

THE BIG IDEAS

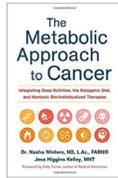
Two Theories of Cancer
Metabolic vs. SMT.

Gardening the Terrain
Ten elements.

Sugar
Our biggest addiction (and nemesis).

Cachexia
Weight loss: Therapeutic vs. pathological.

Hope
Never, EVER give it up. (Period.)



The Metabolic Approach to Cancer

Integrating Deep Nutrition, the Ketogenic Diet, and Nontoxic Bio-Individualized Therapies

BY DR. NASHA WINTERS AND JESS HIGGINS KELLEY · CHELSEA GREEN PUBLISHING
© 2017 · 408 PAGES

“A metabolic, deep nutrition, and nontoxic approach is the answer to cancer prevention and management. This book is our call to arms—we must focus on the 90-95 percent of cancers that are caused by the standard American diet and exposure to environmental toxins. We simply cannot keep shrugging our shoulders when we, or our loved ones, are diagnosed. If a new virus began to kill one of every four people in the United States, you can bet your pink ribbon a cure would be found, and fast. While Western medicine continues to drive along the dusty, dead-end road seeking the genetic and targeted answer to cancer, it is time for us to start taking control of our own health and health care choices. We’ll say it again: Cancer is a metabolic, environmental, and emotional disease. It’s not just a tumor; it signifies correctable imbalances that occur inside and outside our body. Now is the time for lifelong remission. It is time for some real hope and to disarm the most deadly disease of modern times. How? With the metabolic approach to cancer.”

~ Dr. Nasha Winters and Jess Higgins Kelley from *The Metabolic Approach to Cancer*

This is the third book specifically on cancer I got after my brother’s recent diagnosis.

Pilar Gerasimo recommended [Anticancer](#). We started with that one then covered [Tripping over the Truth](#) by [Travis Christofferson](#).

When I asked my friend (and coach) Ben Greenfield what books I should be reading he told me to read this one and to “follow it to the t.” So, of course, I immediately got it.

It’s astonishingly good. I echo Ben’s advice and say, THIS is the book to read if you or a loved one are dealing with cancer.

[Dr. Nasha Winters](#) was diagnosed with stage IV terminal ovarian cancer 25 years ago. She was told Western medicine couldn’t do anything for her so she committed herself to figuring it out—becoming a naturopathic doctor and acupuncturist and fellow of the American Board of Naturopathic Oncology in the process.

She’s thriving and has helped thousands of others thrive through cancer as well by focusing on, as per the title, a “metabolic approach to cancer” that integrates “deep nutrition, the ketogenic diet, and nontoxic bio-individualized therapies.”

Nasha wrote the book with [Jess Higgins Kelley](#) who is an oncological nutrition specialist. The book is encyclopedic in its wisdom yet still super-readable. It’s smart, grounded, and integrative. I was literally on the edge of my seat reading and underlining it—fired up with the insights and excited to implement them with my brother.

Get a copy of the book [here](#).

It’s literally PACKED with Big Ideas. We’re barely going to scratch the surface of the surface but I’m excited to share a few of my favorite Ideas so let’s jump straight in!

“Illnesses do not come upon us out of the blue. They are developed from small daily sins against Nature. When enough sins have accumulated, illnesses will suddenly appear.”

~ Hippocrates

"The genetic mutations considered by conventional medicine as the root causes of cancer are, in fact, modifiable by epigenetic factors. Indeed, it is well established that genetics is the cause of only 5-10 percent of cancers and most of these genes encode proteins that impact mitochondrial respiration. It is mitochondrial damage that causes cancer, not the genes. If the inherited cancer gene does not damage mitochondria, cancer will not occur."

~ Dr. Nasha Winters and
Jess Higgins Kelley

"We are not getting cancer because we are living longer; we are getting cancer because we are damaging our mitochondria on a daily basis with environmental toxins, poor diet, and endocrine disruptors. Most of us are not eating the foods that keep cancer at bay while simultaneously overeating the foods that encourage its riotous growth—too many cookies, too little kale."

~ Dr. Nasha Winters and
Jess Higgins Kelley

THE METABOLIC THEORY OF CANCER

"As you can see from the title of the book, we subscribe to the metabolic theory of cancer—the proven fact that cancer cells are fueled by sugar and that altered mitochondrial metabolism is the ultimate cause of cancer. In fact, a December 2016 meta-analysis research paper assessed more than two hundred studies conducted between 1934 and 2016 and concluded that the most important difference between normal cells and cancer cells is how they respire, or create energy. Cancer cells use a primitive process of fermentation to sustain their rapid growth, a process we discuss in detail in chapter 4. But the most important finding is that fatty acids (dietary fats) cannot be fermented by cancer cells, which makes a ketogenic diet the most powerful dietary approach to cancer identified to date. And thanks to more than a hundred years of research by physicians and scientists Otto Warburg, Thomas Seyfried, Dominic D'Agostino, and Valter D. Longo, as well as a rising number of others, we know beyond a shadow of a doubt that low-glycemic, ketogenic diets and intermittent fasting should be an integral part of an effective anticancer diet program. We discuss these in relation to almost all ten terrain elements."

First: Why is the book called "The Metabolic Approach to Cancer"?

Well, as per our Notes on *Tripping over the Truth*, there are two theories on the origins of (and therefore the therapies for) cancer: the "somatic mutations theory" of cancer (or "SMT") and the metabolic theory of cancer.

Western medicine's current approach to cancer is based on the somatic mutations theory which basically says that damaged genes are the cause of cancer.

We've spent \$100 billion researching this theory of cancer and we spend \$100 billion every year on cancer medications based on this theory of cancer. And, as Travis Christofferson says in *Tripping over the Truth*: "Despite embellished announcements from government actuaries, the real death rates from cancer are the same today as they were in the 1950s."

The alternative theory? The metabolic theory of cancer—which says that it's damaged MITOCHONDRIA that is the primary cause of cancer. (Note: From this viewpoint, although genetic damage *can* exist in cancer cells, it is not the primary *cause* of cancer.)

Recall from our other Notes and your high school biology class, that mitochondria are our little energy powerhouses within the cytoplasm of every cell. And know this: "We subscribe to the metabolic theory of cancer—the proven fact that cancer cells are fueled by sugar and that altered mitochondrial metabolism is the ultimate cause of cancer."

When you see cancer from a mitochondrial/metabolic perspective, your therapeutic strategy and interventions are COMPLETELY different.

Rather than waging a war on cancer by slashing (surgery), burning (radiation), and poisoning (chemotherapy) your body, you gently rehabilitate your mitochondria while killing off the cancer cells via deep nutrition, a ketogenic diet and bio-individualized nontoxic therapies.

Helping us understand this approach is, of course, what the book is all about.

THE TEN TERRAIN ELEMENTS

"Comprehending the complexities of the individuals' biological terrain is akin to a gardener understanding the ideal conditions for growing vegetables. A successful gardener knows that it takes more than a piece of land and a packet of seeds to grow a bountiful harvest. It requires knowledge of soil biochemistry, the planting requirements of all the various types of seeds, proper balance of nutrients, fertilizing agents, and the right amount of water and sunlight. It also requires insight into how pests, insects, weeds, molds, and fungi impact the soil or plants. The ten terrain elements we've identified are like systems within that garden. Regulating a healthy

*"We need to treat the terrain,
not the tumor."*

~ Dr. Nasha Winters and
Jess Higgins Kelley

*"The seeds of a metastatic
cancer will thrive in an
inflammatory, immune-
compromised, and highly
oxidative environment. Yet
when the terrain is healthy,
nourished, and optimized,
those same bad seeds cannot
sprout."*

~ Dr. Nasha Winters and
Jess Higgins Kelley

*"Studies have found that
the patients who are actively
engaged in their care, ask all
the questions, get second
and even third opinions, are
vocal about their needs and
concerns, and have a great
support system have longer
survival and recovery rates
than those who are passive in
the process."*

~ Dr. Nasha Winters and
Jess Higgins Kelley

human biological terrain is similar to raising a healthy, thriving garden. When the body is fed a diet that provides adequate amounts of macro- and micronutrients, vitamins, and minerals; is exposed to a variety of microbes; and has adequate amounts of exercise, sleep, fresh water, sunlight, love, and attention; then the body, like a healthy garden, will flourish. Conversely, if it is fed antinutrients and chemicals, receives insufficient sunshine, and endures too much stress, it will wither.

So the key is this: Since cancer consists of cells gone awry in response to toxic diets and environments, we must optimize the body's healing mechanisms instead of waging war on them. We need to treat the terrain, not the tumor. We must build the body up instead of attacking it. Our strategy works: The only side effect of the metabolic approach is feeling better. *Much better*. In fact, for over a decade, Dr. Nasha has seen hundreds of Stage IV cancer patients who have lived far beyond their "expiration date" because they have followed this model. As we will explain, each terrain element is optimized using the oldest form of medicine: *food*. It sounds simple, yet in the modern world of medicine, it's about as radical and 'unfounded' as it can be."

You may recall that we talked about the "terrain" in our Note on *Anticancer* and in *Conquering Cancer 101*. It's essentially the environment within our bodies that is either feeding cancer or is inhospitable to it. [David Servan-Schreiber](#) used the metaphor of cutting off cancer's supply lines and shares his ideas on how to optimize the terrain.

(btw: David wrote *Anticancer* a decade before this book. I'd be willing to bet a LOT that he'd fully endorse every aspect of this book.)

Nasha and Jess tell us that we need to think of this whole process like wise gardeners—sharing a metaphor we discuss in [Alejandro Junger's *Clean*](#) that is often used by integrative doctors.

Short story: When we take a broader, more integrative approach, we don't slash off dead limbs or spray some poison on the tree and call it a day. We step back and think about the SYSTEMS involved—not just the SYMPTOMS.

→ *"To truly overcome cancer it is the terrain, not the tumor, that requires treatment."*

Why? Many reasons. But think about it for a moment. If your therapeutic strategy doesn't even think about (!) let alone effectively address (!) the underlying CAUSE of your cancer, won't it just come roaring back?

Nasha and Jess offer TEN key elements to a person's terrain. They call it "The Terrain Ten™" and the book has a chapter for each of these ten elements:

1. Genetic, epigenetic, and nutrigenomic modifications
2. Blood sugar balance
3. Toxic burden management
4. Repopulating and balancing the microbiome
5. Immune system maximization
6. Modulating inflammation and oxidative stress
7. Enhancing blood circulation while inhibiting angiogenesis and metastasis
8. Establishing hormone balance
9. Recalibrating stress levels and biorhythms
10. Enhancing mental and emotional well-being

< – THAT's the metabolic approach to cancer.

P.S. Is your oncologist thinking about those things? Nasha and Jess actually give us a list of ten REALLY good questions to ask your oncologist and they make the VERY strong point that we need to take charge of our health care process. I love how they put it: *"Do not be afraid to ask questions. Remember, you are paying your doctor, so they work for you. Consider yourself the CEO of your cancer care process and your caregivers as your board of directors."*

SUGAR: OUR BIGGEST ADDICTION

"All cancer cells have the ability to reprogram their energy metabolism in order to consume more glucose and grow faster. No conventional treatment, including the newer targeted therapies, will affect the cancerous cells if sugar remains high. Period."

~ Dr. Nasha Winters and
Jess Higgins Kelley

"We have a major drug addiction in this country. Bigger than opiates, amphetamines, alcohol, heroin, and nicotine all combined. It's a legal drug, and everyone can easily get it. Even kids. You guessed it: sugar—it's in practically every modern food we eat and drink and it is fueling our cancers and other chronic illnesses. Sugar consumption is simply off the charts, and most people don't even think twice about it; it seems so innocent and so tasty. So what's the big deal? The deal is that cancer cells ingest sugar—all kinds of sugar—at a rate that's almost fifty times faster than healthy cells, and it's the main fuel that helps them to grow and spread. Researchers from Harvard Medical School reported that up to 80 percent of all human cancers are driven by the effects of glucose and insulin, which stimulate the proliferation, migration, and invasiveness of all types of cancer. It is because sugar is cancer's favorite food that the positron emission tomography (PET) scans are able to detect active cancer sites. Before patients undergo a PET scan, they first must fast and then receive an injection of radioactive sugar. The sugar circulates in the bloodstream and is gobbled up by hungry cancer cells that light up the scan like a glow stick. The higher the rate of glucose consumption (that is, the more densely lit the cancer cells appear on the scan), the more aggressive the tumor."

Let's pause for another moment and reflect on this: A PET scan detects active tumor sites. It's basically searching for hot spots of sugar metabolism.

Why? Because, as per the Warburg Effect: *"Cancer, above all other diseases, has countless secondary causes. But, even for cancer, there is only one prime cause. Summarized in a few words, the prime cause of cancer is the replacement of the respiration of oxygen in normal body cells by a fermentation of sugar."*

The fact that cancer cells have dysfunctional metabolism that preferentially feasts on sugar is an established fact that EVERYONE acknowledges. Including your traditional oncologist.

YET... (!!!!!!!!!!!!!!!) My brother's oncologist has a bowl of candy in his reception area. And, when I shared that fact with a best-selling author friend who is also undergoing treatment for cancer, he told me *his* oncologist has a bowl of candy in his reception area as well. To which I replied, "How is that not malpractice?" All of which is part of a longer chat we'll save for another time.

For now: As Nasha and Jess put it, if your doctors don't think nutrition significantly effects your well-being you might want to look for another doctor. ;)

Back to the chapter on the second terrain element: "Sugar, Cancer, and the Ketogenic Diet." Want to Optimize your deep nutrition? Eliminate added sugar and all the edible foodlike substances in which it's hidden. Which, to be clear, is pretty much EVERY processed food.

I know I say this all the time. And, I know some of you might be saying exactly what Nasha and Jess say above: "Really? Come on. Can't be THAT bad for you." Well, it is.

And, let's not wait for the cancer diagnosis to make the change. Although the metabolic approach to cancer provides a TON of hope to thrive after a cancer diagnosis, it's easier to prevent than to treat cancer. So... Stop drinking the sodas. Say no to the donuts and cookies and all the other stuff that's torturing your mitochondria. (Pretty please with no sugar on top?)

One more thought from Nasha and Jess: *"All cancer cells have the ability to reprogram their energy metabolism in order to consume more glucose and grow faster. No conventional treatment, including the newer targeted therapies, will affect the cancerous cells if sugar remains high. Period."*

Here's another gem: *"The ketogenic diet plays an integral role in the metabolic approach to cancer and in our approach. We personally have seen it work wonders with our cancer patients time and time again. It is a deeply therapeutic, high-fat, low-carbohydrate diet that*

"Between 1985 and 2000 the price of fruits and vegetables doubled and fish increased 30 percent, while sugars and sweets decreased by 25 percent and soda became 66 percent cheaper. It is horrifying how subsidies have made broccoli more expensive than Dr. Pepper!"

~ Dr. Nasha Winters and
Jess Higgins Kelley

*"The doctor of the future
will no longer treat the
human frame with drugs, but
rather will cure and prevent
disease with nutrition."*

~ Thomas Edison

enables the body to cease using glucose as its primary fuel source and to utilize ketones (the bi-product of fatty acid breakdown) instead. Ketones are a source of fuel that is more difficult for cancer cells to consume than glucose is. The ketogenic diet thus deprives cancer cells of energy targeting the fundamental cause of cancer: altered metabolism."

P.S. Another big tip from that chapter? ELIMINATE GMOs from your diet! I knew they were bad but I didn't realize just HOW bad. Did you know that twenty-six countries have banned genetically modified foods and other substances because they've been proven to be so carcinogenic? Yep. Although places like Australia, China, France, Germany, India, Italy, Mexico, Russia and Switzerland have banned GMOs, the US has not.

So... If it doesn't say organic/non-GMO then assume it's GMO. And don't eat or use it.

CACHEXIA: WEIGHT LOSS: PATHOLOGICAL VS. THERAPEUTIC

"Cachexia is the reason behind the urgent exhortations not to lose weight during cancer treatment. 'Eat whatever you want, just don't lose weight!' is the most common, and sometimes only, nutrition advice a cancer patient will get.

It is essential to understand that cachexia is in fact metabolism-based, not calorie-based, and research has proven that cachectic patients rarely respond to increased caloric intake alone. This is important because practitioners of Western oncological medicine want to force-feed cachectic patients with high-sugar foods and inflammatory drinks like Boost—which only make it worse. Cachexia, like cancer itself, significantly alters a patient's metabolism, and it simply cannot be resolved using the calories in = calories out equation. During cachexia there is both a depression in protein synthesis and an increase in protein degradation, making sure amino acids (that is, quality protein) consumption is high and complete becomes of utmost importance, while also keeping glucose low. Studies have found that the ketogenic diet not only diminishes tumor growth and proliferation but also inhibits cancer-induced cachexia. The 'milk shakes to gain weight' model is actually lethal."

This is a REALLY big deal. I underlined the living bliss out of this section and made a post-it to make sure to chat with my brother about this and to make sure I included this Idea in the Note.

Rick's oncologist said pretty much EXACTLY *"Eat whatever you want, just don't lose weight!"* (Seriously. Almost verbatim.)

His doctor looked at the chart and Rick's weight and said he was concerned about him losing weight. I told him that I get the concern, but if a patient comes in overweight or obese, why would we want to maintain the unhealthy weight which was a primary factor in arriving in his office in the first place? (Then I might have mentioned the candy in his reception area. Which would be funny if it wasn't so disturbing. UPDATE: This has been removed!)

He didn't have a good answer to that question. Alas, the distinction between THERAPEUTIC weight loss that is a result of a nutritional (and exercise plan) that INCREASES strength and well-being vs. a *pathological* loss of weight that is caused by cachexia seemed foreign to him. I have a DEEP level of respect for how hard he has worked in his career AND an even deeper level of disbelief at how narrow the traditional approach can be. Ahem. Again, longer chat. Etc.

Back to Nasha and Jess: *"When it comes to weight loss, it is important to distinguish between the two types: pathological weight loss (cachexia) and therapeutic weight loss, which is beneficial. Practically every patient we have placed on a ketogenic diet has lost weight, at least ten pounds, very quickly. This is therapeutic weight loss, and a good thing. Typically, it's ten pounds of inflammation! Healthily thin and cachectic are not in the same category whatsoever—and that's the conversation we have with patients and their family members who get nervous when weight loss occurs. The fact is this: It is more effective to stabilize and reverse cachexia by fasting than by repeatedly eating the wrong thing."*

*"We can slug down more
sugar in thirty minutes
than our ancestors would
consume in an entire year.
Since the primary function
of cortisol is to balance
the effect of insulin, it's
pretty simple: When insulin
is chronically high, so is
cortisol. If you eat more
than 30 grams of sugar a
day (less for kids), you are
living in chronic stress, even
without any other stressors
present."*

~ Dr. Nasha Winters and
Jess Higgins Kelley

"Dr. Nasha starts all of her cancer retreats with this Emily Dickinson quote: "Hope" is the thing with feathers that perches in the soul- / and sings the tune without the words- / and never stops-at all-."

~ Dr. Nasha Winters and
Jess Higgins Kelley

Finally: "There simply cannot be an insulin response during cachexia, that's the killer. Continuing to eat a pro-inflammatory and high sugar diet only speeds the rate of cachexia's tissue destruction. This is a real paradigm-shifting concept, and one that is deeply entrenched in Western medicine. But clearly eating ice cream when you have cancer is not working."

NEVER, EVER GIVE UP HOPE

"While the prognosis of a rapidly growing or metastatic cancer sounds grim, it does not mean that remission cannot be achieved. Never, ever give up hope. ... Having overcome stage IV ovarian cancer herself, Dr. Nasha has also helped hundreds of other stage IV patients who were essentially 'sent out to pasture' by their conventional oncologists. With the right foods, a therapeutically tailored diet, and nontoxic therapies—including mistletoe and hyperbaric oxygen—all working to optimize the terrain, cancer can be overcome. You just have to believe that it will."

Hope. As per our study in *Anticancer*, it's ESSENTIAL.

To be clear, we're not talking about a stare-at-your-vision-board-and-ignore-reality hope. We're talking about a scientifically-validated, super-empowered hope. A hope based on the SOLID, rigorous, irrefutable *science* of what we KNOW works backed up by a ton of astonishingly inspiring exemplars who have thrived after a terminal diagnosis.

Dr. Nasha herself is the best case study. She was diagnosed with stage IV terminal ovarian cancer at 19 and told she had 3 to 6 months to live and was given hospice care info to prepare for imminent death. (Read her story [here](#).) And... Here we are, 25 (!) years later.

So... If you or someone you love is diagnosed with a terminal cancer, that just means we need to turn up the heat on the intensity of our focus on Optimizing our terrain—ignoring the statistics and doing ALL (!) we can to be a long-tail case study of overcoming the odds and thriving!

B

Brian Johnson

About the Author of "The Metabolic Approach to Cancer"

DR. NASHA WINTERS WITH JESS HIGGINS KELLEY MNT



Dr. Nasha Winters, ND, FABNO, L.Ac, Dipl.OM is the visionary and CEO as well as best selling author, lecturer, and the primary consultant of Optimal Terrain™. She is a nationally board certified naturopathic doctor, licensed acupuncturist, and a fellow of the American Board of Naturopathic Oncology.



Jess Higgins Kelley, MNT, is the CEO of Remission Nutrition, a global oncology nutrition therapy consulting and education enterprise. She is also the Founder of the Oncology Nutrition Therapy Program at the Nutrition Therapy Institute.

About the Author of This Note

BRIAN JOHNSON



Brian Johnson loves helping people optimize their lives so they can actualize their potential as he studies, embodies and teaches the fundamentals of optimal living—integrating ancient wisdom + modern science + practical tools. Learn more and optimize your life at optimize.me.

If you liked this Note,
you'll probably like...

[Tripping Over the Truth](#)

[Anticancer](#)

[Fat Chance](#)

[Grain Brain](#)

[Brain Maker](#)

[The Case Against Sugar](#)

[Food Rules](#)

[Daring Greatly](#)