

HITMAN



HIGH INTENSITY TRAINING MANUAL

By: MATRIX SYSTEMS



HIGH INTENSITY TRAINING MANUAL

Proven Scientific Methods

to Help You Reach Your

Genetic Potential

in

Muscular Mass

by

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HITMAN

HIGH INTENSITY TRAINING MANUAL

MAIN CONCEPTS

Program Approach

Hitman is a "high-intensity" training program developed by Matrix Systems, a consulting group of personal trainers and bodybuilders based in Southern California. It was formulated and designed for the rapid development of strength, size and power while emphasizing complete recuperation. We have identified nine Critical Growth Factors, which form the basis from which this program is built upon. Understanding and applying them correctly will make the difference on how well this system works for you. This is a low-frequency program designed for athletes at every level, from the man or woman with only a couple of months of training background, to the seasoned lifter with many years of experience. The primary focus is on muscular development but it also includes guidelines on nutrition, weight loss, cardiovascular conditioning and flexibility training. These are the five pillars to total health and fitness.

Through years of research and experience, we have come to understand there is a growing percentage of men and women that want to train and increase their power and strength yet possess limited recuperative capabilities. In the fitness industry they have been labeled "hardgainers." Their limitations are due to both genetic factors and, less commonly identified, environmental factors. Daily stress, moderate to poor eating habits, lack of regular rest and personal indulgences all contribute toward limiting your body's ability to recover from a regular exercise schedule. If you find yourself not making consistent progress, constantly fatigued when you do train, or always on the "go" with little time to spend on your workouts and are still devoted toward building a strong, muscular body, then this program will meet your needs. Hitman was designed just for you.

Many "hardgainer" routines simply add in additional rest days without changing any of the other important variables in the training regimen. Eventually, without any real direction or variety, these routines become mundane and Jack the zest to keep you working out on a regular basis. Simply adding more rest into your training schedule is not enough to help you consistently gain strength and size. Most people are not robots than can follow a stagnant routine day-in and day-out without variety. Even if a schedule like this were productive, our motivation would eventually expire and cause us to become frustrated and quit training altogether. This program's success relies on intensity cycling, training variety and applying the techniques responsible for complete muscle stimulation. We work in sync with the body's natural ability to withstand stress and recover. Hitman's "secret" is to keep your body and mind in a state of alert with regularly periodized workout cycles.

Your progress will depend on following each training Period as closely as possible. We attempt to work within a delicate balance between the proper amount of training stress and your overall recuperative capacities. Only if you feel fatigued beyond normal or get sick, should you take an extra day off. Otherwise, you should make an effort to train on each designated workout day of the schedule. Each workout advances from the momentum created of the previous one so, an effort should be made not to break-up this natural flow of energy. If you cannot complete a training Period due to a vacation or unplanned event then you should start the Period over again or move on to the next Period in the program sequence.

Genetics

When it's all said and done, your genetic blueprint will determine how large, strong and muscular you ultimately can get. These are all traits, which you inherit directly from your parents. The cold scientific fact is that your genes set the upper limits of your physical potential. Everyone knows or is acquainted with someone that gains muscle easily without training very often or very hard. They seem to just look at the weights and grow. Any program these genetically-gifted individuals follow will produce noticeable results. It is exactly for this reason that you should avoid trying to duplicate their routines. Following the program of an easy-gainer, who is not applying the factors involved in optimal muscle growth, will often times produce very little benefits and plenty of frustration. Do not make the correlation that the routines these gifted individuals perform necessarily have any basis in a valid, rational approach to muscle building. Educate yourself so you can make your own decisions as to what training principles makes sense and are consistent with information which is supported by valid research. In this program, we provide you with principles, which are supported by science, not gym hearsay, and have been tested and proven successful.

If you compare yourself with other weight trainers, you will eventually come across the athlete which seems to make noticeable progress with every workout. Then you will find yourself jumping around from one training philosophy to another. You should only compare your progress against yourself, unless you are going to enter a bodybuilding or powerlifting contest. If you have only added half an inch to your chest in the last three years and we provide you the tools to add another half an inch in the next three months, even though your chest may not be as muscular as your training partners', you will have made great progress in a short period of time. This is the type of comparison you should be making.

The other side of the genetic coin is that many of our trainees, which seemed to lack the potential to build muscle easily, have created outstanding physiques that were both muscular and symmetrical. Strong determination, a well balanced diet and a program which is properly designed, such as Hitman, will produce dramatic results for any individual which is dedicated enough to follow it. Right now, you do not know for certain what your genetic potential is. Therefore, you should not use your genetics as an excuse for poor results. Every healthy person can develop considerable muscle mass and strength, just like every person can learn a new skill if trained properly. There are very few athletes which come close to achieving their ultimate potential. That means whatever level you are at right now, you can probably still build more strength, muscle mass and definition. An average gain of 5-15 pounds of solid muscle without adding any fat is a realistic expectation for anyone adhering to the principles of Hitman during their first year of training. This is not a wild pipe-dream, we have consistently produced outstanding results with a majority of our training clients. When there is a lack of progress there is usually an element of the training which is not being managed correctly. In these cases, we like to address these problems on a personal basis.

MUSCLE GROWTH

Stress and Adaptation

The sole physiological key to bodybuilding and strength development is adaptation with over-compensation. By definition, adaptation is any change or response to suit a new environment. In weightlifting, we train with resistance to stimulate a specific adaptive response, more strength and muscle size. If our training program is properly designed, this adaptive response should occur quite frequently. Where you are adding size and power, it is "over-adaptation" or over-compensation which is occurring. A universally proven and accepted rule in exercise is that our musculature will grow bigger and stronger when it is forced to contract against a greater-than-normal stress. If the stress is normal, then no change will occur because the muscle has already adapted. We must strive to provide stress which is continually greater than the previous dose to initiate a new adaptive response. This is the basic concept behind progressive resistance training. The first biggest common mistake which most people make is sticking with their same "favorite" routine for months at a time without changing exercises, the amount of weight used or the repetitions performed. In this case, the training effort is always the same producing the same results. No new stimulus or stress means no new growth! If this is the situation you are in, this is the perfect opportunity to change.

The second biggest common mistake, on the other end of the spectrum, is the individual which is always "going for it". They perform every set to failure, at full intensity all of the time. You see them in the gym always grunting and groaning through every set. There is constantly more stress provided but without the required lower intensity intervals necessary for recovery and growth. Since the body is in a continuous state of alert, it can never keep up with the training stimulus. Eventually, illness or bum-out occurs since progress is rarely made with this type of approach.

It is pertinent to increase stress and become stronger during a high-intensity training cycle. Exercise science has proven without a doubt that a stronger muscle is a larger muscle. We must develop strength to create the type of physique that we desire. This raises the question of, "how do we provide greater-than-normal stress to a muscle?" Let's use the squat exercise as an example for ways to increase stress beyond the usual.

First, if you can squat 200 pounds for eight reps, then increasing the weight to 225 pounds for eight reps will increase your stress. This is the most common approach for most people. More weight lifted means more training stress applied.

Secondly, lifting the same 200 pounds with shorter rest periods (faster training pace) between sets will increase your training stress. The same volume of work performed in less time means that your training session is more intense because more work is performed per unit of time.

Thirdly, decreasing the weight to 175 pounds and completing fifteen reps will also increase your training stress. This increases the volume of work performed in your workout. It involves a longer duration of muscular contractions which forces you to utilize different energy systems.

Finally, squatting 200 pounds for eight reps and, when another full repetition cannot be completed, by performing Partial reps or a Static rep to keep tension on the muscle will also increase training stress. In this method a Muscle Overload Technique is applied at the end of

your set to increase training intensity. You force the muscle fibers to continue contracting beyond the level they normally do. These are four methods which will effectively stimulate the muscle to become stronger and therefore, larger. Trying only to lift heavier and heavier weights, which many people follow, ignores the other methods of providing stress to the muscle. Training stress factors should be consistently varied and applied for optimal results. This is a concept which you should adhere to no matter what training style or routine you ever follow. Pursuing one approach will stagnate and limit your progress.

Other minor, yet important ways of modifying training stress is to alternate the exercises for the body parts you workout. Besides adding variety, selecting new exercises from cycle to cycle imposes new stress factors on your physique. This is due to the reason that no two movements stimulate your muscle in exactly the same way. A popular misconception is that different exercises are used to develop different angles of a muscle. In truth, various exercises should be used to trigger the different motor units within the same muscle group for maximum development. Specific "angles" of the same muscle cannot be developed. What can be developed, which gives the illusion of muscle-shaping, are the various individual muscles within a whole body part. Therefore, the term "muscle-shaping" is not a correct and the more proper usage should be "body-shaping" or "bodybuilding".

Finally, the use of different grips on the bar, foot positions, types of bars and varying the angles of the movement, will all change the stress applied on the muscle. You should try different grip positions, stances and angles, even when performing the same exercises. Many trainees are surprised when they are sore after making only minor adjustments in their exercise technique. These are the factors you should vary consistently to continually stimulate new growth and keep you eager and motivated. Not every variable must change but at least one element should vary from workout to workout. Each training session can be slightly different from the previous one. This program changes the key factors from cycle to cycle but there are specific variables which you are responsible for modifying.

MAIN VARIABLES AFFECTING TRAINING STRESS

- 1) Amount of total weight used
- 2) Resting time between sets
- 3) Volume of training per body part (program specifies)
- 4) Total repetitions performed (program specifies)
- 5) Application of Muscle Overload Techniques

MINOR VARIABLES AFFECTING TRAINING STRESS

- 1) Alternating exercises performed (program specifies)
- 2) Minor changes to grip, stance and body position (angles)

Applying the right amount of training stress, in a progressive fashion, as we have discussed, is the trigger to initiate the growth process. It is the most important element of the process yet only part of the whole picture. The quality of your rest and nutrition/supplements will determine the overall effectiveness and results of your training efforts. The majority of muscular over-compensation (growth) will occur within twenty-four hours after you have completed your workout. What you do during this recovery time is important and will be covered in detail under Recuperation.

Training to Failure

Many well known "high-intensity" training gurus insist that you should take every set to absolute muscular failure in order to stimulate optimum growth. In theory, it makes sense and is a valid principle but bodybuilding, like other disciplines, relies on a careful blend of art and science to find the right answers. Similar to a surgeon combining years of study with instinct and experience to make the right decisions regarding your health. Just like there is a range of medication which will cause a specific response, there is a range of training intensity, which you can withstand, to stimulate muscular growth. We often hear promoted that taking a set to "true" total failure is like imagining someone holding a gun to your head on those final reps. Few people can realistically generate this degree of intensity, day-in and day-out, when trying to build muscle and lose fat. A life or death motivation is a difficult state of mind to place yourself under on a regular basis.

To properly apply the "training to failure" concept, we recommend taking your regular sets to "muscular fatigue". What is muscular fatigue? It falls in the 80-90% range of the contractual capacity of your muscles. But most importantly, it is a level which will effectively stimulate your muscle fibers to grow. This type of intensity is attainable to most motivated trainees. Muscular fatigue is accomplished by performing your reps until the muscle contraction starts to slow down and it finally becomes impossible to complete another full rep without taking a long pause and exerting an "unusually" greater amount of effort. Two to three sets at 80-90% intensity can generate as much growth as the seemingly impossible "one set to absolute failure". In other words, perform each set of your workout until your muscle fatigues and you cannot complete another full rep in good form. On the final set of a body part or exercise, attempt to go to total failure, which is a couple of reps past muscular fatigue, by utilizing a Muscle Overload Technique. On average, no more than two sets per body part in a single workout should be pushed to this extreme level. We do not recommend nor find it beneficial to train as if your limbs feel like they are tearing out of their sockets on every single set. This type of training will be sure to limit your motivation and is unsafe for the trainee which plans to weight lift for any extended period of time.

To summarize, we do not feel that most athletes can stimulate growth with one set to failure. We have experience with people that have attempted this method and have failed to make any progress. Our philosophy is a low-volume approach which includes multiple sets per body part. This program works within the physiological changes which occur during resistance training. We rely on an intensity level which is high yet attainable. After each workout you should feel tired but not wiped out. Your musculature will feel fatigued but your overall energy level should still be high.

Overtraining

The issue of overtraining is a controversial topic in the bodybuilding arena and in all of sports training. The reason is that it is hard to pin point exactly how much exercise is productive while avoiding overtraining or doing too much. All athletes have a specific threshold range which enables them to tolerate a certain amount of training stress while compensating progressively. What works for one person may be too much stimulation for another. Another factor to consider is that an individual's stress tolerance may fluctuate from week to week and month to month. What you adapted to last month may be too much stress to recover from this month. These changes occur because our lives are in a constant state of flux. Our environment is never exactly the same. Our jobs, families, habits and biorhythm affect our response to exercise. This is why it is important to rely on your instincts if you feel you should take a break or

lower your intensity level. You alone are the best judge on how much you can take and on how well you are recovering. Experience will enable you to decide whether you are just sore from the previous workout or are starting to feel run down from training too hard. This program is designed to carefully provide a balance between adequate stress and rest for people which have limited recuperative powers. You know who you are because your training progress has been slow, inconsistent or nonexistent. You fail to make significant progress on routines which your friends are following or from other books or programs you have purchased.

All of the training parameters of Hitman are based on the latest research and studies which indicate how long to train, how often and what exercise style and technique to follow. Besides exercise, there are many other external factors which can lead to overtraining that have nothing to do with your training approach. Sleep and rest patterns, eating habits and the amount of outside stress, can all affect your recovery from high-intensity training. Even without the additional stress of exercise, these factors can make you ill, feel lethargic and run you down if not managed correctly. At least half of the time, it is these outside factors which lead to overtraining rather than the exercise program itself. Therefore, to be successful with our system, you will have to structure your external recuperative efforts in the manner we recommend.

Chronic overtraining syndrome is characterized by persistent plateau or deteriorating performance that is not improved by short-term rest periods. A short-term rest period is defined as a few days up to a week. Common warning signs are associated with disturbances in mood and sleep, loss of appetite and weight, on-going muscle soreness and a loss in enthusiasm to workout. If you start losing strength in the gym, feel unable to push to muscular fatigue, feel flat and unable to get a good pump and find your joints sore, you may be chronically overtrained. At this point, begin by taking a full week off and rest completely without performing any other sports. During this time carefully review your diet and rest habits to assure yourself that you are doing the right thing. From our experience, lack of sleep is the number one culprit which causes overtraining syndrome. After a thorough analysis, try to identify the factor(s) which led you to overtrain. Once you are completely rested, start back up slowly until you feel strong again. Minor overtraining only requires a few days of rest while chronic overtraining may require up to a month. Following the training Periods of this program decreases the likelihood of ever chronically overtraining. Minor overtraining is still a possibility due to the factors which are under your control. Throughout this manual, we clearly indicate which is the best way to workout, recuperate and grow strong. It is important for you to follow these guidelines as closely as possible to make consistent progress. Following is a list of common external and internal factors which can lead you to overtrain.

EXTERNAL FACTORS FOR OVERTRAINING

- Insufficient restful sleep
- Poor diet, eg. insufficient protein
- Excessive job/family stress
- Too many other sports activities

WORKOUT FACTORS FOR OVERTRAINING

- Incorrectly combining body parts and sets
- Insufficient rest days between workouts
- Not periodizing training intensity properly
- Excessive intensity for level of conditioning

The Pump

Is it myth or folklore carried on by one generation of muscle-heads to the next? Possibly an elusive feeling of pleasure to balance out all of the pain and sacrifice associated with heavy weight training? Maybe. But if you have ever picked up a weight, you have probably experienced a muscle pump. It is the feeling of blood, filling the muscle tissues, causing a swelling and tightness in a specific area or body part. It forces the muscle to expand, sometimes by several inches beyond normal. The pleasure is in seeing the muscle which you are training grow right before your eyes. Like a preview or teaser of things to come if you just keep working out hard enough. During the 60's and 70's, the muscle pump was deemed as the ultimate goal when working out. No matter how much you trained, if you left the gym flat, your workout was a failure. In the 80's new training beliefs cited that the pump was unimportant to muscle growth and of little value. That if there was no muscle pump, it did not matter because it was not an accurate indicator of any growth stimulation. Trainers figured you could perform fifty push-ups and get a good pump but that did not mean you would add any real muscle mass to the chest. So, with this simplistic reasoning, the pump was considered of no value without taking into consideration on how the pump was achieved.

Research now reveals that a muscle pump, when combined with intense resistance training (less than 12 repetitions), is productive and very beneficial for fast muscle growth. You could perform 10 reps on the bench press with 200 pounds or 50 push-ups and experience a similar muscle pump but the most effective exercise for muscle growth would be the bench press. The key is that with the bench press, the muscle pump was achieved within an optimum repetition range for muscle growth. This range causes physiological changes within your body including the release of anabolic hormones. The pump, in and of itself, is not as important as how you achieve it. With this new information, it is considered an important goal when training each body part. You should achieve a full muscle pump within all the repetition ranges we recommend. Some days, it will be more intense than others. This can be caused by how much food and water you consumed and by the amount of stress you were exposed to. Here are some important benefits:

THE MUSCLE PUMP

- Stimulates anabolic hormone release
- Increases amino acids delivered to muscle
- Decreases the accumulation of lactic acid
- Stretches muscle cells, encouraging growth
- Provides feedback for proper exercise selection
- Improves muscle-mind link
- Psychological boost

TRAINING FORMAT

Periodization

The Hitman training cycles are made up of Periods which last four weeks in length. Each Period begins with a two-week high-intensity cycle called GROWTH PHASE followed by a two-week lower-intensity cycle called STABILIZE PHASE. During the Growth phase, each workout should be approached with, maximum effort and intensity. The second week of each Growth phase is designed more intensely than the first, in an effort to stimulate as many muscle fibers as possible. During this cycle, you should focus on each workout, taking each set to "muscular fatigue" while including two Overload sets per body part. Remember to focus on stressing the muscle as much as possible in an effort to exhaust the tissue and trigger a growth response. These are the two weeks in which you want to motivate yourself and "go for it".

Beginning with the third week of each Period starts the Stabilize phase. During this cycle the program systematically reduces the factors which contribute to high training intensity. This two-week cycle gives your body the chance to completely recuperate and allows your physiological systems to stabilize from the stress of all-out training from the previous cycle. During this time, all your sets should be taken to muscular fatigue only. You should not attempt to go to total failure by using any Muscle Overload Techniques. This is an "active rest" phase which should be less intense than the Growth phase. Though you are not working at full capacity, your training effort is still in the 80% range. You approach your workouts aggressively but your goal is not to completely tear down the muscle.

Alternating training intensity levels on a pre-determined regular basis is popularly known as PERIODIZATION. It will keep your body from adapting to any one type or level of stress and from experiencing overtraining or a plateau in progress. Periodizing is the first Critical Growth Factor to consistent muscular development. If you have not regularly trained this way before, you will experience a noticeable improvement in your workouts and energy level almost immediately.

Periodization has proven to be one of the best tools towards regular progress. For decades, many of the Communist Block countries excelled in Olympic competition due in part to their strict adherence to periodized training cycles. All modern organized sports training now includes a periodized methodology at some level. Without it, all you are left with is either training hard all of the time or training at sub-optimal intensity levels. In either case, muscle development will be impaired. I have to question the validity of lifting philosophies which suggest training all-out to failure all of the time, without lower intensity cycles included. If you have trained for any amount of time, you would know that this is truly not possible and far from reality. If you do not actively periodize your training efforts, your body will find a way of doing it for you. Continuous high-intensity training will either deplete your immune system, allowing you to catch a cold or the flu, which automatically slows down your workouts or you end up straining a muscle which in the end, forces you to train at a less intense level. We advocate a periodized program as a practical way of avoiding these pitfalls.

The main benefits to periodization include the alleviation of overuse injuries, stimulating consistent muscle growth and strength development and the reinforcement of your hormonal system. It will allow you to thoroughly recover, maintain mental freshness and increase motivation which leads to a high level of satisfaction and enjoyment during your workouts. When you experience regular progress, you will be more motivated to train consistently and reach your ultimate goals.

Workout Length

Recently, one of the most apparent changes in workout styles has been the reduction in training time spent in the gym. For natural athletes, gone are the two-hour sessions which chemically-built bodybuilders made popular for so many years. Research indicates that a maximum workout length of fifty-minutes is the most productive duration for any cycle. This second Critical Growth Factor keeps your workouts within your body's optimal hormonal output. Precise blood tests have shown that after approximately fifty-minutes, your primary anabolic hormones including testosterone, human growth hormone and insulin have peaked and will begin to decline rapidly. Training past their peak forces your body to use muscle tissue for fuel and dangerously depletes your ability to recover. It is like digging a ditch deeper and deeper which makes it more difficult to climb out of. Since this program is geared toward those with specific recovery needs, completing your workouts within this time frame will be essential.

The approximate one-hour training window begins from the moment you perform your first working set. The time you spend stretching, warming-up and cooling-down is not counted as part of your specific workout time. The hormonal changes we identified begin to occur only after you actually start your hard working sets. Unlike other types of exercise, intense anaerobic training produces specific unique changes within your body.

A minimal workout length is not specified. If you are completing your sessions very quickly (25 minutes or less), that may indicate that you are not resting enough between sets and are probably training with too light of weights. At too fast a pace your training will be primarily aerobic and will produce little benefits in the development of new muscle. Super-fast training does not provide your muscles with enough time to re-charge its chemical energy (ATP) to produce strong contractions.

Lifting Style

All your sets should begin with strict adherence to proper technique using a full range of motion. If you have not been training for long or are just getting started, you should have a personal trainer at your gym "walk you through" all the basic exercises which we recommend in this program. Using proper technique on the big, compound movements is important when you are first starting out. If your technique is sloppy or incorrect from the beginning, as you get stronger with each Period, the likelihood of injury increases substantially. We recommend learning all the basic exercises first before jumping into any heavy lifting.

After you have learned the basics, you start incorporating the more advanced FREESTYLE training technique. It is performed as follows. Complete as many reps as possible with strict exercise form. Once your muscle tires, you simply loosen up your technique and use momentum to complete more repetitions than you otherwise could have. The Freestyle approach is the third Critical Growth Factor of this program because it allows you to add more stress to the muscle group. During your Freestyle reps, allow your natural momentum and synergy of other muscle groups to completely exhaust the target body part. These reps involve a shorter range of motion with some bouncing and jolting of your body. Even though some technique is sacrificed, you should still be in complete control of the weight.

This style is known as "cheating" but we feel the name does not justify the effectiveness of this method when used properly. The goal is to first complete as many strict reps as possible before loosening up your technique. This method can be used in almost every set to some degree. Use Freestyle reps more extensively during Growth phases than during the Stabilize phases.

Rep Speed

You should perform each exercise at an even pace, through the positive portion up (concentric) and the negative portion down (eccentric) of the movement. We recommend two to four seconds for the positive contraction and two to four seconds for the negative contraction. If you practice super-slow lifting, you will find your muscle gains limited. The reason for the ineffectiveness with super-slow training is that it primarily stimulates slow-twitch muscle fiber types because of the actual lifting speed. Fast-twitch (explosive) muscle fibers are completely neglected with this type of exercise.

In a similar context, negative-only training or performing the negative portion of an exercise very slowly is dangerous to the stability of your ligaments, tendons and can increase the likelihood of muscle micro-tears. This theory of training was based on the fact that the muscle is stronger on the lowering part of a movement (negative) than it is on the lifting portion (positive) of the movement. We do not dispute this fact. The problem is that upon negative contraction or resistance, muscle tissue and soft-tissue connectors are stressed severely because the muscles act as "brakes" to resist the force of gravity and the momentum of the weight being lowered. The physiological reason we are stronger on the negative portion of an exercise is because of the resistant friction these supporting structures create.

In *Biology of Physical Exercise* by Edington he clearly states that, "your muscles were meant to contract quickly and then release at the same speed. To resist a weight on the negative portion (eccentric) of a lift is to stress your muscle, ligaments, tendons and joints beyond their natural and normal functions." Ninety-percent of the injuries we have witnessed in the gym have been through the over use of slow negative training. Some people comment that since negatives are so painful, they must be doing something good. Do not be fooled by this type of reasoning, almost anything you do with weights can be painful. It does not necessarily mean there is any productive value in it.

On the other hand, with ballistic type of lifting, fast explosive reps are usually performed without attention to strong muscle contractions and safety. This is a dangerous workout style that seems to have been popularized to add drama and spice to many bodybuilding videos. Ballistic reps rely primarily on momentum which stresses the joints, tendons, ligaments and skeletal structures of the body. You end up swinging the weights around more than lifting them. It is easy to lose control of a weight you are throwing around too quickly and injure yourself or someone around you. In every explosive ballistic movement, you have to use a greater stopping force to slow the weight down otherwise you end up smashing yourself with the bar. While using heavy weights, the controlling force required can strain your body very easily.

Your goal during each workout session is to feel the muscle work and contract on every repetition possible. You should focus the effort directly on the muscle you are training. When you first start working out, this concentrated focus may seem very difficult. But with a few months of effort it will come naturally. To accomplish this level of contraction, we recommend performing your repetitions at an even tempo (two to four seconds) for the positive and negative portions of your exercises. You can explode the weight up but you should always, carefully and in control, guide the weight back down. This technique will allow you to feel the actual muscular contraction and properly stimulate fast and slow twitch muscle fibers within the target body group.

Set Volume

This program emphasizes the development of strength and power by stimulating the different energy sources within the body. This can be accomplished by manipulating the number of reps which you perform during a set. The repetition range (volume) most productive for our goals will vary between five to twelve reps per set. When more than twelve reps is used, it is to shock your body for a specific purpose. Below five reps would force you to lift so heavy that it would over-stress the physical structures of your body much similar to ballistic type of lifting. Research and experience indicates that five to twelve repetitions must be completed in order to fully activate your ATP (explosive) and lactic acid (extended) energy systems. At higher rep ranges, the set becomes primarily an aerobic exercise which contributes very little toward muscle growth. Higher repetition ranges also means that you are training with weights which are too light. Otherwise, how would you be able to perform so many reps.

In our rep structure, both fast-twitch (white fibers) and slow-twitch (red fibers) muscle fiber types are stimulated. Slow-twitch muscle fibers are used primarily for endurance type of training. They are weaker but can continue contracting for extended periods of time. People which lift in the fifteen-plus rep ranges for all their exercises are using primarily slow-twitch muscle fibers much like a marathon runner does.

Fast-twitch muscle fibers are more powerful and can generate greater force in a shorter period of time. Though capable of explosive movements they fatigue rather quickly. A sprinter is an example of an athlete which relies on fast-twitch muscle fibers to get them out of the starting blocks and down the runway. Performing your set which fatigues the muscle before or at twelve repetitions will stimulate both muscle fiber types adequately. Though people vary, due to genetics in the quantity of each type of fiber they possess, both types should be trained to maximize growth potential. This low to medium repetition range is the fourth Critical Growth Factor of this program.

Training Pace

For the goals of this program, the resting time between sets should fall between two to four minutes. This is Hitman's fifth Critical Growth Factor. Two minutes will give the ATP-CP explosive energy system, which is predominant through short bursts of maximal effort, enough time to recharge. Less than two minutes will tax the cardiorespiratory system which will not allow you to optimize the amount of weight you should be using. This is why we feel, for strength and mass building, that circuit training is a waste of time. Moving quickly from one machine to another does not allow you to focus on any one body part or recharge your ATP system to lift heavy enough to stimulate any growth. We think most chain health clubs embrace this style to get their members in and out of the gym as quickly as possible. Plus it is easy to train someone how to use them.

Over four minutes of rest will allow too much time for the muscle to stay actively stimulated. Your blood flow will actually begin to leave the body part. Most trainees feel a moderate pace of two to three minutes is adequate time before beginning the next set. The goal is to complete the workout in less than an hour and preferably within the fifty-minute training window which we recommend.

During the Stabilize phases, you should be able to lift at a faster pace since your intensity level will be lower than in the Growth phases. During the high-intensity Growth phases, when you

are focusing on pushing each set with maximum effort, be sure to rest adequately to allow your muscles time to recover for the next set. Performing heavy and intense compound movements like the bench press, squat and bent over row will always require more rest time. For this reason, Growth phase workouts take a little longer than Stabilize phase workouts.

· Exercise Selection

Certain exercises stimulate significantly more muscle than others. For years, through the process of trial and error, bodybuilders narrowed down the movements which provide the best muscle building results. The bench press is a better movement than the dumbbell fly. The squat is a superior movement than the lunge. The close grip bench press is more productive than the triceps kickback. Why are these exercises superior for building mass and power?

The concept is called MAXIMAL FIBER STIMULATION or MFS. It is the sixth Critical Growth Factor of this program. When an exercise stimulates a high degree of stabilizer muscle interaction with the combined synergy of assisting muscle groups to complete a movement, then it is said to trigger Maximal Fiber Stimulation. The third piece of this puzzle is the mental connection. As stabilizer muscles help to maintain proper positioning and balance and assisting muscle groups help in moving the weight through the range of motion, your central nervous system is stimulated including your brain initiating an increased amount of neural activity. Research has shown that nerve damage to a muscle causes more rapid and extensive atrophy (muscle tissue breakdown) than muscular inactivity. This proves that nervous system input is a key ingredient to muscle growth. Mental focus and interaction while training is required for maximum growth.

Stabilizer and assisting muscles, called co-contractors, act together to support the joints around which the movement is performed. The more stabilizer muscles which are involved in an exercise, the more work and effort your body is expending. With a high degree of stabilizer muscle involvement, there is also an extensive amount of recruited muscle assisting in the lifting effort. Both of these elements will automatically increase the amount of neural input we mentioned. Any weight lifting movement which includes these elements to a high degree will be your key mass building exercises.

For example, look at the parallel bar dip. It is a compound movement which primarily involves your pecs, delts and triceps. Consider all the muscles which stabilize your body during one repetition of this exercise, like your intercostals/obliques, abdominals, lumbar, glutes and basically your whole pelvic and shoulder girdle structure. The balance you have to maintain to stay in proper position for this exercise makes the dip a valuable muscle stimulating movement.

When performing an exercise, ask yourself if you have to maintain your balance throughout the movement. Try to notice if other muscles, besides the primary movers, are helping you lift the weight. Become aware of your mental focus. Can your mind float away and think about something else during the exercise? If you are performing a multi-joint compound exercise like the deadlift then you have no choice but to focus on the task at hand. Have you ever seen someone just chatting away in the middle of some heavy squats or rows? Or while performing a barbell military press? It is not likely because the mind is too focused on what it is doing. Multi-joint compound movements should be the core of your workout exercises. MFS is what makes these movements so effective. Strapping yourself into a variable resistance machine

which does not stimulate any stabilizer or assisting muscle involvement, for a majority of your exercises, will not produce significant results. There is no need to balance yourself or recruit any other muscles because the movement runs on a guide or track which isolates the target muscle and only requires you to push the bar. These shiny high-tech looking devices are most-ly used as another selling tool for many health clubs.

Machine companies for many years have tried to tell us that their contraptions worked more naturally than free weights, conforming with the body's normal strength curve. There is nothing natural about following the machine's path through the whole range of motion. This confined movement places an unnatural stress on the body's skeletal structure. All of the reported joint and tendon problems documented from their use will support this fact. Compound, multi-joint, free-weight exercises are the best for building dense muscularity and mass. Experience has proven this beyond a doubt and now you know why they are so effective. Notice that in this free-weight category we include pulleys, guided weights like the Smith machine and weights which pivot on a hinge like lat row equipment. These are not variable resistance movements. They simply allow you to lift a free weight at a different angle.

Based on these concepts we have found the following "CORE EXERCISES" most effective. In each training Period, we specify which exercises to perform. If you would like to switch and use another exercise because of injury or personal preference, then be sure to substitute a MASS movement with another exercise identified as a MASS movement. All the MASS exercises are marked. The un-marked exercises are primarily isolation-type movements which are still productive enough to be included in your training program.

For example, if we indicate to use the deadlift as a back exercise and you would rather not because of a sore back then an appropriate substitution would be lat pulldowns. Notice both the deadlift and lat pulldowns are marked "MASS". If there is an un-marked isolation exercise in your routine which you would like to substitute, then you can exchange it with any other exercise in that body part. Ideally, each routine we have designed has a mix of mass and isolation exercises for a specific effect, you should try to maintain this balance. Notice that all forearm and abdominal exercises are of equal value, there are no mass or isolation preferences.

CORE EXERCISES

LARGER MUSCLE GROUPS

BACK

Chin ups (MASS)
Bent over row (MASS)
Deadlifts (MASS)
Lat pulldowns (MASS)
Seated pulley rows (MASS)
Dumbbell pullovers
Dumbbell one-arm row

CHEST

Dips (MASS)
Bench press (MASS)
D. B. press (MASS)
Incline flys
Pee-deck machine
Cable crossovers
Push ups

SHOULDER

Barbell military (MASS)
D.B. military press (MASS)
Upright rows (MASS)
Lateral raises
Reverse pec-deck
Bent over laterals
Shrugs

THIGHS

Squats (MASS)
Leg Press (MASS)
Hack squats (MASS)
Leg extensions
Leg curls
Sissy squats
Lunges

CORE EXERCISES

SMALLER MUSCLE GROUPS

CALVES

- Standing calf raise (MASS)
- Seated calf raise (MASS)
- Leg machine press (MASS)
- Donkey calf raise (MASS)
- D. B. calf raise/1 leg

BICEPS

- Barbell curl (MASS)
- Pull ups (MASS)
- Stand D.B. curl (MASS)
- Incline D.B. curl (MASS)
- Concentration curl**

TRICEPS

- Close grip bench (MASS)
- Overhead ext. (MASS)
- Laying triceps ext. (MASS)
- Pulley pushdowns
- Dumbbell kickbacks

FOREARMS

- Barbell wrist curl
- D.B. wrist curl
- Rev. B.B. wrist curl
- Reverse B.B. curl
- D.B. hammer curls

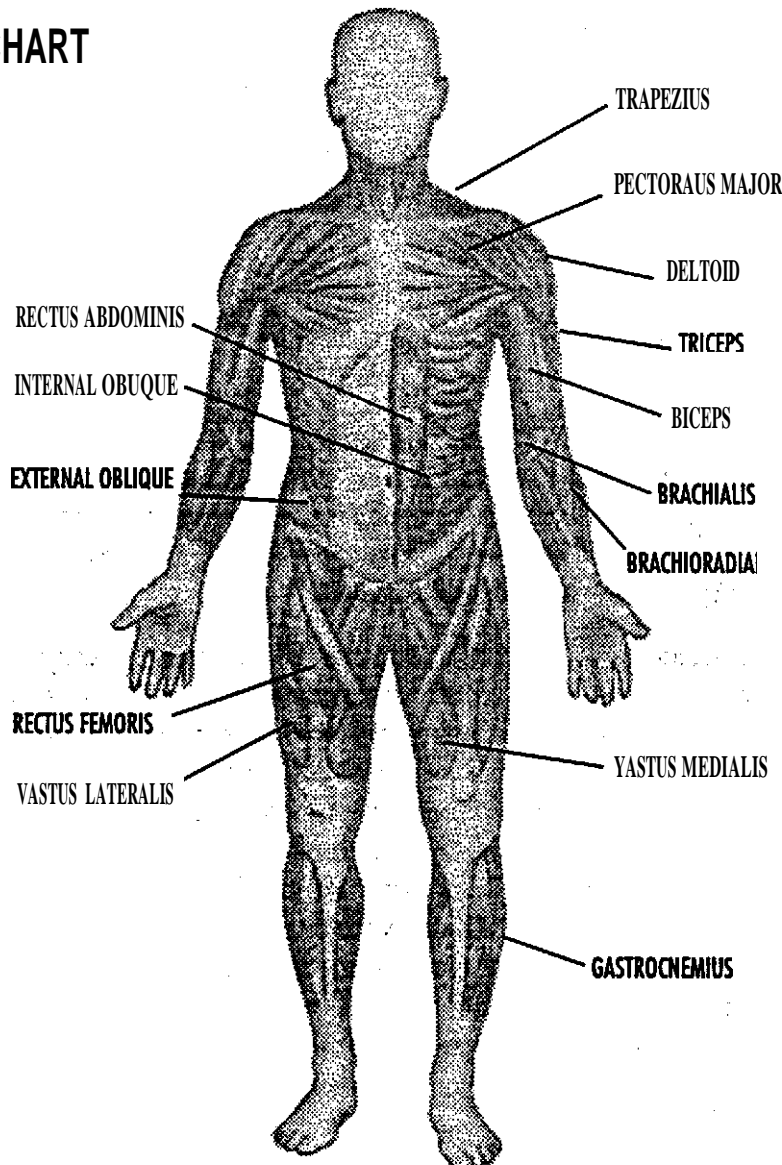
ABDOMINALS/LOWER BACK

- Incline sit-ups
- Hanging leg raises
- Prone hyperextensions
- Laying leg raise
- Crunches
- Oblique raises/side crunch

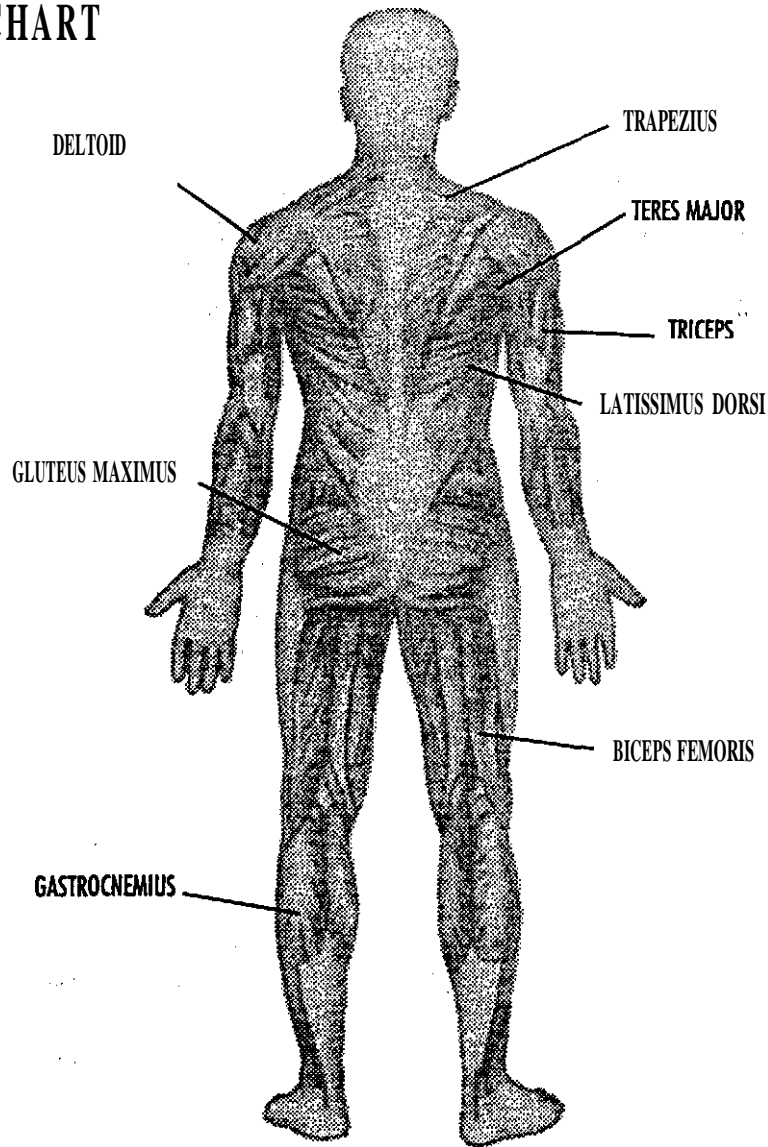
NOTE:

- D.B. =Dumbbell
- B.B.=Barbell
- Rev. = Reverse
- Ext. = extensions

MATRIX MUSCLE CHART (FRONT)



MATRIX MUSCLE CHART (BACK)



When to Train

Some trainers argue that the morning is the best time to workout because it wakes you up and stimulates your body into activity. Others feel that training late at night is good for tiring you out and helping you get more restful sleep. Research has shown that neither early morning nor late night workouts may be the most productive.

A research study conducted by Ballard in 1991 found that your energy levels peak between 12:00 noon and 6:00 p.m., due to your cyclic hormonal pulses. This is when hGH (human growth hormone) release, triggered by high-intensity training, was most abundant. On average, most trainees find this an optimum time to workout but there are some individuals which fall out of this average biorhythm and discover their peak training time extends for two more hours. If you feel strongest at 8:00 p.m., then you may fall into this group and working out at this time would be appropriate for you. But for 75% of the population, after 6:00p.m. your energy begins to drop off and your metabolism will decline. Another good reason to train earlier is that your metabolism will be elevated for several hours after your workout helping you to burn extra fat. If you train later, you will lose this benefit and may experience restless sleep. The advice here is to train whenever your schedule allows, but when possible, get to the gym before 6:00 pm. to take advantage of your natural hormonal surge and the boost to your metabolism.

Cardiovascular Training

Though cardiovascular training is not the focus of this manual, it is an important aspect for your overall health and fitness. Strength and cardiovascular conditioning are developed by two separate types of training approaches, each with its own parameters, but they can be cross trained to a limited extent. Fast circuit training with weights will develop some endurance and high-impact aerobic exercise will develop some muscle tone and strength. Yet for significant results, each should be pursued individually and on different training schedules. If strength, size and mass are your primary goals and you are not over-weight, then you can by-pass any cardio training during this phase. If you are under-weight then definitely eliminate all cardio training. If you are over-weight or satisfied with your current muscle size and want to pursue more definition, then you should include cardiovascular training on the days you do not lift weights. For our training goals, we have four important basic guidelines for you to follow.

First, choose a type of exercise which is enjoyable, safe and easy to perform on a regular basis. Easy access to the type of cardio training you select is an important consideration. If it is a hassle, then you will find reasons to skip it. The exercise should involve the large muscle groups and be rhythmic and continuous. Fast walking, bicycling, rope jumping, aerobic dance, roller-blading, swimming, karate and most racquet sports are good choices. Avoid excessive contact sports since these have the potential to cause injury and prolonged muscle soreness.

Second, the intensity of exercise should be appropriate for your current fitness level. Do not jump into an intensity that you use to perform when you were in shape back in high school or college. Starting out over your head will not only cause extreme muscle soreness, it will also break your enthusiasm toward your training. Allow yourself to start in at a level below your capacity so that you can gradually build up your confidence and conditioning.

Research indicates that optimum exercise intensity for fitness improvement should be in the 50 to 85 percent of maximum oxygen consumption. A practical and easy way to gauge your intensity is the Talk Test. It means you should be able to carry on a comfortable conversation while exercising. If your breathing becomes erratic and labored, the intensity level is too high and should be lowered immediately. This moderate range will ensure the use of fat as a primary source of fuel and improve overall circulation.

Third, the duration of your cardiovascular training should initially fall between 15-20 minutes per session. Once you have followed this program for 1-2 months, the duration can be increased to approximately 30-45 minutes. This is the level of cardiovascular training which will still allow you to build muscle and strength at a rapid pace while burning extra body fat. Beyond 45 minutes of exercise will force your body to deplete much of its glycogen stores and, when combined with regular weight training, make it more difficult to recuperate.

The fourth and final guideline is frequency or how often. Training 2-3 times per week is sufficient to improve cardiovascular fitness and muscular definition. This should be performed on the days you do not lift weights. If you have to do both, then perform your lifting routine first followed by your cardio workout. Remember to include one day per week that you give your body a complete rest from all exercise.

For the trainee with limited recuperative energies or focusing on building strength and power, cardio training should be put on hold. If you do decide to include aerobic training, you will have to gauge the effects from your workouts. Are you recuperating completely? Do you feel sore or wiped out the following day? These are questions which you should ask yourself so

you can modify your aerobic schedule. If you suddenly start losing too much body weight or muscle strength, you are most likely performing too much aerobic conditioning and are becoming overtrained. Do not fall into the trap of trying to build strength and super conditioning at the same time. We notice people training in the gym, warming up for an hour on the Stairmaster and then going through a two-hour weight workout every day, five-days per week. Months go by and they look exactly the same way with no changes in their physique, yet they continue training at this furious pace. Do not become a blind follower of your workout routine. Be conscious of your weight, muscle size, strength and energy levels so that you can modify your training efforts on a regular basis.

As a benchmark, your body fat should not fall below 10-12%. Dropping below this will limit the muscular gains which you can make. At low body fat levels, the most which you can accomplish is to maintain your current muscle mass. Competitive bodybuilders learned this years ago. They had to put on some fat in the off season which allowed them to train heavier and build new muscle mass. This does not mean you can become a blimp, we are talking about adding 2-3% more body fat or approximately 10-12 pounds of extra weight when you decide to lift heavier and add mass.

ADVANCED MUSCLE STIMULATION

Myotatic Reflex

There are muscle spindles which lay parallel to each muscle fiber that are responsible for what is known as the stretch reflex or myotatic reflex. Its function is very specific and understanding it will help you utilize the stretch reflex toward your muscle building efforts.

Muscle spindles act as receptors which are sensitive to stretch or elongating of the accompanying muscle fiber. As a muscle fiber lengthens during an exercise movement, so does the muscle spindle. It is sensitive not only to the amount of stretch but also to the speed at which the muscle is being stretched. If the muscle lengthens quickly and forcefully, the spindle responds by triggering it to suddenly contract forcefully. This response is an important defense mechanism which protects the muscle from over-stretching and possibly tearing and damaging itself. Within limits, the harder and faster a muscle is stretched, the stronger the myotatic reflex contraction. The "length-tension" relationship of a muscle spindle and fiber will generate maximum force when it begins its contraction at 1.2 times its resting length. This means you must stretch the muscle before contraction to use the myotatic reflex effectively. By incorporating this knowledge, you can take advantage of this defense mechanism to generate stronger and more forceful contractions. If you go beyond the degree of stretch to which the myotatic reflex can respond, the second line of your defense mechanism kicks in and the muscle stops contracting altogether and goes completely limp. The signal to the muscle is that the "length-tension" stimulus is so excessive that the next best thing for protection is to eliminate all contraction. If you have ever been to a powerlifting contest, you have probably witnessed this response in action. Most commonly, it happens when a competitor tries to lift a weight which is beyond their capacity and suddenly the legs buckle or arms fold without warning. When trying out this technique, make sure to start out carefully and not to stretch the muscle too quickly or severely.

A baseball pitcher uses the stretch reflex when he pulls his arm back and winds up to throw a pitch. Right when the arm is completely stretched back, he suddenly reverses the motion with a quick snap and begins the forward movement to release the ball. It is the moment when the arm is completely pulled back, that the stretch reflex is activated causing a powerful contraction forward. Another example is when you have been the passenger in a car and have fallen asleep. As your head tilted forward with increasing speed, you suddenly jerked it back up when your chin was slightly touching your chest. This occurs because the spindles in the back of your neck suddenly stretched forward, initiating the myotatic reflex which contracted your neck muscles, pulling your head back up to a safe position.

How will this benefit your training? Many exercises allow you to sufficiently stretch the muscle and use the myotatic reflex to increase your power upon contraction. This technique will require a little practice but once you have gotten use to it, you will experience an increased amount of muscle torque. Stronger muscular contractions will ultimately lead to faster growth because you are involving more muscle fibers in each repetition.

To use this technique with an exercise, let us look at parallel bar dips for chest training. On the descending portion of the movement, the pectoral muscles are primarily being stretched. Right near the bottom of the motion, those last couple of inches while descending, increase

your speed, going to a complete stretch and suddenly reverse the movement with a strong contraction to press your body back up. You should experience a quick snap and slight jerk

when reversing the motion if you are doing it right. You can only use the myotatic reflex on exercises which place resistance on the muscle in the stretched position. Not all movements are suited for this method. Following are the exercises which work best.

EXERCISES FOR MYOTATIC REFLEX TECHNIQUE

- CHEST- Flys (all angles), pee-deck machine, dips, push-ups on dumbbells
- BACK- Pullovers, bent-over rows, dumbbell row, chin-ups
- SHOULDERS- Incline lateral raise, cable lateral raise (crossing in front of your torso)
- TRICEPS- Overhead triceps extension (dumbbell or barbell)
- BICEPS- Incline dumbbell curls
- THIGHS -Sissy squat, hack squats

You should incorporate the stretch reflex in your workouts as much as possible. It will help you recruit more muscle fibers when using certain exercises. Since this technique does not overload a muscle but allows it to perform more effectively, it can be used during both the Growth and Stabilize cycles of your training.

Muscle Overload Techniques

During the Growth phase, the last set for each body part or exercise (one to two sets maximum per muscle group) should include a MUSCLE OVERLOAD TECHNIQUE. This will trigger more muscle fibers to be used during a single set of an exercise. It comes into play once the initial set has been taken to positive failure and you cannot perform another full repetition on your own. It is a high-intensity style of training and the seventh Critical Growth Factor of this program.

A Muscle Overload Technique pushes the muscle beyond regular contraction with a greater-than-normal stress which is a requirement for new muscle growth. Using an Overload Technique will force the muscle to adapt to a new and greater demand and produce a strong pump. You can still gain strength and size without using any Overload Techniques while following this program but at a certain level your body will most likely plateau. At this point your muscles will require an overload stimulus or shock, something beyond normal, to break through your sticking point, allowing you to continue gaining size and strength and improving your physique. Your overall improvement will depend upon how aggressively you use these techniques and on your specific goals and level of motivation. Test each method in your workouts to experience the different feelings each one produces. In most cases, trainees will adopt a couple of favorite ones and use them for several months before switching to another style. Whatever you decide, do not go over the two set maximum per body part in one workout using any Overload Technique.

No Overloads should be used during the Stabilize cycles of each Period. It is important to follow this guideline. After the second intense Growth training week, you still may be motivated to keep training hard due to the physical and mental momentum you have created. It is a natural impulse to want to continue training intensely when your body is responding effectively to your workouts. But you must lower your intensity during the Stabilize cycles to enable your body to recuperate and to prepare to grow during the next Growth training cycle. If you do not let up through the Stabilize cycles, you will be systematically chipping away at your

recovery capacity and slowing down your muscle gains. These are active rest cycles which will allow you to make progress at a consistent level. A common reason for slow gains is due to the over ambitious trainee which continues training intensely right through the Stabilize cycles using heavy weights, Overload Techniques and a fast training pace. Do not let your enthusiasm work against you.

There are four specific Muscle Overload Techniques which we recommend. We have selected them because they are safe to use on a long-term basis and are extremely effective at promoting fast gains in strength and size. They can be used individually or combined together during one set. If you combine several of these techniques together in one set, you count that as one Muscle Overload set. Remember, these techniques should only be used after you have reached positive failure. If you incorporate them too quickly, when the muscle is still fresh, they will not be as valuable in producing the desired effect.

1) **FORCED REPS**

Forced reps help you grind out a few more reps than you otherwise would have been able to on your own. It is a simple technique which has been in use for many years. They are executed with a partner helping you to perform additional repetitions, once you have failed, by giving you physical assistance in lifting the weight. This technique is perfect when trying to lift a new, heavier weight and want to make sure you complete your target reps. Explain to your helper, not to touch the weight until you give them a clear signal. A good set can easily be ruined when someone jumps in too quickly and jerks the bar away from you. Another important point is to make sure the weight continues moving through the positive contraction. If your training partner is helping you and allowing the weight to stop moving, making you struggle excessively, then an injury is a strong possibility. Even very slowly, the weight should continue moving until you complete the exercise. This is the only Overload Technique which requires a training partner's assistance. The other three can be performed individually.

2) **MODIFIED/PARTIAL REPS**

Modified reps or Partial reps are performed by exhausting the muscle with full range repetitions and continuing to move the weight through part of the range of motion. This can be a half rep, quarter rep or even a couple of inches in the movement path of the exercise. The emphasis is to keep the weight in motion and continue contracting and stimulating the target muscle. In theory, when you perform your regular repetitions, you may stimulate 70%-80% of your total muscle fibers available. As you continue to push and move the weight, even in small increments, the muscle fibers keep firing and additional motor fiber units are recruited to assist in the lifting effort. This technique creates a deep burn within the muscle which makes it a great finishing tool when you want to get the most benefit out of your last few reps. This is a popular training method used by many of the top natural bodybuilders.

3) **STATIC REPS**

Static or isometric contraction is an intense muscle fiber stimulus. The reason is, you are stronger and can hold more weight in the contracted position, than you can lift. This means you will still have plenty of static strength left after you have depleted your energies on positive contraction. In most cases, your static strength is left unused.

A Static rep is performed on the final repetition of your set. Hold the weight in the extended or contracted position, as long as possible, before lowering it and completing the set. Since the muscle is stronger during static contraction, than it is during positive (concentric) contraction,

you will be able to hold the weight in the contracted position for a reasonably long amount of time, averaging between 10-30 seconds and longer in certain positions. As you hold the weight, you will feel your muscle contract harder and harder. Focus on keeping the weight motionless and resist the temptation of quitting before you are totally exhausted. In dangerous positions, be careful that your muscle does not become numb and suddenly shut down, causing you to drop the weight on yourself. On these movements, a spotter may be necessary. Static reps combine well with Partial reps because once you have squeezed out mini-reps through part of the range of motion, you can hold the weight and let the muscle completely sizzle. This simple technique is very brutal and will leave the target area completely fatigued and with a great pump. Here are some of the exercises which allow you to properly include Static contractions.

EXERCISES PROVIDING RESISTANCE IN CONTRACTED POSITION

- BENCH PRESS(all angles)
- BARBELL and DUMBBELL ROWS
- SEATED PULLEY ROWS
- MILITARY PRESS
- CLOSE-GRIP BENCH PRESS
- PULLEY TRICEPS PUSHDOWNS
- INCLINE DUMBBELL CURLS
- SQUATS
- LEG EXTENSIONS
- CALF RAISES (seated and standing)
- DIPS
- MACHINE LAT PULLDOWNS
- PULL-UPS and CHIN-UPS
- DELTOID RAISES (front, side and rear)
- TRICEPS EXTENSIONS (bar or dumbbell)
- BARBELL CURLS (3-4 inches from shoulders)
- CONCENTRATION CURLS
- LEG PRESS MACHINE
- LEGCURLS

4) DROP SETS

This is our favorite Overload Technique which we have used throughout the years in a variety of training applications. The intense burn and pump experienced after a Drop set is incredible. It is performed by completing your regular reps, reaching failure and immediately continuing the exercise with a lighter weight. You can perform as many drops as it takes to completely exhaust the muscle. This is where your ability to withstand pain is truly tested because Drop sets can be very painful. Since dumbbells lend themselves to this technique, many body-builders like to position their bench near the dumbbell station and "run the rack", as it is popularly referred to. For most trainees, two to three drops in weight is sufficient to exhaust the muscle and stimulate new growth. Move from one set of weights to the next without any rest in between, only pausing long enough to exchange the weights. If you allow yourself to rest in between, the muscle will have the opportunity to partially re-charge itself, eliminating much of the intended benefit. The goal is to continue stimulating more and more muscle fibers with each drop in weight. A training partner is convenient but not absolutely necessary when using this technique.

A common question when using Drop sets is, "If my target reps for a set is ten, then do I count all my reps, including each drop in weight together, so they add up to a total of ten repetitions?" This is a common question and the answer is no. When the program lists ten reps, or whichever number is specified as your target goal, that means ten reps should be completed on your first initial effort or weight. Here is an example when the target is ten reps in the program. Using the barbell curl, you would lift 100 pounds for ten reps and fail on that tenth rep, then picking up a 70 pound barbell and completing three more reps and failing and finally

picking up a 50 pound barbell and squeezing out four more reps to complete your set. The total number of reps in this set was seventeen but the initial number of reps completed with the first weight or effort was ten, which means you met the target number of ten reps called out in the program. The same is true for your other Overload Techniques, especially when using Partial or Forced reps. You do not count these additional repetitions towards your total number completed, when following the target reps listed in the program. Your goal is to reach failure or muscular fatigue on the last rep indicated of the target number and then squeeze out a few more intense Muscle Overload reps using the techniques we have described.

Note that the target reps we indicate for each workout are a guide or goal. Do not worry if you perform a few more or less. When this happens, on the next set adjust the weight and continue with your training. Stay focused on your workout and do not become overly concerned with trying to finish each set exactly on the button. The repetitions change in order for you to use different weights and tap into different energy systems within your body. The target reps are not carved in stone but only varied to help you achieve an anabolic training effect.

Key Exercise Tips

This section will cover the most important exercises to include for each body part and key things to remember while training to get the best results.

BACK/LATS

The back is a strong and complex body part which consists of many individual muscles. It is important that you aim for a full contraction, trying to pull the shoulder blades back and together as much as possible. Since you cannot see this body part work, focus on feeling the contractions on each repetition. For a mass movement, the deadlift exercise is one of the best. We grouped the deadlift in this body group because it works the lower and mid-back muscles primarily, but it also strongly stimulates the thighs, hamstrings and shoulders.

Another exercise for overall back development is the bent over row. Perform this on a raised platform to allow you to stretch the bar down to your feet. On this movement, make sure to keep your knees bent and that you wear a lifting belt. To specifically develop upper back width, focus on medium grip lat machine pulldowns. Using a reverse grip (palms facing you) will provide the strongest contractions since this puts the biceps, which is your weak link in lat development, in the strongest position. Using straps will allow you to handle more weight and have a secure grip.

CHEST/PECS

Weighted dips are one of the best pectoral mass developers. While performing this exercise make sure to keep your back arched, your chest pushed forward and not to lock out at the top of the movement. Your body position is at an angle, with your head approximately at 11 o'clock and your feet at 5 o'clock. Get a full stretch at the bottom of the movement. When you cannot get another complete rep, stretch, bounce and contract the pees. The key to good chest development is to hit as many angles as possible stimulating a variety of muscle motor units.

Another good exercise is the incline barbell bench press. This movement adds mass to the upper chest cavity which creates a full and powerful looking torso. A medium grip on all your pressing motions will help prevent shoulder irritation. When training chest, at the top of all your pressing exercises, try to squeeze the pectoral muscles together tightly. For a finishing

exercise, include a fly or pee-deck movement to stretch your pec-delt insertion. This helps tie-in the shoulders to the pectoral muscles for an even balance. It is important to keep your elbows out wide and away from your body on all pressing motions to fully place the stress on the pees. If you keep your elbows close to your torso, you will primarily work the triceps.

SHOULDERS/DELTS

The standing barbell military press to the front of your body and dumbbell overhead press are your first main choices for total shoulder development. Standing is better than seated because of the stabilizer/assisting muscle elements which we previously covered. Make sure to keep your body straight and upright. Leaning back to press a heavy weight up will eventually hurt your lower back and places much of the stress on the front deltoids and upper pectoral muscles. Avoid barbell presses behind the neck since this places too much stress on the shoulder joints and does not provide any additional muscle building benefits.

Limit the use of upright rows if your traps are sufficiently developed. Sloped shoulders are not a feature you want to accentuate. Try to include a lateral raise movement and rear delt movement, to create a full shape and add thickness to your shoulders. When performing side laterals, raise the dumbbells to head level. Raising above this point is not necessary and dangerous to your rotator cuffs. Primarily stick with the heavy basic pressing motions for mass and power. We have found that most trainees do not need to perform any front delt isolation exercises since you get so much indirect stimulation from all your other pressing movements.

THIGHS/QUADS

Bodybuilding has long had a love-hate relationship with the squat exercise. It has also always been the topic of much controversy. Some old-timers believe that it is the best overall exercise in the gym because it stimulates growth hormone within the body to be released. This is true. Other "experts" feel that squats are overrated and they tend to "overdevelop the glutes (buttocks) and ruin the knees and overall symmetry of the body. Both of these situations are possible with the squat. The results you experience are directly related to two factors, exercise performance (technique) and your physical/skeletal structure. Exercise technique is the only factor which you can improve.

If the squat exercise is performed incorrectly, it can overdevelop your glutes, hips and stress your knees and lower back. Common mistakes include leaning forward too much, placing your feet in too wide of a stance, bouncing at the bottom of the movement and lifting with the lower back instead of the thigh muscles. For some individuals, even when they squat properly, they can still suffer negative side effects. Athletes over six-feet tall, people with light bone structures, having long legs compared to their torso and weak spinal erector muscles are common genetic and structural reasons for the squat not to be an appropriate exercise to perform. If you find that every time you try to include squats in your routine, you get hurt or suffer from unusual joint and muscle soreness, you may fall in this category. You should limit or eliminate squats from your leg training and substitute other mass thigh movements instead. You can still develop a great pair of legs with the incline leg press, hack squat machine and leg extension machine. We have many trainees with huge, ripped thighs that have never squatted and have built them up solely using leg pressing motions. You will still benefit from growth hormone release if you perform leg presses intensely enough. Research now indicates that growth hormone release is directly related to the weight and intensity generated rather than the specific exercise performed. Of course, the compound exercises will always enable you generate more intensity than isolation movements. So, you can still get a great training effect if you attack the leg press machine with commitment.

If you decide you can safely and productively perform squats, then fine tune your technique with lighter weights before you move into heavier lifting. The first point is to always squat in front of a mirror to allow you to keep an eye on your technique. Use a pad or towel around the bar for comfort. Your foot placement should be no wider than shoulder width apart with your toes pointing slightly outward. The bar should rest on your upper traps and not on your neck. Place your feet on a flat surface and avoid using a wooden block. You will be more stable and experience a natural motion without having your heels elevated. Squat down without leaning or bending forward to a level where your thighs are parallel with the floor. Bending forward is a common mistake which takes much of the stress off of the thighs. Going down to rock-bottom has not proven to offer any advantages in thigh development and can be hazardous to the knee structure. Exhale as you rise up in a steady motion with the idea that you are pushing the ground away from your body with your heels instead of the ball of your feet. At the top of the movement, take a deep breath and repeat.

CALVES/GASTROCS

This is a simpler body part to develop than most lifters realize. Yet, developing a good pair of calves places the finishing touch on pair muscular thighs. Use the standing and seated calf machines as your main exercises. This is one of the few body parts that you can easily go through a full range of motion without jeopardizing good technique. Do not cheat yourself, as many people do, by performing small bouncy movements in the mid-range only. Go *all* the way up, squeeze for a moment and lower all the way down, fully stretching the muscle on each rep. Avoid using a weight which will not allow you to go through this full range. When performing standing calf raises, lock the knees in position so the thigh muscles do not become involved in the effort. We often see novice lifters pile the weight on and proceed to perform mini-squats, with the idea they are working their calves. Avoid making the same mistake.

To make your calves appear larger and flare out at the sides, use the seated calf machine. This hits the soleus which is the long muscle underneath the gastrocnemius muscle, running from the back of the knee all the way down to the heel bone. Developing it forces all the interlocking muscles of the lower leg to bulge outward. For chiseling the classic diamond shape into them, use the standing calf machine. For the most part, toe position does not affect the areas of the calf which are developed. The calves require higher reps than the rest of the body and this is reflected in your program.

BICEPS

Not too many of us need much motivation to blast the biceps. It seems to be everyone's favorite muscle to train. Often times, developing big arms was the main reason to start lifting weights in the first place. They respond quickly, pump up easily, are a universal symbol of ruggedness and are easily visible. The discipline in this case is not to overtrain them because of, a) the small size of the muscle, and b) they are directly involved in all your upper body exercises to some extent. If you develop a massive back or chest, your arms will benefit by growing as well. How often have you seen someone with a well developed upper body and scrawny arms? Therefore, you should limit the direct amount of biceps/triceps training which you perform.

The mass builder for biceps is the standing barbell curl. Use a straight bar since this keeps your grip supinated (palms-up) and allows you to contract the biceps more forcefully. Even though the E-Z curl bar is gentler on the wrists, it places your hands in the wrong position. At the top of the curl, hold and squeeze the muscle for a one-count. Then lower the bar all the

way back down to your thighs with control. One of the reasons to focus on the barbell curl, besides being a compound exercise, is that you can really squeeze out additional reps when your muscles fail by performing Freestyle reps. Loosen up your technique, only enough to get the bar up and only after you have completed as many strict reps as possible. Do not allow your lower back to do most of the lifting for you.

Another important movement, because of MFS interaction, is the pull-up. This compound exercise hits the whole biceps area and forces you to balance and maintain your body in position. Your grip should be shoulder width apart or slightly narrower with your palms facing toward you. As with the barbell curl, squeeze the biceps in the top position and lower yourself under control. When you fail, you can have someone assist you with Forced reps by giving you a push under the knees.

TRICEPS

We have found the close-grip bench press to be an excellent exercise for developing the triceps muscle. To perform this exercise properly, your grip should be ten to twelve inches apart with the elbows kept forward. Lower the bar to your lower chest line and press the weight back up with the heels of your palms. A thumbless grip will help isolate the triceps and be more comfortable on your wrists. A common mistake seen is that many lifters put their hands too close together and flare their elbows out, which moves the focus of the stress to the pecs and front delt muscles. Also, with a medium grip, irritation to the elbow joints is minimized which makes this an exercise which you can perform for many years to come.

Another strong movement is the laying triceps extension (aka, skull crushers). When performing this exercise, keep the elbows pointing straight up toward the ceiling while only moving the lower arms. If you follow this strict form, you will have to use a lighter weight but the stimulation will be directly on the muscle. Either a barbell or dumbbells can be used. If you feel the slightest tweak in the elbows and are performing the movement correctly, then stick with the close-grip bench press. The triceps extension is one of those exercises which your joints will either be able to handle or not.

Finally, as a finishing exercise, perform pulley pushdowns. Use an angled bar or a knotted rope. With the rope you have the added advantage of being able to twist your palms down and outward upon contraction, placing a unique stress on the entire muscle group. Avoid leaning over the handle too excessively. The machine pulley should be directly above your hands.

FOREARMS

I am sure that you have heard how some bodybuilders grow huge forearms with nothing but indirect stimulation from all exercises. It is true that in every gripping effort, your lower arms are involved, but we feel they need direct exercise and stimulation. Otherwise, your calves, which fall in the same category, would completely develop from just standing around and walking all day. We have found that by developing a stronger grip, all your other upper body movements will benefit as well.

The reverse barbell curl produces excellent results because it directly works the brachioradialis and brachialis. These are the muscles on top of the forearm which run underneath the biceps. Developing them pushes the biceps up which increases your overall arm size as well. Grip a straight bar or E-Z curl bar with a palms down grip (pronated), about shoulder width apart.

Curl the bar up to your chin, squeeze and lower it under control all the way back down. The key to this exercise is to keep the elbow joints pinned to the sides of your torso.

A second great exercise for working the forearms is the incline dumbbell hammer curl. This also hits the brachioradialis and brachialis. Sit on an incline bench and curl a pair of dumbbells with a vertical grip (thumbs pointing up), throughout the movement. You can curl them together or alternately. Lower back down under control and avoid swinging the dumbbells in the bottom position which is a common mistake. A thumbs-up position, throughout the movement, will place the stress directly on the forearms and the lower biceps.

A final good movement is the standard barbell wrist curl. Hold a barbell with your palms up (thumbless grip) about ten to twelve inches apart. Hang your hands over your knees or flat bench while sitting with your torso slightly bending forward. With only the movement of your wrists, curl the bar towards your body, squeeze and release your wrists back forward, allowing the bar to roll towards the end of your fingers. A full range of motion can be used with this exercise.

ABS/LOWER BACK

You should know by now that is the most crucial element in attaining a well-developed mid-section. If a layer of fat is present, it does not matter if you do a thousand incline sit-ups everyday, twice a day! You still will not be able to see well defined abdominals. When people perform extensive ab workouts without a proper diet, all they are really doing is burning calories, which is fine but why not ride the stationary bicycle to do it more efficiently? In other words, once you train the abdominals with a moderate number of sets and reps until fatigue, you should leave them alone and focus on your diet to bring out the definition.

Another common mistake is to use heavy weights with the ab crunch machine or other abdominal equipment. This will over-develop the midsection which tends to push the gut out, creating a muscular "pot belly". The abdomen consists of fibrous interlocking muscle tissue which responds best to moderate resistance and repetitions. Hitting it with heavy weights will ruin your symmetry and destroy the V-taper that you are after.

The main exercises to focus on are incline sit-ups and hanging leg raises. These stimulate all the abdominal muscles, from sternum to pelvis. A medium exercise speed will help contract the muscles on each rep and create a deep bum. Do not get carried away with sloppy technique and fast reps just to complete an extensive number of repetitions. Experimenting with different machines, benches and angles will keep your abdominal training fresh and interesting.

To train the intercostals and obliques, the muscles which run on the sides of your torso near your lower ribs, angle your hips on any of the standard abdominal exercises. A slight variation in angle will help focus on this area which is often neglected. Do not place a bar or barbell on your shoulders and perform trunk twists, in an effort to exercise the abdomen. Though obsolete, trunk twists still seem to be practiced by many gym members. Twisting vigorously with weight on your back places an unnatural stress on your spinal bones. This is a dangerous movement you should avoid completely.

For strengthening the lower back, perform hyperextensions (aka, good mornings). Hang over a padded bench, face down, with your heels stabilized. Raise up, contract the lower back and

lower back down slowly. The range of motion will be three to four inches above parallel or hip level and down approximately ten inches. It is a short range of motion. Avoid rising above this since this compresses the spinal cord and can pinch a nerve. Use a weight for added resistance. If you have ever suffered lower back pain or injury then you should include this exercise in your weekly training schedule (with your physician's approval). The deadlift, which is part of your back training, will also strengthen your lower back and spinal erectors. Sports therapists are recommending both of, these exercises as rehabilitation for lower back trauma.

THE WORKOUT

Pre-training

Before starting this program, you should have a doctor's approval to weight train on a regular basis. We are legally and ethically obligated to advise you of this. If you are over-weight or have been sedentary for an extended period of time, it is especially important to have a physician thoroughly check you out. Even though you may feel fine, there may be underlying health risks which you are completely unaware of which may be aggravated by intense resistance training. A sore back, stiff knees and elbow joints should be reviewed by a physical therapist. Learn what your limitations are and train within or around them. This program is designed for the individual that is healthy, with no major physical illnesses. If at some point in your workout you feel light-headed, dizzy or nausea, stop training immediately and seek medical help. Contrary to gym folklore, training until you puke is not healthy nor the optimum way to build a muscular physique.

If you are in good physical health but have not been weight training on a regular basis, start this program slowly. Give your body a chance to "break-in" and get accustomed to the new stimulation you are providing. Many times the muscles can withstand the workout but the connective tissues are not quite conditioned sufficiently. Ligaments, which connect bones to bones at a joint, and tendons, which connect muscles to the bones, can be injured easily without proper adaptation. Regular training will make these tissues more resilient but it will require you to start off slow and give your body time for these changes to take place. Like with any new sport, weight training requires balance, physical coordination and technique. These skills will require study and practice.

Warm-up and Stretching

Before beginning your actual routine, you should always briefly warm-up. We recommend a five to ten minute warm-up and stretch. The warm-up does not count as part of your actual workout time. In preparation, perform 25-50 push-ups, jumping jacks and abdominal crunches. These exercises will help raise your core temperature and increase blood flow throughout your body. As soon as you complete your warm-up, go right into a light stretching session.

Stretching is a progressive system of exercise which increases the flexibility of the muscles, joints and connective tissues. Although muscle tissue is the main focus in stretching, related structures benefit because tendons, ligaments and joints are warmed up and become lubricated with proper flexibility training. This makes them more stable and less likely to become injured during exercise. Some people like to jump directly into their workout but statistics prove that this practice can increase your chances of injury.

There are two types of stretching which you should practice. Passive stretching, which is performed during your warm-up. It focuses on holding the stretched position for ten seconds or longer. It is a less aggressive style which aims at increasing the flexibility of your limbs and torso. The other type is Dynamic stretching which is performed while training. It involves shorter more aggressive movements which focuses on maintaining a continuous blood flow to a specific area while stretching the actual muscle itself.

Dynamic stretching is essential to your ongoing pursuit of mass and strength. It is the eighth Critical Growth Factor of this program. It forces the fascial sheath, which surrounds the

muscle tissue, to expand allowing it to swell beyond its normal capacity. This encourages your muscles to grow by increasing their ability to contract more forcefully. Research now indicates that one of the main factors which limits your muscular growth potential is the rigidity of the fascial sheath which encapsulates your muscle tissue. Many noted scientists, including Torbjom Akerfeldt from Sweden, feel that the fascia must be stretched to encourage muscle fiber growth and nutrient absorption. Dr. Akerfeldt, who has performed years of research in this area, has devised a complete dietary approach which aims at overloading the muscle with glycogen in order to stretch the fascial sheath. The preliminary test results have been very successful. The Anabolic Burst Cycling program is included as an addendum to this manual.

Stretching also ensures faster recovery and decreases post-workout soreness by increasing the blood circulation to the area being trained. The increased blood supply helps eliminate the waste products produced during exercise more quickly and efficiently. As a minimum, especially during the intense Growth cycles, you should include at least ten to fifteen minutes of a cool-down stretch to maximize recovery.

For a basic warm-up, you should perform a Passive stretch to all your major muscle groups. Hold each stretch position for at least ten seconds. Begin by turning your head side to side and back" and forth gently. Then turn your head in large circles in one direction, then the other. Rotate your arms in large circles, forward and back, to loosen up the shoulder joints. Reach overhead, interlocking your hands and stretch to the sides, warming up your torso and lower back. Bend over at the waist and touch your toes while keeping your knees locked. With your legs shoulder width apart, try to pull your head down toward one knee and then the other. After you straighten up, place your hands on your hips and lean back slowly, stretching your middle and lower back. For a more thorough stretch of the thigh and hamstring muscles, you can sit down, open your legs straight (splits-position) and reach for your toes, alternating from left to right and then towards the center. The key is to stretch slowly and evenly without bouncing and to keep your lower back straight. You do not want to over-stretch nor pull the muscles too severely. Breathe evenly and relax. If you hold your breath and are tense, you will find the whole process to be more difficult to enjoy. Once you reach a desired level of flexibility, you will be able to maintain it with less time stretching.

During your actual training session, include Dynamic stretching for the body parts which you are working on between each set. By continuously stretching the muscle, flushing it with more blood, you will directly enhance your workout with an increased muscle pump and decreased lactic acid build-up up to 50%. This is a powerful technique you should include in your workouts from day one. The Dynamic stretching which you perform while training is more of a ballistic or aggressive style than the Passive stretch you performed while warming up. The movements are basically the same, instead you will use short bouncing motions on the areas you are targeting, keeping the muscle pumped but not on trying to increase flexibility. While training, the muscle is already warmed up so you can use faster movements safely without substantially increasing your chances of injury. Even so, if you have not been training for over six-months consistently, apply this technique with care.

BENEFITS OF THE WARM-UP AND STRETCH

- Prevents premature onset of lactic acid and muscle fatigue
- Causes gradual increase in muscle temperature which enhances contraction
- Reduces likelihood of muscle injury promoting consistent training
- Increases the elasticity of connective tissues and other muscle components
- Increases muscular growth potential by enlarging the fascia

RECUPERATION

Immediate Recovery

Anaerobic exercise, like bodybuilding, produces lactic acid as a by-product. This causes the deep burning sensation in the muscles when you are training. Up to half (50%), of the accumulated lactic acid is metabolized and eliminated within twenty-five minutes after you finish your workout. The other 50% is neutralized within ninety-minutes after finishing your workout. Therefore, you should immediately engage in active recovery as soon as you have completed your last training set. This would include a light Passive stretching session similar to your warm-up routine. It will help you get rid of the lactic acid more efficiently and prevent it from "pooling" in the muscle tissues, causing more intense post-workout soreness. Your cool down will help your circulatory system slow back down and stabilize as opposed to abruptly stopping all activity which can be a shock to your body. A natural time to cool down, while finishing your training, is during your abdominal work. Since ab training is lighter in nature, it is a good time to combine it with some light stretching movements.

Extended Recovery

Proper recuperation allows your body and mind to recover from the training stress which you place on it. The more successfully you recuperate, the more stress your body can withstand in the future. As you are able to withstand more stress, you will be able to build more muscle mass. With added muscle, you will generate stronger contractions which creates more stress on your overall physical system. Therefore, as you get stronger and bigger, you will need to recover more fully and your attention to your recuperation will become more and more critical toward your continued progress.

Many bodybuilders feel that recuperation is 80%-90% of the game, and at the competitive level, all things being equal, we agree. But for consistent muscle growth, we feel recuperation accounts for 30%-50% of your progress. If you are not training properly, no amount of rest and diet will produce good results. If you are following a high-volume training approach or are using machines and cables for most of your workouts, it is not really going to matter what you eat or how much you rest. You are not going to get the results which you desire. But if your training is logical, sound and right on target, like the Hitman system, your recuperation can be slightly off and you will still make good gains. You can cheat on your diet occasionally or lose a few hours of sleep here and there and still build a significant amount of muscle. Of course, the ideal situation is to combine a strong program in both your recuperative efforts and training schedule, allowing you to get the results you seek as quickly as possible.

Your sleep schedule should include a minimum of eight to ten hours of rest each night and more, if you feel the need. How many times have you heard this recommendation? Yet there are so few trainees which take this guideline seriously. Everyone feels they are the exception and can get by with less. When lacking results, the amount of restful sleep is the first area to look at, after analyzing the training program, and the easiest to correct. Adequate rest is especially important during your Growth phases, when you are pushing your body to the limit. You can get by with a little less during the Stabilize phases but usually only for a few days. If you find your training progress slowing, try adding an extra hour of sleep each night for a week to see if that does not fix the problem. It is a simple solution that often does the trick. However many hours you decide is best for you, you should feel recovered and fresh enough to approach each workout with enthusiasm and energy. You will find when you do not rest sufficiently, it will be harder to maintain focus and motivation and even get a good pump

The next important element in recovery is the ability to relax. After a heavy workout, let your body slow down and allow your metabolism to attain equilibrium. Engage in something which is not physically demanding nor mentally stressful. Sometimes we forget and are not quite aware of the stress that a fifty-minute, intense training session has on our system. You are quickly reminded when you lay-off and start training again, that first day back can leave you feeling like a wreck and then you realize how tough lifting weights really is on your body. Another example happens when taking a friend to the gym with you for an "easy" workout. You go through a light session, knowing they are not use to this type of exercise and inevitably, they experience extreme muscle soreness and fatigue for several days later. This should alert you to the fact, even though you have adapted to this level of training stress, it is still an intense shock to your body.

After your workout, allow your breathing, blood flow, glandular secretions and heart rate to gradually stabilize. You can accomplish this several ways but you should avoid rushing into another activity which requires a high level of energy. Give yourself time to take it easy and focus on something which you enjoy. Concentrate on something other than training so you can maintain an enthusiastic approach toward your workouts. Change into comfortable loose clothes and footwear. While relaxing, breath evenly and deeply from the diaphragm. Spread yourself out and avoid folding your arms and legs in any way which will slow down circulation. Elevate your feet and support your head when possible. Sip cool water, ice tea or a protein drink. There are more and less involved relaxation methods, depending on your personal preferences. Here is a list of some common activities which you can do after training.

POST TRAINING ACTIVITIES

- Warm/cool shower or bath
- Listen to music
- Watch a movie or television
- Take a nap
- Gardening
- Light massage
- Read a book, magazine or newspaper
- Easy paced walk
- Recline and sunbathe
- Visit with friends and family

Stress Factors

Stress is a normal part of life but excessive stress can be detrimental. Not just toward reaching your training goals but to your general health and happiness as well. The amount which you can handle is relative to each individual. What can devastate one person is perfectly acceptable to another but the negative effects of too much stress is practically the same for all of us. High levels of stress stimulates the body to produce excessive amounts of cortisol, the most catabolic hormone known.

Cortisol eats up muscle tissue and depresses your immune system as part of an immediate survival response mechanism. Its role is to heighten awareness and prepare the body for a sudden encounter with a perceived danger. Cortisol causes us to consume muscle tissue (amino acids) for short-term energy and to preserve fat tissue as an energy source for future survival needs. Since it heightens our awareness, all of our glands increase their output which can decrease their function over time with repeated exposures. Excessively long periods of stress is known to permanently damage hormonal output. This explains "runner's burnout syndrome". Many marathon and long distance runners which consistently train, compete and

push their bodies beyond their ability to recover have destroyed their hormonal balance, forcing them into early retirement. There is new research being conducted with supplements like phosphatidylserine which can help control excessive cortisol secretion. It is theorized that this is the same mechanism which makes anabolic steroids function so effectively.

We cannot always control what happens to us or what circumstances we find ourselves in, but we can control our reactions to them. An important goal is to try to maintain a balanced perspective and to resolve problems with a positive approach. Allowing yourself to be stressed-out all day will zap your physical energies and lower your motivation for training. If you find yourself dealing with a multitude of difficult issues, set aside an hour before you go to the gym to clear your mind, relax and focus on your workout. Do not skip going to the gym just because you have had a lousy day. Usually a good, hard training session will do wonders for your outlook and attitude. This is one of the many valuable benefits of following a regular bodybuilding/fitness program.

Excessive running or jogging is another stress factor which should be avoided or limited. Since grade school, we were conditioned to think that running was the best way to "get into shape". When someone talks about losing a few pounds and getting back into good condition, they usually mention running as the first activity they will pursue. For many trainees, it seems to stress the lower back, knees, ankles and many supporting connective tissues. Too much running can literally ruin your physique, cause muscle and joint soreness and, when combined with weight training, push you into a state of overtraining faster than any other single activity. What constitutes "excessive" running varies from individual to individual but here are some basic guidelines. We recommend jogging or running one to two times per week from twenty to thirty minutes maximum per session. As you condition yourself, attempt to run faster but not any longer than thirty minutes. The pace of your bodybuilding workouts will stimulate your cardiovascular system enough to burn the body fat which you require. Along with a balanced diet, the training Periods are designed to build muscle and burn excess fat at the same time.

Many of our trainees follow our programs exclusively without performing any additional cardiovascular training. Yet they maintain low body fat levels and are in great general health. Once you attain the size and density which you desire, you can add one more twenty to thirty minute cardio session to your regular routine if you would like. No more than three total sessions per week is recommended. We prefer you to include a low-impact type of cardiovascular form of exercise. Adding another session will help decrease your body fat levels even further to really bring out the definition. But remember – when you bring your body fat below 10%, you are limiting the gains in additional muscle size which you will make. It is a trade-off which you will have control over.

NUTRITION

The Basics

A complete and detailed nutritional program is a vital element in recuperation and muscular growth. The specific plan we recommend is the ninth Critical Growth Factor in this program and important to the success of any sport you practice. The more knowledge you gain and apply to your diet, the better result you will attain in your health and bodybuilding goals. Nutritional science is constantly evolving and there will always be new things to learn about the effects of food on your body. No matter which diet you adhere to, keep in mind the food which you consume everyday is used for more than as an energy source for your daily activities. It is also used as building blocks for tissue growth, the repair of dying or damaged cells and the defense against harmful bacteria and viruses. These processes are enhanced through the intake of the proper macro and micro nutrients. If you expect good results while consuming pizza, chips and beer, then you are fooling yourself and undermining your own training efforts.

There are many comprehensive diet books available. We suggest you review as many as possible which deal specifically with sports nutrition. It is beyond the scope of this program to cover every detailed aspect of a healthy diet. But we do provide you with an applicable outline of the most important features of any bodybuilding and fat loss diet plan. When experimenting with different diets, we warn against the popular fad diets which seem to surface regularly. Fad diets are the ones which are extreme in design, usually totally eliminating one macronutrient from your diet, like proteins or carbohydrates. Or ones which only promote drinking your meals that is followed by many "natural juice" diet advocates. It is always unhealthy and dangerous to cut out a whole category of food for an extended period of time. As you will see, it is the balance of quality proteins, carbohydrates and fats which will optimize the way you feel and function. Other practices to avoid is fasting for more than a day or "cleansing" your intestines with powerful fiber formulas. This will rob your body of valuable nutrients and offer no real benefits.

Formula for Success

Throughout the years we have experimented with many different eating plans. Here is a summary of some of our observations. We have generalized the effects for each, since certain people can thrive on any dietary combination. Everyone knows someone who can eat doughnuts and hot dogs and stay lean and feel good but in the long run, the negative effects of processed junk foods tend to catch up with everyone.

We have tested every form of the high-carbohydrate diet. It has long been the traditional mainstay of all athletic diets. High carbs are basically what we all grew up eating and is part of the largest percent of the recommended Four Food Groups. We found for most individuals, high carbohydrates made them gain fat rapidly, build muscle slowly and made them feel lethargic and moody throughout the day. To stay trim on a high carbohydrate consumption meant you had to perform extended cardiovascular training practically every day. Excessive carbohydrates is the main reason why Americans gets fatter by the day.

We tested high-protein diets when liquid proteins became popular several years ago. Protein is perfect for muscle tissue growth and repair but not as a practical energy source. The conversion of amino acids to glucose is a slow and cumbersome process. It forces the individual to consume excessively large amounts of protein foods. This process can leave you feeling

fatigued with little energy. High protein diets have also been known to cause some forms of depression and mental confusion and produces several other related health risks.

For many years we practiced a high-protein, high-fat dietary combination. Similar to the guidelines which Dr. Mauro Di Pasquale, Dr. Atkins and Drs. Heller recommend. All of these researchers feel that a low carbohydrate intake will force the body to use dietary fat and stored body fat for fuel. Since fat releases nine calories per gram as opposed to four calories per gram for protein or carbohydrates, it would be a perfect source of never-ending energy. The theory seems fool-proof but it requires strict adherence to a specific program and there are still pieces of the puzzle which need to be resolved.

We no longer advocate the high-fat/protein diet for a few simple reasons. The biggest one is you can easily get into trouble while eating large amounts of protein and fat if you consume more than your carbohydrate daily allowance. It is such a specific tolerance that we find it difficult for trainees not to exceed it due to the fact it requires counting the number of carbohydrates for every single piece of food you put in your mouth. Even going a few grams over your tolerance level will quickly put you into a fat gaining mode. Another negative reason is that it does not work well for everyone. Certain medical conditions and cardiovascular risk factors make it impossible for many individuals to follow a high-fat/protein program. If you already have certain cardiovascular risks, this diet will not be suitable for you. Finally, certain individuals do not make the transition to burning fat for fuel very comfortably. The transition can last from a few days to several weeks, leaving you weak and mentally confused. If you do decide to try one of these programs, make sure to study the diet carefully before beginning it. It may work for you but be sure to study and learn all the details first.

We do not discourage any dietary program, as long as the protein intake is adequate and it is working and giving you the results which you desire. For the majority, we have determined that the most beneficial diet for the bodybuilder/athlete in search of increasing muscle, decreasing fat and maintaining optimal health is "The Zone" nutritional technology by Dr. Barry Sears. We agree with his philosophy but recommend a slightly higher amount of protein than he does. For the hard training bodybuilder, one gram of protein maximum per pound of lean body mass, as Dr. Sears recommends, does not seem to be sufficient. During Growth cycles, we prefer 1-2 grams of protein while maintaining the same amount of carbohydrates. Therefore, the macronutrient break-down for each individual meal is:

ADEOUATE PROTEIN • MODERATE CARBOHYDRATE & FAT
(30-40% Proteins • 30-40% Carbohydrates • 20-30% Fats)
-PERCENT CALORIES-

On The Zone Diet, you can eat non-starchy vegetables and fruits and still build muscle and burn body fat at the same time. You will experience a steady supply of energy with no fatigue, no food cravings and increased mental alertness. Most importantly, you will lose 2-3% of body fat within the first sixty-days, without losing any strength or muscle mass, when first beginning this diet. Following this plan creates significant health benefits. Your immune system is boosted and those little nagging illnesses which we all seem to experience, like allergies, colds, flus and headaches, seem to happen less often.

The key to this eating approach is to properly combine protein with low glycemic (minimal insulin response) carbohydrates which will make your body burn dietary fat and body fat for

fuel. You basically switch your system over from sugar-burning to fat-burning by balancing your protein and carbohydrate intake. The beauty of this program is the practicality and ease in following it. It does not require extensive measuring, weighing or calculating of every food you eat.

The Battle

History and research has shown us that our metabolism was intended for adequate protein and moderate carbohydrate consumption. Before the Industrial Age, people ate plenty of beef, chicken, fish, eggs, cheese, butter, raw vegetables and nuts. Though they consumed plenty of protein and fat, there was low incidence of obesity and cardiovascular disease. The migration from rural areas to urban life required the necessity to store foods and make it available for mass consumption. This is precisely the time when the abundance of refined carbohydrate consumption began. Sugar was the first "poison" added to everything and used in excess. As time passed, most people began eating junk foods like hamburgers and french fries, hot dogs, doughnuts, pastries, cookies, candy bars and potato chips. Coincidentally, at the same time, as a society we became very sedentary due to economic and social changes. There were less jobs which required hard labor, more energy saving appliances and the total reliance on our automobiles for transportation everywhere.

With these elements and shifts in our society combined, the stage for heart attacks, kidney problems, obesity and high blood pressure was set. At this moment, though we have been bombarded by the low-fat media craze, obesity, high blood pressure and all the diseases associated with being overweight are at an all time high. Everything you see at the store is low-fat and yet as a nation, we are getting fatter by the year. How do we account for this? Something we are doing is not working. Manufacturers are now scrambling to produce fake fats and more diet related pharmaceuticals than ever before in an effort to trim down our bulging society. Experts now feel that we are in a downward spiral and will lose the battle against fat.

The Zone

One solution is to cut back on the unfavorable carbohydrates, increase our protein and watch the fat disappear. The Zone Diet is an innovative eating program which we recommend trying for at least two months to see how great you will look and feel. By purchasing a carbohydrate counter book, you can easily learn and determine which everyday foods are loaded with excessive carbs. The proteins and fats you consume will come from healthy sources like lean beef, chicken, fish, whole eggs, cheese, nuts and protein supplements. All of these sources, by nature, have the right ratio of protein to fat as recommended by this isocaloric diet. Other healthy fats which you should add are fish oils, borage oil, and virgin olive oil. These contain primarily unsaturated fatty-acids which provide your body with fuel for balanced hormone production.

The type of carbohydrates you consume is the key to the Zone Diet. It should include primarily fresh vegetables and fruits like lettuce, carrots, celery, onions, avocados, apples, pears and oranges. Even though fruits are made of simple sugars (fructose), they are low on the glycemic index. People often protest that fruit is just simple sugar, which is chemically correct but your insulin response to fruit is not the same as for sucrose. Your glycemic response is the most important thing to consider when making your carbohydrate food selections.

Foods containing refined carbohydrates or which are made from grains should be avoided because they are high on the glycemic index and cause an over insulin reaction. This includes

common table sugar and other foods like rice, potatoes, all types of breads, crackers, catsup, barbecue sauces, fruit juices, cookies, ice cream, candy and most salad dressings. These are so carbohydrate-rich that only a small serving will exceed your limit for that meal, triggering excessive insulin release which creates a negative hormonal balance. It immediately shuts down your fat burning process and growth hormone release. Other products to avoid, which have become a gym favorite, are carbo-type sport drinks and protein powders with lots of sugar. Many popular weight-gain powders are loaded with carbohydrates to enhance the flavor and weight-gaining effect, with only a small amount of protein in the formula. Carefully read the labels of everything you eat and drink and familiarize you with the different forms of sugar. Here are some of the common names it appears as:

**FRUCTOSE • GLUCOSE • DEXTROSE • MALTOSE
LACTOSE • MALTODEXTRIN • HONEY • BARLEY MALT • SUCROSE**

In general terms, this is a description of how the carbohydrate mechanism works. When you consume carbohydrates during a meal, they are digested and broken down by an enzymatic process into glucose which is a simple sugar. Your blood system transports the glucose throughout your body to be used as fuel, primarily for muscular energy. If only a small amount of carbohydrates are consumed, it enters the bloodstream slowly, and gets burned up leaving no extra glucose floating in your system. Under these circumstances, the carbohydrate mechanism works efficiently producing no negative side effects.

Now let us assume a more typical case. You consume a larger carbohydrate meal which may commonly include a baked potato, a serving of beans and rice and maybe a large bowl of pasta. For dessert you might even have a piece of apple pie or ice cream. Sound familiar? Now your blood is flooded with glucose. There is so much sugar in your system which has entered very quickly, there is no possible way of using it all up. The elevated blood sugar signals your pancreas to release insulin. This hormone's primary function is to lower your blood glucose level to a safe concentration. Insulin has two alternatives when reducing your sugar levels, it will either convert the glucose to glycogen, which is stored in your liver and muscles for later use, or it will convert the glucose into triglycerides which is what your body uses to produce fat. If you consistently eat a higher amount of carbohydrates than you can possibly bum off as fuel or store in your liver and muscles, then the alternative you have to decrease your blood glucose levels is to store it as body fat. Excessive carbohydrates end up around your belly, thighs and anywhere else you are prone to store fat.

Besides the negative side effect of storing fat, once your blood glucose level is lowered, it usually falls below the point which you originally started prior to your meal. With a low blood sugar condition, your energy level drops and you feel tired, fatigued and lethargic. Many forms of depression have been associated with low blood sugar making you feel confused and depressed as well. This is where the term "sugar crash" arose from. To make matters worse, your feelings of hunger strike shortly and you eat more carbohydrates to give you another little energy rush, initiating the whole process once again. This is the carbohydrate "roller-coaster" which millions of Americans ride on a daily basis. Once you understand why you feel the way you do, it should take little motivation to correct the problem.

People who are addicted to carbohydrates experience uncontrollable food cravings, moodiness, anxiety, mental confusion, anger, low energy slumps, apathy and varying levels of personality disorders. They are often driven to snack and are constantly eating chips, cookies and

candies throughout the day. These are all conditions which you can control and improve by regulating the type and quantity of carbohydrates you consume at each meal. Understanding how this process works makes it easier to follow a healthier diet. It is not just gaining fat you are fighting but a host of other undesirable effects including premature aging. When you limit the quantity and types of carbohydrates and balance it with the appropriate amount of proteins, your body will store less fat and burn more as fuel. Since fat has more calories per gram as compared to protein and carbohydrates, you will have an abundance of energy. Fat is a very reliable fuel source which will help you avoid carbohydrate ups and downs and sugar crashes. It is so reliable an energy supply that your heart muscle uses it exclusively.

The proper macronutrient balance will help you gain immediate control of your appetite and hunger pangs. These cravings are typical of low blood sugar which often pushes you into over eating and consuming the wrong foods. You will develop a more moderate appetite which will allow you to eat less and make healthier food selections.

The theory of eicosanoids is the hallmark of the Zone Diet. Prior to Dr. Sears research, very few doctors even knew they existed, much less how they functioned. Eicosanoids are super-hormones which have been around for more than five-hundred million years. They control all of the body's hormonal systems including every vital physiological function known. They exist for only fractions of a second but initiate the most powerful of chemical reactions within your body. The types of eicosanoids includes prostaglandins, thromboxanes, leukotrienes, lipoxins and hydroxylated fatty acids. There are "good" and "bad" eicosanoids defined by their effects on the body. Dr. Sears maintains that our dietary intake directly controls which type you produce and their balance. Eicosanoid balance is the main focus and thrust of the Zone dietary program.

All these benefits make the Zone Diet fit perfectly into a bodybuilding/fitness program. Here are some specific nutritional recommendations to follow when weight training and trying to build muscle mass. These are specific for bodybuilders/strength athletes.

- Consume one to two grams of protein per pound of body weight.

The research is conclusive proving you require more protein, when weight training, to recuperate and build maximum muscle tissue. Sports nutritionist agree this is a safe and conservative quantity. Part of your daily protein intake should include one to two protein shakes with whey as a component. Whey protein is the most easily absorbed.

- Consume low glycemic carbohydrates equal or less than your protein consumption. Eat carbohydrates which cause a low insulin response for better overall health and bodybuilding gains. Fresh fruits and vegetables are the best choices.

- Spread meals out to four or five per day. More frequent smaller meals promotes faster and more efficient nutrient absorption. It helps maintain stable insulin and energy levels and decreases fat storage. Regular small meals aids in appetite control.

- Drink a minimum of ten glasses, and up to twenty, per day of distilled water. It is important to keep yourself hydrated to allow your liver to detoxify and neutralize the waste materials and poisons in your blood stream. There is a direct correlation between the amount of water consumed and the rate of fat loss. Drinking a small amount of water (five glasses or less daily), causes dehydration very easily and will abruptly stop your fat burning process.

Trainees often ask about their cholesterol levels and are concerned about eating too much meat and fat. This is a reasonable concern considering we have been told for so many years that dietary cholesterol leads to hardening of the arteries and heart attacks. Studies have shown that only 1-3% of the cholesterol you consume is actually absorbed by your body. Your liver makes almost all the cholesterol which your body needs and uses. Research indicates that, in most cases, there is not a correlation between your dietary cholesterol and your cholesterol blood levels. This means if you are genetically programmed to have high cholesterol, it will be high regardless of your diet. But a balanced plan which controls your insulin output can dramatically improve this situation for you.

The experience with people following the Zone Diet is that their cholesterol levels have actually dropped. We have regularly experienced this with our personal training clients. By controlling your carbohydrate intake, insulin and triglyceride levels are lowered which leads to lower cholesterol levels. Besides the positive muscle building aspects, this is one of main benefits of following this diet. We still emphasize to get a doctors' approval because this dietary approach may not be suitable for those individuals with particularly high levels of cholesterol and or other specific medical conditions. We recommend a complete blood test prior to beginning this program and consultation with your physician to see if this diet is appropriate for you. Check your cholesterol and triglycerides during this program to compare the differences for you. In most cases you will find the results to be truly exciting.

Zone Principles

1) To burn fat for energy, you must restrict your carbohydrate consumption to equal amounts or less of your protein intake. This will be approximately 30%-40% of your total calories. Some athletes may be able to eat more and some may have to eat less. You need to adjust the amount depending on how much body fat you are losing or gaining. Each individual has a specific range which they will have to discover and work with.

2) The carbohydrates consumed must be the type which enter the bloodstream slowly (low glycemic). Non-starchy vegetables, nuts, seeds and fruits are ideal. No refined carbohydrates like sugar (sucrose) or grains (rice, pasta, bread, etc.) are allowed.

3) Intake of an adequate amount of protein at each meal (30-40 grams) is important while your body is burning fat and building muscle. This will insure that your muscles have the building blocks necessary for repair and growth from your bodybuilding workouts. Your personal protein requirements will depend upon your lean body mass, goals and activity level (training intensity).

4) Healthy, natural sources of fat must also be consumed at each meal. Fat will slow down the digestion of carbohydrates you consume, regulating the amount of insulin released into the blood stream. It acts as a buffer which slows down the amount of carbohydrate which is metabolized. Once your insulin secretion is turned down, your body will create a chain of fat-burning enzymes which enhance the fat-burning metabolic process. You will become more efficient at burning fat and becoming leaner in the process.

5) Technically, the specific Zone ratio of protein to carbohydrates is 0.6 - 1.0 with .75 being ideal according to Dr. Sears. We feel that the 1.0 (one-to-one) ratio of equal amounts of protein to carbohydrates is the minimum protein intake for the hard training bodybuilder. During Growth cycles, we recommend increasing protein to 1-2 grams per pound of body weight.

HOW TO DETERMINE YOUR DAILY CALORIC INTAKE

Say for example that you weigh 200 pounds and you have 12% body fat. You can determine your body fat level by purchasing skin calipers or having a trainer at the gym take the measurement for you. For ease, calipers have proven to be very reliable and low cost. Most come with easy to use instructions. Determine your total fat weight by multiplying your body weight by your body fat percentage ($200 \times .12 = 24$ total pounds of fat). Calculate your lean body tissue by subtracting your body fat weight from your total weight ($200 - 24 = 176$ pounds of lean body mass). It is well known that not all of your lean body mass is solid muscle. Lean mass also includes bones, organs and supporting structures. But using your total lean body mass to calculate your protein requirements is a very good approximation of your protein needs. A complicated formula which takes into account the protein needed to maintain existing muscle tissue and to provide protein for repair and growth due to training stress, averages out to the same number as your lean body mass formula which we are providing for you.

Following this example, as a minimum, you would require 176 grams of protein, 176 grams of carbohydrates (one-to-one ratio) and 60-80 grams of fat. Then multiply the number of grams for each macronutrient by the number of calories per gram to get your total daily caloric intake. From this example this individual would consume between 1948 to 2128 calories per day. This range is a starting reference to be modified by the factors which we covered earlier including metabolism, training goals and exercise intensity. The critical element is providing your body with enough quality proteins to fuel consistent muscle growth.

Frequently Asked Questions

1) Is there a weight loss or weight gain adjustment to this program?

This eating technology fits both goals very adequately. You will lose fat and build muscle at the same time. The hormonal responses to this program reduces insulin to optimum levels and maximizes growth hormone release. For specific weight goals, adjust total caloric intake while maintaining the appropriate macronutrient (protein, carbohydrate and fat) ratio. Once this ratio is balanced, simply increase total calories to gain weight or decrease total calories to lose weight. Manipulate your total protein consumption to meet your bodybuilding goals and adjust your cardiovascular training to match those same goals.

2) Can I use the Zone if I want to get totally cut up?

Yes. Again, the hormonal balance created with the Zone Diet assists you in losing as much fat as you would like. To lose at a faster rate, you would lower your total caloric intake, carefully limit the amount and type of carbohydrates which you eat, increase your weekly cardiovascular training and use a thermogenic supplement to increase your calorie burning by increasing your metabolic rate throughout the day.

3) What about using MCT oil as a fat source?

Medium chain triglycerides are water soluble fats. They are rapidly absorbed by the liver and burned before they enter the blood stream. They force you to deplete your liver glycogen stores as they are being broken down which lowers energy fuel for muscular contractions. MCTs are metabolized so quickly that muscle cell mitochondria can not readily utilize these fats. A more efficient and effective energy source is monounsaturated fats like virgin olive oil. We have not found MCT oil to be a valuable supplement for health or bodybuilding purposes.

4) Besides food, what limits eicosanoid production?

Linoleic acid is from the Omega 6 family of essential fatty acids. It is found in every food including protein and vegetables. It is converted into an eicosanoid by a series of enzymatic reactions. A main enzyme, known as Delta 6 Desaturase, is vital in this conversion process. The macronutrients which you consume directly affects how much and which type of eicosanoid the linoleic acid is formed into. Without adequate delta 6 desaturase, all eicosanoid production, including "good" and "bad" eicosanoids, is limited.

5) What limits the enzyme known as Delta 6 Desaturase?

The limiting factors are, a) high levels of stress, b) normal aging, c) disease and infections, d) consuming trans-fatty acids, like margarine and foods containing hydrogenated oils, e) the common cold virus, and f) eating a high carbohydrate diet and insufficient protein.

6) When I get stressed out I tend to overeat. What causes this impulse?

Stress affects your body much like a high carbohydrate diet does. Stress initiates an insulin and cortisol response which causes fatigue, moodiness, hunger pangs and the tendency to overeat. Cortisol breaks down muscle protein to be used as fuel for immediate energy. If you combine a highly stressful environment with a high carbohydrate diet, you almost guarantee slow or no muscle gains and an unhealthy lifestyle.

7) Diets are difficult to follow. Do I have to know exactly how many calories I eat each day?

Absolutely not. By just breaking down your meals into four or five per day and balancing the protein to carbohydrates equally at each meal, you will fall within the correct Zone range. You can "eyeball" equal amounts of protein to the carbohydrates we have recommended very easily. When in doubt, fresh fruits and vegetables are an easy choice. Eliminate the sauces and dressings and drink plenty of distilled water and you will be successful with this diet. If you start to gain fat, simply eat smaller portions. An honest look in the mirror will tell you when to cut-back.

Supplementation

The market is flooded with every type of supplement which you can imagine. Just open a muscle magazine or walk into a vitamin store and you will see the vast array of concoctions, pills, powders, liquids and sprays which promise to enhance your progress in the gym. It is a thriving billion dollar industry which has mostly gone unregulated. Ingredients printed on the label may only appear in small amounts in the actual product, if at all. We have tested supplements which resulted with only a fraction of a percent of the key ingredient listed.

What the product will do can be greatly exaggerated and is often advertised to mislead the consumer. Many times, animal studies do not guarantee the same results with people. The point is, if you are going to experiment with a variety of supplements, do so one product at a time, so you can monitor the results. Once you have verified that a certain supplement produces good results, you can add it to the mix you regularly use. We lab test every single product we sell. We use and test it ourselves and on our personal training clients. We base the decision to market it on our personal results and on a substantial amount of published research. This will help you choose the best supplements and eliminate using much of the junk which is out there.

When your training program is on target, we feel that supplementation can enhance your performance by 10-20%. In other words, unless you are following a properly periodized training

program, the supplements you take for adding muscle will be mostly a waste of money. For the average person who trains with machines two-days a week, an occasional protein shake will be adequate. But for the serious trainee who wants fast results, there are important basic supplements which you should be using. The first goal, before considering using any nutritional or sports supplements, is to get your diet organized and well established. You cannot make up for poor nutrition by taking a few vitamins or protein shakes every day. Your diet will determine the quality and quantity of nutrients which your body absorbs.

In *Hitman* we describe the three basic supplements. The following three should be used on a daily basis. For specific performance supplements that are proven effective, use the *Matrix Supplement Handbook* as your guide. Exact effects and dosages are detailed.

The first basic supplement is a multi-vitamin, multi-mineral mega pak. These are little plastic pouches which contain about five to ten pills. They will supply you with the necessary daily vitamins and minerals for good health and act as an insurance policy to make sure you are getting all the micronutrients which our food supply seems to be lacking. Take each pak, as recommended by the manufacturer, with your regular meals. These nutrients are better utilized with meals because they bind with the proteins, carbohydrates and fats in the food which allow for more efficient absorption. Vitamins taken on an empty stomach can pass through the digestive system and be eliminated untouched.

The second supplement is a quality protein powder which contains whey protein. Whey has proven to be, without a question, the most effective, easily absorbed protein supplement developed yet. Studies show that the amino acid structure of whey protein bears the closest resemblance to that of the human body, making whey easier for your system to absorb and utilize (higher bio-availability).

Whey is a type of milk protein which is a by-product of cheese-making. When tested for Biological Value, a measurement which indicates nitrogen retention and growth promoting factors, whey scored the highest (157) as compared to whole egg (100), which is the second highest. A higher value means that your body uses more and eliminates less as waste.

Make sure to choose a supplement with moderate to low carbohydrates. You will defeat the purpose if your powder is loaded with sugar. If you follow the Zone Diet, you will usually have no problem meeting your minimum protein needs. Even so, it is still a good idea to drink 1-2 shakes a day because of the consistent quality of the supplemental protein and because it digests more quickly than protein foods, making it convenient for use before and after heavy training sessions. How often can you make a sandwich and know exactly how many grams of proteins and carbohydrates are in it?

Drink a protein shake at least sixty-minutes before working out. If you drink it and train right away, the protein in your digestive system will cause the blood flow to be misdirected towards your stomach, as opposed to your target muscles and make you nauseated while training. Your second shake should come within sixty-minutes after you have finished your workout. This will help take advantage of the "window" for maximum amino acid absorption. Another convenient alternative to protein shakes is a protein bar. As opposed to the original PowerBar, which was packed with carbohydrates, there are several bars on the market now which balance proteins and carbohydrates properly. Many do not know that the original PowerBar was designed for long endurance athletes like the Ironman events and marathon races. They are not suited for bodybuilding purposes and should not be part of your diet.

The third basic bodybuilding supplement to use regularly is powdered creatine monohydrate. This is one of the largest selling sports supplements in the health and fitness industry. It is popular because it works, the results are reliable and occur very quickly. Most first time users can gain 5-8 pounds of muscle within the first thirty-days and keep the mass with only a small maintenance dose. Gains of 30-50 pounds on heavy basic lifts, like the bench press and squat are quite common within this thirty-day time frame. It is no wonder this supplement is so popular.

Creatine works by replacing the ATP (adenosine triphosphate) in muscle tissues. Muscle power is generated by the conversion of ATP, which is chemical energy, to the mechanical force of muscular contraction. It is the primary chemical and fuel in your body which is used for anaerobic energy (lifting weights). Creatine monohydrate also promotes a process called "cell volumizing" which hydrates (increases water content) the cells in the muscles, making them bigger, fuller and rounder. It has been proven in research studies that supplementing with creatine makes your skeletal muscles both anabolic and less catabolic. In other words, you will build more muscle and keep it. Other benefits include more muscle-torque (stronger contractions), more overall energy for your workouts and less lactic acid accumulation. Less lactic acid alone means you can take your sets further into fatigue by being able to complete more repetitions. Athletes that get the most dramatic effects seemed to have been low in creatine to begin with. This variance in individual concentration levels determines how powerful the effects you will experience.

HOW TO USE CREATINE

Our recommendation for best results is to take 25-30 grams a day for the first week as part of the loading phase. After this, use 10-15 grams a day for maintenance. Each dose is five grams (one teaspoon) with your total intake divided out evenly throughout the day. Do not take all your creatine at once! Mix your powder with a few ounces of fruit juice. It is important to use fruit juice instead of water because creatine is better absorbed when taken with simple carbohydrates. The insulin spike from the fruit juice shuttles more creatine into the muscle cells giving you a better overall effect. Some people which had no results when using water has experienced great effects with juice, so do not overlook this simple detail.

You can stop using creatine monohydrate for up to thirty-days without having to go through the loading phase again. Within this time frame, your muscles will still retain a high concentration of creatine. Past this point, you will need to re-load. This supplement has been proven safe to use year round and as a minimum should be used during your high intensity Growth lifting cycles.

CRITICAL GROWTH FACTORS

Rules for Rapid Growth

Throughout this manual we have explained the nine Critical Growth Factors which are essential in maximizing your muscular development. All the guidelines and ideas are important but these nine factors are particularly critical. You should go back and review them if there are any questions in your mind. Reaching your goals and therefore, your success with this program is dependent upon your proper application of these factors in a consistent fashion. Here is a summary of the nine factors.

1) PERIODIZATION

Hitman is a training system which combines high-intensity and low-intensity cycles to promote consistent progress. Each Period has a two-week high-intensity Growth cycle followed by a two-week lower intensity Stabilize cycle. This keeps you from overtraining and stimulates your muscles with new forms of stress.

2) POWER CURVE TRAINING

Blood tests have indicated that the anabolic hormones within your body peak after approximately fifty-minutes of intense resistance training. Continuing to workout when your hormones have diminished only erodes your recovery capacity which limits your muscular growth. The training Periods are designed to be completed within this optimum growth window.

3) SET PERFORMANCE

Allow yourself to break strict exercise form, taking advantage of momentum and the participation of assisting muscles in a lifting effort. A Freestyle approach will help increase your training intensity by forcing the muscle to continue to contract beyond the point of normal exercise fatigue.

4) REP VOLUME

Training in the lower and upper repetition ranges (5-12 repetitions) stimulates the different energy systems within your body. It also forces the fast and slow twitch muscle fibers to develop equally because each fiber type responds to a different volume of training. This allows you to reach your true physical potential more rapidly.

5) TRAINING PACE

Varying the volume of repetitions will control the amount of weight used for each exercise. Higher reps will allow you to train at a faster pace and lower reps will force you to slow down. Through this indirect manipulation of your training pace your explosive, intermediate and extended energy systems are used to promote further muscular adaptation. Therefore, your resting times between sets should range between two to four minutes.

6) MAXIMAL FIBER STIMULATION

Exercises which stimulate stabilizer muscle interaction and combine the efforts of assisting muscle groups to complete a movement are the most valuable for building muscle mass. This increases central nervous system arousal which has been proven to be a key factor to muscular growth.

7) MUSCLE OVERLOADING

Four specific Muscle Overload Techniques are used to push the muscles beyond normal momentary failure. Training past failure stimulates more muscle fibers to be recruited thereby encouraging consistent growth. We have selected the most effective and safest techniques to use for long-term training.

8) DYNAMIC STRETCHING

New research indicates that stretching the muscle fascia while training, to take advantage of the localized blood flow, increases muscular growth potential. The rigid muscle fascia encapsulates all muscle tissue and regulates the amount a muscle can grow. By stretching and expanding the fascia, more nutrients are driven into the muscle cells, increasing the amount of space for further growth.

9) THE ZONE DIET

This nutritional technology balances the release of important hormones within your body. By controlling the release of insulin, glucagon, growth hormone, cortisol, testosterone, estrogen and a series of other regulating hormones, you can manipulate your system to build muscle, lose fat, increase energy, increase mental clarity, improve overall health and slow down the aging process. The Zone Diet is ideal to follow for reaching your physique goals and maximizing your health and fitness.

TRAINING PERIODS

Your workouts are carefully engineered into eight different and distinct Periods. Each Period begins with a two-week high intensity Growth cycle followed by a two-week lower intensity Stabilize cycle. The four weeks together comprise one Period. If you miss one workout during any week, then make it up on the following day. If you miss two or more workouts in a Growth cycle, then start the Period over again. If you miss two or more workouts in a Stabilize cycle, then extend the cycle for another week. If you feel fatigued or sore near the end of the Stabilize cycle, extend it until you have completely recuperated. Avoid beginning a new Period if you feel fatigued or run-down. You should approach each Growth cycle with 100% energy and determination.

<u>PERIOD#</u>	NAME	EMPHASIS
1	BODY FOCUS	Standard three-day split emphasizing a strong muscle pump and burn-out on the final sets of each exercise.
2	MEGAMASS	Each muscle group is stimulated with two different movements for a medium volume of sets. Compound exercises are used to focus on developing new muscle mass.
3	BODYBLAST	A high frequency phase which hits the major muscle groups in every workout. Based on traditional full-body training.
4	PREFLEX	Pre-exhaust type training which isolates the target muscle with the first exercise and then stimulates the whole muscle group with a compound movement on the second exercise.
5	GH PLUS	Powerlifting compound movements are used in low volume sets to stimulate a strong growth hormone response. The focus is on heavy lifting and strengthening the connective tissues.
6	SUPERFLEX	Mid-volume superset training combining synergistic muscle groups to flush the target area with maximum blood flow.
7	POWERPLAY	Compound and isolation exercise mix emphasizing the "push-pull" system of bodybuilding training. The focus is on power movements.
8	ANABOLIC BURST CYCLE	Compound heavy weights and low reps including Dynamic stretching are performed during bulking phase. Followed by lighter isolation exercises, higher reps and aerobic training during the cutting phase. This training Period is specifically developed to be used in conjunction with the new Anabolic Burst Cycle diet. (see addendum for details)

BODY FOCUS PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Chest	Incline barbell press Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Shoulders	Military barbell press Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Triceps	Laying triceps extensions Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Abs	Hanging leg raises	1 set of 25-50 reps
Wednesday	Back	Lat pulldowns Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Biceps	Barbell curl Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Calves	Standing calf raise Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Friday	Thighs	Leg press Burn-out set
	Forearms	Barbell wrist curl Burn-out set	1 set of 10 and 1 set of 8 1 set of 12-15 reps (3 sets total)
	Abs	Crunches	1 set of 25-50 reps

BODY FOCUS PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Chest	Incline barbell press Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Shoulders	Military barbell press Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Triceps	Laying triceps extensions Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Abs	Hanging leg raises	2 sets of 25-50 reps
Wednesday	Back	Lat pulldowns Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Biceps	Barbell curl Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Calves	Standing calf raise Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Friday	Thighs	Leg press Burn-out set
	Forearms	Barbell wrist curl Burn-out set	1 set of 10, 8, 6 and 4 reps 1 set of 12-15 reps (5 sets total)
	Abs	Crunches	2 sets of 25-50 reps

BODY FOCUS PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Chest	Dips	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Shoulders	Lateral raises	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Triceps	Close grip bench	1 set of 10 and 1 set of 8
	Burn-out set	1 set of 12-15 reps (3 sets total)	
	Abs	Incline sit ups	1 set of 25-50 reps
Wednesday	Back	Seated pulley rows	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Biceps	Dumbbell curls	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Calves	Seated calf raise	1 set of 10 and 1 set of 8
	Burn-out set	1 set of 12-15 reps (3 sets total)	
Friday	Thighs	Hack squats	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Forearms	Dumbbell wrist curl	1 set of 10 and 1 set of 8
		Burn-out set	1 set of 12-15 reps (3 sets total)
	Abs	Laying leg raises	1 set of 25-50 reps

MEGAMASS PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back	Seated pulley rows	2 sets of 10-12 reps
		Lat pulldowns	2 sets of 10-12 reps
	Chest	Bench press	2 sets of 10-12 reps
		Incline dumbbell flys	2 sets of 10-12 reps
	Abs	Incline sit ups	2 sets of 25-50 reps
Wednesday	Thighs	Squats	2 sets of 10-12 reps
		Leg extensions	2 sets of 10-12 reps
	Shoulders	Seated military press	2 sets of 10-12 reps
		Lateral raises	2 sets of 10-12 reps
	Abs	Hanging leg raises	2 sets of 25-50 reps
Friday	Biceps	Barbell curls	2 sets of 10-12 reps
		Incline dumbbell curls	2 sets of 10-12 reps
	Triceps	Close grip bench	2 sets of 10-12 reps
		Pulley pushdowns	2 sets of 10-12 reps
	Calves	Standing calf raise	2 sets of 12-15 reps
		Seated calf raise	2 sets of 12-15 reps
	Abs	Crunches	2 sets of 25-50 reps

MEGAMASS PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back	Seated pulley rows	3 sets of 6-8 reps
		Dumbbell one-arm row	3 sets of 6-8 reps
	Chest	Bench press	3 sets of 6-8 reps
		Cable crossovers	3 sets of 6-8 reps
	Abs	Incline sit ups	2 sets of 25-50 reps
Wednesday	Thighs	Squats	3 sets of 6-8 reps
		Lunges	3 sets of 6-8 reps
	Shoulders	Seated military press	3 sets of 6-8 reps
		Shrugs	3 sets of 6-8 reps
	Abs	Hanging leg raises	2 sets of 25-50 reps
Friday	Biceps	Barbell curls	3 sets of 6-8 reps
		Pull ups	3 sets of 6-8 reps
	Triceps	Close grip bench	3 sets of 6-8 reps
		Laying triceps extension	3 sets of 6-8 reps
	Calves	Standing calf raise	3 sets of 8-10 reps
		Donkey calf raise	3 sets of 8-10 reps
	Abs	Crunches	2 sets of 25-50 reps

MEGAMASS PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back	Seated pulley rows	2 sets of 10-12 reps
		Lat pulldowns	2 sets of 12-15 reps
	Chest	Bench press	2 sets of 10-12 reps
		Incline dumbbell flys	2 sets of 12-15 reps
	Abs	Incline sit ups	2 sets of 25-50 reps
Wednesday	Thighs	Squats	2 sets of 10-12 reps
		Leg extensions	2 sets of 12-15 reps
	Shoulders	Seated military press	2 sets of 10-12 reps
		Lateral raises	2 sets of 12-15 reps
	Abs	Hanging leg raises	2 sets of 25-50 reps
Friday	Biceps	Barbell curls	2 sets of 10-12 reps
		Incline dumbbell curls	2 sets of 12-15 reps
	Triceps	Close grip bench	2 sets of 10-12 reps
		Pulley pushdowns	2 sets of 12-15 reps
	Calves	Standing calf raise	2 sets of 12-15 reps
	Seated calf raise	2 sets of 12-15 reps	
	Abs	Crunches	2 sets of 25-50 reps

BODYBLAST PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs Back Chest Shoulders Biceps Triceps Calves Abs	Squats Deadlift Incline barbell press Barbell military press Barbell curls Close grip bench press Standing calf raise Hanging leg raises	1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 25-50 reps
Wednesday	Thighs Back Chest Shoulders	Leg raises Dumbbell one-arm row Dumbbell flat press Lateral raises	2 sets of 10-12 reps 2 sets of 10-12 reps 2 sets of 10-12 reps 2 sets of 10-12 reps
Friday	Thighs Back Chest Shoulders Biceps Triceps Calves Abs	Squats Deadlift Incline barbell press Barbell military press Barbell curls Close grip bench Standing calf raise Crunches	1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps 1 set of 12-15 reps

BODYBLAST PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs Back Chest Shoulders Biceps Triceps Calves Abs	Squats Deadlift Incline barbell press Barbell military press Barbell curls Close grip bench press Standing calf raise Hanging leg raises	2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-12 reps 1 set of 25-50 reps
Wednesday	Thighs Back Chest Shoulders	Leg press Dumbbell one-arm row Dumbbell flat press Lateral raises	4 sets of 6-8 reps 4 sets of 6-8 reps 4 sets of 6-8 reps 4 sets of 6-8 reps
Friday	Thighs Back Chest Shoulders Biceps Triceps Calves Abs	Squats Deadlift Incline barbell press Barbell military press Barbell curls Close grip bench Standing calf raise Crunches	2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 8-10 reps 2 sets of 10-12 reps 1 set of 25-50 reps

BODYBLAST PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Hack squats	2 sets of 12-15 reps
	Back	Chin ups	2 sets of 12-15 reps
	Chest	Dips	2 sets of 12-15 reps
	Shoulders	Dumbbell press	2 sets of 12-15 reps
	Biceps	Incline dumbbell curls	1 set of 12-15 reps
	Triceps	Overhead extensions	1 set of 12-15 reps
	Calves	Seated calf raise	1 set of 12-15 reps
	Abs	Laying leg raise	1 set of 25-50 reps
Thursday	Thighs	Hack squats	2 sets of 10-12 reps
	Back	Chin ups	2 sets of 10-12 reps
	Chest	Dips	2 sets of 10-12 reps
	Shoulders	Dumbbell press	2 sets of 10-12 reps
	Biceps	Incline dumbbell curls	1 set of 10-12 reps
	Triceps	Overhead extensions	1 set of 10-12 reps
	Calves	Seated calf raise	1 set of 12-15 reps
	Abs	Laying leg raise	1 set of 25-50 reps

PREFLEX PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Leg extensions Leg press	1 set of 10-12 reps Both exercises done with no rest in between
	Back	Dumbbell pullover Bent over row	1 set of 10-12 reps Both exercises done with no rest in between
	Abs	Hanging leg raises	2 sets of 25-50 reps
Wednesday	Chest	Incline flys Bench press	1 set of 10-12 reps Both exercises done with no rest in between
	Shoulders	Lateral raises Seated barbell press	1 set of 10-12 reps Both exercises done with no rest in between
	Forearms	Barbell wrist curl Rev. B.B. wrist curl	1 set of 10-12 reps Both exercises done with no rest in between
Friday	Biceps	Concentration curls Barbell curls	1 set of 10-12 reps Both exercises done with no rest in between
	Triceps	Pulley pushdowns Close grip bench	1 set of 10-12 reps Both exercises done with no rest in between
	Calves	Seated calf raise Standing calf raise	1 set of 10-12 reps Both exercises done with no rest in between
	Abs	Laying leg raises	2 sets of 25-50 reps

PREFLEX PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Leg extensions Leg press	3 sets of 8-10 reps Both exercises done with no rest in between
	Back	Dumbbell pullover Bent over row	3 sets of 8-10 reps Both exercises done with no rest in between
	Abs	Hanging leg raises	2 sets of 25-50 reps
Wednesday	Chest	Incline flys Bench press	3 sets of 8-10 reps Both exercises done with no rest in between
	Shoulders	Lateral raises Seated barbell press	3 sets of 8-10 reps Both exercises done with no rest in between
	Forearms	Barbell wrist curl Rev. B.B. wrist curl	2 sets of 10-12 reps Both exercises done with no rest in between
Friday	Biceps	Concentration curls Barbell curls	3 sets of 8-10 reps Both exercises done with no rest in between
	Triceps	Pulley pushdowns Close grip bench	3 sets of 8-10 reps Both exercises done with no rest in between
	Calves	Seated calf raise Standing calf raise	3 set of 10-12 reps Both exercises done with no rest in between
	Abs	Laying leg raises	2 sets of 25-50 reps

PREFLEX PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Sissy squat Hack squat	1 set of 10-12 reps Both exercises done with no rest in between
	Back	Dumbbell one-arm row Lat pulldowns	1 set of 10-12 reps Both exercises done with no rest in between
	Abs	Crunches	2 sets of 25-50 reps
Wednesday	Chest	Pec-deck machine Dumbbell flat press	1 set of 10-12 reps Both exercises done with no rest in between
	Shoulders	Upright rows Dumbbell press	1 set of 10-12 reps Both exercises done with no rest in between
	Forearms	Dumbbell wrist curl Dumbbell hammer curls	1 set of 10-12 reps Both exercises done with no rest in between
Friday	Biceps	Incline dumbbell curls Pull ups	1 set of 10-12 reps Both exercises done with no rest in between
	Triceps	Dumbbell kickbacks Laying triceps extensions	1 set of 10-12 reps Both exercises done with no rest in between
	Calves	Leg machine calf press Donkey calf raise	1 set of 10-12 reps Both exercises done with no rest in between
	Abs	Prone hyperextensions	2 sets of 25-50 reps

GH PLUS PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Squat	1 set of 20 reps
		Leg extensions	1 set of 12-15 reps
	Calves	Standing calf raise	1 set of 12-15 reps
	Back	Deadlift	1 set of 10-12 reps
	Chest	Incline bench press	1 set of 10-12 reps
	Shoulders	Military press	1 set of 10-12 reps
	Abs	Hanging leg raises	1 set of 25-50 reps
Wednesday	Biceps	Barbell curl	2 sets of 10-12 reps
	Triceps	Overhead extensions	2 sets of 10-12 reps
	Forearms	Barbell wrist curl	2 sets of 10-12 reps
	Abs	Crunches	1 set of 25-50 reps
Friday	Thighs	Squats	1 set of 20 reps
		Leg extensions	1 set of 12-15 reps
	Calves	Standing calf raise	1 set of 12-15 reps
	Back	Deadlift	1 set of 10-12 reps
	Chest	Incline bench press	1 set of 10-12 reps
	Shoulders	Military press	1 set of 10-12 reps
	Abs	Hanging leg raises	1 set of 25-50 reps

GH PLUS PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Squat	3 sets of 20 reps
		Leg extensions	3 sets of 12-15 reps
	Calves	Standing calf raise	1 set of 12-15 reps
	Back	Deadlift	1 set of 8-10 reps
	Chest	Incline bench press	1 set of 8-10 reps
	Shoulders	Military press	1 set of 8-10 reps
	Abs	Hanging leg raises	1 set of 25-50 reps
Wednesday	Biceps	Barbell curl	2 sets of 8-10 reps
	Triceps	Overhead extensions	2 sets of 8-10 reps
	Forearms	Barbell wrist curl	2 sets of 8-10 reps
	Abs	Crunches	1 set of 25-50 reps
Friday	Thighs	Squats	3 sets of 20 reps
		Leg extensions	3 sets of 12-15 reps
	Calves	Standing calf raise	1 set of 12-15 reps
	Back	Deadlift	1 set of 8-10 reps
	Chest	Incline bench press	1 set of 8-10 reps
	Shoulders	Military press	1 set of 8-10 reps
	Abs	Hanging leg raises	1 set of 25-50 reps

GH PLUS PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Leg press	1 set of 12-15
		Sissy squats	1 set of 12-15
	Calves	Seated calf raise	1 set of 12-15 reps
	Back	Lat pulldowns	1 set of 10-12 reps
	Chest	Dumbbell flat press	1 set of 10-12 reps
	Shoulders	Lateral raise	1 set of 10-12 reps
	Abs	Crunches	1 set of 25-50 reps
Wednesday	Biceps	Incline dumbbell curls	2 sets of 10-12 reps
	Triceps	Pulley pushdowns	2 sets of 10-12 reps
	Forearms	Rev. barbell wrist curl	2 sets of 10-12 reps
	Abs	Prone hyperextensions	1 set of 25-50 reps
Friday	Thighs	Leg press	1 set of 12-15 reps
		Sissy squats	1 set of 12-15 reps
	Calves	Seated calf raise	1 set of 12-15 reps
	Back	Lat pulldowns	1 set of 10-12 reps
	Chest	Dumbbell flat press	1 set of 10-12 reps
	Shoulders	Lateral raise	1 set of 10-12 reps
	Abs	Crunches	1 set of 25-50 reps

SUPERFLEX PERIOD	GROWTH PHASE	WEEK ONE	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back/Chest	Seated pulley rows Incline barbell press Both exercises done together/3 sets total	10-12 reps 10-12 reps
	Abs	Hanging leg raises	2 sets of 25-50 reps
Wednesday	Thighs/Leg Biceps	Leg press Leg curls Both exercises done together/2 sets total	10-12 reps 10-12 reps
	Shoulders/Calves	Dumbbell military press Seated calf raise Both exercises done together/2 sets total	10-12 reps 10-12 reps
Friday	Biceps/Triceps	Barbell curls Overhead extensions Both exercises done together/3 sets total	10-12 reps 10-12 reps
	Forearms Abs	Rev. B.B. wrist curl Laying leg raises	1 set of 10-12 reps 1 set of 25-50 reps

SUPERFLEX PERIOD	GROWTH PHASE	WEEK TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back/Chest	Seated pulley rows Incline barbell press Both exercises done together/5 sets total	10-12 reps 10-12 reps
	Abs	Hanging leg raises	2 sets of 25-50 reps
Wednesday	Thighs/Leg Biceps	Leg press Leg curls Both exercises done together/4 sets total	10-12 reps 10-12 reps
	Shoulders/Calves	Dumbbell military press Seated calf raise Both exercises done together/3 sets total	10-12 reps 10-12 reps
Friday	Biceps/Triceps	Barbell curls Overhead extensions Both exercises done together/5 sets total	10-12 reps 10-12 reps
	Forearms Abs	Rev. B.B. wrist curl Laying leg raises	2 sets of 10-12 reps 2 sets of 25-50 reps

SUPERFLEX PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Back/Chest	Dumbbell one-arm row Dips Both exercises done together/2 sets total	8-10 reps 8-10 reps
	Abs	Oblique raises	2 sets of 25-50 reps
Wednesday	Thighs/Leg Biceps	Hack squats Leg curls Both exercises done together/2 sets total	8-10 reps 8-10 reps
	Shoulders/Calves	Lateral raises Seated calf raise Both exercises done together/2 sets total	8-10 reps 8-10 reps
Friday	Biceps/Triceps	Incline D.B. curls Pulley pushdowns Both exercises done together/2 sets total	8-10 reps 8-10 reps
	Forearms	D.B. hammer curls	1 set of 8-10 reps
	Abs	Crunches	1 set of 25-50 reps

POWERPLAY PERIOD		GROWTH PHASE	WEEK ONE
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Squats Leg extensions	2 sets of 10-12 reps 1 set of 12-15 reps
	Chest	Incline barbell press Pec-deck machine	2 sets of 10-12 reps 1 set of 12-15 reps
	Abs	Crunches	2 sets of 25-50 reps
Wednesday	Back	Deadlift Lat pulldowns	2 sets of 10-12 reps 1 set of 12-15 reps
	Biceps	Barbell curl	1 set of 12-15 reps
	Calves	Standing calf raise	1 set of 12-15 reps
	Abs	Prone hyperextensions	2 sets of 25-50 reps
Friday	Shoulders	Military press Lateral raise	2 sets of 10-12 reps 1 set of 12-15 reps
	Triceps	Close grip bench	1 set of 12-15 reps
	Forearms	Barbell wrist curl	1 set of 12-15 reps
	Abs	Hanging leg raise	2 sets of 25-50 reps

POWERPLAY PERIOD		GROWTH PHASE	WEEK TWO
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Squats Leg extensions	4 sets of 4-6 reps 1 set of 12-15 reps
	Chest	Incline barbell press Pec-deck machine	4 sets of 4-6 reps 1 set of 12-15 reps
	Abs	Crunches	2 sets of 25-50 reps
Wednesday	Back	Deadlift Lat pulldowns	4 sets of 4-6 reps 1 set of 12-15 reps
	Biceps	Barbell curl	2 sets of 12-15 reps
	Calves	Standing calf raise	2 sets of 12-15 reps
	Abs	Prone hyperextensions	2 sets of 25-50 reps
Friday	Shoulders	Military press Lateral raise	4 sets of 4-6 reps 1 set of 12-15 reps
	Triceps	Close grip bench	2 sets of 12-15 reps
	Forearms	Barbell wrist curl	2 sets of 12-15 reps
	Abs	Hanging leg raise	2 sets of 25-50 reps

POWERPLAY PERIOD**STABILIZE PHASE****WEEKS THREE & FOUR**

DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Thighs	Leg press Sissy squat	2 sets of 10-12 reps 1 set of 12-15 reps
	Chest	Dumbbell press Incline flys	2 sets of 10-12 reps 1 set of 12-15 reps
	Abs	Crunches	2 sets of 25-50 reps
Wednesday	Back	Bent over row Dumbbell pullovers	2 sets of 10-12 reps 1 set of 12-15 reps
	Biceps	Standing D.B. curl	1 set of 12-15 reps
	Calves	Seated calf raise	1 set of 12-15 reps
	Abs	Prone hyperextensions	2 sets of 25-50 reps
Friday	Shoulders	Dumbbell military press Shrugs	2 sets of 10-12 reps 1 set of 12-15 reps
	Triceps	Pulley pushdowns	1 set of 12-15 reps
	Forearms	Reverse B.B. wrist curl	1 set of 12-15 reps
	Abs	Hanging leg raise	2 sets of 25-50 reps

FINAL ANALYSIS

The Hitman System incorporates some of the latest research in bodybuilding and fitness training. We feel we have developed a comprehensive system to guide you in building a muscular, lean and healthy physique. Our program is not only based on the latest research but also on the hands-on practical experience we have attained through training thousands of athletes just like you. Our objective with Hitman was to develop a periodized series of workouts which would stimulate every physiological factor contributing to rapid muscular growth while protecting your recuperative energies. We try to take you to the edge of your training capacity without crossing over the line into overtraining. Any program claiming fast results must attempt to maintain this delicate balance.

Progressing through each Period will help you develop physically and gain the training experience which will allow you to develop a sense of what works for your particular needs and capabilities. In the future, this knowledge will help you assemble or modify a specific training strategy to suit your current goals. Each cycle focuses on a different set of stress factors which provide a variety of stimulation, allowing you to make gains as consistently as possible. Once you complete the entire program, each Period can be used over and over again until you feel your body has adapted to that particular type of stress. Adaptation is indicated by no further progress in size or strength. Once you go stale, it's time to move on to another Period.

We have cut through much of the nonsense which surrounds modern bodybuilding and fitness training today. Old myths have been tossed aside and current scientific knowledge and experience has taken its place. You now know that two-hour marathon workouts push you past your hormonal peak and actually force your body into a catabolic state. That strapping yourself into an isolation-type of variable resistance machine does not build any significant muscle at all. That training as "hard as you can" all the time will not necessarily produce the results which you desire without overtraining the muscle. That always trying to lift low reps of heavy weights, year after year, completely stagnates your progress. That "carb-ing-up" on pasta and potatoes for extra energy will make you fat and fatigued.

As exercise science progresses, we incorporate new techniques and strategies which produce better results. While we continuously search for more knowledge and advanced lifting methods, we constantly come across new data. We do not accept any "fact" on face value. The proof is in the results, testing and practical application. Some ideas and theories look great on paper but never quite produce the results expected. Hitman is a practical and straight-forward system which has been proven and is being applied in gyms throughout the world.

Each Period is carefully engineered for a specific training effect. If you jump in and starting changing too many things, then it becomes impossible to associate what factors are causing which results and you will most likely throw off the momentum each Period is designed to produce. This system works and will give you great results. You should follow it as presented while making minimal modifications.

As always, if you need any tips or clarification concerning any part of Hitman, please contact us with your questions. Good luck and good training!

Lester S. Maurice
MATRIX SYSTEMS

EXERCISE DESCRIPTIONS

BACK

CHIN-UPS

Grip a chin-up bar slightly wider than shoulder width with your palms facing away from you. Pull yourself up and touch your upper chest to the bar, arching your back and release slowly. Do not let your body swing. Cross your feet to stabilize yourself. Add weight when needed.

BENT OVER ROWS

Bend at the waist and grab a barbell wider than shoulder width. Pull the bar up just below your chest level and squeeze your lats at the top of the movement. Keep your knees bent and try to maintain your body from rocking up and down. You can use a palms-up (reverse) or a palms-down grip. We have had good results with a reverse grip because it allows you to really contract your lats intensely and it places your biceps (weak link) in a stronger position. Use straps for this exercise.

DEADLIFTS

Stand with your feet shoulder width apart, squat down and use an over-hand grip with your hands outside your legs. Inhale, keep your back flat and your head up and stand erect. At the top of the movement, pull your shoulders back but do not lean back. Lower the bar slowly. Make sure, in the initial part of the move, which your thighs and glutes are driving the weight up. The bar should travel up as close to your shins and thighs as possible. Use straps for this exercise.

DUMBBELL PULLOVERS

Lay on a flat bench with your head hanging off one end. Keeping your hips low to the ground, grip a dumbbell with both hands, palms facing up. With a slight bend in the elbows, lower the weight behind your head, stretching your lats and chest and pull the weight back up over your head in an arch. It is important to inhale deeply so you can get maximum expansion in your chest. This popular movement can enlarge the rib cage from one to two inches.

LAT MACHINE PULLDOWNS

Grip the bar with your palms facing forward or reverse. Sit on the seat and pull the bar down to your upper chest, slightly arching your back forwards. Your elbows should stay pointing towards the floor. Release slowly and feel the stretch at the top of the movement. Avoid swinging your body to pull the weight down. Do not use a grip that is wider than your shoulders. Super-wide grips stress your shoulder joints excessively and do not provide any additional benefit. They actually limit the range of motion.

SEATED PULLEY ROWS

Adjust the pulley on the machine so that it is in the low position. Grip a straight bar shoulder width apart with your palms facing down. Use straps for a secure grip. Sit down and pull the bar to your stomach, squeezing your lats and arching your chest forward. Release slowly and stretch, but only slightly. Do not let the weight pull you forward so that your back bends excessively. On contraction pull your elbows straight back.

ONE ARM ROWS

Grab a dumbbell, bend over at the waist and, with the opposite hand and knee, brace yourself on a bench. With the dumbbell hanging straight down, pull the weight to your outside chest, keeping your palm facing toward your body and slowly lower back down. Feel the stretch at the bottom of the movement.

T-BAR ROWS

Grip the bar with your palms facing down or inward at an angle and your torso bent 45 degrees at the waist. Bend your knees slightly, to take the stress off your lower back. Driving your elbows straight back, pull the weight to your lower chest, squeezing your shoulder blades together and slowly release. Straps will also be helpful for this movement. Use different grips on the bar to hit different areas of your back.

CHEST

DIPS

Grip the dip bars and lock your arms out. Keeping your elbows away from your body and your chest and back arched forward, lower yourself slowly. At the bottom of the movement, stretch the pectorals and drive your body back up without locking out. Use a weight belt as soon as you go past your target reps.

BENCH PRESS

Lay on a bench and grip the bar a couple of inches wider than shoulder width. Lower the bar just above your nipple line and push straight up. Keep your elbows out so that your pees get most of the stress. Do not lower the bar to your neck. This popular "tip" will cause you to develop problems with your shoulder joints in no time. Press the weight evenly. Touch but do not bounce the bar off your chest.

INCLINE BARBELL PRESS

Adjust a bench to about 30 degrees. Grip the bar wider than shoulder width apart and lower to your upper chest. Your elbows should remain pointing straight down towards the floor. Push the bar straight up, being careful to maintain control of the weight. Do not use a bench that is too inclined because this puts most of the stress on the front deltoids.

DUMBBELL FLAT PRESS

Grab a pair of dumbbells and lay down on a bench. Start with the weight locked overhead, lower the dumbbells together to the outer portion of your chest with your elbows pointing straight down and drive the dumbbells straight up and together. Your palms are facing your feet throughout the movement. Do not twist your palms in. At the bottom of the movement you should feel the stretch in the pectoral muscles.

DUMBBELL INCLINE PRESS

Use a 30 degree incline bench. Start with the dumbbells on your knees and push your thighs up, clearing the weights to your shoulders. From your shoulders, press the dumbbells straight overhead, keeping your palms facing forward. It is not necessary to turn your palms towards each other. Make sure to keep your elbows pointing outward throughout the movement. Avoid arching your back during this exercise.

INCLINE FLYS

Adjust a bench to 30 degrees and grab a pair of dumbbells and press them overhead. With a slight bend in the elbows and your arms locked in position, lower the dumbbells to shoulder level, arching to the sides and pull them back up with the same arm position. Feel the stretch and pull in your pectoral muscles only.

DECLINE BARBELL PRESS

Grip a loaded bar shoulder width apart after you have positioned yourself onto the decline bench. Lower the bar to your upper chest and press straight up, controlling the weight from swaying throughout the whole movement. Make sure not to lower the bar to the neck area as this will put too much stress on the shoulder joints.

PEC-DECK MACHINE

Sit on the machine and adjust the seat so that your hands can grip the handles at shoulder level. Use a thumbless grip, bend the elbows slightly and lock your arms in position. Stretch them back and drive them forward and together. Keep your upper body pressed against the seat pad and, when your hands come together; squeeze your pec muscles tightly. The motion should look like you are hugging a tree.

PUSH-UPS (WARM-UP)

Position yourself with your feet elevated on a bench and your hands gripping a pair of dumbbells. Lower yourself, with your elbows pointing outward and push straight up. Being elevated and using dumbbells will make the exercise more difficult and allow you to stretch your pectorals intensely. This is a good warm-up exercise before getting into your workout.

DELTS

STANDING MILITARY PRESS

Standing with your feet one foot and a half apart, clear a barbell to your neck with a grip that is slightly wider than shoulder width, palms facing forward. Press the bar up evenly, without locking it out and lower it back down to the neck. Do not lean back or use your knees to push off.

SEATED MILITARY PRESS

Sit down and grip the bar a little wider than shoulder width apart. Lower the weight to the base of your neck and drive it straight back up. On the upward motion, keep your elbows right underneath your hands and make sure you do not arch your back during the pressing motion. You can press behind your neck but some people find this uncomfortable and there is no additional benefit. You will be able to use more weight in the seated position than in the standing military because of the back support.

UPRIGHT ROWS

Grip a bar shoulder width apart with your palms facing your body. Standing upright, pull the bar straight up your torso to your chest, keeping your elbows pointing up and out and lower slowly. The important point to remember is make sure the grip is shoulder width and not any narrower. A narrower grip will tend to stress the elbow and shoulder joints.

DUMBBELL PRESS

Grab a pair of dumbbells, clear them to your shoulders with your grip facing forward. Press them overhead and together and slowly bring them back down. Keep your elbows under the weight throughout the movement and keep your back straight. You do not need to turn your palms towards each other like you may see people doing. This has no benefit and can hurt the wrist.

LATERAL RAISES

Grab a pair of dumbbells and stand erect with your palms facing each other and in front of your thighs. Raise the dumbbells simultaneously to the side with a slight bend in the elbows and the arms locked in position. Lift up to shoulder level, keeping the dumbbells parallel to the floor and lower slowly. Feel the contraction in the side delt muscle. This is an exercise which requires relatively light weight and you still get a good burn in the muscle.

BENT-OVER LATERALS

Grab a pair of dumbbells, bend over at the waist until your upper body is parallel to the floor. Make sure to keep your knees bent slightly. With a small bend in the elbows, raise the weights to the side, palms facing down until they are head level and then lower them slowly. Keep the arms locked in position so that the rear delt does the work and not the triceps muscle.

REVERSE PEC-DECK

Sit backwards, with your chest pressed against the pad on the pec-deck machine. Adjust the seat so that your hands grip the bar at shoulder level. Bend your elbows slightly, lock your arms in position and pull them straight behind you and slowly release. Make sure to keep your arms locked to avoid the triceps becoming involved in the movement. The rear delts should perform all the work.

SHRUGS

Grab a pair of dumbbells and stand erect with them hanging down by your sides. Pull your shoulders straight up as if trying to touch your delt muscles to your ears. Squeeze at the top contracted portion of the movement and release. You do not need to roll your shoulders to the front or back. This popular technique limits the range of motion and can hurt the shoulder joints. Use straps to secure your grip.

THIGHS

SQUAT

Take a barbell and position it on your shoulders, right below your trap muscles. Stand with your feet shoulder width apart, with your toes angling slightly outward. For additional balance, place a two-inch block under your heels. Take a deep breath and lower yourself all the way down, without bouncing and drive yourself back up. Focus straight ahead and keep your body as upright as possible. Your knees should not fold in during the upward portion of this movement. Wrap your knees with ace bandages for additional support, use a lifting belt and have someone spot you in case you get stuck. It is important that you perform this movement as strictly as possible to avoid lower back or knee injury.

HACK SQUATS

Position yourself under the shoulder pads of the hack squat machine. Place your feet about eight inches apart with your toes pointing slightly outward, squat down all the way and push the weight back up. Wear a belt for this exercise for additional support. You should feel most of the stress of this movement on the front of the thigh muscles. Do not bounce at the bottom.

LEG PRESS

Sit down and position your feet shoulder width apart on the leg press pad. The machine should be at a 45 degree angle. Gripping the side handles for stability, take a deep breath, lower the weight smoothly and drive the rack back up. You can experiment with a variety of foot positions on this exercise. Use a steady motion throughout this movement. You should feel no stress on your lower back.

LEG EXTENSIONS

Adjust the foot pad on the leg extension machine, sit down and position your feet straight forward. Brace yourself by holding the grip bars or the bottom of the seat. Extend your lower legs until your knees lock and flex your quads, then lower your legs slowly.

LEG CURLS

Lay down or stand up, whichever leg curl machine you use, and position your heel under the pad. Keeping your body straight, curl your heel toward your hamstrings and release slowly. Try not to arch your back excessively during this motion. A lighter weight and strict movement will give you a strong contraction.

SMITH MACHINE SQUAT / OPTIONAL

If you have never performed squats, this is a good exercise to start with. Position the bar on your lower traps and place your feet shoulder width apart, toes out, slightly forward, in front of the slide. Squat down completely and drive straight up. Keep looking straight ahead. Use a block under your heels if you find it difficult to go down completely. Inhale as you descend and exhale at the top of the movement. The air in your lungs will help act as a cushion during this motion.

LEG PRESS-FLAT / OPTIONAL

Slide underneath the plate and position your legs shoulder width apart. Make sure your hips are directly under the weight and that your lower back is flat. Take a deep breath and press the weight up and slowly lower it back down. Grip the side bars to help you stabilize yourself. The up and down motion should be as smooth as possible. You can experiment with a variety of different foot positions.

CALVES

STANDING CALF RAISE

Position yourself under the pads of the calf machine. With your heels hanging off the end of the plate, raise all the way up and lower your heels all the way down. Keep a slight bend in your knees but make sure that your thighs do not become involved in any of the lifting. Tense your calves at the top of each contraction for better definition. Use a belt during this exercise to protect your lower back.

SEATED CALF RAISE

Sit down and position your knees under the pads. Unlock the machine and lower your calves to a full stretch and squeeze them up. This exercise allows a full range of motion, especially in the stretched (down) position. You can use a variety of foot positions on the pad.

DONKEY CALF RAISES

Bend at the waist, positioning your upper body at a right angle. Place your elbows on a table and have your partner sit on your lower back. Raise your heels up and lower them all the way down. Use a wooden block to elevate your feet. Place it under your toes so that you can really stretch, flex your calf muscles and give you a full range of motion.

LEG MACHINE CALF PRESS

Sit down and position your toes on the bottom of the leg press pad with your heels hanging off the end. Press your toes forward, release and stretch your calves at the bottom of the motion. Flex your calves in the contracted position tightly.

DUMBBELL CALF RAISE

Grab a dumbbell and, with the same side you are working the calf, stand on a wooden block with your heel hanging off the end. Raise your heel, squeeze your calf and then lower, until your heel touches the ground. Feel the stretch at the bottom of the movement. With your free hand, hold the wall or rack for stability and keep your body upright.

LEG CALF CURLS

Lay down on a leg curl machine and place your heels under the pads. To stimulate the calf muscle, you must point your toes straight and perform the leg curl motion, pulling your heels toward your hamstrings. This foot position will stimulate the whole calf muscle particularly in the stretched position. This is a good optional exercise to include.

BICEPS

BARBELL CURLS

Stand upright with a barbell at arms length. Curl the bar up to your shoulders without using any momentum from the body or bouncing the weight off the thighs. During the curling motion, lean slightly forward to keep the tension on the biceps and, at the top of the movement, squeeze the muscle for a couple of seconds. Make sure that your elbows do not flare out when you are curling the weight.

PULL UPS

Grip a chinning bar shoulder width with your palms facing you. Pull yourself up to your neck and slowly let yourself down. Do not swing your body and make sure that you start from a full hanging position.

STANDING DUMBBELL CURLS

Standing erect, grip a pair of dumbbells. At the beginning of this move, your palms are facing your body. Curl the weight either together or one at a time and turn your palms toward the

ceiling during the motion (supinated). When you reach your shoulder, squeeze your biceps for a moment, then lower slowly, twisting your palms back in toward your body. Supinating your grip helps contract and peak the biceps.

INCLINE DUMBBELL CURLS

Adjust a bench about 45 degrees. Grab a pair of dumbbells, lay back and curl them up to your shoulders. As you curl, rotate your hands outward and squeeze at the top of the motion. When you lower the dumbbells, you can rotate your palms back in. At the bottom of the motion, feel the stretch in the biceps.

CONCENTRATION CURLS

Bend at the waist and grab a dumbbell with one hand and brace your other hand on your opposite thigh. Curl the weight to the opposite side of your head, squeeze the muscle and lower slowly. Make sure to rotate your "pinky" toward your ear as much as possible. This will help peak the biceps muscle.

PREACHER CURL

Position yourself on a preacher bench. Grab a barbell narrower than shoulder width apart. Curl the bar up to your chin and lower completely, feeling the stretch at the bottom of the movement. Do not use your body to pull the weight up for you. Keep your torso pressed against the bench pad. Using an EZ curl bar can take some of the strain away from the wrists.

CABLE CURLS

Grip a bar attached to a low pulley. Your hands should be about ten inches apart. Standing a foot away from the rack, curl the bar up to your chin, squeeze the muscle and slowly lower the bar. This is a good finishing move since it creates continuous tension throughout the motion. Bend your knees slightly and do not lean back. Keep your form strict. This is one of the few biceps movements which provide resistance in the contracted position.

TRICEPS

CLOSE GRIP BENCH

Lay on a bench and take a grip that is ten inches apart. Grab the bar without using your thumbs (thumbless grip). When you lower the bar, keep your elbows tucked in close to your sides, right underneath your wrists. This will keep the tension on the triceps. Touch the bar to the bottom of your sternum. Do not let your elbows flare out. Press the bar back up to lock-out. The weight should travel in an "S" type of pattern.

TRICEPS REAR BENCH DIPS

Place two benches parallel to each other. Sit between them, with your back to one and feet pointing toward the other. Reach behind you and support yourself with the heels of your palms and place your feet on the other bench. Lower yourself as far as you can go and push yourself back up, placing the stress on the triceps muscle. Keep your elbows tight, close to your torso. Once you get past your target reps with your body weight, you can hold a dumbbell between your legs or have your training partner rest a plate on your thighs for additional resistance.

LAYING TRICEPS EXTENSION

This exercise is also known as "skull crushers". Lay down flat on a bench and position a barbell pressed over your chest. Your grip should be ten to twelve inches apart. Keeping your upper arms straight up, bend your lower arms (forearms) back so that the barbell touches either your forehead or the top of your head and drive the bar back up. Make sure your elbows stay pointing straight up and parallel to each other. If touching your forehead, place a pad or towel across your head for safety.

OVERHEAD TRICEPS EXTENSION

You can use either a dumbbell or an EZ curl bar. Press the weight overhead and keep your elbows tucked in close to your ears. Bend your lower arms back, behind your head and drive the weight back up. Keep your elbows pointing towards the ceiling throughout the movement. Have someone spot you when using a heavy weight.

PULLEY PUSHDOWNS

Grab a cambered bar with an eight-inch grip, palms facing downward. Stand with your feet together and your elbows tucked tightly to your sides. Press your lower arms straight down, flex your triceps and then release back up to your chest. Do not lean into the pulley because this will involve your front delt muscles. Keep a steady motion.

DUMBBELL KICKBACKS

Grab a dumbbell and bend over at the waist until your upper body is parallel to the floor. With your upper arm against your torso, locked in position, extend the forearm straight back and squeeze the triceps. The dumbbell should rise above your torso. With the free hand, brace yourself against your own thigh or against a bench.

FOREARMS

WRIST CURL / BAR OR DUMBBELL

Sit down and grip a bar about ten inches apart with your palms facing up. Rest your elbows on your thighs with your upper body slightly leaning over the weight. With a thumbless grip, roll the bar toward you and slowly roll back out. Try to let the bar roll as far down your fingertips as possible. Feel the movement directly in the forearm muscles.

REVERSE BARBELL CURL

Grab a bar shoulder width apart with your palms facing downward. Standing upright, curl the weight up to your shoulders and lower slowly. Do not swing your body during this move. You can use an EZ curl bar if you find it more comfortable for your wrists.

DUMBBELL HAMMER CURLS

You perform this movement with dumbbells. Your grip should be vertical (thumbs up). Curl the weight up to your shoulders, making sure to maintain the same grip-do not supinate like on other standard curling movements. Slowly release back down. This exercise can be performed on an incline bench.

REVERSE WRIST CURL / BAR OR DUMBBELL

Sit down and grip a bar ten inches apart with your palms facing towards the ground. Rest your elbows on your inner thighs with your upper body slightly leaning over the weight. Roll the bar and wrist up and down in a steady motion.

BARBELL/DUMBBELL ROLLS

Grip a bar with your palms facing your body. Roll your wrist up, squeeze the forearm muscles and slowly let the weight roll down to the end of your fingertips.

ABS

INCLINE SIT-UPS

Slide your feet under the bar or strap of an incline sit-up bench. Keep your knees bent and place your hands over your stomach or across your chest and curl your shoulders toward your knees and release slowly back down. At the top of the movement, tense your abdominals tightly as you exhale all the air out of your lungs.

HANGING LEG RAISES

Hang from a chin-up bar with your legs together and bent slightly at the knees. Raise your legs to parallel and lower slowly. At the top of the movement, squeeze your abs hard. Use straps so that your grip does not give out before your abs fatigue. If you find these are too difficult at first, then you can perform knee-ups using the same motion.

PRONE HYPEREXTENSIONS

Your gym should have a bench where you can lock your feet under for stability. Position yourself face down with your hands behind your lower back. Lower yourself toward the floor and then raise up three inches above parallel. Do not raise up any higher because this places too much stress on your lower back and can hurt the spine. When you go past fifty reps easily, grab a plate, and hold against your chest for added resistance.

LAYING LEG RAISE

Lay down on a bench and brace yourself by placing your hands behind your head gripping the bench sides. Place your feet together and elevate them six inches above parallel. Raise your legs to 45 degrees and lower slowly. Do not raise all the way up, as this will take tension off your lower abs.

CRUNCHES

Lay on the floor with your knees bent and raised up. Place your arms across your stomach or chest and roll your head and upper back off the floor and toward your knees. Contract the ab muscles intensely at the top of this movement. While you are curling your body up, pull your knees in toward you as well. Make sure to blow the air out of the lungs when you are contracting the abdominal muscles. Avoid placing your hands behind your head. This strains your neck muscles and lessens the stress on the abdominals.

OBLIQUE RAISE/SIDE CRUNCH

Position yourself sideways on a bench that allows you to slide your feet under some pads that will hold you down. With your torso hanging off the edge, lower your body and raise it again about four inches above parallel and feel your obliques and intercostals contract. Perform this exercise in a steady motion and make sure to angle your body slightly to fully hit the sides of your abs. You can perform this exercise on the floor with someone holding your legs down. The motion is only four to five inches and the contraction is very intense.

ADDENDUM

Anabolic Burst Cycle Diet & Training

Would you be interested in a system that would help you add pounds of muscle mass consistently, like nothing ever before, in a matter of weeks? Sounds like a supplement ad. But with the Anabolic Burst Cycle (ABC) program, it just may be possible. We say "may be" possible because it has not been around that, long, yet the preliminary tests have been very positive and the research and science behind this theory is credible. We are so excited about μ results, we decided to add the ABC program as an Addendum to the Hitman training manual for you to try for yourself.

The person responsible for the research is Dr. Torbjom Akerfeldt from the Uppsala University in Sweden. He specializes in nutrition, physiology, endocrinology and pharmacology. His study first began by noticing that most diets only worked initially, with the effects wearing off after a few short weeks. This observation helped him conclude that it was not necessarily the diet which made the impact as much as the change in diet. He observed when calories are increased or decreased, a series of enzymatic reactions take place which trigger an increase in hormonal activity. Dr. Torbjom measured this change, noticing the response decreased after approximately two weeks. At this point, testosterone, growth hormone, insulin and IGF-1 levels had adapted, decreasing their output and stabilizing.

Dr. Torbjom tested subjects by increasing their food intake from 1,200 to 1,600 calories per day over their maintenance levels, keeping a consistent ratio of macronutrients. He measured a strong spike in anabolic hormones secreted, which was double their normal levels, with an increase in metabolic activity as well. The hormonal spike faded by the 14th day of the study. Immediately following, he decreased caloric intake and noted that their metabolism was still elevated from the over-eating phase. He also noted another hormonal spike from the sudden decrease in food volume. Though these subjects were not working out, they gained an average of 3-6 pounds of body weight consisting of 1-2 pounds of fat. That is an average of 1-5 pounds of lean muscle in four weeks without even training!

From this basis, Dr. Torbjom has refined and formulated the ABC program. He feels you have a 14 day window, which is long enough for muscle hypertrophy to occur, while short enough to keep a substantial amount of fat from being stored in the adipose tissue. During the dieting or cutting phase, you can trim off all the fat you gained during the eating or bulking phase while only losing a couple of pounds of muscle. The ratio of macronutrients consumed should be isocaloric or 40% carbohydrates, 30% proteins and 30% fats, like the Zone Diet. Your meal frequency is 4-5 times per day which provides a consistent availability of nutrients in your system at all times.

The Bulking Phase

During the two-week bulking phase, fluid, glycogen and amino acids are loaded into the muscle cells. This is known as cellular hydration and actually helps enlarge and stretch the muscle fibers and fascia. You can amplify this process by performing Dynamic stretching movements in between your training sets when your muscles are pumped up. Stretching during the bulking phase is an integral part of this program. At the peak of this phase, when anabolic hormones are at their highest, research indicates that the muscle cell is at its peak potential to split and form satellite cells. Though this is still an on-going area of research, there is much evidence to support this theory.

This phase requires you to consume at least 1,500 calories over your maintenance level per day. A guideline to figure out your maintenance level is to multiply your body weight by twelve. If you weigh 170 pounds ($170 \times 12 = 2,040$), your maintenance would be approximately 2,040 calories which mean you would consume 3,540 calories ($2,040 + 1,500 = 3,540$) per day. This starting point may have to be modified because of other factors including activity level and genetic make-up which may require you to eat more or less. If you are not gaining weight during this phase then increase your intake by 500 calories per day in the first week. Your goal is to gain 5-6 pounds total during the two-week cycle or 2-1/2 to 3 pounds per week. If you still have not gained at least 2-1/2 pounds by the start of the second bulking week then increase your daily intake by another 500 calories. Your protein ratio should be 1-2 grams per pound of body weight as a minimum. Additional protein will help increase the anabolic environment which the high caloric intake is producing. After a few days of high calorie consumption, a feedback loop will suppress your appetite. It is a mechanism in mammals which helps control how big they can get but you must fight this tendency and continue eating as planned for the entire two weeks.

Useful supplements during bulking include creatine monohydrate, vanadyl sulfate and chromium picolinate. All three increase nutrient and water absorption within the cell, known as "cell volumizing". They work toward expanding the muscle and surrounding tissues, which is a main goal during this phase. Chromium and vanadyl will help increase insulin sensitivity.

Your training during the bulking cycle should include heavy weights, low reps, basic compound movements and lots of stretching. Avoid any aerobic exercise. You will be able to lift heavier with each workout because the high calories will initiate a hormonal response which will make you stronger. Include the use of Overload Techniques to stress the muscles as much as possible.

The Cutting Phase

During the cutting phase you would consume your body weight times eight. The same 170 pound person would eat ($170 \times 8 = 1,360$) a total of 1,360 calories per day. Like the bulking phase, this starting point may have to be modified. If you are not losing weight then decrease your intake by 300 calories per day. Include at least one gram of protein per pound of body weight. Additional protein is not necessary during this weight-loss cycle.

Your training during the cutting phase is lighter, faster and includes aerobics at least 3-4 times per week with more abdominal training. The training intensity is lower and you can include isolation-type exercises. No Overload Techniques should be used because your focus is on obtaining a good pump and losing as much fat as quickly as possible. Stretching during your workout is also not necessary.

Beneficial supplements for this phase include thermogenic fat-burners, which raise your metabolism in order to burn more fat, and calcium pyruvate. The pyruvate will help you get rid of the excess fat by forcing your cells to function at a more active level. Distilled water is always essential but especially so during this period. Drink at least two-quarts throughout the day.

If you are currently overeating, start the ABC program in the cutting phase. If you have been dieting, start the program in the bulking phase. The idea behind this program is that the body does not build muscle and lose fat at the same time effectively. By separating these activities

into two-week cycles, you create a separate environment to do both very quickly and efficiently. Research with the ABC diet has shown that lean body mass is increased without affecting body fat percentages. Dr. Torbjom states that, "going back and forth between low and high calorie diets is a fantastic way to keep your anabolic hormones and lipolytic (fat-burning) hormones and enzymes, as well as receptors primed at all times".

Dr. D.J. Millward, a well known res archer, has assisted Dr. Torbjom on certain aspects of the ABC diet. He has performed extensive analysis on his "bag theory" which identifies the connective sheets or fascia tissue as the limiting factor to muscle growth. He feels that these "bags" act like very tight girdles with a minimum elasticity which actually inhibit muscle tissue growth. With the ABC diet, the muscle tissues are hydrated beyond their normal state and with heavy training and stretching, muscle growth potential is maximized. So in fact, the muscle pump does contribute to muscle growth because the tissues are stretched to capacity. This supports the practice and belief which "old timers" had about performing some final pump sets at the end of each body part. They used exercises which would stretch the muscle when it was totally pumped up as part of their routine. Their instincts seemed to have been correct.

Dr. Millward confirms, "a key feature of skeletal muscle growth appears to be that it is limited by connective-tissue growth, which controls myofiber diameter and length. Somehow you must stretch this connective tissue - this tight girdle around muscle tissue - to experience dramatic muscle growth. This is very important. All bodybuilders must do this." This explains the "muscle memory" concept. Once you have had a seventeen inch arm and quit training, you can easily regain that size when working out again. This is due to the connective tissues already having been stretched out, making it easier to regain its previous size, not to some inherent "memory" which your muscles have.

We have been testing this program for over six months. It definitely has some merit but like other training concepts, it seems to work better for some than others. Trainees have gained an average of five pounds per month, with the biggest gains made in the first four-week cycle. To test it properly, you must follow the program precisely as we have outlined it. We have designed a training Period specifically for the ABC program. It includes heavy, low rep lifting during the bulking phase as recommended by Dr. Torbjom. The cutting phase includes higher reps with a pre-exhaust slant to the program for optimal results. Abdominal training is increased as well. One area of concern with this unique diet system is the discipline required. You have to cut back the calorjes during the cutting phase or else you will gain fat and lose the hormonal-training effect desired. The discipline lies in being able to switch from eating practically all you want to a very restricted caloric intake. If you can handle the shift, then this program may work well for you. Good luck and let us know your results.

ABC PROGRAM

Bulking Phase

Diet: 1,500 calories over your maintenance
 Isocaloric /Zone Diet base with 10%
 Increase in carbohydrates.

Supplements: Creatine monohydrate
 Vanadyl sulfate and Chromimum picolinate.

Training: Low reps/compound
 exercises and Dynamic stretching.
 No aerobic training.

Goals: Gain a minimum 5-6 pounds in two
 week period. Train intensely using power
 movements and focus on stretching the
 muscles during your workout.

Cutting Phase

Diet: 500-1,000 below maintenance (average)
 Isocaloric/Zone Diet base with 10-20% decrease in
 carbohydrates.

Supplements: Thermogenic fat-burner, Calcium
 pyruvate and additional distilled water.

Training: Higher reps/include isolation-type
 exercises and aerobics. No Overload Techniques
 should be used.

Goals: Lose 1-3 pounds of fat while maintaining
 muscle. Train less intense with higher repetitions
 and perform aerobics 3-4 times per week. Fat loss
 is your main concern during this cycle.

ANABOLIC BURST CYCLE	BULKING PHASE	WEEKS ONE & TWO	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Chest	Incline bench press	2 sets of 5-7 reps
		Dips	2 sets of 8-10 reps
		Flat dumbbell flys	2 sets of 8-10 reps
	Triceps	Overhead extensions	2 sets of 5-7 reps
		Laying triceps extensions	2 sets of 8-10 reps
Forearms	Barbell wrist curl	2 sets of 10-12 reps	
Abs	Crunches	1 set of 25-50 reps	
Wednesday	Thighs	Squats	3 sets of 8-10 reps
		Leg press	2 sets of 10-12 reps
		Leg curls	2 sets of 10-12 reps
	Shoulders	Military press	2 sets of 5-7 reps
		Lateral raise	2 sets of 8-10 reps
		Reverse pec-deck	1 set of 8-10 reps
	Abs	Hanging leg raises	1 set of 25-50 reps
Friday	Back	Deadlift	2 sets of 5-7 reps
		Lat pulldowns	2 sets of 8-10 reps
		Dumbbell pullovers	2 sets of 10-12 reps
	Biceps	Barbell curl	2 sets of 5-7 reps
		Incline D.B. curl	2 sets of 8-10 reps
	Calves	Standing calf raise	2 sets of 12-15 reps
		Seated calf raise	2 sets of 12-15 reps
	Abs	Incline sit ups	1 set of 25-50 reps

ANABOLIC BURST CYCLE	CUTTING PHASE	WEEKS THREE & FOUR	
DAY	BODYPART	EXERCISES	SETS/REPS
Monday	Chest	Incline dumbbell flys	2 sets of 12-15 reps
		Incline dumbbell press	2 sets of 10-12 reps
		Bench press	1 sets of 10-12 reps
	Triceps	Pulley pushdowns	2 sets of 12-15 reps
		Close grip bench press	2 sets of 10-12 reps
Forearms	Rev. B.B. wrist curl	2 sets of 10-12 reps	
Abs	Crunches	4 sets of 25-50 reps	
Wednesday	Thighs	Leg extensions	2 sets of 12-15 reps
		Hack squats	2 sets of 10-12 reps
		Leg curls	2 sets of 10-12 reps
	Shoulders	Dumbbell press	2 sets of 12-15 reps
		Shrugs	1 set of 10-12 reps
	Abs	Bent over laterals	1 set of 12-15 reps
	Hanging leg raises	4 sets of 25-50 reps	
Friday	Back	Dumbbell pullovers	2 sets of 12-15 reps
		Chin ups	2 sets of 10-12 reps
		Dumbbell one-arm row	1 set of 10-12 reps
	Biceps	Concentration curl	2 sets of 12-15 reps
		Standing D.B. curl	2 sets of 10-12 reps
	Calves	Seated calf raise	2 sets of 12-15 reps
		Leg machine calf press	2 sets of 12-15 reps
	Abs	Incline sit ups	4 sets of 25-50 reps

Your Next Step

After you have completed all the **HITMAN** training periods, you should move on to the **Matrix Mass Workouts**.

The **Matrix Mass System** has 11 totally different advanced training periods that will take your physique to an even higher level of development!

Get The Matrix Mass Training Manual at

www.getbulky.com