A blue flame torch is the central visual element, with the flame rising from the bottom left towards the top right. The background is solid black. The text is overlaid on this background.

# BURN FAT

WITH

# THE METABOLIC BLOWTORCH DIET

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**The Ultimate Guide for  
Optimizing Intermittent Fasting:**  
Burn Fat, Preserve Muscle, Enhance Focus  
and Transform Your Health

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JAY CAMPBELL & JIM BROWN

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# PRAISE FOR THE METABOLIC BLOWTORCH DIET

## MBTD User Daniel Kelly

**Jay Campbell and Jim Brown are unparalleled** in their knowledge of fitness and nutrition.

Their expert knowledge is a unique combination of hard won experience from decades in the trenches backed up by their mastery of scientific studies.

Now I'm not the kind of guy to put people on a pedestal. But whenever I've followed their advice, I've **NEVER** gone wrong. So when they speak I tend to shut up and listen.

I'm writing a foreword to this book because I want people to know how powerful this diet really is.

Most diet programs go something like this: Make complex calorie calculations, eat foods you hate while at the same time feeling like crap. All in the name of losing a few pounds!

If you're like me, you're tired of that shit. You're looking for a diet that delivers on its promises, but isn't so complex it makes your head spin. Well you've come to the right place.

However, I'm not here to tell you it's all roses. This diet is not a magic pill you swallow and then suddenly wake up with the body you want.

You've still got to put in the work and eat right. But here's the thing with this diet - you won't have to make a pact with the devil and sell you soul to lose weight.

When I began following The Metabolic Blowtorch Diet (abbreviated as the MBTD throughout the pages of this book), I was skeptical fasting for long periods would be beneficial. And yet I was no newbie to intermittent fasting.

I had all these beliefs in my head; I would lose muscle, I'd be constantly thinking about food and dieting has to be grueling to be successful.

Well, all I can say was I was stunned by my results after just a few weeks. The extended fasting periods were decimating body fat in a way I'd never seen.

I realized all these beliefs I held had no basis in reality. In fact, the more fat I lost the bigger I looked. I started to see the caps on my delts and my abs really started to pop.

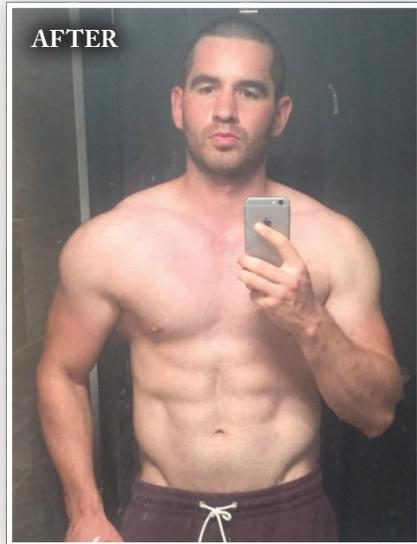
Don't get me wrong, during the first few days I started to think about food. But after a week it was plain sailing. And as a bonus my concentration levels went through the roof! I thought a diet was just about losing body fat, and not

enhancing cognitive performance at the same time!

Nevertheless I couldn't always follow the diet to the letter. But because the diet is so customizable I could fit it around my schedule and still get results!

I have no ambitions to enter a bodybuilding competition, but I do want to look good naked. And I want to do it in a way that's as simple as possible, with minimal disruption to my life. I believe I've found that with this diet.

This is a system that works. Do yourself a favor and read this book cover to cover several times over. Once you understand it, you won't have to hop from diet to diet ever again. You'll have a template for life.



## MBTD User Dennis Pontani

**Because of The Metabolic Blowtorch Diet (MBTD)**, in just a short three weeks I was able to dramatically reduce body fat. For me The Metabolic Blowtorch Diet targeted the fat around my midsection and chest which gave me the noticeable results I was looking for.

Prior to using the MBTD techniques, I was counting my calories and weighing my meals as I would normally do to try and achieve results. After four frustrating strict weeks of this approach and still not seeing desired results, I opted to try the MBTD.

I was reluctant at first because I didn't know if I was going to be able to follow the fasting intervals and was worried I would suffer hunger pangs. After the first couple days I was hooked! And quite honestly, the fast adaptation happened within four days and I barely even noticed it.

Not only did I hit my physical goals, but I also experienced some amazing cognitive benefits. I noticed my energy was increasing rather than decreasing as it would normally do on a caloric restricted program. I felt refreshed, energized and my workouts were great. I also have not experienced any muscle loss and regularly fast for more than 20 hours on my fasting days.

I have adopted the MBTD as my new lifestyle approach. I can honestly say I will never deviate from it as it's convenient and easy to follow. I look forward equally to both my fasting and training days. If you're reading this book right now, I can't recommend this lifestyle more strongly for meeting your health and fitness goals.



# NOTE FROM THE AUTHORS

**It's important to remember** with any new venture in life, **ATTITUDE** is everything.

Many people when reading this book may be taken aback at the daunting task of fasting for 15 to 20 hour time periods.

While we admit it seems difficult for most to not consume food every 4-6 hours, we ask that you trust in our proven process. Adhering to this diet becomes quite easy once your body adapts to the biological process of fasting. We lay this process out in a very easy to understand and concise fashion inside the pages of this book.

On "The Metabolic Blowtorch Diet" program you can expect to shred fat in a short period of time, and be able to do so without the mental torture of typical diet programs. What's more, it doesn't require strict 100% adherence for it to be ultra effective. The strength of this diet is its flexibility.

We are supremely confident that any person regardless of fitness level or dieting experience can make The Metabolic Blowtorch Diet (MBTD) work for them.

With that being said you should design your version of The Metabolic Blowtorch Diet based on how you see yourself fitting into the three classifications of people below.

- **Average/normal person** wanting to lose body fat effectively (dropping pant and dress sizes) while improving their overall health.
- **Semi-experienced dieters/trainees** who want to become elite and drop their body fat to around 10-12% while maintaining it for life.
- **Elite Fitness Competitors or Experienced Athletes** who want to alter their body composition for maximum fat loss (single digit levels) and/or maximum muscle preservation in the fastest and healthiest way possible.

It doesn't matter whether you are a parent with three kids, a guy/gal looking to take their physique to the next level or a pro fitness competitor, our diet will work for you.

Our goal is to have as large an impact on as many lives as we possibly can! Being "lifetime dieters" and successfully helping thousands of men and women accomplish their health & fitness goals, we know how challenging it is to find an effective long term diet program to follow.

The MBTD is the most effective and efficient lifestyle you will find. Not only will it allow you to achieve the look you desire and help you maintain it for years to come, it also massively improves your long term health!

If you get results from this book, we ask you give us a “**5 Star Amazon Review**”. We also encourage you to email us your personal success stories to [jay@trtrevolution.com](mailto:jay@trtrevolution.com). If you know of anyone else that can benefit from this book, please share it with them. It is up to each of us to have a positive impact on as many lives as we possibly can!



# IS THERE A “PERFECT DIET?”

**As a physique coach** for everyday guys and gals who want to look extraordinary, I get that question almost every day.

And my standard answer is usually a resounding “no.”

There is no “perfect diet,” for everyone. There’s only the best diet for you — one built around natural, whole foods that you enjoy eating. One that you can realistically and sustainably source, prepare, share, and eat. A diet that nourishes and satisfies while fulfilling both your health needs and body composition goals.

So that’s my answer to the “perfect diet.” Not as succinct as Michael Pollan’s classic “eat food, not too much, mostly plants” or Jim Brown’s “meat and veggies will make your dreams come true” but it’s what I say to most asking.

But what about the guys (and girls) who already have a very good grasp of basic nutrition and energy balance and beyond?

Those that understand the power of protein and healthy fats and colorful veggies, and the “smart bomb” effect of well-timed carb spikes and fasting periods? That embrace the subtle influence of structure and consistency, and the restorative healing of regular sleep and a positive mindset?

For those folks, there **IS** a perfect diet. It’s called The Metabolic Blowtorch Diet. This diet can get you lean and muscular **FAST**. It can also improve most of the relevant health markers that your physician can measure. And did I mention it works fast?

But it’s not easy. Some will find it too complicated or mentally consuming to allow the adaptation period to take effect. Others will complain they get too hungry at the end of fast windows or that it doesn’t jive with their work, family, or social life. And that’s okay. Because The Metabolic Blowtorch Diet isn’t for them, at least not now. These folks would be better off starting with something a little less regimented, a little more “rounded.” Something more like what I might suggest for them should they contact me in search of the “perfect diet.”

Unless during our dialogue I determine that they are in fact part of that distinct group of men and women. In that case, well, I’ll just send them a copy of Jim and Jay’s book. Because quite honestly, I know of nothing better to accomplish the goal of fast and efficient fat loss.

Yours in health and muscle,

**Bryan Krahn**

CSCS National Strength and Conditioning Association,  
Writer for *Men’s Health*, *Bodybuilding.com* and *AskMen.com*

# ACKNOWLEDGMENTS

This is the most challenging aspect of writing a book. Because there are so many people who have greatly influenced our lives it would be impossible to acknowledge and thank them all in this limited space. But we have to start somewhere.

First, we could not have attempted to write let alone finish this book without the help of the greatest things that ever happened to us – our wives – Monica Campbell and Rosie Brown. Their enormous self sacrifice and positive encouragement compelled us to do and be more in our tireless research. They taught both of us the greatest form of acceptance – unyielding and unwavering love and gratitude.

Second, heartfelt praise and gratitude to Joshua Smith our business partner and mentor whose Internet marketing mastery is allowing us to change the face of the sports supplement and hormonal optimization industries.

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To all our families, friends and forum brothers, ex-wives, girlfriends, clients, and fitness industry peers, thank you for the assistance and intel you provided in our times together while researching for more than two and a half decades.

Last but not least, thanks to our dear friends Alexander Cortes, Daniel Kelly, Tom Zakharov, and Austin Gunter for their editorial oversight and help turning the MBTD into an enlightening treatise on dieting for maximum fat loss, muscle preservation and improving overall health.

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# Introduction

**We have tried** every single diet ever discussed or written about in the fitness and health industry.

We tried eating six small meals a day to ‘boost our metabolisms’. We tried eating the isocaloric Zone Diet made popular by Barry Sears. We followed Martin Berkhan’s Leangains protocol. We did Dan Duchaine’s Body Opus Diet. We experimented with Lyle McDonald’s Cyclical Ketogenic Diet.

We even tried “If It Fits Your Macros” (IIFYM) when it was trendy and counted our total caloric intake down to 7-8 calories per pound for fat loss. On top of that, we’ve also used Dr. Mauro Di Pasquale’s “Anabolic Diet” and Jay Robb’s “The Fat Burning Diet”.

After close to 30 years of relentless nutritional experimentation, we have devised what we believe is the single most effective diet for stripping down body fat in the fastest way possible while maintaining skeletal muscle. This diet works for men and women **REGARDLESS** of your insulin sensitivity or body type.

When you combine our diet with hormonal optimization<sup>1</sup> and cutting-edge medications and supplements, it is a dream come true for rapid and efficient fat loss, muscle preservation and improving most health markers.

We call this diet the “**Metabolic Blowtorch Diet**” (also affectionately referred to as the **MBTD** in the pages of this book), but it’s technically a **Targeted Intermittent Fasting Diet (TIFD)**.

Our diet is designed so you specifically fast on days where there is no resistance training. In fact our resistance training is fully programmed into the diet based on whether one desires maximum fat loss or muscle preservation. On resistance (weight) training days, the body is intentionally nourished with a higher carbohydrate intake<sup>2</sup> – and therefore higher caloric intake – to preferentially refill muscle glycogen stores (enabling more glucose to be used by your muscles for energy) and prevent catabolism (muscle tissue breakdown) from your training.

**The Metabolic Blow Torch Diet** accomplishes three specific things where most intermittent fasting diets fail.

One, it allows for the body’s Basal Metabolic Rate (BMR) to remain elevated over time through regular every other day (EOD) fluctuations

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<sup>1</sup> To learn more about hormonal optimization, please refer to The Definitive TRT MANUAL

<sup>2</sup> Relative to an individual’s insulin sensitivity

depending on whether one is experiencing a fasting day (downregulation of appetite/thyroid/BMR and increase in GHRELIN/AMPK)<sup>3</sup> or a training day (upregulation of thyroid, BMR, etc). This continual yo-yoing of metabolic rate optimizes the body's fat and calorie burning process as thoroughly explained throughout the pages of this book.

Two, it eliminates boredom (from spartan low calorie diet regimens of most intermittent fasting programs) and provides great psychological uplift from the flexibility provided from alternating days of reduced and increased calorie and carb consumption. This doesn't even take into account the massive enhanced focus and cognition experienced by the increased production of Brain-Derived Neurotrophic Factor (BDNF) from the recommended longer fasting windows. (much more on BDNF in a Bonus Chapter later in the book).

Three, it actually improves muscle retention and can actually assist in new muscle tissue growth. This is due to the significantly reduced caloric intake during long fasting days which greatly decreases intramuscular fat stores.<sup>4</sup> This decrease of fat inside your muscle tissue greatly enhances your muscle's response to the hormone insulin, dramatically increasing muscle protein synthesis leading to potentially more muscle growth. This is fully dependant on one's insulin sensitivity, current muscular development and caloric intake.<sup>5</sup>

It is important you have a good working knowledge of the hormone insulin and how it affects your body when using The Metabolic Blowtorch Diet. Understanding how to manipulate insulin is your key to building muscle, losing fat and reducing inflammation, (ultimately avoiding disease) as you age. We highly recommend you read the article '*Don't Be So Sensitive*'<sup>6</sup> to understand the critical role insulin plays in fat loss, muscle gain and disease, especially obesity.

Studies show most people who diet gain the weight back after just one year. These folks attempting to diet down to lose weight ultimately put it back on. Rinse and repeat. As a result of this 'yo-yo effect', many become

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<sup>3</sup> Saha AK, Xu XJ, Lawson E, Deoliveira R, Brandon AE, Kraegen EW, Ruderman NB. Downregulation of AMPK accompanies leucine- and glucose-induced increases in protein synthesis and insulin resistance in rat skeletal muscle. *Diabetes*. 2010;59(10):2426-34.

<sup>4</sup> Rvan Loon LJ, Koopman R, Stegen JH, Wagenmakers AJ, Keizer HA, Saris WH. Intramyocellular lipids form an important substrate source during moderate intensity exercise in endurance-trained males in a fasted state. *J Physiol*. 2003;553(Pt 2):611-25.

<sup>5</sup> Hillier TA, Fryburg DA, Jahn LA, Barrett EJ. Extreme hyperinsulinemia unmasks insulin's effect to stimulate protein synthesis in the human forearm. *Am J Physiol*. 1998;274(6 Pt 1):E1067-74.

<sup>6</sup> <http://www.ironmanmagazine.com/dont-be-so-sensitive/>.

frustrated and disillusioned with dieting. Because it seems no matter what they do, their efforts are in vain.

They chalk up their failure to a lack of discipline or willpower. Something they believe they'll never possess. 'Just resist temptation!' or 'Try harder!' they're told. But this is not the real reason why people fail diets and endure the yo-yo effect. In fact, most people don't fail diets – their diets fail them.

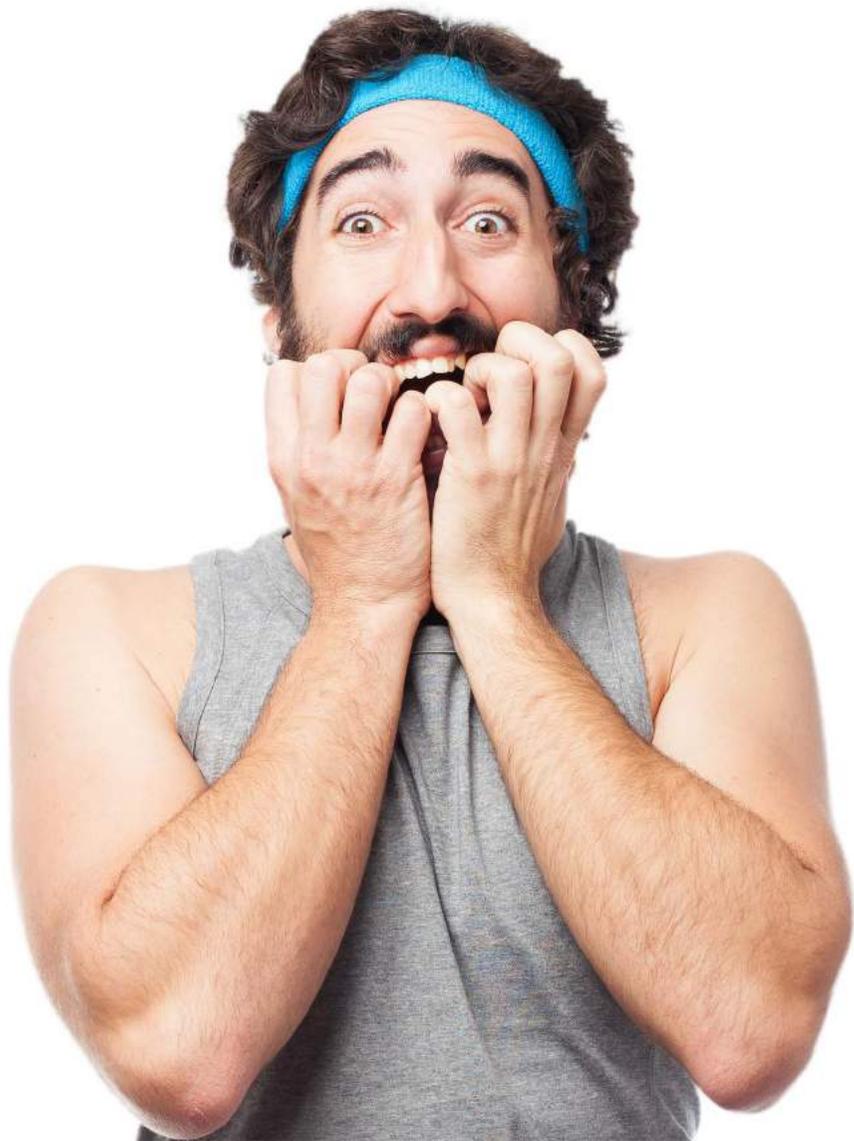
This is because most diets fail to take into consideration the effect on your metabolism after dieting. The constant calorie restriction results in a lowered resting Basal Metabolic Rate (BMR). And a lowered BMR is the perfect environment to gain weight. Your body is no longer efficient at burning calories. Ever wondered why ravenous teenagers can eat whatever they want and never gain weight? It's because they have a naturally fast metabolism.

On the other hand, The Metabolic Blowtorch Diet intelligently manipulates your metabolism with its combination of fasting followed by programmed refeeds of higher carbs and calories. This ensures you become a permanent calorie burning **MACHINE** and keep the weight off for good.

The Metabolic Blow Torch Diet (MBTD) works phenomenally well for those who are new to dieting and weight training. At the same time, it works **EVEN BETTER** for those who have been weight training for more than 5 years and have an appreciable amount of muscle mass. This is because they are more neurologically efficient, meaning they can retain muscle mass easier. The amount of muscle one carries will dictate two things. First, the more muscle that you have the higher your Basal Metabolic Rate (BMR) and need for calories per day. Second, a larger muscle will need more carbohydrates to be stored as glycogen. Typically the more muscle mass you possess, the more sensitive to insulin you are. This also makes you more efficient at handling the ingestion of carbohydrates metabolically.

The best part about the MBTD is that you can customize it around **ANY** lifestyle and training schedule. It's greatest strength is its flexibility in adapting to your unique wants and needs.

If you have more body fat to lose, you can shorten the rest periods during your resistance training while increasing the frequency and potentially the intensity of your cardio training. Additionally, you would spend more days and hours fasting over a 7-day period.



1

“But what about muscle loss?”

**The #1 myth** perpetuated by supplement companies, bodybuilding magazines and the Internet is that men and women must eat every 2.5-4 hours to maintain muscle mass, optimal nitrogen balance and an efficient metabolism. The myth claims that you'll go into starvation mode and lose your hard-earned muscle mass, which study after study has debunked!

When intermittent fasting (known as **IF** throughout the book) is done correctly, particularly when you use the MBTD, these beliefs are definitively proven to be 100% false. In particular, the over-exaggerated fear of 'losing skeletal muscle' is completely overblown.

If the 'starvation mode' myth were true, human beings would be **EXTINCT**. As hunter gatherers, food was often scarce and we needed to keep our energy up in-between meals. If humans had gotten weaker and less energetic over time due to a lowered rate of metabolism, we would not have had the energy to hunt and our species would have collapsed. Therefore, human bodies evolved to adapt to periods of famine.

The irony is that your metabolic rate – and therefore your resting energy expenditure (REE) – actually **INCREASE** during short periods of fasting.<sup>7</sup> It makes sense because your body starts using your stored fats as a source of energy when food is absent.

Skipping a meal or two does not count as starvation. Starvation, in the literal sense, means that you are eating absolutely nothing for 36 hours straight. You would have to go out of your way and try not to eat anything, so much as a calorie for 48 hours straight (or more), before you even started experiencing the slightest amount of muscle loss. Plus, lean muscle tissue is only consumed when there is next to zero body fat left (think 4% body fat or less). Very few humans will ever get to that level of leanness so the threat of muscle loss has very little basis in reality.

If you have a high-protein meal and then go through a long period of fasting, you'll have a sufficient supply of amino acids flowing through your bloodstream to prevent muscle catabolism. These amino acids are absorbed slowly, allowing you to be satiated until your next feeding period.

There was an interesting study done by Stote et al. where they compared consumption of three meals a day with just one meal a day, keeping total caloric intake the same for both meal plans. The group who ate one meal

<sup>7</sup> Zauner C, Schneeweiss B, Kranz A, Madl C, Ratheiser K, Kramer L, Roth E, Schneider B, Lenz K. Resting energy expenditure in short-term starvation is increased as a result of an increase in serum norepinephrine. *Am J Clin Nutr.* 2000;71(6):1511-5.

a day didn't lose any muscle mass, but they also ended up losing more fat than the group who ate three meals a day!<sup>8</sup>

You can get rid of the fear of starving or losing your precious muscle mass. It's simply not going to happen. Anybody who tells you so is keeping you in a state of fear so that you'll buy their products.

With that myth debunked, let's start talking about the Metabolic Blowtorch Diet!

## **But first...**

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<sup>8</sup> Stote KS, Baer DJ, Spears K, Paul DR, Harris GK, Rumpler WV, Strycula P, Najjar SS, Ferrucci L, Ingram DK, Longo DL, Mattson MP. A controlled trial of reduced meal frequency without caloric restriction in healthy, normal-weight, middle-aged adults. *Am J Clin Nutr.* 2007;85(4):981-8.



# 2

Why Should I Care  
About Fasting?

**When most people think** of fasting, they conjure images of Jesus retreating into the desert for 40 days and 40 nights. Fasting doesn't mean you have to forego food for days on end. The key here is the intermittent element. We are using fasting on an intermittent basis in order to reap its many benefits for overall health and wellness.

When a person fasts, the body's central nervous system and brain's neurotransmitters recover from the metabolic effects of food digestion. Fasting gives the body a physiological break from the ongoing process of nutrient metabolism.

A once a week 18–24 hour fast alone is neuroprotective (i.e. it allows brain cells to repair and regenerate). Studies have shown intermittent fasting confers similar health benefits to leading a calorie restricted diet. The difference with the MBTD, is you don't have to sacrifice life quality or muscle mass in order to get them.

There is an enormous amount of scientific research data detailing the significant benefits of fasting for your mental health, your cognitive performance, and your overall well-being. Allow us to share some of the most important points.

## Mental Health:

- Fasting can eliminate cravings for over-stimulating food (trans-fatty acids and processed sugars) and drugs like alcohol, caffeine, and cigarettes with nicotine.<sup>9</sup>
- Fasting may reverse emotional behaviors associated with binge eating (**NOTE: Due to individual experiences and genetics, some people with 'eating disorders' will have an increased compulsion to eat during fasting**).<sup>10</sup>
- Fasting improves mood and levels of happiness through increasing dopamine levels, thereby reducing depression.<sup>11</sup>

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<sup>9</sup>Lappalainen R, Sjöden PO, Hursti T, Vesa V. Hunger/craving responses and reactivity to food stimuli during fasting and dieting. *Int J Obes*. 1990;14(8):679-88.

<sup>10</sup>Bhutani S, Klempel MC, Kroeger CM, et al. Effect of exercising while fasting on eating behaviors and food intake. *J Int Soc Sports Nutrition*. 2013;10:50.

<sup>11</sup>Chan JL, Mietus JE, Raciti PM, Goldberger AL, Mantzoros CS. Short-term fasting-induced autonomic activation and changes in catecholamine levels are not mediated by changes in leptin levels in healthy humans. *Clin Endocrinol (Oxf)*. 2007;66(1):49-57.

## Cognitive Performance:

- Fasting can improve learning and memory<sup>12</sup>
- Fasting can enhance focus and concentration<sup>13</sup>
- Fasting can allow for better comprehension of information<sup>14</sup>
- Fasting increases levels of BDNF (brain-derived neurotrophic factor), stimulating new neuron growth<sup>15</sup> while protecting against diseases that lead to cognitive decline (ex. Alzheimer's and Dementia).<sup>16</sup> BDNF can produce higher levels of creativity<sup>17</sup> allowing for easier access into flow state. We discuss the wonders of increasing BDNF later in the book.

## Overall Well-Being:

- Fasting lowers risk of stroke<sup>18</sup> and cancer<sup>19</sup>
- Fasting lowers blood pressure<sup>20</sup>
- Fasting can increase levels of growth hormone<sup>21</sup>
- Fasting decreases levels of insulin and blood sugar<sup>22</sup>

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<sup>12</sup> Li L, Wang Z, Zuo Z. Chronic intermittent fasting improves cognitive functions and brain structures in mice. *PLoS One*. 2013 Jun 3;8(6):e66069.

<sup>13</sup> van Praag H, Fleshner M, Schwartz MW, Mattson MP. Exercise, energy intake, glucose homeostasis, and the brain. *J Neurosci*. 2014;34(46):15139-49.

<sup>14</sup> Fontán-Lozano A, Sáez-Cassanelli JL, Inda MC, de los Santos-Arteaga M, Sierra-Domínguez SA, López-Lluch G, Delgado-García JM, Carrión AM. Caloric restriction increases learning consolidation and facilitates synaptic plasticity through mechanisms dependent on NR2B subunits of the NMDA receptor. *J Neurosci*. 2007;27(38):10185-95.

<sup>15</sup> Lee J, Duan W, Long JM, Ingram DK, Mattson MP. Dietary restriction increases the number of newly generated neural cells, and induces BDNF expression, in the dentate gyrus of rats. *J Mol Neurosci*. 2000;15(2):99-108.

<sup>16</sup> Nagahara AH, Merrill DA, Coppola G, Tsukada S, Schroeder BE, Shaked GM, Wang L, Blesch A, Kim A, Conner JM, Rockenstein E, Chao MV, Koo EH, Geschwind D, Masliah E, Chiba AA, Tuszynski MH. Neuroprotective effects of brain-derived neurotrophic factor in rodent and primate models of Alzheimer's disease. *Nat Med*. 2009;15(3):331-7.

<sup>17</sup> Diano S, Farr SA, Benoit SC, McNay EC, da Silva I, Horvath B, Gaskin FS, Nonaka N, Jaeger LB, Banks WA, Morley JE, Pinto S, Sherwin RS, Xu L, Yamada KA, Sleeman MW, Tschöp MH, Horvath TL. Ghrelin controls hippocampal spine synapse density and memory performance. *Nat Neurosci*. 2006;9(3):381-8.

<sup>18</sup> Arumugam TV, Phillips TM, Cheng A, Morrell CH, Mattson MP, Wan R. Age and energy intake interact to modify cell stress pathways and stroke outcome. *Ann Neurol*. 2010;67(1):41-52.

<sup>19</sup> Lee C, Raffaghello L, Branchhorst S, Safdie FM, Bianchi G, Martin-Montalvo A, Pistoia V, Wei M, Hwang S, Merlino A, Emionite L, de Cabo R, Longo VD. Fasting cycles retard growth of tumors and sensitize a range of cancer cell types to chemotherapy. *Sci Transl Med*. 2012;4(124):124ra27.

<sup>20</sup> Nakano Y, Oshima T, Sasaki S, Higashi Y, Ozono R, Takenaka S, Miura F, Hirao H, Matsuura H, Chayama K, Kambe M. Calorie restriction reduced blood pressure in obesity hypertensives by improvement of autonomic nerve activity and insulin sensitivity. *J Cardiovasc Pharmacol*. 2001;38 Suppl 1:S69-74.

<sup>21</sup> Ho KY, Veldhuis JD, Johnson ML, et al. Fasting enhances growth hormone secretion and amplifies the complex rhythms of growth hormone secretion in man. *J Clin Invest*. 1988;81(4):968-75.

<sup>22</sup> Barnosky AR, Hoddy KK, Unterman TG, Varady KA. Intermittent fasting vs daily calorie restriction for type 2 diabetes prevention: a review of human findings. *Transl Res*. 2014;164(4):302-11.

- Fasting may improve quality of sleep<sup>23</sup>
- Fasting may clear unsightly acne from your skin<sup>24</sup>
- Fasting promotes autophagy, the natural biological process of eliminating components within cells. This is key in preventing autoimmune diseases and infections.<sup>25</sup> The benefits of regular autophagy at the cellular level are numerous, but normally only available during the fasting period. This is why the longer fasting windows recommended in the MBTD are so powerful for improving biological processes.

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<sup>23</sup> Michalsen A, Schlegel F, Rodenbeck A, Lüdtkke R, Huether G, Teschler H, Dobos GJ. Effects of short-term modified fasting on sleep patterns and daytime vigilance in non-obese subjects: results of a pilot study. *Ann Nutr Metab.* 2003;47(5):194-200.

<sup>24</sup> Please refer to this article for more information: <http://bradpilon.com/weight-loss/intermittent-fasting-and-acne/>

<sup>25</sup> Glick D, Barth S, Macleod KF. Autophagy: cellular and molecular mechanisms. *J Pathol.* 2010;221(1):3-12.



# 3

## Quick Overview of MBTD Key Principles

## 1) Gender-based fasting window

On fasting days, men should optimally fast for a period of 16-20 hours while women should fast for 12-15 hours. Why the difference between the two genders, you may ask?

### NOTE

**The length of a person's Fast window** is purely determined by their desire for Fat Loss. The longer the fasting window, the more fat is lost per unit of time. The reasons for this are explained in detail throughout this book. Adhering to the minimum hourly recommended fasting windows (and beyond) will provide the dieter optimal results. **Men and women who are OK extending their fast windows beyond the recommended maximum periods (16-20 for men, 12-15 for women) have greater net fat loss per unit of time.**

From our personal experience, the smaller fasting window for women allows for greater diet compliance. After the same time spent fasting, women will have lower plasma glucose concentrations than men.<sup>26</sup>

This means if women endure extended periods of fasting without a feeding period, they will likely get moodier, hungrier (hangry) and emotionally unbalanced. Men, on the other hand, can fast for longer periods without experiencing similar negative effects.<sup>27</sup> This is most likely attributed to genetic and epigenetic factors historically establishing men as the hunter-gatherer type, whereas women were historically more of the nurturer type.

### IMPORTANT

**Most women will have great success with this diet.** However, some women will struggle with fasting. Due to blood sugar issues, extreme insulin sensitivity, menstrual cycles and other female-related eating disorders, there are women who will struggle to adhere to the MBTD. If you're a woman, it is recommended you start with the smallest fasting window (12 hours) and work your way up to the maximum effective window (15 hours) and beyond if it works for you. There are many women using the MBTD who

<sup>26</sup> Browning JD, Baxter J, Satapati S, Burgess SC. The effect of short-term fasting on liver and skeletal muscle lipid, glucose, and energy metabolism in healthy women and men. *J Lipid Res.* 2012;53(3):577-86.

<sup>27</sup> Patterson RE, Laughlin GA, Sears DD, et al. Intermittent fasting and human metabolic health. *J Acad Nutr Diet.* 2015;115(8):1203-12.

are fasting up to 20 hours and beyond with great success. Dr Jason Fung and Jimmy Moore in their excellent book *'The Complete Guide to Fasting'* state all the studies on fasting show it's equally safe for men and women.

## 2) Macronutrients and calories are cycled through feeding windows

The specificity depends on your ultimate goal. There are three distinct conditions a person can be aiming for:

- Fat Loss
- Maintenance
- Muscle Gain

Protein is kept constant at 1 gram per pound of lean skeletal weight (in most cases). If you don't know what your lean skeletal weight is, you can approximate 1 gram of protein per pound of body weight

### IMPORTANT

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**If your goal is fat loss**, it is better to be specific and have your body fat precisely measured so you know how to calculate your calories through all phases of the diet.<sup>28</sup>

The best way to have your body fat measured accurately is through a DEXA scan<sup>29</sup> or a 'bod-pod' analysis.<sup>30</sup> For an excellent article on understanding the differences of these body fat measuring methods, read "*Comparing Body Fat Test Methods*" on BodySpec.com.<sup>31</sup>

Carbohydrates (carbs) are highest on training days and preferably flanked around meals (pre, peri (intra) and post-workout). Carb consumption is relative, depending on an individual's insulin sensitivity. If you need more information on understanding insulin sensitivity, please refer to "*Don't Be So Sensitive*" by Dr. Brett A. Osborn, and Jay Campbell.<sup>32</sup>

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<sup>28</sup> If you want a qualified coach to personally guide you through all phases, please see our coaching options:  
<http://www.trtrevolution.com/coaching>

<sup>29</sup> <https://www.bodyspec.com/what-is-dxa>

<sup>30</sup> <https://causenta.com/bodpod-body-fat-testing/>

<sup>31</sup> [https://www.bodyspec.com/blog/post/comparing\\_body\\_fat\\_testing\\_methods](https://www.bodyspec.com/blog/post/comparing_body_fat_testing_methods)

<sup>32</sup> <http://www.ironmanmagazine.com/dont-be-so-sensitive/>

### 3) Weight Training is never performed on Fasting Days

In our opinion, where most **IF** programs fail is asking the adherents to train in a fasted state. We believe you should never weight train when fasted because the body is not biochemically primed to handle explosive aerobic glycolytic (requiring full muscle glycogen stores) movements due to low circulating blood glucose. While, there are protocols to do this and avoid muscle breakdown, those protocols all require the ingestion of calories, and negate the benefits of the fast. A major benefit of this diet is to maximize and or maintain muscle mass, neither of which can be attained if you train fasted.

As you enter the 35 age range, you must maintain a mindset you are training to build muscle because muscle is the great metabolic equalizer. The more muscle you possess, the more calories you burn at rest. Training to build muscle is also the greatest way to insulate yourself from sarcopenia,<sup>33</sup> as it strengthens your connective tissue and improves bone mineral density. In our 30 years of practice based experience, recovery and hypertrophy (increasing muscle mass) are greatly enhanced by not training your muscles fasted.

#### **NOTE**

**It is important** to recognize the majority of **IF** diets/protocols<sup>34</sup> recommend a person train fasted to maximize fat burning. The primary goal of The Metabolic Blowtorch Diet lifestyle is building a functionally strong, lean, and **HEALTHY** physique while avoiding disease as one ages. As previously stated, regularly training in a glycogen depleted state is not optimal for building muscle and hence it ignores our primary goal. We find 'fasted training' to be acceptable **ONLY** in cases where a person is obese or when the overriding and primary goal is medically required fat loss(mandated by your Physician). This is permissible with individuals suffering from Metabolic Disorder, Type 2 (non-insulin dependant) Diabetes, or severe Insulin Resistance whereby health is supremely compromised. When a person becomes 'fast' and 'fat adapted' the muscles do become more efficient at burning fat. The number of specialized fat burning proteins is increased and

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<sup>33</sup> Vinciguerra M, Musaro A, Rosenthal N. Regulation of muscle atrophy in aging and disease. *Adv Exp Med Biol.* 2010;694:211-33.

<sup>34</sup> The Complete Guide to Fasting: Heal Your Body through Intermittent, Alternate Day and Extended Fasting-Jason Fung MD and Jimmy Moore.

the breakdown of fat for energy is enhanced. The combination of low insulin and high adrenaline levels when exercising fasted improves the burning of fat for energy.<sup>34</sup> So for extremely obese individuals whose immediate need for losing body fat outweighs their long term need for building muscle, we find fasted weight training acceptable.

#### **4) Whole foods are given priority over liquid nutrition due to the thermic effect of food (TEF)<sup>35</sup> when it's chewed**

Compromise is likely going to have to occur due to life getting in the way. If job or life commitments prevent you from preparing meals, it is okay to substitute your solid food meals for a protein shake or protein bar (ex. a meal replacement bar (MRP)). Just be aware that not all protein powders<sup>36</sup> and bars are made the same. If you do need a meal substitute, ensure it's a quality brand and sugars are minimal. Although neither will replace the nutritional value of wholesome prepared/cooked meals.

#### **5) Meal preparation is essential for making the MBTD work**

If you're running out of time, hire someone to prep your meals on a Sunday afternoon. Finding someone to prepare meals for you is as simple as running an ad on Fiverr, Care.com or Craigslist looking for somebody who can do your meal prep. You then train this person to prepare your meals in 2-3 hours per week. If you're a busy person, this may mean the difference between success and failure on the MBTD.

In both of our households, one of the main staples is simmered grass-fed<sup>37</sup> beef or organic ground turkey served with lentils or brown rice.<sup>38</sup> Meal prepping ahead of time will make or break your results with the MBTD. When it comes to the MBTD, failing to prepare really is preparing to fail.

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<sup>35</sup> TEF refers to the biochemical process where the body burns calories to digest and metabolize food. To learn more about this, please refer to the following study: D'Alessio DA, Kavle EC, Mozzoli MA, Smalley KJ, Polansky M, Kendrick ZV, Owen LR, Bushman MC, Boden G, Owen OE. Thermic effect of food in lean and obese men. *J Clin Invest.* 1988;81(6):1781-9.

<sup>36</sup> <http://www.trtrevolution.com/proprietary-blends-make-money-supplement-industry/>

<sup>37</sup> To learn more about the best protein sources to consume on this diet, please refer Chapter 7.

<sup>38</sup> To learn more about the best carbs to consume on this diet, please refer Chapter 8.

In our advanced training video program “90 Days To Optimized Health & Longevity” we spend an entire day video recording how we prepare and weigh our food to ensure we have the exact portions and plan for success. To learn more about this program you can visit:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)

## 7-DAY SCHEDULE for Maximum Fat Loss

<b>MONDAY</b>	<b>TRAINING</b>
<b>TUESDAY</b>	<b>FASTED</b>
<b>WEDNESDAY</b>	<b>TRAINING</b>
<b>THURSDAY</b>	<b>FASTED</b>
<b>FRIDAY</b>	<b>TRAINING</b>
<b>SATURDAY</b>	<b>FASTED</b>
<b>SUNDAY</b>	<b>FASTED</b>

Let’s now examine The Metabolic Blow Torch Diet based on whether it’s a training or fasting day. Both days have different formulas for calculating both caloric and macronutrient intake. You will see that both days have varying caloric intakes and feeding windows to maximize the effect of either fasting (fat loss) or training (muscle preservation/growth).



4

MBTD -  
Training Day

**Training day<sup>39</sup> diets** are more flexible/relaxed due to the increased carbohydrate and caloric requirements necessary to replenish muscle glycogen from intense weight training. (Our Forged Weight Training system variants are laid out in the appendix and designed in conjunction with the MBTD based on either 3-day (max fat loss) or 4-day (max muscle preservation) approaches. Forged Training is our Advanced resistance (weight) training program we recommend once our initial 90 Day Beginner/Intermediate program is completed. You can learn more about these training programs at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com) and  
[www.AdvancedForgedTraining.com](http://www.AdvancedForgedTraining.com)

As the below tables illustrate, your age, specific goal, and insulin sensitivity/body type are the ultimate determinants for configuring your calories and macronutrients.

## Daily Caloric Intake: 13-15 Calories Per Pound (LB) of Bodyweight (BW)<sup>40</sup>

<b>Protein Requirements<sup>41</sup></b>			
<b>AGE GROUP</b> (years)	<b>MAINTENANCE</b> (gram/lb of BW)	<b>MUSCLE GAIN</b> (gram/lb of BW)	<b>FAT LOSS</b> (gram/lb of BW)
<b>15-19</b>	<b>1</b>	<b>1.5</b>	<b>1.25</b>
<b>20-49</b>	<b>0.85</b>	<b>1.25</b>	<b>1</b>
<b>50-65</b>	<b>.65</b>	<b>1</b>	<b>0.85</b>
<b>65+</b>	<b>0.55</b>	<b>0.75</b>	<b>0.65</b>

<sup>39</sup> See the "Appendix" in this book for sample schedules of training sessions in the early morning, mid morning, afternoon and evening.

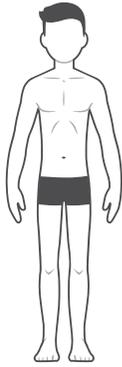
<sup>40</sup> Depending on dieting experience, body fat level and end goal. These caloric ranges have been used by Jay and Jim for more than 20 years both personally and with hundreds of clients.

<sup>41</sup> Please refer to this link for a detailed explanation on our recommended guidelines for daily protein requirements: <http://fabfitover40.com/2014/06/02/know-daily-protein-requirements/>.

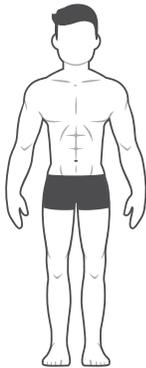
## Carbohydrate Requirements:

<b>SOMATOTYPE</b> (Body Type)	<b>TOTAL CARBOHYDRATE CONSUMPTION</b> (grams)
<b>Ectomorph</b> (Naturally skinny and lean)	<b>250</b>
<b>Mesomorph</b> (Naturally muscular and athletic)	<b>200</b>
<b>Endomorph</b> (Naturally chunky, 'heavy set')	<b>75 or less</b> (no more than 100)

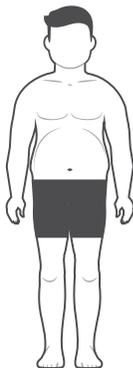
## Sample Body Types



**Ectomorph**



**Mesomorph**



**Endomorph**



### **NOTE #1**

**Carb count** does not normally count for leafy green and most fibrous vegetables.

### **NOTE #2**

**Very few people are ‘pure’ in their somatotypes** (body type), and are usually a combination of the two (i.e. nobody is a perfect somatotype). You might be part-ecto and part-meso, for example.

### **NOTE #3**

**Take your remaining leftover calories and divide by 9 to get your daily fat intake in grams.** It is assumed that you understand the energy expenditure in caloric measurement for proteins, carbohydrates and fats. If you don't, please educate yourself by reading “What Is A Calorie And Why Is It Important To Know How Many Calories There Are In Certain Foods?” on ABC News.<sup>42</sup>

### **NOTE #4**

**If you are an endomorph**, you are naturally fat. You will have to err on the side of caution and eat less. You will not be able to come home, eat a donut, and not expect to gain fat the next day. Like it or not, you will have to work harder than a mesomorph or an ectomorph.

### **NOTE #5**

**If you are an ectomorph**, you might also be thought of as ‘skinny fat’. Normally your metabolism is the fastest of all three body types but it also makes it extremely challenging to build and retain muscle. Ectomorphs due to metabolic reasons have the most margin for error when calculating carbs and calories. This is because their naturally fast metabolisms allow them to eat more food without resulting in fat deposition. But the inverse is also true. They need higher caloric intakes above the normal maintenance requirements of endo and mesomorphs in order to put on muscle.

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<sup>42</sup><http://abcnews.go.com/Health/WellnessResource/story?id=6762725>

# Sample “Training Day” Caloric Calculations, Based on Somatotype: (Higher Carbs and Higher Calories)

In the following calculations, we are providing examples of various men and women of different ages, body types and sizes (weight and body fat levels). This is done to give the reader better familiarity with the type of caloric conversions necessary to have optimal results on The Metabolic Blowtorch Diet.

## IMPORTANT

**Like all things in life,** if you want to make the MBTD work optimally, it’s imperative to you do the math and the required work necessary to configure your calorie/macronutrient intakes on both Training and Fast days.

### NOTE

**We have designed a caloric converter** that will do the majority of the caloric conversions for you. This calculator is available in our Facebook Group for The Metabolic Blowtorch Diet.<sup>43</sup>

<sup>43</sup> <https://www.Facebook.com/BlowTorchDiet/>



WEIGHT (LBS)	BODY FAT %	AGE GROUP	GOAL	SOMATOTYPE
212,00	13,00%	20-49	MUSCLE GAIN	ENDOMORPH
Training Day Calories		Fasting Day Calories		
15,00		9,00		

Result Training Day	Amount in Gram	Calories
PROTEIN	264,84	1059,35
CARBS	75,00	300,00
FAT	202,29	1820,65
<b>TOTAL CALORIES</b>	<b>3180,00</b>	

Result Fasting Day	Amount in Gram	Calories
PROTEIN	264,84	1059,35
CARBS	0,00	0,00
FAT	94,29	848,65
<b>TOTAL CALORIES</b>	<b>1908,00</b>	

# IMPORTANT

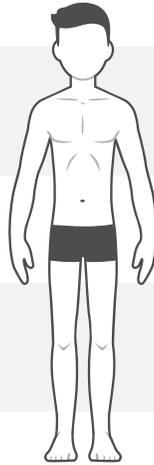
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It is **extremely critical** you understand how to design your own specific program for the MBTD. This is something we go extremely in depth on inside our “90 Days To Optimized Health & Longevity Program”. You can learn more at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)



**Training Day: 25-Year-Old Ectomorph Male**  
 who weighs 175 pounds at 9% body fat and  
 wants to gain muscle



**Total Caloric Intake**

175 LBS \* 15 CALORIES  
 PER LB =  
**2625 CALORIES**

**Total Fat Weight**

175 LBS TOTAL \*  
 9% BODY FAT =  
 16 LBS OF FAT

**Total Lean  
 Muscle Weight**

175 LBS TOTAL –  
 16 LBS OF FAT = 159 LBS  
 OF LEAN MUSCLE WEIGHT

**Grams of Protein**

159 LBS LEAN MUSCLE  
 WEIGHT \* 1.25 GRAM OF  
 PROTEIN PER LB =  
**199 GRAMS OF PROTEIN**

**Calories from Protein**

199 GRAMS OF PROTEIN \*  
 4 CALORIES PER GRAM  
 OF PROTEIN = **796 CALORIES  
 FROM PROTEIN**

**Calories from Carbohydrates**

**250 GRAMS OF CARBS** \* 4  
 CALORIES PER GRAM  
 OF CARBS = **1000 CALORIES  
 FROM CARBS**

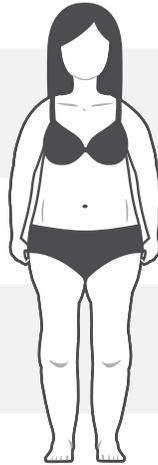
**Calories from Fats**

2625 CALORIES – 796  
 CALORIES – 1000 CALORIES =  
**829 CALORIES FROM FATS**

**Grams of Fat**

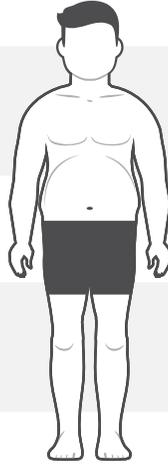
829 CALORIES / 9 CALORIES  
 PER GRAM OF FAT =  
**92 GRAMS OF FAT**

**Training Day: 50-Year-Old Endomorph Woman** who is 160 pounds at 30% body fat who wants to get into a healthy body fat range of 16-18%



<b>Total Caloric Intake</b>		$160 \text{ LBS} * 13 \text{ CALORIES PER LB} =$ <b>2080 CALORIES</b>
<b>Total Fat Weight</b>		$160 \text{ LBS TOTAL} * 30\% \text{ BODY FAT} =$ <b>48 POUNDS OF FAT</b>
<b>Total Lean Muscle Weight</b>		$160 \text{ LBS TOTAL} - 48 \text{ LBS OF FAT} =$ <b>112 LBS OF LEAN MUSCLE WEIGHT</b>
<b>Grams of Protein</b>		$112 \text{ LBS LEAN MUSCLE WEIGHT} * .85 \text{ GRAMS OF PROTEIN PER LB} =$ <b>95 GRAMS OF PROTEIN</b>
<b>Calories from Protein</b>		$95 \text{ GRAMS OF PROTEIN} * 4 \text{ CALORIES PER GRAM OF PROTEIN} =$ <b>380 CALORIES FROM PROTEIN</b>
<b>Calories from Carbohydrates</b>		$75 \text{ GRAMS OF CARBS} * 4 \text{ CALORIES PER GRAM OF CARBS} =$ <b>300 CALORIES FROM CARBS</b>
<b>Calories from Fats</b>		$2080 \text{ CALORIES} - 380 \text{ CALORIES} - 300 \text{ CALORIES} =$ <b>1400 CALORIES FROM FATS</b>
<b>Grams of Fat</b>		$1400 \text{ CALORIES} / 9 \text{ CALORIES PER GRAM OF FAT} =$ <b>156 GRAMS OF FAT</b>

**Training Day: 45-Year-Old Endomorph Male**  
 who weighs 210 pounds at 15% body fat and  
 wants to lose body fat



**Total Caloric Intake**

210 LBS \* 13 CALORIES  
 PER LB =  
**2730 CALORIES**

**Total Fat Weight**

210 LBS TOTAL \*  
 15% BODY FAT =  
 31.5 POUNDS OF FAT

**Total Lean  
 Muscle Weight**

210 LBS TOTAL –  
 31.5 LBS FAT = 178.5 LBS  
 OF LEAN MUSCLE WEIGHT

**Grams of Protein**

178.5 LBS LEAN MUSCLE  
 WEIGHT \* 1 GRAM OF  
 PROTEIN PER LB =  
**178.5 GRAMS OF PROTEIN**

**Calories from Protein**

178.5 GRAMS OF PROTEIN \*  
 4 CALORIES PER GRAM  
 OF PROTEIN = **714  
 CALORIES FROM PROTEIN**

**Calories from Carbohydrates**

**50 GRAMS OF CARBS \***  
 4 CALORIES PER GRAM  
 OF CARBS = **200 CALORIES  
 FROM CARBS**

**Calories from Fats**

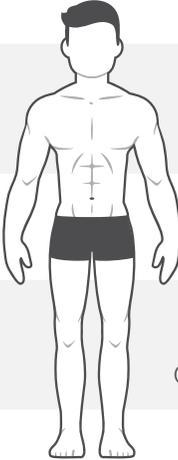
2730 CALORIES – 714  
 CALORIES – 200 CALORIES =  
**1816 CALORIES FROM FATS**

**Grams of Fat**

1816 CALORIES / 9 CALORIES  
 PER GRAM OF FAT =  
**202 GRAMS OF FAT**

## Training Day: 35-Year-Old **Mesomorph** Male who weighs 200 pounds at 10% body fat who wants to maintain current condition

*DISCLAIMER: Mesomorphs in maintenance mode (due to genetic factors that include great natural insulin sensitivity and a propensity to build muscle easily) can handle slightly higher calorie intakes such as 16 calories per pound in the below calculation*

<b>Total Caloric Intake</b>		200 LBS * 16 CALORIES PER LB = <b>3200 CALORIES</b>
<b>Total Fat Weight</b>		200 LBS TOTAL * 10% BODY FAT = 20 LBS OF FAT
<b>Total Lean Muscle Weight</b>		200 LBS TOTAL – 20 LBS FAT = 180 LBS OF LEAN MUSCLE WEIGHT
<b>Grams of Protein</b>		180 LBS LEAN MUSCLE WEIGHT * 0.85 GRAMS OF PROTEIN PER LB = <b>153 GRAMS OF PROTEIN</b>
<b>Calories from Protein</b>		153 GRAMS OF PROTEIN * 4 CALORIES PER GRAM OF PROTEIN = <b>612 CALORIES FROM PROTEIN</b>
<b>Calories from Carbohydrates</b>		<b>200 GRAMS OF CARBS *</b> 4 CALORIES PER GRAM OF CARBS = <b>800 CALORIES FROM CARBS</b>
<b>Calories from Fats</b>		3200 CALORIES – 612 CALORIES – 800 CALORIES = <b>1788 CALORIES FROM FATS</b>
<b>Grams of Fat</b>		1788 CALORIES / 9 CALORIES PER GRAM OF FAT = <b>199 GRAMS OF FAT</b>

## Training Day Sample Diet Schedule:

In our 90 Days to Optimized Program<sup>44</sup> we provide you with all the info you'll need to figure out your daily caloric intake based on your goals. You can learn more at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)

Also, if you are a “beginner” or “intermediate” to resistance (weight training), we highly suggest you check out “90 Days To Optimized Health & Longevity” where you are educated and shown the proper way to work out. If you are not careful, it is easy to injure yourself. You also want to make sure the time you are investing into your workouts, is as effective as possible. This will have a huge impact on your overall results. You can learn more at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)

If you are already an “Advanced” weight lifter, we highly recommend you adopt our “Advanced Forged Training” protocol to ensure maximum results! You can learn much more at:

[www.AdvancedForgedTraining.com](http://www.AdvancedForgedTraining.com)

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<sup>44</sup> [www.90days2optimized.com](http://www.90days2optimized.com)

5:00 AM

**Supplement(s) to Take:**

EMF<sup>45</sup>, and or Black Coffee half of your daily dose of Metformin<sup>46</sup> and Dessicated Thyroid<sup>47</sup>

**Activity:**

10 minutes of mindfulness meditation



**1st Meal of the Day:**

Oatmeal + protein source + 1 tablespoon of almond butter

6:00 AM

10:00 AM

**2nd Meal of the Day:**

Protein shake + essential fatty acids (olive oil, MCT oil, almond butter or coconut oil)



**3rd Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and Healthy Fat Source found in Chapters 7, 8 & 9)

2:00 PM

5:30 PM

**4th Meal of the Day (Pre-training Meal):**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and Healthy Fat Source found in Chapters 7, 8 & 9)



<sup>45</sup> [www.optimizedlifenutrition.com](http://www.optimizedlifenutrition.com) \*NOTE: caffeine will potentiate its effect!

<sup>46</sup> Metformin dosage is determined by your Physician - normal starting dose for women is 250 mg, and for males it is 500 mg. Dosage can be adjusted up based on toleration and effect.

<sup>47</sup> This supplement will be discussed further in the "Supplements" section later within this book.

6:00 -  
6:45 PM

## TRAINING SESSION



### 5th Meal of the Day:

Post-workout shake - 30-50 grams of True Nutrition Protein, 20-40 grams of carb powder (True Nutrition Sweet Potato Powder)

7:00 PM

8:00 PM

### Final Meal of the Day:

Clean carbs<sup>48</sup> + lean protein + fat source



### Supplement(s) to Take:

Half of your daily dose of Metformin<sup>49</sup> and Dessicated Thyroid<sup>50</sup>

BEDTIME

<sup>48</sup> Please read this article for more information: <http://fabfitover40.com/2014/04/18/carbs-you-should-eat-2/>

<sup>49</sup> This supplement will be discussed further in the "Supplements" section later within this book.

<sup>50</sup> This supplement will be discussed further in the "Supplements" section later within this book.

## Recommended Carb Amounts before, during and after weight training<sup>51</sup>

**Pre-workout: 20-30 grams of carbs**

**Peri-workout: 15-20 grams of carbs**

**Post-workout: 25-40 grams of carbs**

## IMPORTANT POINTS FOR THE MBTD TRAINING DAY:

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- 1) The majority of your carbohydrates should be consumed during the pre-workout, peri-workout (during the workout), and post-workout time periods.**

Pre-workout can be defined as the time period that starts up to 60 minutes prior to your workout, and post-workout can be defined as the first hour after your training session ends. From personal experience, your best post-workout option is a shake with liquid protein and high GI (glycemic index) carbs immediately after training for optimal glycogen replenishment.

- 2) Pre-workout, peri-workout and post-workout nutrition should consist of 20-40 gram feedings of high-glycemic carbohydrates and an equal amount of liquid protein.**

This will ensure maximum nitrogen retention and glycogen replenishment. For peri-workout (during) carbs, the best kind to use are short-chain, simple sugars or (ideally) cyclic dextrin<sup>52</sup> carbohydrates. These are your

<sup>51</sup> It doesn't matter when you lift weights, as long as you fit it into your schedule. Training time varies, depending on an individual's work-life balance. These carb amounts have been used by Jay and Jim for more than 20 years both personally and with hundreds of clients.

<sup>52</sup> <http://truenutrition.com/blog/highly-branched-cyclic-dextrin-hbcd/>

high glycemic index, rapidly digested carbohydrate powders.

If you're using MBTD for fat loss, carbohydrate consumption should always be monitored and based on insulin sensitivity. The more insulin-insensitive you are, the less carbohydrates you should consume.<sup>53</sup> The higher your body fat, the more you must minimize and strategically consume your carbs to reduce it.

### **3) Your post-workout meals should ideally be high in carbohydrates, moderate in protein and low in fat.**

From our personal experience, this is the best approach for maximizing muscle growth and retention, training recovery and limiting the amount of fat that gets stored under hypercaloric conditions (i.e. eating above maintenance).

As already indicated, the majority of carbohydrates in these meals should be fast digesting sources (simple sugars) due to their ability to replenish muscle glycogen rapidly.<sup>54</sup> Cyclic dextrin powders,<sup>55</sup> or our favorite True Nutrition's Sweet Potato Powder,<sup>56</sup> are perfect for accomplishing this.

Additionally, the post-workout meal should be the largest of the day. You can then split your remaining calorie intake as you see fit. Personally, we'll have one post-workout meal right after our training session (usually a shake with True Nutrition Protein Powder mixed with True Nutrition Sweet Potato Powder) and then another post-workout solid Food meal one hour later.

The exact amount of calories and macronutrients consumed in the post-workout window largely depends on the individual's primary focus (fat loss, maintenance or lean muscle gain) and body size.

### **4) You WILL see fluctuations in day-to-day scale weight due to the higher consumption of carbohydrates, relative to your fasting day.**

It's common toward the end of fasting periods for your body weight to drop. If your intention is to lose weight, you'd inevitably be overjoyed at the sight of the scales going down. However, you may be disappointed

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<sup>53</sup> For more information on determining what your insulin sensitivity is, please read this article: <http://www.ironmanmagazine.com/dont-be-so-sensitive/>

<sup>54</sup> But as noted before, some fructose might also be beneficial to allow for muscle growth processes to occur.

<sup>55</sup> <http://truenutrition.com/blog/highly-branched-cyclic-dextrin-hbcd/>

<sup>56</sup> <https://truenutrition.com/p-6431-sweet-potato-powder-1lb.aspx>

if you weigh yourself on a training day, only to see your weight deviate anywhere from 3-8 pounds. This is because during the fast you deplete your muscle glycogen stores. And on training days you replenish them through carbohydrates, resulting in increased water retention. This allows you to enjoy better workouts due to the increased cellular energy from full muscle glycogen stores. Therefore, fluctuations in weight are to be expected and perfectly normal.

Remember using the scale is a mistake when trying to accurately measure body composition on any diet but especially with The Metabolic Blow Torch Diet.

## **5) It is imperative that NO calories are consumed whatsoever during the fasting window.**

### **NOTE**

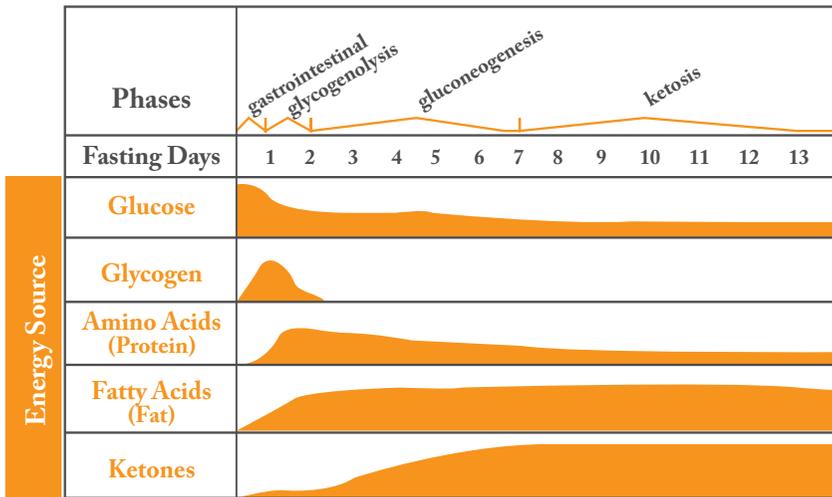
**Many Intermittent Fasting** protocols advocate the usage/consumption of MCT Oil, lard, butter, cream and even BCAA's (Branch Chain Amino Acids) during fasting windows. They claim that zero carbohydrate additives result in a negligible insulin response. We **EMPHATICALLY DISAGREE** with these protocols. Much of the research shows the consumption of a single calorie will stop a fast. The exceptions we have found to be acceptable are all in the 1-2 calorie range such as black coffee and or chewing gum. One could argue even these break the fast metabolically. For the reasons we use fasting in the MBTD, they are acceptable.



# 5

## MBTD – Fasting Day

## FOUR PHASES OF FASTING



(Image taken from “*Introduction To Fasting*” on the International Natural Hygiene Society website)<sup>57</sup>

As already stated previously, fasted days require fewer calories to take advantage of the biological processes created during periods of low circulating insulin and blood glucose. These conditions lead to enhanced fat burning due to your body relying on its adipocytes (fat cells) as its primary fuel/energy source.

Remember the primary goal is fat loss on your fast days.

<sup>57</sup> <http://www.i-nhs.com/inhs/articles/fasting1.html>

## Daily Caloric Intake:

7-9 calories per pound (lb) of bodyweight (BW)<sup>58</sup>

<b>Protein Requirements<sup>59</sup></b>			
<b>AGE GROUP</b> (years)	<b>MAINTENANCE</b> (gram/lb of BW)	<b>MUSCLE GAIN</b> (gram/lb of BW)	<b>FAT LOSS</b> (gram/lb of BW)
<b>15-19</b>	<b>1</b>	<b>1.5</b>	<b>1.25</b>
<b>20-49</b>	<b>0.85</b>	<b>1.25</b>	<b>1</b>
<b>50-65</b>	<b>.65</b>	<b>1</b>	<b>0.85</b>
<b>65+</b>	<b>0.55</b>	<b>0.75</b>	<b>0.65</b>

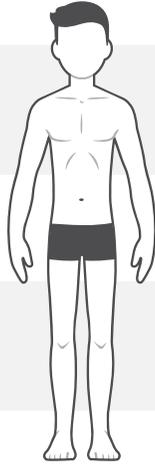
<b>Carbohydrate Requirements:</b>	
<b>SOMATOTYPE</b> (body type)	<b>TOTAL CARBOHYDRATE CONSUMPTION</b> (grams)
<b>Ectomorph</b> (Naturally skinny and lean)	<b>75</b>
<b>Mesomorph</b> (Naturally muscular and athletic)	<b>50</b>
<b>Endomorph</b> (Naturally chunky, 'heavy set')	<b>0</b> (no more than a trace except vegetables)

<sup>58</sup> Depending on dieting experience, body fat level and end goal. It is not recommended taking calories below 7 per pound. These caloric ranges have been used by Jay and Jim for more than 20 years both personally and with hundreds of clients successfully.

<sup>59</sup> Please refer to this link for a detailed explanation on our recommended guidelines for daily protein requirements: <http://fabfitover40.com/2014/06/02/know-daily-protein-requirements/>.

# Sample “Fasting Day” Caloric Calculations, based on Somatotype: (Lower carbs and calories)

25-Year-Old **Ectomorph** Male who weighs 175 pounds at 9% body fat and wants to gain muscle



<b>Total Caloric Intake</b>		$175 \text{ LBS} * 9 \text{ CALORIES PER LB} =$ <b>1575 CALORIES</b>
<b>Total Fat Weight</b>		$175 \text{ LBS TOTAL} * 9\% \text{ BODY FAT} =$ <b>16 LBS OF FAT</b>
<b>Total Lean Muscle Weight</b>		$175 \text{ LBS TOTAL} - 16 \text{ LBS OF FAT} =$ <b>159 LBS OF LEAN MUSCLE WEIGHT</b>
<b>Grams of Protein</b>		$159 \text{ LBS LEAN MUSCLE WEIGHT} * 1.25 \text{ GRAM OF PROTEIN PER LB} =$ <b>199 GRAMS OF PROTEIN</b>
<b>Calories from Protein</b>		$199 \text{ GRAMS OF PROTEIN} * 4 \text{ CALORIES PER GRAM OF PROTEIN} =$ <b>796 CALORIES FROM PROTEIN</b>
<b>Calories from Carbohydrates</b>		<b>75 GRAMS OF CARBS</b> * 4 CALORIES PER GRAM OF CARBS = <b>300 CALORIES FROM CARBS</b>
<b>Calories from Fats</b>		$1575 \text{ CALORIES} - 796 \text{ CALORIES} - 300 \text{ CALORIES} =$ <b>479 CALORIES FROM FATS</b>
<b>Grams of Fat</b>		$479 \text{ CALORIES} / 9 \text{ CALORIES PER GRAM OF FAT} =$ <b>53 GRAMS OF FAT</b>

50-Year-Old **Endomorph** Woman who weighs 160 pounds at 30% body fat who wants to get into a healthy body fat range of 16-18%



**Total Caloric Intake**

160 LBS \* 7 CALORIES  
PER LB =  
**1120 CALORIES**

**Total Fat Weight**

160 LBS TOTAL \*  
30% BODY FAT =  
48 POUNDS OF FAT

**Total Lean  
Muscle Weight**

160 LBS TOTAL –  
48 LBS OF FAT = 112 LBS  
OF LEAN MUSCLE WEIGHT

**Grams of Protein**

112 LBS LEAN MUSCLE  
WEIGHT \* .85 GRAMS OF  
PROTEIN PER LB =  
**95 GRAMS OF PROTEIN**

**Calories from Protein**

95 GRAMS OF PROTEIN \*  
4 CALORIES PER GRAM  
OF PROTEIN = **380 CALORIES  
FROM PROTEIN**

**Calories from Carbohydrates**

**0 GRAMS OF CARBS \***  
4 CALORIES PER GRAM  
OF CARBS = **0 CALORIES  
FROM CARBS**

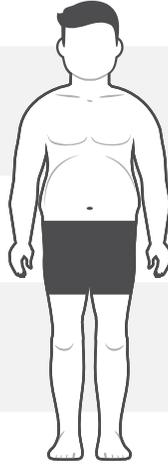
**Calories from Fats**

1120 CALORIES - 380  
CALORIES – 300 CALORIES =  
**740 CALORIES FROM FATS**

**Grams of Fat**

740 CALORIES / 9 CALORIES  
PER GRAM OF FAT =  
**82 GRAMS OF FAT**

45-Year-Old **Endomorph** Male who weighs  
210 pounds at 15% body fat and wants  
to lose body fat



**Total Caloric Intake**

210 LBS \* 7 CALORIES  
PER LB =  
**1470 CALORIES**

**Total Fat Weight**

210 LBS TOTAL \*  
15% BODY FAT =  
31.5 POUNDS OF FAT

**Total Lean  
Muscle Weight**

210 LBS TOTAL –  
31.5 LBS FAT = 178.5 LBS  
OF LEAN MUSCLE WEIGHT

**Grams of Protein**

178.5 LBS LEAN MUSCLE  
WEIGHT \* 1 GRAM OF  
PROTEIN PER LB =  
**178.5 GRAMS OF PROTEIN**

**Calories from Protein**

178.5 GRAMS OF PROTEIN \*  
4 CALORIES PER GRAM  
OF PROTEIN = **714  
CALORIES FROM PROTEIN**

**Calories from Carbohydrates**

**0 GRAMS OF CARBS \***  
4 CALORIES PER GRAM  
OF CARBS = **0 CALORIES  
FROM CARBS**

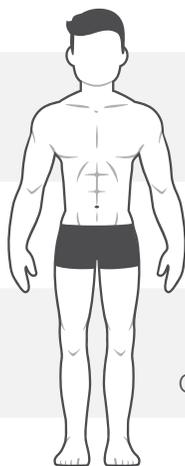
**Calories from Fats**

1470 CALORIES – 714  
CALORIES – 200 CALORIES =  
**756 CALORIES FROM FATS**

**Grams of Fat**

756 CALORIES / 9 CALORIES  
PER GRAM OF FAT =  
**84 GRAMS OF FAT**

35-Year-Old **Mesomorph** Male who weighs  
200 pounds at 10% body fat who wants  
to maintain current condition



**Total Caloric Intake**

200 LBS \* 8 CALORIES  
PER LB =  
**1600 CALORIES**

**Total Fat Weight**

200 LBS TOTAL \*  
10% BODY FAT =  
20 LBS OF FAT

**Total Lean  
Muscle Weight**

200 LBS TOTAL –  
20 LBS FAT = 180 LBS  
OF LEAN MUSCLE WEIGHT

**Grams of Protein**

180 LBS LEAN MUSCLE  
WEIGHT \* 0.85 GRAMS OF  
PROTEIN PER LB =  
**153 GRAMS OF PROTEIN**

**Calories from Protein**

153 GRAMS OF PROTEIN \*  
4 CALORIES PER GRAM  
OF PROTEIN = **612  
CALORIES FROM PROTEIN**

**Calories from Carbohydrates**

**50 GRAMS OF CARBS \* 4  
CALORIES PER GRAM OF  
CARBS = 200 CALORIES  
FROM CARBS**

**Calories from Fats**

3160 CALORIES – 612  
CALORIES – 800 CALORIES  
= **788 CALORIES  
FROM FATS**

**Grams of Fat**

788 CALORIES / 9 CALORIES  
PER GRAM OF FAT =  
**88 GRAMS OF FAT**

You should have a very good understanding of how to calculate and convert your Fasting day calorie and macronutrient intake now.

## Fasting Day Sample SCHEDULE (Male):

Here is a sample daily schedule for reference to put it all together.

5:00 AM

### Supplement(s) to Take:

EMF<sup>60</sup> and or black coffee, half your daily dosage of Metformin<sup>61</sup> and Dessicated Thyroid<sup>62</sup>

### Activity:

10 minutes of mindfulness meditation



## NOTE

**Both Metformin and Thyroid Medications** are only available with a Doctor's script in the USA. We discuss much more about both medications (including how to best use them in conjunction with the MBTD in a later chapter) We also mention OTC alternatives that you may substitute. Dosages are determined by blood work and or your physician's recommendation.



### Activity:

Up to 45 minutes of fasted cardio between 65 and 80% of max heart rate with a specific target of 125-140 bpm<sup>63</sup>

5:15 AM

10:00 AM

### Supplement(s) to Take:

EMF<sup>59</sup> or Black Coffee



### Supplement(s) to Take:

EMF<sup>59</sup>, or Black Coffee

1:30 PM

<sup>60</sup> <http://www.optimizedlifenuitrition.com/>

<sup>61</sup> This supplement will be discussed further in the "Supplements" section later within this book.

<sup>62</sup> This supplement will be discussed further in the "Supplements" section later within this book.

<sup>63</sup> Target Heart Rate can be calculated at <http://www.active.com/fitness/calculators/heartate>.

2:00 -  
4:00 PM

**1st Meal of the Day:**

Grass Fed Beef and Broccoli  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)



**2nd Meal of the Day:**

Grass Fed Beef and Broccoli  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

**2 Hours**  
(After First Meal)

Before  
8:00 PM

**Final Meal of the Day:**

(Preferably: Salad + Lean Protein, or Casein  
Protein + MCT or Nut Butter, Avocado Oil)



**Activity:**

Second cardio session (up to 45 minutes,  
preferred heart rate of 125-140 bpm)

**1 Hour**  
(Before Bedtime)

**BEDTIME**

**Supplement(s) to Take:**

Half of your daily dose of Metformin<sup>60</sup>  
and Dessicated Thyroid,<sup>61</sup> 1-2 grams of  
Ashwagandha<sup>64</sup>



**NOTE**

**Females would break their fast earlier** due to the shorter fasting window discussed previously. EMF<sup>59</sup> is a “Nootropic” that might help women stay focused, longer, while also improving mood and curbing appetite. It is sold exclusively at

[www.OptimizedLifeNutrition.com](http://www.OptimizedLifeNutrition.com)

<sup>64</sup> This supplement will be discussed further in the “Supplements” section later within this book.

## IMPORTANT POINTS FOR FASTING DAY:

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### 1) You **MUST** use fasted cardiovascular endurance training in the early mornings to attain peak effectiveness.

The higher your body fat, the more cardio you are going to need to lose fat in the fastest way possible. 2 sessions a day on fasting days (i.e. days without resistance training) are optimal. Morning and evening would be the best options.

One could also entertain the option of doing interval training, or high-intensity interval training (HIIT) cardio in order to increase the rate of fat loss and enhance the potential calories burned per unit of time. There is newer research about supramaximal interval training (SMIT) being the most effective<sup>65</sup> for not only fat loss but also enhancing lean muscle tissue growth. SMIT involves interval training at 100-130% of maximum capacity for roughly 30-60 seconds followed by 4-5 minutes of active recovery.

## IMPORTANT

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**Anyone choosing to perform HIIT/SMIT cardiovascular training** should have a good amount of existing muscle tissue as either form of cardio can break down muscle protein especially when eating below maintenance calories, leading to catabolism (i.e. losing your gains).

### 2) The longer the fast window, the more fat stores are utilized for energy leading to increased lipolysis (fat burning).

Men with a lot of body fat to lose should try to fast for 20+ hours (for women, 14-15+ hours).

Remember - when you feel hungry, this is an indication your body is running on its own body fat stores for fuel. **DO NOT EAT** until you absolutely must in order to burn as much fat as possible during your fast window. If you can extend your fast for 20 hours or longer, per fasting

<sup>65</sup> Krstrup P, Hellsten Y, Bangsbo J. Intense interval training enhances human skeletal muscle oxygen uptake in the initial phase of dynamic exercise at high but not at low intensities. *J Physiol.* 2004;559(Pt 1):335-45.

window (15+ hours for women), it will greatly speed up your rate of fat loss. Performing back-to-back fasting days of 20+ hours for men and 15+ for women (like on weekends, for example) dramatically increases the rate of fat loss due to the increase in catecholamines.

### **3) It is imperative that you DO NOT consume any calories, artificial sweeteners or diet cola's during your fast window.**

Mio (or other water-replacement flavor bottles), black coffees and sugar free gum are acceptable.<sup>66</sup> BCAA's, and anything else that contains calories is **NOT ACCEPTABLE**. Anything that will elicit an insulin response (no matter how small) technically will end a fast. Therefore, you should **NOT** be using select artificial sweeteners like Stevia®, or Splenda®, despite the fact that they are advertised as zero-calorie alternatives to regular sugar (and yes, no milk/cream in your coffee).

It is our opinion (from our practice-based experience) that **MOST** sugar free gum, black coffees, and sugar free water flavor enhancers **WILL NOT** stop the positive effects of fasting windows.

### **4) Due to the production of BDNF (Brain Derived Neurotrophic Factor) when fasting, your brain will be highly focused with a feeling of flow and increased cognition.**

There is much more information on BDNF in a special bonus chapter later in the book.

### **5) The frequency of your feedings after your fasting window ends are insignificant.**

You will want to live the GSD (get shit done) Mode Lifestyle.<sup>67</sup> Just stay focused on projects or work which will keep your mind off food. It's a good habit to schedule your most brain-intensive work between your 12-20th hours of fasting (12-15 hours for women), because that's when BDNF will be the highest. There is much more about BDNF in a bonus chapter later in the book. The longer recommended fasting windows significantly stimulate the production of BDNF.

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<sup>66</sup> Even though they aren't technically recommended due to containing trace amount of calories, along with their ability to slightly raise your insulin levels.

<sup>67</sup> <http://www.gsdmode.com/>

Most successful fasters will eat 2-4 times a day. It depends on the length of time of your feeding window. If it's more than 6 hours, we recommend 3-4 feedings. If it's only 3-5 hours, we recommend eating every 90 minutes. Obviously sticking to your daily caloric and macronutrient amounts will ensure you continue to lose fat or maintain relative to your specific goal.

## **6) Your feeding window on fasting days should stay the same as often as possible due to the hormonal effect of eating in consistent timed intervals.**

When one builds a regularly scheduled eating pattern, it's much easier to maintain diet adherence. Hormonal factors<sup>68</sup> will play a role in hunger occurring at about the same time daily. If you are normally breaking your fast at 5pm daily and starting your next fast at 9pm, it is recommended you maintain that eating pattern on your fasted days.

## **IMPORTANT**

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**Anyone choosing to perform HIIT/SMIT cardiovascular training** should have a good amount of existing muscle tissue as either form of cardio can break down muscle protein especially when eating below maintenance calories, leading to catabolism (i.e. losing your gains).

## **7) On your fasting days, your biggest meal should always be the first feeding of the day. On training days, the first meal post workout is your largest feeding.**

A good rule of thumb is to make your first meal of the day (post-fasting) large while trying to also get 20 to 30% of your daily target protein intake (in grams) in this feeding.

### **NOTE**

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**If your primary goal is maximum fat loss**, (and depending on your body type/insulin sensitivity) your carbohydrates should be kept to a minimum after 6PM. This is to keep insulin under control and to further optimize fat burning. A good rule of thumb is to eat only green veggies or salad after 6PM in combination with your protein source. One could also choose to eat zero carbs after 6PM and only consume fat and protein.

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<sup>68</sup> F.A. Scheer, C.J. Morris, and S.A. Shea, "The Internal Circadian Clock Increases Hunger and Appetite in the Evening Independent of Food Intake and Other Behaviors," *Obesity* 21, no. 3(2013): 421-3.

## 8) **Compromise is a necessity with The Metabolic Blowtorch Diet.**

If you would rather eat a larger meal later at night instead of in the afternoon upon breaking your fast, go for it. Remember we understand life gets in the way. Some folks will hold out to have a bigger meal with family around dinner time. On Saturdays and Sundays when Jay fasts, he usually doesn't eat until nearly 5:30PM both nights in order to eat relatively unrestrained with his family - often times at a restaurant or barbecue.

### **IMPORTANT**

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**Increasing fast windows** to 19-21+ hours (14-15+ hours for women) on back-to-back days are massively effective for dramatically reducing body fat.

In fact, we don't know of anything as effective as back to back 20 hour + fasting days for removing stubborn body fat stores. This is due to the increase in catecholamines produced from the extremely low insulin levels found at the end of longer fasting windows.

Catecholamines (such as adrenaline and epinephrine) are hormones that are secreted by your adrenal glands into the bloodstream as part of the stress response. When dieting with low calories and low carbs (decreasing insulin release) the body sees this as stressful and signals the release of catecholamines. These chemical compounds allow more fat to be burned from under the skin, leading to greater net fat oxidation (burning) and increased weight loss. Additionally, adrenaline is known to decrease appetite, which will help with adherence during the fast window.

## 9) **It is permissible to eat unlimited amounts of most vegetables or salads during the feeding window.**

Veggies are primarily made up of water, and their carbohydrate content is negligible in the human digestion system. Broccoli, green beans, spinach, asparagus, brussel sprouts are optimal choices. Don't be afraid to include a variety of red and yellow vegetables as well.

**10) It's always imperative to drink as much water throughout the day as you can without disrupting your life.**

Aim for 1 gallon per day or more depending on how much it disturbs your urination cycles and affects your work-life schedule.

If you are a “Beginner” or “Intermediate” to resistance (weight training), we highly suggest you check out “90 Days To Optimized Health & Longevity” where you are educated and shown the proper way to work out. If you are not careful, it is easy to injure yourself. You also want to make sure the time you are investing into your workouts, is as effective as possible. This will have a huge impact on your overall results. You can learn more at:

**[www.90Days2Optimized.com](http://www.90Days2Optimized.com)**

If you are an “Advanced” weight lifter, we highly recommend you adopt our “Advanced Forged Training Method” to ensure maximum results! You can learn more at:

**[www.AdvancedForgedTraining.com](http://www.AdvancedForgedTraining.com)**



# 6

## MBTD – Maintenance Dieting

**You might be wondering** if the MBTD can also be used as part of a maintenance diet setup. **The answer is YES!** The MBTD is hands-down the **EASIEST** approach to maintain low body fat while giving you the chance to eat liberally and enjoy your life. The MBTD allows you to spend less time craving food and more time focused on more important things.

Thanks to our discovery and success with the MBTD, we can maintain low body fat year-round with a fraction of the effort we used in the past for other maintenance diets.<sup>69</sup> Until you settle into a pattern of training and eating that doesn't require a lot of attention or energy, you cannot truly appreciate the functional effectiveness of this approach.

**Daily Caloric Intake:**  
**14-16 calories per pound (lb) of bodyweight (BW).**<sup>70</sup> Depending on body type (somatotype), ALWAYS go for the lower intake if you are endomorphic (naturally heavy) to avoid fat storage.

<b>Protein Requirements<sup>71</sup></b>			
<b>AGE GROUP</b> (years)	<b>MAINTENANCE</b> (gram/lb of BW)	<b>MUSCLE GAIN</b> (gram/lb of BW)	<b>FAT LOSS</b> (gram/lb of BW)
<b>15-19</b>	<b>1</b>	<b>1.5</b>	<b>1.25</b>
<b>20-49</b>	<b>0.85</b>	<b>1.25</b>	<b>1</b>
<b>50-65</b>	<b>.65</b>	<b>1</b>	<b>0.85</b>
<b>65+</b>	<b>0.55</b>	<b>0.75</b>	<b>0.65</b>

<sup>69</sup> If you want to make every single part of your fitness journey effortless, leading to greater adherence in maintenance mode, we highly recommend you check out [www.90Days2Optimized.com](http://www.90Days2Optimized.com).

<sup>70</sup> Depending on dieting experience, body fat Level and end goal. These caloric ranges have been used by Jay and Jim for more than 20 years both personally and with hundreds of clients.

<sup>71</sup> Please refer to this link for a detailed explanation on our recommended guidelines for daily protein requirements: <http://fabfitover40.com/2014/06/02/know-daily-protein-requirements/>.

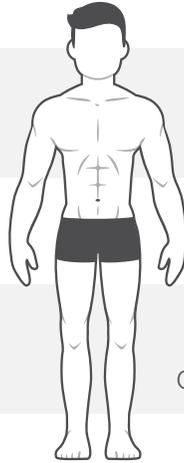
## Carbohydrate Requirements:

SOMATOTYPE (body type)	TOTAL CARBOHYDRATE CONSUMPTION (grams)
Ectomorph (naturally skinny and lean)	175
Mesomorph (naturally muscular and athletic)	150
Endomorph (naturally chunky, 'heavy set')	50 or Less



# Sample “Training Day” Caloric Calculations:

30-Year-Old **Mesomorph** Male who weighs 210 pounds at 10% body fat who wants to maintain his current condition



<b>Total Caloric Intake</b>		$210 \text{ LBS} * 15 \text{ CALORIES PER LB} =$ <b>3150 CALORIES</b>
<b>Total Fat Weight</b>		$210 \text{ LBS TOTAL} * 10\% \text{ BODY FAT} =$ 21.5 LBS OF FAT
<b>Total Lean Muscle Weight</b>		$210 \text{ LBS TOTAL} - 21.5 \text{ LBS FAT} = 188.5 \text{ LBS OF LEAN MUSCLE WEIGHT}$
<b>Grams of Protein</b>		$188.5 \text{ LBS LEAN MUSCLE WEIGHT} * 0.85 \text{ GRAMS OF PROTEIN PER LB} =$ <b>160 GRAMS OF PROTEIN</b>
<b>Calories from Protein</b>		$160 \text{ GRAMS OF PROTEIN} * 4 \text{ CALORIES PER GRAM OF PROTEIN} =$ <b>641 CALORIES FROM PROTEIN</b>
<b>Calories from Carbohydrates</b>		$150 \text{ GRAMS OF CARBS} * 4 \text{ CALORIES PER GRAM OF CARBS} =$ <b>600 CALORIES FROM CARBS</b>
<b>Calories from Fats</b>		$3150 \text{ CALORIES} - 641 \text{ CALORIES} - 600 \text{ CALORIES} =$ <b>1909 CALORIES FROM FATS</b>
<b>Grams of Fat</b>		$1909 \text{ CALORIES} / 9 \text{ CALORIES PER GRAM OF FAT} =$ <b>212 GRAMS OF FAT</b>

## Daily Training Schedule: (Evening Training Session)

5:00 AM	<b>Supplement(s) to Take:</b> EMF, <sup>72</sup> and or Black Coffee, half of your daily dose of Metformin <sup>73</sup> and Dessicated Thyroid <sup>74</sup> <b>Activity:</b> 10 minutes of mindfulness meditation	
	<b>First Meal of the Day:</b> 1st meal of the day: Oatmeal + protein source + 1 tablespoon of almond butter	6:00 AM
10:00 AM	<b>2nd Meal of the Day:</b> Protein shake + essential fatty acids (olive oil, MCT oil, almond butter or coconut oil)	
	<b>3rd Meal of the Day:</b> Grass-fed beef + brown rice (Or Choose a Lean Protein, Clean Carb, and Healthy Fat Source found in Chapters 7, 8 & 9)	2:00 PM
5:30 PM	<b>4th Meal of the Day (Pre-training Meal):</b> Grass-fed beef + brown rice (Or Choose a Lean Protein, Clean Carb, and Healthy Fat Source found in Chapters 7, 8 & 9)	

<sup>72</sup> [www.optimizedlifefitnutrition.com](http://www.optimizedlifefitnutrition.com)

<sup>73</sup> This supplement will be discussed further in the “Supplements” section later within this book.

<sup>74</sup> This supplement will be discussed further in the “Supplements” section later within this book.

6:00 -  
6:45 PM

## TRAINING SESSION



### Post-workout Shake:

30-50 grams of Whey + Casein Protein and depending on body type/insulin sensitivity, an equal or lower amount of cyclic dextrin/high glycemic carb powder.<sup>75</sup> A perfect choice would be True Nutrition Protein mixed with Sweet Potato Powder)

7:00 PM

8:00 PM

### Final Meal of the Day:

Final meal of the day: Clean, low glycemic carbs + lean protein



### Supplement(s) to Take:

Half of your daily dose of Metformin<sup>76</sup> and Dessicated Thyroid<sup>77</sup>

BEDTIME

<sup>75</sup> Please refer to the carbohydrate consumption table on page 62 for more information. Given that the amount of carbs you get per day depends on your body type, you need to flank carbohydrate ingestion around your training.

<sup>76</sup> This supplement will be discussed further in the "Supplements" section later within this book.

<sup>77</sup> This supplement will be discussed further in the "Supplements" section later within this book.

## Eating Carbs during weight training<sup>78</sup>

Pre-workout: 20-30 grams of carbs

Peri-workout: 15-20 grams of carbs

Post-workout: 25-35 grams of carbs

## Sample Maintenance “Fasting Day” Caloric Calculations:

### **NOTE**

**Depending on your body type**, you should probably reduce your total caloric intake by 10-15% (reduce your carbs) because you won't have the same feeding window that you do on your training days (an entire day on training days, vs. a few hours on fasting days). Mesomorphs can reduce their caloric intake by 5-10%, while endomorphs should do a 15% reduction.

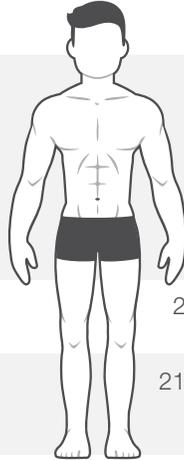
Your caloric consumption is largely dictated by your body type. Endomorphs (usually people who are overweight) should eat at the lower end of the caloric range (13 calories per pound of body weight) while being conscientious of your carb intake after 7pm at night. **DO NOT** over-eat on your fasting days!

If you are an ectomorph or a mesomorph, it won't matter as much because you are not as prone to storing excess calories as fat.

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<sup>78</sup> It doesn't matter when you lift weights, as long as you fit it into your schedule.

30-Year-Old **Mesomorph** Male who weighs 210 pounds at 10% body fat who wants to maintain his current condition (using previous calculations from training day for maintenance dieting):



**Total Caloric Intake**

210 LBS \* 15 CALORIES  
PER LB = 3150 CALORIES  
3150 CALORIES \*  
10% = 315 CALORIES  
3150 CALORIES -  
315 CALORIES =  
**2835 CALORIES TOTAL**

**Total Fat Weight**

210 LBS TOTAL \* 10% BODY  
FAT = 21.5 LBS OF FAT

**Total Lean  
Muscle Weight**

210 LBS TOTAL - 21.5 LBS FAT  
= 178.5 LBS OF LEAN  
MUSCLE WEIGHT

**Grams of Protein**

178.5 LBS LEAN MUSCLE WEIGHT  
\* 0.85 GRAMS OF PROTEIN PER  
LB = **160 GRAMS OF PROTEIN**

**Calories from Protein**

160 GRAMS OF PROTEIN \*  
4 CALORIES PER GRAM  
OF PROTEIN = **641 CALORIES  
FROM PROTEIN**

**Calories from Carbohydrates**

150 GRAMS OF CARBS \* 4  
CALORIES PER GRAM OF CARBS  
= 600 CALORIES FROM CARBS  
600 CALORIES OF CARBS - 315  
CALORIES = 285 CALORIES OF  
CARBS  
**285 CALORIES OF CARBS / 4  
CALORIES PER GRAM OF CARBS  
= 71 GRAMS OF CARBS**

**Calories from Fats**

2835 CALORIES - 641 CALORIES  
- 285 CALORIES =  
**1909 CALORIES**

**Grams of Fat**

1909 CALORIES / 9 CALORIES  
PER GRAM OF FAT =  
**212 GRAMS OF FAT**

## Daily Training Schedule: (Evening Training Session)

5:00 AM	<b>Supplement(s) to Take:</b> EMF, <sup>79</sup> and or Black Coffee, half of your daily dose of Metformin <sup>80</sup> and Dessicated Thyroid <sup>81</sup> <b>Activity:</b> 10 minutes of mindfulness meditation	
	<b>Activity:</b> Up to 45 minutes of fasted cardio with an ideal heart rate of 125-140 bpm	5:15 AM
10:00 AM	<b>Supplement(s) to Take:</b> EMF <sup>76</sup> or Black Coffee	
	<b>1st Meal of the Day:</b> Grass-fed beef + broccoli (Or Choose a Lean Protein, Clean Carb, and Healthy Fat Source found in Chapters 7, 8 & 9)	12:30 PM

<sup>79</sup> <https://www.youtube.com/watch?v=IhX4edxPdKs>

<sup>80</sup> This supplement will be discussed further in the “Supplements” section later within this book.

<sup>81</sup> Dessicated Thyroid Medication dosage is determined by your blood work and Prescribing Physician. Over the counter Dessicated Thyroid Supplements should also be determined by proper blood work an or recommendation from the manufacturer.

2:00 -  
4:00 PM

**2nd Meal of the Day:**

Grass-fed beef + broccoli  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)



**3rd Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

**2 Hours**  
(After First Meal)

BEFORE  
8:00 PM

**Final Meal of the Day:**

(Preferably: Clean Carb+ Lean Protein, or  
Casein Protein + MCT, Keto Powder or Nut  
Butters blended into a shake)



**Supplement(s) to Take:**

Half of your daily dose of Metformin<sup>82</sup> and  
Dessicated Thyroid<sup>83</sup>

**BEDTIME**

<sup>82</sup> This supplement will be discussed further in the “Supplements” section later within this book.

<sup>83</sup> Dessicated Thyroid Medication dosage is determined by your blood work and Prescribing Physician. Over the counter Dessicated Thyroid Supplements should also be determined by proper blood work and or recommendation from the manufacturer.

## IMPORTANT POINTS MAINTENANCE DIETING:

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### **1) Maintenance dieting is harder for most people than dieting to lose fat or eating to gain muscle.**

The extreme boredom with robotic 6x a day feeding patterns of most diet plans leads you to ‘screw this’ moments where you give yourself a pass and over-eat. There is also a noticeable psychological component to eating ‘restrained’ due to a lack of a defined goal. When one is dieting to lose body fat, the focus on achieving the end goal helps in overriding the body’s desire to over consume.

### **2) The beauty of the MBTD for maintenance is your fast window doesn’t need to be any longer than 12-14 hours. You are not trying to lose body fat or gain muscle. You are strictly maintaining which allows you more variation and flexibility.**

### **3) Maintenance dieting should be EFFORTLESS.**

With Maintenance dieting on a MBTD, the 12-14 hour fast fits perfectly into most work schedules. It is easy to adapt to, it doesn’t ask for anything extreme, and it allows you to spend more time getting things done without distractions. If you have your last meal at 9PM, you can eat your first meal the next day at 12PM. This coincides perfectly with most normal lunch time schedules.

### **4) Doing cardio once a day on non-training days (fasting days) should be enough for your cardiovascular efforts. Doing it fasted first thing in the morning is always preferable.**

### **5) Your carbs should be very clean sources.**

Please refer to the section outlining clean sources of carbs later in the book.

**6) You should still focus on consuming the majority of your carbs immediately before, during and right after your training session regardless of your body type or insulin sensitivity for maximum glycogen replenishment and carbohydrate utilization.**

**7) An occasional cheat meal here and there during your feeding window is not going to kill you.**

It's probably best to 'cheat' on a training day to take effect of your body's enhanced need to replenish glycogen from the intense resistance training provided by "Forged Training" principles.<sup>84</sup> Leg days are perfect for this. Cheat meals should always attempt to minimize high fat and high carb intakes together. A giant bowl of cereal with almond milk is much better than three jelly donuts.

## **How to Adjust Calories in the MBTD when Fat Loss Stalls**

One of the chief strategic advantages of the MBTD is that rarely will fat loss stall due to the varying of calories on training and fasting days. This constant up and down of calories and carbs normally ensures basal metabolic rate (BMR) stays elevated. In the rare instances where fat loss stalls the fastest way to increase BMR is by eating calories and carbohydrates above maintenance (above 15 calories per pound) for a day or two. This means you would eat a lot more than your normal caloric intake on your training days.

Eating 15% above your maintenance daily intake in calories on training days (focusing on increasing the consumption of clean carbs) will usually up-regulate your thyroid hormone, increasing thermogenesis and accelerating the burning of carbohydrates for cellular energy. Fat loss should accelerate again once the body recognizes it needs to expand BMR to burn the excess calories it's not used to having come in.

So for a 200-pound mesomorph who's eating 9 calories per pound for total caloric intake on fasting days (1800 calories per day), he would go up to  $200 * 16/17 = 3200/3400$  calories on training days when fat loss stalls. Proteins and fats are kept the same while upping the carbs preferentially because it increases cellular energy metabolism.

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<sup>84</sup> [www.advancedforgedtraining.com](http://www.advancedforgedtraining.com)

You should be observing how your clothes fit while measuring your waist periodically to see any visible progress and changes. The mirror, and how things fit on you, are the two most important indicators of fat loss in day to day living on The Metabolic Blowtorch Diet.

## IMPORTANT

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**When you are eating a higher amount of carbohydrates on training days**, there will be fluctuations in your scale weight (going up). It is not uncommon for the scale to show 3-8 pound deviations due to glycogen replenishment and increased water in the muscles. Don't focus on short term scale deviations as they are necessary and normal in the process of maximum fat loss and muscle preservation on the MBTD. The scale is of relatively little importance when trying to lose body fat. Each of us can have wide ranging fluctuations in weight due to water consumption/balance, urination frequency, bowel movements and the amount of clothing we're wearing. The focus should always be on how clothes are fitting in the waist area. Increasing belt loop notches and decreasing dress sizes are what you're aiming for.

To gain a better and deeper understanding of how to vary your caloric requirements when attempting to lose body fat fast, please read John Meadows' excellent ebook "*Adjusting Meal Plans Made Easy*".<sup>85</sup>

## When to Transition from Fat Loss to Maintenance

When you've reached your fat loss goal (usually reducing belt notches for men, and dropping dress sizes for women), it's safe to transition to maintenance caloric eating. However, if your goals are more serious, such as a fitness or bodybuilding competition, then you would continue on until you reach a stage-worthy body with ultra-low body fat levels (single digits for men (5-7%) and 10-12% for women).

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<sup>85</sup> <http://www.mountaindogdiet.com/products/eb1-adjusting-meal-plans-made-easy/>

When you can start maintenance dieting, you'll know you have achieved what you wanted from a nutritional and fat loss standpoint. Living a lifestyle of maintenance dieting is a sign of accomplishment towards building a healthier, stronger and leaner physique.

Stay on a maintenance calorie intake until you want to achieve a new goal of further fat loss or muscle gain.

**Please see the charts and calculations in  
“MBTD – MAINTENANCE DIETING”  
for the amount of calories you should be eating.**



# 7

## The Best Proteins to Consume

## The Best Proteins to Consume

Protein is the most important macronutrient for performance and physique improvement. On top of needing protein to build and maintain muscle, you need protein to stay alive. Therefore, you need to get quality protein regularly throughout the day every 4-5 hours (when not fasting) and preferably at 20-50 grams per feeding.

PROTEIN SOURCE	BIO-AVAILABILITY INDEX
Whey Protein Isolate Blends	100-159
Whey Concentrate	104
Whole Egg	100
Cow's Milk	91
Egg White	88
Fish	83
Beef	80
Chicken	79
Casein	77
Rice	74
Soy	59
Wheat	54
Beans	49
Peanuts	43

*(Data taken from "Protein Availability & Bioabsorption" on Dioxyme.com)<sup>86</sup>*

### NOTE

**All proteins are not made equal.** Our bodies absorb some proteins better than others. For each protein source listed in the table, their bio-availability refers to the amount the body typically absorbs. By looking at this table, you can see that whey and eggs are some of the best protein sources you can consume from an absorption standpoint.

<sup>86</sup> <https://dioxyme.com/protein-absorption/>

**There are four basic types of protein that you need to focus on if you want to meet your target protein intake every day:**

## **1) Animal Protein**

You should consume organic and wild caught lean cuts of red meat, fish, turkey and chicken. These cuts will have less toxins from pesticides and antibiotics accumulated in the fat of the animal. Cows and fish should not be raised eating corn as it lessens the omega 3 fatty acids found in a wild caught or grass fed animal. For the same reason, you should consume only organic and free range eggs.

For those who are consuming vegan protein, stay as far away from soy-based products as possible! Concentrated soy products have high levels of estrogen that will lead to undesired effects in the body such as lowered libido, sperm count and breast enlargement.

Fortunately, you do not need to rely on this inferior choice as there are many healthy plant-based options for getting your protein. Don't be fooled by meat-substitute products either, because they might contain soy. Read the labels carefully! The only exception to this rule is **FERMENTED** soy protein, and even then it has to be organic and properly fermented.

As an example of a reliable vegan protein source, concentrated pea protein powder has a great amino acid profile. TrueNutrition.com offers many great vegan alternatives in several delicious flavors.

Long story short: Eliminate all soy additives, soy proteins, and soy bi-products from your diet **AND NEVER LOOK BACK!**

## **2) Whey Protein**

This is the cheapest, most efficient way to add supplemental protein into your diet. It is also the most common ingredient in protein powder formulations seen in supplement stores and magazine advertisements. It can be used in multiple ways: mixed with oatmeal, in shakes by itself, combined with other foods when cooking, and so on. Due to its rapid absorption by the body, use it immediately pre, peri (during) after training as part of your post-training shake. The rapid influx of amino acids into your bloodstream from Whey protein has been shown to increase protein

synthesis.<sup>87</sup> The best form to use is Whey Protein Isolate Cold-Filtration as it is the most highly filtered whey and it is done so at a cold temperature that leaves you with a virtually fat and lactose free, undenatured protein source.

### **3) Casein Protein**

Technically known as ‘micellar casein,’ it is a natural and undenatured milk protein that is separated from milk through ultrafiltration. Unlike whey protein, it provides a much slower and steady release of amino acids into the bloodstream upon consumption. It is used by people who want to prevent muscle tissue breakdown during situations where a large caloric deficit is needed (ex. Fitness competitions). It is best consumed at night so that your body can use the slow-digesting amino acids while in an overnight fasted state. This makes it an excellent protein source when used in conjunction with The Metabolic Blowtorch Diet.

### **4) Egg Albumin**

This is the protein you can find in egg whites. Minimal in fat and rich in protein, it is one of the easiest protein sources to use for busy people who are always on the go. You can buy egg white formulations, or eat whole eggs. Combined with meats and veggies, it is a very satiating option you will find yourself going back to.

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<sup>87</sup> Tipton KD, Elliott TA, Cree MG, Wolf SE, Sanford AP, Wolfe RR. Ingestion of casein and whey proteins result in muscle anabolism after resistance exercise. *Med Sci Sports Exerc.* 2004;36(12):2073-81.



# 8

## The Best Fats to Consume

**When using the MBTD**, one will notice on fasting days a good percentage of calories come from fat intake. It becomes imperative to focus on eating the right fats. The best kinds of fats to consume provide essential fatty acids (EFAs).

Humans need EFAs to control important cellular processes and maintain optimal health. Without them, your skin would dry out, your brain would cease to function and your nervous system would shut down completely. Ironically, 90% of people in the world are deficient in EFAs from eating an average 'everyday' diet.

Supplementing with EFAs will result in significant improvements in muscular and neural coordination, along with improvements in memory, metabolism and skin elasticity. Get EFAs into your daily diet and maximize their use to improve your health and fitness.

We recommend getting your fats and EFAs in these specific ways:

- Udo's Oil:<sup>88</sup> Add it to protein shakes and salads, 2-4 tablespoons a day
- Deep Marine Fish Oil<sup>89</sup> (High in Omega 3): 4-6 grams Omega 3 minimum per day
- Coconut Oil:<sup>90</sup> You can cook your meal with 2-3 tablespoons
- Avocado Oil:<sup>91</sup> 2-4 tablespoons per day
- Olive Oil:<sup>92</sup> 2-4 tablespoons to be used on salads or with cooking
- Red Palm Oil:<sup>93</sup> 2-4 tablespoons per day
- Nut Butters (Almond, Peanut, Cashew)
- Nuts - Almonds, Sunflower Seeds, Macadamia Nuts
- Medium Chain Triglycerides (MCTs):<sup>94</sup> Supplemental capsule form, liquid form added to protein shakes

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<sup>88</sup> <https://www.amazon.com/exec/obidos/ASIN/B0010ED3DQ/fabfitove40-20>

<sup>89</sup> <http://www.amazon.com/exec/obidos/ASIN/B00CAZAU62/fabfitove40-20>

<sup>90</sup> <http://www.amazon.com/exec/obidos/ASIN/B00CXA0AKA/fabfitove40-20>

<sup>91</sup> <http://www.amazon.com/exec/obidos/ASIN/B007XA4908/fabfitove40-20>

<sup>92</sup> <http://www.amazon.com/exec/obidos/ASIN/B011R6KI3M/fabfitove40-20>

<sup>93</sup> <http://www.amazon.com/exec/obidos/ASIN/B00IMQC78C/fabfitove40-20>

<sup>94</sup> <http://www.amazon.com/exec/obidos/ASIN/B0019LRY8A/fabfitove40-20>



# 9

## The Best Carbohydrates to Consume

# Many people have irrational fears

of carbohydrates because they have been misled into thinking that they are 'evil' and will cause insulin resistance. Carbohydrates are very misunderstood from a nutritional perspective. A great article to provide a deeper perspective on carbs/insulin is "*The Insider View Of Insulin (You Should F\*cking Read This)*" on TRTRevolution.com.<sup>95</sup>

As long as you consume the proper carbs relative to your body type/insulin sensitivity at SPECIFIC TIMES during the course of your day, you will remain lean and energetic.

Here are the 'right' (i.e. clean) carbs you can eat, along with some guiding principles of when to eat them depending on your goals.

## 1) Complex Carbs

Eat these earlier in the day to provide a slow and steady release of insulin throughout the day. If you want to 'eyeball' it, add a fist full of these complex carbs alongside a high-quality lean protein for your dinner.

Additionally, we recommend you consume high glycemic carbs (ex. cyclic dextrin) within 30 minutes after finishing your workout. You can also consume them prior to and during your workout for fast absorption and replenishment of muscle glycogen stores. This is especially important if you are trying to gain lean muscle.

- Brown Rice
- Oatmeal
- Sweet Potatoes / Yams
- Oatbran
- Couscous
- Matza
- Ezekiel Bread
- Quinoa

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<sup>95</sup> <http://www.trtrevolution.com/insider-view-insulin-fcking-read/>

## 2) Vegetables / Legumes

Anything that is green can be eaten in huge amounts, but avoid adding high-calorie dressing or additives to them. If you are hardcore dieting to drop a lot of body fat, lean protein + tons of green veggies are a tried-and-true combination.

- Any Vegetables that are Green and Leafy
- Asparagus
- Broccoli
- Green Beans
- Spinach
- Cauliflower
- Mushrooms
- Artichokes
- Lima Beans
- Okra
- Edamame

## 3) Fruits

The best time to consume fruits is as a pre-workout snack for some quick release simple sugar, and with protein right after your workout. With that said, it's best to minimize fruit consumption altogether<sup>96</sup> if you want to get super lean.

This is because fructose digestion is rate limited by a specific enzymatic process. If you eat too much fruit over this rate limitation (usually 50 grams of fructose in a day, i.e two apples) the body's liver glycogen overfills during digestion leading to fat gain. This is not optimal for maximum leanness.

The more fiber that a fruit has, the more readily it will be digested and the less likely that the body will metabolically struggle with it.

- Apples
- Blueberries

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<sup>96</sup> <http://fabfitover40.com/2014/01/22/truth-fructose/>

- Cherries
- Pineapple
- Fresh Melon / Cantaloupe
- Papaya
- Grapefruit
- Pears





10

Supplements

**Consider these supplements** as powerful weapons in your arsenal. When used intelligently in conjunction with The Metabolic Blow Torch Diet, they will help you achieve incredible results. To learn more about how to best optimize hormones in conjunction with the MBTD, please read The Definitive TRT MANual.<sup>97</sup>

Most of the supplements we recommend are used in conjunction with losing body fat preferentially.

However, our amazing nootropic “EMF” from Optimized Life Nutrition<sup>98</sup> (more on that later) can be used on any form of the MBTD, including maintenance.

## 1) Metformin

We’ve already written prolifically about the benefits of Metformin,<sup>99</sup> a potent medication that suppresses insulin and regulates blood sugar levels. Please see the following articles we’ve written for more information:

- *Longer Life in a Bottle*<sup>100</sup>
- *Metformin and Life Extension: What You Should Know*<sup>101</sup>
- *Is Metformin a Miracle Drug for All Population Groups*<sup>102</sup>
- *What You Really Need to Know About Metformin*<sup>103</sup>

You must have a prescription from your physician to legally use Metformin (USA). It is available online<sup>104</sup> from various foreign pharmacies. We discuss the science of Metformin as it relates to life extension<sup>105</sup> and inflammation reduction in much greater detail in the upcoming Advanced Strategies (AS) Version of The TRT MANual.<sup>106</sup>

Additionally, Metformin can be substituted by Berberine,<sup>107</sup> a natural alternative you can buy over the counter (OTC) and has similar dosing and timing schedules to Metformin.

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<sup>97</sup> <https://www.amazon.com/exec/obidos/ASIN/1942761724/fabfitove40-20>

<sup>98</sup> [www.optimizedlifenuitrition.com](http://www.optimizedlifenuitrition.com)

<sup>99</sup> Please view the daily “sample diet” schedules (on pages 119-126) to understand when best to dose Metformin.

<sup>100</sup> <http://www.ironmanmagazine.com/longer-life-in-a-bottle/>

<sup>101</sup> <http://fabfitover40.com/2015/05/25/metformin-and-life-extension-what-you-should-know/>

<sup>102</sup> <http://www.trtrevolution.com/metformin-miracle-drug-population-groups/>

<sup>103</sup> <http://www.trtrevolution.com/really-need-know-metformin/>

<sup>104</sup> <https://www.inhousepharmacy.vu/search.aspx?searchterm=Metformin>

<sup>105</sup> Campbell JM, Bellman SM, Stephenson MD, Lisy K. Metformin reduces all-cause mortality and diseases of ageing independent of its effect on diabetes control: a systematic review and meta-analysis. *Ageing Res Rev.* 2017. pii: S1568-1637(17)30147-2.

<sup>106</sup> [www.advancedTRTMANual.com](http://www.advancedTRTMANual.com)

<sup>107</sup> <http://www.amazon.com/exec/obidos/ASIN/B01AGGTXM8/fabfitove40-20>

# How to Best Use Metformin in Combination with The Metabolic Blowtorch Diet

With a script from a physician, Metformin is usually started with a minimum dosage 250 mgs for women (or smaller men) and 500 mgs for Men to assess tolerance. Once tolerance is understood dosing can be adjusted up to 500 mgs BID (AM and PM dosage) for women and 1 gram (AM & PM dosage) for men. Some people do better with the extended release version.

## **NOTE**

**The people who complain of nausea**, intestinal discomfort or stomach upset from using Metformin are usually dealing with a compromised gut biome that is programmed to run on sugar. Metformin is incredibly effective at neutralizing unhealthy gut bacteria over time. This process can be aided by adding probiotics to your diet.

## 2) Desiccated Thyroid Medications (Nature Thyroid, WP Thyroid and Amour Thyroid)<sup>108</sup>

Nature Thyroid, Amour Thyroid and WP Thyroid (there are others) are natural, desiccated thyroid hormone replacement medications containing T<sub>4</sub>, T<sub>3</sub>, T<sub>2</sub> and T<sub>1</sub>. Using any of these medications can provide a minor metabolic uptick to human metabolism without the risk of harsh thyroid medications like Synthroid or Cytomel.

Your physician must prescribe this for you, and your ability to qualify is based on your TSH (Thyroid Stimulating Hormone) levels and whether there is an observed clinical need. There are also over the counter (OTC) desiccated thyroid supplements available to purchase. If you choose to purchase, we recommend following the dosing instructions provided by the manufacturer while also monitoring blood work. With either of these types of desiccated thyroid agents, we are looking to move your thyroid from the low range to the high range of the accepted lab value.

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<sup>108</sup> Please view the daily "sample diet" schedules (on pages 119-126) to understand when best to dose Nature Thyroid.

## How to Best Use Desiccated Thyroid Medication in Combination with The Metabolic Blowtorch Diet

As you can see from the diet schedules, desiccated thyroid combinations are best used on an empty stomach first thing in the morning and also before bed in the evening. This dosage is best chosen by your physician when there is an observed clinical need.

For those of you unable to get a Thyroid medication prescription from your physician, there are OTC formulations<sup>109</sup> with desiccated glandular thyroid that are a near similar substitute. We highly recommend following the dosage strategy recommended by the manufacturer.

### 3) Yohimbine

This herb may be particularly useful for those trying to get rid of stubborn body fat specifically the fat covering the lower abs and back in lean men, and thighs and hips in lean women. Practice-based knowledge reveals that Yohimbine is slightly more effective for women in stubborn body fat than men.

In short, Yohimbine inhibits alpha-2-receptors (lower abs and back have a high density of alpha-2-receptors for men and women), which aids in improving blood flow and fat mobilization from stubborn fat areas.

## How to Best Use Yohimbine HCL in Combination with The Metabolic Blowtorch Diet

To understand how to properly time and dose Yohimbine HCL, please see Lyle McDonald's *The Stubborn Body Fat Solution*.<sup>110</sup>

### 4) Albuterol

Albuterol is used for the treatment and management of asthma, bronchospasm, and to a lesser extent, COPD (chronic obstructive pulmonary disease). Most of you have seen or have experience with an Albuterol inhaler. Albuterol in fitness and bodybuilding circles has been used as a fat loss agent.

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<sup>109</sup> <http://www.amazon.com/exec/obidos/ASIN/B005POWJZY/fabfitove40-20>

<sup>110</sup> <http://fabfitover40.com/2014/03/09/struggle-removing-stubborn-body-fat/>

Albuterol is known as a beta-2 receptor adrenergic agonist. Beta-2 receptor agonists are known to accelerate fat burning especially when combined with a low insulin environment (the type of environment produced during the end of a fasting window, roughly 14-20 hours in). Because Albuterol is a beta-2 receptor agonist, it will slowly down regulate the beta-2 receptors over time.<sup>111</sup> This means its effects are lessened and fat loss stalls once down regulation occurs. Practice based experience using Albuterol for fat loss tells us dosing for two weeks on followed by two weeks off is optimal.

## How to Best Use Albuterol in Combination with The Metabolic Blowtorch Diet

A peak fat-burning Albuterol dose prior to fasted cardio is 3-6 mg depending on body size. Because Albuterol possesses a half-life of only 4 – 6 hours, it is recommended you use it early in the morning before fasted cardio due to its ability to mobilize stubborn fat tissue for periods of two weeks on and two weeks off.

### 5) Nicotine

The supplemental form of nicotine<sup>112</sup> has been used very successfully as a cognitive enhancer.<sup>113</sup> Nicotine improves attention in a wide variety of cognitive tasks, while also improving immediate and long term memory. It also improves attention span in patients with probable Alzheimer's disease.<sup>114</sup>

## IMPORTANT

**While one can become addicted** to nicotine in any form, is it likely using 1 -2 mg for a short period of time? **NO**, it isn't. We have done this time and time again and not experienced any dependence or negative symptoms upon cessation of use.<sup>115</sup> When you use nicotine

<sup>111</sup> Schiavone A, Tarantola M, Perona G, Pagliasso S, Badino P, Odore R, Cuniberti B, Lussiana C. Effect of dietary clenbuterol and cimaterol on muscle composition, beta-adrenergic and androgen receptor concentrations in broiler chickens. *J Anim Physiol Anim Nutr (Berl)*. 2004;88(3-4):94-100.

<sup>112</sup> <http://www.amazon.com/exec/obidos/ASIN/B0039ZAF44/fabfitove40-20>

<sup>113</sup> Warburton DM. Nicotine as a cognitive enhancer. *Prog Neuropsychopharmacol Biol Psychiatry*. 1992;16(2):181-91.

<sup>114</sup> Jones GM, Sahakian BJ, Levy R, Warburton DM, Gray JA. Effects of acute subcutaneous nicotine on attention, information processing and short-term memory in Alzheimer's disease. *Psychopharmacology (Berl)*. 1992;108(4):485-94.

<sup>115</sup> Besson M, Forget B. Cognitive dysfunction, affective states, and vulnerability to nicotine addiction: A multifactorial perspective. *Front Psychiatry*. 2016;7:160.

in a nasal spray, gum or lozenge it is much different than using a tobacco product. Tobacco is a known carcinogen, nicotine is not. Tobacco products have a multitude of other ingredients to make you want to use them more. Nicotine is just one of the chemicals found in tobacco products. Nicotine by itself has shown no adverse health effects, particularly at the range we are talking about.

When used in conjunction with the Metabolic Blowtorch Diet, supplemental nicotine gum has been shown to help suppress appetite. When combined with caffeine, these actions are enhanced.<sup>116</sup> Nicotine also helps your body convert stored fat to energy used by muscle tissue.<sup>117</sup>

When your body is in a low insulin/glucose state (during the middle to end of a fast window) using nicotine will help get fat out of cells and ready to be used as energy. If you have these fats ready to be used as energy but have glucose and insulin in the system (when eating carbs), these fats will **NOT** be mobilized as energy. This is why you don't want to dose Nicotine outside of your fasting windows.

## How to Best Use Nicotine in Combination with The Metabolic Blowtorch Diet

We know from the research, nicotine will:

- Act as a Nootropic
- Suppress Appetite
- Is Enhanced by Caffeine
- Helps Mobilize Fat out of Cells to be Used as Energy

We personally use nicotine (infrequently) for both cognitive enhancement and fat loss during our fasting windows. We both have found it very useful to increase fat loss further when resistant fat cells (full of  $\alpha 2$  receptors) stall the rate of fat loss.

Nicotine is also useful to curb appetite and we use it first thing in the morning before fasted cardio to optimize the low glucose environment. It can also be used during the middle or end of a long fasting window to

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<sup>116</sup> Jessen A, Buemann B, Toubro S, Skovgaard IM, Astrup A. The appetite-suppressant effect of nicotine is enhanced by caffeine. *Diabetes Obes Metab*. 2005;7(4):327-33.

<sup>117</sup> Sztalryd C, Hamilton J, Horwitz BA, Johnson P, Kraemer FB. Alterations of lipolysis and lipoprotein lipase in chronically nicotine-treated rats. *Am J Physiol*. 1996;270(2 Pt 1):E215-23.

help with stubborn body fat reduction.

Because the MBTD uses sugars intra-workout and throughout the day on training days, we don't find it prudent to use nicotine on any days but fasting ones.

We usually start dosing protocols at 1 mg and will work up to 2 mg, but will only use it for 4 weeks within these parameters.

## 6) Ashwagandha

Ashwagandha<sup>118</sup> is one of the most vital herbs in Ayurvedic (traditional Indian) healing. It's known to boost immunity, improve memory and enhance learning capacity. It also reduces anxiety and depression without causing fatigue. It's been shown to stabilize blood sugar and lower LDL cholesterol levels. If all of those benefits are not enough, it has also been shown to stimulate libido and enhance fertility in some men.<sup>119</sup>

Ashwagandha appears to have an anti-stress component which underlies its claim as a supplement helping to decrease circulating cortisol. This also allows it to reduce anxiety and increase relaxation at the same time.<sup>120</sup>

Additionally, it's been used with people suffering from depression to improve well being and enhance mood.

## How to Best Use Ashwagandha in Combination with The Metabolic Blowtorch Diet

The best usage of Ashwagandha in the MBTD is for cortisol suppression right before bed, especially on fasting days. Doing so will ensure deep and restful sleep. There is recent research stipulating the importance of restful (REM) sleep for proper metabolic function.<sup>121</sup> We've found that taking 1-4 grams right before bed promotes deeper sleep and noticeable relaxation. It can be taken with food or on an empty stomach.

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<sup>118</sup> <http://www.amazon.com/exec/obidos/ASIN/B00WDEAZTW/fabfitove40-20>

<sup>119</sup> Mahdi AA, Shukla KK, Ahmad MK, Rajender S, Shankhwar SN, Singh V, Dalela D. Withania somnifera Improves Semen Quality in Stress-Related Male Fertility. *Evid Based Complement Alternat Med*. 2009 Sep 29. [Epub ahead of print]

<sup>120</sup> Chandrasekhar K, Kapoor J, Anishetty S. A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of ashwagandha root in reducing stress and anxiety in adults. *Indian J Psychol Med*. 2012;34(3):255-62.

<sup>121</sup> Koren D, Dummin M, Gozal D. Role of sleep quality in the metabolic syndrome. *Diabetes Metab Syndr Obes*. 2016;9:281-310.

## 7) Nootropic: Energy Memory Focus (EMF)

EMF by Optimized Life Nutrition (OLN)<sup>122</sup> is an excellent nootropic to utilize when following the Metabolic Blowtorch Diet. We highly recommend it for its ability to improve your focus due to its unique formula. All of the ingredients within the formulation are proven to improve cognition, drive and focus. It also has a mild appetite-suppressing ability, making it an excellent choice to use while on the MBTD during fast windows for improved fat loss and enhanced cognition.

Here is the breakdown of ingredients that are used in Energy Memory Focus:

### Magnesium L-Threonate (MgT)

The typical American diet will lead to magnesium deficiency throughout the body. Among other roles within the brain, magnesium is involved in the activation of nerve canals responsible for the plasticity of synaptic pathways. It is vital to the biological processes needed for learning and memory.

MgT is unique in that it can cross the blood brain barrier and activate these processes. Studies have shown clearly that MgT has increased both long-term and short-term processes that are critical to learning.<sup>123</sup> The optimal human dose per serving has been widely accepted at 144 mg. This is why we put that exact amount in our formula.

### Bacopa Monnieri (BM)

BM has been used since the 6th century to sharpen mental processes. It has been shown to improve attention, cognitive processing, and working memory partly via the suppression of acetylcholinesterase (AChE) and monoamine oxidase (MAO) activity.<sup>124</sup>

AChE and MAO are enzymes that break down neurotransmitters such as dopamine and choline. An example of this would be certain

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<sup>122</sup> [www.optimizedlifenutrition.com](http://www.optimizedlifenutrition.com)

<sup>123</sup> Slutsky I, Abumaria N, Wu LJ, Huang C, Zhang L, Li B, Zhao X, Govindarajan A, Zhao MG, Zhuo M, Tonegawa S, Liu G. Enhancement of learning and memory by elevating brain magnesium. *Neuron*. 2010;65(2):165-77.

<sup>124</sup> Peth-Nui T, Wattanathorn J, Muchimapura S, Tong-Un T, Piyavhatkul N, Rangseekajee P, Ingkaninan K, Vittaya-Areekul S. Effects of 12-week Bacopa monnieri consumption on attention, cognitive processing, working memory, and functions of both cholinergic and monoaminergic systems in healthy elderly volunteers. *Evid Based Complement Alternat Med*. 2012;2012:606424.

kinds of anti-depressants - selective serotonin uptake inhibitors (SSRIs) MAO inhibitors. This is also why BM has been reported to give users a better positive feeling after taking it. Alzheimer's drug cocktails will typically include a AChE inhibitor.

You will find BM in many formulas, but the research studies we based our dosage on averaged to be 500 mg per day from STANDARDIZED sources.<sup>127-128</sup>

## Rhodiola Rosea (RR)

RR is another herb with a very long use in human history, dating back centuries where it was first used to deal with extremely harsh living conditions and stress. Like BM, RR has also been demonstrated to be an effective MAO inhibitor.<sup>129</sup>

Recent studies have shown a significant reduction in self-reported, anxiety, stress, anger, confusion and depression at 14 days and significant improvements in total mood.<sup>130</sup> So, why did we specifically include it in our formula if it just makes you 'feel better'?

More research has concluded that RR will result in a reduction of mental fatigue and an improvement in mental processes involving complex perceptive and cognitive cerebral functions, such as associative thinking, short-term memory, calculation and ability of concentration, and speed of audio-visual perception.<sup>131</sup>

What better addition to a nootropic than a compound that will help your brain deal with stress so it can be focused on the task at hand? Again, we included a **CLINICAL** dosage of RR in our formulation of 500 mgs.

## TeaCrine®

TeaCrine® is the trademarked version of Theacrine. TeaCrine® inhibits adenosine, which decreases feelings of fatigue. It also enhances neural drive, providing better focus while also supporting positive mood and heightened motivation. TeaCrine® is such a revolutionary supplement that it does all of the following.<sup>125</sup>

- Boosts mental + physical energy
- Supports energy without jitters, irritability, or habituation
- Supports a positive mood

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<sup>125</sup> Please refer to this page for more information on TeaCrine® <http://www.compoundsolutions.com/benefits.html>

- Increases motivation to exercise
- Improves perceived focus + concentration

## L-Tyrosine

L-Tyrosine is a supplement known as a building block of neurotransmitters. It has been clinically shown to help in periods of stress, and sleep deprivation.<sup>126</sup> Data has shown that L-Tyrosine may also increase working memory while performing multiple tasks.<sup>127</sup> Once again, we have a REAL dose of 500 mg.

Although studies show mixed results, empirical evidence suggests that L-Tyrosine has its use as a pre-workout stimulant when combined with other substances such as caffeine. It seems to enhance the effect of other stimulatory substances, which we have both have experienced as well.

L-Tyrosine has also shown promise in alleviating the decrements in cognitive performance associated with stress and fatigue. For this reason, it might be useful for keeping your mind sharp during intense stints of dieting such as the MBTD.

## How to Best Use EMF in Combination with The Metabolic Blowtorch Diet

EMF can be used for many applications while using the MBTD. For improved focus during intense work tasks, for blunting appetite during long fast windows and also to improve energy before cardio or weight training.

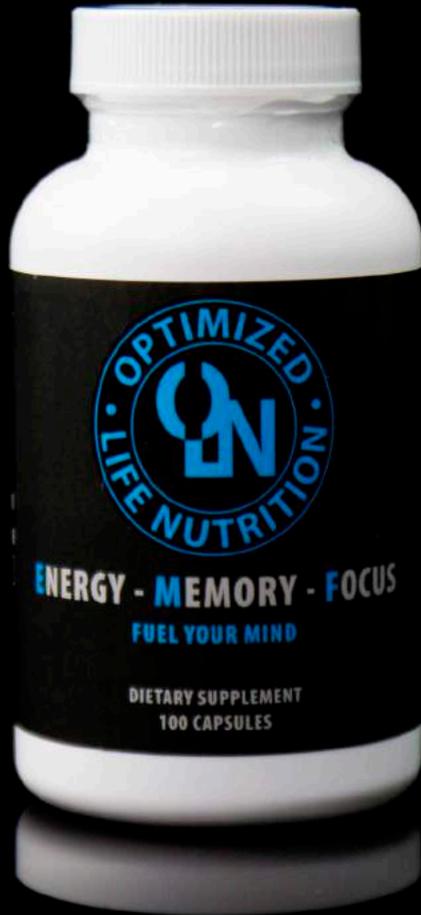
We have found using it on Fasting days before early AM cardio and also early/mid afternoon will help to dull appetite and also increase energy and focus.

Many also find using EMF before training sessions improves neural drive during the workout. Dosages really depend on body size and whether a person is sensitive to stimulants or not. For a concise explanation on how to best use EMF, read “*How to Use the World’s Strongest Nootropic – Energy Memory Focus*” on TRTRevolution.com.<sup>128</sup>

<sup>126</sup> Magill RA, Waters WF, Bray GA, Volaufova J, Smith SR, Lieberman HR, McNevin N, Ryan DH. Effects of tyrosine, phentermine, caffeine D-amphetamine, and placebo on cognitive and motor performance deficits during sleep deprivation. *Nutr Neurosci*. 2003;6(4):237-46.

<sup>127</sup> Thomas JR, Lockwood PA, Singh A, Deuster PA. Tyrosine improves working memory in a multitasking environment. *Pharmacol Biochem Behav*. 1999;64(3):495-500.

<sup>128</sup> <http://www.trtrevolution.com/how-to-use-energy-memory-focus/>



**EMF is Sold Exclusively at:**  
**[www.OptimizedLifeNutrition.com](http://www.OptimizedLifeNutrition.com)**



# 11

Bonus Chapter- BDNF:  
Brain Derived Neurotrophic  
Factor The Secret Ingredient  
for Peak Performance And  
Optimal Cognition

**How would you like** to effortlessly learn difficult things and memorize huge volumes of information at any age?

Do you want to tap into the ‘flow’ state that keeps you laser focused for hours on end?

Are you ready to see 10x jumps in your productivity and feel like you are literally on top of the world the second you wake up?

If that sounds like you, sit tight and read this chapter closely.

If you are serious about optimizing your brain for peak mental performance, you **NEED** to know about the life-changing benefits of BDNF!

## Brain-Derived Neurotrophic Factor (BDNF)

There has been a significant amount of research done by scientists for the past 20 years on a chemical compound called BDNF.

It is a protein that triggers neurogenesis (the creation of brain cells, or ‘neurons’) in the hippocampus, while growing existing neurons and making the connections between them even stronger.

At the same time, BDNF allows for new connections between cells to form in the brain and it ensures cell survival at the same time by preventing apoptosis (cell death) from taking place.<sup>129</sup>

Having higher levels of BDNF in your body will give you the following benefits:

- Increased learning capacity (learning takes place at a faster rate)<sup>130</sup>
- Higher levels of intelligence<sup>131</sup>
- Improved ability to process, memorize and apply both new and existing information<sup>132</sup>
- Lowers risk and Delays the progression of age-related neurodegenerative diseases like Alzheimer’s, Dementia

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<sup>129</sup> Lipsky RH, Marini AM. Brain-derived neurotrophic factor in neuronal survival and behavior-related plasticity. *Ann N Y Acad Sci.* 2007;1122:130-43.

<sup>130</sup> Piepmeyer AT, Etnier JL. Brain-derived neurotrophic factor (BDNF) as a potential mechanism of the effects of acute exercise on cognitive performance. *J Sport Health Sci.* 2014;4:14-23.

<sup>131</sup> Bekinschtein P, Cammarota M, Katche C, Slipczuk L, Rossato JI, Goldin A, Izquierdo I, Medina JH. BDNF is essential to promote persistence of long-term memory storage. *Proc Natl Acad Sci U S A.* 2008;105(7):2711-6.

<sup>132</sup> Cunha C, Brambilla R, Thomas KL. A simple role for BDNF in learning and memory? *Front Mol Neurosci.* 2010;3:1.

and Parkinson's<sup>133</sup>

- Elevated mood via promotion of anti-depressant activity<sup>134</sup>
- Decreased levels of cortisol (the 'stress' hormone)<sup>135</sup>

Above all else, BDNF enhances your cognition (mental sharpness) through neuroplasticity.<sup>136</sup> This is literally your brain changing its structure over time by forming new neural connections. The combined firing and wiring of these connections is how you form and retain new memories, thoughts, and skills. Furthermore, it's how your brain repairs and heals itself after an injury and/or a neurodegenerative disease that causes damage.

Breakthroughs in neurobiology research have revealed neuroplasticity to be a lifelong process that does not stop at any age.<sup>137</sup> It's extraordinary because we used to believe that it was impossible for neurons to regenerate (i.e. you had a fixed number of neurons at birth, and that's all you would ever get).

But in order for neuroplasticity to take place, you need sufficient levels of BDNF to facilitate the process. Better brain health means faster and more efficient neuron repair, so it is in your best interest to maximize BDNF production.

If you allow your BDNF levels to decline over time and let them stay at low levels, you can expect to experience some of the following outcomes:

- Depression<sup>138</sup>
- Cognitive Decline<sup>139</sup>
- Bipolar Disorder<sup>140</sup>

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<sup>133</sup> Lim YY, Villemagne VL, Laws SM, Pietrzak RH, Snyder PJ, Ames D, Ellis KA, Harrington K, Rembach A, Martins RN, Rowe CC, Masters CL, Maruff P. APOE and BDNF polymorphisms moderate amyloid  $\beta$ -related cognitive decline in preclinical Alzheimer's disease. *Mol Psychiatry*. 2015;20(11):1322-8.

<sup>134</sup> Björkholm C, Monteggia LM. BDNF - a key transducer of antidepressant effects. *Neuropharmacology*. 2016;102:72-9.

<sup>135</sup> Naveen GH, Varambally S, Thirithalli J, Rao M, Christopher R, Gangadhar BN. Serum cortisol and BDNF in patients with major depression-effect of yoga. *Int Rev Psychiatry*. 2016;28(3):273-8.

<sup>136</sup> Murray PS, Holmes PV. An overview of brain-derived neurotrophic factor and implications for excitotoxic vulnerability in the hippocampus. *Int J Pept*. 2011;2011:654085.

<sup>137</sup> Lillard AS, Erisir A. Old dogs learning new tricks: Neuroplasticity beyond the juvenile period. *Dev Rev*. 2011;31(4):207-39.

<sup>138</sup> Lee BH, Kim YK. The roles of BDNF in the pathophysiology of major depression and in antidepressant treatment. *Psychiatry Investig*. 2010;7(4):231-5.

<sup>139</sup> Siuda J, Patalong-Ogiewa M, Żmuda W, Targosz-Gajniak M, Niewiadomska E, Matuszek I, Jędrzejowska-Szypułka H, Rudzińska-Bar M. Cognitive impairment and BDNF serum levels. *Neural Neurochir Pol*. 2017;51(1):24-32.

<sup>140</sup> Fernandes BS, Molendijk ML, Köhler CA, Soares JC, Leite CM, Machado-Vieira R, Ribeiro TL, Silva JC, Sales PM, Quevedo J, Oertel-Knöchel V, Vieta E, González-Pinto A, Berk M, Carvalho AF. Peripheral brain-derived neurotrophic factor (BDNF) as a biomarker in bipolar disorder: a meta-analysis of 52 studies. *BMC Med*. 2015;13:289.

- Schizophrenia<sup>141</sup>
- Memory and Learning Problems (ex. forgetfulness),<sup>142</sup> Particularly for Long-term Memory Formation<sup>143</sup>
- Increased Risk (and faster progression) of Cognitive Disorders like Alzheimer's, Parkinson's<sup>144</sup>
- Accelerated Aging<sup>145</sup>
- OCD<sup>146</sup>
- Psoriasis<sup>147</sup>
- Anorexia Nervosa<sup>148</sup>
- Diabetes<sup>149</sup>
- Obesity<sup>150</sup>

## How to Naturally Maximize BDNF Production

Given that your BDNF levels will naturally decline as you age,<sup>151</sup> you need to act NOW and start taking control of your mental health. The good news is you can naturally increase your BDNF levels to slow down any cognitive decline or even prevent it from happening altogether!<sup>152</sup> It

<sup>141</sup> Green MJ, Matheson SL, Shepherd A, Weickert CS, Carr VJ. Brain-derived neurotrophic factor levels in schizophrenia: a systematic review with meta-analysis. *Mol Psychiatry*. 2011;16(9):960-72.

<sup>142</sup> Erickson KI, Prakash RS, Voss MW, Chaddock L, Heo S, McLaren M, Pence BD, Martin SA, Vieira VJ, Woods JA, McAuley E, Kramer AF. Brain-derived neurotrophic factor is associated with age-related decline in hippocampal volume. *J Neurosci*. 2010;30(15):5368-75.

<sup>143</sup> Alonso M, Bekinschtein P, Cammarota M, Vianna MR, Izquierdo I, Medina JH. Endogenous BDNF is required for long-term memory formation in the rat parietal cortex. *Learn Mem*. 2005;12(5):504-10.

<sup>144</sup> Zuccato C, Cattaneo E. Brain-derived neurotrophic factor in neurodegenerative diseases. *Nat Rev Neurol*. 2009;5(6):311-22.

<sup>145</sup> Budni J, Belletini-Santos T, Mina F, Garcez ML, Zugno AI. The involvement of BDNF, NGF and GDNF in aging and Alzheimer's disease. *Aging Dis*. 2015;6(5):331-41.

<sup>146</sup> Oliveira-Maia AJ, Castro-Rodrigues P. Brain-derived neurotrophic factor: a biomarker for obsessive-compulsive disorder? *Front Neurosci*. 2015;9:134.

<sup>147</sup> Brunoni AR, Lotufo PA, Sabbag C, Goulart AC, Santos IS, Benseñor IM. Decreased brain-derived neurotrophic factor plasma levels in psoriasis patients. *Braz J Med Biol Res*. 2015;48(8):711-4.

<sup>148</sup> Brandys MK, Kas MJ, van Elburg AA, Campbell IC, Adan RA. A meta-analysis of circulating BDNF concentrations in anorexia nervosa. *World J Biol Psychiatry*. 2011;12(6):444-54.

<sup>149</sup> Li B, Lang N, Cheng ZF. Serum levels of brain-derived neurotrophic factor are associated with diabetes risk, complications, and obesity: A cohort study from chinese patients with type 2 diabetes. *Mol Neurobiol*. 2016;53(8):5492-9.

<sup>150</sup> Lommatzsch M, Zingler D, Schuhbaeck K, Schloetcke K, Zingler C, Schuff-Werner P, Virchow JC. The impact of age, weight and gender on BDNF levels in human platelets and plasma. *Neurobiol Aging*. 2005;26(1):115-23.

<sup>151</sup> Ziegenhorn AA, Schulte-Herbrüggen O, Danker-Hopfe H, Malbranc M, Hartung HD, Anders D, Lang UE, Steinhagen-Thiessen E, Schaub RT, Hellweg R. Serum neurotrophins--a study on the time course and influencing factors in a large old age sample. *Neurobiol Aging*. 2007;28(9):1436-45.

<sup>152</sup> Musumeci G, Castrogiovanni P, Castorina S, Imbesi R, Szychlinska MA, Scuderi S, Loreto C, Giunta S. Changes in serotonin (5-HT) and brain-derived neurotrophic factor (BDNF) expression in frontal cortex and hippocampus of aged rat treated with high tryptophan diet. *Brain Res Bull*. 2015;119(Pt A):12-8.

will require you consistently doing a few things over a long period of time, but rest assured the effort will be worth it.

You already have the power to build a healthy, high-performance brain and you won't need any special tools to get started. The 'magic pill' for optimal cognition consists of two very simple practices:

## **Intermittent Fasting**

Intermittent fasting has been shown to increase BDNF levels in several studies, especially when the fasting windows are maxed out.<sup>153,154,155</sup> Put simply, intermittent fasting refers to the practice of abstaining from food for an extended period of time. For most people, this means you would skip your breakfast and consume your daily caloric intake within a shorter period of time (lunch and dinner).

Because you're reading this book right now, you're already familiar with how to use the best intermittent fasting protocol in the world. The Metabolic Blowtorch Diet gives you all-day energy and maximum focus, due to the incredible amount of BDNF produced in the brain during long fasting windows.

## **High Intensity Aerobic Exercise**

The connection between increased BDNF levels and high intensity exercise has been well-established in numerous scientific studies.<sup>156,157,158</sup> Naturally, more BDNF is produced with more frequent exercise. On top of the BDNF boost, you will also produce various neurochemicals that will regulate your mood and energy (dopamine, epinephrine, serotonin, and more).<sup>159</sup>

There is no way of getting around this – you **MUST** exercise consistently if you want to experience the full benefits of higher

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<sup>153</sup> Mattson MP. Energy intake, meal frequency, and health: a neurobiological perspective. *Annu Rev Nutr.* 2005;25:237-60.

<sup>154</sup> Longo VD, Mattson MP. Fasting: molecular mechanisms and clinical applications. *Cell Metab.* 2014;19(2):181-92.

<sup>155</sup> Marosi K, Mattson MP. BDNF mediates adaptive brain and body responses to energetic challenges. *Trends Endocrinol Metab.* 2014;25(2):89-98.

<sup>156</sup> Griffin EW, Mullally S, Foley C, Warmington SA, O'Mara SM, Kelly AM. Aerobic exercise improves hippocampal function and increases BDNF in the serum of young adult males. *Physiol Behav.* 2011;104(5):934-4.

<sup>157</sup> Winter B, Breitenstein C, Mooren FC, Voelker K, Fobker M, Lechtermann A, Krueger K, Fromme A, Korsukewitz C, Floel A, Knecht S. High impact running improves learning. *Neurobiol Learn Mem.* 2007;87(4):597-609.

<sup>158</sup> Erickson KI, Voss MW, Prakash RS, Basak C, Szabo A, Chaddock L, Kim JS, Heo S, Alves H, White SM, Wojcicki TR, Mailey E, Vieira VJ, Martin SA, Pence BD, Woods JA, McAuley E, Kramer AF. Exercise training increases size of hippocampus and improves memory. *Proc Natl Acad Sci U S A.* 2011;108(7):3017-22.

<sup>159</sup> Lin TW, Kuo YM. Exercise benefits brain function: the monoamine connection. *Brain Sci.* 2013;3(1):39-53.

BDNF levels. Sitting still for long hours, in some cases, will actually reduce your cognition slightly. One exercise session will not be enough to experience a significant change in BDNF levels.

Specifically, the best form of exercise to do is steady state aerobic exercise.<sup>160</sup> 30-40 minutes of training at 65-80% of your maximum heart rate has shown to lead to the highest increases in BDNF levels.<sup>161</sup> Some studies claim interval training leads to greater increases than continuous, steady-state training.<sup>162</sup>

Regardless of which form of aerobic training is best for BDNF formation, we can all agree that consistent aerobic training leads to sudden improvements in blood flow, which allows for certain growth factors to be transported into your brain in order to create BDNF.<sup>163</sup>

## How to Combine Both Strategies

If you want to experience a massive short-term and long-term boost in BDNF levels, you need to combine several strategies at once. Here is the step-by-step formula for extraordinary levels of cognition through BDNF optimization:

First, use The Metabolic Blow Torch Diet and make a conscious effort to max out your fasting windows. If you have 24 hours in a day, you would have an 18-21 hour fast window and a 3-6 hour feeding window. The more time you can spend in a fasted state, the better.

Second, you want to do steady state or depending on the level of muscular development you possess high intensity interval training (HIIT) cardio on the days you are fasting. Fasted cardio in the morning will do wonders to jack up your BDNF levels and give you a rush of feel-good chemicals that will brighten up your mood.

After your cardio, you will experience a spike in BDNF that will return to a normal level after several minutes (or even a few hours). Exercise alone will not be sufficient for cognitive optimization – you must pair the

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<sup>160</sup> Dinoff A, Herrmann N, Swardfager W, Liu CS, Sherman C, Chan S, Lanctôt KL. The effect of exercise training on resting concentrations of peripheral brain-derived neurotrophic factor (BDNF): A meta-analysis. *PLoS One*. 2016;11(9):e0163037.

<sup>161</sup> Schmolesky MT, Webb DL, Hansen RA. The effects of aerobic exercise intensity and duration on levels of brain-derived neurotrophic factor in healthy men. *J Sports Sci Med*. 2013;12(3):502-11.

<sup>162</sup> Saucedo Marquez CM, Vanaudenaerde B, Troosters T, Wenderoth N. High-intensity interval training evokes larger serum BDNF levels compared with intense continuous exercise. *J Appl Physiol* (1985). 2015;119(12):1363-73.

<sup>163</sup> Thomas AG, Dennis A, Bandettini PA, Johansen-Berg H. The effects of aerobic activity on brain structure. *Front Psychol*. 2012;3:86.

physical stimulation with some mental stimulation immediately after.

Third, you are going to perform a difficult, challenging task right after your cardio. This should be something that requires a ton of brain power (critical thinking, writing, producing content, using creative/artistic energy, etc.). Your mind is now in the most optimal state to handle cognitively demanding tasks. Also, make sure you are devoid of all distractions and potential interruptions before you begin. This is best done in seclusion in an office or studio where nobody can bother you.

**(BONUS: have a nice cup of plain black coffee to sip on while you are completing the task!)**

Now that you know all about the game-changing benefits of BDNF, and how to maximize its production for achieving peak performance, go out there and change the world.





**Thank you** for reading The Metabolic Blowtorch Diet. We're always interested in your feedback. Please feel free to email us your success stories from following the diet to [jay@trtrevolution.com](mailto:jay@trtrevolution.com).

Your input is greatly appreciated. We also encourage you to join our **FREE** Facebook group the Metabolic Blow Torch Diet.<sup>164</sup>

The next book Jim and Jay are publishing is the *Advanced Strategies Edition of The Definitive TRT MANUAL*.<sup>165</sup> It's packed with 8 new chapters and all the latest relevant data including hormonal optimization for women and TRT for United States veterans. Our book will be the **STANDARD** when optimizing hormones in the context of health and longevity. To get on the waiting list, go to [www.advancedTRTMANual.com](http://www.advancedTRTMANual.com).

The next book in the series will be Monica Campbell (Jay's wife) and Dr Jim Meehan's book *Cracking the Fountain of Youth Code: The Complete Woman's Guide to Becoming Sexier, Leaner, Happier and Empowered for Life*. Their book will be a next level treatise on hormonal optimization and aging gracefully for women.

As a token of our appreciation for having read the entire book, we want to tell you all about the "Anabolic Blowtorch Diet." We are currently working on a variant of the Metabolic Blowtorch Diet, strictly for hard-gainers and men and women who want to maximize lean muscle gain while minimizing any fat gain. Bodybuilders and Fitness Competitors looking to gain muscle, this is for you!

If you are willing to do certain things, it is 100% possible.

If you are interested in learning about this new variant and getting your hands on it when it's available, send me an email [jay@trtrevolution.com](mailto:jay@trtrevolution.com) with the subject line "Anabolic Blowtorch Diet."

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<sup>164</sup> <https://www.Facebook.com/BlowTorchDiet/>

<sup>165</sup> [www.advancedTRTMANual.com](http://www.advancedTRTMANual.com)



# 13

## Appendix - Training Resources

## Ways to Measure Body fat for Precision Results

If you're committed to getting results on this diet, we recommend you get your body fat measured before you begin and once you've finished.

This serves two purposes. It reinforces your self-belief by showing you how far you've really come. This positive reinforcement will also help you cement the right diet habits you've always wanted.

Many diets fail because participants lack unrealistic expectations fostered by inexact data when starting out.

There are two specific ways to get your body fat measured with scientific accuracy.

They are a DEXA scan,<sup>166</sup> and a Bod Pod.<sup>167</sup> To understand the differences between the two testing procedures, read "*Comparing Body Fat Test Methods*" on BodySpec.com.

Of course, you don't have to use any of these methods. You can use the mirror and monitor how you fit into your clothes.

Understand the psychological component of dieting plays a big part in your success. Your mind can play tricks on you. That's why we recommend you measure your results with precise and accurate data. It's truly the only way to be sure.

## Resistance Training

If you want to learn much more about our preferred resistance training program for The Metabolic Blowtorch Diet (MBTD), check out Jim Brown's Forged Training.<sup>168</sup> Forged is a complete training program allowing maximal muscle gain in minimal time training.

Forged stresses training to positive muscle failure and at higher rep ranges ultimately preserving joints, tendons and soft tissues from the brutal pounding incurred from heavier weights and lower rep ranges. Positive failure is defined by you not being able to perform the concentric portion of the movement without compromising form. The working sets are comprised of 1-2 sets going to positive failure the first of which you target a range of 20-25 repetitions. The second set following will be same weight

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<sup>166</sup> <https://www.bodyspec.com/what-is-dxa>

<sup>167</sup> <https://causenta.com/bodpod-body-fat-testing/>

<sup>168</sup> [www.advancedforgedtraining.com](http://www.advancedforgedtraining.com)

to positive failure (PF). Most trainees will fail at a rep range of 12-18 reps. We have designed two specific variants of Forged for The Metabolic Blow Torch Diet. A 3-day version for max fat loss and a 4-day version for max muscle preservation.

<b>For Maximum Fat Loss</b> (3 Days Lifting and 4 Days Fasting + Cardio)			
	<b>MON</b>	<b>WED</b>	<b>FRI</b>
<b>CHEST</b>	<b>Fly &amp; Press</b>		
<b>BACK</b>	<b>Pulldown or Pullup Rows</b>		
<b>SHOULDERS</b>			<b>Press, Front Raises Laterals</b>
<b>BICEPS</b>			<b>Preacher Hammer Concentration</b>
<b>TRICEPS</b>	<b>Pushdown Extension Dip</b>		
<b>LEGS</b>		<b>Press or Squat Iso Quad / Hamstring</b>	
<b>CALVES</b>		<b>Knee bent or Knee Str.</b>	
<b>ABS</b>	<b>Weight Machine Crunch</b>	<b>Hanging Leg Raises</b>	<b>Roman Chair Crunches</b>

Resistance training is performed 3 days, fasting is done for 4 days and cardio is done for 4 days (on all four fasting days).

## Sample workout for maximal fat loss:

This is Jay's personal Forged 3-day max fat loss MBTD work out, utilizing the forged principles of positive muscle failure at higher rep ranges. Rest intervals should be no longer than 90 seconds with a goal of trying to rest 60 seconds between sets.<sup>169</sup>

### Day 1, Monday: (Chest, Back, Triceps, Abs)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Slight Incline Pres	1-3	2
Meadows Rows	1-3	2
Fly Machine	1-3	2
Mag Grip Inner Grip Pulldown	1-3	2
Press Machine (Decline or Flat):	1-3	2
Wide Grip Pull Ups with Band	1-3	2
Triceps Pushdowns	1-3	2
Tricep Cable Rope Extension	1-3	2
Weighted Machine Crunch	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).

<sup>169</sup> For much more on Forged Training, go here: [www.advancedforgedtraining.com](http://www.advancedforgedtraining.com)

## Day 3, Wednesday: (Calves, Legs, Abs)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Knee-Straight Calf Raises	1-3	2
Hamstring Curls	1-3	2
Adductor Machine	1-3	2
Leg Press or Squat	1-3	2
Leg Extension	1-3	2
Hanging Leg Raises	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).



## Day 5, Friday: (Delts, Biceps, Abs)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Lateral Raise (Machine or DB)	1-3	2
Front Raises (DB, Rope, Plate)	1-3	2
Inverted DB Press (Touching the Center Delt Head)	1-3	2
Palms-Facing DB Press	1-3	2
Rear Delt	1-3	2
2 Handed Cable Traps	1-3	2
Incline Ab Crunches	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).

## For Maximum Muscle Preservation

(4 Lifting Days and 2 or 3 Fasting + Cardio Days)

depends on level of body fat

	DAY 1 OF 7	DAY 2 OF 7	DAY 4/5 OF 7	DAY 5/6 OF 7
CHEST	Fly		Press	
BACK	Pulldown		Row	
SHOULDERS	Press		Lateral	
BICEPS		Reverse		Regular
TRICEPS		Skull Crush		Cable Ext.
LEGS		Press		Isolation Quad/ Hamstring
CALVES		Knee bent		Knee Str.
ABS	Upper	Lower		

Resistance training is performed 4 days and fasting + cardio for 2/3 days if you want to maximize lean muscle gain (also dependant on individual's body fat %).

## Day 1: (Chest, Back, Delts, Traps)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Fly Machine	1-3	2
Pulldown	1-3	2
Deltoid Side-Lateral Raise Machine	1-3	2
Deltoid Front-Rope Front Raise	1-3	2
Deltoid Rear-Rear Delt Machine	1-3	2
Weighted Ab Machine	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).



## Day 2: (Biceps, Triceps, Legs, Calves, Abs)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Bicep Reverse Curls	1-3	2
Triceps Skull Crushers	1-3	2
Squat or Leg Press	1-3	2
Straight Knee Calf Raises or Bent Knee Calf Raises	1-3	2
Hanging Leg Raises	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).



## Day 4/5:<sup>170</sup> (Chest, Back, Delts, Traps)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Slight Incline Smith Chest Press	1-3	2
Meadows Rows	1-3	2
Deltoid Side - DB Lateral Raises	1-3	2
Deltoid Front - DB Front Raises	1-3	2
Deltoid Rear - DB Rear Raises	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).

<sup>170</sup> The second time through the body part progression is determined by individual recovery ability. Some may choose to fast two days in a row (Days 3 and 4) perform the last two training sessions of the 4 Day split on Day 5 and 6.



## Day 5/6:<sup>171</sup> (Biceps, Triceps, Hamstrings, Quads, Calves)

EXERCISE	WARM-UP SETS	WORKING SETS TO POSITIVE FAILURE
Bicep Reverse Curls	1-3	2
Triceps Skull Crushers	1-3	2
Squat or Leg Press	1-3	2
Straight Knee Calf Raises or Bent Knee Calf Raises	1-3	2
Hanging Leg Raises	1-3	2

**FOR ALL WORKING SETS:** 1st working set should be in the 20 rep range (~20-30) and 2nd set should be in the 12-20 rep range. You're going to positive muscle failure (PF).

<sup>171</sup> The second time through the body part progression is determined by individual recovery ability. Some may choose to fast two days in a row (Days 3 and 4) perform the last two training sessions of the 4 Day split on Day 5 and 6.



## IMPORTANT

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Also, if you are a beginner or intermediate to resistance (i.e. weight training), we highly suggest you check out 90 Days To Optimized Health & Longevity where you are educated and shown the proper way to work out. If you are not careful, it is easy to injure yourself. You want to make sure the time you are investing into your workouts, is as effective as possible. This will have a huge impact on your overall results. You can learn more at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)

If you are an advanced weightlifter, we highly recommend you adopt our “Advanced Forged Training Protocol” to ensure maximum results! You can learn more at:

[www.AdvancedForgedTraining.com](http://www.AdvancedForgedTraining.com)

## Cardiovascular Training

We believe the optimal cardio strategy is performing low-impact endurance training (see below for optimal forms) 2-7x per week (30-45 minutes per session) at 65-80% of maximum heart rate depending on your body fat levels.

When you are performing cardio at 65-80% of your target heart rate, you should be in the 125-140 bpm range.<sup>172</sup> The more body fat you possess, the more cardio is needed to drop fat in the fastest and most efficient way while avoiding muscle loss.

Optimal forms of low impact endurance training include:

- Walking Outside
- Walking on a Treadmill on an Incline
- Riding a Stationary Bike
- Using a StairMaster,
- Rowing Machine (Ergometer)
- Elliptical
- Swimming

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<sup>172</sup> Please calculate your target heart rate by following the instructions at <http://www.active.com/fitness/calculators/hearttrate>. We are assuming you are using a low-impact cardio machine that calculates heart rate, but you can also wear things like an Apple Watch to determine your heart rate.

As we already listed earlier in the book, one can employ brief HIT or HIIT interval cardio training if they possess enough neurologically efficient muscle mass to avoid the risk of catabolism ie losing muscle from training at high intensity.

It is **CRITICALLY IMPERATIVE** as an aging athlete you limit your performance of high impact/explosive endurance exercise (like running on hard surfaces, or ballistic movements such as those found in CrossFit programs etc.) to preserve your soft tissues and spine.

The last thing you want is having your knee or hip replaced later in life. Watch this video<sup>173</sup> for much more detailed information.

## A Quick Primer on Lean Body Mass

**Ideal Lean Body Mass Percentage Chart**

DESCRIPTION	MEN	WOMEN
<b>Ultra Lean</b> (Generally not sustainable due to impact on reproductive and hormonal health)	<b>95-98%</b>	<b>87-90%</b>
<b>Athletic, Optimal Metabolic Health</b>	<b>87-94%</b>	<b>80-86%</b>
<b>Metabolically Healthy</b>	<b>83-86%</b>	<b>76-79%</b>
<b>Average</b> (Possible Insulin insensitivity)	<b>76-82%</b>	<b>69-75%</b>
<b>Metabolically Unhealthy</b> (Obese)	<b>75</b> <b>(and below)</b>	<b>68</b> <b>(and below)</b>

(Table Data provided by Alexander Juan Antonio Cortes)

<sup>173</sup> <http://youtu.be/4gDdeML0oJs>

The true priority for metabolic health is lean body mass (LBM). The mistake that the majority of people make is prioritizing fat loss (i.e. what their body fat percentage is) over LBM, when it should be the other way around. Without muscle, you cannot achieve permanent fat loss. Muscle is the great metabolic equalizer. The more muscle you have, the more efficient you are at burning calories you burn while sitting at your desk ie at rest.

While most body composition charts all use fat mass, the one above displays body composition in terms of your LBM (relative to total weight). It is a direct system of measurement that allows you to assess your LBM and make it your primary focus for better health. If you increase your LBM, you will become healthier. Period. This is the most important mental shift you can make if you are constantly obsessed about your body fat percentage.



# 14

## Appendix - Training Schedules

## Training Day Sample Schedule: (Early Morning)<sup>174</sup>

5:00 AM	<b>Supplement(s) to Take:</b> EMF, half of Metformin dosage, half of Dessicated Thyroid Medication dosage <b>Activity:</b> 10 minutes of mindfulness meditation	
	<b>First Meal of the Day:</b> Pre-workout meal - Small bowl of oatmeal + protein powder	5:30 AM
6:00 - 7:00 AM	<b>TRAINING SESSION</b>	
	<b>2nd Meal of the Day (Post-workout):</b> Shake - 30-50 grams of True Nutrition Protein, 20-40 grams of high glycemic carb powder (True Nutrition Sweet Potato Powder)	9:00 AM
9:00 AM	<b>3rd Meal of the Day (Post-workout Meal):</b> Protein shake + essential fatty acids (olive oil, MCT oil, almond butter or coconut oil)	

<sup>174</sup> Pre-workout meals should be consumed 30 minutes prior to workouts, and post-workout meals should be consumed as soon as possible (immediately following training is best).

1:00 PM

**4th Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)



**5th Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

4:00 PM

7:00 PM

**6th (Final) Meal of the Day:**

Salad + lean protein + oil dressing



**Supplement(s) to Take:**

Half of Metformin dosage, half of Dessicated  
Thyroid Medication Dosage

BEDTIME

# Training Day Sample Schedule: (Morning)

5:00 AM	<b>Supplement(s) to Take:</b> EMF, half of Metformin dosage, half of Desiccated Thyroid Medication Dosage <b>Activity:</b> 10 minutes of mindfulness meditation	
	<b>First Meal of the Day:</b> 1st meal of the day: Pre-workout meal - Oatmeal + protein source + 1 tablespoon of almond butter	7:30 AM
8:00 - 9:00 AM	<b>TRAINING SESSION</b>	
	<b>2nd Meal of the Day (Post-workout):</b> Shake - 30-50 grams of True Nutrition Protein, 20-40 grams of high glycemic carb powder (True Nutrition Sweet Potato Powder)	9:00 AM
10:00 AM	<b>3rd Meal of the Day (Post-workout Meal):</b> Protein shake + essential fatty acids (olive oil, MCT oil, almond butter or coconut oil)	

1:00 PM

**4th Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)



**5th Meal of the Day:**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

4:00 PM

7:00 PM

**6th (Final) Meal of the Day:**

Salad + lean protein + oil dressing



**Supplement(s) to Take:**

Half of Metformin dosage, half of Dessicated  
Thyroid Medication Dosage

BEDTIME

## Training Day Sample Schedule: (Afternoon)

5:00 AM

### Supplement(s) to Take:

EMF, 500 mg Metformin, 30 mg Armour  
Thyroid

### Activity:

10 minutes of mindfulness meditation



### First Meal of the Day:

Oatmeal + protein source + 1 tablespoon of  
almond butter

6:00 AM

10:00 AM

### 2nd Meal of the Day:

Protein shake + essential fatty acids (olive oil,  
MCT oil, almond butter or coconut oil)



### 3rd Meal of the Day:

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

1:30 PM

2:00 -  
3:00 PM

### TRAINING SESSION



3:00 PM

**4th Meal of the Day (Post-workout):**

Shake - 30-50 grams of True Nutrition Protein,  
20-40 grams of high glycemic carb powder  
(True Nutrition Sweet Potato Powder)



**5th Meal of the Day (Post-workout):**

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

4:00 PM

7:00 PM

**6th (Final) Meal of the Day:**

Salad + lean protein + oil dressing



**Supplement(s) to Take:**

500 mg Metformin, 30 mg Armour Thyroid

BEDTIME

## Training Day Sample Schedule: (Evening)

5:00 AM

### Supplement(s) to Take:

EMF, 500 mg Metformin, 30 mg Armour  
Thyroid

### Activity:

10 minutes of mindfulness meditation



### First Meal of the Day:

Oatmeal + protein source + 1 tablespoon of  
almond butter

6:00 AM

10:00 AM

### 2nd Meal of the Day (Post-workout):

Protein shake + essential fatty acids (olive oil,  
MCT oil, almond butter or coconut oil)



### 3rd Meal of the Day (Post-workout Meal):

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)

1:00 PM

4:00 PM

### 4th Meal of the Day:

Grass-fed beef + brown rice  
(Or Choose a Lean Protein, Clean Carb, and  
Healthy Fat Source found in Chapters 7, 8 & 9)



6:30 PM

**5th Meal of the Day (Pre-workout):**  
Liquid meal (i.e. a shake)



**TRAINING SESSION**

7:00 -  
8:00 PM

8:00 PM

**Post-workout Shake**



**6th (Final) Meal of the Day:**  
Salad + lean protein + oil dressing

9:00 PM

**BEDTIME**

**Supplement(s) to Take:**  
500 mg Metformin, 30 mg Armour Thyroid



If you are a beginner or intermediate to resistance training (i.e. weight training), we highly suggest you check out 90 Days To Optimized Health & Longevity where you are educated and shown the proper way to work out. If you are not careful, it is easy to injure yourself. You also want to make sure the time you are investing into your workouts is as effective as possible. This will have a huge impact on your overall results. You can learn more at:

**[www.90Days2Optimized.com](http://www.90Days2Optimized.com)**

If you are an advanced weightlifter, we highly recommend you adopt our “Advanced Forged Training Protocol” to ensure maximum results! You can learn more at:

**[www.AdvancedForgedTraining.com](http://www.AdvancedForgedTraining.com)**

**F**requently

**A**sked

**Q**uestion

15

FAQ

**Q: I want to optimize my health to the highest levels possible and get my hormones in check. What's the best resource for this?**

**A:** We recommend having your blood work and all relevant biomarkers looked at regularly. The best way to do this is by visiting

[www.CheckMyBloodWork.com](http://www.CheckMyBloodWork.com)

For men, The Definitive TRT MANual<sup>175</sup> is hands-down the ultimate resource for everything related to male hormonal optimization. You'll learn the myths behind hormonal health, and get insider knowledge on the cutting-edge clinical strategies used by top progressive physicians using therapeutic testosterone in the context of health and longevity. The Advanced Strategies edition of the TRT MANual is launching 4th Quarter of 2017. The Advanced Strategies version of The TRT MANual will 100-X the content of the first book. It will be the ultimate resource guide for optimizing hormonal health. To get on the waiting list, go to

[www.advancedTRTMANual.com](http://www.advancedTRTMANual.com)

**Q: Is this material available as a video course? I learn best from visuals that show me proper technique for the exercises, along with body fat measurement and other things discussed in this book.**

**A:** While this book is not available in video form, our flagship course 90 DAYS TO OPTIMIZED is a comprehensive, step-by-step 90 day program that will walk you through each and every aspect of health optimization. The content is all inclusive of weight training, nutrition, meal planning and preparation, supplements and mindset all meticulously programmed to allow you to fully optimize your health and fitness. You can learn more at:

[www.90Days2Optimized.com](http://www.90Days2Optimized.com)

**Q: I am noticing that after I finish my training day and wake up to the next fasting day, my weight has shot up by 5 pounds! Is my fat loss stalling, or even reversing to the point where I'm putting fat back on?**

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<sup>175</sup> <https://www.amazon.com/exec/obidos/ASIN/1942761724/fabfitove40-20>

**A:** As we mentioned, due to the depletion of muscle glycogen stores, it's common to see your weight drop after a fast. And upon replenishment of glycogen stores, your weight may go up due to increased water retention. Don't panic. Many people become fixated on scale weight during diets. The scale is just one tool you have at your disposal and should not be your only measurement of success. Because it does not tell the full story and losing body fat does not necessarily mean dropping scale weight. A simple and accurate way to see if you're losing fat is to see how your clothes fit week to week. If you're dropping waist sizes then you're making excellent progress.

**Q: Is taking nicotine gum addictive/safe?**

**A:** The use of nicotine gum during the fasting windows of the MBTD is safe when the lowest effective dosage principle is applied. The science behind nicotine's effectiveness as a nootropic and a thermogenic has already been covered in this book. It's critical that you don't use nicotine for longer than brief periods during specific, programmed phases of the diet. Nicotine can be addictive, but at the lowest effective dosage for short term usage, we have not experienced any withdrawal symptoms or dependency issues.

**Q: What if I don't have a script for Amour or Metformin?**

**A:** In countries where it is legal to obtain either without a prescription, the information found inside this book could be followed to mimic the results discussed. If you are acquiring these products without a doctor's prescription in countries where it is illegal to do so, we cannot recommend breaking the law. Berberine is an over the counter (OTC) alternative to Metformin that we recommend that we recommend.

**Q: Is it OK to take other thyroid medication, aside from Amour?**

**A:** We recommend Thyroid medications derived from desiccated tissue (most commonly porcine). These medications are mild, and are not as strong as the synthetic Thyroid medications prescribed by most doctors for thyroid issues/imbalance. Either way, it's best to have blood work done in advance to adjust the dosage accordingly.  
**REMEMBER** Thyroid medications are by Doctor's prescription

only in the USA.

**Q: As a man, will I lose muscle if I'm natural (i.e. not on testosterone replacement therapy)?**

**A:** Absolutely not, as long as the training stimulus is adaptive to the caloric intake and quality of carbs, protein and fats during your feeding windows (especially on training days). If your testosterone is in the normal range (+575 ng/dL), it's as if you are already ON testosterone replacement therapy (TRT). TRT isn't a supraphysiological dose – it's a clinical dose designed to get your testosterone levels in the optimal range. For much more on understanding Hormonal Optimization, please read *The TRT MANual*<sup>176</sup>

**Q: When should I replenish carbs and how much should I eat?**

**A:** You should always consume carbs before, during and immediately after your workout on training days. Replenishing carbs (also known as a re-feeding) is something that is bio-adaptive and highly individual to the person. For long-time dieters, they know when their muscle glycogen stores are tanked. On training days (and immediately after training), you will always eat to the upper carbohydrate range of your body type as determined by the charts found inside the book.

**Q: If I feel exceptionally hungry, is it OK to break the fast early on occasion?**

**A:** That's up to you, and it is respective of your individual goal. If you're fat, or not where you need to be with your fat loss goals, breaking the fast early is counter-productive to maximum fat loss.

**Q: Can I fast longer than 21 hours if I feel good?**

**A:** Absolutely. It's not unusual for some using the MBTD to fast a full 24-36 hours before refueling their body. This works especially well for those with a lot of body fat to lose. We DO NOT recommend FASTING on training days. If one trains in the late afternoon, breaking a 36 hour fast within one to two hours of training

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<sup>176</sup> <https://www.amazon.com/exec/obidos/ASIN/1942761724/fabfitove40-20>

(consuming a high glycemic carb source to replenish muscle glycogen before training) often works very well to burn body fat.

**Q: Fasting for long periods suppresses my appetite. Is it OK to eat just one or two meals?**

**A:** Absolutely. This is a strategy that works really well for maximum fat loss in a minimum amount of time. Many successful MBTD users eat 1-3 times a day on their fasting days. Also minimizing eating frequency increases the presence of a muscle building/fat burning hormone produced in the stomach known as Ghrelin. Ghrelin has a potent ability to stimulate the production of natural Growth Hormone.<sup>177</sup> Ghrelin has numerous other benefits. Studies show Ghrelin can have positive effects on learning and memory, and learning may be best during the day when Ghrelin levels are highest.<sup>178</sup> These are the exact conditions found between 16 and 22 hours of long fasting windows when using the MBTD. Ghrelin also has an ability to defend against anxiety/depression symptoms brought on by high levels of stress.<sup>179</sup>

**Q: What if I can't do fasted cardio?**

**A:** Not being able to do 'fasted cardio' upon awaking will reduce your overall rate of body fat loss over time. Doing some cardio on a daily basis (preferably when blood glucose is low) will also enable free fatty acids to be burned preferentially as fuel while at rest. More cardio is better than none at all, and fasted cardio is optimal on the MBTD.

**Q: Can I do cardio with weights?**

**A:** For your weight training to be most effective for building and maintaining muscle, cardio should be kept separate. This means that after a weight training session, one could engage in a short bout of cardio training since one's heart rate is (ideally) already elevated from their weight training session. That said, if that is the only option your schedule will allow, then it is preferable to do cardio after weights.

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<sup>177</sup> Kojima M, Hosoda H, Date Y, Nakazato M, Matsuo H, Kangawa K. Ghrelin is a growth-hormone-releasing acylated peptide from stomach. *Nature*. 1999;402(6762):656-60.

<sup>178</sup> Diano S, Farr SA, Benoit SC, McNay EC, da Silva I, Horvath B, Gaskin FS, Nonaka N, Jaeger LB, Banks WA, Morley JE, Pinto S, Sherwin RS, Xu L, Yamada KA, Sleeman MW, Tschöp MH, Horvath TL. Ghrelin controls hippocampal spine synapse density and memory performance. *Nat Neurosci*. 2006;9(3):381-8.

<sup>179</sup> Lutter M, Sakata I, Osborne-Lawrence S, Rovinsky SA, Anderson JG, Jung S, Birnbaum S, Yanagisawa M, Elmquist JK, Nestler EJ, Zigman JM. The orexigenic hormone ghrelin defends against depressive symptoms of chronic stress. *Nat Neurosci*. 2008;11(7):752-3.

**Q: Could MBTD be used strategically when trying to gain muscle?**

**A:** We are working on a variant of the diet known as the Anabolic Blowtorch Diet. This variant will be used to preferentially maximize lean muscle gain while also minimizing body fat gain. In most examples, it is impossible to gain muscle without also gaining fat at the same time. We have come up with a version of this diet whereby lean tissue gain is possible with minimum to no fat gain for those willing to follow close instruction. To find out more information about the Anabolic Blowtorch Diet, please send an email to [jay@trtrevolution.com](mailto:jay@trtrevolution.com).

**Q: Sometimes I'm so hungry that when I break the fast, I end up bingeing - how do I stop this?**

**A:** This is an individual choice. Once you are fast adapted to the MBTD, your body's need for calories will be muted with the exception of the time period immediately after training and potentially after back-to-back fasting days. At the end of the day, you will still have to be in a specific caloric range and eat the correct foods to get results relative to your specific goal.

**Q: You mention cheat meals in the book. How do I know what is and isn't acceptable for a cheat meal?**

**A:** A good cheat meal option ensures that you are not combining high sugar and high fat at the same time. Both of these different fuel sources require the body to break them down for energy at the same time. Normally, this ends up in fat deposition because the body can't burn both fat and carbohydrate at the same time for fuel. This is especially true when an excess of both is present because one has over consumed both macronutrients. We recommend eating a large serving of clean low glycemic carbohydrates preferentially to regulate blood sugar and minimize insulin release. Advanced dieters could eat higher glycemic carbohydrates (cereal, fruit, white rice etc) right after an intense weight training session to preferentially refill muscle glycogen stores and prevent any damage from the overconsumption of high glycemic carb sources. It is also important to recognize that dieting is like life. Things get in the way. Using the MBTD can't be so restrictive that one fears to eat.

**Q: When I have a busy day and end up eating way under maintenance calories, is this acceptable?**

**A:** If your goal is maximum fat loss and you have a lot of body fat to lose, this is fine. We don't recommend this becoming a regular habit as your body will still have minimum energy requirements. Sticking with the calculations in the book is always the best choice.

**Q: How safe is it to take thermogenics, and how long should I take them for?**

**A:** This is an individual thing, and one you should get figured out under the supervision of your doctor. We don't recommend thermogenics that tax the adrenergic pathways, as these can elevate heart rate (this may be a bad thing in select individuals). It really comes down to the thermogenic you are talking about specifically, and your personal risk factors.

**Q: What is a good brand of thermogenic to take?**

**A:** There are many different brands found on the market today, and we link to some good ones in this article.<sup>180</sup> Our nootropic Energy Memory Focus<sup>181</sup> is also highly recommended due to its ability to increase focus, energy and mildly suppress appetite.

**Q: Can I take fish oil capsules instead of fish oil?**

**A:** As long as the capsules come from deep sea fish, and also consist of primarily omega 3's. Please see our specific recommendations listed in the book.

**Q: If I train fasted and don't eat for several hours post workout, is this OK?**

**A:** No. Your body is preferentially able to refill glycogen stores immediately after training. This is when it's critical to eat carbs and protein to take advantage of this post-training anabolic window. This window allows your body to process higher caloric intakes due to the energy demands of the training session. Plus, we are timing our insulin events around training to take advantage of the body's

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<sup>180</sup> For a comprehensive review of some of the top thermogenics on the market, please refer to this article. Read the dosing instructions on the bottle, never exceeding more than 3 doses per day. Start at the minimum effective dose, and gradually work your way up.

<sup>181</sup> [www.optimizedlifenutrition.com](http://www.optimizedlifenutrition.com)

enhanced glycogen re-uptake capabilities. Effective weight training under conditions of low muscle and liver glycogen (as found when one is fasted) is terribly inefficient and often leads to injury.

**Q: I'm allergic to avocado/coconut/olive oil, what's a good alternative?**

**A:** If you are allergic to all of those, there are oils you maybe experiment with (sesame, walnut or cottonseed, for example).

**Q: I can't afford to take all these supplements, so do I really need them?**

**A:** You never NEED supplements. We provide recommendations that allow one to optimize the MBTD from different aspects. With that said, using the supplements and medications we recommend will definitely help maximize fat loss.

**Q: If I can't take all these supplements, which ones are the absolute essentials?**

**A:** Nothing is a 'must'. However, for people with poor insulin sensitivity, using Metformin will dramatically improve carbohydrate metabolism and reduce blood sugar.

**Q: Your training programs mostly involve high repetitions. Can I also do low rep (i.e. strength work) while doing the MBTD?**

**A:** The Forged Training system is designed to deliver maximum hypertrophy in minimum time. We designed specific weekly training protocols in conjunction with the MBTD. If they are followed exactly as instructed, they work amazingly well. Choosing another training system or program is purely an individual choice. The Forged Training programs outlined in this book were specifically created for the MBTD. If followed consistently, users will experience great results. As long as you are training to positive muscle failure, you will grow larger muscles if the other factors (nutrition, rest, optimized hormones) are there. Remember, you are hitting a variety of rep ranges in Forged (15-25). For much more on Forged visit

[www.advancedforgedtraining.com](http://www.advancedforgedtraining.com).

**Q: What can I do to keep the hunger away during fasting windows?**

**A:** We've found that chewing zero calorie gum massively helps when hungry. Also drinking black coffee or water with caffeine increases metabolic rate and provides needed energy. Chewing nicotine gum also provides a mild nootropic effect while also blunting appetite. These strategies are covered in depth throughout the pages of this book. It's also important to recognize that once one becomes 'fast adapted', the hunger pangs and irritability dissipate and usually go away altogether.

**Q: I've been on a diet and in a caloric deficit for a number of months. Can I go on the MBTD or not?**

**A:** It really depends. We wouldn't start at the end of a diet where we were at 5/6% body fat. However if you have been in a caloric deficit and your metabolism is still healthy (you're not burnt out due to diet fatigue) we do not see any reason to not do it.

**Q: This book appears awesome, but I'm concerned it's written for just fitness people looking to get ripped. What about average folks just looking to lean out and fit into clothes better? Do the fast window's have to be so long for both men and women to get benefit?**

**A:** We have broken down users into 3 groups that will determine how long you fast and how aggressive you get with these concepts. The MBTD is absolutely flexible to fit your needs and level of commitment. It doesn't matter if you are new to dieting or an advanced dieter/trainee. The first group of users is for 'average/normal' folks many of whom are newbies to dieting and fitness. For them, their goals are not as aggressive as the 2nd (intermediate) and 3rd group (advanced). As long as the minimum fast window's recommended in the book are adhered to, fat loss will be experienced. It is also important to remember you will be self experimenting here. If you follow the protocols outlined and are getting "too lean" or finding that you aren't losing fat as desired, you will have to adjust. This can be done with calorie manipulation, the control of your insulin response to foods eaten, fasting times, or calories burned. Somewhere in there is a balance for your life versus realistic goals

desired. The Metabolic Blowtorch Diet isn't just designed to make you look and feel better, it also improves your long term health.

**Q: I understand fasting slows down metabolic rate and potentially thyroid function. Will this have lasting effects on my metabolism?**

**A:** One of the major issues with long term Intermittent Fasting Diets is that they can slow down basal metabolic rate (BMR) due to reduced caloric consumption inevitably reducing thyroid output. The main difference with the MBTD is the increased carbohydrate and calorie intakes on Training Days help to keep the metabolism revving optimally through the increased production of AMPK. AMPK (adenosine monophosphate-activated protein kinase) is an enzyme that plays a role in cellular energy homeostasis.<sup>182</sup> High levels of AMP/ATP (low energy status) lead to the activation of AMPK, which triggers cellular processes such as: increased oxidation of fatty acids, and increased glucose uptake inside the muscles.<sup>183</sup> Think of AMPK as a cellular energy sensor which is turned on during low energy states. The exact state created during long fasting windows. There is research on fasting and AMPK showing that “human beings have to constantly adjust their metabolism in response to changes in environmental nutrient availability.”<sup>184</sup> This is because the body is always adjusting both resting energy expenditure (REE) and total energy expenditure(TEE) in times of caloric scarcity and abundance.<sup>185</sup> Due to these reasons, it is unwise to follow a fixed daily caloric intake strategy (what most IF protocols advise) as the body prefers variability knowing both REE and TEE are never constant. This is why the MBTD is so effective at optimizing basal metabolic rate over time. We recommend the MBTD as a lifestyle due to metabolism staying dynamic and never down regulating due to it's constant yo-yoing of calories and/or energy expenditure.

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<sup>182</sup> <http://bit.ly/2xLBSQL>

<sup>183</sup> <https://www.ncbi.nlm.nih.gov/pubmed/15465812>

<sup>184</sup> <http://bit.ly/2xLBSQL>

<sup>185</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4971894/>

**Q: I have an underactive thyroid, is it OK for me to do this diet?**

**A:** With any observed clinical condition, it is crucial to get the permission of your Doctor before starting The MBTD. Please speak to your physician about getting your thyroid into an optimal range.

**Q: You talk a lot about insulin sensitivity. How can I find out my insulin sensitivity?**

**A:** Great question. There are biomarkers which can be measured such as Hba1c and Fasted Blood Glucose. There is also a glucose drink you can take which measures your insulin levels. You can also buy a glucometer and check your blood sugar from a pre and post prandial pin prick. We recommend regular blood work via:

[www.CheckMyBloodWork.com](http://www.CheckMyBloodWork.com)

**Q: You recommend doing HIIT cardio on fasting days. Won't the high intensity make me dizzy if I haven't eaten?**

**A:** This is an individual thing. Many who are fast adapted will have no problem performing fasted HIT cardio in the morning. Others due to low resting blood sugar and insulin, **MIGHT** have an issue upon doing HIT cardio at various points and times. However, in a fasted state we suggest steady state cardio to ensure you don't break down proteins for glucose.

**Q: I'm a diabetic and I'm concerned about the effects of fasting on my blood sugar levels, is it OK for me to do this diet?**

**A:** We highly recommend consulting with your physician for approval before starting the MBTD.

**Q: Why do other IF protocols ask people to train fasted but you guys say it's wrong?**

**A:** We already tackled this point earlier in the book but our answer bares repeating here. It is important to recognize the majority of **IF** diets/protocols recommend a person train fasted to maximize fat burning. The primary goal of The Metabolic Blowtorch Diet lifestyle is

building a functionally strong, lean, and **HEALTHY** physique while avoiding disease as one ages. As previously stated, regularly training in a glycogen depleted state is not optimal for building muscle and hence it ignores our primary goal. We find 'fasted training' to be acceptable **ONLY** in cases where a person is obese or when the overriding and primary goal is medically required fat loss (mandated by a Physician). This is permissible with individuals suffering from Metabolic Disorder, Type 2 (non insulin dependant) Diabetes, or severe Insulin Resistance whereby health is supremely compromised. When this type of person becomes 'fast' and 'fat adapted' the muscles do become more efficient at burning fat. The number of specialized fat burning proteins are increased and the breakdown of fat for energy is enhanced. The combination of low insulin and high adrenaline levels when exercising fasted improves the burning of fat for energy. So for extremely obese individuals whose immediate medical need for losing body fat outweighs their longterm need for building muscle, we find this acceptable.

**Q: Many faiths and spiritual traditions advocate fasting for its spiritual development, is there any truth to this?**

**A:** This is an esoteric subject for a diet book. However, it's no coincidence many historical figures gained incredible insight after long periods of fasting and seclusion. Regardless of your views on spirituality, fasting undoubtedly has the ability to help you become more attuned with your intuitive self. This is because the ego spends the majority of the day preoccupied with its [perceived] needs and wants. And food is one of its biggest wants. There is no coincidence we use the phrase 'Food for thought.' Once you overcome the desire for food through fasting, you remove the background noise of the ego and its worries. What remains is a stillness and clarity of mind, enabling you to get in touch with your true internally resonant voice. It is also likely that enhanced production of BDNF and GHRELIN in long fast windows, allow for certain brain wave states to flourish allowing the mind to remain still/calm as found in various meditation states.

**Q: On fasting days because the feeding windows are so short, how am I supposed to get the required calories in?**

**A:** Good question. In all honesty, it truly depends on your goal. If your goal is pure fat loss, getting in all the required calories isn't as important as you think. We recommend you eat 1-3 meals or until you are full. Many also will choose to fast 24+ hours not eating until the next training day. If this is your course of action you should compensate by increasing your caloric load on the training day. Each person will have to experiment to see what works best for them. If your goal is maximum muscle preservation and depending on your body type, the easiest way to get the required calories in during the smaller feeding window, is through liquid protein, carbs (cyclic dextrin or sweet potato powder) and EFA's (MCT Oil, Avocado Oil, Udo's Oil).

**Q: What do you guys think of 36 Hour Fasts? Are they better than the strategic fast windows advocated by the MBTD for fat loss?**

**A:** This is a good question. For most otherwise normal aka healthy people, the fast windows advocated in the MBTD are fine for improving health markers, and reducing body fat. For those who have type 2 diabetes, attempting longer fasts of 36 hours plus (when medically supervised) is a great strategy to wean patients off diabetes medications and improve insulin sensitivity. Once the patients have reached their desired body fat level, the fast windows can then be reduced enough to allow for the patient to maintain their results and also feel good.

**Q: Do you have any insider hacks or personal strategies to really stoke the metabolic fire and improve the rate of fat loss in the fastest time possible?**

**A:** We will save most of these for the Facebook group but offer one here. An amazing tweak a seasoned dieter can apply is adjusting training days to Day 1, 2 and 5 and fasting on days 3-4 and 6-7 so that fasting is done in back to back fashion for at least 20 hours (and preferably up to 22 hours). This massively increases stubborn body fat reduction due to the increase in catecholamines (norepinephrine and adrenaline) which help to mobilize fat burning in areas that have poor blood flow. 80+ hours a week of fasting combined with effective training (weights and cardio) and optimal nutrition (on training days) will dramatically improve fat loss per unit of time.



# The Metabolic Blowtorch Diet Glossary<sup>186</sup>

## Amino Acids

An amphoteric organic acid containing the amino group NH<sub>2</sub>; especially : any of the various amino acids having the amino group in the alpha position that are the chief components of proteins and are synthesized by living cells or are obtained as essential components of the diet.

## Basal Metabolic Rate (BMR)

The minimal rate of energy expenditure per unit time by endothermic animals at rest.

## Body Fat

The body fat percentage (BFP) of a human or other living being is the total mass of fat divided by total body mass; body fat includes essential body fat and storage body fat. Essential body fat is necessary to maintain life and reproductive functions.

## Calories

A unit equivalent to the large calorie expressing heat-producing or energy-producing value in food when oxidized in the body.

An amount of food having an energy-producing value of one large calorie.

## Carbohydrate / Carb

Any of various neutral compounds of carbon, hydrogen, and oxygen (such as sugars, starches, and celluloses) most of which are formed by green plants and which constitute a major class of animal foods.

## Central Nervous System

Is the part of the nervous system consisting of the brain and spinal cord.

## Cheat Meal

When one is on a strict diet regime they occasionally will have a meal

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<sup>186</sup> These definitions are widely found online and also modified by Jim and Jay to be relevant to the application of The Metabolic Blowtorch Diet.

that allows for them to eat things that are not apart of the prescribed diet.

## **Cognitive Enhancement**

When drugs, supplements, or other substances improve cognitive function, particularly executive functions, memory, creativity, or motivation, in healthy individuals.

## **Complex Carbs**

Apolysaccharide (such as starch or cellulose) consisting of usually hundreds or thousands of monosaccharide units; also : a food (such as rice or pasta) composed primarily of such polysaccharides<sup>3</sup>

## **Cortisol**

Cortisol is a hormone that's released during times of stress, whether physical or psychological. It activates the fight or flight response as a survival adaptation.

## **Ectomorph**

Characterized as linear, thin, usually tall, fragile, lightly muscled, flat chested and delicate; described as cerebrotonic inclined to desire isolation, solitude and concealment; and being tense, anxious, restrained in posture and movement, introverted and secretive.

## **Endomorph**

Characterized as round, usually short and soft with under-developed muscles and having difficulty losing weight; described as viscerotonic enjoying food, people and affection; having slow reactions; and being disposed to complacency.

## **Essential Fatty Acids (EFAs)**

Essential fatty acids, or EFAs, are fatty acids that humans and other animals must ingest because the body requires them for good health but cannot synthesize them. Those not essential are non-essential fatty acids.

## **Insulin**

A hormone produced in the pancreas by the islets of Langerhans that regulates the amount of glucose in the blood. The lack of insulin causes a form of diabetes.

## **Fasted Cardio**

Cardio workout during hours of fasting (not eating).

## **Fasting**

Fasting is a willing abstinence or reduction from some or all food, drink, or both, for a period of time. An absolute fast or dry fasting is normally defined as abstinence from all food and liquid for a defined period, usually a period of 24 hours, or a number of days.

## **Fasting Window**

Hours of the day fasting (not consuming food).

## **Fat**

A natural oily or greasy substance occurring in animal bodies, especially when deposited as a layer under the skin or around certain organs.

## **Fat Loss**

Weight loss, in the context of medicine, health, or physical fitness, refers to a reduction of the total body mass, due to a mean loss of fluid, body fat or adipose tissue or lean mass, namely bone mineral deposits, muscle, tendon, and other connective tissue. Weight loss can either occur unintentionally due to malnourishment or an underlying disease or arise from a conscious effort to improve an actual or perceived overweight or obese state.

## **Fructose**

Fruit sugar.

## **Glucose Concentrations**

The normal blood glucose level (tested while fasting) for non-diabetics, should be between 3.9 and 5.5 mmol/L (70 to 100 mg/dL). The mean normal blood glucose level in humans is about 5.5 mmol/L (100 mg/dL); however, this level fluctuates throughout the day.

## **Glycogen Replenishment**

Glycogen, which is stored in the muscles, is the fuel source athletes must restore following strenuous training. Muscle glycogen is the predominant fuel source used during long bouts of aerobic exercise. In fact, aerobic performance is directly related to initial glycogen stores. Once glycogen is depleted, the athlete will feel fatigued and

performance will suffer. High-glycemic carbohydrate foods, such as white bread, candy made from dextrose, or maltodextrin supplements, will replenish glycogen stores when consumed immediately following workouts since muscle tissue is spongelike and therefore will rapidly soak up glucose from the high-glycemic carbohydrates.

## **High Intensity Interval Training (HIIT)**

High-intensity interval training (HIIT), also called high-intensity intermittent exercise (HIIE) or sprint interval training (SIT), is a form of interval training, a cardiovascular exercise strategy alternating short periods of intense anaerobic exercise with less intense recovery periods. HIIT is the concept where one performs a short burst of high-intensity (or max-intensity) exercise followed by a brief low-intensity activity, repeatedly, until too exhausted to continue. Though there is no universal HIIT session duration, these intense workouts typically last under 30 minutes, with times varying based on a participant's current fitness level.

## **High GI (glycemic index)**

A food with a high GI raises blood glucose more than a food with a medium or low GI.

## **Insulin Sensitivity**

Describes how sensitive the body is to the effects of insulin. Someone said to be insulin sensitive will require smaller amounts of insulin to lower blood glucose levels than someone who has low sensitivity.

## **Lipolysis**

Is the breakdown of lipids and involves hydrolysis of triglycerides into glycerol and free fatty acids. Lipolysis is also referred to as the process of 'fat burning'.

## **Macronutrients**

A type of food (e.g., fat, protein, carbohydrate) required in large amounts in the human diet.

## **Maintenance Dieting**

Maintenance dieting is referred to as eating the required macronutrients to maintain your current bodyweight and condition. These numbers change based on a person's body type and insulin sensitivity.

## **Mesomorph**

Characterized as hard, rugged, triangular, athletically built with well developed muscles, thick skin and good posture; described as somatotonic inclined towards physical adventure and risk taking; and being vigorous, courageous, assertive, direct and dominant.

## **Metabolism**

The sum of the processes in the buildup and destruction of protoplasm; specifically : the chemical changes in living cells by which energy is provided for vital processes and activities and new material is assimilated. Regular exercise can help to increase your metabolism.

## **Muscle Catabolism**

The breaking down of complex molecules into smaller ones. As it relates to bodybuilding, catabolism is the breaking down of muscle tissue.

## **Muscle Gain**

A positive energy balance, when more calories are consumed rather than burned, is required for anabolism and therefore muscle hypertrophy. An increased requirement for protein, especially branch chained amino acids, is required for elevated protein synthesis that is seen in athletes training for muscle hypertrophy.

## **Muscle Glycogen**

The storage form of carbohydrates. Glycogen is the primary fuel your muscles use for energy production; therefore, optimizing glycogen stores is important and it's one of the reasons energy levels decrease when reducing carbs.

## **Nitrogen Balance**

Nitrogen balance is a measure of nitrogen input minus nitrogen output.

## **Nitrogen Retention**

A fundamental prerequisite of any bodybuilding program, is a sufficient intake of complete proteins. A positive nitrogen balance is an accurate indication that one is consuming adequate protein.

## **Neurotransmitters**

A substance (such as norepinephrine or acetylcholine) that transmits

nerve impulses across a synapse.

## **Nootropic**

A substance that enhances cognition and memory and facilitates learning.

## **Omega 3's**

Are polyunsaturated fatty acids (PUFAs) with a double bond (C=C) at the third carbon atom from the end of the carbon chain.

## **Peri-workout**

During workout.

## **Pre-workout**

Before workout.

## **Protein**

Any of various naturally occurring extremely complex substances that consist of amino-acid residues joined by peptide bonds, contain the elements carbon, hydrogen, nitrogen, oxygen, usually sulfur, and occasionally other elements (such as phosphorus or iron), and include many essential biological compounds (such as enzymes, hormones, or antibodies).

## **Positive muscle failure**

When a muscle is trained to a limit whereby not a single rep can be performed again without aid or assistance.

## **Post-workout**

After workout.

## **Rep Range**

A specified range of weight lifting repetitions.

## **Resistance Training**

Resistance training is a form of exercise that improves muscular strength and endurance. During a resistance training workout, you move your limbs against resistance provided by your body weight, gravity, bands, weighted bars or dumbbells. Some exercise machines can also be used for resistance training.

## **Resting Energy Expenditure (REE)**

The amount of calories needed to maintain basic body systems and body temperature at rest.

## **Rest Interval**

Describe a pause between sets of an exercise (could be a sprinting) which allows your muscles to recover partially before beginning the next set.

## **Skeletal Muscle**

Skeletal muscle is one of three major muscle types, the others being cardiac muscle and smooth muscle. It is a form of striated muscle tissue which is under the 'voluntary' control of the somatic nervous system.<sup>9</sup> Most skeletal muscles are attached to bones by bundles of collagen fibers known as tendons.

## **Starvation**

Starvation is a severe deficiency in caloric energy intake needed to maintain an organism's life.

## **Somatotype**

Body type.

## **Soy**

A protein derived from soybeans, used as a replacement for animal protein in foods and fodder.

## **Targeted Intermittent Fasting Diet (TIFD)**

Otherwise known as The Metabolic Blowtorch Diet. This type of fasting alternates days of fasting (non training days) with days of ample calories and carbohydrates (training days) to keep the metabolism in a constant state of flux.

## **Thermic Effect of Food (TEF)**

Specific dynamic action (SDA), also known as Thermic effect of food (TEF) or dietary induced thermogenesis (DIT), is the amount of energy expenditure above the resting metabolic rate due to the cost of processing food for use and storage.

## **Thermogenic**

Thermogenic means tending to produce heat, and the term is commonly applied to drugs which increase heat through metabolic stimulation, or to microorganisms which create heat within organic waste.

## **Thermogenesis**

Thermogenesis is the process of heat production in organisms.

## **Thyroid Hormone**

The thyroid hormones, triiodothyronine (T3) and its prohormone, thyroxine (T4), are tyrosine-based hormones produced by the thyroid gland that are primarily responsible for regulation of metabolism.



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Private Consulting

**If you take a look** at the most impressive physiques in the world, whether as a weekend warrior or an athlete competing at the highest level, they all have one thing in common:

A professional, qualified coach who helps them dial in their nutrition, training and competitive mindset.

They don't waste time or bang their heads against the wall trying to figure out everything all by themselves. They leave all the hard thinking and decision-making to somebody else, so they can do the one thing they're supposed to do: Consistently execute the plan that is known to **WORK!**

If you want someone to guide you through your fitness journey, or even keep you accountable on The Metabolic Blowtorch Diet, you can personally work with us 1-on-1. We will provide you with a diet and training routine completely customized to your body type and fitness goals.

Visit [www.TRTRevolution.com/coaching](http://www.TRTRevolution.com/coaching) to find out more. It might be the best decision you will ever make for optimizing your lifelong health!

## A SINCERE REQUEST

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The information found inside this book provides a real path to sustainable fat loss for life. It can also prevent millions from suffering from the debilitating effects of extreme diets that don't deliver results, fulfillment or flexibility.

In order for this book to reach as many people as possible, we're depending on you! Please do us a huge favor and write an honest review. The more reviews it gets, the more this information will help others just like you escape from the conditions of yo-yo dieting and sub-optimal fat loss and transform their lives. We are sincerely grateful for the time and effort you put into writing a thoughtful review.

Thank you so much for reading The Metabolic Blowtorch Diet. We hope you use this information to transform your own life.

[www.TRTRev.com/review](http://www.TRTRev.com/review)



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About the Authors

**Jay Campbell** is the Amazon Best Selling author of ‘*THE Definitive Testosterone Replacement Therapy MANUAL: How To Optimize Your Testosterone For Lifelong Health and Happiness*’.<sup>187</sup> Jay is also the Founder of TRTRevolution.com<sup>188</sup> and the TRT Revolution Podcast.<sup>189</sup> Jay is also a former champion male physique competitor and co-founder of Fabulously Fit Over 40<sup>190</sup> - the #1 site on the web for ‘Fit Over 40’ information.

**Jim Brown** is an elite athlete who began training as a bodybuilder at 13 years old. Over the course of 33 years, he has become knowledgeable in every aspect of body transformation, hormonal optimization and elite performance. Jim is the creator of the Forged Training system.<sup>191</sup> Forged is a complete training program allowing maximal muscle gain in minimal time training.

Jay and Jim write for *Iron Man Magazine* as the Fitness over 40 Experts. Jay and Jim in partnership with visionary entrepreneur Joshua Smith<sup>192</sup> are also the co-owners of Optimized Life Nutrition (OLN),<sup>193</sup> which produces the world’s most powerful OTC nootropic supplement E-M-F (Energy Memory Focus). OLN offers a unique line of supplements essential for living a hormonally balanced and fully optimized life.

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<sup>187</sup> <https://www.amazon.com/exec/obidos/ASIN/1942761724/fabfitove40-20>

<sup>188</sup> <http://www.trtrevolution.com/>

<sup>189</sup> <https://itunes.apple.com/ca/podcast/trt-revolution-podcast/id1097576864?mt=2>

<sup>190</sup> <http://fabfitover40.com/>

<sup>191</sup> <http://www.trtrevolution.com/forged-training/>

<sup>192</sup> <http://www.gsdmode.com/>

<sup>193</sup> <http://www.optimizedlifenuitrition.com>