

# METABOLIQ®

## Reset and Recharge Your Metabolism - For Life

With two out of every three people in the United States classified as being overweight or obese, the weight loss market is literally busting at the seams. Many companies are looking to capitalize on the weight loss trends and are much more concerned with generating profits rather than providing real, sustainable, or healthy solutions. As a result, the market is cluttered with fad diet programs and products; some of which include magic foods, silver bullet caffeine capsules, fat and carb blockers, quick cleanses, protein drinks, low-fat foods, and so-called nutrition bars. Virtually all of the popular diet methods in the marketplace prove to be unsustainable because they are not developed to deliver what your body needs for the long term. In fact, these popular weight loss diets aren't designed to protect or improve the health of your body; they're designed to give you a quick fix loss of a few pounds to make you think that they are working. But this rapid weight loss is weight you will quickly regain, and your body will be worse off in the long run.

While you may lose weight with these fad programs and products, you are likely doing more harm than good by losing lean tissues including muscles, organ tissues, and bone mass. Loss of muscle and bone becomes even more dangerous as we get older and lean tissues are more difficult to repair and recover. Without proper nutrition during weight loss to target loss of body fat, the loss of lean tissues (muscles, bones, heart, liver, intestines, and kidneys) reduces your ability to burn calories and eliminate body fat. This makes it more and more difficult to lose weight and keep weight off. The longer you use a bad diet the fewer calories you can eat.

Because of our modern food distribution system, and our convenience-oriented and indulgent society, weight management must become a daily, deliberate, and conscious process. It doesn't need to be complicated or difficult, but healthy and successful weight management must be a lifestyle decision. Qivana is dedicated to providing real solutions to healthy and sustainable weight loss and to creating lifestyle habits that will help you regain your health for life.

### Proven Benefits of the METABOLIQ® System:

- *Stimulates, protects, and properly nourishes your lean muscle tissues for fat burning.*
- *Naturally melts away fat by resetting and recharging your metabolism.*
- *Leads to a sustainable, improved body shape and composition within weeks.*
- *Eliminates hunger pangs, energy crashes, and unhealthy food cravings.*

\*These statements have not been evaluated by the food and drug administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## METABOLIQ® Product Profile

*Qivana's METABOLIQ®  
System Provides Real  
Sustainable Weight-  
Loss Solutions*



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## METABOLIQ - An Entirely Original Model

Qivana's comprehensive METABOLIQ System is based on the most exciting breakthroughs in weight loss research in decades. This new understanding has led to the development of a total lifestyle approach to weight loss and management proven to be simple to use and sustainable for the long-term.<sup>a</sup> METABOLIQ's totally unique formulas, products, ingredients, and programs are the crowning achievement of more than three decades of published research, millions of dollars in studies, and with efficacy established by random controlled human clinical trials. This system proves that sustainable fat loss and dramatic improvements in body composition are possible with proper nutrition at any age. No other program delivers these reliable and sustainable results.

The METABOLIQ System is backed by the discoveries and award-winning research of Dr. Donald Layman, a world-leading nutrition and metabolic scientist at the University of Illinois. Dr. Layman has partnered with Qivana to reveal his weight loss breakthroughs in a simple 90-day system that provides real, reliable, dramatic results. This system is based on four unique and highly targeted mechanisms to energize the body's ability to burn calories and eliminate unwanted body fat.

- 1. First, the METABOLIQ System activates your muscles to their full potential. Your muscles determine everything about your body weight including how many calories you can tolerate, what foods you need, and ultimately your health.<sup>b</sup> The METABOLIQ System introduces an important new concept of macrobalance that focuses on eating the right portions of the right proteins, carbohydrates, and fats at each meal to energize and rebuild your muscles. Macrobalance is based on Dr. Layman's ground-breaking discoveries about the branched-chain amino acids (BCAA) in protein and how these essential amino acids activate your muscles to repair and remodel our most fundamental structures including muscle proteins and mitochondria, the metabolic furnaces of your body.<sup>c</sup> This process actually causes you to use stored body fat to fuel the energy needs of these highly active muscles. In this way weight control is all about helping the muscles do the work. Body composition changes by losing the right weight—weight from fat, and not from active tissues like muscles or organs.*
- 2. The second way the METABOLIQ System reduces fat is by minimizing insulin action to store excess dietary carbohydrates as body fat. This is achieved by consuming the proper amount of the right kind of carbohydrates.<sup>d,e</sup> The system gives you the right proportions of the best foods for fat burning including high quality proteins and SmartCarbs while minimizing starchy carbs at every meal. This is all part of the new macrobalance concept. Getting the correct balance of these macronutrients stabilizes blood sugar, reduces energy crashes, eliminates cravings, and halts hunger pangs.\**
- 3. To further accelerate fat burning, the METABOLIQ System includes a Boost capsule containing clinically validated weight loss ingredients that create a thermogenic effect in the body to increase metabolism and help burn fat. This fat burning thermogenic capsule increases the body's resting rate of energy expenditure.*
- 4. Finally, the System includes METABOLIQ® Resist, an all-natural after-meal tablet based on an Indian herb that temporarily blocks sugar receptors and represses sweet cravings for up to two hours. This proprietary, rapid-dissolve tablet will help everyone to resist sweets, even those who consider themselves to have weak willpower. Think of Resist as willpower on demand.*

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## The Scientific Foundation for METABOLIQ

The METABOLIQ System is the result of award-winning research at the University of Illinois by Dr. Donald Layman, a metabolic expert specializing in weight loss research. The METABOLIQ System and products were formulated using decades of cutting-edge research demonstrating unique insight and superior understanding of the relationship between muscle metabolism and body composition. Qivana has partnered directly with Dr. Layman and used his expertise and the results of his breakthrough findings to build a simple 90-day system where you can achieve reliable, dramatic results. Qivana's METABOLIQ System contains superior formulas, unique products, high-quality ingredients, and a comprehensive lifestyle program that are backed with millions of dollars of published research and human clinical trials.

### Dr. Layman - Pioneering the Way in Metabolic Research

Dr. Layman is recognized internationally for his incredible research breakthroughs and publications representing new thinking about amino acid metabolism, lean muscle health, nutrition requirements for exercise, and new approaches to teaching use of protein, carbohydrates, and fats in weight loss diets. Dr. Layman was the first to uncover the specific role of the unique BCAA leucine in building lean muscle mass and reducing body fat.

Dr. Layman says, "For over 35 years, I have personally researched and published studies in the areas of sports nutrition, obesity, and diabetes and the link between muscles and lifelong health. I am very excited to partner with Qivana to bring to you the METABOLIQ System. Having studied the weight loss industry for years, I am proud to finally create the only complete nutritionally-balanced program proven to offer a healthier lifestyle and long-term weight control for everybody at every age. The METABOLIQ System is based on my revolutionary research and clinical discoveries. Not surprising, many other weight loss diets reference my research as the foundation for understanding the role of protein in diets for adults. Unfortunately, most get it wrong. For the first time ever, you can use the secrets of my award-winning research for lifetime weight management."

### **Macrobalance - The Foundation of the METABOLIQ System**

Many people are caught in the diet confusion about the fear of fat, which has led to gross over-consumption of carbohydrates and the carbohydrate-crash cycle in the body. In fact, Americans are told to eat 50 to 65 percent of their total calories from carbohydrates, and they do, consuming over 350 grams of carbohydrates every day. If you're an elite athlete, you may be able to use 350 grams of carbohydrates each day, but most people need less than 130 grams of daily carbs. The trouble is that too many carbohydrates, especially the highly refined cereal grains, lead to rapid spikes in blood sugar levels. As blood sugar spikes, insulin is rapidly released

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to quickly stabilize the sugar in your bloodstream and push the sugar into your cells. These excess carbohydrates in the diet create more body fat, and this chain reaction ultimately leads to fat storage and obesity. In addition, large swings in blood sugar levels create a crash feeling and triggers feelings of tiredness, hunger, and food cravings, usually for more carbohydrates. Eating more carbohydrates simply restarts this cycle, causing even more fat storage. Controlling carbohydrate intake and the resulting insulin levels are a critical part of minimizing fat storage.

Carb elimination diets are on the right track, but fail to understand the importance of the *macrobalance* with protein. Some fuel from carbohydrates is an essential part of muscle health and supporting physical activity, but carbohydrates must be correctly balanced with protein to energize muscles while avoiding energy crashes, food cravings, and ultimately excess fat storage. The very low carbohydrate diets that are said to be ketogenic eliminate too many essential nutrients found in vegetables and fruits, while conventional low-fat diets provide too many carbohydrates that trigger the insulin carbohydrate-crash cycle that leads to fat storage. It's all about getting the *macrobalance* right.

Even more important than minimizing fat storage by controlling carbohydrates, METABOLIQ simultaneously maximizes fat burning by energizing and building muscle tissues with the proper consumption of high quality proteins and essential amino acids. Stimulating the muscles helps build and repair lean tissue and dramatically increases calorie use, specifically burning fat stores and ultimately changing body composition. The amazing secret behind the success of the METABOLIQ System is understanding the proper use and balance of dietary protein and the role of the amino acid leucine.

The METABOLIQ System focuses on decreasing fat storage and inducing fat burning by consuming the right proportion of healthy proteins and *SmartCarbs* (carbs high in fiber) while controlling the starchy and sugary carbs at each meal. This ideal balance of foods for fat burning is the breakthrough discovery behind *macrobalance*. Through a systematic program of molecular research and clinical trials, Dr. Layman found that each meal requires 30 grams of a precise blend of amino acids to fully activate muscle metabolism while limiting starchy carbs to prevent the negative impact of insulin. This *macrobalance* concept serves as the foundation for the METABOLIQ System.

The Qivana METABOLIQ® *Lifestyle* incorporates the complex concepts of *macrobalance* into a simple new teaching approach to healthy nutrition balance. Users of the METABOLIQ *Lifestyle* learn to visualize each meal by dividing their plate into thirds; each third represents a food group. Start with the protein portion or entree and determine a food that will give you roughly 30 grams of protein. Equally balance a portion of starchy carbs in the second section, and then finish off the *macrobalance* on the plate with an equal portion of *SmartCarbs*. In truth, you can enjoy as many *SmartCarbs* as you would like because the fiber content of the *SmartCarb* foods will fill you up before you can eat too many calories. These *SmartCarbs* are the

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green vegetables and high fiber fruits that provide essential nutrients and work for you, not against you. The METABOLIQ System makes this meal planning approach simple by providing you with the METABOLIQ® Shake, a prepared, on-the-go meal that is ideally designed for use at breakfast and/or lunch. The METABOLIQ® Stick can be used to supplement a meal or used alone as a healthy snack.

### Why Protein Source Really Matters

Dr. Layman's creation of the *macrobalance* concept reflects an entirely new understanding about dietary proteins and the unique role of the amino acid leucine in repairing and protecting muscles during weight loss. Dietary protein always provides amino acids as building blocks to make new proteins in your body. But beyond this basic purpose of protein, some of the amino acids have other roles, and one of the most important of these for adult health is the special role of leucine in muscle.<sup>c,d,f,g</sup> Dr. Layman discovered that the amount of leucine consumed at each meal throughout the day ultimately determines the health of your muscles and the composition of your body.<sup>h,i</sup> Leucine energizes your body and turns on your muscles to their full potential. Leucine is an amazing molecule that activates your muscles to burn calories.

Dr. Layman discovered the power of leucine while studying recovery after exercise.<sup>g,j,k</sup> After a hard workout or competition, athletes often use drinks that contained electrolytes and carbohydrates for recovery. While these drinks work well for recovery of hydration and muscle glycogen they do nothing to help your muscles repair and regenerate. Muscles do not fully recover until you eat protein and specifically until you get the right amount of leucine which is the metabolic signal that tells the muscles the diet is adequate to support repair and recovery. Dr. Layman has now applied these same principles in developing the METABOLIQ System to energize and protect muscle and get rid of body fat. The clinically proven formula of the *macrobalance* that is incorporated into the METABOLIQ products is designed to naturally maximize loss of body fat, nourish and maintain your active muscles, and reset and recharge your metabolism. In other words, your body shape, mobility, and overall lean body composition will significantly improve.

While most marketers focus simply on the total amount of protein, they fail to understand the importance of getting the critical amount of leucine and the optimal balance of the three BCAA in each serving or meal. Proteins come from many different sources; some are plant-derived and some are animal-derived. Each different protein is constructed of different amounts of leucine and the BCAA. Dr. Layman discovered that each of the BCAA have different and specific roles in the body. Dr. Layman's research determined that, in general, animal proteins have a more complete balance of these BCAA and are superior to plant proteins for stimulating and properly nourishing muscles, one of the critical components of healthy weight loss.

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### Dr. Layman's Breakthrough Discovery--BCAA's and Natural Fat Burning

Diets that are higher in protein and have reduced carbohydrates are gaining acceptance with medical professionals for weight loss and treatment of type 2 diabetes. Unfortunately, the ideal balance of protein, carbohydrates, and fat for these diets is not well understood. Dr. Layman has become an internationally-recognized leader in this field with his discoveries about BCAA's (branched-chain amino acids) and their contribution to creating the ideal macrobalance. His award-winning research has shown that it is not just about reducing carbs and increasing protein, but about getting the right balance and right types of protein (thus BCAA's) and carbs at each meal.<sup>a,i,m,n</sup>

Leucine, isoleucine, and valine, known as the branched-chain amino acids (BCAA), are three of the nine essential amino acids. These three BCAA make up about 25 percent of the total daily protein intake and represent a very unusual part of our daily protein requirement. The body has evolved expecting to receive BCAA in high quantities. These three BCAA, and particularly leucine, provide the body with a unique signal that the diet is adequate for the daily demands of repairing and remodeling the body. This signal allows the body to trigger synthesis of new proteins in muscle, which is a very energy-intensive process that requires burning of stored fats and ultimately leads to changes in body composition with more lean tissue and less body fat. This signal is also interpreted by the body that its nutrition needs have been satisfied which reduces hunger and cravings so you stop eating naturally.

What makes these amino acids so unique is that the body evolved to metabolize the BCAA in skeletal muscle, whereas all other amino acids are metabolized in the liver. After a meal, 75 percent of dietary BCAA appear directly in the blood. Skeletal muscle learned to recognize this change in blood leucine as an indicator of diet quality. If leucine does not increase in the blood after a meal, the muscle interprets that the body is in a starvation condition and shuts down use of energy and amino acids for muscle repair or building. This response in the body is a type of fight-or-flight response.

Dr. Layman proved that specific BCAA's actually regulates muscle protein synthesis like an on-off switch. After a meal, BCAA's increases in the blood and activates a signal cascade in muscles which turns on the translational machinery that allows the body to translate genetic codes (mRNA) into new proteins. The molecular signal of leucine is transmitted through the signaling molecule "mTOR" (mammalian target of rapamycin) which is a key regulatory site in the insulin-signaling pathway.<sup>d,g</sup> This signal pathway allows muscle to sense diet quality and determine if the meal has the proper balance of amino acids and energy (carbohydrates) for muscle to begin the repair and building processes. Without the proper signal, muscle stays in a dormant state and stores dietary calories as body fat for future use. This is a survival response that was important for our ancient ancestors living in the wild, but in modern society where food is never limited we simply get fat. Our brain also interprets this condition as an incomplete meal and tells us we need to eat again to get protein. This cycle continues until we get a meal with adequate protein to trigger the correct signal. This is the threshold effect of leucine as a trigger at each meal.<sup>c,d,o</sup>®

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This signal cascade represents a connection between insulin and the BCAA's. More simply put, it's the macrobalance we need between dietary protein and carbohydrates. We now know that this signal pathway is dominated in growing children by the hormone signals (insulin, growth hormone, and IGF-1) which allow children to grow with very high carbohydrate diets, while in adults these growth hormones become less important and the signal pathway is dominated by diet quality. This is why the role that leucine plays in a balanced diet is critical for adults, especially during weight loss. Children and athletes need and can handle more carbohydrates in this signal, while sedentary adults need a greater proportion of protein.

The BCAA also contribute to energy, or fuel, use by the muscles. They increase synthesis of new proteins for the repair and remodeling process which requires a lot of energy, plus they have a direct effect on increasing mitochondria in the muscles.<sup>p,q</sup> Mitochondria are literally the energy furnace of the cells. They convert food calories into fuel for the body. The BCAA make your muscles more active in burning fuels.

Use of the BCAA as a fuel also helps to stabilize blood sugar. This is particularly important during exercise and energy restriction.<sup>d,r,s</sup> Using the BCAA as a fuel first requires removing the nitrogen molecule which is attached to pyruvate making another amino acid called alanine. The pyruvate comes from glucose that the muscles get from the blood and use for anaerobic metabolism (glycolysis). The new alanine is sent back to the liver. The liver breaks down the alanine to pyruvate to re-make glucose. The liver and muscle create a recycling of glucose-alanine which allows the body to reduce dietary carbohydrate intake and stabilize blood sugar.

### **Macrobalance in Practice - METABOLIQ Shakes**

The selection of weight loss shakes on the market today is unreal. The average consumer is lost in a maze of unrealistic claims and poor quality products. Most of these shakes lack the proper nutrition to be considered a viable meal replacement, and many are saturated with sugars and artificial sweeteners, causing insulin spikes and fat storage. Others contain either poor quality protein or not enough protein to contribute to muscle health.

Qivana's METABOLIQ Shake is ideally formulated with the correct *macrobalance* to be the perfect total meal replacement for weight loss. It contains a proprietary blend of four high quality proteins, plus leucine, designed to stimulate muscle synthesis. The METABOLIQ Shake has the optimal metabolic balance of protein, carbohydrates, fiber, and fats to maximize fat burning. When the macronutrients are correctly combined and perfectly timed, they leave you feeling satiated throughout the day. In addition, you should see improvements in your mood, appetite control, and total health.\* Every ingredient in this precise formulation was chosen for its important role in helping achieve healthy, rapid weight loss and long-term health.

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## **Macrobalance in Practice - METABOLIQ Stick**

There's an even greater selection of nutrition bars to choose from on the market than there are shakes. With so many choices, it's difficult to select the best bar or to know what the best ingredients are. Most bars contain inferior filler ingredients, such as rice puffs, and are made via cold-slab extrusion making them hard and off-tasting, without leaving much room for real nutrition. The METABOLIQ Stick is a delicious tasting chocolate bar that is macronutrient balanced and high in protein. Unlike other bars that are hard to chew, taste terrible, and contain artificial ingredients, high fructose corn syrup, hydrogenated oils, or unhealthy trans fats, the METABOLIQ Stick is an all-natural bar. It is one of the only bars in the world that utilizes an oven to produce a baked bar superior in taste, flavor, moisture, and shelf life. Its metabolic design is similar to the METABOLIQ Shake and it contains a delicious, mouth-watering 210 calories. It contains 15 grams of protein, but has added branched-chain amino acids to have the effect of 30 grams of protein in the body for weight loss. Try cutting the Stick in half and use half as a supplement to the Shake for lunch and use the remaining portion for a healthy snack alternative. This precise formulation is *macrobanced* to minimize fat storage and maximize fat burning.

## **METABOLIQ® Boost Scientific Validation**

METABOLIQ Boost is an exclusive, patent pending and proprietary formula of clinically validated weight loss ingredients. These ingredients have all demonstrated an ability to increase metabolism, burn calories, reduce body weight, and accelerate fat loss in just 90 days.

METABOLIQ Boost combines two powerful and clinically validated ingredients; a phospholipid wrapped green tea catechin extract, and a mega-concentrated extract of capsaicinoids from cayenne peppers. These ingredients have powerful thermogenic effects in humans and have shown to increase basal metabolic rate. Thermogenesis in the body is the process of fat being released into the blood stream for the body to use as fuel. This process of fat being used for energy provides extra energy, sheds excess water, and also helps to burn body fat. In addition to these two powerful thermogenic ingredients, METABOLIQ Boost contains several nutrients known for their role in increasing metabolism and reducing body weight.

*Puratea™ is a proprietary, highly purified, non-caffeinated green tea (Camellia sinensis) extract rich in catechin content and wrapped in a unique molecular structure that aids in superior absorption of nutrients. It stimulates the central nervous system and causes fat to be released into the bloodstream for the body to use as fuel, known as thermogenesis.*

*Micro-enrobed cayenne pepper extract (Capsicum annum) contains a protective coating to ensure it dissolves in the intestinal tract. It is extremely rich in capsaicinoids, which have been shown in multiple studies to burn calories and support healthy weight loss.*

*L-carnitine tartrate is a naturally occurring amino acid which plays a vital role in the metabolism of fat. It functions as a transporter of fatty acids into the mitochondria, the metabolic furnace of the cell.*

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The B-vitamins found in METABOLIQ Boost are required by the body for the metabolism of protein, carbohydrates, and fat. These vitamins are used to form the enzymes needed to properly metabolize food energy in the body.

The METABOLIQ Boost is backed by human clinical research in which subjects lost three times as much weight as those on a restricted diet who did not take METABOLIQ Boost. In addition, these people improved both their waistline and their BMI (Body Mass Index) over a 90-day period. You will burn more fat and burn it better with the assistance of METABOLIQ Boost.

**Key Ingredients: Green Puratea™ (decaffeinated green tea extract with phospholipids absorption technology), Capsicum annuum (Sax 2 percent capsaicinoids), Carnitine l-tartrate, B-vitamins.**

### The Science of Green Tea in Weight Loss

Clinical studies have demonstrated that catechin derivatives, mainly in gallate form obtained by extracting the aerial, unfermented parts of *Camellia sinensis* L. (green tea), can increase basal energy expenditure by as much as four percent after oral administration of the extract containing at least 270 mg of epigallocatechingallate. This thermogenic action has been investigated in several studies and has demonstrated a weight loss effect.<sup>1-3</sup>

In the short term, weight loss results can also be achieved by increasing daily energy expenditure.<sup>4,5</sup> Substances such as EGCG are believed to increase caloric consumption by increasing thermogenesis.<sup>6</sup> In 1999, Dulloo et al. demonstrated in a controlled study that oral administration of 270 mg of EGCG (in a standardized green tea extract) produced a four percent increase in energy expenditure, a 3.4 percent reduction in respiratory quotient, a 35 percent increase in fat oxidation, and a 40 percent increase in urinary NE concentration compared to baseline.<sup>7</sup>

Despite the large amount of pharmacological and clinical data on the effects of naturally occurring polyphenols on animal and human health, these molecules are poorly absorbed orally. To make the catechins more bioavailable than free form green tea, Puratea, used in the Boost formulation, has been wrapped in a new and unique stable phospholipid layer that binds to the polyphenols in green tea and dramatically improves the absorption of the Puratea actives. This unique delivery system is often at least three to five times more bioavailable measured by area under the curve (AUC) than the free form botanical.<sup>8</sup>

A recent study in Europe was performed to clinically evaluate the effect of a preparation containing a standardized green tea extract complexed with phospholipids in conjunction with a hypocaloric diet, compared to a hypocaloric diet alone. The outcomes measured total weight loss, changes in BMI, and other lab markers associated with obesity. Oral consumption of 150mg of the phospholipid complex, taken twice daily, along with a hypocaloric diet resulted in significant weight loss after 90 days (14 kg) compared to the diet-only group (5 kg).

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Considering the high safety profile of the active ingredient used in the formulation and the absence of relevant side effects in treated subjects compared to untreated subjects, the product can be considered a safe and effective tool for weight loss and impacting obesity related risk factors.

### The Science of Capsicum Annuum in Weight Loss

In several studies, performed both in human and animal models over the last 30 years, the active ingredients in capsicum annuum (red peppers) have been researched and recognized for their potential and promise as a weight loss aid.<sup>10,11</sup> Studies show such effects as diet-induced thermogenesis, reduction in body mass and percentage of body fat, and reduced waist circumference.<sup>11</sup> High levels of red peppers are needed to obtain these results, but unfortunately they are often difficult for most individuals to tolerate because of their hot taste.

The capsicum annuum extract used in the METABOLIQ Boost formula provides maximum efficacy without the traditional discomfort associated with eating peppers. This highly concentrated natural capsicum annuum extract has a specialized coating with a patent pending spheroidal beadlet that minimizes oral and GI irritation, while providing the food equivalent of up to 10 grams of peppers per serving.

Several small, short-term pilot studies have been conducted on humans with this ingredient showing positive trends on both BMI and resting metabolic rate increases. According to findings published in the *Lipids in Health and Disease*, a single 100 milligram dose of Omni Active's Capsimax ingredient increased levels of free-fatty acids both before and after exercise, compared with a placebo. In addition to the increased level of fat burning, researchers from the University of Memphis also report that the *capsaicin* ingredient did not affect heart rate, systolic, or diastolic blood pressure. The researchers also note that there were gastric upsets associated with the supplement.<sup>14</sup>

Research led by Professor Jong Won Yun at the Daegu University in South Korea, suggests that capsaicin may cause weight loss and stop fat build up by stimulating the expression of certain fat degrading proteins, and down-regulating other proteins that work to synthesize fat. The Korean research team also found that glycerol-3-phosphate dehydrogenase (GPDH) and malate dehydrogenase (MDH) were significantly down-regulated by capsaicin, resulting in a reduction in glycolytic activity and less overall fat synthesis.<sup>13</sup>

Capsaicin stimulates the visceral sensory neurons. It is then transmitted to the spinal neuron and then the adrenal sympathetic neuron resulting in increased levels of secretion of epinephrine and norepinephrine into the blood. It reacts with beta-adrenergic in liver and adipose tissues causing glycogenolysis and lipolysis. Capsaicinoids are readily and efficiently absorbed, 85 percent after 3 hours, portal pathway via passive diffusion. Capsaicinoids bind to serum albumin and are transported throughout the body. A study in the *Journal of Nutrition* demonstrated that the mechanism of action is the activation of the sympathetic nervous system which increases catecholamine secretion from adrenal medulla.<sup>9</sup> Another study published in the *International Journal of Obesity* found that capsaicin enhances fat oxidation.<sup>12</sup>

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## The Role of L-Carnitine in Weight Loss

Found naturally in the body, L-carnitine helps the body break down lipids, or fats, and turn them into metabolic energy.<sup>17</sup> Some studies show that oral carnitine reduces fat mass and fatigue, and increases muscle mass. All of these effects may contribute to weight loss.<sup>17</sup>

The body obtains some L-carnitine from the diet, primarily from red meats and dairy products. The body can also synthesize L-carnitines from the amino acids lysine and methionine. The kidney aids in keeping L-carnitine levels stable. Normally, greater than 90 percent of filtered L-carnitine is reabsorbed. If dietary intake of L-carnitines decreases, L-carnitine reabsorption becomes even more efficient.<sup>15</sup> L-carnitine plays a key role in cellular energy production. It is essential for beta-oxidation of long-chain fatty acids in the mitochondria. To enter the mitochondria, fatty acids must bind to coenzyme A, forming fatty acyl-CoA. Long-chain fatty acyl-CoA molecules are too large to cross the internal mitochondrial membrane and rely on enzymatic transportation that requires L-carnitine. In the mitochondria, fatty acids undergo beta-oxidation to adenosine triphosphate (ATP) and L-acetyl-carnitine is excreted to begin a new transport cycle.<sup>16</sup>

## METABOLIQ Resist

METABOLIQ Resist is an all-natural tablet based on the known benefits of an ancient Indian herb, gymnemma sylvestre, traditionally used to control blood sugar. The unique properties of this patent-pending product have a powerful dual action against sugar. First, the tablet temporarily blocks sugar receptors on the tongue to help repress powerful sweet cravings for up to two hours. Second, this tablet blocks the sugar absorption in the intestinal tract for a period of time. The METABOLIQ Resist leverages the power of this herb to create willpower over sweets because sugar cannot be tasted or absorbed.

Flavored for use as a sweet after-dinner mint, simply place the tablet directly onto the tongue until sweet foods cannot be tasted anymore. The sweet receptors are now blocked for up to two hours which means that anything eaten will only taste sour, astringent, or pungent. Indulging in sweets will only be dissatisfying.

Most people who overindulge in sweets consume in regular and predictable patterns throughout the day. They have mentally trained themselves that they need a sweet mid-afternoon, after dinner, or just before bedtime. This regular pattern of behavior is called the sweets cycle. Breaking out of it is often much more psychologically challenging than physiologically. Breaking these regular patterns of behavior and engrained mindsets is the key to reducing daily caloric intake of high-calorie, high-carbohydrate sweets, which often cause excess fat storage.

METABOLIQ Resist is novelly designed to be the missing element people need to break from the sweets cycle; it is literally willpower on demand. Using the METABOLIQ Resist tablet over time can help change eating behaviors and reduce sugar intake.

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The applicable part of this ancient Indian herb, *gymnema sylvestre* is the leaf. *Gymnema* contains the constituents gymnemic acid, gymnemosides, gurmarin, conduritol, gymnemasins, and *gymnema* saponins. The constituents gymnemic acid and gurmarin inhibit the ability to taste bitter (quinine) or sweet (sugar) without affecting the ability to taste sour, astringent, or pungent flavors.<sup>20</sup> Research shows that *gymnema* extracts can have a powerful effect on lowering blood glucose in animal models and in humans.<sup>18,19</sup> *Gymnema* appears to be safe when used for up to 20 months.<sup>18</sup>

## METABOLIQ System Directions for Use

The METABOLIQ System is divided in two stages: METABOLIQ® Burn (the first 90 days), and the METABOLIQ *Lifestyle*, which begins at the completion of the Burn stage. Each stage serves a specific purpose. The METABOLIQ® Burn System is designed to help you rapidly reset and recharge your metabolism, reshape your thinking, and retrain yourself how to eat properly. Beginning with the METABOLIQ Burn System, you can realize incredible results in the shortest period of time possible. The METABOLIQ *Lifestyle* will help you transition your new eating patterns into true lifestyle habits that will guarantee your long-term success.

## A Sample Day in METABOLIQ Burn:

*Morning: Take one METABOLIQ Boost capsule and your QORE System Supplements 30 minutes prior to breakfast. Make a METABOLIQ Shake for a quick, satisfying breakfast that will keep you full of energy and satisfied until lunch. The shake can be made with water, skim, or 1% milk based on individual caloric needs and to also improve satiety.*

*Lunch: Take another METABOLIQ Boost capsule 30 minutes prior to lunch. For the first two to four weeks, replace lunch with a METABOLIQ Shake. People who can tolerate higher caloric intakes can add a half to one full METABOLIQ Stick with their lunch meal. After the first two to four weeks, either prepare a meal or eat out using the healthy and balanced METABOLIQ macrobalance meal principles.*

*Mid-Afternoon: Benefit from a METABOLIQ Stick when you get that afternoon craving or need an energy lift. Alternatively you can choose a snack from the recommended snacks list.*

*Evening: Enjoy a balanced METABOLIQ Lifestyle meal and then take an after-meal METABOLIQ Resist tablet. Dinner should be about 700 calories and constructed after the macrobalance principles of 1/3 protein, 1/3 starchy carbs, and smart carbs, which can be eaten until satisfied.*

*Daily anytime: Continue to develop your daily routine of physical exercise with 30 to 60 minutes every day.*

	MORNING	NOON	MID-AFTERNOON	EVENING
METABOLIQ System	METABOLIQ Boost (30 min. prior) METABOLIQ Shake	METABOLIQ Boost (30 min. prior)	METABOLIQ or 100-200 calorie healthy snack alternative	METABOLIQ Boost (30 min. prior) METABOLIQ Shake
METABOLIQ Lifestyle Meals		✓		✓
Exercise	30 Min./day Anytime	30 Min./day Anytime	30 Min./day Anytime	30 Min./day Anytime

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METABOLIQ Resist tablets can be taken at any point throughout the day to control and repress sweet cravings for up to two hours. For a healthy snack, use half of the METABOLIQ Stick in the afternoon and the other half to ward off the late night munchies. At any point in the program, you can transition from METABOLIQ Shakes to METABOLIQ *Lifestyle* meals you construct on your own using the principle of *macrobalance*. The METABOLIQ Shakes and Sticks are designed for simplicity and to help you create successful eating habits. Once you eat your first meal of the day you should eat again every four hours. Eating regularly keeps your metabolism going and gives you the energy you need, while preventing you from over-indulging at any one meal.

### Expected results

Healthy weight loss is a gradual process and pounds lost will vary with each individual based on gender, age, weight, metabolism, and physical activity. Healthy weight loss requires time because it involves improving muscle composition, resetting and retraining your metabolism, and improving lean body mass. Most women will lose weight if they consume 1,200 to 1,600 calories per day, and most overweight men will lose weight if they consume 1,600 to 1,900 calories per day. On average, healthy weight loss is considered to be 2 to 3 pounds per week, though results may be more dramatic in the first few weeks. After one month, you should expect to lose 6 to 10 pounds and at 4 months you should have lost about 10 percent of your body weight. During the weight loss process, you should monitor not only your scale weight, but also BMI, body measurements, body fat, and blood markers. Body composition shifts can result in more inches than pounds so measurements should always be taken to assess composition shift. Once you are down to the last 10 to 15 pounds to lose, exercise intensity and duration may need to be adjusted to shed the final stubborn pounds.

### About Dr. Marcus Laux - Chairman, Qivana Scientific Advisory Board

Dr. Marcus Laux is a world renowned expert in natural medicine. He is a licensed naturopathic physician who received his doctorate from the National College of Natural Medicine (NCCM) in Portland, Oregon in 1985. For nearly two decades, Dr. Laux maintained a successful full-time private family practice in Beverly Hills and Malibu, California. He served as an assistant adjunct professor at Emperors College of Traditional Oriental Medicine in Santa Monica, California, as Clinical professor of OB/GYN at NCCM, and is an adjunct faculty member at Bastyr University of Natural Health in Kenmore, Washington.

Currently, Dr. Laux can be seen weekly across the United States on *Healing Quest*, the long running PBS TV series where he presents his Natural Medicine Update. Dr. Laux appears regularly in the national media as a natural health and medical expert, including CNN, CBS, NBC, PBS, BBC, CTV, and Fox News. Dr. Laux has traveled extensively throughout Asia, Europe, and the Americas to experience the indigenous healing practices and learn their native pharmacy and healing methods first-hand.

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Dr. Laux testified before the Clinton Presidential Commission on Dietary Supplements on behalf of the National Natural Foods Association, and has presented novel nutritional research at the United Nations, and the Washington Press Club. He has been a leading educator and respected pioneer to the Natural Products industry for three decades. Dr. Laux changed pharmacy forever through creating the term “Bio-Identical®” hormone for his ground-breaking book, *Natural Woman, Natural Menopause* (HarperCollins), improving the lives of millions of women’s worldwide.

Dr. Laux has been interviewed in leading publications, including *Prevention, LA Times, Cosmopolitan, O, OK, Delicious, and In Shape*, among others. In addition, he was the editor of *Naturally Well Today*, an international monthly newsletter published by Healthy Directions from 2002 to 2009. Dr. Laux has also served as editorial advisor for numerous publications, including the *International Journal of Integrative Medicine* and *The Nutrition Reporter* and co-author of *The Ten Top Alternative Therapies, Natural Woman, Natural Menopause, Living Well with Food Intolerance, FVG Pine Bark, Walking with the Wise for Health and Vitality, The Fountain, After a Stroke, The Healing Powers of Pearl, and The King’s Crown*. His latest book will be released in 2011, *Myth, Lies, and Nutritional Nonsense*.

### **About Dr. Donald K. Layman - Qivana Scientific Advisory Board**

Dr. Donald Layman is Professor Emeritus of Nutrition in the Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign. He is recognized for his research on amino acid metabolism, nutritional requirements during exercise and work with high protein weight loss diets.

Dr. Layman has over 90 peer-reviewed publications and his research has been recognized by the American Society for Nutrition with the BioServ Research Award in 1986, the Shannon Award from the National Institutes of Health in 1992, and the Nutrition & Metabolism Society National Leadership Award in 2009. He has also received numerous awards and recognitions for his teaching in clinical nutrition and advanced nutrition and biochemistry at the University of Illinois. Dr. Layman served as Associate Editor of *The Journal of Nutrition* from 1989 through 1993 and he is currently Associate Editor of *Nutrition and Metabolism* and serves on the editorial board of the *Journal of Nutrition Education and Behavior*. Dr. Layman earned his B.S. and M.S. degrees in chemistry at Illinois State University and completed his doctorate in human nutrition and biochemistry at the University of Minnesota in 1978.

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## Frequently Asked Questions

*Q: How much weight can I expect to lose?*

*A: Typical and healthy weight loss is around 2 to 3 pounds per week. You may lose more in the first two weeks, particularly if you have more weight to lose. The process of losing weight is never constant. Some weeks you lose a lot and some weeks almost nothing. But remember you're doing much more than just losing weight. You are resetting and retraining your metabolism, improving muscle composition, tone, and your lean body mass. Be patient and give yourself an opportunity to adjust to the normal changes that will energize your muscles and forever rid you of harmful body fat. Be diligent in following your plan. The METABOLIQ System is just the beginning of a scientifically designed program that will help you achieve lasting, long-term success.*

*Q: Can pregnant women take METABOLIQ?*

*A: The Shakes, Sticks, and METABOLIQ meals are all safe for pregnant women. However, we recommend that pregnant women, who choose to use the products, use them in conjunction with and under the supervision of their primary healthcare provider.*

*Q: I haven't lost weight and I've followed the program for a few weeks. What should I do?*

*A: First of all, weight loss is ultimately about calories consumed versus expended. So if you're not losing weight your combination of food intake and exercise is not enough to create a negative calorie balance. As a general rule, you need to consume 500 less calories than you do at your base metabolic rate. You can reduce the calories of the products by mixing the METABOLIQ Shake with water, not milk. You can also just eat half of a METABOLIQ Stick per day instead of a full one.*

*Second, the METABOLIQ System and products were designed for both men and women who really are overweight to obese (40 to 100 pounds overweight). The combined daily calories (two shakes, one stick, and a dinner is about 1400 calories). Individuals who are obese will lose weight, as we have observed in most users. Individuals with greater muscle mass at the starting point will experience more weight loss. Because of this, weight loss for men will usually be dramatic. For women weight loss has several factors: the smaller the body, the older the age, and the lower the physical activity, usually signifies less weight loss.*

*Third, a woman who weighs 140 pounds and is trying to lose 10 pounds is really targeting fitness versus obesity. Fitness requires both a great diet and quality exercise. A 1400 calorie a day diet may not be low enough to lose weight without daily, moderate to intense exercise. To lose weight you really need to generate a daily calorie deficit of about 500 calories. A 140-pound woman may be at calorie balance with only 1600 calories per day. So to lose weight she will need to be below 1100 calories. This would require eliminating at least the Stick or the second Shake each day.*

*Fourth, this is such a low-calorie program, that having only one dinner out each week with a couple of drinks and a dessert could totally defeat five or six perfect diet days. The margin for error here for successful weight loss is really low, so exercise is the key.*

*Finally, we need to recognize that for whatever reason, physiology or truthfulness, not everyone will lose weight on the same program. The METABOLIQ System is extremely healthy for body composition but still may not get someone back to having the body they had at age 25. That requires intense, consistent exercise.*

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