

## Preface

Having been in the fitness field for nearly 20 years, it's been clear to me for quite some time that women face issues that men simply don't. They have more overall trouble with fat loss, seem to gain weight and fat more easily along with endless other differences. And while I had made observations regarding this over the years, I had never really examined it in any sort of enormous detail. But this lack of attention to the issue came to a head in 2007 which is when I can say that this book really started. I had a female trainee who I simply could not figure out. Her performance was all over the place in the gym with her coordination, strength and mood changing seemingly weekly. She'd hit personal bests one week and be unable to lift 60% of her best in others with smaller variations in other weeks. Her mood shifted constantly and she suffered from fairly debilitating PMS along with the typical female body fat issues.

One day, in the midst of a tangentially (and unfinished) related project, I decided to finally get this worked out and to "solve PMS". I spent the day reading endless research papers and, without exaggerating, was done in about a day. At least in regards to her training, a basic model of what needed to be done fell right into place. While that should have been the start of the project it wasn't. I'd write my *Stubborn Fat Solution* (addressing women's bodyfat issues) shortly thereafter and essentially retire for about 8 years.

In 2015, after a few years of craziness, I finally got back to work. About February of that year, I found out that one of my earlier books, *A Guide to Flexible Dieting* (written in 2004), had been plagiarized by someone claiming to have pioneered the concept. It wasn't even the first time I'd been plagiarized but this made me angry. Very angry. For little to no reason other than spite, I decided to rewrite that book. A lot of my thoughts had changed and, being 11 years old, it was a little rough around the edges.

As I started that project, I realized that I needed to add a section and all of a sudden it had turned into a completely different book, one on general fat loss. I'd needed to write that kind of book for a while so that's what I began doing. I pulled information from my other books, from my website and suddenly what started as a basic rewrite had spiraled into a 400 page tome. My purpose, ignoring dealing with my anger, became to write the be-all, end-all book on the topic of fat loss. If it wasn't discussed in my book, it didn't matter or the concept didn't yet exist. As a secondary, and also anger driven goal, I wanted to give people in the field something to plagiarize for the next decade. They were going to do it anyway so I figured I might as well give them a comprehensive (and correct) resource to rip off.

## Women's Issues

Which brings me in a very roundabout way to the book you hold in your hands. I had reached a point where I was about 90% done with the mega fat loss book, at least in its initial form when I realized there was one last topic I needed to discuss. A topic that I had promised a book on years previously but had avoided (consciously or unconsciously) as I knew the difficulty it would entail. Of course that topic was women's issues as they pertained to diet, fat loss and training. As trite as it sounds, it was clear that women are "not just little men" even if they are often treated as such by coaches, physiologists and the medical establishment alike. There are physiological, anatomical, neurological and psychological differences to begin with and that's just as a baseline. During the course of the menstrual cycle, changes in a woman's hormone levels cause large-scale shifts in a woman's physiology. Her insulin sensitivity, whether she uses fat or carbohydrates for fuel, her metabolic rate, hunger, propensity to store fat along with her strength, endurance, coordination, injury risk and almost any other topic you could think of all change. In contrast, men are basically the same every day.

Originally I figured I could cover the topic in maybe a chapter or so. Hahahahaha. Not only would it have been totally unfair to relegate women's issues to one short chapter, it became rapidly clear that it was impossible. Women make up ~51% of the population and a single chapter wouldn't do even if I could do the topic justice in that few pages. I figured I'd expand it to the length of the other sections in that book, that I might get it done in 40-50 pages. How wrong I was. As I started writing that section and was putting up excerpts on my Facebook wall or in my group, women on both started going kind of nuts and clamoring for that information. They didn't want to wait for the tome to be finished and wanted it earlier rather than later. Given the general lack of information that was out there, and knowing my generally obsessive approach to projects, they knew anything that I wrote would cover the topic in a way that only I seem able to. Make no mistake, some of it already existed (I had personally read an older book by two Australian sports scientists/coaches on the topic that I am fairly sure nobody else has seen) and was on the web and I Googled what was out there myself to see what had been written. What I was found was either vague, incomplete or, in some cases, incorrect.

And it then dawned on me that, while information on women would be included in the mega-project to one degree or another, the topic truly needed its own stand-alone book. I'd have to pull some information from the big book since I couldn't say "Refer to Chapter 17" from a book that hasn't been release but that was fine. And I started writing and researching and writing and researching. As I got deeper into the topic, the complexity would multiply seemingly exponentially. The menstrual cycle alone introduced complications in women's physiology that simply don't occur in men. Even here, there is an added complexity. The "normal" menstrual cycle really isn't with a great deal of variability. Any two women may have different cycle lengths and even the same woman may have her cycle length change from month to month. Women also show differences in terms of how their mood, hunger, etc. change with almost no two women having the same exact pattern.

The cycle can also be disrupted. In oligomenorrhea, menstruation occurs infrequently. In amenorrhea (altogether too common in dieters and athletes), the cycle may be lost completely. Even that was only the tip of the iceberg due to the presence of what I call hormonal modifiers. Birth control (which is supremely complicated) is one of the most common but Poly-Cystic Ovary Syndrome (PCOS) along with the changes that occur around menopause are all important issues. There are endless other situations, disease states (some of which women are more susceptible to than men), that change the system but they are far beyond the scope of this book. But each of the above situations are subtly or not so subtly different from the others. The hormonal profile may change (or not) with a given reproductive hormone being relatively more dominant in terms of impacting or changing a woman's physiology. In contrast, a man's primary hormone is effectively a flat line that changes only minimally day to day and goes down gradually with age. Certainly levels of that hormone vary between men which may have implications for fat loss and training but these are really slight variations on a theme rather than being distinctly different physiologies entirely. Comparatively speaking, men are profoundly simple from a physiological (and some might say other) standpoint.

## **The Writing**

While I was writing this book, I joked repeatedly that I had been putting it off for a decade and that's not really untrue. As I mentioned above, while I had recognized some of the issues purely from experience, I knew that delving into the topic thoroughly would be exhausting and I wasn't wrong. Covering even the general physiological differences would have been difficult enough but by the time the hormonal modifiers were added, addressing the topic in any degree of detail was overwhelming. A project that I thought I'd get done quickly and easily would rapidly spiral out of control. While I originally intended to talk about fat loss and training in the one book, I would end up having to split the information into two volumes (as I write this preface in September of 2017, the training book is only partially written).

None of this was made any easier by the fact that I was basically starting completely from scratch in terms of even the terminology that is used. I was a man writing about a topic that I have no fundamental (and certainly not personal) familiarity with studying information that doesn't resonate with me on any sort of intuitive level. I don't have a menstrual cycle and the entire concept is fundamentally foreign to me beyond my observations of female trainees. I would find that many women don't really understand the menstrual cycle so what chance, as a man did I have? Over the next 2.5 years, I would manage to wrap my head around the topic although I would be lying if I didn't say it was exhausting. In podcasts I would describe it as soul crushing with no negative intention meant. The topic is simply overwhelming. At the same time writing this book has been immensely gratifying (finishing it perhaps moreso) Not only did it allow me to expand my knowledge base, both on women and physiology in general by an enormous amount, but I also knew that I was ultimately contributing positively to the field, in a way that had never really been done before with this book.

## **This Book**

This book is a book about women's physiology, diet, nutrition and fat loss. As I mentioned above, originally it was meant to cover training issues but doing those justice will require a second volume. In it I will look at what may seem like an endless number of topics. This will include a woman's general physiology, focusing on the menstrual cycle itself and what changes are occurring throughout it. Since they are so common, the hormonal modifiers will be discussed in some detail in terms of how they impact on or alter a woman's physiology. For background I'll look briefly at exercise types and some of the common goals a woman might seek

To ensure that readers are clear on certain concepts, I will look at some fairly general topics such as body composition (what it is, tracking it and altering it) along with the issue of energy balance and metabolic adaptation. The next sections of the book will look in detail at how women utilize different nutrients, store and mobilize fat along with the potential differences in fat gain and fat loss. Since it is such a critical issue, I will address the topic of menstrual cycle dysfunction in some detail along with a large chapter on stress (a place where women and men differ drastically). This will lead into a chapter where I look at how to fix the various issues women face.

The remainder of the book will be aimed at providing practical recommendations on a number of topics with a primary focus being on dieting and fat loss as that is such a prevalent goal for women (it is also a place where there is simply a staggering amount of either incorrect or outright damaging information present). This includes setting and adjusting calorie levels, determining nutrient requirements along with nutrient sources, fluid intake and others. I will discuss the concept of flexible eating strategies (originally discussed in the 2004 book that indirectly led to this one), around workout nutrition, meal frequency and patterning and finally supplements (including phase or hormonal specific supplement recommendations). I will also talk about estimating dieting times, identifying and breaking the inevitable dieting plateaus and adjusting the diet over time. Since training is a critical part of fat loss, I will address it in brief, once again a full discussion of women's training issues will have to wait for Volume 2 of this series. Finally I will provide hormonal templates for each of the potential situations a woman might find herself in along with diet templates for women of different starting body fat. Since lean females have the most issues, they will get their own chapter along with an examination of what should happen when and if they develop amenorrhea. Since recovery from amenorrhea is absolutely critical, I will spend a chapter discussing how that is optimally done.

In many places in this book, I will be addressing some of the mistaken ideas that exist for women in terms of dieting and fat loss. There is simply a tremendously large amount of mistaken beliefs and information on the topic. And the recommendations, which as often as not come from men (especially in the athletic realm) are either ineffective or damaging to a woman's health. And while I will, as often as not, compare a woman's physiology to a man's (primarily to differentiate women), the fact is that this is a women's book. Others have been written (and I've read them all) but they tend to be either clinical and aimed at researchers or, frankly, simply aren't that good. Many are incomplete and it's not uncommon to find flatly incorrect information in them (based on the research available). While this book may have started out as part of another book before becoming what was meant to be a relatively small side-project, it morphed over 2.5 years into something completely unique. It's not just a general guide to women's physiology as books of that nature exist. Rather it exists as a comprehensive guide to not only women's unique physiology but what implications that uniqueness has in terms of optimizing her nutrition, diet, health, etc. Finally, the book I promised years ago is here. Well, Volume 1 anyway.

## **An Important Note About This Book**

While I have tried to make this comprehensive regarding women in different types of hormonal situations, there are several topics that I have chosen not to cover. The first are any medically based pathophysiologies. There are far too many of them to address in any type of detail, it is an area far outside of my expertise and which should be treated by a health practitioner or OB/GYN in any case. I will mention the occasional issue in brief but, beyond that, the topic will not be addressed.

While I will address some of the changes that occur throughout a woman's lifespan (especially the menopausal transition), I will not explicitly address girls between puberty and the age of 18. Certainly much of the information in this book applies in terms of good nutrition, improving bone mineral density and the consequences of things such as amenorrhea (Common in young female athletes) but there are too many issues involved with the growing female that I have neither the expertise nor ability to cover.

Similarly, I will not be covering the issue of pregnancy or breast feeding. Women's hormones go through enormous changes at this time with some of their effects effectively reversing in some ways and addressing that in detail would be impossible. Of more importance, I am both unqualified and unwilling to provide dietary advice on either situation. The developing fetus and newborn are too sensitive to changes in a mother's food intake and the idea of giving suggestions that might cause harm fills me with dread (I will mention pregnancy in one or two places, however). There are already numerous books on the topic, written by people far more qualified than I available and I would recommend that women interested in the topic use them as a resource.

Finally is the topic of eating disorders (ED's). While absolutely relevant to the topic of women, diet and fat loss, it is another topic that requires professional help and intervention rather than advice from a book (no matter how well researched). As with pregnancy, I will mention it once or twice in this book, primarily as it pertains to other topics, but I will not address treatment or recovery.

## **A Few Qualifications**

In the modern world, discussions of sex or gender can be problematic for any number of reasons and I want to make some qualifications about the language and concepts that I'm going to discuss first. This section may seem excessive or pedantic but I want to make absolutely sure that none of what I will write throughout this book will be misconstrued.

First and foremost, in terms of their specific meaning sex and gender are not identical concepts. Sex refers to an individual's biology in terms of their genetics and which reproductive organs are present. In contrast, gender refers more to the roles an individual plays in society or how they self identify. Someone with female reproductive organs (female by sex) might identify as a male (male by gender) or perform what are traditionally referred to as a male gender role. The opposite can hold true and there are many more possibilities than just those two (my choice of that example is not meant to be exclusionary).

That said, in the scientific literature, and certainly among a majority of the lay-public, sex and gender are used interchangeably, with scientific researchers showing no real tendency towards one or the other. This is especially true in physiological research which is what most of this book focuses on. While acknowledging that it is technically incorrect, I will do the same throughout this book using the terms sex and gender or sex differences and gender differences synonymously. In most cases, I am likely talking about sex differences since my focus is on physiology and biological differences but I will still use both at varying times. I just want to make it clear that I am in no way dismissing or denying the differences.

In a similar fashion, I may occasionally refer to female-like or male-like characteristics or personality traits. With no intent to imply or maintain traditional gender roles, this is simply a descriptive shorthand that I will be using since I expect readers to be familiar with what the terms have traditionally represented. Clearly, women can show what are traditionally thought of as male-like characteristics (in terms of behavior or personality) and vice versa and there is a tremendous range of behaviors that might be seen between any given extreme. Again, it's nothing more than a descriptive shorthand since most know what the terms refer to and I use it only for convenience.

## **About the Title**

This book has gone through a number of title changes. My first working title was "50 Shades of Hormones" which became "More than Just Little Men" but I was thankfully convinced that neither were appropriate. While I frequently compare women and men's physiology throughout this book, my primary goal was simply to point out those differences and nothing more. To compare women to men in the title misses the point of what this book is. That is, this is a book about women and the differences and situations that they face. Hence the change to simply "The Women's Book" which describes exactly what it is.