet your individual needs.
- There are three main factors that led me to sticking to the keto diet: it cuts out nutrient-deficient foods, helps me feel full and satisfied and has cognitive enhancing-effects. But both keto and paleo focus on whole foods, whether they are meats or vegetables. It is about choosing healthy, natural, non-processed food products, which are usually sold close to where they are farmed. Paleo is more than whole food, it is ultimately about adopting a lifestyle that focuses on more natural movement, less allergens, more conscious choices—that we are evolved for.
- Metabolic flexibility means your body can efficiently and effectively switch between using carbs and fats for fuel based on availability and need—and it is a key to looking, feeling and performing your best as well as living your most energized life. The goal of a ketogenic diet is to create a powerful metabolic state during which the body is primarily burning fat (since ketones are derived from fats). Following a paleo-keto diet means avoiding processed fats and oils like soybean, corn, safflower, canola, sunflower, cottonseed and palm, which are high in PUFA, since they've been exposed to high heats and chemicals that turn them rancid and carcinogenic. Nutrition is not just about what you are putting into your body and how,

but also how you are digesting those foods. A diet rich in whole, unprocessed foods will encourage the growth of good bacteria in the gut, helping to establish a strong immune system.

- Mindful eating involves paying attention to our food on purpose, moment by moment and without judgment, and it focuses on our sensual awareness and experience of the food. When we are present to the act of eating, we can no longer treat it as an unconscious habit. We are forced to reckon with our choice-making and become liberated from the bliss point, gaining control over what we put into our body and how. Through practice, this helps interrupt habitual eating behaviors and provides greater regulation of food choice. Mindful eating is about behavior changes.
- Both keto and paleo offer long-term health benefits, making you less prone to disease and more likely to live a long, healthy and energized life. The goal is to eat mindfully and attentively. Intermittent fasting is a broad term referring to dietary approaches where individuals go extended periods of time with little or no caloric intake (typically 12-48 hours), with intervening periods of normal intake, on a recurring basis.
- Keto flu refers to a group of symptoms such as brain fog, headache, nausea, muscle cramps and more that some people may experience when starting a ketogenic or other low-carb diet. Fewer than five percent of people experience this but it's more likely for those transitioning from a lifestyle that is sugar and carb-dependent.

## Exercise Summary

- We all need to start somewhere. By making the starting line a place that is reasonable and comfortable, you are more likely to stick with your new habit as you increase the stress and stamina of your exercise routine. If you have been exceptionally sedentary, just start by walking—even the simple act of a morning or evening walk can promote circulation and increase energy, not to mention shift your mindset.
- One of the single most important factors dictating how long and well you live is muscular strength. Muscular strength doesn't just increase lifespan, it also enhances healthspan—the period of life free of major chronic clinical diseases and disability. It is based on the premise that life can be divided into two phases: a period of relatively healthy aging (healthspan) and a period of age-associated disease and disability. Another way to think about healthspan is optimal longevity, which means living long with an even greater interest in living well.
- Outside of weight loss, there are *many* health benefits associated with regular exercise, including what I like to call quality weight loss, which reflects changes in body composition. When resistance training is performed safely, appropriately and gradually, it causes adaptations which make you stronger. It is important to note that it is not a matter of “more is better” but rather “better is better.” To put it plainly, resistance training is essential for *everyone*.
- Working out not only promotes youthfulness, but also creates more neuroplasticity in the brain, in turn improving our ability to learn new things and increasing brain-derived neurotrophic factor (BDNF), which helps generate new neurons in the brain.

An ideal routine might include resistance training three times a week, HIIT twice a week and some low-level aerobic exercise three times a week that you enjoy (e.g. golf, basketball, tennis, biking, swimming).

- As with allostatic load, each person has a “threshold level.” While adding stress to an already full “stress bucket” causes overflow and health problems, adding the right level of stress helps you to learn, grow and increase energy. The concept of hormetic stress (e.g., cold exposure) confirms the fact that mild, transient stress can be highly beneficial, lead to adaptation and promote resilience. This then carries over to other areas of life and helps you stay cool-headed in other stressful situations.
  
- Exercise not only builds up immunity through strengthening our physical defenses, but also increases our mental stamina, which helps us overcome disease and disorders.

## Growth Summary

- Growth is about enhancement. It is about recognizing the gap between our bio-individuality and the demands of the modern world and finding the formulas to close the gap and launch us into the future. With the right time and attention, anyone can develop their highest potential and create a lifestyle tailored to their individual biology. But you can't discover what works until you've done the deep self-work and experimented a bit. Instead of pretending you're someone else, the greatest biohack of all is to become confident in your own skin, grant yourself grace and own who you authentically are!
- One of the greatest biohacks to growing physically, mentally and spiritually is intermittent fasting (IF), which results in your body being in a post-absorptive state where it can focus on maintenance and recovery instead of digesting and building.
- Diet and exercise can take us incredibly far in our health journey, but supplements help us transcend the barriers that diet and exercise can't. Nootropics can boost focus, concentration and perceived feelings of energy. When used carefully, they can acutely enhance cognitive function and protect and repair the brain. The second core supplement is MCTs, which promote ketosis, as well as a wide range of health benefits including treatment of depression and everything from autism to Alzheimer's. The third is CBD, which can be an incredibly potent healing, anti-inflammatory and mood-enhancing supplement.
- The endocannabinoid system can be viewed as the body's natural adaptogen system, constantly working to maintain equilibrium and helping to regulate everything from the nervous system to mood and memory. The ECS's outstanding

homeostatic roles have been summarized as “relax, eat, sleep, forget and protect.” If you’ve always felt “something off” about you, addressing your ECS may be one of the most important steps you can take.

- Ikigai is the Japanese concept meaning “a reason for being,” or more simply, “a reason to jump out of bed in the morning.” Research shows that people with a growth mindset have a sense of purpose. It is important to keep the big picture in mind, but not be so fixed on it that you can’t change your course should an opportunity arise. In order to live energized lives, we must discover what works for our individual biology. We must reject the one-size-fits-all approach and create a diet and regimen that works for our specific needs, challenges and schedules.
  
- If you want others to believe in you and see you as a leader and role model, you must believe in yourself. Developing a growth mindset means challenging your thoughts and the thought patterns you have developed over time. As we age, we require more enhancements in order to not only improve our lifespan, but also our healthspan.

## Routine Summary

- Our mornings ultimately determine whether we are set up for success or stagnation, which is why a strong morning routine offers you a foundation on which to build the rest of the day's plans—allowing you to stay grounded, achieve goals and maintain energy and flow throughout the day. The best way to start is by choosing one thing and trying it out for a couple of weeks. If it is something that works for you and benefits your life, then include it as part of your routine.
- When the circadian rhythm becomes de-synchronized, we see an increased risk for things like diabetes, obesity, neurodegenerative diseases and mood disorders. While light and dark are the primary drivers of the body's circadian clock, many factors can disrupt circadian rhythms—including what and when we eat and exercise, as well as work, travel, poor sleep hygiene, stress and more. Increased sunlight exposure, reduced artificial blue light in the evening, meal timing and healthy sleep hygiene habits can all go a long way in promoting circadian rhythms. Getting sunlight exposure first thing in the morning can have a substantial effect on setting the circadian clock to feel more awake during the day.
- Sleep is the foundation of an energized life—ultimately supporting us to make healthy conscious choices. Quality of sleep determines quality of life. It's not just about the number of hours you spend in bed, but about the quality of sleep while you're getting those zzz's.
- From a circadian rhythm standpoint, food timing (in addition to light and temperature) is one of the major variables that impacts circadian alignment. Intermittent Fasting regimens (such as TRF) that limit food consumption to daytime/light hours may be

particularly effective at promoting metabolic health. According to time-restricted feeding research, it may be best to limit your “feeding window” to less than 12 hours each day with most—if not all—of your food intake during daylight hours.

- Men and women both run on a 24-hour rhythm with the earth’s rotation and the sunrise and sunset. Fertile women are more clearly affected by a monthly/cyclical rhythm in line with the lunar cycle so women may need to pay even closer attention to this realignment process and know that it’s normal to not feel the same from day to day. The more time we spend in nature, the lower our cortisol levels. This helps ground our nervous system and make us feel more secure as we move about our day.
- Scripting your day, both at the beginning and at the end, is a great way to establish your goals, routine and commitment. Waking up 15 minutes earlier to do this or spending a few minutes at the end of the day can help you feel successful. When we build a healthy routine, we tap into a deep, parasympathetic rhythm, which allows us to enhance and sustain our energy. We not only increase our lifespan, but also enhance our lives in ways we could have never imagined—deepening our relationships and increasing the quality of our time on earth.

## Your Tribe Summary

- A major 75-year study done by Harvard University showed that the single biggest factor for healthy aging was the quality of one's relationships. When you are living in joy, you are finally empowered to live your true self, which is why it is so critical to find an authentic circle of people you know and trust who can also provide accountability. There is nothing more important than the relationships we have, which is why we must be conscious about the people we choose to have in our lives.
- We are who we surround ourselves with. Look at your five closest friends and colleagues. How do they add value to your life? What lessons are they teaching you through their own relationships? How can you either strengthen those relationships or find a group which better matches your "manifested" life and vision?
- "Biohacking" is about hacking your biology not just for your own betterment and longevity, but also for the world around you. If we are hustling and grinding, we are not *seeing* other people or listening to them. We are just getting through the day. Our purpose should be to become who we are meant to be—and after that, to help others self-actualize.
- Often one of the best things we can give someone is our experience; when you give, you are fulfilling what you are supposed to do and who you are supposed to be. You are helping others reach their fulfillment. This will energize you even on days where you are feeling low.

- Now more than ever, we need to find ways to develop and strengthen community, creating safe and healthy ways to connect with other humans. One of the best ways to show someone you care is simply to show up for them.
  
- “Ubuntu” is an African philosophy that may best be described by the phrase “I am because of who we all are.” Ubuntu places emphasis on solidarity, compassion, respect, human dignity and collective unity, and focuses on reciprocity, humanity and morality in the interest of building and maintaining community with mutual caring.