

100 WAYS TO BOOST YOUR METABOLISM

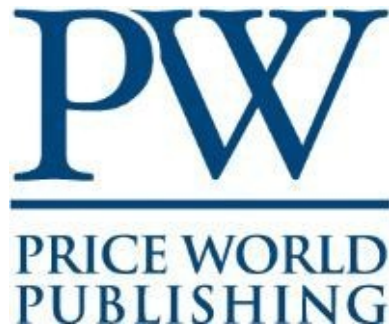
Make your daily
metabolism burn
like a wildfire!

The definitive
guide to using
dietary
supplements,
nutritional
science, and
exercise
secrets to
melt fat and
build lean
muscle.

BEN GREENFIELD

100 Ways to Boost Your Metabolism

By Ben Greenfield



Prior to beginning any exercise program, you must consult with your physician. You must also consult your physician before increasing the intensity of your training. The information in this book is intended for healthy individuals. Any application of the recommended material in this book is at the sole risk of the reader, and at the reader's discretion. Responsibility of any injuries or other adverse effects resulting from the application of any of the information provided within this book is expressly disclaimed.

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Rev It Up.
Increase Iodine.
Yoga.
Think Thiamin.

Energy.

introduction

Your body is always expending energy. It doesn't matter whether you are sleeping, performing a push-up, sitting at your desk, walking the dog or eating popcorn. Somehow your body must muster enough energy, through one process or another, to sustain life and perform the activities of daily living.

Some energy requiring processes are automatic. Your heart must beat. Your eyes must twitch. Your lung muscles must contract and relax. Your liver must process organic compounds. Your kidneys must filter your blood. While you have no direct control over these processes, there are dietary and lifestyle modifications you can make that affect how much energy your body "automatically" burns.

There are also voluntary energy requiring processes. You must fire the muscles in your legs to sit down in your desk chair, to move your fingers to clip the leash on the dog and to contract your gripping muscles to grab a handful of popcorn. Each of these actions requires energy.

All this energy is measured in tiny units called calories. Metabolism is defined as the caloric sum of all these chemical processes, whether automatic or voluntary, that must take place in order for the energy forming process to occur.

Metabolism.

Technically, metabolism is divided into four components: resting metabolic rate (RMR), thermal effect of feeding (TEF), thermal effect of activity (TEA) and adaptive thermogenesis (AT).

Your resting metabolic rate (RMR) accounts for the largest portion of your metabolism, up to 75% of your total daily energy expenditure. RMR includes all the automatic processes your body must sustain in order to live: the action of your digestive, cardiovascular and hormonal systems, the maintenance of proper body temperature, the preservation of sensitive electrical gradients in your cells and the conductance of electrical transmissions through your nervous system.

Without your RMR you would cease to exist. However, in the presence of certain crucial factors outlined in this book, your RMR can be slightly enhanced in a way that not only maintains normal function but pushes the rate just slightly higher!

The TEF is the caloric sum of all the energetic processes required to digest, absorb, transport, metabolize and store your food. Believe it or not this can account for up to 10% of your energy expenditure. Portions of this book explain how the content and chemical structure of the foods you eat can increase or decrease the TEF.

The TEA is the easiest metabolic component to modify and accounts for up to 30% of the total daily energy expenditure depending on your level of physical activity.

If you're physically active you've already taken a step in the right direction toward increasing your TEA.

The 100 tips presented in this book will move you light years forward by supplying you with the knowledge of exactly which activities to perform, for how long and with what intensity to drive your TEA through the roof.

The final component of metabolism, the AT, is your body's "reaction" system. Basically, your metabolism will make sensitive rate alterations in

response to changes in the external or internal environment, such as physical or mental stress, hot or cold temperatures and changes in the body's hormone levels. There are certain strategies outlined in this book that throw environmental "curveballs" at the AT, forcing the body to react and maintain a highly sensitive metabolism.

It is also possible to have an energy surplus. The Law of Conservation of Energy says that energy cannot be created or destroyed, it can only change form. Therefore, unused energetic compounds found in food are either extracted as waste products or stored for future use, usually as fat.

To avoid this unwanted energy storage, the metabolic strategy outlined in this book is three-fold:

1. Practice dietary techniques that eliminate the energy surplus.
2. Follow lifestyle guidelines that maximize energy expenditure.
3. Supplement with compounds that have been proven to optimize the body's ability to use energy.

Food.

Energy comes from food. However, complex actions must take place inside your body for turkey, mashed potatoes and cranberries to become the energy needed to talk, stand, sit, walk and breathe. Your body must break the food into small pieces, then absorb and move them through the membrane of a tiny cell to be broken into even smaller pieces. These pieces then enter into a miniscule cellular component called the mitochondria. The mitochondria is the cell's powerhouse. It is here that the electrical power of oxygen is harnessed to finally break that last tiny molecule of food apart and release energy!

There are thousands of crucial steps leading up to this eventual release of energy, most of which require energy themselves. This energy is derived from the calories, nutrients, vitamins and minerals you've previously consumed and are combined with the oxygen you breathe. Any shortage of the necessary components results in a shortage of energy. Therefore, inadequate oxygen or inadequate food intake results in inadequate energy.

Inadequate energy results in a slow metabolism. This book not only tells you how to ensure adequate nutrients from your dietary and supplement intake, but also how to achieve adequate oxygen balance in your internal and external environments.

Barriers.

In the energy creation process, there are certain barriers to overcome. Take free radicals, for example. The more energy you require the more oxygen you must utilize. Occasionally oxygen can mutate and escape from the cell in the form of a “free radical” oxidant. When these renegade oxygen molecules combine with other molecules in the body they can interrupt the processes associated with their “host” molecule.

Because they can interact with so many different molecules, free radicals can wreak serious havoc by altering DNA, destroying sensitive protective barriers around the cell and changing the fragile biochemical structures of proteins and fats. These disruptions and alterations of sensitive cellular processes can sabotage energy production. Even a small amount of damage to a cell’s outside receptors and membrane can severely alter the movement of compounds in and out of the cell, eventually killing the cell.

Another serious barrier to boosting your metabolism is blood sugar stabilization. After consumption of a carbohydrate-rich meal, your digestive system breaks down the carbs into tiny glucose molecules.

Once these molecules enter the bloodstream they trigger the release of insulin by an organ called the pancreas. Insulin ensures that the glucose is delivered to necessary tissues for energy. When these energy stores are full any excess glucose still in the bloodstream or digestive tract is easily converted to fat.

Unfortunately, most of us are walking around with chronically elevated insulin levels because of excess energy consumption, especially in the form of simple sugars. Constant exposure to high amounts of insulin results in a condition called “Metabolic Syndrome.”

This condition is characterized by high levels of circulating fats in the bloodstream, high cholesterol, high blood pressure, uncontrollable appetite cravings, obesity and increased diabetes risk. Even more critical is the decreased sensitivity to insulin which means that the cells become

so accustomed to high blood insulin levels that they grow non-responsive so even more insulin is released!

You'll find many strategies in this book directly focused on improving your sensitivity to insulin and stabilizing your blood sugar levels, thus avoiding this metabolic roller coaster ride. You'll also discover how dietary supplements assist in overcoming the blood sugar stabilization barrier. For example, chromium, vanadyl sulfate and manganese are all compounds that assist insulin.

By lowering the need for insulin release and enhancing blood sugar stabilization they decrease the body's propensity to store carbohydrate as a fat. While it may be difficult to consume these compounds in their raw form, there are dietary supplements that contains a perfect balance of all three! This book is full of such simple dietary tips and supplement recommendations.

The Solution.

You're holding in your hands the key to unlocking your energy levels and making your metabolism burn like a wildfire! If you follow 10 of the tips in this book you'll double your energy levels. If you follow 20 tips you'll see fat literally melt from your waistline. If you follow 50 tips you'll wonder why you avoided this incredible effect for so many years.

But if you read this book cover-to-cover and integrate each of the 100 tips into your daily lifestyle while using a combination of the unique and entirely natural dietary supplements I suggest, you'll find your entire quality of life peaking at levels you never thought imaginable. Enjoy the feeling.

**Trainsmart, eatsmart, livesmart,
BenGreenfieldNSCA-CPT, CSCS, MS, C-ISSN**

P.S. I've also scattered several "Metabotips" throughout this book. These tips, tricks and secrets are amazing weight loss tools! Also, to discover more information about many of the exciting dietary supplements featured in this book, contact the person who gave you this book, or visit www.impaxworld.com.

*Individual results of recommended supplements may vary. The author makes no therapeutic claims on any products. Information contained in this book should not be used as a substitute for personal medical attention, diagnosis or hands-on treatment.



The author

Other books by Ben Greenfield, available at pacificfit.net: [Shape21: The 21 Day Lean Body Manual](#)

[The E-Health Handbook of Diet & Fitness Secrets](#)

[Top 12 Resistance Training Routines for Triathletes](#)

[Run With No Pain](#)

Ben Greenfield resides in Spokane, WA, where he is Director of Sports Performance at Champions Sports Medicine and President of Pacific Elite Fitness. He graduated from University of Idaho with bachelor's and master's degrees in sports science and exercise physiology, and is certified as a personal trainer and fitness coach by the National Strength & Conditioning Association, and a sports nutritionist by the International Society of Sports Nutrition. Ben's services are available for diet and nutrition counseling, exercise prescription, corporate fitness programs, and lifestyle wellness programs, via in-person, online, and phone consultations, and he offers a free blog and podcast at www.bengreenfieldfitness.com. His specialties include metabolic influences on weight loss, and science based training of endurance athletes. To learn more, visit www.pacificfit.net or e-mail Ben at elite@pacificfit.net.

To discover more information about many of the exciting dietary supplements featured in this book, contact the person who gave you this book, or visit www.bengreenfield.impaxworld.com.

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metabotip

Put candies, chocolates, and other sweet or high-calorie snacks in non-transparent containers. Your brain is triggered by what the eyes see, and by “hiding” unhealthy snacks, you’ll grab fewer handfuls. Keep the good stuff, like fruits and vegetables, in a transparent, centrally located bowl.



Choose Cardio Wisely.

Not all cardio machines are created equal. To maximize calories burned during exercise and elevate your post-exercise metabolic rate, you'll want to choose your cardio machines wisely. The key is to rank them in order of their "double-whammy" effect. Determine what machine burns the most calories while you're on it while increasing your metabolic rate for the longest period of time.

I've ranked some for you in order of their effective burn rate: 1) Running on a treadmill with slight incline 2) Rowing or swimming

3) Upright bicycle with hills 4) Elliptical with arms and legs 5) Elliptical with legs only 6) Recumbent bicycle with hills 7) Walking on a treadmill.

Although this will vary from person to person depending on weight, it's a rough estimate of how to get the most bang for your buck. So what are you waiting for? Go find yourself a treadmill, a rowing machine or a pool. Just be sure to mix it up enough so that your body doesn't get used to any single mode of exercise.



Power Up.

Did you know that an Olympic power lifter burns as many calories in a typical day of training as an Olympic marathoner? That's because explosive fast-twitch muscle motions burn a lot of energy and use a high amount of carbohydrates. While lifting or performing bodyweight exercises at high velocities does have an inherent risk factor, there is a large amount of energy required, a huge post-exercise metabolic rate increase and an anabolic hormone response that vastly improves fat burning capabilities.

If you learn how to properly do exercises like the power clean, lunge jump, push press and jump squat, they can become your most potent calorie-burning and metabolism-boosting weapons. Make certain that the coach or personal trainer who instructs you is properly certified! Although these exercises are complex, with correct powerlifting form, you'll stay free from injury and reap huge waistline benefits.



Crucial Copper.

Minerals initiate, regulate and control vital bodily functions like enzyme activity, digestion, cell electrical impulse and metabolism. The mineral copper reduces free radical damage and enhances recovery from exercise, helps maintain bone and connective tissue health, and preserves normal thyroid gland function. Copper also helps develop the proteins and enzymes essential to iron utilization which directly influences the amount of oxygen available to working tissues. This is important since every molecule of oxygen you utilize burns a significant number of calories!

So what are the top sources of copper? Try crimini mushrooms in your omelet, turnip greens with your spinach salad and blackstrap molasses in your oatmeal. Don't have time for a copper-based meal? Green barley grass, a powerful antioxidant and rich source of chlorophyll, magnesium, protein, and trace minerals like copper can be found in the powerful superfood supplement EnerPrime. Another powerful supplement called ProstElan contains a perfectly balance of zinc and copper citrate.



Twitch.

Studies have found that individuals who are constantly moving burn more calories. This seems obvious but many people don't realize that "constantly moving" includes activities like tapping your feet, drumming your fingers, standing up, sitting down, moving your head in circles, shrugging your shoulders, clenching your butt and even rolling your eyes! These movements may seem to incorporate only small and insignificant muscle contractions but every time a muscle fiber moves it uses energy and increases your body's temperature and metabolism.

It's true that larger muscle fibers burn more calories but when you're attempting to elevate the metabolism, even the tiny boosts from smaller muscle fibers will help. If you're trying to lose or maintain weight or just keep your metabolism elevated, make sure that you're twitching and fidgeting as much as possible. Employing even these small movements while you're riding on the bus, watching television or even eating breakfast will make a big difference in your metabolism.



Never Go Hungry.

Perhaps you've heard that eating small and frequent meals is a very effective way to keep the metabolic fire burning. However, this strategy only works if you never actually become hungry. Hunger pangs which are caused by low blood sugar, tell your digestive system that there's a food shortage and to slow down to conserve energy. This is accomplished by decreasing the rate of your body's normal functions effectively putting the brakes on your metabolism. Sometimes this can even happen before you actually experience hunger pangs.

One low blood sugar level indicator is sudden mood or attitude swings which often occur before experiencing hunger. Here's an interesting note: high performance endurance athletes will sometimes eat as soon as they start having bad feelings about the race. They have found they can't accurately rely on feelings of hunger as a sign of low blood sugar. A quick calorie intake can quickly bring blood sugar levels back up and simultaneously give attitude a positive boost! So don't let yourself get to the grumpy, hungry point in your daily routine.

The best strategy is to always have a meal hidden away in your bag, purse, locker, desk, office refrigerator or glove box. Nuts and berries, fresh raw fruit and low-fat yogurt are great places to start. You can further stabilize your energy levels and limit the hunger associated with a hypoglycemic drop by using the supplement ThermoFactor, a formula that stabilizes appetite and blood sugar.

Test Your RMR.

RMR stands for “Resting Metabolic Rate” or the number of resting calories you burn during a day. Since your RMR accounts for about 75% of your total daily energy expenditure, if you know your RMR you can instantly determine how many calories you need to eat in a day in order to lose or maintain a healthy weight. You can also find out how much of what you burn is carbohydrate versus fat which is important in determining what your daily percentages of these nutrients should be. RMR measurements completely take the guesswork out of establishing how many calories, carbohydrates, fat and protein you should consume a day to maximize your metabolism. The best part is that this particular metabolic test is simple. Just a brief 10-15 minute assessment is done while you sit quietly and breathe into a tube or mask. A RMR test will cost anywhere from \$50 to \$200 depending on the testing location. RMR testing is crucial for an individual who wants to lose fat or gain muscle, any athlete who is attempting to achieve a higher power/weight ratio or someone who is curious as to whether they have a “high or low” metabolism.

Does your RMR ever change? Absolutely! Changes in exercise, diet and supplementation can all increase or decrease RMR. One perfect way to gain more “free” calorie burning is by consuming a combination of the metabolism-boosting supplement called [LeanFactor](#) and the energy-stabilizing supplement called [ThermoFactor](#).



Over-Eat.

If you are at a constant net caloric deficit, which is typical in most diets, then your body will have negative energy stores. You can only function for just so long in this state before your body begins to “shut down” by depressing the metabolism and lowering performance during exercise and the activities of daily living. Without adequate nutrition, your hormones, enzymes and other important metabolic contributors fall to levels too low to maintain the desired metabolic rate.

To address this problem and make sure you don't go for an extended period of time at a caloric deficit, occasionally consume a large meal. This will not only keep your body from the 24-7 stress levels that are associated with underfeeding but will also give you a mental break from your regular dietary restrictions. Give yourself this break every week or two by just eating more than usual. You can still eat healthy by visiting an “all-you-can-eat” salad bar or healthy buffet. You may choose to make yourself a fancy multi-course dinner at home. The best time for this large meal is immediately after exercise when the food is most likely to end up in your muscles for energy.

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metabotip

When consuming high-calorie drinks, foods and snacks, leave the mess on the table as you eat. Bones from chicken wings, shells from shrimp and empty wine bottles will cause you to eat less because you'll be more aware of the amount already consumed.



The Great Outdoors.

The indoor exercise environment can be less conducive to large active calorie-burning movements due to pollutants or environmental toxins in the air from aerosols, detergents and disinfectants which leave the air stale and low in oxygen. In contrast, the outdoors offers higher amounts of oxygen, consistently less pollution and more wide-open spaces that allow for bigger more productive movements. So if the weather is nice outside, don't go for the treadmill or the indoor pool, choose the trail or the lake instead. By simply consuming more oxygen and swinging your arms and legs in bigger motions, you'll burn more calories and boost your metabolism for a longer period of time.

You'll find that exercise in the great outdoors also becomes less predictable which causes your body to experience inefficiency, a good thing for your metabolism. The dips, hills, turns and obstacles in a trail run will burn more calories and strengthen a greater number of muscles and ligaments than a single-direction, indoor treadmill run. The currents and waves in an open water swim will push you much harder than a swimming pool. So lace up those trail shoes and step outside!



Digest Pancreatin.

In the human body there are two forms of pancreatin. Pancreatic Amylase is the enzyme that breaks down complex sugars into simple sugars during digestion. Pancreatic Lipase is the enzyme that breaks down fats. Theoretically, higher levels of digestive pancreatin will speed metabolism by allowing you to process sugars much quicker. While there's no hard research to support this fact, supplementing with pancreatin is a method of increasing the metabolism, especially if your body is not producing enough on its own. Pancreatin can also be used as a digestive aid. Digestive pancreatin is actually a mixture of enzymes that have been extracted from the pancreas of a pig or cow. If you have trouble finding digestive pancreatin, try EnerPrime from IMPaX WORLD which contains a powerful combination of natural digestive enzymes.



Eat Saturated Fat.

Huh? Isn't the stuff bad? Saturated fats are actually a major component of your cell's membranes which are crucial to the flow of nutrients in and out of the cell. Saturated fats are also important to the maintenance of proper cellular function. An important part of maintaining a high metabolism is ensuring that the cells are operating properly. Not only that, the heart and other muscles of the body use saturated fat as a fuel.

Many of the modern day replacements for saturated fat such as margarine or mayonnaise as well as most of the fats used in frying and in many packaged foods are quite damaging to the metabolism when compared to saturated fats found in animal meat and dairy products. The processed compounds in these foods contain a high degree of trans fats, which are factory-produced fats that your body has a very difficult time metabolizing. Trans fats are heavily associated with heart disease, obesity, and metabolic damage. You'd be better off choosing butter over margarine, string cheese instead of boxed crackers, and steak instead of chicken salad with mayonnaise. But be careful, saturated fats are very calorie dense so just a small pat of butter with dinner can have as many calories as the entire potato!



Two Minute Tango.

As you probably know, metabolism stays elevated for a significant amount of time after exercise. Unfortunately though, by the time we actually get around to exercising again, our metabolism can be back to a slower pace and getting “back into the groove” for the next day’s bike ride, run or aerobic session can be difficult. Wheezing, gasping for breath, coughing, stumbling, feeling sleepy, lethargic or fatigued are sometimes associated with starting back into exercise after that 24 hour hiatus. This is because our body must be warm, our lungs must be stretched, and our blood must be actively flowing before our body begins efficiently utilizing oxygen. For most individuals, it takes about two minutes for this process to begin to occur, after which you actually start feeling good. Rather than struggling through these first two minutes at a snail’s pace, your post-exercise metabolic rate will be higher if you simply jump into the cardio at a moderate pace and hang on for the first 120 seconds. In addition, you’ll not only warm-up faster but the rest of your exercise routine will burn more calories. Just keep telling yourself, “I just need to get through these first two minutes!”.

Unplug The Mouse.

Sure, pointing and clicking to add items to your shopping cart may be quick, convenient and perhaps slightly less expensive but don't let this form of procuring your shopping needs take complete precedence over your life. Up until the advent of modern technology, people had to hunt, gather and foray for their daily needs – not sit in a chair and wait for it to arrive on the front doorstep. So as much as possible, try to attend to your shopping needs while out and about, even if it's less convenient. The simple act of hitting the snooze button on your computer, jumping into the car, walking through the parking lot and navigating around the department store or shopping mall will boost your metabolism much higher than a mouse and keyboard ever will. Plus, you just might find an excuse to stop by the gym on the way home!



Go Organic.

Most organic foods retain a higher levels of enzymes, vitamins, minerals and phytonutrients due to less exposure to toxins and pesticides. They also have lower levels of free radicals and metabolism damaging compounds found in preservatives and packaging materials. Not only can your body more readily use this clean fuel as energy, but fewer free radicals means healthier cell membranes and a more active cellular metabolism. Since it's expensive and often inconvenient to go "all-organic", start by choosing fruits and vegetables with edible skins – like apples, pears, peppers, cucumbers, carrots and tomatoes. Melons and bananas may be less of an organic priority, as well as any produce items that are frequently sprayed for freshness. When the weather is nice, be sure to stop by your local farmer's market for tasty and accessible organic and naturally grown produce.

For meat, eggs, milk and other non-produce items, look on the internet for local farms, suppliers and distributors of organic or naturally raised products. The bottom line is that cleaner fuel the faster the metabolism. To combat many of the toxins and free radicals non-organic compounds expose your body to, supplement your diet with EnerPrime which includes superfoods, adaptogens, antioxidants, phytonutrients, herbs, enzymes and micronutrients. Also the N-Acetyl-L-Cysteine found in EnerPrime is a superior form of the naturally occurring amino acid L-cystein and is an efficient precursor to the antioxidant glutathione which assists the body in detoxification.



Park Poorly.

How many of us get all dressed up for a fancy evening meal then cruise around a busy restaurant ten times waiting for a prime parking spot? In reality, walking four or five blocks, even if it's in a suit or dress, isn't really that bad. You'll not only burn calories and get a little exercise on your way to the meal, but research has proven you store less fat from a large meal if you go for a brief jaunt afterwards. If you're really shooting for a higher metabolism, you should never be looking for the best parking spot. Instead, find the most undesirable parking spot imaginable – up a hill, down an alley and through the bushes. Huff and puff your way to and from dinner using all that extra oxygen to burn calories and watch the pounds melt away.



Buy A Bottle.


Your body's fat-burning process relies on water as a primary ingredient. Regular consumption of this refreshing, calorie-free beverage will also boost your metabolism burning a few extra calories an hour, which quickly adds up through the course of a day. In working with clients to achieve leaner bodies, I've found that for many, staying adequately hydrated is similar to eating small meals throughout the day. Knowing what to do is one thing, actually having the means or control to do it is quite another. Just like one of the best investments you can make for snacking is a travel cooler, one of the best investments you can make for hydration is carrying a simple water bottle with you at all times. This inexpensive investment will keep you sipping all day long. In contrast, out of sight is out of mind. You're unlikely to stop what you're doing to go find the nearest watering hole so keep your water bottle easily accessible.

Follow this rule: never let your water bottle go empty during the course of the day. You'll find you'll eat less, burn more calories and feel fantastic.



Ingest Inositol.

Inositol is a sugar-based compound that is closely related to the B vitamins and choline which are some of the most important components of energy and metabolism. In addition to helping maintain cell membrane integrity, inositol assists with proper nerve transmission and fat transport throughout the body. Like most important compounds, your body can make it's own inositol but other great sources include wheat germ, Brewer's yeast, veal, pork, liver, brown rice, wheat bran, oat flakes, nuts, vegetables, cantaloupe, raisins and bananas. Because the effectiveness of inositol is enhanced in the presence of folic acid, linoleic acid and vitamins B, C and E, it is often included as part of a complete multivitamin supplement. Just be careful that such a "metabolism-enhancing" supplement does not have high amounts of central nervous system stimulants, like caffeine or ephedra. High and frequent doses of such supplements over a long period of time can over-exhaust your adrenal glands leading to an eventual slowing of the metabolism. You'd be better off with regular consumption of wheat, meat or produce.



Mmmint.

While peppermint is well-known as an excellent tummy soothing herb and even an appetite suppressant, it is also an ideal source of many nutrients that are essential to a smooth-running metabolism. This includes manganese, dietary fiber, folate, iron, magnesium, calcium, vitamin C, vitamin A, vitamin B2, omega-3 fatty acids, potassium and copper. Although bubblegum may offer a miniscule source of peppermint oil if you're lucky enough to find the kind with a natural peppermint flavoring, there are better choices. For instance, try fresh mint tea, chopped mint leaves over soup or salad or simply a small bag of mint leaves in your refrigerator to chew on when you need a little appetite self-control.



Pod Time.

You can't maintain a high metabolism if you're not exercising. But sometimes it can be difficult to find motivation to exercise when there are so many other productive activities falling to the wayside during your 30 minutes of isolated fitness time. If you're the type who must constantly be productive, invest in a personal audio player. But don't just buy any old player – make sure to pick a model that can download and play audio files in MP3 format. Once you have this feature, a virtual world of what I call “productive audio” is at your fingertips. The internet is full of free and inexpensive podcasts that include ground-breaking news stories, health discussions, financial lectures, audio books and motivational speakers. You'll find yourself looking forward to your next weight lifting or long cardio session where you'll burn fat and build lean muscle while learning about the 10 hottest stock picks of the month or listening to the audio version of the New York Times front page. Walks, runs and bike rides will become more motivating. There are even underwater MP3 player cases and headphones for you swimmers.

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metabotip

Social eating occurs when you associate a food with an event, like popcorn at the movies or hot dogs at the ball game. Instead, substitute water or sugar-free gum because typically your appetite is environmentally related and not truly driven by hunger.



Snooze.

Sleep is one of the easiest activities in the world. Unfortunately, most people seem to place more importance on a favorite TV show, extra tasks at work, surfing the web or an unhealthy obsession with excessive exercise which, by the way, can actually disrupt sleep and lead to insomnia. Undercutting your necessary sleep by even one hour per night can decrease insulin sensitivity, decrease leptin levels which decreases appetite control and increase ghrelin levels which increases appetite cravings. Any of these can severely affect your metabolism thus increasing your propensity towards overeating, fat storage, diabetes and obesity as well as other chronic metabolism-related diseases. Furthermore, lack of sleep can increase cortisol levels, decrease key neurotransmitter levels and give your body inadequate rest and recovery for muscle tissue and organ repair. Not giving your body the required 7-9 hours of sleep a night is the equivalent of parking your car in a hailstorm every night. The long-term effect is a battered, broken down body and a sluggish metabolism. Having trouble sleeping? Try a natural product such as melatonin or use my own simple trick: take 4-6 EnerPrime capsules 15 minutes prior to bedtime! You'll awake refreshed, renewed, and restored.

Cardio Boosters.

It's time to break the rules on whatever type of weight lifting regimen you're currently performing. To boost your metabolism, you should perform a "cardio booster" during every single rest period, whether it's 10 seconds, 30 seconds or 3 minutes. This means that after you finish your set of 12 dumbbell presses, you do jumping jacks as fast as possible for 15 seconds. Following your 6 rep squat routine, do 20 explosive pushups. You'll automatically burn several times more calories than your old routine and your post-exercise metabolic rate will go through the roof. Other good cardio booster exercises include vertical and horizontal jumps, step-ups, lunge jumps, jump rope, jogging in place and shadow boxing. If you have access to cardio machines, include 60 second bicycle or treadmill sprints, 250-500 meter rowing efforts or a quick, all-out elliptical effort.



Be The Chef.

As much as possible, spend time planning, preparing and cooking your own meals. You'll have complete control over the ingredients, you'll burn calories in the preparatory process and you're far less likely to overeat. There's nothing more metabolically diminishing then sitting in your car as you go through a fast food drive-through and then consuming food higher in calories and damaging compounds that you would make for yourself at home. Being in charge of your meals is also a great way to educate yourself about how foods affect the metabolism and how ingredient substitutions can have an enormous effect on your energy levels.

For instance, just by substituting olive oil for margarine you'll be consuming a fat that is more preferentially used as energy and that contains lower levels of metabolism-slowing free radicals! Just by adding a teaspoon of cinnamon to your stir fry you'll control your body's blood sugar response to the more starchy vegetables. As the chef, you'll also be introduced to a variety of new fruits, vegetables and novel food items that keep your body guessing and your mind free from "diet boredom."

Pump At The Pump.

You're on a long road trip and you stop for gas. How long does it take to fill the tank? 20 seconds? 45 seconds? 2 minutes? Any one of these time lengths is ample for giving your body its own quick pump of oxygen and blood that will elevate your metabolism for a significant amount of time after you leave the filling station. Once you've pulled the trigger on the gas pump, do any of the following until the pump stops: jumping jacks, arm swings, running in place, torso twists or push-ups. You can even jog or speed-walk a lap around the service station. Staying active during your road trip breaks up a stale drive and gives you far more energy and less drag by the time you actually reach your final destination.

Multi-Jointed.

If you currently practice a resistance training program like weight lifting, I've got a two-part challenge for you to try for the next month.

1. Perform only multi-joint exercises such as upper and lower body, core and upper body or core and lower body, calf and ankle or chest, shoulder, arm combinations.

2. Never sit or lie down during any portion of your routine. Very few multi-joint exercises actually occur in the seated position since it's tough to employ multiple joints when your butt is planted in a chair.

A "seated dumbbell curl" is not a multi-joint exercise but a walking lunge to medicine ball curl is an effective multi-joint exercise. Here are five more highly effective multi-joint exercises to get you started:

1. squat to overhead press
2. horizontal lunge to overhead press
3. squat to standing cable row
4. deadlift to upright row

5. vertical jump to pull up

If you'll take the challenge and perform only these types of exercises for the next month, you will be amazed at the rapid body transformation that occurs.



Find A Tree.

Breathing pollution like car exhaust and industrial fumes can cause production of free radicals inside your body. Free radicals cause damage to all the body's tissues, including your cells where metabolism takes place. People who exercise in highly polluted outdoor environments seem to experience higher levels of heart problems and asthmatic symptoms than their non-exercising counterparts. Airborne contaminants in smog like carbon monoxide, sulfur dioxide and nitrogen dioxide can also reduce exercise capacity.

So if you run, bike, swim or perform outdoor calisthenics or resistance training in areas known for high levels of pollution, move your exercise to a park or area with large concentrations of trees or foliage. You'll find that the air will be noticeably purer. Furthermore, if you exercise in a rural environment with high levels of volcanic ash, road dust or agricultural related pollutants, make sure to avoid significant exposure especially during exercise. If you can't avoid a constant barrage of airborne contaminants just stay indoors.



Thyroid TLC.

Many people unknowingly have a metabolic disorder called hypothyroidism or an underactive thyroid gland. Since the thyroid gland is responsible for controlling much of your body's metabolism, an inability to lose weight can indicate low levels of the thyroid hormone. Other symptoms of an underactive thyroid can include chronic fatigue and depression. Using a blood test, your doctor can check your thyroid and treat you with a synthetic thyroid supplement to return your metabolism to normal. Natural thyroid hormone therapy is also available, and many of the metabolism-boosting foods and supplements in this book will be helpful.

One example is LeanFactor, a synergistic blend of ingredients important for thyroid function and the addition of lean muscle tissue. It contains guggulsterones which improve the actions of the thyroid and its hormones; forskolin, which increases the ability of cells to respond to signals from thyroid and adrenal hormones; and potassium, which is strongly related to the transport of potassium ions across the cell membrane. A depressed sodium potassium pump will lead to a depressed basal metabolic rate. Consider LeanFactor your thyroid insurance policy!

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In one study, people given a “low-fat” snack actually ate more than people given a regular snack. Low-fat doesn’t necessarily mean lower calories, so don’t be influenced by a label gimmick. Sometimes, calories are just calories.



Ditch The Diet.

I'm talking about ditching diet sodas, sugar-free candies, artificial coffee sweeteners and any sugar substitute or packaged food that includes aspartame, sucralose, acesulfame potassium or saccharin. When the taste receptors on your tongue taste this sweet substance your digestive systems begins to produce compounds that prepare your body to use the "food" that your brain thinks you are consuming. The hormones produced in the digestive process are still present once this fake food enters your small intestine but no actual energy release or satiety occurs. This leaves you with a gut full of digestive hormones that need food to break down and make the brain crave real food. This is why studies have shown that consumption of diet soda products are associated with obesity!

Furthermore, since these products are "calorie-free" they are by definition not metabolized by the body. Not only does this mean that you miss the metabolism increasing effect of normal food calories, but your body must also find a way to store these foreign bodies that cannot be metabolized. Often toxins and compounds that cannot be properly metabolized are stored in fat cells. So if you consume large amounts of "diet" products your body may actually create additional fat cells in which to store these compounds. If you're really serious about burning fat, ditch any sugar substitute foods or diet drinks you tend to consume. I guarantee that once you overcome the initial "diet-addiction" withdrawal, you'll feel a hundred times better.



Cinnamon.

Studies have observed that the intake of cinnamon not only improves insulin production and response but can also increase the metabolism of glucose up to 20 times faster! This means that by simply including a teaspoon or two of cinnamon in your daily diet you'll burn sugar faster, decrease your blood cholesterol and increase your antioxidant activity. Cinnamon has also been used for thousands of years as a natural healing agent to improve circulation. Try adding cinnamon to your daily tea or coffee, sprinkling it on oatmeal or salads or adding it to chicken or other meats before cooking. For those of you who may be wondering, cinnamon rolls are not on the menu.



Move Fast.

The other day a friend approached me and said, “I saw you out for a run yesterday.” Turns out they had simply seen me jogging in to the grocery store from my car, which was parked 50 yards away. It’s simple tricks like running instead of walking that can keep your body fit and lean. Many exercise experts claim that your body burns just as many calories walking a mile as it does running a mile since technically you are moving your body over the same distance. This is simply not true. Studies have shown that the faster you cover a distance, the more calories you burn, period. There is a higher metabolic cost in moving quickly than in moving slowly. So you’re going to burn the most calories pedaling, running, rowing, swimming or any other cardio exercise by doing it as fast as possible. The added bonus is that the faster you move, the higher your post-exercise metabolism becomes causing you to burn more calories throughout the day than if you had moved at a slower pace. So when given the choice, it really is more beneficial to run than to walk, everywhere you go.



Zinc.


If you don't have enough zinc in your diet your insulin response is decreased resulting in insulin insensitivity. With a lower insulin response, blood sugar levels become hard to control resulting in a catabolic hormone response that can depress your metabolism. Zinc is a key component in the metabolic process by which your cells produce energy. Low zinc levels will not only directly impair your metabolic rate but can also decrease thyroid hormone production further depressing your metabolism even further.

Zinc is also necessary for protein synthesis and collagen formation, which is important if you're trying to boost your metabolism by adding more lean muscle fibers. Furthermore, carbonic anhydrase enzymes in your red blood cells rely on zinc to help the body expel carbon dioxide so low zinc levels can also impair your ability to exercise with metabolism-boosting intensity and speed. If you have inadequate dietary protein intake, it's likely that you have deficient zinc levels. Asparagus, spinach, beef, lamb and crimini mushrooms are all great sources of zinc. Since zinc is a crucial component in prostate health, one very smart zinc option for older males is the supplement ProstElan. The flower pollen extracts in ProstElan greatly increase the levels of zinc in prostatic tissues and fluids.

In-Flight Fidgeting.

Most people know that you aren't supposed to sit quiet and motionless for the entirety of a long plane trip, especially an international flight. In addition to depressing your metabolism other risks include blood clots, low back injuries and a weakened resistance to the various viruses circulating throughout the plane's cabin. Most individuals simply don't know how to exercise effectively on a plane. Fact is it doesn't take much. Set your clock, alarm or PDA to remind you to rise from your seat every 45 minutes, find an exit row or other open space and perform a 5-minute exercise or stretching routine after which you can quietly return to your seat, refreshed and rejuvenated.

Here's the routine that's gotten me through many long flights: head rolls, arm circles, shoulder shrugs, torso twists, hip circles, leg marches, squats and toe raises. Jot that list down or commit it to memory, then on your next flight complete 20 reps of each exercise without resting every 45 minutes.



Size It Up.

As you know, consumption of several small meals per day is a great way to keep the metabolism elevated. The problem is most restaurants or fast food joints aren't focused on giving you one of these small meals, especially since the Western ideal is to receive as much food for your dollar as possible. Big portion sizes keep most customers happy and fat! Studies have shown that when presented with a restaurant prepared meal, an individual will automatically consider the size of that meal to be an acceptable portion size and most likely consume the entire portion in one setting. Combine this with the fact that restaurant meal sizes have been significantly increasing over the past several decades and you've got a recipe for uncontrolled blood sugar levels, insulin insensitivity, weight gain and a depressed metabolism. When eating out consider that muffins can be 3 times a standard portion size, pasta can be 5 times a standard portion size and desserts can be 7 times a standard portion size! Furthermore, checking or asking for the nutritional label can often be deceptive because the label may break a single item down into several separate portions. So the cookie that claims on the nutritional label to be 100 calories is actually 400 calories, unless you just eat $\frac{1}{4}$ of it. Here's a simple solution to overeating when eating out. Whenever you go to a restaurant ask for a "to-go" box with your order. Immediately shove at least half of the meal into the to-go box and set it under your chair to take home for a later meal. Better yet, ask the kitchen to box half the meal for you. They should be happy to oblige.



PB & S.

Peanut butter is rich in magnesium, a metabolite that is crucial to the cell's metabolic process. Other good sources of magnesium include whole grains and spinach. It's always good to have a recipe that combines several different metabolism-boosting compounds. While a peanut butter and spinach sandwich on whole grain bread may not sound appetizing, try this recipe instead.

In a wok or sauté pan, stir fry a handful of low-fat chicken breast or lean beef with organic, natural peanut butter, broccoli, spinach and Thai spices like curry and turmeric. Serve over a bed of whole grain rice or wrapped in a whole grain tortilla. Now we're talking!

Want a supplement based source of magnesium? Try the powerful 1-2-3 combo in EnerPrime:

- 1) Green barley grass: a rich source of chlorophyll, magnesium, protein, and trace minerals
- 2) Green kamut powder: an ancient grain from Egypt that has never been crossbred and is rich in chlorophyll, vitamins and nutrients, including vitamin E, magnesium, zinc, riboflavin, thiamine and niacin
- 3) Pure magnesium citrate: metabolism-boosting

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Put stop signs in your diet. In one study, people ate fewer chips from a can when every few chips were colored because this broke their rhythm. When snacking do a load of laundry, drink a glass of water or install other strategically placed “stop signs” to help curb unrestrained, automatic snacking.



Avoid Vegetables.

Vegetable oil, that is. How can an oil that comes from a vegetable, such as corn based oils, sunflower oil, sesame oil, soybean oil, safflower oil and canola oil be dangerous for our bodies? It's because of the way the oils must be extracted from the vegetable. This process occurs in factories where the oil-containing seeds are heated to enormous temperatures under massive pressures while being exposed to heavy amounts of light and oxygen. Add in the toxin-containing extraction chemicals and pesticide concentrating compounds and the results is an oil with a high amount of free radicals and damaged or destroyed cholesterols and vitamins which are non-beneficial for the body. Free radicals damage the cells and slow cell metabolism. In contrast, an oil such as extra virgin olive oil is produced by crushing olives between two stone rollers – a relatively non-stressful process. In addition to extraction, many of the vegetable oils undergo hydrogenation, a process in which an oil that would normally be a liquid at room temperature is converted to a solid. This is accomplished by mixing the oil with metal particles, hydrogen gas, emulsifiers, starch and bleach. This process, applied to margarine and shortenings, makes these fats even more dangerous than the vegetable oils. Hydrogenation results in the formation of trans fats, a toxic and metabolically un-usable fat that can build up in the body and significantly increase the risk of cancer, heart disease and other metabolically damaging conditions. You'll find these type of fats in cream cheese, peanut butter, shortening and other solid spreadable fats. These “partially hydrogenated” fats are used to give food a longer shelf life and preserve the flavor. Hydrogenation also blocks the body from being able to actually use the fatty acids as energy which makes them end up on your waistline. Extra virgin olive oil, coconut oil and flax seed oil are three of the best oils you can use if you want to consume fats but avoid the potential cell damage.



Touch Your Toes.

Let's face it, sometimes exercise is difficult, especially in the morning when you've just crawled out of bed or in the evening after you've finished an exhausting day of work. This is where a simple stretching program can be quite effective. While the importance of stretching has been acknowledged for injury prevention and joint flexibility improvement, it is also an "easy" form of exercise that enhances blood flow and respiration while burning calories. Granted, you burn far fewer calories while stretching when compared with aerobic or resistance training exercises, but stretching is a great alternative when you just don't have the gusto or motivation for a more intense workout.

For an effective stretching program, first perform 20 reps of each of the following: arm circles, straight leg swings, bent leg kicks, toe touches, torso twists, head circles, and wrist circles.

Then move on to a standing hamstring stretch, a standing quadriceps stretch, a calf stretch, a "reach for the sky" chest stretch and a shoulder blade "squeeze" with the hands clasped behind the back.

Not only will you burn calories without a high rate of exertion, but after a good stretch, you may find you actually have the energy for something more vigorous!



Turmeric.

Most of us associate turmeric with curry and a strong spicy flavor in our food. But it is also a fantastic metabolism boosting compound that aids in absorption and digestion of carbohydrates in the small intestine, as well as the metabolism of fats in the liver. As an added bonus, turmeric can lower cholesterol, inhibit formation of blood clots and act as both an anti-inflammatory and an anti-oxidant. Keep turmeric in your spice cupboard and next time you sauté a chicken breast, add a dash of turmeric, curry and a handful of cashews to the mix for a savory metabolism boosting meal.

Citrus aurantium extract from the dried immature fruit of the bitter orange can act in a similar manner to turmeric. More effective than ephedrine on thermo genesis, this extract increases metabolic rate without the side effects. It helps suppress appetite and increase the release of fatty acids from storage. As a bonus, athletes benefit from the ability to exercise longer without exhaustion or lean tissue loss! This extract can be found in the supplement [ThermoFactor](#).



Pedal.

It sounds simple. The more you can use your own energy in getting from point A to point B, the higher your metabolism will rise. But usually driving a car is more practical and convenient than walking or running. Enter the happy medium: a bicycle. While a jaunt that involves a highway or a large amount of mileage may not be practical for pedaling on a bike, a trip to the movie theatre, grocery store or gym is often easily performed on a bike. You'll be surprised how quickly you can get somewhere when you don't have to deal with traffic as you would driving in a car.


During the spring and summer, I use a bicycle to travel to any location within a 2 mile radius of my house. My metabolism is constantly through the roof due to using this mode of transportation over driving. Once you learn the simple tricks, like rolling up a pant leg and filling a backpack with groceries, you'll realize that it can actually be a relaxing and enjoyable experience. The bonus is that when you utilize a bike for transportation, your day is typically filled with several short rides, which are far more effective than a single, continuous aerobic effort.



Breathe.

When performed properly, the rhythmic contractions of the abdominal blood vessels during inhaling and exhaling help to circulate blood through the body, enhancing oxygen uptake and metabolic rate. As you inhale, your diaphragm expands and squeezes the blood out of your internal organs and blood vessels. Then as you exhale, the diaphragm relaxes as new blood rushes in. So as a simple method of boosting the metabolism, focus on deep breathing from the stomach and not just during a stretch or exercise routine but also while you're driving in your car or sitting at your desk.

Try this: inhale slowly through your nose, hold for a 1 count, then exhale through your mouth. The breath should originate from the back of the throat and finish from deep inside the stomach. Once you've practiced and perfected this form of breathing, it can become a natural mechanism for boosting your metabolism.



Chains of Fat.

Medium chain fatty acids, also called medium chain triglycerides, are different than other fats. They are small and able to penetrate cell membranes easily without requiring significant help from additional proteins and enzymes for uptake and energy utilization. They are preferentially burnt as fuel over other fats. They are digested and absorbed into the bloodstream much more efficiently than larger fatty acids so they can then travel into the liver for immediate conversion into energy, rather than to storage as fat. So how do you get them? Many supplement companies offer MCFA or MCT's, often advertised as a great source of fat fuel during long term athletic activities. Natural food sources are limited but coconut oil and coconut milk are your best bets!



Auto Exercise.

Believe it or not, you actually can perform a workout routine in your car. While breaking a sweat while driving is near to impossible, you can use a simple calorie expending trick that musters up enough heat to give your metabolism an automobile boost. The trick is called “isometric” muscle contractions. This means that you use your muscles to apply a force against an object, but the muscles don’t actually move or change in length.

For example, if you press both hands together as hard as possible and hold for 5-20 seconds, this is considered an isometric exercise. Other examples include thigh contractions, floor stomps, headrest pushes, butt squeezes, bicep flexing, shoulder shrug holds, and stomach tightening. You’ll be amazed at how much a series of these movements can raise your body’s temperature and increase the heart rate, all without leaving the driver’s seat.



Blow A Bubble.

Studies have shown that chewing gum raises your metabolic rate by about 20 percent, allowing you to lose up to an extra 11 pounds of fat per year! This is partly due to the “twitching” effect – small muscular contractions resulting in an increase in burnt calories and boost in body temperature. In this case, those twitches are coming from all the tiny jaw and facial muscles involved in chewing. Just be careful to choose gum that doesn’t contain high amounts of sugar and remember that sugar-free gum contains potentially toxic artificial sweeteners. Excessive gum consumption can cause stomach discomfort and put you at a potential health risk from the chemicals in artificial sweeteners. However, one to two pieces a day can be effective and will often help to curb your appetite.



Gargle With Garlic.

Garlic juice and garlic oil has been observed to reduce levels of circulating fat in the bloodstream, stabilize blood sugar levels and improve the fat-burning rate in the liver. It also stimulates adrenaline hormone production in your body which can trigger fat release from storage tissue and use of these adipose stores for energy. So utilizing this potent flavor can actually help whittle away the waistline! Furthermore, garlic can stabilize cortisol levels reducing lean muscle mass breakdown which simply means you're burning fat and building protein.

You don't have to actually drink or gargle garlic juice. The more convenient and less face puckering alternatives include whole bulbs, minced garlic and supplement capsules. Keep a small bowl of garlic on the kitchen counter and include it in omelets, salads, stir fries, sauces and dressings. Just remember to brush your teeth. The supplement, EnerPrime, contains high allicin potential garlic concentrate, used since Biblical times for endurance and strength. In this form, the garlic is activated by water to form allicin which has powerful antioxidant and cardiovascular-supportive properties.

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When soup bowls are constantly refilled via a hidden straw at the bowl, people have been observed to eat far more soup. Sometimes it's the portion in front of us, not our appetite that dictates fullness. Stop when you're 80% full.



Caffeine ingestion can increase your metabolic rate and energy expenditure by over 10%, and coffee is one of the most inexpensive and convenient ways to achieve this effect. In addition to stimulating the central nervous system and increasing both mental and physical energy, caffeine can improve memory, enhance athletic performance and help you burn more fat as a fuel, especially during aerobic activity. Caffeine can also inhibit the growth of new adipose cells (your body's fat storage tissue) and when taken with a meal can improve fat-burning. In order to maximize the beneficial effect of caffeine on your metabolism, you must consume coffee or caffeine supplements only in moderation. If these supplements are consumed in excess, your central nervous system and hormones can adapt and grow non-responsive to the metabolic effect. In addition, excessive caffeine can cause an increase in your heart rate, blood pressure and release of your body's adrenaline hormones which can eventually lead to physical stress and breakdown. Excessive caffeine consumption has also been linked to headaches, restlessness, irritability, insomnia, anxiety, dehydration, stomach irritation and heart palpitations. A metabolic increasing dose of caffeine is about 100-200 milligrams daily, which is the equivalent of one or two small cups or 10-15 ounces of coffee. For the best effect on exercise, consume it about 45-60 minutes prior to the workout, which will result in an optimal carbohydrate sparing and fat burning effect. Coffee in the morning prior to about 20-30 minutes of light to moderate exercise, followed by a complex breakfast is a great fat burning strategy. Because it contains all the benefits of coffee with less caffeine, delta-E is a healthy and more energy stabilizing alternative to regular coffee.



Push.

If you want to be able to increase your metabolism at any time of the day, month or year, no matter where you may happen to be, you must know at least 3 variations of the pushup. Why? Because a pushup involves your facial muscles, neck, chest, shoulders, arms, hands, wrists, core, pelvic musculature and legs. I suggest that you start with the standard-grip pushup, the narrow-grip pushup and the fist pushup. If you do not have the strength to complete a pushup in the normal position, then complete a knees-down version. Switch between the standard grip and narrow grip to incorporate different muscle groups in the chest, shoulders and arms. Use the fist pushup when your wrists are tired or when you don't want to get your fingers too familiar with a germ-ridden surface.

Here's a good starting point: three times a day complete the maximum number of pushups that you can perform. Throw this habit into your next vacation or long day at work and you'll be guaranteed a burst in your metabolic rate.



Chromi-Yum.

Perhaps 90% of all Americans are deficient in chromium! Chromium picolinate is a trace mineral that potentiates the effects of insulin, causing less insulin to be needed by the body. It possesses the properties to increase the efficiency of insulin to optimal levels, aiding in glucose and fat metabolism and resulting in weight loss, mood enhancement and energy promotion. Animals fed with chromium supplements have stored less body fat and attained more lean muscle mass than animals on similar diets. Combining chromium with picolinic acid, as done in popular diet supplements, enhances dietary absorption. You can try increasing your intake of chromium naturally by eating romaine lettuce, onions, tomatoes, oysters, liver, whole grains, bran cereals and potatoes. You can also supplement with ThermoFactor, a rich source of chromium combined with other appetite-controlling and blood sugar-stabilizing compounds, like Vanadium and L-Tyrosine.



Phone Pacing.

The twitch concept of burning energy applies in all situations, including during your phone conversations. If you cross and uncross your legs, stretch, stand and pace, swing your arms and do toe raises while engaging in conversation, you can actually burn several hundred extra calories per month. You'll also feel more energized and be more likely to exercise after a day of desk work if you're up and around as much as possible throughout your daily routine. It will take some time to form a habit of standing and moving around while on the phone, but the extra effort is worth the metabolic benefit.



Niacin Needs.

Niacin or vitamin B3 is found in two different forms in the body – nicotinamide adenine dinucleotide or “NAD” and nicotinamide adenine dinucleotide phosphate or “NADP.” These two compounds are essential for converting carbohydrates, proteins and fats into energy, as well as forming carbohydrate storage in muscles and in the liver for future energy. Since niacin plays a major role in fat processing, vitamin B3 can also successfully lower blood cholesterol. When supplementing or enhancing your diet with any of the B vitamins, you will notice a significant boost in energy and alertness. The best sources of niacin are crimini mushrooms and tuna. Other great ways to obtain niacin include salmon, chicken breast, asparagus, halibut and venison. The dietary supplement EnerPrime contains green kamut powder which is a very rich and convenient source of niacin.

Include Intervals.

Interval training involves cardiovascular workouts that include periods of high intensity training incorporated between rest sessions of low or moderate intensity. By allowing yourself recovery between each interval, you enable yourself to push harder during the intense portions. This boosts your post-exercise metabolic rate and ensures that you burn a significantly greater amount of calories following exercise. Compared to a long, low-intensity cardio session, the metabolic effect of interval training is significantly greater.

Here are some ways of including intervals in your workout sessions:

During a 30 minute bicycle session, alternate with 2 minutes of hard then 2 minutes of easy pedaling for the entire ride.

Try incorporating several 20-40 second sprints into your daily jog.

Not only will you increase the total caloric cost of exercise, but you'll also experience an enormous metabolic boost that lasts long after your cardio session is complete.



Peel A Banana.

As you probably know, bananas are an excellent source of potassium. It is not true, however, that bananas are the “fat-fruit” unless you eat a few dozen a week! What you may not know though is that potassium is essential for your body to be optimally hydrated. A lack of proper hydration is one of the top ways to depress your metabolism since every single energy process in your cells relies on a molecule of water at some point in time!

Potassium also aids in proper muscle contraction. It is important for chemical reactions within the cells, stabilization of blood pressure and transmission of electrochemical impulses. Thermo genesis, which is crucial to a high metabolism, is strongly related to the transport of potassium ions across the cell membrane. A depressed sodium potassium pump will lead to a depressed basal metabolic rate!

In case you just can't stand the flavor or the yellow mush of bananas, other great sources of potassium include milk and oranges. LeanFactor includes a particularly beneficial source of potassium aspartate which vastly improves energy levels. EnerPrime contains potassium citrate, which is under consumed by Americans and often depleted due to overuse of sodium and caffeine. The combination of the potassium aspartate in LeanFactor and the potassium citrate in EnerPrime makes them ideal supplements to your diet!



Dairy Dose.

Dairy provides high doses of calcium, often in a low-fat or non-fat source that also includes lean proteins. While often thought of as a bone strengthener, calcium also plays a role in many other physiological activities that include nerve conduction, muscle contraction, regulation of enzyme activity and cell membrane function. Many of these physiological activities are essential to maintaining a high metabolism. Fat oxidation can actually be depressed in the presence of inadequate calcium.

Dairy, not fortified calcium foods or vitamins, is the best way to get optimum absorption of your daily calcium dose. Even if you're lactose intolerant or sensitive to milk products, yogurt contains many of the enzymes that help your body digest dairy. But use caution - most of the yogurt in the grocery store aisle is modified iced cream. Your best bet is use plain, fat-free yogurt then add your own blueberries, raspberries or nuts. Turnip and mustard greens are also excellent sources of calcium.



Spice Up Your Sports.

Variety is the spice of life and nowhere is this statement more true than with exercise. In exercise science we have what is called the SAID principle which stands for Specific Adaptation to Imposed Demands. This means that your body will eventually adapt to the demands that are placed upon it, becoming more efficient at familiar movements and burning less calories during a frequently performed activity. To light a fire under your metabolism, try cross-training by replacing your daily walk with rollerblading, switching from racquetball to tennis or substituting rock climbing for a weight lifting session. Take an evening martial arts or dance class. Try out spinning. Not only will you boost your metabolism by working new muscles and new energy systems, but you'll also increase your post-exercise metabolic rate as your body takes longer to recover from the different movements.

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Keep your snacking simple. In the “M&M test,” people ate far more candies from a bag with 10 colors than a bag with 7 colors. When options are plentiful, like snack mix in popcorn or multi-colored cereal, we eat more.



The GI.

The glycemic index, a.k.a. the GI, is one of the most important determinants in choosing your food, more specifically your carbohydrates. The GI is a simple measurement of how quickly a carbohydrate or sugar is absorbed into the bloodstream. Foods with a “high GI” are absorbed quickly and result in a large spike in energy and insulin levels, followed by a sharp decrease in blood sugar and a subsequent fall in energy levels. This can then depress the metabolism and increase the appetite. “Low GI” foods are more stable sugars, absorbing slowly and providing long term energy sources that keep the metabolism elevated. This includes milk, yogurt, soy products, apples, pears, blueberries, plums, oranges, grapes, bananas (not overly ripened), grapefruit, oatmeal, brown rice, whole wheat spaghetti and egg fettuccine, whole-wheat pasta, bran cereal, barley, bulgur, basmati, Kashi and other whole grains, beans, peas (especially chick and black-eyed), lentils, whole corn, sweet potatoes and yams. Stay away from foods with a high GI, which include juices, candies, breads, pastas, cereals, bagels, scones, biscotti and most foods that taste “sweet” in your mouth. Also avoid processed and packaged foods as much as possible because they are likely to include artificial sweeteners (which have a similar effect as sugar), as well as simple and refined sugars. Keep your eye on the nutrition label for ingredients like sucrose, maltose, dextrose, fructose, galactose, glucose, arabinose, ribose, xylose, deoxyribose, lactose and other fake names for sugars. Even “healthy” juice and many health food or supplement products will need to be avoided if they contain high levels of sugar, especially high fructose corn syrup. Gain the ability to identify the GI of all the foods in your diet and your energy levels will stabilize, your mental focus will improve and your metabolism will soar.



Your Best Friend.

People who own dogs tend to be more physically active than their non canine-bound counterparts. Whether it is walking your pooch around the block or having it drag you on a weekday morning run, there is an increased incentive to engage in metabolism boosting activities when your dog is begging you to go for a jaunt. The same cannot be said for cats or goldfish! So visit a pet shop or open your newspaper classifieds section and try to find a breed that tends to be physically active, such as a boxer, winerheimer or labrador. The investment will be less expensive than a good treadmill and make for far more interesting exercise sessions. Even if you're only devoting 5 minutes a few times a day to insure your dog doesn't go stir crazy, it can make a huge difference in your total daily energy expenditure.



Be A Pyro.

Vitamin B6 is crucial for over 100 different metabolic reactions in the body. The most important include molecular synthesis of amino acids (your muscle's building blocks), red blood cell production (the oxygen carrying system), sugar and starch breakdown and processing (blood sugar control), and nerve impulse transmission (muscle firing capacity). Without these functions your metabolism will crash to low levels! For optimal B6 consumption keep your cupboards stocked with brightly colored bell peppers, turnip greens and spinach. Use these vegetables in salads, soups, stir fries and as a side dish. In case you're checking the nutritional supplement label, all forms of vitamin B6 begin with a "pyr," such as pyridoxine and pyridoxamine phosphate. Delta-E is a perfect example of a healthy and rich supplemental source of vitamin B6.



Go Fish.

Proper cell membrane function can be supported by fish oil supplementation or the inclusion of fish in the diet, especially from coldwater species like salmon. Healthy cell membranes are crucial in supporting energy generation within your cells. Without proper intake of omega-3 fatty acids, which are highly concentrated in fish, you can have inefficient, leaky, poor functioning cell membranes that will slow down your metabolism. People who regularly eat fish have also been observed to have higher levels of leptin, a hormone linked to quick metabolisms, appetite control and weight loss. If you're not taking a high quality fish oil supplement, preferably one that contains "Omega-3's" and "anti-oxidants," try including fish in your diet at least twice a week. Just don't ruin the benefits by frying it in high heat drenched oil – poaching or grilling are healthier preparation methods. A few fish fillets prepared on the weekend can be a perfect topping to salads all week long.

If you don't like the taste of fish oil or desire an equally powerful non-meat alternative, try EnerEFA. This supplement contains a well-balanced combination of the omega-3 and omega-6 essential fatty acids from flax seed oil (nature's richest source of omega-3 fatty acids) and evening primrose oil - which contains a rare nutrient, Gamma-linolenic acid (GLA), needed for the body to make a family of hormone-like compounds called prostaglandins which are necessary for natural hormone production.



Invest In Elastic.

An exercise elastic band is a smart buy for anyone trying to keep their metabolism elevated, especially for frequent travelers or people who can't make it to the gym on a regular basis. Basically, this band pulls on your muscles which lengthens the muscle fibers. In response, your fibers contract in an attempt to maintain length, or avoid tearing.. Although an array of body weight exercises are fantastic, an elastic band will add more variety to your routine and introduce a source of resistance that feels and acts differently than gravity and your own body weight. Bands are often sold in a variety of tensions and colors but you don't necessarily have to have these multiple resistances choices.

An optimal routine combines elastic band exercises with body weight exercises and would look something like this: crunches, band side raises, band front raises, knee push-ups, band curls, band rows and body weight squats. These exercises would be completed as a 10-20 repetition circuit with minimal rest and could easily be performed in a park, hotel room, airport lobby or bedroom. Bands are much easier to carry than trying to stuff a pair of dumbbells in your travel suitcase or glove box!



Do The D.

Did you know that the organ that burns the greatest amount of sugar calories during our resting metabolism is the brain? Since proper human brain cell development is closely related to adequate vitamin D consumption, it has been suggested that vitamin D regulates cellular growth and function in our brain cells. Our bodies also convert vitamin D3 into calcitriol, a compound closely linked to the cellular lifecycle. By encouraging properly dividing and developing cells with adequate levels of vitamin D, you'll be promoting a healthy metabolism. Salmon is a rich source of vitamin D as are sardines, shrimp, cod, milk and eggs.



Fun With Folate.

Folate is important for proper development of red blood cells. If red blood cell levels are deficient, then oxygen distribution to your muscles will decrease. This is a big blow against maintaining a high metabolism since all the body's energy pathways are highly oxygen dependent. Think about running your car on gas fumes - your acceleration and power will vastly decrease. Opening up the flow of oxygen to the muscles is like filling the car tank with gasoline.

Anemia is a condition characterized by low energy levels and an inability to maintain high exercise levels and it is often observed in folate-deficient individuals. In addition to preventing the oxygen-deficient condition of anemia, folate also assists with healthy circulation. So a folate rich diet not only gives you more healthy red blood cells but their delivery to the muscles is enhanced as well. The best sources of folate include dark leafy greens, romaine lettuce, asparagus, broccoli, cauliflower, beets and lentils. Pregnant women may also want to take a pre-natal nutritional supplement that includes folate.



Chew, Chew, Chew.

The process of digestion, particularly that of carbohydrates, begins with the saliva in your mouth. By deliberately chewing to a pulp every single bite of food you consume, you'll get a jump-start on digestion which will help you feel fuller sooner. Masticating thoroughly means less blood must be diverted to the digestive system for breakdown leaving more available for muscle contractions and other metabolism boosting movements. Due to the calorie burning effect of "twitching," you also burn many extra calories with each contraction of those powerful jaw muscles and all the other tiny neck and facial muscles involved in grinding your food down. A good strategy is to pick a number of chews (20-30 is usually effective) and focus on completing that number with every bite of every meal. Initially this will seem like a chore, but you'll be amazed at how much sooner you feel full and how much smoother you digest your meal!

Two-A-Days.

Or even three-a-days! Research has shown that individuals who split a long workout such as a 30 minute treadmill run into several shorter workouts (such as three 10 minute treadmill runs) burn far more calories throughout the day and have a higher metabolic rate after exercise. This is due to the “post-exercise metabolic effect” or the increase in the amount of calories that your body burns for the hours following exercise. If this effect happens multiple times during the day, your metabolic rate will be significantly higher than if you exercise just one time.

So think about creative ways to squeeze a two-a-day into your current program. For instance, if you usually stop by the gym on your way home from work for a 90 minute workout, instead complete a 30 minute cardio routine before work, then cut your post-workout routine down to a more manageable hour. Or if you currently run for 20 minutes in the morning, shorten this to four 5 minute runs throughout the day. You’ll immediately notice the effects in your waistline and your energy levels.



Green tea contains small amounts of theobromine and theophylline which increase thermo genesis (body temperature), beta oxidation (fat burning) and resting metabolic rate (calorie metabolism) in a similar way to caffeine. Catechin polyphenols, also found in this green beverage, are compounds that can enhance norepinephrine release which increases the total amount of calories you burn during the day, up to the tune of 100 extra calories! Tea is also a mild appetite suppressant. Keep a box of green tea bags in your desk, purse or car for a convenient metabolism-boosting beverage. Most convenience stores or coffee shops can supply you with the hot water. Just use caution - the junk food industry has hopped on the green tea bandwagon, offering green tea beverages that are actually just glorified, sugar-filled, calorie-packed soft drinks. Check the label for high fructose corn syrup, a “bigger than 10” calorie count or artificial sweeteners. That’s your clue to go with the old, reliable “tea bag in hot water” approach. To date, I’ve found one green tea based energy supplement that offers stabilized energy levels, enhanced mental alertness and high immune system function that actually far surpasses the beneficial effects of green tea! It is called delta-E. Delta-E contains a form of L-theanine called suntheanine, which offers the benefits of dozens of cups of green tea without having to consume all that caffeine! There are none of the usual negative effects of caffeine with the amazing effect of enhanced memory, focus, sleep and stress management.

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Act like a food or wine connoisseur when you're eating. People who critically judge a meal's quality tend to eat less. Savor, sip, and thoughtfully munch on your next meal, and you're guaranteed to feel fuller sooner.



Take A Stroll.

What exactly happens inside the body after a large meal, like Thanksgiving dinner? Your liver becomes overloaded with a surplus of energy because it only has a certain “carbohydrate capacity.” Once the liver is full of carbohydrates, any excess sugars in the bloodstream are easily converted to body fat and sent away to your abdomen, vital organs and wherever else you tend to deposit fat. Unused fats resulting from a large meal typically circulate through your bloodstream and are also deposited as adipose tissue. The huge release of insulin that occurs after a large meal is the trigger for this fat storage but there’s a simple way to halt the high insulin release and “energy storage” mechanism.

Studies have shown that the simple act of moving about and walking after a large meal will significantly decrease circulating fatty acid and sugar levels, lowering your body’s energy surplus. This is because moving muscles take in up to 30 times more blood sugar and energy than “sitting on the couch” muscles. In addition, your cells become more sensitive to insulin which allows your pancreas to release much lower levels of this fat storage hormone. The nice part is that you don’t need to run 5 miles or do 300 pushups – all that’s required is a simple walk. Begin to make this a habit after large meals and you’ll keep that metabolism elevated.



Co-Enzyme.


While it may sound like the name of a sci-fi robot character, Co-Q10 is actually an enzyme found in the mitochondria of your cells and is essential for oxygen based energy generation and antioxidant protection. Co-Q10 levels decrease with age and intense exercise. Reduced Co-Q10 levels may be overcome by supplementation or more preferably by increasing consumption from rich dietary sources like almonds, ocean salmon, sardines, spinach and red meat. Co-Q10 offers an especially helpful metabolic and oxygen utilization boost for endurance athletes but any individual who exercises frequently will receive extra benefit from including this compound in their diet. Remember - the more oxygen you can use, the higher your metabolism will be.



Memorize.

You need to memorize a body-weight-only exercise routine that you can do anywhere – your backyard, a park, your basement, your living room and even the gym. This will be called your “Metabolism Booster.” Commit a routine to memory, then when you have a hectic day with absolutely no time to make it the gym, you can find a brief period of time to complete a few circuits of your memorized metabolism booster. Knowing it front to back in your head will remove the mental barrier of not knowing exactly what to do.

Memorize and then try this very simple routine for starters. 12 pushups, 12 squats, 12 narrow grip pushups, 12 lunges and 12 jumping jacks. Perform anywhere from one to five times throughout the day. This will also come in handy as a travel or vacation routine that you can rely on for a quick burst of energy. If you purchased a hard copy of this book, you have the DVD which automatically gives you access to 5 of my highly effective, personal Metabolism Boosters.



Eat Your E.

The vitamin E family, also known as the tocopherols, contain powerful antioxidants that can protect cells and DNA from the damage caused by exercise or a stress related lifestyle. They can also protect the mitochondria, your oxygen utilizing cellular structures, from the damaging effects of the free radicals produced during energy metabolism and exercise. Vitamin E also naturally increases your body's retention of Coenzyme Q-10, that important metabolic increasing compound with the sci-fi name. Dietary sources of the vitamin E family include wheat germ and wheat germ oil, as well as oils from other vegetables, grains and legumes, like palm oil, sunflower, canola, corn, soybean and olive oil. But if you read the section of this book on vegetable oils, you might know that better ways to eat your E include nuts and sunflower seeds, whole grains, fish, natural peanut butter and green leafy vegetables. One natural form of vitamin E called d-alpha tocopheryl succinate is an important antioxidant which is beneficial in protecting the body against damage caused by environmental and chemical pollutants. It is found in perfect amounts in a supplement called EnerPrime.



Fire It Up.

Go ahead and order the #5 next time you're eating Oriental. Foods with high amounts of a molecule called capsaicin, such as chilies, hot sauces and salsas have been shown to decrease cholesterol absorption and also increase concentration of fat metabolizing enzymes in the liver. This fat-burning effect is enhanced even more in the presence of adequate protein intake, like hot sauce on your omelet. As an added calorie-controlling bonus, you're less likely to overindulge when the food you're eating has that slightly uncomfortable burn in the mouth. So keep your pantry stocked with crushed red peppers, Thai red chilies and Tabasco sauce. If you really want to live life on the edge, there are a variety of novelty hot sauces available in specialty stores and online. Use them in soups, chili and stir-fries.



Sunshine.

Sunlight is the body's main source for proper Vitamin D conversion and utilization. Vitamin D, as you may already know, is essential to a healthy metabolism. Exposure to the sun is also important in maintaining your body's natural circadian rhythm. Without a proper sleepwake cycle, you can become slow, fatigued and depressed – none of which promotes an active body and fast metabolism. Although there will be rainy days and long stretches in the winter where sunlight exposure is difficult to attain, try to follow a general rule of exposing yourself to at least 10 minutes of sunlight every single day, even if it's just for a short walk. You'll feel more alert and awake and will have yet another reason to go outside, remain active and boost your metabolism!

Interestingly, another type of "sun" found in the supplement delta-E offers a very similar feeling. Suntheanine is perfect for reducing stress and anxiety, promoting relaxation, improving learning and concentration, enhancing energy and helping you feel as if you've literally just spent a day in the sun!



Clean Freak.

Next time you're faced with the dreaded task of straightening up the clutter, think again before farming the work out to your spouse, babysitter or maid. Put on some upbeat music and clean as vigorously as possible. Include occasional blood-pumping activities like jumping jacks and pushups and don't let yourself stop for a breather until the task is done. While this form of cleaning can burn 300-400 calories per hour, it will also boost your metabolism for several hours afterwards. There's nothing like being productive and active at the same time! You can even use cleaning as an effective warm-up for a run or gym session. Just don't break any valuable lamps or picture frames during your jumping jacks.



Drink Up.

Water not only displaces the volume in your stomach making you much less likely to fill up the empty space with food, but it is also necessary for normal physiological functions like fat oxidation and energy production. If your body is constantly dehydrated, you are directly depressing your metabolism and severely inhibiting your ability to burn fat. As a matter of fact, metabolism has been observed to increase up to 30 percent quicker directly after water consumption and that can add up to over 5 pounds of weight lost per year!

Here's a good rule of thumb: take your weight in pounds, divide by two and the result gives you the approximate number of ounces of water you should be drinking per day. So can you drink too much water? Absolutely. That can lead to a dangerous and potentially life-threatening condition called hyponatremia, which is basically a dilution of your body's cellular fluids. Don't use this as an excuse to drink too little, but unless you're exercising in hot and humid conditions, try not to take in more than about one large water bottle per hour.



Lips on Lipoic.

Research on animals suggests that lipoic acid supplementation increases cellular metabolic activity and protects the body from cell damaging, metabolism-slowing free radicals, while improving insulin sensitivity and blood sugar stabilization. Lipoic acid is vital for glycolysis, our body's sugar and starch-to-energy converting mechanism. It also helps to maintain the active state of Coenzyme Q-10, that energetic mitochondrial enzyme. Supplemental forms of lipoic acid are available but natural dietary sources include dark green leafy vegetables like spinach and collard greens, broccoli, potatoes, carrots, beets and red meat. Notice that you'll often see patterns in metabolism-friendly foods - they're easily found in nature and in their raw, unprocessed forms. Lean meats, colorful vegetables and whole fruits are always a plus! Another compound that provides all these benefits is EnerPrime, a entirely natural green superfood supplement with the combination of antioxidant support and immune system function.

H₂O, On The Rocks.

Imagine your body as a water heater. A water heater requires energy to raise the temperature of water and you can use this same principle in weight reduction. The human body can expend up to a few dozen extra calories simply heating icy cold water from its frigid temperature up to the optimal temperature your body requires for the best absorption, utilization and hydration. If you make a habit of drinking ice cold water then your body can burn a significant amount of extra calories per day simply acting as a “water heater.” So when you’re trying to increase your metabolic rate by staying adequately hydrated, obtain even more results by making sure your water is as chilly as possible.



Don't Just Pump Iron.

It doesn't matter how much iron you're pumping if you're not consuming adequate dietary iron. Without enough iron intake your cells are unable to efficiently receive oxygen for metabolic reactions, which decreases your metabolic rate and daily caloric expenditure. In addition, inadequate iron can drive you dangerously close to a condition called anemia, leaving you sluggish, fatigued and much less likely to engage in physical activity. While multivitamins may be a quick and convenient source of iron, natural sources are more completely and readily absorbed. If you want to ensure adequate iron intake, include the following as staples in your diet: lean cuts of red meat, chicken, iron-fortified whole grain cereals, soy nuts and dark leafy greens.

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People perceive tall objects as being bigger than short, squat ones, so use tall and slim drink glasses instead of short wide ones. Even pro bartenders pour more alcohol into highball drink glasses and balloon-shaped red wine glasses.

Break Your Fast.

Research has indicated that one of the habits of people who successfully maintain a fast metabolism is the consumption of a healthy, complex breakfast. There are two likely reasons. First, the body's metabolism actually rises when digesting food and the increased caloric burn of processing a well-balanced breakfast gives your metabolism a jump start after your overnight fast. Second, the act of prioritizing breakfast will force you to have fuel in your body, thus avoiding a mid-morning slump as your body runs out of fuel and enters into "fat-storage" mode. Prioritizing the majority of calorie consumption early in the day is called "front-loading" your calories and can significantly increase metabolic rate.

The best breakfast includes: a fiber such as oatmeal, spinach, bran or fruit, plus a complex carbohydrate like yogurt or whole grain toast, plus a complete protein like eggs or salmon, plus a small amount of fat, like natural peanut butter.

So one example would be oatmeal with sliced bananas, peanut butter and a dollop of yogurt. Another good breakfast is a slice of healthy whole grain bread with an egg and sliced tomatoes or spinach. This is your most important meal of the day so find several tried and true recipes that you enjoy and start eating a big breakfast!



Flavin Flavor.

Like most of the B vitamin group, Vitamin B2, also known as riboflavin, is a critical component of your body's energy production pathways. It is converted to several compounds in the body that attach to protein enzymes and allow for optimal oxygen-based sugar conversion into energy. Riboflavin is found in especially high concentrations in the liver and kidneys, two of your body's major metabolic processing organs. High concentrations are also found in skeletal and heart muscles where vitamin B2 plays a key role in aerobic metabolism. To get your daily dose of B2, go for mushrooms, calf's liver (less toxins than older animal liver), spinach, and smelt. Over two milligrams of riboflavin, along with healthy doses of the entire B-vitamin family, are found in delta-E. The synergistic blend of natural bioactives in delta-E give your metabolism a perfect peak!




One A Day.

Apples contain a chemical called pectin which turns into a thick, jelly-like substance in your digestive tract. This not only decreases glucose absorption but also creates a lasting sensation of fullness. Furthermore, pectin activates hormones that suppress appetite and leave you feeling more satisfied with less caloric consumption. As a low-calorie, nutrient dense food, an apple is one of your best bets for a whole, raw fruit. If you can't get your hands on the organic version, try soaking regular apples in water and vinegar for 5-10 minutes to limit herbicide or pesticide consumption. This is a better alternative than peeling, which decreases fiber and nutrient value.



Paper Or Plastic?

The key to boosting your metabolism is frequent snacking. The key to frequent snacking is actually having the right snacks readily available. The key to snack availability is some sort of package or bag in which to conveniently transport your food! My most successful weight loss clients can always be found with a Ziploc bag of almonds, sunflower seeds or raisins in their purse; a travel cooler with lean meat or low-fat dairy in their office; or a plastic container of salad and mixed vegetables in their car. Don't be caught unprepared. Don't allow your blood sugar to plummet because you don't have a healthy snack handy or worse yet force you to pull over at a fast food joint to satisfy those hunger pangs! On your next trip to the grocery store load up on small and large Ziplocs, plastic containers with lids and a small travel cooler. Once you have access to these items, healthy snacking and grazing becomes quick, convenient and practical.



Try Tyrosine.

Tyrosine is an important building block for crucial neurotransmitters, the chemical messengers that are highly involved in metabolism and appetite regulation. These messengers include epinephrine, norepinephrine, serotonin and dopamine. Tyrosine also aids in the function of your body's adrenal, thyroid and pituitary glands, all of which are important organs for maintaining a high metabolism. Two markers of a depressed metabolism are low thyroid activity and low body temperature. Both conditions have been associated with low levels of tyrosine.

Tyrosine is produced in the body by another compound called phenylalanine which is found in high amounts in meats, nuts, avocados, bananas, dairy products, lima beans, pumpkin seeds and sesame seeds. Tyrosine is also a stimulant for the release of the growth hormone (GH). With all these benefits of tyrosine, you may want to consider supplementing with the highly active L-Tyrosine form found in combination with vanadium, chromium and manganese in the supplement ThermoFactor for powerful thermo genesis!



Grow Hormones.

Human growth hormones can reduce body fat even in the absence of dieting. They can also increase lean muscle formation and boost energy, endurance and metabolism. Also known as somatotropin or “hGH,” this hormone is secreted by the pituitary gland, mostly when you’re asleep.

Here are some natural ways to increase your body’s hGH production: 1. Make the last meal of the evening high in protein and low in fats and sugars.

2. Fast 2 hours before bedtime.
3. Avoid alcohol and caffeine 2 hours before bedtime.
4. Eat only low glycemic index (50 or less) carbohydrates.
5. Re-fuel as soon as possible after a workout.
6. Attempt to create lactate production in your muscles during nearly every workout which means you don’t rest very long between sets and you make sure to achieve an intense burn or oxygen deficit with at least 1 set or exercise.

Whey protein and creatine are two exercise supplements that can also assist with hGH production but are only recommended for individuals engaged in moderate to high resistance training programs. An amino acid called L-Tyrosine which can actually stimulate growth hormone production and is found in the supplement ThermoFactor.



Vanadi-Yum.

Remember that insulin is essential for proper processing of sugar calories, which is a crucial component of maintaining a high metabolism. Vanadium is a compound that has the ability to improve the body's sensitivity to insulin, thus assisting in the stabilization of blood glucose levels. As the "spikes" in blood sugar are controlled, the metabolism remains at a higher level and excess body fat is avoided. In addition, vanadium can also help lower cholesterol. But be careful supplementing with vanadium as a high intake of over 1.8mg/day can easily be toxic. Instead, attempt to consume foods with high natural levels of vanadium including mushrooms, black pepper, parsley, dill weed and whole grains. If you want to ensure that you're supplementing safely with vanadium, try ThermoFactor, which contains a form of vanadium called vanadyl sulfate that is perfectly healthy and combined with a host of other natural nutrients that immediately boost the metabolism.



Hit The Iron.

Since a pound of muscle can burn up to nine times as many calories as a pound of fat, training with resistance will not only vastly increase your metabolic rate by replacing droplets of fat with fibers of muscle but will also keep the metabolism in overdrive up to 24 hours after lifting. This is why weight training is one of the top metabolism boosting activities out there. If you compare an individual who utilizes only aerobic exercise with an individual who combines both aerobic exercise and resistance training, the latter will always have a significantly higher exercise-derived metabolism.

The best weight lifting exercises to choose are multi-joint movements that burn the most calories and use the most body parts in the shortest period of time. These “bang-for-your-buck” movements include exercises like squats, lunges, rows, push-ups and pull-ups. Avoid machines which burn relatively fewer calories and do not train nearly as many different muscles as free weights. For the best metabolic results, complete a circuit that includes 10-15 repetitions of 4-8 different exercises with minimal rest between movements.



Ginseng.

Ginseng is a root that has been used for centuries as a central nervous system and adrenal gland stimulant as well as a promoter of healthy blood circulation. It has been observed to help stabilize blood sugar levels and glucose tolerance and may speed sugar transport from the blood into active tissue, thus reducing insulin response and enhancing metabolism. Ginseng may also be involved in the formation and utilization of fatty acids which will assist in cholesterol and weight management.

While wild ginseng is hard to come by, ginseng tea is relatively easy to find. For a double whammy, add a few sprinkles of blood-sugar controlling cinnamon to your morning cup of ginseng tea. A very powerful form of ginseng, eleutherococcus (siberian ginseng extract) can be found in the supplement EnerPrime. Interestingly, siberian ginseng is not a true ginseng which is important for individuals with high blood pressure who may not tolerate the possible hypertensive effects of traditional ginseng root.



Carnitine.

As a cellular transport molecule, carnitine is a vital component of the cell's mitochondrial system that helps to convert fatty acids into energy. Carnitine is essential for proper mitochondrial function and energy metabolism. High levels of carnitine result in increased fat utilization during both rest and exercise. Your body can produce carnitine by combining amino acids with vitamin B, vitamin C and iron, but in times of heavy exercise or stress, you may need to boost your metabolism with a supplemental intake. Supplemental forms of carnitine are available in pill or capsule form but the richest dietary sources are lamb, organ meats such as liver and heart, fish, avocado and wheat germ.



Taste Of Thai.

The curry powder used in Thai cuisine is actually a blend of various spices including coriander, turmeric, cumin, cinnamon, black pepper, horseradish and nutmeg. Many of the ingredients in curry contain a significant amount of capsaicin, the element that makes a spicy food hot. Just like chili-based hot foods discussed in other sections of this book, curry can directly elevate the metabolism through the body's thermoregulatory (increased temperature) and adrenaline response (increased metabolic activity). The spiciness in Thai food can also improve blood circulation which elevates the metabolism by delivering more oxygen to muscle tissues for cellular activity and calorie burning. Your best bet is to go easy on the sticky rice and choose meat and vegetable curry dishes instead.

The logo features a stylized flame icon to the left of the word "Ginger." in a serif font. The flame is composed of several pointed, overlapping shapes in shades of grey and white, giving it a textured, fire-like appearance. The word "Ginger." is written in a classic serif typeface, with a period at the end.

Ginger can speed your metabolic rate by enhancing digestion of fats and proteins while also stimulating your motor and respiratory centers and improving blood circulation. In addition, ginger can also speed up digestion of large meals and improve feelings of well-being after eating. While sucking on a chunk of ginger root isn't the most appetizing prospect, you can try grinding fresh ginger on your next stir fry or salad. Simply peel the root and grind the ginger just like a carrot.



Avoid Alcohol.

In addition to stimulating appetite and providing excess calories that are largely void of nutrients, alcohol slows your metabolism by depressing the central nervous system. Whenever alcohol is consumed, especially in the presence of food, you burn less fat and store more calories. The production of acetate occurs after alcohol consumption which can inhibit the burning of fats, carbohydrates and proteins, thus slowing the caloric cost of digesting food. Alcohol also has a dehydration effect and can deplete the body of essential vitamins and minerals while suppressing formation of testosterone and lean muscle mass. All of this significantly depresses cellular metabolism. While certain alcoholic drinks such as organic red wine are less damaging, alcohol in general should be avoided or only taken in moderation.

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Studies have observed that chefs with larger serving tools tend to create higher calorie meals in bigger portions. So go small whenever possible. Use scaled down serving bowls, teaspoon sized spoons and tiny salad plates.



Find Fiber.

Fiber is essential to a high metabolism. Soluble fiber binds to “bile acids” and removes them from the small intestine. Since bile acids aid in fat digestion, this means that your body is less likely to absorb and use fat and more likely to simply pass it through. Bile acids also transport cholesterol so reduced bile acids in the small intestine results in lower cholesterol! Soluble fiber also regulates blood sugar levels and controls insulin levels, maintaining a high metabolism and a greater utilization of fatty acids as a fuel.

Insoluble fiber, which does not dissolve in water (i.e. roughage), increases the bulk in your gut. As a result, digested food sits for a shorter period of time in the intestine and less starches and sugars are absorbed into the body. You also feel fuller faster! But while increased fiber intake can greatly assist in weight control, be warned that too much fiber intake will result in inadequate nutrient absorption which can decrease energy levels and lower the metabolism. So hold back on munching down that giant bag of spinach and space your fiber out evenly throughout the day.

How do you ensure that you’re consuming sufficient fiber? Here’s my strategy: a bowl of oatmeal in the morning consumed with sliced fruit, like apples or strawberries; a large salad for lunch or in the afternoon usually with 3-4 different types of vegetables or fruits, like carrots, alfalfa sprouts, diced cucumbers, tomatoes or pears; one handful of whole, raw almonds every day as a snack; one large serving of vegetables with dinner, such as sautéed asparagus, a handful of mini carrots or a bowl of steamed broccoli; and 6 EnerPrime capsules. The impact of fiber on metabolism can be just as big as the benefits of an exercise program!

Eat Like A Squirrel.

You've heard it a million times before: 5-6 small meals a day is better than 3 large meals. I'd like to step that up a bit and suggest you can go as high as 10 times a day depending on your energy consumption and needs.

Here's an example from my personal nutrition log: 1) 7:00 am – one banana 2) 9:00 am – a bowl of oatmeal w/ raisins 3) 10:30 am – a handful almonds 4) 12:00 pm - three turkey slices 5) 1:00 pm - one yogurt 6) 2:00 pm – one apple 7) 4:30 pm - large salad 8) 7:00 pm - one protein bar 9) 8:15 pm – a handful of raisins 10) 9:00 pm - 1 scrambled egg with spinach (bed at 11pm).

The philosophy behind eating frequently is that the physical act of digestion has a metabolic cost and by continually feeding you are maintaining a higher metabolic rate. As long as your grazing is healthy this results in more calories burned throughout the day. On the flipside, eating too infrequently can cause your body go into starvation, energy-conserving, fat-storage mode thus lowering digestive metabolism and overall metabolic rate.



B12 Bomber.


Vitamin B12 is of primary importance for red blood cell development. Without B12, your body has insufficient DNA, a component that is necessary for proper red blood cell formation. Forming red blood cells is crucial for oxygen transport to active tissues. Lack of oxygen will slow the metabolism. B12 also assists in iron utilization, proper digestion, nutrient absorption, protein synthesis, carbohydrate and fat metabolism.

As you age, your ability to absorb vitamin B12 from the digestive system will decrease. Combined with the fact that metabolism naturally slows as you grow older, this can be a one-two combo punch to your waistline! Excellent sources of vitamin B12 are calves' liver and snapper. A daily supplement or multi-vitamin that includes this vitamin is recommended. Mega-doses of vitamin B12, in a form called methylcobalamin (the most bio-available form), are found in a product called delta-E, which combines the B12 with caffeine, suntheanine, green tea extract, pomegranate juice extract, caffeine USP and paullinia cupana seed extract. Can you say excellent metabolism-boost-



Savory Soybeans.

Soybeans are high in vital amino acids and proteins which are building blocks to lean muscle fiber formation and a natural way to increase your metabolism. Soybeans also help stabilize blood sugar levels keeping you from going into a hypoglycemic, fat-storage mode. In addition to being high in protein, these green snacks are high in fiber and phytonutrients. They also contain a chemical called lecithin, an important component of fat metabolism. Also called edemame, soybeans can be purchased at many grocery stores in their whole, raw form and taste delicious eaten from the shell as a snack! Fermented soy products may be healthier than unfermented soy and sources include Natto, Miso, Tempeh, Soy Sauces, fermented tofu and fermented soymilk. A healthy and convenient soy tofu powder source is also found in the supplement EnerPrime.



Carbohydrate Taper.

Meals that contain larger amounts of carbohydrates should be eaten earlier in the day. This means that much of your whole grain and fruit consumption should occur before noon. The body's metabolism is highest in the A.M. hours so this is a great time to supply your muscles with energy in the form of glycogen (carbohydrates), while also ensuring that many of the carbohydrates you consume will be burned for fuel rather than deposited as fat stores.

Many families tend to have the biggest meal of the day in the evening, ironically at the time when the body is least in need of energy and the metabolism is at its lowest. The practical application is to make breakfast bigger and dinner smaller.

So try it out - prioritize eating carbohydrates early in the day and focus on decreasing carbohydrate portion size as afternoon and evening approaches. If you have sugar or carbohydrate cravings later in the day, try supplementing with ThermoFactor which will help to stabilize appetite and reduce sugar cravings.



Combine Carbs.

Consuming a protein in close proximity to a carbohydrate will stabilize release of the sugars in the carbohydrate food. This carbcombining strategy will help to slow the rise in blood glucose and moderate the production of insulin by the pancreas. This effectively lessens the chances of a hypoglycemic drop in blood sugar and subsequent falling of the metabolism. When consuming a protein with a carbohydrate you'll fill up faster and eat less.

For some practical examples, try including natural peanut butter with whole grain toast or celery, almonds with yogurt, walnuts served over an apple and pear salad or flax seed in your morning oatmeal. Try to make it your dietary rule to never consume a "lone carbohydrate" – always include a protein chaperone.



Look For HFCS.

HFCS stands for “High Fructose Corn Syrup.” High fructose corn syrup is extremely soluble, mixes well in many foods, is cheap to produce, tastes sweet and is easy to store. Hence it’s popularity as an additive in breads, sauces, beverages, meats and most disturbingly, a high amount of health food products. It has twice the fructose of table sugar and unlike the fructose in raw fruit, HFCS contains zero enzymes, vitamins or minerals. Fructose directly interferes with the body’s use of important metabolism boosting compounds like magnesium, copper and chromium. HFCS has been observed to increase risk of high blood cholesterol, dangerous blood clots and immune system damage.

Most importantly the fructose in HFCS reduces your cell receptor sensitivity to insulin, which is a big step towards a plummeting metabolism and risk of type-2 diabetes. Since so many “health foods” contain HFCS, your best bet is to look for an organic or naturally sweetened energy bar if you must have an energy supplement. Organic cane juice or agave nectar are two popular alternatives to HFCS.



Buy Biotin.

Biotin allows your body to use starches efficiently as a fuel by moving sugar through the cell for conversion into energy. It is also a necessary component of acetyl Co-A carboxylase, an enzyme that is essential for production of fatty acids from dietary fat intake. It is important to teach your body how to use fatty acids as a fuel while maintaining adequate levels of fat to build healthy cellular membranes. In addition to helping you utilize metabolism-boosting B vitamins, biotin also supports proper neuromuscular function allowing for efficient skeletal muscle contractions.

So how do you get your biotin? The best source is swiss chard, a dark leafy green vegetable that is great in an omelet or used as a wrap for sandwiches.



Bet On Buckwheat.

Buckwheat lowers blood glucose and insulin response, which decreases the hypoglycemic response, a potential metabolism-lowering effect of starch consumption. Glucose utilization and cell signaling, important components of a high metabolism, are enhanced by a compound in buckwheat called chiro-inositol. Providing a rich supply of phytochemicals, buckwheat helps to lower circulating levels of fat in the bloodstream. Buckwheat is also a great source of magnesium, which vastly improves blood circulation. It is also a source of insoluble fiber which decreases fat absorption, improves insulin sensitivity, and keeps you feeling full for a longer period of time. Buckwheat can be combined with whole wheat flour for a healthy breakfast pancake, used as an oatmeal substitute or added into salads as a smart carbohydrate choice.



Fill Up With Flax.

High in protein and fiber which help to stabilize blood sugar levels, flax seeds are also chock full of omega-3 fatty acids which maintain cell membrane integrity. Properly functioning cell membranes allow for a more sensitive insulin response and higher glucose absorption for sugar conversion into energy, which stabilizes blood sugar levels and keeps the metabolism elevated. The Omega-3 fatty acids in flax seeds also help to lower blood cholesterol and triglycerides and increase blood circulation through enhanced levels of nitric oxide. Perhaps most importantly, flax seeds increase secretion of leptin, a metabolism-boosting hormone that assists in appetite control and weight loss. Keep a bag of flax seeds in the pantry or refrigerator and toss a small handful over salads, mix into cereals and blend in smoothies. A supplement called EnerEFA contains a well-balanced combination of omega-3 and omega-6 essential fatty acids in convenient capsule form. This supplement is a very rich and convenient source of flax seed oil.

Pantothenic Acid.

Pantothenic acid is just another name for vitamin B5. In the body, vitamin B5 is combined with another molecule to form coenzyme A, which is essential for the proper metabolism of sugars, storage carbohydrates and fat. Increased levels of pantothenic acid have been observed in individuals with fast metabolisms and highly efficient mitochondria, like marathon runners. By sustaining cellular energy release, vitamin B5 is vital for a high metabolism.

The two top sources are mushrooms and cauliflower. Since two other good sources include broccoli and sunflower seeds, a broccoli-cauliflower salad with sunflower seeds and sliced mushrooms is a perfect meal for vitamin B5 optimization. Or you can just mix 1 single packet of delta-E with 6-8 ounces of water to receive not just pantothenic acid but the entire range of the vitamin B complex combined with caffeine and a highly effective metabolism-boosting source of theanine!

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metabotip

Ghrelin is your body's primary "appetite-inducing" hormone. The longer it takes to consume a meal, the lower your Ghrelin levels will be. Chew multiple times, drink water after each bite, and eat protein first to maximize this effect.



Rev It Up.

RPM stands for Revolutions Per Minute and shows up as “cadence” on many cardio exercise machines such as rowing machines, bikes, elliptical trainers and other similar pieces of equipment. This number goes up when you move your legs or arms faster. The idea is that as RPM increases, resistance typically decreases. So which is better – moving legs and arms fast with a low-medium resistance or moving them slowly at a high resistance? The former uses primarily slowtwitch muscle fibers, burns more fat as a fuel and elicits a higher cardiovascular response. While the latter uses more fast-twitch muscle fibers, burns more carbs as a fuel and elicits a higher muscular force response.

From a metabolic standpoint, research has shown that post-exercise metabolic rate is highest during a workout in which RPM is as high as possible with a low-moderate resistance. This would mean bicycling at an RPM of 90 or higher, rowing at an RPM of 45 or higher and using the elliptical trainers at an RPM of 150 or higher. You can even determine your RPM when running. To do so, count how many times your right foot strikes the ground in a 20 second time span. You should aim for 30 or higher. Once you’ve taught your body how to operate at a high RPM, moving fast at a low resistance will begin to feel more natural. You’ll find that you can maintain a higher intensity for a longer period of time and recover faster from the workout.



Increase Iodine.

Iodine is a vital component of thyroid hormone production. If your body cannot synthesize sufficient levels of thyroid hormones, you will be unable to maintain a high metabolism. When blood thyroid hormone levels drop, the body responds by increase iodine uptake from the blood for more hormone synthesis. As long as your iodine levels are sufficient, this process will happen normally. But if you're iodine deficient, thyroid hormone levels cannot be sufficiently increased.

Iodine is also important for proper immune system function and is found in high amounts in sea vegetables (like kelp, seaweed, or algae), dairy products and strawberries. If you suffer from low thyroid symptoms, you may want to combine your iodine supplement with the powerful thyroid support supplement LeanFactor, a synergistic blend of ingredients important for thyroid function and the addition of lean muscle tissue.

The word "Yoga." is written in a serif font. To the left of the letter 'Y' is a stylized flame icon with three distinct points, rendered in a dark grey color.

Control your stress. By encouraging high levels of circulating cortisol and overworking your body's fight-and-flight response, stress can contribute to abdominal fat formation and a decreased metabolism, as well as lack of appetite control and food cravings. Any activity that helps to channel and control stress is beneficial. Although it doesn't burn significant calories, yoga can directly decrease your body's negative stress response thus indirectly offering a boost to your metabolism. The improvements in flexibility and blood circulation are also highly beneficial from a metabolic standpoint. If you can't make time for a local hour-long yoga class, just learn a few simple yoga moves and work them into your day. The stress-reducing benefits can be derived from as little as 15 minutes of focused yoga a day.



Think Thiamin.

Vitamin B1, also known as thiamin, functions to help convert sugar into energy by acting as a necessary structural component of your body's pyruvate dehydrogenase system, an oxygen-based energy processing unit. Thiamin is also necessary for normal production of hydrochloric acid which is essential to healthy digestion. The more efficiently you can digest food, the better the caloric expenditure from digestion. You should try to get about 0.5 milligrams of B1 for every 1000 calories consumed. You may not need a supplement to achieve this amount as the best natural sources of Vitamin B1 are asparagus, romaine lettuce, mushrooms, spinach, sunflower seeds, tuna, green peas, tomatoes, eggplant and Brussels sprouts. Think tuna salad in a lettuce wrap, sautéed mushrooms and asparagus or a spinach salad with sunflower seeds.

What about supplemental sources? At this point in the book, you've read about every component of the vitamin B family and should see a consistent pattern emerging. The supplement delta-E is an incredible way to immediately enhance vitamin B levels and stabilize energy levels while boosting the metabolism!