PRACTITIONER POWER PACK

UNCONVENTIONAL MEDICINE

The only thing more dangerous than the threat of chronic disease itself is ignorance, resistance, and flat-out denial. Fearful defense of the status quo and distrust of Functional Medicine will only make things worse.

To that end, we designed this guide to help you as a practitioner be prepared to counter the doubt and make the case for FM as clearly and effectively as possible.

Here's what you'll find here:

- **Powerful facts and figures** about chronic illness and Functional Medicine that earn you instant credibility when talking to colleagues about FM.
- **A curated list of current research** to give you the evidence and reference points you need to make the case for Functional Medicine.
- **Best tactics for communicating** the value of FM and lifestyle change with clarity and urgency to patients who are still hung-up on a quick fix.

SECTION 1

Here are the Facts About Chronic Disease

FACT: Chronic disease is by far the biggest health challenge we face.

- 1 in 2 Americans has a chronic disease, and one in four has multiple chronic diseases
- 27 percent of kids now have a chronic disease, up from just 13 percent in 1994
- Chronic disease is responsible for seven out of every ten deaths

FACT: The consequences of chronic disease are severe.

It's destroying our quality of life, shortening our lifespans, bankrupting our governments, and threatening the health of future generations.

- Spending on chronic disease worldwide will reach $47 trillion by 2030. This is equivalent to the GDP of the six largest economies in the world.
- This generation is the first in which kids are expected to live shorter lifespans than their parents.
- 1 in 5 Americans struggles to pay medical bills, and three in five bankruptcies are due to medical expenses.

FACT: Conventional medicine has not only failed to address chronic disease thus far, but it has no hope of ever doing so in its current configuration.

There are three reasons why (know these cold!):

- Our modern diet and lifestyle are out of alignment with our genes and biology.
- Our medical paradigm is not well suited to tackle chronic disease.
- Our model for delivering care doesn't support the interventions that would have the biggest impact on preventing and reversing chronic disease.

...and here are the stats

- **1 out of 2** Americans is affected by chronic disease; **1 in 4 has *multiple*** chronic diseases.
- **7 of 10** deaths in the U.S. are caused by chronic disease.

- **50 million Americans (approximately 1 in 6) have an autoimmune disease** (more than cancer and heart disease combined)
- Nearly **1 in 3** Americans have either prediabetes or diabetes. (100 Million)
- At any given moment, **roughly half of the adults in the U.S.,** including 9 out of 10 adults over age 60, **are taking at least one prescription drug**
- **Almost a third of adults** take two or more drugs.
- **Almost 30 percent of all teens** are now on a prescription drug, as are 20 percent of young children.
- **America spent just under $310 billion on pharmaceutical drugs in 2015 (IMS Health 2016)**
- Medical care is the third-leading cause of death in the US., according to analyses published in **BMJ in 2016** and **JAMA in 2000**.
- **Chronic disease will generate $47 trillion in healthcare costs** globally by 2030 if the epidemic is unchecked (**Duff-Brown, 2017**). That's more than the annual GDP of the six largest economies in the world.

Countering Criticism

It's not uncommon for people with no previous knowledge of Functional Medicine to have questions—and even exhibit some serious skepticism, based on what they've half-heard or read, or, more importantly, believe. Challenging a system that people have grown up trusting is not easy, for them or you!

So here are some ways to respond to pushback, facilitate understanding, and establish authority—without antagonizing or creating tension.

"Functional medicine isn't evidence based."

In fact, it is. The idea that FM is something spun out of thin air and wishes is simply untrue.

- **Functional Medicine emphasizes the importance of *evidence-based* interventions**—and we're wary of trends that have no substantial research to back them up.
- **Cleveland Clinic has started doing research that more explicitly points to FM,** and they are also integrating FM and nutrition into the curriculum of Cleveland Clinic Lerner College of Medicine.

- **Plenty of research supporting an FM approach already exists:** you just need to know how to look for it (and most conventional doctors never see them because they operate from a different paradigm).
    - *You won't find:* a study that "proves" that an FM approach works.
    - *You have to look for:* studies that support the rationale of Functional Medicine, the idea that diseases and the signs and symptoms that result from them are caused by underlying mechanisms/pathologies.

Issue:	Research suggests that:	But conventional medicine:
Irritable bowel syndrome	IBS is caused by disrupted gut microbiome, SIBO, parasites, gut–brain axis dysfunction, food intolerances, and other underlying mechanisms.	Treats each symptom separately, and rather than follow the clues, it seeks to silence the symptoms through medication.
Depression	Depression may be caused by inflammation, known as the immune-cytokine model of depression, which could be caused by poor diet, gut issues, toxins, etc. This supports an FM approach to depression.	Attempts to manage symptoms with medication, which often cause unwanted side effects like drowsiness, insomnia, agitation, anxiety, reduced libido, sexual dysfunction, and more.
Autoimmune disease	Rather than irreversible, these conditions may be amenable to a root cause approach, treatable by diet and lifestyle changes—which also supports FM.	CM treats autoimmune disease with drugs such as prednisone, methotrexate, or infliximab. These drugs not only do not address the underlying triggers of immune dysfunction, but they also globally suppress the immune system and cause serious side effects and complications.

Why there is no magic pill (and why you should question anyone who claims to have one)

Without a doubt, medications for acute infections save lives—every day. FM is not anti-medication; we believe in making sound, sensible use of prescriptions when necessary. However, one of the biggest problems with our current system is the degree to which it relies on drugs to address issues that they are ill equipped to address.

Drugs by and large are used to do one thing: suppress symptoms. If you have high blood pressure, you'll be given a drug to lower it. If you have high cholesterol, you'll be given a drug to lower that. There's rarely any investigation into what caused the high blood pressure or high cholesterol in the first place.

Here's why that's a problem:

1. **Drugs rarely address the *real* problem.** Imagine that you have a rock in your shoe and it's making your foot hurt. You could certainly take ibuprofen or some other painkiller to reduce the pain in your foot, but wouldn't a better solution be simply taking off your shoe and dumping out that rock? When you rely on meds to suppress symptoms, you fail to address the underlying issue.
2. **Drugs don't just suppress symptoms; they also suppress functions.** Many people take NSAIDs like ibuprofen to cope with arthritis or inflammatory conditions. While these medications can be effective in relieving pain, they also reduce blood flow to cartilage. Blood carries all the nutrients and immune substances that we need for tissue repair. Ironically, taking NSAIDs chronically can worsen the problem because they actually reduce the tissue's ability to heal.
3. **Drugs often correct one imbalance by causing another—or several others.** The interactions between proteins are extremely complex. If a drug interferes with one protein, it will inevitably affect many others. This causes what we typically refer to as "side effects." But if you think about it, a drug really only has *intended* effects and *unintended* effects. The problem is that the unintended effects of a drug often far outnumber the intended effects. When we continue to address problems by creating imbalances, this destabilizes the body and compromises its ability to function.

"Modern medicine is evidence based. How can you be against that?"

Modern medicine plays a critical role, to be sure. But it's not healthcare; it's "sickcare." Its primary goal is to manage disease. Look, if any of us gets hit by a bus, we want to be taken to a hospital, stat! But the idea that conventional medicine is evidence-based and FM isn't is flat-out false.

A better question to ask is whether *conventional* medicine is evidence based. Consider the following cornerstones of modern Western medicine:

- **Randomized clinical trials:** The gold standard of conventional research—the randomized clinical trial —isolates just *one* variable, then tests the effect of that variable; all other elements of the study are kept the same. The randomized clinical trial is practically the antithesis of the philosophy of Functional Medicine, which seeks to tailor layered treatment plans to individual patients. So is it any wonder why this one particular way of testing and evaluating systemic health issues falls short of what FM requires?
- **Peer-reviewed research:** A healthy dose of skepticism is key—which is why we should question the research itself. A few reasons why:
    - **In many cases, initial research results are never replicated.** The scientific method is based on replicability—when there's an initial finding, its value depends on it being reproduced in other researchers in other labs. Typically, a finding isn't considered truly valid until this happens. Much of the research we've formerly relied upon was never replicated; in recent reviews of published trials in fields ranging from cancer research to drug discovery, between 65 and 89 percent of findings couldn't be replicated.

- **Most published research findings support the status quo.** This means that they're not necessarily based on solid evidence. Often, the research that builds on an initial study ends up perpetuating questionable findings. The assumption is that the evidence in that first paper was correct—but what if it's not?
- **Conflicts of interest abound.** Two-thirds of medical research is funded by pharmaceutical companies (**Smith 2014**). These conflicts of interest don't necessarily invalidate the research, but they do raise cause for concern and invite a critical evaluation.
- **Fraud is a thing.** Fraud, both intentional and unintentional, is an underappreciated problem in medical research. The real problem is not only that it happens, but that you won't know when it does. A recent paper called "Out of Sight, Out of Mind, and Out of the Peer-Reviewed Literature," published in *JAMA Internal Medicine* (**Seife 2015**), found that the FDA's findings of fraud rarely end up being reported. In one case, the researcher responsible for fraud even went to jail, but the study itself never made any mention of it.
- **Conflicts of interest in research are also underreported.** We know that industry-sponsored trials are more likely to report favorable results for drugs than unfavorable; however, they're rarely disclosed. A 2009 report issued by the Department of Health and Human Services showed that very few universities required reports to be made to the government about their researchers' financial conflicts of interest. Even when they are reported, the universities rarely require those researchers to eliminate or reduce those conflicts. In fact, 90 percent of universities relied solely on the researchers themselves to decide whether to report their potential conflicts of interest.

  It affects health policy, too. In 2008, it was found that eight out of nine of the experts who were responsible for writing the National Cholesterol Education Program Guidelines had ties to statin drug manufacturers (**Kresser, Behind the Veil: Conflicts of Interest and Fraud in Medical Research 2015**). True objectivity in scientific research is not as common as we think.

"Functional medicine is too expensive."

Depends on how you look at it.

Consider the costs of conventional medicine

- **We currently spend $3.2 trillion on healthcare a year**, which amounts to $10,000 *for every man, woman, and child in the U.S.* Plus, despite spending far more than any other country in the world, we rank last overall of 11 industrialized countries in measures of healthcare performance.
- **Conventional care can be enormously expensive** for patients since it relies heavily on medications, surgery, and other expensive procedures. Insurance provides some relief but doesn't always cover these expenses—and when that happens the results can be disastrous.

- **1 in 5 Americans struggles to pay medical bills each year.** Three in five bankruptcies are due to medical expenses, making healthcare the number one cause of such filings, even ahead of unpaid credit cards or mortgages (**LaMontagne 2013**).

- **We're spending trillions of dollars on a system that not only cannot improve, reverse, or prevent disease,** but will continue to cost more and is destined to fail in the not-so-distant future.

How Functional Medicine saves money

Functional Medicine will almost certainly prove more cost effective than conventional medicine over time.

- **Right now, out-of-pocket expenses are higher** for Functional Medicine because of the lack of insurance coverage. Patients may have to increase the amount of money they initially invest in their health, understanding that, like with other good investments, they'll receive a significant return over time.

- **Functional Medicine, with its emphasis on preventing and reversing disease** rather than just suppressing symptoms with medication, can potentially save patients thousands of dollars over the course of their life.

- **Most find the investment in Functional Medicine to be worth it** because they receive a high level of care that helps them address problems more effectively and consistently than ever before.

- **You can prevent the loss of hundreds of thousands in income.** Imagine if, due to worsening chronic conditions, you had to stop working, go on long-term disability, and ultimately declare bankruptcy (which happens more often than you think). If you could prevent, reverse, or better control your symptoms using an FM approach, you could avoid the steady accumulation of unpaid medical bills—and keep earning an income, rather than forfeit tens or hundreds of thousands from lost income, savings, and investments.

"The ancestral diet is stupid because our ancestors all died when they were 30."

The average lifespan of people living in Paleolithic hunter–gatherer cultures was shorter than our average lifespan today, but those averages don't take into consideration the much higher rates of infant mortality and premature deaths from trauma, warfare, exposure to the elements, and complete lack of emergency medical care.

It's tempting to think that chronic disease is simply par for the course for living longer; however, heart disease, diabetes, and many autoimmune diseases are nearly nonexistent in hunter–gatherer populations.

Anthropologists have found that when hunter–gatherer cultures have access to even the most rudimentary form of emergency medical care, like a clinic half-a-day's hike away, they live lifespans that are roughly equivalent to our own, particularly if they're living in a relatively secure, peaceful environment (**Gurven and Kaplan 2007**).

SOURCES: National Center for Chronic Disease Prevention and Health Promotion. 2016; U.S. Department of Health and Human Services 2015, 295; Johns Hopkins University Partnership for Solutions 2000. A new report from the Centers for Disease Control; American Autoimmune-Related Diseases Association

SECTION 2

Explaining the Research

Examples of research helping you explain your passion for Functional Medicine and ancestral diet and lifestyle to others:

- B12 deficiency is far more common than most healthcare practitioners and the general public realize. Data from the **Tufts University Framingham Offspring Study** suggest that 40 percent of people between the ages of 26 and 83 have plasma B12 levels in the low normal range—a range at which many experience neurological symptoms.
- According to the lower boundary of the U.S. lab range of 30 ng/mL, as many as 70 percent of Americans are considered Vitamin D deficient (**1**, **2**).
- One study of obese postmenopausal women found that a modified Paleo diet improved several metabolic markers, including weight, waist circumference, blood pressure, blood sugar, cholesterol, and kidney function (**3**).
- Low physical activity is correlated with cardiovascular disease, obesity, insulin resistance, and all-cause mortality (**4**, **5**). Just one additional hour in a sedentary posture per day is associated with a 22 percent greater risk of type 2 diabetes and a 39 percent greater risk for metabolic syndrome (**6**).
- A meta-analysis of 17 low-carb diet trials including more than 1,000 patients found that low-carb diets improved CVD risk factors, including decreases in triglycerides, blood glucose, BMI, abdominal circumference, plasma insulin, C-reactive protein, and HDL cholesterol (**7**).
- The negative effects of sleep deprivation are serious: sleep durations that are consistently shorter than seven hours in a 24-hour period are associated with cardiovascular disease and diabetes risk factors, depression, automobile and workplace accidents, learning and memory problems, and an overall increase in mortality (**8**). Some may argue that poor sleep can even undo the benefits of a healthy diet and exercise routine (**9**, **10**).
- The gut microbiota plays a key role in the development, maturation, and function of the immune system. As such, gut microbes are key mediators of inflammatory signaling. A recent study pinpointed the microbiome as a key player in age-associated inflammation (**11**). This age-associated dysbiosis and the accompanying inflammation may in part explain the age-associated increase in the incidence of cardiovascular disease (**12**).
- Chronic heart failure patients have also been shown to have reduced gut bacterial diversity and lower abundance of key bacterial genera (**13**) and increased intestinal permeability compared to healthy controls (**14**, **15**).

- Several studies have reported that probiotic-containing yogurts significantly reduce total serum cholesterol and LDL cholesterol and improve the LDL-to-HDL cholesterol ratio (16, 17, 18).
- One study examined the specific differences in the bacterial make-up of the microbiome in patients with major depressive disorder in comparison with healthy individuals (19). Significant differences were identified between these two groups. Additionally, the severity of depressive symptoms was related to the amount of a specific bacterium. A lower relative abundance of *Faecalibacterium* was associated with more severe depression.
- Dysbiosis is associated with a growing number of diseases such as Crohn's disease (20), ulcerative colitis (21, 22), irritable bowel syndrome (23), and both type 1 and type 2 diabetes (24, 25).
- A 2014 study found that individuals with hyperthyroidism had significantly lower numbers of Bifidobacteria and Lactobacilli and significant higher levels of *Enterococcus* species compared to healthy controls (26).

SECTION 3

Conversation Starters

A big part of your work is inspiring and empowering your patients to embrace the critical lifestyle changes that can prevent or reverse chronic disease. Sustainable, long-term health is not something you can "give" to them—they need to create it for themselves.

Remember that for many of your patients, this is all new—and yes, they'll have questions, and quite frankly, doubts, about whether anything they do can make a difference. They've grown up being told that someone smarter or better simply administers health, and unlearning this, while relearning the idea of being stewards of their own health, is either too good to be true, or totally terrifying.

To that end, we've included a few helpful questions and conversation starters that can prove pivotal in shifting their mindset, their health, and ultimately, their lives.

- What would you do if you felt full of energy, were pain free, and did not have to think about your health every day?
- What would it be like if you felt differently about food? What if, instead of feeling like a slave to cravings for sugar or other packaged and artificially flavored foods, you actually wanted the things that were good for you?
- Think for a minute about what's called the "side effects" of your medication. There actually is no such thing as a "side effect." There's the intentional effect of your drug, and then there are the unintentional effects. What happens when you experience a negative unintentional effect? You go to the doctor for another med that will treat that symptom, and then that drug will also create its own host of unintentional effects. And on it goes. What if you had no more effects, intentional or unintentional? What if your daily life didn't have side effects?
- Imagine if you never had to pay for, or take, another drug again. What if you could alter your life simply by changing the foods you eat? Would that be something you'd be willing to try?
- What is your biggest obstacle to following this protocol? Imagine that we were able to remove that obstacle. Would you be willing to follow this protocol then?
- You owe it to yourself to take one 30-day period to discover how food is affecting your overall health. What if you uncovered truths about food and your body that changed the way you eat and live? What if, based on that new understanding, you could make choices that restore your own health and energy and remove symptoms? Would that be worth 30 days of experimentation?

- What if I could prove to you that instead of taking a drug for the rest of your life, you could made dramatic shifts to your health with foods you can access for pennies on the dollar—like cruciferous vegetables and healthy protein and food-derived herbal supplements with zero side effects?
- What if instead of believing you were "broken" and unfixable, I showed you that you and no one else can change and improve your health; that what you need is magnesium, not medicine, and B12 rather than bottles of pills you can't pronounce?