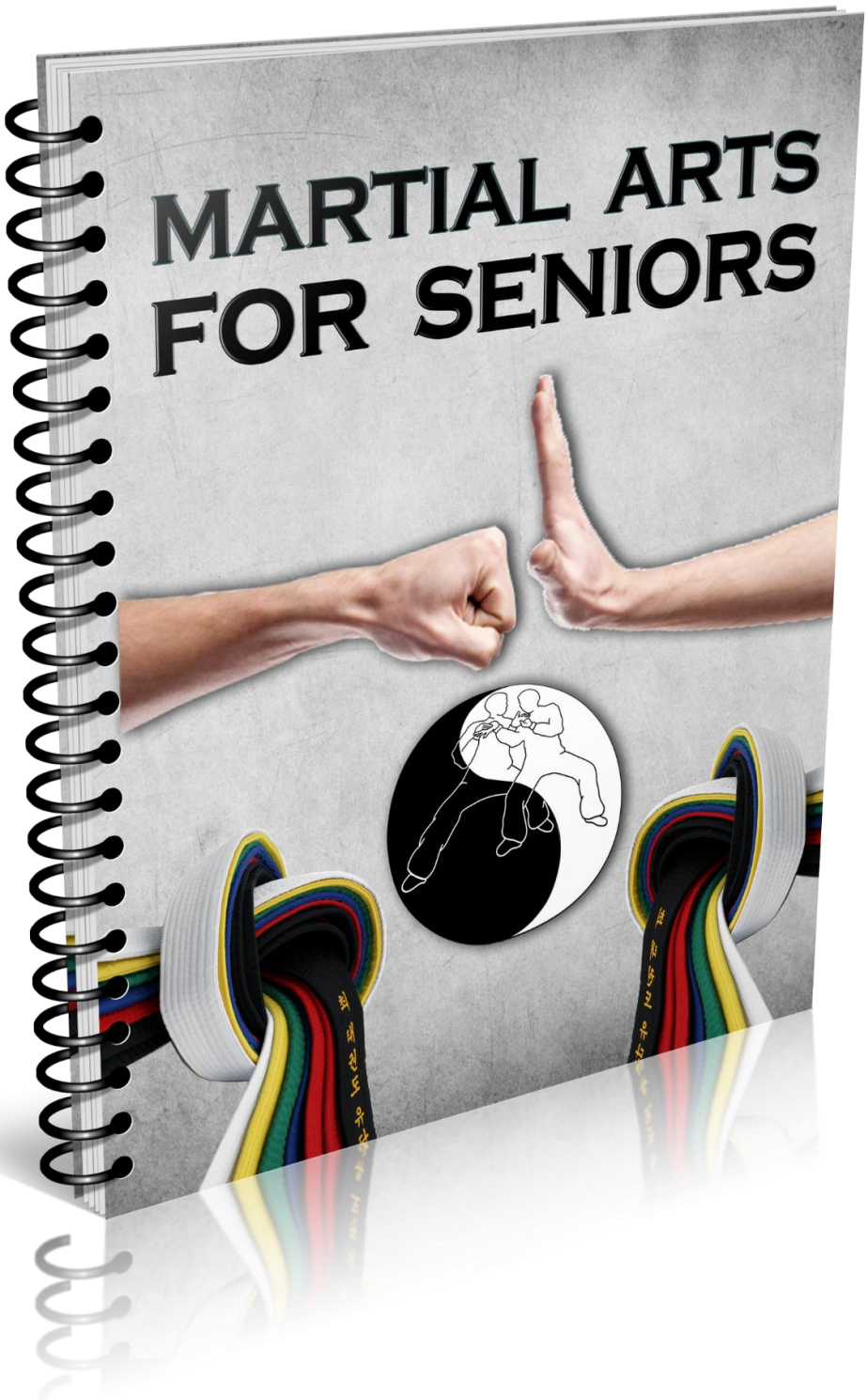
MARTIAL ARTS
FOR SENIORS

“Aren’t you too old for martial arts?”

Have you heard this question lately? Or perhaps even looked in the mirror and asked yourself the same thing? Well the answer is a resounding “No.” Martial arts can be practiced as long as, if not longer, than just about any other physical pursuit.

In fact, martial artists often get better, not worse, with age. Perhaps you are not as fast or flexible as the younger students in class. Perhaps you don’t recover as quickly from your workouts or you are bothered by new aches and pains that you easily shook off when you were younger.

These are minor obstacles when you consider the benefits that come with age. The wisdom to slow down, to see the lessons in every class, to mentor younger students, to laugh at the macho posturing and go your own way, to discover yourself from the inside out. That is what martial arts after 40 is about; a journey of self, a discovery of the boundlessness of your mind and body, working as one, expressing your inner joy and wisdom.

Aging is an inevitable process. It proceeds at different rates in different people. You can’t stop it, but you can delay it. It is your responsibility to live your life to the fullest--or not. As your life unfolds, you begin to realize that every choice that you have made so far has brought definite consequences that are either rewarding or

painful. Reaching mid-life means an accumulation of wisdom. Based upon the lessons of your past choices, you now have a great opportunity to reconsider and possibly change the course of your life. In fact, now is the perfect time to begin living your life to the fullest.

The very fact that you are a martial artist or are considering taking up the martial arts means you want to take care of yourself, that you want to challenge your mind and body. This choice is a tremendous gift to you. It means that you can reach the point of being where your body and mind coexist in perfect harmony.

In your martial arts training, you will at some point realize that your body is unique in itself. Your body has a different set point from others. You have to learn to adjust your condition to the ideal point for the uniqueness of your body. You can ignore statistics and standard guidelines, but you cannot take your natural guidelines for granted.

This book is not intended to mold you to be like someone you see on the cover of a fitness magazine. Instead, it will help you realistically get into and stay in the physical condition that will allow you to continue to enjoy your martial arts practice for many years to come.

Speed Training Tips

There are some rules to keep in mind when developing speed in your skills:

1. The skill must be conducive to speed training. Most martial arts skills can be done at full speed, either in the air, with a partner or

against a target. Gross motor skills are more easily adapted for speed training than precision skills.

2. The skill must be physically sound. Do not try to build speed until you have mastered the basic physical model of a skill. If you have to think about the mechanics of performing a skill or you are performing it without the correct biomechanical form, your potential for speed development is limited.

3. Relax. Speed training requires relaxation from the point of initiation up to the point of impact. At the point of impact, the muscles should briefly tense and then relax again to facilitate quick recovery.

4. Recover. Recovery between executions is essential for improving speed. If you are training a single skill, like front kick, the recovery between kicks can be brief, up to fifteen seconds. If you are working on combinations, spend a bit more time between repetitions so you do not become fatigued too early.

5. Practice first, practice last. There are two theories on where in your workout speed training should come. Many experts advise putting speed training early in the workout so you are not fatigued and your muscles are fresh. This is good advice if you are relatively flexible, have good muscular endurance and can relax easily. There are two drawbacks to doing speed training early in a workout: you can become too fatigued to perform well later in the workout and you may be too tense to fully achieve your potential. Practicing speed skills near the end of a workout means your muscles are looser and therefore you may find it easier to relax although you

may sacrifice some freshness. Arrange your speed training to suit your performance style.

6. Use low repetitions. Keep the number of repetitions of each skill low (less than 10) but the quality of each repetition very high. Perform each rep with complete concentration and fully rest between repetitions.

7. Feel the speed. As you perform each repetition, you may find that a particularly fast repetition "feels" different from all the others. Try to capture and recreate this feeling, whether it is a feeling of lightness, relaxation, energy, intensity or whatever name you assign to it.

8. Take time off. As you practice for speed, you may find that you have hit a speed bump, a pace that you can consistently imitate, but cannot break through. When this happens, it's time to take a few days to a week off from speed training. Instead of practicing the technique, spend time each day visualizing breaking through the speed bump.

Timing

What is timing? Timing can be defined as simply being in the right place at the right time. This can be said for all aspects of life and is not limited to the Taekwondo arena. Timing is the ability to understand when and where to be so that you may take full advantage of an opportunity that is present at that moment. In order to understand timing, it is important to first understand several other concepts.

An opportunity is chance that is present at a particular point in time for success or the achievement of a goal. In the case of a Taekwondo athlete, the goal is to score a point. Therefore, all timing leads to the acquisition of points. This is not as simple as it sounds, for there are several ways in which such opportunities occur.

Opportunity presents itself at different times and as the result of different occurrences or circumstances. The one truth is that opportunity is a causal effect of action or inaction. It is the direct effect of you or your opponent's action or reaction to the circumstances that are present at a given time during a match. This is the good news, because it means that it can be created and taken away. You can create opportunity by your actions or by causing reactions in your opponent.

Opportunity either exists or does not exist or is in a state for coming into being or ceasing to be. Competitors are always trying to take advantage of an opportunity when it exists. If it does not yet exist, they are waiting for it to come into being so they can access it. Or, finally, they are trying to create opportunities to take advantage of. I call this the "TAKE, WAIT, or CREATE" model. As an athlete you can take an existing opportunity, wait for one to appear, or create one. As much as there is a past, present, and future, so it is for opportunity.

Since good competitors keep their opponents from creating opportunity, we must spend most of our time waiting or creating the same. It is in this way that timing comes into play and is the final essential piece of the point puzzle. An opportunity that is realized is usually the result of bad timing, or the inability to meet the

opportunity when it presents itself. One is said to have good timing if they can perform the two basic functions of a Taekwondo competitor: Remove opportunity that an opponent is trying to access and take advantage of an opportunity that an opponent has allowed.

So, how does it all work, and more importantly, how do you improve your timing? I use the same method for my practice and training regardless of the skill or attribute that I am trying to improve. First, I conceptualize the action in its' perfect form and try to understand its' uniqueness. What is the primary function of timing? Second, I break it down into its' component parts.

What is timing about and what attributes are necessary in order to have good timing? Finally, I develop a series of drills to improve my skills with regard to the attributes of good timing. This plan of attack will work with any skill or training. First, study and understand your goal, then break it down into smaller parts and finally develop drills to improve the smaller part and refine the larger whole.

Good timing requires several physical and intellectual skills, and these can be improved through a series of drills. However, keep in mind that we are dealing with the final phase of point scoring; the existence of an opportunity or the accessing of one that is about to come into being. This column is not about creating opportunity, but merely taking advantage of one that does or will exist.

So, back to the fundamental premise. Timing requires adequate or superior speed. Drills that will increase your speed will ultimately improve your timing. Next, timing requires a spatial understanding

of your body and attacking implements with regard to your opponent's target areas and movement. In other words, you must be able to position yourself quickly and appropriately so that you will be able to launch an effective attack or counterattack. Finally, you will need to understand your opponent's habits or predisposition towards certain movements. This will help you to create opportunities and score points.

A good starting place is match analysis of good players and games. Watch high-level players or videotapes of international competitions and study the athletes' attack and counterattack patterns. Take special note of timing relative to when and how the attack or counterattacks are executed. Do not focus on the point, but rather use the point as the starting place from which to build outward. By viewing the tape and moving backward from the occurrence of the point, you will start to see certain patterns arise. These are the occurrences or the circumstances, which cause the point into being.

Next, visualize yourself in a similar situation performing a similar attack or counterattack. Imagine the different scenarios that might occur during the execution of the same. Now it's time to take this into the gym and develop drills to refine these motion patterns. Working with a partner, develop drills that present opportunities for you to access. In the first phase of the drills your partner will allow you ample time to access the opportunity. The second phase will have your partner presenting the opportunity and then removing it. Finally, in the third phase your partner will try to prevent the occurrence of such opportunities while you are trying to access it. In next month's column, I will detail and outline a full and complete method to bring closure to your timing adventure.

Hydrate for Higher Performance

Our thirst and common sense tells us that keeping hydrated during workouts is important, but did you know that proper hydration can measurably improve your performance? Recent studies showed that bicyclists that pedaled hard for 50 minutes had a 6% increase in performance when they replaced as much liquids as they sweated out, and their performance improved 12% when the liquids contained carbohydrates, such as in a sports drink.

How much liquid should you consume? If you lose two pounds of sweat in an hour workout then you need to drink 32 oz. of liquid or roughly 8 oz. every 15 minutes. Don't just rely on your thirst to tell you when you've drunk enough, as studies show that people who relied solely on thirst drank only half of the liquids they needed.

If carbohydrates boost performance does this mean you should drink a sports drink? Not necessarily, you can have the same effectiveness by drinking juice as long as you water it down so that there is no more than 80 calories per 8 ounces. What about replacing minerals and electrolytes which so many sports drinks tout? It's not really necessary, as you body is unlikely to deplete these unless you have an extreme workout of over 6 hours or more.

What's the best regimen for fluid replacement? Start with 8-16 oz. no longer than a half-hour before your workout, and then take frequent fluid replacement breaks during the workout. Also, avoid extremely cold drinks as your body more quickly absorbs cool, but not cold liquids.

So drink up for higher performance.

Improve Your Speed

To develop overall speed, there are several sequential steps in training:

- Basic conditioning
- Explosive power development
- Skill refinement
- Skill loading
- Full speed training

Basic condition, including flexibility, strength and agility training, is a prerequisite for speed training. The completion of basic conditioning is signaled by a level of fitness that allows the athlete to begin the more intensive exercises that develop explosive power. Exercises for developing explosive power are detailed in "Chapter 2: Power" and the execution speed section of this chapter. Once the target muscles start to develop, begin working on skill refinement. Each skill should be examined to eliminate unnecessary movements and increase biomechanical efficiency.

With highly refined movements and strong muscles, you can begin adding speed to each movement. Start skill loading gradually and observe your body's reaction. If you can add speed and still maintain semi-refined movements, continue to increase your intensity. Eventually you will reach the final stage of speed training in which you can execute skillful movements at high speed.

Now let's examine the four types of speed individually.

Perception speed can be increased by repeatedly exposing yourself to situations that require instant analysis. Law enforcement officers do this by participating in mock confrontations that require them to quickly analyze who demands to be responded to and how. The best drill for developing perception speed in martial artists is sparring.

Sparring teaches you what an attack looks like before it happens. Sparring also teaches you to be alert at all times by placing you in imminent physical danger. Alertness is one of the keys to perception speed. You cannot analyze the situation if you do not realize it exists.

Reaction speed is improved by a two pronged approach. First, you have to be aware of what types of situations may arise in any given environment. In sparring, your opponent does one of several things, which are predetermined by the rules of the sparring match. You know in advance what is allowed and what is not.

In a self-defense situation, you also have some idea what to expect. You can reasonably expect your assailant to try to harm you in some way. You do not expect him to start singing songs or reciting poetry. By estimating what to expect from the given environment, you narrow down your choice of possible responses.

Second, you have to have experienced an identical or similar situation before. If you have been attacked hundreds of times by a front kick in sparring, your reaction becomes almost reflexive. If you are sparring for the first time, your reaction time is longer because you must formulate a response without a basis for comparison. If you have practiced self-defense techniques in a realistic way

hundreds of times, you are much better prepared than if you spend all of your time beating up a stationary heavy bag.

Execution speed is the type of speed that most martial arts training focuses on. Executing techniques like kicks and punches with speed takes up a large part of the intermediate and advanced stages of training. Execution speed can best be improved through attention to detail. Shifting into a ready posture at the last minute wastes time. Begin each movement with a ready and relaxed posture. If you are going to punch, have your hands up and ready. If you are going to kick, shift your weight to supporting leg and relax your kicking leg. Shifting your weight and positioning your hands can take more time than the actual striking or kicking. Anticipate what is necessary and be prepared.

When you learn a new skill, practice slowly at first to train your muscles in the correct execution of the movement. When you can execute with little thought about the segments of the movement, speed up gradually. In speeding up the movement, take care not to loose the precision you learned in the beginner stage. Strong basics are essential for speed training.

Observing the laws of motion is also important to execution speed. If you flail your arms and head wildly about when kicking, your kick will be slow. If you stabilize your posture, your kicking speed will increase. If you punch with your arm, your punching will be slow. If you punch from your hips, your punching speed and power will increase. If you spin with your upper body tilted to one side, you will lose kick, however, creates a continuous circle of whirling force, increasing the speed of the second kick.

Finally, relax to create speed. Tense muscles have more difficulty responding to your intense demands than relaxed muscles. Relax just prior to the movement and maintain a minimum amount of tension during the movement. Relaxation conserves energy and lessens the amount of force necessary to move your body quickly.

Recovery speed is the result of execution speed. The old adage "what goes up must come down" applies in other directions as well. If your fist shoots out in a punching motion, it must return along the same path to be efficient and effective. If you execute a sidekick and drop your leg to the ground immediately following impact, you will be off balance and in danger. You must rechamber the leg and then return to a natural stance.

If you do not execute the recovery portion of the technique, the action becomes "dead." It does not have the dynamic quality associated with speedy movement. It also increases the risk of joint injury tremendously. A fast strike or kick that ends in a locked out position is a common case of knee and elbow injuries.
A complete technique has an initiation, execution, impact and recovery. Each phase must be executed correctly to create dynamic speed.

CAUTIONS:

- Never use complex skills for speed training.
- Always master the basics before moving to speed training.
- Never tense your muscles before executing a speed skill.

- Muscles must be well trained before engaging in speed training. Weak muscles that cannot bear the intense requirements of speed training are easily injured.

The Optimal Method of Breathing for Martial Artists

We have seen that mind and body are intertwined. Just as the mind moves the body, the body can move the mind. The key aspect of physiologic control of the mind is breath control. Respiration is truly the mirror of the psycho-physiologic state. While many people have developed a proverbial "poker face" with little clues to their emotions portrayed as facial expressions, their true mental state is always reflected in their breathing pattern. Anger is characterized by rapid breaths with forced exhalations.

Anxiety is demonstrated by an erratic, fitful breathing pattern with breaths taken from high in the chest. While respiration reflects your emotional and physiologic state, it can also be utilized to change the state within seconds.

In the Western world we have been taught to breathe from high in the chest. These stems from the Western ideal of proper posture characterized by a puffed out chest with the stomach sucked in. Take a moment and assume this position. Notice how much energy is expended maintaining this posture. Hold this position for any length of time and soon you will notice how much tension is present. Maintain this position for fifteen to twenty minutes and fatigue will soon follow. While the martial arts teaches us to breathe from the abdomen, with states of tension, fear and anxiety, most students soon revert back to the shallow thoracic (chest) breaths which serve

only to perpetuate sub-optimal states. In order to fully comprehend proper
breath control, the mechanics of respiration must be understood.

The diaphragm is the primary muscle of respiration. This is the large, flat muscle separating the abdominal from the chest cavities. The diaphragm contracts thus lengthening the chest cavity creating a vacuum, which draws air into the lungs. The secondary or so called accessory muscles of respiration include the intercostal muscles (between the ribs), and to a lesser extent, the neck muscles. The accessory muscles function to increase the anterior-posterior diameter of the chest cavity as well as to lift and spread the rib cage.

With good "Western" posture we use our accessory musculature to lift the chest. Using the accessory muscles without proper use of the diaphragm serves to keep air high in the chest and does not expand the lungs to their capacity. A normal thoracic breath draws only 500 to 700 cc of air in the average adult. This results in less efficient oxygen delivery to your circulatory system and subsequently less potential for physical action. On the other hand, a deep, abdominal breath typically draws 2500cc to 3000cc of air, expanding the entire lungs for optimal oxygen delivery.

Proper Respiration

With this background we can now approach the process of proper respiration. Normal, quiet respiration uses only the diaphragm. This is what is termed abdominal breathing. The chest is kept completely still and the accessory muscles are not utilized. This is the proper way to breathe. It is the way infants normally breathe before they become conditioned and are taught "proper posture." It is the way a

cat or other predatory animal breathes when stealthily stalking game.

Breathing should be accomplished by allowing the abdomen to inflate like a balloon creating the sensation of air being pulled deep into the lower body. When you have reached a maximum comfortable breath, press the air even further down towards the pelvis by tensing the abdomen slightly. Expiration is then accomplished in a gradual, controlled manner. Keeping slight tension in the abdominal muscles, the air is slowly released. The accessory muscles should come into play only when winded, contracting only after a full diaphragmatic breath has been accomplished. The accessory muscles are then utilized to expand and lift the chest to more fully inflate the very top portions of the lungs.

All breathing should be done through the nose with the exception of when vocalizing as when a martial artist performs a kiai. Nose breathing is most efficient for oxygen delivery and preserves the moisture of the airways. This becomes extremely important when involved in lengthy, dehydrating workouts.

Benefits of Proper Respiration.
Proper respiration has four major benefits for the martial artist. First, through a neuro-physiologic feedback loop, it keeps the mind calm and "grounded." Just try to become extremely angry or hysterical while taking slow, deep, abdominal breaths. It simply cannot be done. In competitive or confrontational situations, some athletes become so anxious and hyperactive that they are bouncing off the walls. This is the sympathetic nervous system in action. An activated sympathetic nervous system releases a flood of adrenaline

resulting in the "fight or flight" response. The adrenaline surge is taxing on both the body and the mind wasting enormous energy reserves.

Deep, abdominal breathing with slight tension in the abdomen dampens the sympathetic response in favor of the parasympathetic nervous system. The parasympathetic nervous system fosters relaxation, lowering of the pulse, slowing of respiration and conservation of energy. You are then able to respond to a threat appropriately rather than reacting anxiously. The preservation of energy reserves with parasympathetic system dominance becomes very important in endurance activities.

Secondly, proper breathing allows superior oxygen exchange in the lungs resulting in improved muscle performance during activity requiring maximal effort. Third, keeping the breath low in the abdomen automatically keeps your center of gravity low for improved balance. The fourth and probably the most important quality of proper respiration is its ability to assist in keeping the mind focused on the present moment. This will be discussed in detail in Chapter Three.

Developing the habit of diaphragmatic breathing takes considerable practice. It has taken years to condition your breathing to your current pattern so don't expect miraculous change overnight. It will take time to condition your body back to the normal respiration that it knew as an infant, but it will be well worth the effort.

Summary of the Benefits of Proper Respiration
1. Calms the mind by calming the body

2. Allows superior oxygen exchange
3. Lowers the center of gravity for better balance
4. Enhances focus

Stretching--When Is It Too Much Of A Good Thing?

We have been taught since our earliest days in Taekwondo that stretching is the key to increased range of motion, easier movement, and injury prevention. In recent years, many of the traditional stretches that were ballistic in nature (meaning you bounced when you did them) have been shown to be dangerous and have now been discarded. In addition, other potentially injurious stretches such as the Hurdler's Stretch (which places undo pressure on the knees) have been modified to bring the desired results of stretching without the potential of causing the body harm. But, can something as beneficial to Taekwondo training as proper stretching technique still be harmful in certain situations?

Dr. Stephen M. Pribut, a Washington, DC Podiatrist, who practices podiatric medicine and surgery with special interests in Sports Medicine and Biomechanics, points out that even something as beneficial to an athlete as stretching can be overdone.

"Surveys of runners have shown that there seem to be two types of runners who have reported more injuries than others. Those who do not stretch very much and those who spend an inordinate amount of time stretching both seem to have significantly more injuries. This is not necessarily a causal relationship. The fact that a survey has shown that an individual who spends much longer than his peers stretching responds to a survey question reporting many injuries

might also imply that he is stretching in response to his injuries. But then again, too much of a good thing might not be good.

Because your flexibility and muscle elasticity can diminish from time off due to injury, martial artists are often eager to return to their stretching routine. However, Dr. Pribut warns not to begin stretching while injured as this can turn a minor injury into a chronic injury.

“The reason you should not start stretching with an acutely sore body part is that your stretching will probably contribute to continuing to tear the muscle or tendon fibers during your stretching of it,” notes Dr. Pribut.

As martial artists, we often feel that we can never train too hard, and like all athletes we want to come back from our injuries as quickly as possible. Dr. Pribut offers a great reminder that even something as beneficial as stretching can be harmful if overdone, or if done before our body has recovered from injury

Fueling for Competition; Beyond the Fads

Are you confused about what to eat? It's no wonder with so much conflicting advice circulating among athletes looking for a competitive edge. Some nutrition expert’s say you should eat pasta for endurance, others say pasta makes you fat. Should you eat the "gold-standard" high-carbohydrate, low-fat diet, or will you perform better in the "Zone?" Just in case you are one of the three people who haven't yet heard of the "Zone," the term comes from the best-selling, but controversial book, "Enter the Zone," by Barry Sears. Sears recommends a performance diet that balances protein,

carbohydrate and fat in a strict 30:40:30 ratio. The "Zone" diet is higher in protein and fat and lower in carbohydrate than the conventional training diet, which balances the percentage of protein, carbohydrate and fat in a 15:65:20 ratio.

While Sears' theory has become the latest fad among athletes, it has been criticized by the experts. Sears believes that Americans are fatter because we're eating less fat! He has no data to support this conclusion, but cites as "evidence" the fact that obesity in the U.S., has risen over the past 15 years despite a decrease in fat consumption. He implies a cause and effect relationship without producing any evidence that one exists. Seras also believes that carbohydrates cause obesity by activating insulin production. However, this is a simplistic view of how insulin works. Carbohydrates are only converted to fat only if a person chronically consumes excess calories. Sears claims that his diet enhances performance, improves mood and makes it easier to maintain a healthy weight. Again, there is no evidence for these claims, but the diet may aid weight loss simply because it is low in calories.

The conventional high-carbohydrate, low-fat diet has a large body of evidence supporting it, has withstood the test of time, and is the diet recommended by the vast majority of fitness and nutrition experts for fueling athletic performance. This diet helps prevent and reverse high cholesterol, and helps many people lose body fat. However, athletes consuming more than 5,000 calories per day often have trouble eating the sheer volume of food that this diet recommends, while women eating fewer than 1,500 calories per day may not get adequate protein. And many athletes make the mistake of consuming too many of their carbohydrates from refined foods like

sugar and white flour, and not enough from fruits, vegetables and whole grains.

The high-protein diet recommended by Sears contains too much protein and fat, and too little carbohydrate for most athletes. Athletes eating 2,000 calories per day (most women) would get only 200 grams of carbohydrate--100 grams fewer than the minimum recommended for athletes--while consuming double their protein needs. Carbohydrate isn't a problem for athletes consuming more than 4,000 calories, because 40% of 4,000 calories provides 400 grams of carbohydrate--comfortably above the minimum requirement. But, the 300 grams of protein a person would consume on this diet provides three times more protein than needed. Excess protein is expensive, promotes dehydration and causes the loss of calcium from bones, contributing to the development of osteoporosis.

However, the answer to "What's the best diet for me?" may turn out to be an unequivocal "it depends." People are biochemically different, with variations in biological ancestry, metabolism and lifestyles. For example, some people who live healthy lifestyles and eat low fat diets battle high cholesterol, while others who up on junk food and never develop a cholesterol problem. Most of us can indulge in desserts when the whim strikes, but people with diabetes have to carefully monitor their sugar consumption. Some people need to limit salt to keep their blood pressure down, while others find their blood pressure unaffected by salt intake. The point is, we are all different, so the idea that there is one best diet for everyone is probably too narrow. The truth is, some people may perform better on a higher protein diet, and others may perform better on a higher

carbohydrate diet. The majority of us are probably somewhere in between.

FINDING YOUR PERSONAL DIETARY TRUTH

The best way to find your own best diet for peak performance is to experiment. Start keeping a food diary, and after each meal or snack, ask yourself these two questions:
Do I become hungry again within an hour or two? And,
Do I become groggy or "fuzzy-brained?"
If the answer to both questions is yes, look to see if you're eating too much sugar or refined carbohydrate like cookies, candy, bagels and muffins. If so, you might try cutting down on your sugar intake and replacing refined carbohydrate with unrefined whole grains, fruits and vegetables. You can also try adding a little more low-fat protein to your diet and monitoring how you feel. Good low-fat protein choices include: skinless chicken, turkey, water-packed tuna, egg whites, low-fat cottage cheese or yogurt, dried beans, lentils and tofu.

You may find that small changes in your diet provide the gains in energy and performance you're looking for. You probably don't need to makes dramatic dietary changes. Moderation is a far too underrated concept. Many female athletes consume too little protein in their attempt to avoid fat and might benefit from eating a little more protein without compromising the carbohydrate they need. Athletes consuming more than 4000 calories per day might do better with a slightly higher percentage of calories from fat to help decrease the sheer volume of food they must consume. (Remember,

the more fit you are, the more fat you burn, so athletes in the higher calorie ranges can get away with more fat than the rest of us.)
To boost your energy and well being, make sure to include more vitamin and mineral-rich foods. Eat at least 3 to 4 pieces of fresh fruit and 3 to 4 cups of vegetables every day. Choose only 100% whole-grain breads and cereals. Minimize your intake of refined and processed foods. If you need help figuring out the best diet for your body and your sport, consult a registered dietitian trained in sports nutrition.

Medal Winning Forms

Forms, patterns, tul, by whatever name you call them they offer an exciting element to Taekwondo tournament competition. As a judge at AAU Taekwondo tournaments, I know what a great pleasure it is to see a crisp, powerful medal winning form. If you are nervously awaiting your first tournament competition, or are a seasoned medal winner, here are some tips to help you enjoy the experience and hopefully bring home the gold.

First, lets look at what the judges are looking for. In AAU Taekwondo tournaments we welcome a wide variety of traditional Taekwondo forms including ITF, ATA, WTF, and TSD/MDK forms. This variety means that the judges may not themselves practice the form that is being performed before them. So, how do they judge it? By using criteria that the AAU considers common to all these forms. These criteria are beauty, grace, rhythm, focus, power and technique. Now that you know what the judges are looking for lets take a closer look at how the scoring system works.

Here's a hypothetical situation. A competitor has performed their form and the five judges have presented their scores. First, the high and low scores are dropped, and then the three remaining scores are totaled. If those scores were 8.7, 8.9 and 8.8. They would add up to a total 26.4. After dropping the high and low scores from the next competitor their three remaining scores are 8.4, 8.5 and 8.5 and add up to a total of 25.4. If there were only two competitors we now know who would win the gold medal and who would win the silver medal. When do they use the high and low scores? In the case of a tie, first the low score is added back in and if the score is still tied then the high score is added back in.

Here are some tips for how you, the motivated and enthusiastic competitor, can maximize your score.

Enthusiasm - This definitely get you off on the right foot. When your name is called out and you smartly acknowledge, respectfully bow and present yourself to the judges, this sets a tone that alerts the judges that there is a motivated competitor coming.

Power - Unlike in class where you might be expected to punch and kick for an hour or two, the chances are that you will only have to do one pattern that lasts a couple of minutes. There is no reason to save yourself for later. Let it all out, while remaining in control, and really show you have the power to make each punch and kick count.

Don't race Through the Form - Really showcase that you know each move. Don't race through the form just to get it over with. If there are parts of the form where you feel you are weak, focus your

training on improving them rather than just trying to get past the weak spots quickly.

Learn The Meaning of The Moves - The more you understand the purpose behind the moves the easier it is to perform them correctly. Learning the intended target and the purpose of each move helps you bring "realism" to your form.

Enjoy Yourself - Remember why your there; to enjoy a fun day of competition, to challenge yourself, and win or lose, to have a good time meeting and competing with other martial artists. It's not life or death. So, enjoy the experience and use those stomach butterflies productively; to raise your intensity level.

Don't be Afraid of the Judges - Who are the judges? They're people like you who enjoy Taekwondo. They love to watch a crisp powerful form and are rooting for each competitor to their best. Don't be intimidated if they sit their stone-faced, they are doing it out of respect for you. You wouldn't want them laughing and joking up there now would you?

Don't Lose Your Energy if you make a Mistake - Nobody's perfect. Some days are good days and some we try to forget. If you make a mistake keep going. Remember, 7.0 is the lowest score for a completed form. If you throw in the towel after a mistake your score drops to 0.0. Everyone makes mistakes even your competitor. So, just because you kicked at the wrong time don't let it phase you. Show the judges all the rest of the things you can do well.

Don't be discouraged if you have to Start Over - O.K., so you had a mental block and momentarily lost your place and you just cannot continue. It's all right. If you are a colored belt at an AAU tournament you can start again. Just bow to the judges and ask if you can start over. Your second chance will now be scored fresh without consideration of the first attempt. After the judges have totaled your score they deduct two-tenths (.2) of a point from the total score (not from each judges score!). Thus, a 27.5 only drops to a 27.3. Give your second try all the enthusiasm and effort of your first try and you may still win the gold!

Your Competitors Are Your Peers - Feel intimidated by the black belt with 6 gold stripes standing in the lobby? Don't worry, because you're competing against your same age and belt level. Your competitors are people just like you with a similar experience level. They're nervous too!

Make Sure you are doing the Correct Form for Your Rank - AAU tournaments are quite specific which patterns go with each belt color. Make sure you check this year's handbook. Don't get disqualified because the pattern you did doesn't conform to the AAU rulebook. "My instructor always teaches Choong- Moo or Pal Gwe 8 to yellow belts," doesn't matter. The rules specify which patterns go with each belt color and "No Variation will be accepted." This is your assurance that you are competing on a level playing field and that someone doesn't get up and do a black belt form as a yellow belt.

Practice! Practice! - Think how confident you'll be when that form you practiced all winter really shines at the spring tournament.

Don't be Disheartened if You Don't Win a Medal - Many people don't realize that the scores are usually very close. If 27.9, 27.6, and 27.5 win gold, silver and bronze, there are probably plenty of scores that just finished out of the money. Your 26.9 means you are probably average for your level. The people that won were above average that day. So, don't feel discouraged, just work hard to be above average next time!

Lastly, here is a little secret from one competitor to another. Everything you did to improve your forms for the tournament doesn't go away. Win or lose you've made yourself better and that sticks with you long after the tournament is over. That's the ultimate gold medal

What is plyometrics?

Speed and strength are integral components of fitness found in varying degrees in virtually all-athletic movements. Simply put the combination of speed and strength is power. For many years coaches and athletes have sought to improve power in order to enhance performance. Throughout this century and no doubt long before, jumping, bounding and hopping exercises have been used in various ways to enhance athletic performance. In recent years this distinct method of training for power or explosiveness has been termed plyometrics. Whatever the origins of the word the term is used to describe the method of training which seeks to enhance the explosive reaction of the individual through powerful muscular contractions as a result of rapid eccentric contractions.

Muscle Mechanism

The maximum force that a muscle can develop is attained during a rapid eccentric contraction. However, it should be realized that muscles seldom perform one type of contraction in isolation during athletic movements. When a concentric contraction occurs (muscle shortens) immediately following an eccentric contraction (muscle lengthens) then the force generated can be dramatically increased. If a muscle is stretched, much of the energy required to stretch it is lost as heat, but some of this energy can be stored by the elastic components of the muscle. This stored energy is available to the muscle only during a subsequent contraction. It is important to realize that this energy boost is lost if the eccentric contraction is not followed immediately by a concentric effort. To express this greater force the muscle must contract within the shortest time possible. This whole process is frequently called the stretch shortening cycle and is the underlying mechanism of plyometric training.

Choose the method to fit the sport

The golden rule of any conditioning program is specificity. This means that the movement you perform in training should match, as closely as possible, the movements encountered during competition. If you are rugby player practicing for the line-out or a volleyball player interested in increasing vertical jump height, then drop jumping or box jumping may be the right exercise. However if you are a javelin thrower aiming for a more explosive launch, then upper body plyometrics is far more appropriate.

Plyometric Exercises

The following are examples of lower body and upper body plyometric exercises.

Lower Body

Drop Jumping: This exercise involves the athlete dropping (not jumping) to the ground from a raised platform or box, and then immediately jumping up. The drop down gives the pre-stretch to the leg muscles and the vigorous drive upwards the secondary concentric contraction The exercise will be more effective the shorter the time the feet are in contact with the ground. The loading in this exercise is governed by the height of the drop which should be in the region of 30-80 cm. Drop jumping is a relatively high impact form of plyometric training and would normally be introduced after the athlete had become accustomed to lower impact alternatives, such as two-footed jumping on the spot.

Bounding and hurdling: If forward motion is more the name of your game, try some bounding. This is a form of plyometric training, where over sized strides are used in the running action and extra time spent in the air. Two-legged bounds reduces the impact to be endured, but to increase the intensity one legged bounding, or hopping, can be used. Bounding upstairs is a useful way to work on both the vertical and horizontal aspects of the running action. Multiple jumps over a series of obstacles like hurdles is a valuable drill for athletes training for sprinting or jumping events.

These exercises are all aimed at the lower body, but a variety of drills can be used to make the upper body more explosive.

Upper Body

Press ups & hand clap: Press-ups with a hand clap in between is a particularly vigorous way to condition the arms and chest. The pre-stretch takes place as the hands arrive back on the ground and the

chest sinks, and this is followed quickly by the explosive upward action. Once again, to get the best training effect keep the time in contact with the ground to a minimum.

Medicine Ball: Another means of increasing upper body strength popular with throwers is to lie on the ground face up. A partner then drops a medicine ball down towards the chest of the athlete, who catches the ball (pre-stretch) and immediately throws it back. This is another high-intensity exercise and should only be used after some basic conditioning.

Planning a Plyometric Session

The choice of exercises within a session and their order should be planned.
A session could:

- begin with exercises that are fast, explosive and designed for developing elastic strength (low hurdle jumps; low drop jumps)
- work through exercises that develop concentric strength (standing long jump; high hurdle jumps)
- finish with training for eccentric strength (higher drop jumps).

An alternative session could:

- begin with low hurdle jumps
- progress to bounding and hopping
- continue with steps or box work
- finish with medicine ball work out for abdominal and upper body.

Warm up

A thorough warm-up is essential prior to plyometric training. Attention should be given to jogging, stretching (static and ballistic), striding and general mobility especially about the joints involved in the planned plyometric session. A warm-down should follow each session.

How many ?

It is wise not to perform too many repetitions in any one session and since it is a quality session, with the emphasis on speed and power rather than endurance, split the work into sets with ample recovery in between.

Where to do it and what to wear

For bounding exercises use surfaces such as grass or resilient surfaces. Avoid cement floors because there is no cushioning. Choose well-cushioned shoes that are stable and can absorb some of the inevitable impact. All athletes should undergo general orthopedic screening before engaging in plyometric training. Particular attention should be given to structural or postural problems that are likely to predispose the athlete to injury.

Conditioning for plyometrics

Higher than normal forces are put on the musclosketal system during plyometric exercises so it is important for the athlete to have a good sound base of general strength and endurance. Most experts state that a thorough grounding in weight training is essential before you start plyometrics. It has been suggested that an athlete be able to squat twice his body weight before attempting depth jumps.

However, less intensive plyometric exercises can be incorporated into general circuit and weight training during the early stages of training so as to progressively condition the athlete. Simple plyometric drills such as skipping hopping and bounding should be introduced first. More demanding exercises such as flying start single-leg hops and depth jumps should be limited to thoroughly conditioned athletes.

Young athletes

Some authors suggest that moderate jumps can be included in the athletic training of very young children (Lohman, 1989). However, great care needs to be exerted when prescribing any training procedures for preadolescent children. Because of the relatively immature bone structure in preadolescent and adolescent children the very great forces exerted during intensive depth jumps should be avoided (Smith, 1975).

Summary

Plyometric type exercises have been used successfully by many athletes as a method of training to enhance power. In order to realize the potential benefits of plyometric training the stretch-shortening cycle must be invoked. This requires careful attention to the technique used during the drill or exercise. The rate of stretch rather than the magnitude of stretch is of primary importance in plyometric training. In addition, the coupling time or ground contact time must be as short as possible. The Challenge to you as coach or athlete is to select or create an exercise that is specific to the event and involves the correct muscular action. As long as you remember specificity and to ensure there is a pre stretch first then the only

limit is your imagination.

Improving Your Lactic Acid Threshold

The expression lactic acid, or lactate, is used most commonly to describe the intense pain felt during exhaustive exercise, especially short events like the 400 meters and 800 meters. To explain what it is we first have to look briefly into how the working muscles use energy (ATP). Actively contracting muscles obtain Adenosine Triphosphate (ATP) from glucose stored in the blood stream and the breakdown of glycogen stored in the muscles. Initially pyruvic acid and small amounts of ATP are generated from the breakdown of glucose. The pyruvic acid mixed with oxygen is converted to carbon dioxide, water and ATP. When muscles contract vigorously for long periods the circulatory system begins to lose ground in delivery of oxygen. In these conditions most of the pyruvic acid produced in the breakdown of glucose is converted to lactic acid (LA). As the lactate is produced in the muscles it leaks out into the blood and is carried around the body. If this condition continues the functioning of the body will become impaired and the muscles will fatigue very quickly. When oxygen becomes available the lactic acid is converted to pyruvic acid and then into carbon dioxide, water and ATP.

Given that high levels of lactate will be detrimental to performance, one of the key reasons for endurance training is to enable the body to perform at a greater pace with a minimal amount of lactate. This can be done by long steady runs, which will develop the aerobic capacity by means of capillarisation (formation of more small blood vessels, thus enhancing oxygen transport to the muscles) and by

creating greater efficiency in the heart and lungs. If the aerobic capacity is greater, it means there will be more oxygen available to the working muscles and this should delay the onset of lactic acid at a given work intensity.

Anaerobic Threshold

Lactic acid starts to accumulate in the muscles once you start operating above your anaerobic threshold. This is normally somewhere between 85% and 90% of your maximum heart rate (MHR).

What a low Lactate Threshold means

If your lactate threshold (LT) is reached at low exercise intensity, it often means that the "oxidative energy systems" in your muscles are not working very well. If they were performing at a high level they would use oxygen to break lactate down to carbon dioxide and water, preventing lactate from pouring into the blood.

If your LT is low it may mean that:

- you are not getting enough oxygen inside your muscle cells
- you do not have adequate concentrations of the enzymes necessary to oxidize pyruvate at high rates
- you do not have enough mitochondria in your muscle cells
- your muscles, heart, and other tissues are not very good at extracting lactate from the blood

Improving your Lactic Threshold

The aim is to saturate the muscles in lactic acid, which will educate the body's buffering mechanism (alkaline) to deal with it more

effectively. The following are example sessions (running) to help improve your LT.

- 8 * 200 meters at 100% effort - recovery 4 minutes
- 4 * 75 seconds at 100% effort - recovery 5 minutes
- 5 * 60 seconds at 100% effort - recovery 2½ minutes
- 3 * 90 seconds at 800 meter pace - recovery 4 minutes
- 3 * 120 seconds at faster than 1500 meter pace - recovery 5 minutes

A session should be conducted once a week and commence eight weeks before a major competition. This will help the muscle cells retain their alkaline buffering ability.

The Psychology of Training: Using Mental Imagery

Why do we need Psychology in sports?
The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. They may become tense, their heart rates race, they break into a cold sweat, they worry about the outcome of the competition, they find it hard to concentrate on the task in hand. This has led coaches to take an increasing interest in the field of sport psychology and in particular in the area of stress control. That interest has focused on techniques which athletes can use in the competitive situation to maintain control and optimize their performance. Once learned, these techniques allow the athlete to relax and to focus his/her attention in a positive manner on the task of preparing for and participating in competition.

Relaxation Training

There are a number of relaxation techniques, which have the following characteristics:

- procedures for first recognizing and then releasing tension in muscles
- concentration on breathing control and regulation
- concentration on sensations such as heaviness, warmth
- mental imagery

Regardless of which technique is used, the following two conditions need to exist if the technique is to be learned:

- the athlete must believe that relaxation will help
- A quiet, dimly lit and warm room which is free from interruption

Meditation for Relaxation

A number of people involved in sports psychology believe that meditation can be useful in getting maximum performance from an athlete (Syer & Connolly, 1984). Engaging in meditation helps reduce stress before an event and with experience the athlete can learn to relax different muscle groups and appreciate subtle differences in muscle tension. The technique includes the following steps:

- Lie down quietly on your back in a comfortable position and close your eyes.
- Deeply relax all your muscles, beginning at your feet and progressing to your face.
- Breathe through your nose and become aware of your breathing. As you breathe out, say the word "one" silently to yourself. For example, breathe in . . . out, "one"; in . . . out, "one"; and

so on. Continue for 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, lie quietly for several minutes at first with closed eyes and later with opened eyes.

Maintain a passive attitude, permit relaxation to occur at its own pace and expect other thoughts. When distracting thoughts occur return your concentration to your breathing. Try to practice a relaxation technique once a day.

How do I achieve relaxed muscles?
Progressive muscular relaxation involves the active contracting and relaxing of muscles. When a muscle is tightened for 4-6 seconds and then relaxed, the muscle returns to a more relaxed state. This process should be performed for the following parts of the body in turn -- feet, legs, thighs, buttocks, stomach, back, neck, shoulders, arms, hands, jaw, face and eyes.

How will relaxed muscles feel?
J.H. Schultz in the 1930s noticed that patients in a relaxed state experienced one of two sensations: the feeling of warmth or the feeling of heaviness in completely relaxed limbs. During the relaxation process concentration should be focused on one of these sensations. For the first few sessions the athlete should alternate the focus between sessions to determine which one they prefer.

Can Relaxation have a Negative Effect?
In a competition situation an athlete will either be:

- under-excited; low in arousal; find it hard to "get up" for the competition; disinterested; etc.,

- over-excited; high in arousal; over the top; nervous- anxious; scared of the competition; sick with worry; etc.
- optimally-excited; nervous but in control; looking forward to the competition but apprehensive; thinking positively; feeling good; etc.

If we were to use relaxation procedures with an over excited athlete, we might be able to reduce his/her arousal level to that of the optimally excited athlete. This would have a positive effect on his/her performance. However if we asked an under-excited athlete to use relaxation procedures it would only make it harder for him/her to "get-up" for the competition. The coach therefore has to know his/her athletes and how they react in competitive situations.

What is Mental Imagery?

Mental imagery involves the athlete imagining themselves in a specific environment or performing a specific activity. The images should have the athlete performing these items very well and successfully. They should see themselves enjoying the activity and feeling satisfied with their performance. They should attempt to enter fully into the image with all their senses. See, hear, feel, touch, smell and perform, as they would like to perform in real life. When an athlete is in a fully relaxed state, he/she is particularly receptive to mental imagery.

What can Mental Imagery be used for?
Mental Imagery can be used:

- To see success. Many athletes "see" themselves achieving their goals on a regular basis, both performing skills at a high level and seeing the desired performance outcomes
- To motivate. Before or during training sessions, calling up images of your goals for that session, or of a past or future competition or competitor can serve a motivational purpose. It can vividly remind you of your objective, which can result in increased intensity in training.
- To perfect skills. Mental imagery is often used to facilitate the learning and refinement of skills or skill sequences. The best athletes "see" and "feel" themselves performing perfect skills, programs, routines, or plays on a very regular basis.
- To familiarize. Mental imagery can be effectively used to familiarize yourself with all kinds of things, such as a competition site, a race course, a complex play pattern or routine, a pre-competition plan, an event focus plan, a media interview plan, a refocusing plan, or the strategy you plan to follow
- To set the stage for performance. Mental imagery is often an integral part of the pre-competition plan, which helps set the mental stage for a good performance. Athletes do a complete mental run through of the key elements of their performance. This helps draw out their desired pre- competition feelings and focus. It also helps keep negative thoughts from interfering with a positive pre-game focus.
- To refocus. Mental imagery can be useful in helping you to re focus when the need arises. For example, if a warm-up is feeling sluggish, imagery of a previous best performance or previous best event focus can help get things back on track. You can also use imagery as a means of refocusing within the event, by imagining what you should focus on and feeling that focus.

How do I Apply Mental Imagery?

Golfing great Jack Nicklaus used mental imagery. In describing how he images his performance, he wrote:
"I never hit a shot even in practice without having a sharp in-focus picture of it in my head. It's like a color movie. First, l "see" the ball where l want it to finish, nice and white and sitting up high on the bright green grass. Then the scene quickly changes, and I "see" the ball going there: its path, trajectory, and shape even its behavior on landing. Then there's a sort of fade-out, and the next scene shows me making the kind of swing that will turn the previous images into reality only at the end of this short private Hollywood spectacular do l select a club and step up to the ball."

When should mental imagery be used?
To become highly proficient at the constructive use of imagery, you have to use it ever day, on your way to training, during training, after training, and in the evenings before sleeping. If you want to perfect and use mental imagery to your fullest advantage you can start by doing two things. In every training session, before you execute any skill or combination of skills, first do it in imagery as perfectly and precisely as possible. See, feel, and experience yourself moving through the actions in your mind as you would like them actually to unfold. In competitions, before the event starts, mentally recall the event focus plan, significant plays, skills, movements, reactions, or feelings that you want to carry into the event.

What are the Benefits?

Relaxation itself can be useful in a number of circumstances including:

- the promotion of rest, recovery and recuperation
- the removal of stress related reactions, e.g., increased muscular tension, etc.,
- the establishing of a physical and mental state which has an increased receptivity to positive mental imagery
- the establishing of a set level of physical and mental arousal prior to warming up for competition.

When combined with positive mental imagery it is useful in:

- developing self confidence
- developing pre-competition and competition strategies which teach athletes to cope with new situations before they actually encounter them
- helping the athlete to focus his/her attention or concentrate on a particular skill he/she is trying to learn or develop. This can take place both in or away from the training session
- the competition situation.

"You only achieve what you believe"

This is a quotation of mine that I quote to an athlete when I hear them make a negative statement about their ability. I also use it to focus the athlete's attention when assisting them to develop mental imagery skills.

Upper Body Conditioning

One of the most common sites of injury is the lower back. Injury in this region can be as a result of muscular imbalance, weak or inflexible muscles or poor posture. It makes sense, therefore, to

develop a session that will work all these areas and give the right level of conditioning for injury prevention.

The exercises

Detailed below is a session of six exercises. The exercises are to be performed slowly and smoothly and at no time should you be out of breath.

Sit Ups (Lower Abdominal)

- Lie on your back with your legs bent, knees together and feet flat on the floor.
- Rest your hands on your thighs
- Sit up until the palms of your hands touch your knees
- Return to the starting position
- Perform the movements in a slow controlled fashion

Back Arches (Back)

- Lie on you front with your legs crossed at the ankles, keep your feet firmly anchored to the floor
- Hands and arms straight out in front of you
- Raise your upper body off the floor, keep your neck in line with your spine
- Hold for one second and then slowly lower to the floor

Speed Cramps (Upper Abdominal)

- Lying on your back, keep your legs together in the air, bent at the knees
- Rest your hands lightly on the side of you head (not the back of your neck)
- Raise your upper body to bring your elbows to your knees and go straight back down

Hip and Leg raise (Gluteals and hamstrings)

- Lie on your back with knees bent, feet flat on the floor

- Place your hands by your side
- Raise hips and straighten one leg and hold for a second before lowering
- Repeat with the other leg

Short sit ups (Hip flexors and Abdominal)

- Lie on you back with knees bent, feet flat on the floor
- Rest your hands lightly on the side of you head (not the back of your neck)
- Raise your body so that your upper body is at 30-40 degree angle with the floor
- Hold for one second before coming down slowly

Back Extensions (Back)

- Sit on the floor with legs bent, feet flat on the floor
- Position your hands on the floor behind you to take some of the weight
- Raise your body off the floor so that your body is parallel with the floor
- Hold for one second and slowly lower

How Many and How Often?

Start at one set of 10 repetitions. Each week increase the number of repetitions by 2. When you reach 20 repetitions increase the number of sets by one and start again at 10 repetitions.

The exercises should be performed two or three times a week and be incorporated into your training schedule.

Before You Start

Prior to starting any training program it is recommend that you have a medical examination to ensure it is safe for you to do so.

Motivate for Peak Performance

Whether you are heading to this year's Nationals, or just need a pick-me-up to keep your training on track, sometimes having a motivational saying gives that extra little mental boost. Here's a selection of sayings. Maybe one will inspire you to a gold medal.

Trust your hopes, not your fears.

The only way to discover the limits of the possible is to go beyond into the impossible.
The road to success is always under construction.

Luck is when preparation meets opportunity.

There is a big difference between wanting to and willing to.
Winning is seeing improvement in yourself.

You can always better your best.

Your toughest opponent is in the mirror.

The harder your work, the luckier you get.

Practice does not make perfect, perfect practice makes perfect.
Only those risking to go far will ever know how far they can go.

There is always room at the top.

Workout Components for Greater Athletic Performance

Building a workout routine, whether in class or on your own always brings up questions about what type of work an athlete should do to improve their performance. Let's look first at the physical workout.
There are three components to strength and speed training that work hand in hand. Weight training, Light resistance training, including Plyometric training, and Flexibility training. All three of these types of training help the body build the explosive quickness that we use in Taekwondo sparring.

For weight training, it not necessary to pursue maximum bulk, but rather to build the muscles for the purpose of explosive kicking and punching. The advantage to using weights is that they allow you to target and work specific muscles both in-groups and individually.

Light resistance training, such as plyometrics, uses the body's own weight--amplified by the act of jumping, leaping, bounding and hopping--to add not only build muscle strength, but to combine it with coordinated motion, thus building better balance and coordination along with power. Flexibility training uses stretching and kicking routines to build range of motion and accurate placement of techniques.
Combined, these three types of training give you a balanced physical training foundation.
What's missing? The mental workout.

Add in positive visualization training and motivational training, and you have the tools you need to compete at your top level.

So, the next time you're reviewing your workout routine, make sure all these types of training are included and you'll reach your maximum potential.

The Boxer's Secret

Boxers and Taekwondo athletes have a lot in common. Both types of fighting competitions are based on rounds with a short rest break in between. They both call for developing not just quickness, timing and muscular strength, but also stamina and coordination. However, one of the boxer’s most basic training tools is too often neglected by martial artists-the jump rope.

Think of every boxing movie that you've ever seen and you'll remember someone skipping rope?
Why?

Because it's one of the cheapest, easiest, and most readily available tools to improve your stamina, coordination, strength, balance, and all-around conditioning. It burns more calories than jogging and is great for aiding weight loss and full-body toning.
To get started skipping rope you've first got to get a high quality jump rope, which you can find at a sporting goods store. Look for a "speed rope" made of plastic vinyl. Unlike leather ropes, these have ideal weighting.

Now you need shoes. Never skip rope barefoot! Quality footwear is essential and should consist of cross-training shoes. Running shoes

are not recommended, as they do not sufficiently cushion the impact.
Lastly, you need the proper jumping surface. Don't jump on concrete, asphalt or tile. Use a more forgiving surface, such as a wood floor, dance floor, carpet or high-density mat.
Now its time to jump!

Break your routine into rounds, just like your sparring and give yourself a 30-second rest break between each round.

Keep your feet low to the ground. They should only rise 1" to 2" off the ground. This will help keep your jumping from being a "high impact" activity.
Keep the jump rope swinging 8"-12" over your head and try to maintain a pace of 125-175 evolutions per minute.

Slowly build up the total number of rounds you can jump. When you can do a thirty-minute workout, you'll be ready for anything.
It's that simple.

Now you know the boxer's secret!

Strategic Tips for Winning Olympic Style Sparring

Strategic Tips for Winning
Counterattacking has a better chance of scoring than attacking for advanced competitors.
Beginning and intermediate competitors are most likely to score with single direct attacks.

In a close match, an attacking fighter is more likely to win than a counterattacking fighter is unless the counterattacker can score a knockout.

The most frequently used attacks are roundhouse kick, back kick and axe kick. Successful competitors can effectively counter these kicks.
The sidekick and front kick are rarely used in competition any more and are highly unlikely to score points.

The roundhouse kick is the preferred kick for scoring, followed by the back kick and axe kick.
Kicks to the trunk score points more frequently than kicks to the head.
Spin whip kick is the least likely kick (out of the frequently used kicks) to score.
Feinting should be used sparsely and only when there is an intention to attack.

Counterattacking fighters should capitalize on the use of their front leg to increase chances of scoring.
Occupying the center of the ring is most advantageous.

When the opponent positions himself in the corner, prepare to counter an aggressive attack.
When the referee says "Kaesok" attack immediately

Stretching by the Clock

Martial Artists know that stretching is key to improving flexibility and reducing injury. But for how long should you stretch a muscle for maximum results? Ten seconds? Thirty seconds? A minute?

Now a study authored by Brent Feland, Ph.D. that was presented at the American College of Sports Medicine's annual meeting gives a scientific basis for an activity that most people do strictly by feel.
Dr. Feland's study looked at hamstring stretches and broke the study participants into groups that ranged from no stretching to 15, 30, and 60 seconds stretches.

The results clearly showed that the participants who stretched for 60 seconds had by far the greatest benefit. Dr. Feland found that the participants that stretched for 60 seconds had nearly double the increase in flexibility and range of motion of all the other groups.

So, the next time you're taking a moment to stretch, make that moment last 60 seconds. It will be time well spent.

Increase your Flexibility

Stretch every time you exercise. The only way to improve your flexibility is through consistent stretching exercises. Every muscle is subject to the myotatic reflex (stretch reflex) which opposes changes in muscle length, especially sudden or extreme changes. When a muscle lengthens beyond a certain point, the myotatic reflex causes it to tighten and attempt to shorten. This is the tension you feel during stretching exercises.

The myotatic reflex is desirable because it prevents, in many cases, muscle strains and tears. Without it your muscles would be allowed to overextend and tear easily. But it is also undesirable in cases where it prevents you from fully using your body.

Through stretching, deconditioning of the myotatic reflex takes place. Little by little, you teach your muscles a new limit of safe extension. This is why stretching must be slow and consistent. If you overstretch and injure the muscle, you have to go back to a lower level of flexibility and start over. Set your stretching goals over a period of weeks or months, not days, for best results.

There are three types of stretching: static, dynamic and ballistic. Ballistic stretching means bobbing, bouncing or using some type of moving pressure to stretch the target muscles. Ballistic stretching is not recommended because it activates the myotatic reflex and causes the muscles to tense, rather than relax. Ballistic stretching has a high risk of injury.

Dynamic stretching means moving the muscle through its full range of movement. Dynamic stretching leads to greater flexibility in movement but should be done with caution so it does not become ballistic stretching. To maintain a correct dynamic stretch, focus on smooth, even movements that do not shock the muscle. Examples of dynamic stretches are knee raises, leg raises, arm circles, and trunk circles. Static stretching is a controlled stretch. A specific muscle or muscle group is extended to the point of feeling slight pain and held in t hat position for ten to sixty seconds. During static stretching, concentrate on relaxing the target muscles and breathing deeply. Begin your flexibility workout with several minutes of gross motor

activity to increase your blood flow. Increased blood flow improves the suppleness of the muscles. Then move to joint loosening exercises followed by dynamic stretches to the get the muscles moving freely. If you are working only on flexibility, do static stretches next. If you are training, interspersing periods of static stretching throughout the workout works best because the range of motion increases as the body warms up. Do some light static stretches at the end of every workout to relax and refresh your muscles.

CAUTIONS:

- Do not overstretch. A mild sensation of burning or pulling should be felt in the target muscles. It should be uncomfortable but not unbearable. Avoid bouncing during a stretch. Bouncing causes the muscles to tighten and heightens the risk of injury.
- Follow instructions for exercises carefully. There is right and wrong way to stretch every muscle. Good flexibility exercises are designed to provide a maximum stretch with a minimum risk of injury.
- Do gravity assisted stretches with caution and only after fully warming up. Gravity assisted stretches are exercises like splits that use the force of gravity to increase the pressure on the stretch.
- You should never feel pain in your joints during stretching exercises. If you do, stop immediately and discontinue that exercise.
- When doing flexibility exercises that require bending at the waist, always bend from the hip, not the lower back.
- The lower back is extremely vulnerable to injuries.
- Always increase strength and flexibility together.

Eating Your Way to Muscle Recovery

Exercise is a form of trauma. As the muscle cell works during exercise it undergoes considerable trauma and it is this trauma that brings on the soreness so familiar to anyone who has pushed himself or herself hard during a workout.

Now studies have identified a buildup of free radicals during exercise as one of the causes of muscle soreness. The buildup, called oxidative stress, is caused by free radical damage to the muscle cell membrane. What can you do to reduce free radical damage? Antioxidants including Vitamin C and E have been shown to reduce free radical buildup during exercise and protect against muscle damage.

In addition, a new study by Dr. Donald Layman of the University of Illinois in Urbana has shown that the amino acid Leucine, an amino acid found in protein-rich foods, can speed muscle recovery after exercise. Dr. Donald Layman recommends the consumption of protein-rich foods "as soon as possible after exercise." Layman explains that Leucine appears to have a specific, and apparently unique, impact on skeletal muscle. According to Layman, Leucine, similar to the hormone insulin, stimulates a cascade of chemical signals that "jump-start" the post-exercise protein metabolism process.

So after your workout, drink antioxidant rich juices such as orange juice, and eat protein rich foods.
Your muscles will thank you.

Shoto Dojo Kun

Hitotsu. Jinkaku Kansei ni Tsutomuro Koto.
One. Seek Perfection of Character
Hitotsu. Makoto no Michi wo Mamoru Koto.
One. Defend the Path of Truth
Hitotsu. Doryoku no Seishin o Yashinau Koto.
One. Strive to Excel
Hitotsu. Reigi o Omonzuru Koto.
One. Be Courteous
Hitotsu. Kekki no Yu o Imashimuru Koto.
One. Refrain from Violence

As you read the Kun you should notice something. Each line begins with the number 1. Why? Why not 1, 2, 3, etc.? Well, Funakoshi sensei felt that no item of the Kun was any more important than another. Therefore, each item was number 1. Get it?
You should read and study the Kun. As you do, you will come to understand it better each and every time you read it.

Shoto Niju Kun

Karate-do wa rei ni hajimari, rei ni owaru koto wo wasuruna.
Karate begins and ends with courtesy
Karate ni sente nashi.
There is no first attack in karate.
Karate wa gi no tasuke.
Karate is an assistance to justice.
Mazu jiko wo shire, shikoshite tao wo shire.
Know yourself before you know others.

Gijutsu yori shinjutsu.
Spirit before technique.
Kokoro wa hanatan koto wo yosu.
Be ready to free your mind.
Wazawai wa getai ni shozu.
Accidents come from inattention.
Dojo nomino karate to omou na.
Karate training is not only in the Dojo.
Karate no shugyo wa issho de aru.
You will never stop learning karate.
Arai-yuru mono wo karate-ka seyo, soko ni myo-mi ari.
Make karate part of your life and you will find myo.
Karate wa yu no goto shi taezu natsudo wo ataezareba moto no mizu ni kaeru.
Karate is like hot water. If not given continual heat, it will go cold.
Katsu kangae wa motsu na makenu kangae wa hitsuyo
Do not think you must win. Instead, think that you do not have to lose.
Tekki ni yotte tenka seyo.

Tattakai wa kyo-jitsu no soju ikan ni ari.

Hito no te ashi wo ken to omoe.
Think that your hands and feet are swords.
Danshi mon wo izureba hyakuman no tekki ari.
Be aware of your actions so as not to invite trouble.
Kamae wa shoshinsha ni ato wa shizentai.
First master low stances, then natural posture.
Kata wa tadashiku jissen wa betsu mono.
Practicing kata is no substitue for the real thing.

Chikara no kyojaku, karada no shinshuku, waza no kankyu wo wasaruna.

Tsune ni shinen kufu seyo.
Think of ways to apply these precepts every day.

Mind Like Water
Mizo No Kokuro

When performing, practicing or using karate, one must maintain a "mind like water". Yeah, right. What are you TALKING about?!?

This refers to the mental attitude while facing an actual opponent. It refers to the need of making the mind calm, like that of an undisturbed body of water.

Smooth water reflects accurately the image of all objects within its range, and if the mind is kept calm, comprehension of the opponent's movements, both psychological and physical, will be both immediate and accurate, and one's responses, both defensive and offensive, will be appropriate and adequate.

On the other hand, if the surface of the water is disturbed, the images it reflects will be distorted. In other words, if the mind is preoccupied with thoughts of attack and defense it will not properly comprehend the opponent's intentions creating an opportunity for the opponent to attack.

Water also other properties. Water can be quite destructive. In fact, over time, water is one of the most destructive forces on earth. Your mind must be like water. When necessary, be as destructive as you must.

Mind Like The Moon
Tsuki No Kokuro

This refers to the need to be constantly aware of the totality of the opponent and his/her movements, just as moonlight shines equally upon everything within its range. This means that one should watch just part of the opponent's body such as the hands or feet, rather watch the entire body. With the thorough development of this attitude, the consciousness will be immediately aware of any openings in the opponent's defenses.
Clouds blocking the light of the moon are likened to nervousness or distractions. These distractions stop the light from shining on everything. Likewise, they make comprehension of and reaction to the opponent's moves more difficult than they need to be.

Unity Of Will And Mind

If the mind is compared to the speaker of a telephone, then the will is like the electric current. No matter how sensitive the speaker, if there is no electric current, no communication takes place. Likewise, even if you correctly comprehend your opponent's movements and are aware of an opening, if the will to act on this knowledge is lacking, no effective technique will be forthcoming. The mind may

find an opening, but the will must be activated in order to execute the appropriate technique.

The Best Defense

"The best defense is a good offense!" We've all heard that before. And, yes, it is true, in most cases. So, does that mean we should be beating up everyone before they beat us? No, not at all.
Shotokan is a martial art. It is a fighting system. With it, we can cause serious damage to others (and ourselves if we are not careful).

1. Avoid the situation altogether (i.e. going to a bar where you know there will be trouble if you go)
2. Walk or run away from the situation if it presents itself
3. Talk your way out of it (God and evolution gave you a brain so use it)
4. Control techniques (for friends or ones who are annoying but not threatening) and finally
5. Use force for force.

The Gi (Uniform)

The uniform of Shotokan karate (and most martial arts, for that matter) is the gi. The gi is composed of a jacket, pants and a belt (obi).

Very traditional karate students keep their uniforms free from patches, buttons and writing. Their gis are also usually white, only. This is not to say it is wrong if you happen to be someone with

patches on your gi or have a different color(s) than white. To each his own!!

The gi should be treated with the same amount of respect as the Dojo, as your teacher, as yourself. Your gi is your outward appearance for your art. The gi should not have holes or be dirty. The holes can be repaired and dirt should be washed out. The gi should NEVER be left in a pile. When not being worn or washed, it should be hung up, folded or rolled up and tied with the belt.

Now, a word about belt color. There is a somewhat "standard" progression in belt colors, but many schools add their own colors into the mix. This usual progression appears to be White, Yellow, Purple, Green, and Red, Brown and then Black. There are then up to 10 levels of black belt. When you compare belt color with other martial art practitioners be aware that your school may or may not use the same color progression as another school. The belt colors (other than white and black) are really only valid within the walls of your own dojo.

Speaking of white and black, these are the only colors of the belt that are "original". The entire concept of adding various colors to designate rank was added when karate began being taught to US servicemen in Japan. The original idea of a "black" belt was due to the use the belt got and its age. A student would start his training with a white belt. Over the years, as the student trained and practiced, sweated and bled the belt would get dirtier and dirtier. Eventually, the belt would be "black". If the student trained long enough for the belt to get this color, they probably knew what they were doing (or they trained in a REALLY dirty dojo).

The Three K's

We've all heard of the three R's, right? Well, karate has something similar. The Three K's. What are they? Simple:
Kihon (Basics) Kata (Forms) Kumite (Sparring)

When practiced together, the above will help to create a more rounded martial artist. They will teach how to do the basic movements (kihon), how to put movements together (kata) and how to use the techniques in "real life" situations (kumite).

Kihon (Basics)
Kihon are the basics of karate. The individual techniques themselves. Stances, blocks, strikes, kicks, etc. These movements are usually practiced one at a time in the beginning, moving up to multiple moves. They are also practiced in a static stance first and then while moving.

Kata (Forms)
Kata are the forms that a Shotokan practitioner will perform. They are pre-arranged sequences of attacks and defenses. Their purpose is to teach the martial artist the proper way to move while performing the techniques and how to put multiple techniques together. When Gichin Funakoshi first formulated Shotokan, all he taught were kata. There was no separate instruction in how to perform an individual technique. The students learned the techniques through the kata. There also was no kumite, as Funakoshi thought it was too violent.

Kumite (Sparring)

Kumite is the one-on-one and one-on-many fighting that is practiced. The purpose of kumite is to teach the student how to perform his/her techniques with a live opponent, were as kata uses imaginary opponents. There are several types of kumite:

1. Kihon Kumite, or basic sparring is done with each opponent taking a step. Both attacker and defender take up fighting stances. The attacker will announce the technique they will throw (or it will be decided before hand by the instructor) and then step in towards the defender throwing that technique. The defender will step back and block and counter the technique. More advanced defenders may step in towards the attacker.
2. Jyu-ippon Kumite, or semi-free sparring is usually done with the participants taking multiple steps before the attack. There may three of five steps taken. The attacker will then announce his/her technique and execute it. The defender will block and counter. More advanced students may practice this sparring without announcing the attack.
3. Jyu Kumite, or free sparring is the most advanced type of sparring practice. Both practitioners assume fighting stances and have at it. There is no calling of techniques and no designated attacker/defender. Each student must attack and defend as and when they see fit.