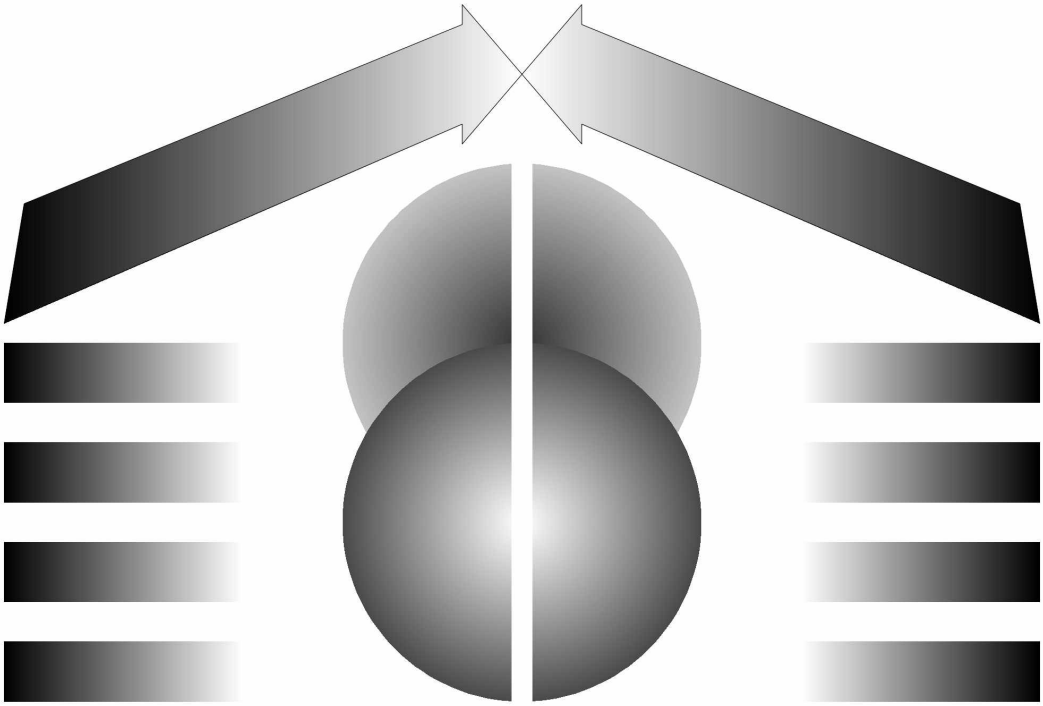
Reflections

On The Mental Side Of Sports



Marie Dalloway, Ph.D.

Comments about *Reflections On The Mental Side of Sports*
by Marie Dalloway, Ph.D.

"PEAK PERFORMANCE: The night Charles Barkley scored 56 points against the Golden State Warriors was a culmination of a range of physical and mental skills. The good news is that anyone can learn those skills and apply them to a profession, according to sports consultant Marie Dalloway of the Optimal Performance Institute in Phoenix, Arizona. Dalloway, who has worked with U.S. Olympic teams, focuses on the athlete in her new book, Reflections On The Mental Side of Sports. *She points out that the mental skills that help a top athlete 'are the same for all fields. What we're really talking about is human effectiveness.'"*

Michael Clancy, Clancy & Co. Column
The Arizona Republic

"To be successful in powerlifting, you will need to master many of the skills noted throughout this book. This straightforward summation of mental training in sports could be just the key you need to break through to a new level of performance."

Mike Lambert, Editor-in-Chief
Powerlifting USA

"Athletes at all levels need to know that performance enhancing mental skills are natural, simple, and easy to learn. Reflections is a masterful, comprehensive, user-friendly guide to sports psychology that both reveals and enables this dimension. It is the path of the future in self-improvement athletic programs."

Ted Goodrich, Director, Major Accounts Customer Support
Bull World Wide Information Systems

Reflections

On The Mental Side Of Sports

BY MARIE DALLOWAY

BOOKS:

Visualization: The Master Skill in Mental Training

Concentration: Focus Your Mind, Power Your Game

Drive and Determination: Developing Your Inner Motivation

Risk Taking: Performing Your Best During Critical Times

Reflections on the Mental Side of Sports

Performing Under Pressure: Mental Techniques for Handling Pressure in Tennis

Stress Control

Focus Under Pressure

Visualization Exercises for Mental Preparation

VIDEOS:

Visualization Training Exercises (training video for athletes)

CD-ROMs:

Visualization Exercises for Mental Preparation

Stress Control

Reflections

On The Mental Side Of Sports

BY MARIE DALLOWAY

Optimal Performance Institute
Phoenix, Arizona

Checklist For Tension and Anxiety Indicators from *The Athlete's Guide to Sports Psychology* by D.V. Harris and B.L. Harris. 1984, (Champaign, IL: Human Kinetics), 182. Reprinted with permission of Human Kinetics Publishers.

Cover design by Robin Abbott

ISBN 0-9634933-4-5
Library of Congress Catalog Card Number: 94-66323

Visit our web site at www.performance-media.com

"I noticed a crack between the rock and the snow sticking to the East Face. I crawled inside and wriggled and jammed my way to the top. A few more whacks with my ice-axe and Tenzing and I stood on top of Everest.

On the summit, Tenzing scratched out a little hole in the snow, and in this he placed some small offerings of food -- some biscuits, a piece of chocolate, and a few sweets -- a small gift to the Gods of Chomolungma which all devout Buddhists believe to inhabit the summit of this mountain. Beside the food, I placed the little cross that John Hunt had given me on the South Col. Strange companions, no doubt, but symbolical of the spiritual strength and peace that all peoples have gained from the mountains."

--Sir Edmund Hillary
Upon reaching the summit
of Mt. Everest May 29, 1953.

And in 1977...

"While Mike and I were in the plains, the climbers completed our pilgrimage by climbing Nas Parbat and Akash Parbat where they sprinkled the summit with holy Ganga water blessed by the pujare (priest) at the river's mouth."

--Sir Edmund Hillary

Describing the culmination of his 1977 expedition up the holiest river of India, the Ganges, or Mother Ganga as it is known. This journey which Hillary called "Ocean to the Sky," involved following the river from the Bay of Bengal to the source in ice-clad mountains. Hillary, 58 at the time, suffered cerebral oedema at 15,500 feet and had to be carried down, then air lifted to a hospital. The journey was completed by other climbers in the group as Hillary described.

Most of the chapters in **Reflections** are adapted from articles by the author that appeared in various publications as follows:

Exploring a Third (Mental) Level in Tennis. **Tennis Talk**. August/September 1982.

Mental Conditioning: Its Place in the Physical Culture of Sports. **Arizona Running News**. January 1985.

The Strategy of Optimal Performance Training. **Arizona Road Racers**. July/August 1987.

Running and Relaxing. **Arizona Running News**. June 1984.

Dealing Effectively With Performance Anxiety. **Sports Week USA**. October 2, 1985 and October 9, 1985. Also, **Women's Sports and Fitness**. June 1987.

Overcoming Mental Barriers. Adapted in part from *Sport Psychology: Mental Barriers Can Stop Athletes from Reaching Potential.* An article and interview by K.S. Perkes. **The Scottsdale Progress**. May 13, 1986.

Gaining Control Over Internal Dialogue. **Arizona Road Racers**. September/October 1987 and November/December 1987.

Gearing Up Mentally for Running. **Arizona Road Racers**. September/October 1987 and November/December 1987.

Drive and Determination: Developing the Mood of a Champion. **Southwest Exercise and Training**. July 1993.

Determining Your Formula for Success. **Southwest Exercise and Training**. March 1993.

CONTENTS

INTRODUCTION

"It's a feeling of wanting to go Mach 11 with your hair on fire. I have all this internal energy. I need to go to the wall and well beyond. Part of me wants to be the best--better than the best."

These are the words of a top performer describing the drive that fuels passionate and unrelenting striving for excellence.

I have learned far more from athletes than I have contributed, an imbalance I keep trying to rectify. Outstanding athletes that I have encountered, such as Brian Enos, Kathy Stiles, Greg Sapp and many others, have taught me about the nature of sport.

Sport experience is human experience played out on an athletic field. Athletics is about jumping farther, hitting a ball better, lifting a heavier weight, running or skating faster. However, in times of reflection, we realize that these are the outward gestures of the mind and spirit that create the action.

Certain people choose (or are chosen by) sport as their venue for winning respect, gaining competencies, and valuing excellence. As well as for other

experiences that are seldom talked about, such as feeling joy and finding self-expression. In this forum, the ideal of perfection is pursued. Athletes with that ineffable spark reach for something within themselves to create that rare moment of magnificence and human triumph. They lift all of us as they explore the boundaries of the possible.

Reflections on the Mental Side of Sports is an inside look at key issues and methods in mental training for athletes. The chapters are grouped into three sections by theme.

Reflections begins by exploring basic questions about mental training for athletes: What is mental training in sports? What are the signs that it is needed? How can it help an athlete?

This section describes an educational and training orientation in sport psychology. Recent understanding about athletic performance reveals that the mental qualities associated with top performance are skills. Qualities of the greats--poise, risk taking, drive, resilience--are skills that others can learn systematically. The main tasks in sport psychology become identifying the key mental characteristics that contribute to outstanding athletic performance, then designing programs that allow others to acquire these mental skills and strategies.

Part Two presents specific psychological techniques for enhancing sport performance. Descriptions of mental training methods include ways to heighten motivation, achieve relaxation, deal with performance anxiety, and overcome mental barriers. Also, guidelines for internal dialogue are considered, as well as steps to prepare mentally for a competition.

The final section may be for those who have had a few more journeys around the sun. A prime benefit of maturity is a deepening in the sense of understanding of one's self and the world. Mental training adds to this natural process that comes with maturity.

Mental training lends a broader perspective to the athletic experience. Sports become a vehicle for self-development, for exploring possibilities for maximizing human potential. This experiment in human development is conducted with the single subject protocol of the athlete himself or herself.

The issue of perspective is broached in "Athletes and Their Heroes" by showing that as athletes gain maturity they move from gauging their performance by external standards to internal standards. A similar theme permeates "The Ideal Performance State" and "The New Athlete." These chapters suggest that the purpose behind the years of practice and pain and dedication of the sports life is the search for the essence of one's self, the ultimate of what one is capable of being. Bringing that ultimate self into being is the struggle and joy of sport.

These three sections fit together in a progressive fashion. They represent areas of concern that receive different emphasis over time. Initially, the athlete (or the sport psychologist) asks the basic questions about mental training. Then the spotlight of attention shifts to practical, how-to techniques for improving performance.

The third movement in this progression concerns issues of purpose and significance. An athlete who has been in a game for a number of years and has attained a high degree of proficiency plays a different game on many levels. Mastery and the drive to develop an outward form for an inner vision of the self may replace the original game of tennis, or golf, or climbing. Section Three addresses the early stages of a shift in perspective that occur with accomplished and thoughtful athletes.

Athletes at all levels can benefit from training in mental skills. *Reflections* is directed toward a broad audience of athletes, ranging from the weekend warrior to the elite performer. This book is pertinent as well to individuals who work with athletes, such as trainers, coaches, psychologists, and managers. However, *Reflections* is especially for the athletes who are dedicated, the ones who strive courageously and persistently toward fulfilling their potential.

Marie Dalloway
March 1994

SECTION I

MENTAL TRAINING: WHAT IS IT?

MENTAL CONDITIONING: ITS PLACE IN THE PHYSICAL CULTURE OF SPORTS

Mental preparation for athletes no longer consists of pep talks and psyching up procedures. Rapid developments in sports psychology offer sports sophisticated mental techniques for enhancing performance. Still, the place of mental conditioning in the physical world of sports puzzles individuals in sports and in sports psychology.

This chapter addresses the issue of the role of mental training in sports. We begin by answering basic questions about mental conditioning. What is mental training for athletes? What are the signs that it is needed? How can it help?

With this basic information established, mental conditioning is presented as one component in a multi-dimensional approach toward maximizing athletic performance.

WHAT IS MENTAL TRAINING?

Mental conditioning is neither technical instruction on the physical skills of a sport nor tactical instruction on strategic approaches to use. Coaches, trainers, and accomplished competitors provide expert guidance on these matters. Mental conditioning focuses on psychological processes and mental skills that relate to competitive performance.

Two questions are at the heart of mental training: What are the mental characteristics that athletes need to develop to function at their peak level? What are the mental characteristics that athletes need to overcome to perform at their best level? Answering these questions involves identifying the mental qualities that contribute to optimal level athletic performance. Mental training also entails the development of programs that teach athletes these mental skills that allow them to perform up to their potential.

WHY THE CURRENT INTEREST IN MENTAL CONDITIONING?

In recent years mental training has been receiving attention as a factor in the total picture of athletic training. It has come into the limelight for numerous reasons.

Increasingly tougher competitive fields in every sport account for interest in mental conditioning. Differences between winning and not winning are measured in fractions of a second faster or in fractions of an inch farther or higher. Among accomplished competitors, differences in technical ability may be so small that psychological qualities can be decisive for victory. Recognizing this fact, national-level athletes include mental techniques in their training regimes. They practice methods such as relaxation, self-hypnosis, and visualization to find that slight advantage that may be the winning edge.

Dramatic moments in sports reveal athletics thrown into high relief. At the highest level of sports, as provided by the Olympic games, millions of people have the opportunity to peer past the physical demands of competition and recognize the significance of mental factors for achieving optimal performance.

Take the winning performance of Dan Jansen in the 1994 Winter Olympics. Before he skated the 1000-meter race, he fell in two shorter distance events. Although he held world records in shorter distances, the 1000-meter competition represented his only chance to be an Olympian. In the previous Winter Games, distraught by the death of his sister, he fell in what should have been his best events.

At twenty-eight and facing his final Olympic competition in 1994, he could have felt fated not to win in the 1000 meters. Instead he put in a powerful performance, winning the gold and setting a new world record.

The poise, control, and courage demonstrated by Jansen go beyond the parameters of speed skating. Dan Jansen showed that he had the "right stuff," the mental and emotional makeup to come up with a winning performance, triumphing over past defeats and disappointments and over formidable pressure. Shining moments in sports draw attention to the mental strengths of the performer, as well as to the extraordinary physical talent required.

The drug problem also prompts interest in mental training. Use of drugs in sports comes to the public's attention through news stories of drug problems and addicted players in national league sports. The scope of the problem is far more apparent to those inside the sports world. Kenneth Clarke, Ph.D., former director of the sports medicine division of the United States Olympic Committee, stated that virtually 100% of power athletes (shot putters, weight lifters, discus throwers) believed that national and international competitions were determined more by the "help" of steroids than by ability. In this context, mental training becomes attractive as a "clean" and effective alternative to "performance enhancement" drugs and other uses of drugs in sports.

DIAGNOSIS: WILL MENTAL TRAINING HELP?

Numerous signs point to the need for mental training. Inconsistency is the clearest indicator for mental conditioning. Not all inconsistency comes from mental factors.

Environmental and physical changes contribute to variations in performance level. Pain, poor surface conditions, weather conditions, general health status, can alter an athlete's performance. Mental training is called for

when inconsistency exceeds what can be attributed to physical and environmental factors.

Athletes playing better in practice or during workouts than in competitions also signals the need for mental training. One golfer I knew did extraordinary shot making on the practice green. When he played in competitions or when friendly bets were placed on a round, his playing deteriorated. His problem was not one of skill proficiency, since he demonstrated his high skill in practice.

Athletes who consistently play below their level of potential show another warning sign for mental skills. Every coach has known talented athletes who do not play up to their level of ability. Numerous problems can inhibit the maximal expression of athletic ability. Not dealing well with pressure, being overly self-critical, or underachieving can prevent even the most talented athletes from fulfilling their potential. Athletes with these difficulties are prime candidates for mental training.

BENEFITS FROM MENTAL TRAINING

Mental factors such as concentration, confidence, and relaxation play a role in maintaining high level performance. Achieving greater consistency represents the major outcome from effective mental training. Improvement in an athlete's consistency can be used as an index of success for a specific mental conditioning program. Mental conditioning clears the way to test how far athletes can reach with the talent they have and the training they do.

We all carry vivid pictures of the athlete who chokes, the one who is not able to deliver in the clutch situation. It is not all vicarious. Every weekend athlete has experienced those frustrating moments of not being able to play as well as he knows he can--the easy putt muffed when the "friendly" game is on the line. For the high school, college, or professional athlete inconsistency can mean being cut. For the weekend warrior it can mean giving up the sport or smashing a tennis racket in frustration--something that should be satisfying fun, is not.

Opposite to choking are those times when a player and the performance shift into a higher gear. Anyone who has played sports for love or money has

experienced a day or a game or a few minutes during a competition when everything comes together and the level of play shifts to a new peak. These occurrences are some of the most rewarding times in an athlete's life. Like magic, it all comes together. The mental clarity and acuity, excellent judgment, perceptual sharpness, and the sense of total concentration make everything suddenly easy. Experiencing this feeling makes the athlete aware that mental state--and, therefore, mental skills--are part of top performance.

Choking and heightened performance show that mental skills play a role in an athlete's performance level. The promise with mental training is to have an athlete play up to his or her level of ability consistently.

Even in the absence of dramatic swings in performance quality, mental training can improve play and make the game more rewarding. Tapping more of an athlete's potential, along with greater concentration, confidence, and relaxation are among the rewards.

MENTAL TRAINING: JUST ONE OF THE BASES

Sports champions are extremely talented. Yet, athletes do not reach world-class status by talent alone. Developing and expressing athletic talent require a number of bases to be covered. Mental skills represents one of those bases.

The view of a multi-based program for athletic development comes from top figures in the sports world, including Peter Ueberroth, the man who brought us the Olympic Games in Los Angeles in 1984 and the former commissioner of major league baseball.

Not surprisingly, the multi-base concept for maximizing athletic potential has developed first among elite athletes. The majority of national level athletes and coaches recognize that success at that level depends upon developing skills in four different areas.

What are the bases that need to be covered to allow full expression of athletic talent? The four steps to optimizing performance are like the four bases of a baseball diamond. First is the development of physical skills and proficiencies directly related to the chosen sport. This is the area of greatest concern and the main focus of attention for athletes and coaches.

Skill learning and systematic practice comprise this first step. Whether the athlete is learning the fundamentals or fine-tuning at the national level with video taping, exercise physiology instruction, and biomechanical analysis, step one involves the development and practice of sport-specific skills.

Tactics and strategy form the second base. Whether the sport is professional auto racing, marathon running, or playing the pro circuit in tennis, tactical knowledge plays a critical role in achieving top performance. Analysis of strengths and weaknesses of opponents, pacing and time-splits for maximal efficiency, and precisely designed training schedules for peak cycling for competitions, play a part in developing an overall strategy for a contest.

Serious competitors amass abundant knowledge about their sport: its history, current and past standouts, records in events, and momentous occasions in which their sport's legends broke mental and physical barriers. With this general knowledge as background plus tactical skill, athletes devise sophisticated tactical strategies for competitions. If two competitors stand at the same physical skill level, tactical savvy creates a performance edge. Knowing this, athletes and their coaches cover tactics systematically.

Achieving high level health and physical conditioning comprise the third base in a comprehensive program for developing athletic potential. Beyond building sport-specific skills, many athletes run (including intervals, fartleks, and hill workouts). This produces aerobic fitness but leaves out other dimensions of conditioning.

Dedicated athletes supplement aerobic training with ancillary steps to produce top conditioning. Flexibility training, strength work, and nutritional counseling complete a well-rounded conditioning program. Beyond sport-specific training, the four ingredients of aerobic training, flexibility training, anaerobic work, and nutritional counseling lift the athlete's level of conditioning *and* produce positive effects in general health and confidence.

Mental conditioning makes up the final base in a program for reaching full athletic potential. Developing the mental characteristics associated with optimal performance is the focus for mental training. Confidence-building techniques, concentration, and relaxation represent vital parts of mental conditioning.

Systematic skill development can be done with visualization, especially for the rehearsal of upcoming competitions. The skills of goal setting and belief modification also play a significant role in mental preparation.

Athletes and coaches automatically regard steps one, two and three as methods for enhancing performance. The fourth step of mental conditioning is new and less accepted. Our understanding of how mental techniques work is not fully in place.

Yet, progressively positive results occur from adding mental training to the total program for athletes. In the near future, mental conditioning will be seen as natural a part of athletic training as the other components.

Framing athletic development in the context of maximizing athletic potential leads to the concept of a multi-based training program. One approach to comprehensive, multi-dimensional training includes sports-specific skill development, tactical training, general physical conditioning (with aerobic, anaerobic, and flexibility training, plus nutritional counseling) and mental conditioning.

If athletes' performances fall short of their potential, the correction may not lie in adding more laps, or exercises, or roadwork. A multi-faceted training program can provide the map to full athletic development. Investing in mental training represents an effective step along the way to peak performance.

EXPLORING A THIRD (MENTAL) LEVEL IN TENNIS

Tennis, or any game, can be analyzed from a number of vantage points. Likewise, the game can be played with the player's focus of attention on different levels. This chapter focuses our attention on the level of gameplay that involves the player's intentionally changing his or her mental state to enhance performance. First, for contrast, we consider the ordinary levels of analysis and play of tennis and other games.

Growing up, my brother showed enthusiasm for endless recitals of statistics on football and baseball players. Like idiot savants, he and his friends rattled off trivia of players' names, numbers, positions, yardage gained in passing, yardage gained in running. They added no overview or analysis of a play, a game, or a season.

As teens, he and I developed an interest in the analysis of technique. The combination of statistics and technique might be called the first level of analysis of game play. With vital interest in a game, this level can be engrossing. Extensive knowledge of a game increases the acuity of perception and makes this analysis compelling.

Focusing attention at this level in tennis involves the mechanics of the game: the grip, the "touch" a player demonstrates, the fluidity of movement, positioning, foot work and foot speed, the service motion, execution of spins. Level one also includes strategy: the placement of the ball and the type of stroke and spin to use to capitalize on the angles of the game.

Level one can involve sophisticated analysis. All the savvy and knowledge of vectors, force factors, torque, and deceleration of the ball due to change in air pressure with spins, can be applied to the game. Attending a tennis match with someone who offers incisive analysis of the on-going action at level one is a genuine pleasure.

Young players or novice players function predominantly at level one. Experienced players move to level two of gameplay in tennis. After a player learns the mechanics of the game, the time comes to elaborate other elements.

One summer when I was a student, I read an article in *The New Yorker* magazine that profiled two tennis players. The writer presented a penetrating study of the tennis games, the personal histories, and the training regimes of two players with contrasting styles: Arthur Ashe and Dennis Ralston. Sharper differences in style are hard to imagine. In the men's field of top players at that time, they represented extremes in court demeanor and playing style. Ralston was hard, determined, aggressive, blasting. The late Arthur Ashe was conspicuous for his graciousness on and off the court. His style of play was fluid, graceful, cool and detached.

As the article showed, these players' style represented a microcosm of their overall style as people. We all know this truth. Even when players attempt to mask their responses, the choice of that ploy and how they use it arise from who they are as people. Chris Evert Lloyd and Bjorn Borg may have been the "best" at hiding their emotional responses to the ups and downs in a match. With Borg, if you tuned into one of his matches, you could not tell whether it was the first or the fifth set, whether the point in play was a pressure point or not, or whether Borg was winning or losing. With Evert, a peeved expression and a glance at the linesperson represented the outer extreme of her negative emotional reactions on court. These styles do not occur at random. They represent a characteristic way about the individual.

The New Yorker article made me wonder why sports writers and announcers seldom used this type of analysis. Sport reportage seemed mundane. Level two analysis, which I dubbed the psychological level, made the game fascinating. Studying psychology quickened my interest in level two of gameplay. While watching matches on television, I studied players from this angle.

As accomplished players of any game know, the second level of analysis has two sides: the psychological analysis of the opponent and of one's self. Players who are unfamiliar with an opponent's game watch tapes of the opponent from recent matches. This preview serves the purpose of analyzing the opponent's basic game and the quality of his or her strokes.

Equally important is the psychological analysis. Spotting lapses in concentration, self-deprecating remarks, the manner in which the opponent relates to the other player, responses under pressure, methods by which the opponent attempts to establish dominance, the opponent's preferred tempo of play are grist for the mill in level two. Scrutinizing these factors allows an analysis of an athlete's strengths and weaknesses that goes beyond the technical aspects of the game.

Assessing psychological strengths and weaknesses requires noting the variations that occur based on psychological responses. Players with mental toughness become grittier when behind or when playing critical points. Some players become fiercely aggressive and move their game up a level once they gain a comfortable lead. Others lose matches after they have a commanding lead. They fall apart when they should be closing the match out.

The moral of level two analysis is to know your opponent and yourself. Chart the mental strengths and weaknesses that your adversaries possess and those that you have. The strategy that arises from level two analysis is direct and effective: Play to your opponents' mental weakness and avoid or minimize their psychological strengths. Do the opposite in relation to yourself. Capitalize on your mental strengths by playing the kind of game that accentuates them; and minimize your weaknesses.

At high-level play, such as among world-class athletes, differences in technical ability may be so small that psychological differences become decisive for winning. For athletes at every level, performing to the athlete's potential demands strengthening mental skills. Recognizing the importance of mental factors, athletes experiment with mental training methods, such as breathing techniques, relaxation, and self-hypnosis.

These techniques are used to overcome mental habits that detract from competitive performance. Mental training, presented at level two, becomes a way of shoring up the flaws on which perceptive opponents can pounce. This orientation to mental training parallels sound tactical strategy of level one--playing to one's strengths and playing to opponents' weaknesses.

Given the first level of analysis of statistics and technique, and the second level of mental methods designed to bolster detectable mental weaknesses, you may wonder what more there could be. Performance at level three is memorable. All athletes have experienced level three. During these occasions, athletes are "in the flow." Everything occurs in a special way. The level of action jumps up notches, creating a sense of significance and pleasure.

Tennis players refer to the third level as playing "in the zone." Suddenly, a player performs at his or her maximum. Strangely, at the same time, everything is effortless. The ball seems to follow the player's intention. Anticipation increases. The player's "touch" at net heightens.

The state might be referred to as the "Ideal Performance State" (IPS). Ordinarily, this condition descends on a player mysteriously. Just as inexplicably, the state disappears. The question for level three analysis is how to capture and maintain this state intentionally. Level three involves creating the mental state that allows play at the best performance level.

With mental training at level three, the IPS becomes the standard for which the athlete aims. The training involves learning a set of mental skills that open the door to the IPS.

Concentration, visualization, and relaxation are components of the best performance state. Honing these mental skills increases the chance for a player to perform at his or her best.

Programs train athletes for all the levels of analysis and play of tennis. Coaches and top-level players are the best sources for level one training and for insights into level two. Mental training programs assist with level two and they offer the skill development for level three. Level three training alters the game considerably. The game of tennis becomes a vehicle for self-development.

THE STRATEGY OF OPTIMAL PERFORMANCE TRAINING

Meet John Baker, a thirty-two year old runner. A former college athlete, he lettered in two sports, volleyball and soccer. He spends free time cycling and playing basketball. But running is his main sport.

John started running four years ago. He competes in 10K races and holds a personal best time of 42 minutes.

His performance hit a long plateau, with his 10K times falling consistently between 42 and 43 minutes. As a serious recreational athlete, he wants to improve his race times. John's goal is to run a sub-40 minute 10K. What are the strategies that he is likely to use to increase his performance?

John Baker faces a range of choices for enhancing performance. This chapter considers seven such strategies. Three are questionable steps, which may backfire by producing negative results. Three are solid methods for improving athletic performance. The seventh, optimal performance training, presents athletes with a new and promising way of increasing performance.

COMMON BUT QUESTIONABLE METHODS

The quest for better performance leads certain athletes to make poor choices, ones that may provide immediate gains but with long-term costs. Drug use among runners is not as pervasive a problem as it is with strength athletes. However, drugs are an issue in any sport.

A decade ago performance enhancement drugs seldom appeared among runners. New emphasis on upper body strength for runners puts steroids in the picture. Some runners want added strength but are impatient with the natural development through strength training. Pro-drug individuals proclaim minimal problems with intermittent steroid use. However, counter indications abound.

Recreation drugs enter into the complex drug picture. Athletes who use drugs for diversion, for relaxation and as an alcohol substitute, frequently trivialize warnings about drugs. A subtle abuse of drugs comes in the form of prescription and non-prescription "pain killers." Athletes self-medicate to block pain, to compete in spite of injury, or to return to competition before complete recovery from their injury.

Runners face negative consequences from drug use: 1) risk of detection through drug-testing, 2) potentially damaging physical effects in the long term, 3) and unpredictable side effects, all for questionable short-term enhancement effects.

Ergogenic aids present another popular method for increasing performance. In physics, an erg refers to a unit of work or energy in the metric system. In sports, "work" translates to muscular exertion, especially staving off fatigue. From high-energy bars to electrolyte-replenishing drinks, ergogenic products promise to increase athletes' energy.

More innocuous than drugs, the question is whether these aids are effective. Manufacturers claim that their products boost the energy or endurance of an athlete and enhance the performance level. Generally, ergogenic aids produce unpredictable effects. When effects do occur, the results are nominal.

"Trying harder" represents another common ploy among athletes for lifting their performance level. When athletes feel stale or when their performance hits a slump, trying harder is frequently the first response. In running, this strategy translates to doing more roadwork, increasing the intensity of workouts, adding interval training or adding another practice session.

Trying hard and having dedication are admirable qualities. However, health and performance considerations place limits on this way of seeking improvement. Training and competing are demanding physically and emotionally. Athletes who push beyond healthy limits jeopardize their performance. Physical and psychological fatigue affect performance negatively.

A study of top speed skaters underlines this relationship. Skaters who were selected for the United States Olympic Team peaked psychologically right before the Olympic trials. Those not chosen for the team experienced physical and psychological fatigue from the rigors of training. Symptoms of training stress experienced by the second group included loss of concentration, errors in judgment, physical fatigue and mood depression.

Skaters in the second group chose training harder as their coping mechanism for dealing with stress. They responded to skating a bad race or to performing poorly in practice by training harder. This strategy raised their already high training stress and increased the chance of a drop-off in performance.

Trying harder can be an effective method for improving performance. When taken too far, this strategy becomes counter-productive. The athlete who pushes too hard courts performance decline from training stress or from injury.

While these three strategies--use of drugs, use of ergogenic aids, and increased intensity of training--may sometimes offer improvement, their use is questionable.

SOLID STRATEGIES FOR INCREASING PERFORMANCE

Certain other methods for enhancing performance fall under the heading of tried and true. Equipment improvement, expert coaching, and tactical instruction present solid ways of heightening performance for athletes.

Runners have little to contend with for equipment. Still, minor changes can make a difference. Supports in shoes, non-slipping socks, clothing that minimizes discomfort from friction and allows the freest motion, offer the possibility of aiding performance.

A new coach or a coach who specializes in a particular aspect of running can spark a runner's performance. World-class runners may seek out short-term coaching (outside of their regular coach) from an expert who will take them through the fundamentals from a fresh perspective. Gaining expert advice and analysis on running form, on ways to design training schedules for specific race distances, on staying hydrated during long competitions and on effective warm-up exercises assists even seasoned competitors.

Tactical instruction can be obtained from accomplished competitors as well as coaches. Joining top-notch running clubs exposes athletes to runners at varying competitive levels and opens up opportunities for practice runs with top runners.

If our runner, John Baker, improves his equipment, seeks out excellent running coaches and gains tactical savvy, he is mining productive methods for increasing his performance. In addition to these sure steps for improvement, he may want to explore a new strategy for performance enhancement.

A NEW STRATEGY

Optimal performance training presents a new and effective method for improving athletic performance. This performance enhancement strategy falls on the mental side of sports. Optimal performance training involves a two-step process: identifying the mental traits that separate top performers from others; then, creating programs that enable athletes to develop these characteristics associated with optimal performance.

The strategy behind optimal performance parallels the advanced methods used to develop the physical skills associated with peak performance. A study conducted by Georgia Institute of Technology in Atlanta compared good recreational athletes to elite athletes. The study asked the question: What are the differences between the good and the great?

The all-female sample consisted of 14 good recreational runners and 16 elite runners. The researchers tested heart, lungs, blood, muscles, bones, fat, hormones and oxygen capacity. Far more similarities than differences were found between the two groups. However, the differences provided useful information.

From the compiled data, they drew a physiological profile of an elite runner. Differences found between the two groups of runners included:

- A lower percentage of body fat with the elite athletes
- Lower resting heart rate with the elite group
- Higher $V0_2$ max and higher stroke volume of the heart with the top athletes

The elite profile allows useful predictions to be made about the potential talent of young athletes. The former Soviet bloc countries use this method for selecting and for predicting future talent on the basis of matching data on young athletes to elite profiles.

Profile information also provides coaches and trainers with information for designing training programs. The traits that separate the best from the rest become the development and training objectives. Skill practices, drills and procedures are created to help athletes develop along those targeted lines.

Knowing the traits to work toward developing gives athletes precise training goals. Seeing the profile of the great in a particular sport guides a developing athlete in modeling the traits that create a difference in athletic performance.

An identical strategy applies in optimal performance training in relation to mental characteristics. Parallel to determining physiological and biomechanical characteristics of elite performers, mental traits that separate top athletes from others are identified. Then, programs are established that allow athletes to develop these mental strategies.

The researchers at Georgia Institute of Technology created a profile of physical characteristics of top runners. The profile of mental traits associated with high performance comes from research which focuses on the mental side of sports. Mental characteristics linked with peak performance in athletics include goal setting, visualization and risk taking.

An important conclusion in optimal performance is that the mental qualities associated with top performance are learnable skills. Certain athletes are high risk takers or excellent visualizers naturally. However, others can learn these characteristics intentionally. By doing so, athletes accelerate their development to their full potential.

Each optimal performance skill includes sub-skills or component skills that the athlete must learn. The optimal performance strategy involves training athletes in the component skills of the targeted mental trait. Practice integrating the component skills follows. Applying the targeted skill to sport performance comprises the third step. This learning sequence results in the systematic development of the trait.

The process of mental skill learning can be seen with the characteristic of goal setting. Skill learning with goal setting begins by identifying the goals of a particular athlete. Most athletes have goals, which they can describe easily: To win a specific meet or to run a race in a certain time.

Typically, the statements athletes make are not true goals. Their objectives are products of external factors. Athletes may voice expectations that their parents or coaches have for them. Or, their objectives may arise from their immediate circumstances, such as wanting to make the first string or to win the regionals in their high school. True goals must be intrinsic to the desires of the athlete.

Everyone has known an athlete who has "burning desire" for sports' goals. Athletes with this quality exhibit an intensity that creates unstoppable drive and determination. They maintain an unwavering intent regardless of obstacles, injuries or setbacks. Two athletes who exemplify this quality of burning desire or passionate commitment are Grete Waitz, the running great, and Tracy Bates, the phenomenon in soccer.

Goal setting is the means by which athletes can simulate the condition of passionate commitment. Goal identification, the first step in the goal setting process, requires that the athlete get in touch with what triggers a feeling of passionate commitment. That feeling of an intense desire to succeed, to win, or to triumph must be identified. The goal becomes the behavior that links this internal feeling with an attainable result.

Once goals are identified, other steps follow. Step two of goal formulation involves framing the goal into a statement that captures the athlete's true intention in a high-impact way. Planning and scheduling action steps necessary for reaching the goal comprise another step. In the final step, visualizations of attaining the goal and verbal repetition of the goal statement are used to program the goal into the athlete's thinking. In the goal programming phase, the goal becomes an overall aim under which other activities are subsumed.

The development of the mental skills associated with top performance requires systematic learning. If our runner, John Baker, seeks to improve his running by using the optimal performance strategy, he will follow a path of skill learning. The basic strategy is simple and cogent: To heighten your performance, model the key characteristics of the greats in your sport. Biomechanics creates a map of the physics and mechanics of what the greats do. Optimal performance training renders a map of the interior events, the thought processes, perceptions, and strategies that open the door to maximizing potential.

The area of optimal performance is new and developing rapidly. Methods for learning mental skills have been systematized. In addition to improving equipment, receiving expert coaching and learning sophisticated tactics, athletes can look to the option of developing and sharpening mental skills.

The techniques of optimal performance offer sound strategies for performance enhancement. John Baker can add mental tools to his repertoire of methods for reaching running goals.

References

Guttman, M.C.; et al.: *Training Stress in Olympic Speedskaters: A Psychological Perspective.* **The Physician and Sportsmedicine.** Vol. 12, No. 12. December 1984.

Villarosa, L.: *The Difference between Good and Great.* **Women's Sports & Fitness.** November 1986

OPTIMAL PERFORMANCE TRAINING: MASTERING THE MENTAL SIDE OF SPORTS

OPTIMAL PERFORMERS

The point guard dribbles the ball down the court. Keeping his eyes straight ahead, he flicks a pin-point pass to the shooting guard positioned for a three-pointer. The guard fakes a jump shot, then snaps the ball back to the first player, who drives into the key. He jumps. Mid-flight, he spins around and slams the ball through the hoop for a reverse slam-dunk. The grace and finesse of this star athlete move the crowd to their feet in a unified roar.

An award-winning writer paces in her study. Distractedly, she twirls a pen, which falls from her hand. She returns to her work area and shuffles pages that cover the desktop. Phrases, quotes and an occasional sentence fill the pages. She arranges and rearranges the sheets like an artist combining colors for a palette. A cluster of thoughts appears in her mind. Suddenly, she "sees" a line of approach for the new chapter.

The basketball player is a young Afro-American man and a phenomenal athlete, a standout even in the top ranks of professional basketball. The writer is white, female, and middle-aged.

Their differences run beyond appearances to style and temperament. The athlete is hip and happening, a person who loves the limelight and who is loved by millions of fans and by numerous sponsors. The writer is quiet, solitudinous and intellectual; a wary observer of life. Age, gender, race, interests, talents, and personality separate them like a yawning chasm.

Yet, a surprise lurks in an underlying dynamic that binds them together. The star athlete and the artist share an identical pattern that goes to the core of human functioning. They are excellent at creating their intent. This is what makes them optimal performers.

UNDERSTANDING EFFECTIVENESS AND TOP PERFORMANCE

Why is it that some individuals rise to the top, while others with comparable levels of talent and experience remain undistinguished? What makes the difference and enables some individuals to outperform others?

These questions have puzzled people through the ages, and in modern times, different groups have sought answers. Let us look at a few of the researchers and the fields they clarified. Humanistic psychology has been one such major force in understanding optimal performance. Abraham Maslow's ground breaking thinking shaped the humanistic orientation in psychology.

Breaking away from tradition, Maslow studied highly functioning individuals, people who were creative and productive, to determine information about personality. He focused on "self actualizing people," a term he used for those who were healthy, mature and productive. His studies revealed much about the nature of human beings at high level functioning. He described a set of characteristics associated with self-actualizing individuals.

Maslow's interest in effective, creative people initiated new thinking in psychology. His work ushered in the humanistic orientation in psychology, which generated questions about the positive aspects of human beings, including the potentials for growth and achievement. His work established the foundation for studies on top achievers and peak performers.

A second element in the history of optimal performance is Neuro-Linguistic Programming (NLP). NLP, as a strategy for changing human behavior, targets the essence of what makes people effective. The nuts and bolts of NLP consist of techniques for manipulating thoughts and emotions in one's self or in others to achieve desired results, such as running a marathon, communicating effectively or closing a business deal.

The strategy of NLP is straightforward: Find people who are excellent at what they do. Find out the mental strategies they go through to produce excellent results consistently.

By breaking down in detail the mental process that top performers use, they found they could reproduce the process in others. NLP therapists talk of duplicating the "mental syntax" of a winner. Teaching people to replicate the belief systems and thought processes of the best in a field allows others to do something well in an accelerated way. In athletics, for example, the methods of NLP involve mapping the sequence of images, thoughts, and feelings that an elite athlete follows during a performance. That sequence of events creates a mental map for others to follow to produce successful outcomes in that sport.

NLP added a new level to the investigation of high functioning individuals. These practitioners changed the study of top performers to a how-to strategy. Mapping the techniques of highly successful individuals guides others in altering their behavior positively. Adopting the mental methods of persons who are excellent in a particular field creates a method by which others can become successful and effective. NLP techniques can accelerate learning and heighten performance. The power of NLP is that the strategies translate into methods for developing human potential.

A third thread weaves the fabric of optimal performance. Recent studies from the 1960's onward of peak performers form another contribution to our understanding of excellence and top achievement. Charles Garfield's work stands out in this area of peak performance.

Garfield's conclusions are distinct from but complementary to the NLP discoveries about excellence and top achievement. Garfield's findings focus on a more macro level than do the NLP insights. NLP informs us about minute detail of mental processing during top performances: the sequence of images, eye movements, kinesthetic feelings, internal sounds, attentional focus, left versus right brain activity, and the system of information retrieval in the brain.

Garfield looked at broader strokes of human functioning, the traits that are associated with the personality. He discovered distinctions between peak performers and others in relation to broad characteristics, such as visualization, concentration, risk taking, and attitudes. NLP practitioners charted methods by which the strategies of high performers could be duplicated by others. Likewise, Garfield contended that the peak performance characteristics were not fixed, inborn qualities but learnable skills. He demonstrated that appropriate training methods could develop optimal performance characteristics in others. Whatever skill level individuals had, training increased proficiency.

His critical insight was that the traits of the great were skills. NLP opened up possibilities for top achievement to a broad range of people by describing strategies for success. Garfield's work underscores the message of accessibility to high performance by training in mental skills.

TRAITS OF TOP PERFORMERS

Do we know what it takes mentally for people to perform better in sports, business or the sciences? Increasingly the answer is yes. We can identify the qualities and the way they translate to action. Garfield contributed significantly to our understanding of high performance by delineating the characteristics of top achievers. Key qualities associated with high

achievement include goal setting, risk taking, visualization, and beliefs that enhance success outcomes. Let us look at each of them.

Goal Setting

Passionate commitment expressed by top performers constitutes a critical factor in how far an individual will develop in any field. Passionate commitment creates drive and determination. We show how this is done in the chapter on Drive and Determination.

The passionate commitment of peak performers comes from their goal orientation. They set goals, which create a sense of direction and purpose in life. They act strategically and intentionally and pursue their goals with vital interest. They focus on the big picture and on results. Their goal orientation means that they are continually developing their chosen goals. Work produces a powerful sense of purpose, even a feeling of mission.

Risk Taking

Top performers are risk takers. Risks faced by athletes may involve physical danger. More often, risk is psychological: fear of failure, fear of losing ranking or reputation, or the fear of success.

Risk-taking ability represents a critical part of optimizing performance. Risk takers leave the comfort zone and drive themselves beyond the limits that others set. They override natural internal stops that set the boundaries of performance, stretching those boundaries beyond the ordinary.

High-risk takers and low risk takers respond differently to the stress that risky situations produce. Effective risk taking means that a person controls the fear associated with risk. He or she performs proficiently in the face of fear.

Visualization

Visualization is the art and skill of creating a mental model of an event or situation. It is controlled, directed, and purposeful. Visualization is a natural, common mental behavior, particularly as a response to challenging events.

Everyone has experienced having a complex move or a correction in behavior "click in" after seeing the action in a detailed and graphic picture in the mind's eye. This experience can be made to happen by applying the skill of imagination and imaging.

Peak performers visualize more and better than do others. They may have learned spontaneously to visualize events in vivid detail.

Beliefs That Enhance Success

Top achievers hold beliefs that are consistent with their achieving success. Many people subscribe to the idea that a positive mental attitude is helpful for reaching to high-level performance. Less well understood is that beliefs shape attitudes. Beliefs can heighten or dampen a person's performance in any field. Beliefs play a vital role in reaching full potential.

A number of beliefs are etched into the mental outlook of peak performers. High performers recognize their potential. This outlook may be displayed as confidence or self-esteem. Frequently, those who become champions or leaders see themselves as potential champions and leaders before they arrive. This view allows them to ignore artificial barriers and obstacles, including the opinions of people who tell them that they cannot do something.

Peak performers have an edge because their beliefs enhance their success. Notably, peak performers have few self-limiting beliefs. Adopting this mental characteristic furthers success. This trait requires learning to change beliefs.

WHY ARE HIGHLY EFFECTIVE PEOPLE THE WAY THEY ARE?

In spite of the advances made in the field of optimal performance, a basic question remains. Why are highly effective people the way they have been described?

Why do top achievers consistently display the characteristics of goal setting, visualization, and risk taking? Why do top performers follow the internal strategies and mental processes that NLP has discovered?

The star athlete follows a pattern that goes to the core of human functioning. This dynamic process calibrates the quality and effectiveness of human lives. A peak performer is an excellent player in the game of creating his or her intent.

Optimal performers are involved in repeatedly striving for a targeted goal. A player in any game from physics to tennis becomes an optimal performer by creating goals. Optimal performers manifest their *intent* consistently.

The traits associated with high performance (goal setting, visualization, risk taking and belief modification) are regarded as skills that optimal performers use to achieve success. Their real role surpasses this assumption.

Optimal performance traits are the qualities that *create* success. Strung together, these characteristics and their expression describe a process by which an idea or desire goes from intent to realization.

In addition to the findings of Maslow, NLP, and Garfield, a new insight extends our understanding of top performance and excellence. A dynamic pattern runs like a current in optimal performers. This process produces effectiveness across fields as diverse as sports, business, and the arts. It consists of the principles and the mental strategies that govern changing a thought into physical reality.

Achieving success with a goal requires a sequence of steps: 1) formulating a definite intention or goal, 2) eliminating fear (which can also be described as risk taking), 3) modifying beliefs to insure that beliefs support the goal, 4) visualizing desired end results. Each element is a point on the map for going from thought to reality. These steps correspond to optimal performance characteristics.

In other words, the steps match the optimal performance characteristics of goal setting, risk taking, belief modification, and visualization arranged in sequence. The optimal performance traits represent another way of describing the steps required for achieving success.

Optimal performance traits are not simply associated with high performance and top achievement. They are the qualities that create success and achievement.

MASTERING THE MENTAL SIDE OF SPORTS

Mastery comes from the ability to achieve one's intent. In sports, science, and the arts, peak performers share the quality of being able to realize their intent consistently. The connection between high performance and intentionality provides new insights about effectiveness.

The core of effectiveness is knowing how to turn a goal into reality. The traits associated with top performance become the steps to realizing intent. The strategies used by top achievers make up the process of converting a desired goal into a realized achievement.

Individuals can increase their effectiveness by learning the strategies of the great. The fundamental lesson top performers have to teach is how to manifest one's goals, a process that incorporates each of the optimal performance characteristics.

The optimal performance traits--goal setting, risk taking, visualization, and beliefs that foster success--are not only for champions in sports or top performers in business or science. These characteristics are critical for everyone who seeks to perform up to his or her full potential. Each optimal performance skill represents another step on the journey to maximizing potential. Mastering the mental side of sports requires the systematic development of these mental skills.

SECTION II

MENTAL TRAINING METHODS

RUNNING AND RELAXING

Optimal athletic performance requires a combination of physical and mental skills. No matter how gifted the athlete, he or she cannot reach full athletic potential by physical talent alone.

Everyone understands that physical skills develop over time for periods that stretch over years. A course parallel to the development of physical talent occurs with mental skills. An athlete may be mentally tough naturally. Beyond that starting level, mental training develops and improves this quality.

Mental skills relevant to running include goal setting, concentration, visualization, and relaxation. Runners undervalue the importance of relaxation. Relaxation is vital for peak performance in running. Plus, relaxation is a fundamental skill, which forms a foundation for concentration and visualization. Let us examine how relaxation applies to running.

APPLYING RELAXATION SKILLS TO RUNNING

Frequently runners misunderstand the purpose of relaxation techniques. They think, "I don't need to be relaxed. I need to be psyched up before a race." This may be true. However, if the feeling of being psyched up goes too far, performance anxiety occurs. Relaxation acts as an antidote to performance anxiety. Controlling performance anxiety represents a primary application of relaxation skills to running.

Performance anxiety can be described by example. Imagine that you are asked to walk the length of a beam, then turn while still standing on it and bounce once. The beam is ten centimeters wide and twenty centimeters off the ground. Most athletes would perform these steps without hesitation.

What if the beam were raised ten meters off the ground? In both cases, you are asked to perform identical skills. In the second situation, stress from focusing on falling, rather than walking across the beam, would prevent many from performing this sequence.

Conquering performance anxiety requires control of fear and of the thoughts which engender fear. Progressing "up the ladder" from your first competitive run to races with tougher competitive fields, such as going from local to district, to regional, to national, to Olympic qualifying meets parallels raising the height of the beam. Athletes who challenge themselves repeatedly experience the added factor of performance anxiety, a term which signifies an overload of stress.

Runners, or any athletes, manifest performance anxiety in two forms: choking or being overwrought. Every athlete has experienced these responses to stress. Choking and clutching describe what happens when the body responds to stress with an inhibiting mechanism. The overpsyched response to high stress includes feelings of being nervous, overwrought, anxious, and generally overactivated.

Neither response is good for performance. If a runner is either "flat" or overpsyched, performance suffers. Top performance requires diffusing the stress. Relaxation skills offer the solution of handling performance anxiety.

Another application of relaxation techniques concerns achieving fast and effective recovery. After running a marathon, runners take weeks to recover. Relaxation methods quicken the recovery process following strenuous endurance activity.

Use of relaxation for accelerating recovery is not confined to endurance runners. A track athlete might compete in the 1500 meter race as well as perform in the hurdles and in a relay event. Relaxation practices allow athletes to rest and recover between events. Staying keyed up from one event to another exhausts athletes, mentally and physically. Runners save their energy by using relaxation. That surplus energy and alertness can be used to maintain a peak competitive state while running.

Relaxation can also be applied to running for the purpose of achieving increased fluidity in form. A distinct practice effect occurs from performing relaxation techniques consistently: The body learns to let go of tension automatically.

Learning to release unnecessary tension leads to a condition of differential relaxation. This can best be described by its opposite. If a person attempts to remove the tight lid of a jar and clenches his jaw while trying to twist the lid, he engages unnecessary muscular force and wastes energy. Excess tension in the body detracts from efficient use of energy.

Differential relaxation means that you relax all muscles except the ones needed for the task at hand. This effect is important to the athlete. Champions exhibit running styles that have the appearance of effortlessness. Part of the reason for their ease in running is differential relaxation. Differential relaxation affects power, endurance, fluidity, and control.

These applications of relaxation to running--as an antidote for performance anxiety, for speeding recovery, and for achieving differential relaxation--concern self-regulation of the stress level in the body. When performance anxiety strikes, the athlete needs to lower the stress level. For maximizing recovery, the athlete wants to elicit a state of relaxation to take full advantage of the time between events or to accelerate recovery

subsequent to endurance activity. With differential relaxation, the athlete maximizes energy expenditure.

Relaxation methods give the runner greater control over bodily states. As a consequence, the runner achieves enhanced performance. Knowing the usefulness of relaxation to runners, we next examine the methods for learning relaxation skills.

METHODS FOR LEARNING RELAXATION

Relaxation methods fall into two major categories. The first method focuses on relaxing the body and is called muscle-to-mind relaxation. A reciprocal relationship exists between the mind and the body. Once the body relaxes, the mind becomes relaxed. In the muscle-to-mind relaxation method, relaxation originates with a physical state of relaxation, then generalizes to include a mental state of calm. The main physical relaxation technique is progressive relaxation.

Progressive relaxation works by relaxing the major muscle groups of the body. The mind becomes relaxed, secondarily. When muscles relax, they transmit less stimulation to the central nervous system. Reducing the stimulation to the brain produces a mental state of quiet and calm.

The second category of relaxation methods, called mind-to-muscle relaxation, focuses on relaxing the mind directly. Methods for this approach include breathing techniques, meditation, autogenic training, imagery, and music. The mental focus in these techniques reduces the stimulation of the brain. The quieting of the mind creates a state of physical relaxation.

If you experience predominantly mental symptoms when stressed, the mind-to-muscle method, which targets the mental state is best. If you experience mainly physical stress symptoms, concentrate on the progressive relaxation technique, the muscle-to-mind method.

Progressive Relaxation

Progressive relaxation is a simple method, but one that demands practice. Practice of the progressive relaxation technique creates awareness of tension. This awareness prevents accumulations of tension. Eventually, relaxation is maintained without conscious effort.

In progressive relaxation, you focus on the major muscle groups in the body, tensing up the targeted group, maintaining the tension for a number of seconds (usually thirty to ninety seconds). Then you release the tension and concentrate on a feeling of relaxation in that area of the body.

Progressive relaxation is unparalleled in its effectiveness for achieving a state of physical relaxation. This technique produces a relaxed state during the session. The feeling of relaxation carries over for hours afterwards depending upon the level of relaxation reached while practicing.

The purpose of the progressive relaxation technique is to induce a state of deep physical and mental relaxation. This aim is accomplished by training the body to become aware of the contrasting feelings of tension and relaxation. Progressive relaxation is a system of exercises that: 1) teaches awareness of tension and relaxation, and 2) trains the individual to replace feelings of tension with feelings of relaxation.

In progressive relaxation, your focus of attention moves from one major muscle group in the body to another. With attention on a specific area of the body, a four-phase procedure occurs: 1) creation of tension; 2) awareness of the feelings of tension; 3) creation of relaxation; and 4) awareness of those feelings of relaxation. For example, with attention focused on the right wrist, the general format for progressive relaxation consists of the following:

1) Bend the right wrist back to create feelings of tension. Using the hand muscles, create a high level, even maximum level of tension in the right wrist. Maintain that maximum level of tension in the wrist for thirty seconds.
2) Focus your total attention on the feelings of tension created in the wrist, the hand, and the forearm. Direct concentrated attention on how that tension build-up feels.

3) Move your right hand into a relaxed position. Let go of the feelings of tension in the right wrist and replace those feelings with a feeling of relaxation.
4) Focus your attention on the feeling of relaxation. Feel that the sense of tension is leaving by continuous increments and is being replaced by continually increasing feelings of relaxation. Maintain this awareness and focus for approximately thirty seconds.

Steps two and three in the general format are accomplished as quickly as it takes to give yourself an instruction. The first and fourth steps are maintained for about half a minute, which makes the total time spent on each muscle group approximately one minute.

The exercise can be carried out either lying down or sitting. Whichever position you choose, make sure it is comfortable and easy to maintain for the duration of the exercise.

The exercise is repeated on the following muscle groups in order: right calf, right upper leg muscles, left foot, left calf, upper left leg muscles, buttocks and pelvic area, abdominal muscles, shoulders, right hand, right forearm, right bicep, left hand, left forearm, left bicep, neck, face, with focus on the forehead, eyes, and mouth. To create tension in your shoulders, lift them up and toward your chest. To create tension in your face, focus on your forehead and bring your eyebrows together. Then, focus on your eyes and squeeze them as tightly closed as you can. Finally, focus on your mouth and purse it up to achieve maximum tension.

Breathing Techniques for Relaxation

In the mind-to-muscle techniques, breathing practices stand out as powerful methods for achieving the desired physical and mental states. These methods work directly on relaxing the mind and indirectly result in physical relaxation.

Mind-to-muscle methods encompass numerous techniques, including breathing methods, music, mantras, yantras (visual images), the relaxation response, visualization exercises, autogenic training, and self-hypnosis techniques. Breathing practices remain the method of choice for many

athletes. They work effectively to reduce stress. With practice, breath regulation achieves a variety of changes in stress and energy levels.

One excellent breathing exercise starts by focusing attention at the bridge of the nose and on the breath as it passes this point. Each inhalation is felt as a sustaining and nourishing force entering the body. Each exhalation is associated with the body becoming increasingly calm and relaxed. The practitioner lets go of thoughts that may occur. The attention remains focused on the breath and on these feelings associated with exhalation and inhalation.

In the second phase of the exercise, the athlete pictures the stream of breath traveling down the body and into the upper right leg. The practitioner takes a series of six breaths while the attention remains on the breath in the upper right leg. Each exhalation increases the sense of relaxation in the upper right leg.

The exercise continues by directing the focus of attention and the breath into different areas of the body (lower right leg, whole right leg, upper left leg, lower left leg, whole left leg, buttocks and pelvis, torso, right arm, left arm, neck and head). After completing this format for each area, the athlete focuses on how the body feels in a state of relaxation.

With consistent practice, the technique of progressive relaxation and the breathing exercise produce mental clarity, enhanced concentration, and a calm mind. After months of practice, heightened awareness can be added to the list, as well as increasingly deeper levels of physical relaxation.

A CUE FOR RELAXATION

Runners do not have the luxury of calling a timeout from a race to collect their thoughts or to lower their tension by using a relaxation technique. Runners must regulate their tension in the commotion of a pre-race setting, during an event, or between events when they are surrounded by spectators and other competitors. Regulation of relaxation on demand requires the development of a cue. A relaxation cue allows the athlete to trigger relaxation when desired.

Cues produce the state of relaxation quickly. Eliciting relaxation through cues allows you to move into a state of relaxation at any time.

An effective cue consists of using the nondominant hand (this is your left hand if you are right-handed) and a deep breath. This cue involves making a fist with the nondominant hand and taking a deep breath. Keep the tension in your hand and hold your breath for five seconds. Then, simultaneously release the tension in your hand and exhale completely. As you exhale, mentally repeat to yourself the word, "relax."

To establish this cue as a trigger, tell yourself after the last statement of your relaxation practice that whenever you use this cue you will experience a state of relaxation similar to your experience during relaxation practice. Statements connecting the cue with the state of relaxation should be made at the end of the relaxation exercise when you experience a deep state of relaxation.

Repeating the statements connecting the cue and the relaxation state turns the cue into an effective trigger, one capable of eliciting a relaxed state at will. Quick elicitation of relaxation states through cues means that the runner can use relaxation as a mental tool on the track, in competitive situations, or at any time.

BENEFITS OF RELAXATION

Relaxation, concentration, and visualization are skills. This understanding is one of the most significant discoveries in the field of performance enhancement. Because these qualities are skills, they are learnable.

Let's say there are two runners, one who is relaxed and calm, the other who is nervous and jittery, especially before important events. With time, discipline, and training, the second runner can gain the composure that matches the first runner. The second runner, with persistent effort and systematic training can surpass the unruffled state of the first runner.

With practice, mental skills make a difference. Benefits can be reaped from relaxation and other mental skills only if the athlete invests the time in practice. Knowing that you can overcome performance anxiety, speed up

your recovery from endurance activity, and gain increased fluidity in running form should spark your interest in the mental side of your sport.

Runners, like other athletes, have exceptional physical ability and control. Learning the skill of relaxation extends your control. Regulating your state through relaxation means that you eliminate problems that interfere with running. The elimination of obstacles enhances performance because you tap more of your potential.

GAINING CONTROL
OVER INTERNAL DIALOGUE

The advice of Jimminy Crickett wasn't bad: Accentuate the positive, eliminate the negative! In mental training, this directive translates to developing the mental characteristics that enhance performance and removing the mental barriers that hold athletes back from demonstrating their potential.

Internal dialogue is one of the most useful and important applications for this advice. Guidelines for internal dialogue come from understanding how champions talk to themselves. The process of altering and controlling internal dialogue follows the logic for developing other mental traits that enhance performance: Model the methods of the great ones in sports.

Champions have a mental edge. They perceive situations in a way which is different from the usual perceptions. That is one reason why they are champions. They see advantages when others see problems. They experience difficult and pressure-packed circumstances as challenging rather than as fearful.

Peak performers use mental strategies that create special ways of perceiving. All too often, these mental patterns are trivialized by labels such as "positive mental attitude." The strategies behind the perceptions of

champions are more complex than thinking positively.

Internal dialogue plays a critical role in perceiving a situation. We can follow the general rule of imitating the strategies of the great by examining the ways in which champions talk to themselves. By forming these patterns into rules, others can follow similar mental "tracks."

With these rules, athletes learn to direct their internal dialogue. Control of internal dialogue gives others part of the mental edge that champions exhibit.

When athletes perceive sports situations in ways that work to their advantage, they perform from their strengths. This makes internal dialogue control a powerful strategy for performance enhancement.

Situations are open to interpretation. Physical symptoms can be interpreted in numerous ways. Consider someone who experiences the following symptoms: a rapid heartbeat, an increase in blood pressure, trembling hands, flushed face, quavering voice, difficulty concentrating, and confusion. Is this person experiencing the effects of strenuous exercise, fright, being in love, anger, exhilaration, or psychological or physical risk? The answer is any of the above.

Identical bodily feelings can be interpreted as exhilaration or panic, as fright and risk, or as excitement! Internal dialogue determines the nature of an experience, including the element of risk. Learning to control internal dialogue is a must for athletes seeking to perform up to their level of ability.

The methods for controlling inner dialogue form a set of guidelines. They describe how to alter your perceptions of a situation in an advantageous way, which includes what to avoid. We start with the guidelines about self-talk to avoid.

GUIDELINES ABOUT SELF-TALK TO AVOID

Rule One: Avoid Thinking That Leads to Worry or Anxiety

Athletes who perform inconsistently, especially athletes who perform poorly in the face of high risk, have self-talk which is centered on being afraid (afraid of losing, afraid of getting hurt) or on doubting their ability ("I can't do it," "I haven't trained enough."). Such statements must be avoided. Statements that lead to worry erode confidence and generate stress.

Rule Two: Avoid Thinking About Past Failures

If you face a team that has defeated your team three times consecutively, thinking about those losses creates a negative thought process, one likely to create high stress. If you have a track meet at a stadium where you experienced a particularly disappointing defeat, keep your mind away from replaying that past event. Reviewing past failures prior to a competition charges the current event with stress and lowers your ability for risk taking.

Rule Three: Avoid Thinking That Ties Self-worth to Performance

Avoid statements which imply that your self-esteem will be damaged by poor performance. Internal dialogue statements that indicate this error are ones such as, "If I lose this point (or tournament or meet), I'm not any good;" or "If I don't win, I'll feel worthless." When an athlete or a coach has the attitude that winning is critical for maintaining self-esteem, the stakes are too high.

Among archers it is common to experience target panic, a feeling of nervousness when the archer stands on the line ready to shoot. One archer experienced target panic to such a degree that he was unable to complete the final step in shooting: releasing the string. He repeatedly positioned himself in his shooting stance, lifted the bow to the shooting position. Then, he put the bow down into the relaxed position. He could not make himself release the string.

Skill was not the issue. This archer's skill was remarkable. In exhibitions, he shot an arrow into a selected quadrant of the bull's-eye. With a second

arrow, he split the first arrow. The problem centered on his perception that his worth as a person was tied to his performance.

Every aspect of his life--vocational, avocational, and social--was concerned with archery. His performance as an archer was tied to his feelings about himself, especially in the area of self-worth. His feeling that his performance on the archery field counted for so much of his self-assessment resulted in his being unable to shoot. His problem, fortunately a temporary one, demonstrates the extreme pressure that can arise when self-worth is equated with athletic performance.

Rule Four: Avoid Reviewing Negative Odds Of Your Winning

Avoiding internal negative statements includes reviewing odds that are negative, a pitfall that catches many athletes. Mountain climber Greg Sapp does not focus on the dangerous odds he faces in climbing. His thinking emphasizes the rare opportunity and adventure climbing offers. Unlike Greg, many athletes, at all levels of the competitive ladder, attend to the odds of their winning.

Athletes do not consider this mental habit negative. They view their self-talk as an objective appraisal of their chances. If a tennis player, before a competition, considers the draw and focuses on the higher ranking of his first opponent, he may inadvertently undermine his own confidence. His thinking creates an *expectation* for losing.

Therefore, directly before or during a competition, avoid thinking about players' rankings, opponents' tournament or meet experience, their sponsorship, and their reputations. Unless you know that you are going to come out with better odds for winning, avoid thoughts related to computing the odds between you and your opponent.

Directing your mind to control inner dialogue is far removed from lying to yourself or denial of facts. Following these guidelines focuses your attention on thoughts that lower your stress level and enhance your performance.

Which facts you review colors your mindset as illustrated by an example with a reporter.

Imagine that a reporter interviewed an athlete for a story in a sports magazine. The reporter presents the athlete in the worst possible light. In his story, he focuses on incidents of poor sportsmanship, inconsistent performances, and personality quirks.

Another reporter writes about the athlete. This reporter likes and admires the athlete. His story focuses on the close family ties that supported the athlete, moments of courage and triumph in the athlete's competing history, times of generosity and unselfish behavior in helping to establish foundations for young athletes in his sport. The second article presents the athlete in glowing terms, as a hero to be emulated by younger athletes.

The two reporters show the range of material on which one can focus for a topic. One can consciously create a positive mental outlook by choosing to focus on thoughts that will enhance your performance.

Train yourself to direct the focus of your thoughts (and therefore your self-talk). Following the guidelines for inner dialogue represents a critical part of that training. In addition to the avoidance guidelines, other rules for self-talk inform you about how to shape and direct your thoughts positively.

GUIDELINES ABOUT POSITIVE SELF-TALK TO INCORPORATE

Rule Five: Monitor Your Internal Dialogue

To change inner dialogue, monitor what you say to yourself prior to competitions. Many athletes do not know what they repeat to themselves. One example is provided by a man that I met when he was in his forties. During his athletic career, he never noticed what he said to himself before competitions.

He told me that several years after he stopped competing as a hurdler, he realized that each time before he ran, he looked at the track and thought to himself how high the hurdles looked and how long the course was.

Internal dialogue represents habitual patterns of thought. Attending to internal dialogue begins the process of gaining the control needed to enhance performance.

Rule Six: Use Statements That Assert Your Ability to Regulate Your State

Stress feelings are open to interpretation. You can regulate your stress level by internal dialogue.

Frequently, when athletes become stressed, they feel a loss of control. Self-talk can change this occurrence. Tell yourself that *you* regulate your stress level. Statements such as, "I'm in control of how I feel," "I control how psyched up I feel," "I regulate these feelings of being charged up" convey this idea.

Rule Seven: Regard Stress Symptoms in a Positive Way

Athletes err by interpreting stress symptoms negatively. As you notice stress symptoms, regard them as neutral. Better yet, regard stress as positive for competition.

Rather than saying to yourself, "I'm afraid," or "I feel weak and shaky from nerves," reinterpret the symptoms. Interpreting feelings of stress as activation offers the payoff of higher performance. When stress symptoms start to build, say to yourself, "I feel challenged," "I feel powerful," "I feel excited," "I'm ready." Such statements help you to shift the interpretation of stress to a feeling of being psyched up and challenged.

Rule Eight: Convert Negative Statements Into Positive Ones

Phrasing directives in the negative creates a mental image that coincides with the instruction. If a runner in a relay race says to herself, "Don't drop the baton," she can get into trouble with her negative directions. A fleeting image occurs in the mind of dropping the baton.

Negative directives increase the probability of the negative behavior occurring. The solution is to transpose negative directives into positive ones. The relay runner should say to herself, "Grip the baton."

As a general guideline for self-talk use two types of statements: encouraging statements and instructional statements that focus on skills. Encouraging statements to yourself bolster confidence. "You can do it," "You're good," "You're a champ," are examples of this type of inner dialogue.

Second, inner dialogue that focuses attention on performance skills provides another positive form of self-talk. As a skater you might say to yourself, "Set up the turn." A tennis player might say, "Watch the ball," and "Get into position."

The self-talk guidelines allow fast detection of negative internal statements. They show you how to change your inner dialogue to performance-enhancing thoughts. To summarize, the guidelines are:

Self-Talk to Avoid

- Avoid thinking that leads to worry or anxiety
- Avoid thinking about past failures
- Avoid thinking that ties self-worth to performance
- Avoid reviewing negative odds of your winning

• Self-Talk to Incorporate

- Monitor your internal dialogue
- Use statements that assert your ability to regulate your states
- Regard stress symptoms in a positive way
- Convert negative statements into positive ones
- As a general guideline for self-talk use encouraging statements and instructional statements

Controlling inner dialogue assists the athlete in performing his or her best. Regulating internal dialogue allows athletes to handle higher levels of risk a and pressure. Want to stay cool even in the tight spots? Following these self-talk guidelines creates significant gains in risk taking, as well as in performance in general.

OVERCOMING MENTAL BARRIERS

A close look at the impact of beliefs on experience reveals how profoundly beliefs affect experience. Everyone realizes that experience affects, even creates, beliefs. We acknowledge a causal relationship between experience and beliefs: Experience leads to beliefs. The converse also holds true. Beliefs shape and help to create experience.

HOW BELIEFS WORK

Beliefs define the territory of the possible. Beliefs are like a "fence" that defines the perimeter of an area. The boundary line defines what is allowed or viewed as possible. The area beyond the boundaries of your beliefs is regarded as out of reach, impossible to achieve. Striving to achieve an aim that is beyond what you believe you can do means working against odds which are formidable, if not insurmountable. You enlarge the area from within by expanding your beliefs.

We respond to what we believe to be true. We can change what we believe to be true. In doing so, we change our responses, including achievement level and athletic performance.

This has been well proven. Numerous studies show convincing examples of the relationship between belief and performance. Hypnosis provides classic examples. Dr. Theodore S. Barber conducted research on hypnosis while he was associated with the Laboratory of Social Relations at Harvard. He adamantly disclaimed that the mysterious was at work in hypnosis. He viewed conviction as the critical factor that allowed subjects to act in ways that went beyond their ordinary boundaries. "However, the plain truth is that when a subject is convinced he is deaf, he behaves as if he is deaf; when he is convinced that he is insensitive to pain, he can undergo surgery without anesthesia. The mysterious force or power does not exist."

Dr. Barber's experiments with athletes show that conviction on the part of the hypnotized subjects can lead to their being unable to perform simple, ordinary tasks. They have "negative" ideas implanted in their thinking by the hypnotist, which makes them incapable of performing a trivial act.

A hypnotist tells a football player that his hand is stuck to a table in a way that makes him unable to lift his hand even slightly. The football player tries to lift his hand, but it does not move. The football player tries harder. We see the muscles bulging under his shirt. The increased effort does not lead to success. This young man *cannot* lift his hand. Why not? Because he is *convinced* that he cannot lift his hand.

In another demonstration, the hypnotist tells a weightlifter that he cannot lift a pencil from a desk. The weightlifter is capable of lifting the weight of about three desks like the one on which the pencil is placed (since he can lift 400 pounds). Under the influence of the conviction that he cannot lift the pencil, he in fact, cannot lift the pencil.

Athletes do not have to be hypnotized to exhibit the effect of beliefs on their performance. Charles Garfield, an expert in the performance sciences, claims that self-limiting beliefs are the biggest obstacle to high-level performance. He contends that average people and athletes set limits far below what they could achieve.

PEAK PERFORMERS BREAK MENTAL BARRIERS

High performers set higher limits consistently. Peak performers ignore artificial mental barriers. They concentrate on their own feelings and create momentum for their effort, which makes them freer to achieve at peak levels.

Roger Bannister is an excellent example of a peak performer functioning in this way. When he ran the first sub-four-minute-mile in 1954, he did so against the consensus of opinion. Runners as well as experts argued that running a mile in less than four minutes was humanly impossible. Against the tide of opinion, Bannister believed in himself and in the idea that it could be done. As Bannister lined up for this historic race, he is reported to have thought, "Yes, the wind was dropping slightly. This was the moment when I made my decision. The attempt was on." When the race was over, Roger Bannister had accomplished what some regard as the single greatest accomplishment in track in this century.

This outstanding accomplishment reveals another facet of the impact of beliefs. Once mental barriers are broken by one individual, that level of performance is repeated soon afterwards by others. Within a few years, dozens of runners had run a mile under four minutes.

CHANGING PERFORMANCE BY CHANGING BELIEFS

Performance levels change when beliefs change. An excellent example of this phenomenon is an experience of Charles Garfield's. At a conference in Milan with scientists from the former Soviet Union, Garfield guessed his lift limit in the bench press at 300 pounds. He managed with difficulty to bench press this weight. That evening, after careful instructions from the scientists for performing exercises in relaxation and visualization, Garfield succeeded in lifting 365 pounds.

Initially, when the researchers told Garfield that he was going to lift 365 pounds, Garfield reacted with anxiety. His anxiety was noted objectively, since he was monitored electronically throughout the process. He expressed *adamant disbelief* about his being able to lift that much weight. After all, he had struggled with 300 pounds.

Beginning weightlifters know that after experiencing difficulty with a weight, the most that should be added is 5 pounds, 10 pounds at the outside. Adding 65 pounds to the bar was courting injury. Three hundred sixty-five pounds represented Garfield's personal best when he was lifting, training, and competing regularly. He had not been in a gym in months. How could the Soviets expect him to match his best performance. It was out of the question!

In response to his strenuous objections, the scientists said, in effect, "Never mind all that, just follow our instructions."

A change occurred during the mental procedures that Garfield did under the guidance of the scientists. Garfield's beliefs about his ability to lift the 365 pounds changed. After he reached a profound state of relaxation, Garfield visualized *in graphic detail* his lifting the 365 pound weight with ease and confidence. As the experimenters made further suggestions to Garfield to increase the vividness of the visualized experience, Garfield experienced a shift in belief. After repeatedly visualizing his performing this bench press successfully, he became convinced that he could do it.

Garfield started from firm disbelief. Due to relaxation and visualization exercises, Garfield moved from his original position of disbelief to a position of conviction that he could make this second lift.

When Garfield expressed his conviction about his being able to lift the weight, the scientists said he was ready for the second lift. At that point he lifted the 365 pounds successfully.

A METHOD FOR OVERCOMING MENTAL BARRIERS

Beliefs are of critical importance for achieving success. A prescription for success is to create beliefs that advance your athletic success. Learning to overcome mental barriers comprises a significant part of this strategy.

An effective method for overcoming mental barriers consists of the two-step process used by the scientists on Charles Garfield. The procedure entails relaxation followed by graphic visualizations of going through the mental barrier with success and confidence.

To begin, you must define the mental barrier and the goal, the vision of moving beyond the barrier. Mental barriers come in numerous forms.

Athletes can easily identify the time or the circumstances in sports which are trouble spots for them. For a runner, it might be race days when there is a drizzling rain and the racing surface is a macadam road that becomes slick. A runner may develop a patterned response to these circumstances of complaining, engaging in negative self-talk, feeling worried and apprehensive, *and* performing under his ability.

Trouble spots create mental barriers. Unfortunately, mental barriers have a way of perpetuating themselves. For example, a figure skater has a problem in part of her routine in the compulsories. After a while, a set of negative expectations and a sense of dread develop around that point. Almost invariably negative expectations and negative anticipation lead to performance decline. The mental barrier becomes set in place.

The worst barriers are recurrent ones: Every time a certain competitor is faced, every time away games are played, every time a particular distance in a race is reached. The athlete must identify these blocks in performance. Then, recognize that corrections can be achieved or facilitated through visualization.

An exercise can be used to overcome mental barriers. First, you achieve relaxation by a relaxation technique such as progressive relaxation or a breathing exercise. The second step involves visualization. The visualization consists of seeing the way you typically respond in the problem area. Then you observe yourself performing correctly and going through the trouble spot exactly the way you want to perform. Finally, you project yourself into the scene, so that you as the experiencer go through the sequence, experiencing yourself doing the performance correctly through the trouble spot.

Of paramount importance for effectiveness is achieving a deeply relaxed state. Also important is the production of detailed visualizations. Heighten the realness of the visualization by adding detail, including kinesthetic information, which has to do with physical feelings associated with the images. If you are a tennis player visualizing a match with a dreaded

opponent, feel your grip on the racket, feel the racket contact with the ball as you serve and as you hit a net volley; feel your feet on the court surface. Focus on how your body feels as you make exactly the right moves.

Keep repeating the visualization of overcoming your mental barrier. What you are aiming for is a shift in beliefs as a result of the new information being presented by the visualizations. Signs of this shift consist of an increased sense of realness about the imagined sequence and a feeling of conviction that you could in real life act in accord with the visualization.

The exercise is ended with general statements to reinforce the corrected sequence. These statements impress on the visualizer the idea that each repetition of the visualization strengthens the impact of the imagery and increases the chances of the projected correction replacing the current performance.

Do you limit yourself with your beliefs? Chances are the answer is "Yes." However, you can do something about it.

Specific techniques make it possible to overcome the self-limiting beliefs, which form mental barriers. You can change your patterns of thought and perception. Overcoming mental barriers is another method that makes your athletic potential available to you.

Athletes experience frustration when factors outside their control stymie them and block them from performing at their best level. Nagging pain, heat exhaustion, equipment failure, and judge's errors are aggravating occurrences in sports' life.

More exasperating are those situations in which your own mind prevents you from demonstrating your ability. Mental barriers produce real effects by detracting from performance.

Know that you can regain control in these areas and overcome mental barriers. By taking the recommended steps, you *can* eliminate mental barriers. This clears the way for you to demonstrate your talent and ability.

References

Barber, Theodore X.: *Could You Be Hypnotized?* **Science Digest.** January 1958.

Edwards, Sally: *Incurable Optimism and Other Secrets of Success.* **Women's Sports and Fitness.** Vol. 8, No. 3. March 1986.

Garfield, Charles A. (with Hal Zina Bennett): **Peak Performance. Mental Training Techniques of the World's Greatest Athletes.** Jeremy T. Tarcher. Los Angeles 1984.

Morgan, William P.: *Mind Over Matter.* **The Runner.** Vol. 6, No. 4. January 1984.

DEALING EFFECTIVELY WITH PERFORMANCE ANXIETY

Performance anxiety strikes athletes at all levels, from the weekend warrior to the elite athlete. Performance anxiety is a term used by psychologists. Athletes refer to this experience as choking or clutching. Under either label, the phenomenon consists of stress that occurs in connection with performance.

Performers of all types experience stress and anxiety: the pianist walking onto the stage; the actor mentally rehearsing a critical scene immediately before it is shot; the speaker listening to her introduction by the Master of Ceremonies; the gymnast waiting for the first note of the music that accompanies her floor routine.

Performers take risks. They put themselves and their performance on the line to be judged by officials, by coaches, by peers, and by themselves. The moment of performance is a moment of truth. It is the time to "stand and deliver." Performance conditions allow no excuses and no speculation about what you could do or might do. All that counts is what you actually do, how you perform, in the arena.

These conditions breed stress. The pressure of performance spurs certain individuals to high levels of achievement. For others, performance anxiety leads to stress overload and performance decline. Performance anxiety has sealed the fate of countless talented athletes.

Performance anxiety plagues certain athletes days before an important event. Disturbed sleep, worry, recurrent thoughts, self-doubt and other anxiety symptoms wring athletes out. The day of the tournament, they appear mentally and emotionally exhausted. This worn-out state is not the stage for performing at your best.

To express their potential, athletes need effective strategies for dealing with the stress of performance. Beating the problem of performance anxiety means that you become "mentally tough."

COMMON STRATEGIES FOR RESPONDING TO PERFORMANCE ANXIETY

Athletes use various methods for coping with stress and for altering their stress to a desired level. Certain athletes depend on a coach or a friend to get them into the right state for competition. If they feel flat, they hope that the coach's pre-game talk will pep them up. When they become too psyched, they rely on the coach or a teammate to bring them into a quality state for competition.

Other athletes set their stress level based on their competitor. For a fierce competitor, they rev themselves up to a state of high activation. With a competitor they have trounced in the past, they set their stress level lower.

These strategies have drawbacks. Counting on a friend or coach to talk you into a quality state before a game frequently misses the mark. Plus, what happens when you are on the field and your stress level rises? How do you make adjustments and avoid choking during a competition?

A similar flaw mars the competitor-related strategy. Using an assessment of your opponent's toughness to set your stress level fails whenever you misjudge that opponent. A competitor may play at the top of her game

during an event. Resetting your stress or activation level in the middle of a contest is seldom effective.

ASSESSING EFFECTIVENESS OF METHODS

The critical issue concerns effective methods for coping with performance anxiety, whether the performance stress occurs days before an event, immediately before a contest, or during a competition. Effectiveness of methods can be assessed by a set of criteria. If your response to performance stress meets these standards, keep using it. If not, find a new way for dealing with performance anxiety.

Evaluate methods for coping with performance anxiety against these four standards:

- Achieves the desired effect with stress
- Remains in your control
- Allows quick rebound ability
- Works for you on and off the playing field

First and foremost, a strategy for dealing with performance stress must work. Achieving the desired result of altering your stress level is the acid test for any method. The best methods allow you to adjust your activation so that you move into your peak stress level, the state associated with your best performances.

The second standard for methods concerns independence. Relying on others puts the stress coping strategy outside of your control. Carrying charms or wearing special jewelry or clothing are also external methods. Best methods for responding to performance anxiety are ones that remain in your control. They are part of your mental set of tools. They can never become lost or misplaced, or not show up for a particular competition.

Ask how quickly your method of de-stressing works. Does your strategy allow you to spring back without delay? If so, this gives you rebound ability, the third standard for assessing methods. Think of rebound ability as the speed with which you can decompress from stress.

Find a method for handling performance anxiety that works on and off the field. For ordinary people, talking with a friend, taking a nap, or having a glass of wine pass as strategies for contending with performance stress. These steps are not for athletes. Methods have to work in athletic arenas-on the court, the green, or the gridiron.

Size up your current methods against these standards. Then decide if it is time for a new mental strategy.

SELF-REGULATION OF STRESS

One strategy for dealing with performance anxiety rates four stars. This method involves tuning into your body and regulating your stress level. When needed, you heighten your stress level to create an activated, psyched-up state. Also as needed, you reduce your stress.

This strategy of self-regulation involves assuming responsibility for setting and for changing your level of stress. Following the strategy of self-regulation for controlling performance anxiety requires three steps. These steps make up a three-prong strategy for dealing effectively with performance stress: 1) gaining awareness of how stress affects athletic performance, 2) controlling your self-talk, and 3) developing relaxation skills.

These steps are the path to self-regulation of stress. Taking this path allows you to conquer performance anxiety, the nemesis of many athletes.

How Stress Works

Awareness precedes control. Frequently athletes remain unaware of stress until they experience debilitating levels. Early recognition of stress symptoms makes it easier to change the reaction to stress.

Awareness is the first step in the regulation of the stress response, the underlying strategy for overcoming performance anxiety. Learning about your stress responses helps you recognize when stress starts to build. You can avoid extreme stress responses, such as acting out-of-control or experiencing anxiety.

Every athlete should be aware of the physical response to stress. Athletes also need to be aware of the specific symptoms they experience to stress. Think of your own reactions. Do you have heart palpitations and feel muscle tension? Do you get clammy hands and feel butterflies in your stomach? Certain athletes respond to stress with predominantly mental symptoms, such as irritability, confusion, forgetfulness, and lack of concentration.

Dorothy Harris and Bette Harris developed a stress indicator checklist in their work with athletes. (Shown on the next page.) You can use this checklist to identify the stress symptoms you experience, including the relative intensity of the symptoms.

	CIRCLE FREQUENCY OF OBSERVATION		
SIGNS OF TENSION	Always	Sometimes	Never
Facial grimaces, frowning	3	2	1
Clenching teeth, grinding teeth	3	2	1
General bodily restlessness	3	2	1
Moving body part continuously: foot, hands	3	2	1
Headaches	3	2	1
Neck aches	3	2	1
Backaches	3	2	1
Diarrhea	3	2	1
Constipation	3	2	1
Irritable bowel	3	2	1
Indigestion	3	2	1
Irritable G.I. tract	3	2	1
Fatigue	3	2	1
Insomnia, disrupted sleep	3	2	1
Restless legs	3	2	1
Restless hands	3	2	1
Pulling, tugging hair, moustache, eyebrows	3	2	1
Muscles twitches, spasms, cramps, tics . . .	3	2	1
Excessive sweating	3	2	1
Cold, clammy hands and/or feet	3	2	1
Chewing fingernails	3	2	1
Chewing inside of cheek or lips	3	2	1
General irritability	3	2	1
Heart pounding or racing	3	2	1
Anger, hostility	3	2	1
Shaking hands, tremors	3	2	1
Irregular breathing rates, shortness breath	3	2	1
Uncontrollable thoughts	3	2	1
Mental confusion	3	2	1
Forgetfulness	3	2	1
Skin rashes	3	2	1
Loss of appetite	3	2	1
Excessive eating	3	2	1
Unexplained fears	3	2	1
		TOTAL SCORE	

Checklist for Tension and Anxiety Indicators

The key indicates the frequency that an athlete experiences specific stress symptoms. Total score indicates the intensity of the stress response. From The Athlete's Guide to Sports Psychology *by D. V. Harris and B. L. Harris,(Champaign, IL: Human Kinetics) p. 182.*

Understanding how performance level varies with stress is critical. Stress is not always detrimental to athletic performance. With too much stress, performance declines. Given too little stress, the athlete may feel unchallenged and may slack off from performing at a high level. The goal is to experience the stress level associated with optimal level performance.

Everyone has experienced the relationship between stress and performance. Up to moderate levels of stress, athletes are psyched up for competition. Once moderate stress levels are exceeded, responses such as choking, mental confusion, shaking, and loss of concentration may occur. The challenge is to achieve an optimal level by feeling psyched up without getting stressed out.

Athletes must understand their own pattern of stress associated with performing at their best. Tracking your stress level and performance level across a number of competitions teaches you this pattern. You can learn which stress symptoms correspond to your best performance.

Athletes can monitor their stress response and its relationship to their performance by completing the Checklist for Tension and Anxiety for a number of competitions. Look for the pattern that emerges across these competitions. Notice what set of stress symptoms you experience when you have your best competitions. This group of stress responses helps to define your peak stress level.

By using this tool, you can learn about your peak stress level. Identifying the stress symptoms associated with top performance and their level of intensity is critical. Stress symptoms and their intensities define the optimal state that the athlete aims for prior to competition.

From understanding stress the athlete should be able to answer the questions: "What are my responses to stress, including the earliest signs of stress?" and "What is the stress pattern I experience when I perform my best?" With these questions answered, you begin the process of regulating stress.

Changing Self-Talk

Self-talk has been described in a previous chapter. However, here we examine the use of self-talk as one part of the three-prong strategy for responding to performance anxiety.

Your self-talk helps you interpret situations you experience. This means that self-talk can be used to re-interpret situations. By following specific guidelines for internal dialogue, you experience situations as less stressful.

First, pay attention to what you say to yourself prior to competitions. Inner dialogue follows patterns. Statements made in internal narrative become habitual. Unfortunately, routine statements frequently go unnoticed. The first step involves paying attention to your inner dialogue, so you know what changes are needed.

Regard stress as positive for your competition. Stress symptoms are open to interpretation. You view stress positively when you regard stress as activation. Rather than saying to yourself, "I'm afraid;" or "I feel weak and shaky from nerves," re-interpret the symptoms. Say to yourself, "I feel challenged;" "I feel powerful;" "I feel excited;" "I'm ready."

Also, transpose any negative directions that you give yourself into positive statements. The runner who says to himself, "Don't fall on this slippery road surface," can create problems with his negative instructions. Negative instructions produce instantaneous mental images that coincide with the directive. Such mental images increase the chance of making the error about which the runner is warning himself. He should change the statement to, "Stay surefooted. Run with confidence."

In your self-talk, use encouraging statements and instructional statements. If statements you make to yourself before and during competitions are neither encouraging nor instructional, eliminate them.

Encouraging statements increase your confidence. "You can do it;" "You're a champ," exemplify this type of inner dialogue. Self-talk that focuses your attention on performance skills provides the other positive form

of internal dialogue. A runner might say to himself, "Relaxed upper body;" a tennis player might say, "Watch the ball," and "Get into position."

Changing self-talk changes your stress level. Consistent application of these guidelines creates new habits in your inner dialogue, habits that reduce stress and give you control over performance anxiety.

The best policy is to use the guidelines for self-talk at all times. Most important of all are the times prior to competitions and during competitions. During these periods, stress and anxiety can flair. Scrupulously following the guidelines from two days before important events through the competitions helps athletes maintain a state of mind that promotes solid performances.

Relaxation Techniques

Relaxation represents the third tool in the set for overcoming the negative effects of performance stress. Relaxation is the remedy for stress. Self-regulation of stress requires learning a relaxation method.

As pointed out earlier, numerous methods can be used to achieve relaxation. These include breathing techniques, meditation, autogenic training, imagery, and progressive relaxation.

Choose a method that you enjoy and that you will practice consistently. Making a relaxation technique part of a daily workout schedule reinforces the idea of the mental and physical aspects of sports working together.

A technique called progressive relaxation is unparalleled for achieving a state of physical relaxation. Edmund Jacobson, a pioneer in researching stress, developed the progressive relaxation method. He found that muscular relaxation shuts off mental activity such as worry and anxiety. It is impossible for a relaxed person to display mental or physical nervous symptoms.

Progressive relaxation is a simple method, but one that demands practice. Practice of the progressive relaxation technique creates awareness of tension. This awareness prevents accumulations of tension. Eventually, relaxation is maintained without conscious effort.

In progressive relaxation, you focus on the major muscle groups in the body, tensing up the targeted group, maintaining the tension for a number of seconds (usually thirty to ninety seconds). Then you release the tension and focus on a feeling of relaxation in that area of the body.

This technique produces a relaxed state during the session. Also, the feeling of relaxation carries over for hours afterwards depending upon the level of relaxation you reached while practicing. If you perform progressive relaxation consistently, a distinct practice effect occurs. The body learns to let go of tension automatically.

Cues For Relaxation

Cues or triggers allow you to elicit a state of relaxation quickly. Fast elicitation of relaxation through cues means that
you can use relaxation effectively prior to a competition, during a competition, or at any time.

A cue works by becoming "attached" to the deep state of relaxation that is reached while practicing the relaxation method. An effective cue is a combined cue that consists of the nondominant hand (this is your left hand if you are right-handed) and a deep breath.

The combined cue involves making a fist with the nondominant hand and taking a deep breath. Keep the tension in your hand and hold your breath for five seconds. Simultaneously release the tension in your hand and exhale completely. To establish this combined cue as a trigger, tell yourself after the last statement of your relaxation practice that any time you use this combined cue you will immediately experience a state of relaxation similar to what you experience during your practice.

Statements about the association between the cue and the state of relaxation should be made at the end of the progressive relaxation exercise when you experience a deep state of relaxation. Continued practice, with statements reinforcing the association of the cue and the relaxed state, makes you increasingly efficient at eliciting a relaxed state at will with the use of the cue.

The cue for relaxation should work hand-in-hand with awareness of stress. The instant an athlete perceives the building of stress symptoms is the time to engage the cue for relaxation.

Different standards apply at different times regarding the acceptable level of stress. Staying relaxed and low-key for several days before a competition works best for most athletes. Immediately before a contest, the stress level should move up to a peak activation level.

The three methods for regulating stress should operate in unison. The first method of awareness gives the athlete a superb detection system for stress symptoms. The other two methods, altering self-talk and triggering relaxation, make the regulation of stress possible.

SUMMARY

Athletes cannot avoid stress. Pressure is part of the fabric of competitive athletics. Manageable levels of stress add spice and excitement to the athletic life.

The recommended three-step process requires an investment of time and energy. These steps--1) gaining awareness of stress and its effects on performance, 2) changing self-talk, and 3) learning to relax at will--allow athletes to regulate their stress level. Self-regulation of stress is the unbeatable strategy for dealing with performance anxiety.

Removing performance anxiety opens the way for athletes to play up to their level of talent. Mental skills enhance sports performance. They allow athletes to reveal more about human potential in the sports domain.

References

Harris, Dorothy V.; Harris, Bette L.: **The Athlete's Guide to Sport Psychology.** Human Kinetics. Champaign, IL. 1984.

GEARING UP MENTALLY FOR RUNNING

It is that time of year again to gear up for the running season. The rituals begin: buying new running shoes, designing training practices, posting race schedules in your room, noting the advent of another season in your training log, and returning to your training diet.

These steps mark the entry into the new season. Preparation is the hallmark word. Once you determine time goals for your distance, you can set out action steps that will take you to your goals.

In the midst of this activity, athletes frequently overlook mental training. The start of a season, when your energy is high and your resolve is strong, presents a perfect opportunity for incorporating mental skills into your training program.

Numerous mental skills make good candidates for mental training. Visualization, concentration, relaxation, goal setting, and inner dialogue control are important skills for the athlete. This chapter presents an effective set of visualization skills.

These techniques share a focus on feelings of success. They set the mind of the athlete on a track of winning, confidence, and success. Using these

skills as part of a training regime prepares the athlete for performing his or her best. These practices build a success history, which brings you closer to the athlete within that you can envision.

BUILDING A PERSONAL SUCCESS HISTORY

Most of us remember errors. With particularly disappointing events, memories seem etched in mind. Sometimes, with stunning defeats, the memory assembles itself on a loop and plagues us with vivid replays.

Learning to extract the lesson or correction and to replay the corrected version is an important lesson in sports and in life. With errors, you have to unlearn the sticking power of errors. Equally important is learning to build a personal success history. With successes, you need to capture these times and to build the memories into a personal success history.

Successful occasions inside and outside of sports become part of your success history. Each memory constitutes an entry in your "success library." Entering the inner space of the success library prior to competitions creates feelings of optimism, success, and confidence. This mindset affects performance positively.

Athletes seek maximal control and efficiency in motion. Gaining control of your interior state can be developed through mental training. The mental skills that build a success history enable athletes to create a mindset that increases the likelihood of successful performances.

Building blocks for your success history consist of 1) reviewing your successes, 2) building your confidence, and 3) using best performance mental rehearsals. These steps engage your mind, as well as your body, in the process of gearing up for a new sports season.

REVIEWING YOUR SUCCESSES

Visualization is the tool for re-experiencing successful situations. Reviewing a successful experience locks that experience into memory. Replaying your successes as soon as they occur builds your personal success history. Mental replays of successes increase the likelihood of repeating that experience or a similar success experience and produce positive effects in confidence and self-esteem.

Reviewing successes should be done for specific instances, such as the successful execution of a complex dive or of a difficult vault. A sprinter might review a particularly fast start from the starting block. Also, review successful outcomes, such as winning a race or turning in a personal best performance. Make a habit of replaying all of your success events, those in sports and in other areas such as academic accomplishment.

The quality of the mental review determines the effectiveness of the memory. Focusing full attention on the replay strengthens the memory. Concentrate on the specific feelings that you had during the success experience.

Did you experience feelings of exhilaration? A sense of accomplishment? A feeling of expansiveness? Remembering and replaying the exact bodily feelings vivify the memory.

Certain outstanding memories can become symbols of success and triumph. In the first Rocky film, the scene in which Rocky runs up the steps of the Philadelphia Museum of Art represents a vivid success experience.

The dedication and heart he put into his training have paid off. He has not won the fight. But this scene shows the victory of his accomplishment. He experiences triumph because he has reached a level of fitness which gives him a chance, however slight, to win his big fight.

This scene becomes a "moment," a time which is larger than life because the occasion is packed with meaning and significance. As Rocky dances on the landing at the top of the steps, savoring his accomplishment, the scene transforms into a symbol of success.

Each recreation of success adds an item to the success history. Remembering and encapsulating special times of triumph in your life build symbols into your success library. When you replay these special moments, your state shifts into one geared for high performance.

BUILDING CONFIDENCE

Remember the adage, "Success breeds success." Confidence plays an important role in successful individuals becoming more successful. Building confidence represents a prime method for preparing mentally for your sport.

Confidence is critical for being a peak performer. With confidence, individuals can push for levels of achievement that others consider out of reach. Confidence allows risk taking, leaving the comfort zone, to engage in tasks that are challenging and demand more of an athlete's potential.

Athletes and coaches know that confidence makes a difference in level of performance, consistency in performance, and response to pressure plays. What many athletes and coaches do not recognize is that confidence can be developed.

Although certain people have high levels of confidence naturally, it should be reassuring to others who are not so confident, that a confident attitude can be developed intentionally.

Often, after a competition, when the winner is being interviewed, confidence comes up as an explanation of the win. How often have you heard, "I played well today. I was feeling confident from the start."

Dan Landers of Arizona State University conducted a study in which he compared collegiate athletes who became champions with others who did not become champions. He found three significant differences between the two groups. The athletes who became champions had better self-images, higher self-esteem, and they saw themselves as champions before they became champions. All three differences from these results point to a factor of confidence.

The method for achieving confidence through visualization consists of three steps: Relaxation, visualization, and general statements of reinforcement. In the visualization portion, the practitioner visualizes a time from the past when a high level of confidence was experienced.

The athlete examines this state of confidence and describes the state in detail, including the physical, emotional, and mental components that make up confidence. Words or phrases are used to sum up the major components of the state of confidence. These words plus the picture of the athlete operating in a high state of confidence form a symbol that allows the athlete to re-elicit the state of confidence at will.

The logic behind this method for developing confidence is straightforward. A state, including the state of confidence, can be specified by describing its physical, emotional, and mental components in detail. By assigning a word or phrase to each component, the state can be re-entered with ease. The phrases act as triggers to re-elicit each element that makes up "being confident."

You do not have to hope that you will feel confident during a particular competition. You can train yourself to bring about a state of confidence.

The confidence exercise offers a technique for entering states of confidence. Confidence puts you in a state of positive preparedness. With confidence, you view yourself and your performance positively. You raise your performance expectations. These consequences increase the likelihood of your success. Developing confidence is a vital step for building a personal success history.

USING BEST PERFORMANCE MENTAL REHEARSALS

Mental rehearsal completes the set of techniques for orienting you toward success. With this mental rehearsal method, you preview yourself being successful in a future competition.

Everyone has heard of feedback. This "feedforward" technique calibrates the mind and the body toward high performance.

Mental rehearsal helps to develop a "feeling" of success. Mental rehearsal involves practicing or rehearsing an important upcoming event in your mind's eye.

Mental rehearsal methods may be external or internal. In external mental rehearsal, you view yourself in a scene from the perspective of an observer of your behavior. With internal mental rehearsal, you project yourself into the scene so that you become the experiencer, rather than the observer.

One of the most effective external mental rehearsal techniques is called "best performance" mental rehearsal. For this technique, you select the event that you want to prepare for with mental rehearsal. Then, using a brain-storming method, construct a list of the characteristics associated with your performing at your best level. For example, best performance for a cyclist might include relaxed breathing, smooth and powerful cadence, mental focus, confident feeling, well-rested, and a sense of being fully prepared and ready.

The next step involves creating a detailed visualization. Review a time in the past when you did your best performance in an event like the one for which you are preparing. For example, if you select an important track meet as the upcoming event, scan your memory until you find the time in the past when you did your best in running this race distance.

In your mind's eye, review this best performance from the past. Note each of the significant characteristics that made it your best performance. Next project the scene ahead in time and see yourself at the upcoming meet performing with the identical characteristics and the form that you exhibited in your best performance.

In the visualization, systematically include each of the best performance characteristics that you came up with in the brainstorming session. Include all of the key characteristics that you exhibited in your best performance from the past.

Best performance techniques help to create high-level performances consistently. For mental rehearsal to produce this desired outcome, repetition is necessary. With sufficient practice, this method is unparalleled in gearing your mind toward performing at the top of your ability.

PRACTICE REQUIREMENTS FOR THE SUCCESS TECHNIQUES

All three methods for building your success history--reviewing successes, building confidence, and using best performance mental rehearsals--require practice. As a general rule, each mental method should be done daily for a practice period of fifteen minutes over the course of one month. This practice time establishes a foundation for the mental skill. The introduction to a mental technique is analogous to learning the basics in the game of chess--the names of the pieces, the moves each can make, a few classic openings, and practice time playing the game.

With this foundation, you can "call on" a mental skill, such as the confidence exercise or the best performance method. Additional practice sharpens and develops your ability to do the mental technique, in a way that parallels physical skill development.

As your ability develops with a mental skill, the impact of that technique on your athletic performance increases. Undertake the mental preparation for a specific competition only after the initial month of practice. An easy-to-follow schedule allows you to incorporate each success method into a plan for mentally preparing for a competition.

Three to four weeks prior to a competition go through the best performance technique at least once a day. Twice a day is preferable and easy to carry out, especially if you record the best performance technique onto a cassette tape. Continue this rehearsal method up to the day of your performance.

Three days prior to the event add a review of successful occasions. Three times during each of these days go over several successes that you have experienced. Note in particular the bodily feelings associated with success.

As a general habit, you should review success instances and outcomes. For the success reviews beginning three days prior to a competition, choose successful times that stand out in your memory. Replay your special successes, your most important moments of triumph and accomplishment.

To complete the mental preparation that gears you toward success, use the confidence exercise twice on the day of your competition, once when you enter the site of the competition, once immediately prior to your event.

SUMMARY

Certain mental patterns orient you toward success. Reviewing your successes, building your confidence and using best performance mental rehearsals are powerful techniques. They direct your mind toward success like a compass needle toward magnetic north.

Too often, athletes and coaches view characteristics such as confidence and self-esteem as fixed qualities, connected to an individual's personality. We are learning that it can be otherwise.

The power of intention combined with the love of sport push athletes to transform themselves physically, to achieve extraordinary levels of physical skill. Adding mental skills to sports training accelerates athletic development. Using the three exercises for building a success history can be done in parallel to the physical conditioning the athlete pursues at the beginning of a new season.

These mental skills hone an athlete's mind to a point of readiness and to a sense of expectation for success. This mindset enhances physical performances and the total athletic experience.

DRIVE AND DETERMINATION: DEVELOPING THE MOOD OF A CHAMPION

In an interview before one of his Wimbledon finals matches, Boris Becker, the German court Wunderkind, said something remarkable, considering that this was the annual Olympus of tennis. The outcome, he predicted, would have "nothing much to do with tennis." With his extraordinary prediction, Becker made a critically important statement about winning: In the end, winning is more than the sum total of the physics and physical skills that make up a sport.

That realization is intuited by anyone who has devoted time to a game or spent a lot of time in the stands. Winning--and winner--have to do with something mysterious and ineffable, something having to do with "heart" and "psych." More recent is an understanding that psychological traits, once thought to be exclusively inborn, can be developed. The mental attributes--desire, concentration, poise under pressure--that create optimal performance can be learned.

Of all the mental traits that heighten athletic performance, one quality stands out: drive. With this characteristic added to an athlete's make-up, an athlete strives relentlessly toward his or her potential. Drive and determination, also referred to as desire or as passionate commitment, constitute a critical factor in how far an athlete will develop.

The sports sciences have experienced explosive growth over the last two decades. Leaps in understanding have contributed to accelerated development in physical skills. Coaches and fitness experts direct sophisticated conditioning programs complete with aerobic fitness, flexibility training, and strength work.

Learning sports-specific skills involves more than playing the sport. Video taping of performances, exercise physiology instruction, ergotrophic aids, biomechanical analysis, complex tactical strategies all come into play to develop sports skills.

Parallel to the growth in understanding physical skills are the advances in understanding psychological factors that enhance performance. Experts in mental training have shown that the mental traits that foster athletic performance are skills. The important characteristic, drive, as with all mental skills, can be learned. Imagine the boost to athletic performance when athletes learn to connect their inner forces of drive and determination to athletic goals!

Drive and determination are difficult to define in an exact way. But any of us in the sports world recognizes this trait when we see it. Boris Becker presents an outstanding example of drive and determination.

His family introduced him to tennis at age six. They took him to a new tennis clinic in Heidelberg. The regional coach recognized Boris' athletic talent. The visiting German head coach noted that the feature that distinguished the eight-year-old Boris from his peers was "enormous determination."

By age eleven, Boris started to train at the national center. Neither his technique nor his match record was the best for his age group. It was in willpower that he surpassed his peers.

Becker's determination revealed itself in training and in competitions. He made a maximum effort consistently. Once while running with older boys, he pushed himself so hard that he fainted.

When he gained international attention at seventeen by winning his first Wimbledon title, millions witnessed his "never say die" drive. Never giving up on a single point, lunging and diving for balls, playing with total commitment and unwavering determination were striking as the hallmarks of his style.

Consistency and intensity characterize the training done by athletes with drive. These athletes work with intense effort. Despite fatigue, poor weather conditions or other circumstances that could become excuses, these athletes strive toward their maximum level in each training session. Competitions also show this stamp of steel-will determination and unflagging persistence.

The importance of understanding this trait of drive and determination centers on two reasons. Coaches have a vested interest in identifying young athletes with the greatest athletic potential for a sport. The Player Development Program of the United States Tennis Association (USTA) sets the identification of the most promising young players as one of its main goals.

However, future champions cannot be selected on the basis of performance alone. Performance records and the skill proficiency of youngsters at ten or twelve provide only moderately accurate forecasts of which athletes will reach world-class caliber. Intense investment in money and in personnel goes into making a champion. Plus the caliber and international ranking of a country's athletes are points of national pride.

Other signs beyond performance are needed to predict future champions. Intense drive and determination may be one of the most distinguishing characteristics of young athletes who will rise to the top. Understanding this trait promises to increase the accuracy of predicting our country's best athletes.

A second reason for the importance of understanding the quality of drive involves the development of training programs for all athletes. Drive and

determination appear to be tied to character traits. Training strategies make the characteristic of determination accessible to every athlete.

Athletes want to win, to achieve, to excel. Most of us share this general desire. However, individuals with drive go after their goals with an unwavering intention and an intensity that separates them from others.

The underlying dynamic with drive involves connecting a goal or objective with a core value. The goal becomes invested with meaning and significance. When drive operates, achieving the goal matters intensely.

Consider the two main characters from the film, *Chariots of Fire*. Two world-class runners in the 1920's compete for the Olympic glory and gold. One is a Jew and a university student on scholarship in class-conscious England. The other is an Irish minister.

The minister runs for God. He views his athletic talent as a gift from God. By running he pays homage to God. In his mind, his running is a tribute to God, a gesture to glorify God.

The Jewish student runs to prove himself, to justify his existence. His performance proves to himself that he has worthiness.

Society (at least the bigoted portion of the society in which he lives) defines him as less than others. His running provides a way of rising above the bigoted perceptions of him. He runs to define himself anew. Literally, he runs for his life. Everything of importance to him rides in the balance of his performance.

These two characters are excellent examples of athletes with unbending drive and determination. The source of their drive comes from the meaning attached to their goals. When a runner or any athlete develops burning desire, the athletic performance is laden with meaning.

The runner imbues the race and his or her performance with significance. Crossing a finish line first or last contains little significance as an act in itself. The athlete determines what the event means. Athletes who express determination and drive build layers of meaning and symbolism into an

athletic feat. The meaningfulness of the event creates a different perception and a different intention in the mind of the athlete.

The race is no longer simply a race but a proving ground. The game no longer is about the running of an 880 or a mile, but becomes the game of life. The performance is a gauge of one's ability to be a player in the game of life.

Consider Rocky Balboa. What chance does this central character from the film *Rocky* have to make it in life? He is poor. He is inarticulate. He is not exactly a mental whiz. He is awkward socially. He is from the "wrong side of the tracks." He lacks all the right stuff for succeeding in our society. His chance to succeed is maybe one in a million. Which is approximately his chance of winning the heavyweight bout that provides the central event of the plot.

The factor of desire tilts the probabilities. He trains in a pitch of intensity. The scenes of his running up the steps of the Philadelphia Museum of Art and the one in the cold storage area in which he punches a side of beef until his hands bleed memorably capture his intense desire. He invests himself heart and soul in his fight. He wants to win with his blood.

In spite of formidable odds, he pours himself into his performance. He knows that the fight represents his one chance, maybe for his lifetime. The audience cheers him on. We want him to win. His winning represents a human triumph. His fight becomes one variation on the basic human theme of triumph.

The theme of triumph contains key elements: A person who is pitted against difficult odds, faces the challenges courageously, mounts a passionate effort, and ultimately wins. With triumph, life expands. Triumph means that an individual transcends his or her former level and moves to higher ground in life.

Most acts in life are patterned, habitual, safe. Acts that contain the possibility of triumph are risky. They place an individual on the edge of her own boundaries.

Desire and determination arise when a goal is tied to something that is deeply valued, which, if attained, gives the individual a sense of triumph.

The goal becomes a symbol of the possibility of triumph. When the athletic event comes to represent a way of triumphing, the athlete performs differently.

The athletic event symbolizes a way of triumphing over the core challenge in the athlete's life. This is the point at which the race becomes a gesture for glorifying God, or a proving ground to reinvent the self, or, as for Rocky, the one chance in a lifetime to "be somebody." The perception that the playing field is the stage for the athlete's struggle to triumph in life changes the game radically. A wellspring of drive and determination emerges.

The secret of tapping passionate commitment in sports centers on self-examination. Figuring out how to muster your drive and determination involves a path of self-discovery. You need to discover your core values. From those core values, you can determine your definition of triumph. Ask the question: What would give me a sense of triumph in life?

An athlete who is working toward a goal that creates a feeling of triumph bends every effort to succeed and marshals the powerful force of determination.

Anyone can tap their drive and determination and channel those forces to charge their athletic performance. A two-step program accomplishes these objectives. The program sequence is like a left, right punch.

First the athlete has to set goals that link athletic performance to core values. The second step involves changing beliefs that stand in the way of achieving desired goals. These steps make up the two-part process for creating drive and determination.

GOAL SETTING

Goal setting represents the key to motivation. Without goals an athlete can slide into a slump. In contrast, profiles of goal-directed top athletes show the purpose and motivation that goals can provide.

The goal setting procedure involves three steps: goal identification, goal formulation, goal programming. These steps for working with specific goals create significant effects in the athlete's thinking and performance.

BELIEF MODIFICATION

The strategy of belief modification goes beyond directives for positive thinking. Belief modification involves athletes' ability to manage their beliefs about themselves and about their performance. The drive and determination associated with optimal performance occurs when athletes hold beliefs that support their doing their best in sports. Belief modification trains athletes in the skills needed to modify beliefs to create a mental advantage.

Learning the steps of goal setting and belief modification set the stage for fueling your athletic performance with drive. The process of recruiting this inner force is an exciting one.

The range of possible results includes sparking your athletic life with the fire that flows from within. This is the drive that lifts athletic feats to a higher level.

SECTION III

A BROADER PERSPECTIVE

ATHLETES AND THEIR HEROES

Childhood is a time for dreams, fantasies and heroes. Children's heroes, the ones who always win and who demonstrate mind-stretching feats and powers, light the small but luminous eyes of their admirers with wonder and inspiration. Athletes are no exception to the hero habit. Not surprisingly, young athletes select heroes from the sports world, frequently from athlete's own sport.

Adults listening to children's recital of statistics of their heroes' exploits in baseball or football or hockey, might wonder why they exchange this information with boundless enthusiasm. Sports trivia of yardage gain, passes completed, interceptions made, unforced errors, batting percentages, RBI's are rattled off with high-level energy. The vividness of descriptions of critical plays or points, when children recount triumphant moments for their hero, transports even a reserved child into another realm.

Children's heroes play varied and significant roles in their development, especially in the goals, standards, and ways-of-being that the young emulate.

A major effect of athletic heroes is inspiration. Young athletes show endless curiosity about the personal life history of their hero. They revel over their hero's saga, the rise through the ranks, triumphs over stacked odds,

accounts of personal dedication and resiliency when defeated. Knowledge of the personal side and the performance side of a hero's life allows athletes to identify with the hero and to be inspired to strive for their own highest performance.

Athletes fantasize about running, cycling or swimming with their hero. As a young runner kicks a longer stride rounding the field next to his high school, he imagines himself running with Bill Rogers. Kicking harder, the young athlete pushes through a barrier of pain. Encouraged by a word from "Bill Rogers," he strains to keep within a few strides of the imaginary Rogers' breaking the finish tape. He runs his best practice time for his distance. High-quality practice accompanying a fantasy about one's sports hero is not uncommon. Using athletic heroes for inspiration represents a natural and effective form of visualization practice.

The athletic hero also adds significance to an admirer's life. Imagine a fifteen-year-old girl who is edging her way up in the rankings at a regional level in tennis. Her hero is Martina Navratilova. Having a tennis hero enlarges this young player's experience. Identification with an outstanding champion adds excitement to her following of professional matches.

An older sister who is a top contender on the professional tennis circuit expands the interest and drama of matches for a sibling. Having a hero in the professional tennis circles expands the realm of experience of a young player. Focusing keen attention on the matches, tournaments and career of a hero adds vital interest and excitement to a player's love of the game.

A hero contributes to a feeling of significance. A sense of connection with a hero mentally plucks the young athlete out of the constrained existence of high school and local matches and transports her to a higher level, where champions play Grand Slam matches for history-breaking records, where champions function at a dazzling level of gameplay, where they push the boundaries of human potential and the possibilities of the game itself. For many, experiencing that rarified realm is only possible through identification with an athletic hero.

Beyond adding inspiration and significance to a young athlete's life, the hero helps to mold ideals and standards for behavior on and off the playing field. The hero's performance record stands as a high, even ideal, standard for achievement. Athletes develop vivid ideas about performance boundaries because of what their heroes can do.

Having a hero facilitates the development of personal standards, as well as performance standards. At the championship level, skill proficiency is a significant factor, but not the only factor in winning. At the highest levels in sports, personal courage, poise, and dedication frequently decide the final outcome of who runs the fastest, throws the farthest, or jumps the highest. Emulating the style and the characteristics of heroes defines a process that sports psychologists call modeling. Modeling occurs when athletes set standards, such as gutsiness, risk taking and steel-will determination based on a hero's exhibition of these characteristics.

The hero phenomenon operates in interesting cycles from one generation of athletes to the next. Certain athletes with sports heroes in their youth rise to the top in a sport and become heroes to the new generation of rising athletes. Such an athlete is Brian Enos, a world-class pistol shooter.

Brian Enos, a 35-year-old resident of Mesa, Arizona, was ranked second in the world in the International Practical Shooting Confederation or IPSC. In this event, Brian Enos shoots a .45 caliber automatic pistol at various targets, both metal and paper, that are arranged strategically on different courses of fire.

IPSC shooting is a new sport with a short 30-year history. Jeff Cooper, the originator of IPSC, is a shooting instructor in Arizona.

The IPSC course is self-paced. However, the shooter's score is based on the time required to strike each target on the course. The shooter must decide how to pace himself in a maximally efficient way.

Pushing for what is possible on a course, the shooter reaches for a fine line where he draws, moves and shoots as fast as humanly possible, but where he still checks each movement to ensure that it falls within the boundaries

needed to meet the accuracy requirements. As Brian describes it, this feature puts the high-level shooter on "the ragged edge."

Unlike other forms of shooting, such as silhouette, shotgun and rifle marksmanship, IPSC is non-static and free-style. The starting position on the shooting line is a mock surrender stance, with hands held up. When the starting timer sounds, the shooter draws his gun from his holster and begins. On a particular course of fire, the shooter may be required to shoot from various sites called stations. The shooter might start at one station from which he strikes various metal targets at varying distances, then be required to run to another station on the firing line and to shoot additional targets in a prescribed sequence.

In watching Brian Enos at the shooting line, even the untrained eye of someone new to the event can detect his efficiency of motion. Brian pares each motion down to its most efficient form. He pushes the boundaries of efficiency in motion, quickness and accuracy, in an increasingly refined equation each time he shoots. At Brian's level, as he shoots, he pushes on the envelope of human potential.

In certain IPSC competitions, the courses remain unknown to the shooter until shortly before the competition. The first time the shooter learns the exact course requirements occurs when he registers for the match. The number and size of the targets; their arrangement on the course; the sequence to follow in striking the targets; the changes in position that are prescribed for the course, remain unknown until shortly before the event.

The demands on the IPSC competitor place a premium on fluidity, adaptability, and the ability to deal in an immediate way with an unanticipated situation. Versatility and quick adaptation are hallmarks of top shooters in IPSC.

Similar to the design of a golf course with sand traps, water traps and subtle difficulties created by the contours of the green and the distances and angles of the shot trajectory required to drive from one hole to the next, the design of the IPSC course is created with subtle and obvious traps. Outmaneuvering the designer's traps, playing the most efficient angles, and

dealing with the lack of knowing the specific requirements of a course until shortly before firing, requires lightning-fast thinking and total clarity while shooting.

Given the unusual requirements of the IPSC, it is fitting that Brian Enos had an unusual athletic model. Reluctant to label Bruce Lee a hero, Brian refers to Bruce Lee as someone whom he greatly admired. Enos feels that each person should construct his own model to access his freedom and individuality. Having another individual as a model creates a constraining, preconceived idea that limits thinking and action. For Brian Enos, Bruce Lee, the famous martial artist, represents someone who strived for perfection.

Enos admired Lee's deep thinking which created the clarity required for Lee's "in-the-moment" performance. Although masked by the hype surrounding the man and his life, Lee made remarkable contributions to the martial arts. Lee sought freedom by operating outside of any system. He pushed the boundaries of the martial arts. He performed at a level no one could match. He did it not by conditioning himself with a teacher or school of training, but with a mindset directed at pushing forward without boundaries or preconceptions toward perfection.

No wonder Brian Enos admires what Bruce Lee did and who he was. Bruce Lee strived for perfection, as Brian does now. Bruce Lee had an intensely inquiring mind, a feature which is striking about Brian, who is willing to stay suspended in a state of non-conclusions in order to be always in search of more perfect solutions.

Not surprisingly, Brian dropped the idea of a model. Bruce Ogilvie, a sports psychology expert, claims that after athletes reach a certain proficiency level in their sport, they need to move beyond the model provided by their early idols or heroes.

Certain athletes let go of their heroes because they find themselves competing with them on an equal basis, such as in the cases of the Irish cyclist Stephen Roche competing against his fellow countryman Sean Kelly, of whom he was a lifelong admirer; or Zola Budd racing against Mary Decker Slaney; or Ingrid Kristiansen racing against her idol Joan Benoit.

Athletes need to shift their view of their former idol to one of colleague and competitor. Once he reached the national level in his sport, Olympic cyclist Davis Phinney realized that those at the top "are guys just like me."

Letting go of heroes is not always easily accomplished. Ingrid Kristiansen worked with a sports psychologist to rid herself of feeling intimidated by her former hero Joan Benoit.

Brian Enos is wise in his view of models. For young athletes, the athletic model presents a stretch in performance boundaries, one that allows much and disallows little. However, if athletes (and others) let go of models once they mature, they allow themselves the freedom and creativity to strive for the outer limits of their own potential, a unique model that only they can create.

References

Balf, T: *Idle Worship: How Your Athletic Heroes Fit Into Your Fantasies.* **Ultrasport.** July 1986.

DETERMINING YOUR FORMULA FOR SUCCESS

Every athlete has one. For most sports warriors, the formula for success in sports is implied, never articulated. One runner might follow a regular running schedule with peak cycling variations added close to major meets. An eye on dietary guidelines and faith in particular equipment, such as the style and brand of running shoes, might constitute other considerations.

Everyone in sports from world-class athletes to weekend warriors holds beliefs about how to increase performance. The question is: At your current level in your sport, and given your talent and ability, how do you get the most out of the time you put into your sport? How do you achieve the greatest performance payoff given your investment in training? Once you frame these questions, then ask: What help can you expect from sports programs and from local and national athletic associations?

National athletic associations hold the responsibility for collecting and for disseminating information concerning the means for achieving full development of athletic potential in a sport. Few American sports associations meet this challenging mandate. Other countries have assumed

leadership in asking the question about the "formula" for maximizing athletic potential and in establishing systems designed for this goal.

Eastern European countries, in particular, demonstrate impressive results with their programs for athletes. Their intelligent application of sports science information pushes the boundaries of human performance. Programs in Germany produce sports champions significantly beyond the numbers expected based on the country's population. Two European prototypes who emerged through the German system are Boris Becker and Steffi Graf.

Consider Boris Becker, the German Wunderkind, who was a Wimbledon champion at 17 and again at 18. We have already sketched Boris Becker's intrinsic drive and determination. What outside forces helped bring him to championship level?

Becker started tennis at age 6. Because he showed talent, he received free lessons at a tennis clinic in Heidelberg from the regional coach, who held a doctorate in biomechanics. By 9, his practice schedule changed from biweekly to daily. All his lessons continued to be free.

By 11, he was selected to train at a national center. Although he had good dexterity, he was not among the best in his age group in terms of technique or ranking. His outstanding quality was "enormous determination."

At 12 and at 14, he lost in early rounds of regional events. But at 16, he emerged shining. He leaped forward in the juniors and, at 17, he won his first Wimbledon title.

The German Tennis Federation estimates the cost of Becker's pre-Wimbledon training at $500,000, all of which was provided by the Federation. The financial burden on Becker's parents? Nothing.

Had Becker been born in the United States, the likelihood of his becoming a champion tennis player is small. In this country, the system responsible for identifying talented players and for developing those players to their highest potential might not have identified or have developed a young Becker.

The American system in tennis operates in ways which are inconsistent with effective development of talented players in the sport. This is not an indictment of the tennis system. Rather, this recognition points out that American sports systems, with tennis as an example, have functioned with "formulas" for success in athletics that translate to methods that are not aligned with bringing out the highest performance levels in talented athletes.

In contrast with the organized efficiency of Eastern European sports development systems, an intriguing study of sports champions reveals shortcomings in the American system.

Sporting Excellence, by David Hemery, a gold medallist for Great Britain in the 400-meter hurdles in 1968, describes characteristics of world champion athletes. The conflicts between his profile of champions and American methods for developing young athletes are enlightening.

- **"Late bloomers" characterizes two-thirds** of Hemery's champions. American systems focus on young athletes with early competitive achievement records.
- **World champions are well-sports-rounded**, participating in a number of different sports and not specializing until age 16 on the average. Numerous sports in the United States pressure youths to specialize by age 10.
- ***None* of the champions hailed from affluence**. In contrast, juniors in numerous sports, especially tennis and golf, come from wealthy families in high proportions.
- **Families of champions create a stable, supportive environment**. Too often, the American parent behind an athlete is the prototypic "stage" parent who pushes and pressures.
- **Intensity of training** represents a near universal characteristic of champions. The widely-held myth of more is better results in lengthy but low-intensity training with American athletes.

If you think that your formula for your athletic development is off a few beats, you are in good company that includes national sports organizations. However, emerging signs indicate progress toward improved sports systems.

It is a tribute to the United States Tennis Association (USTA), particularly the architects of their Player Development Program, that they are creating a new system for the development of athletic talent in tennis. With excellent people, with resources and energy behind them, the USTA is tackling the question of what it takes to develop athletes to their fullest sports potential. Results from the Player Development Program will fashion a new system informed by the best methods in coaching and by the advances in the sports sciences. Their ambitious undertaking, begun in 1988, will affect the future of tennis. Their system may act as a prototype for redesigning the sports development systems of all Olympic sports.

We do know that champions are born and trained. Athletes who strive to reach their potential are born and trained. Physical talent for high achievement is more widely distributed than previously believed.

Constellations of factors form the major components in the equation for excellence in sports. Talent plus personal characteristics, notably steel-will determination and dedication, plus the best sport-specific coaching, and the best ancillary training, including total fitness, dietary considerations and mental skills, create the general equation for optimally developing athletic potential.

Rethink your formula for success in your sport. As the designer of this equation, you play a significant role in your performance outcomes.

Your formula for success in your sport is a unique construction. Consider your current program. Have you included the major components mentioned above that enhance performance?

If your overall objective entails maximizing your athletic ability, a multi-faceted program is a must. Decide which types of additional training would yield the greatest boost to your performance. Then, determine the best sources for guidance and instruction for those methods. Choose carefully among coaches, sports organizations, and athletic clubs.

Most important of all, remind yourself that the success formula applies to your abilities and your goals. The final equation should be tailored uniquely to you.

References

Tabak, Lawrence: *Unforced Errors.* **American Way.** July 1988.

THE IDEAL PERFORMANCE STATE

An athlete who performs at the top of his or her ability functions in the Ideal Performance State (IPS). The IPS represents the maximum for an athlete given the stage of athletic development.

If a snapshot were taken at a point in an athlete's development, an assessment could be made of the performance at that stage of training and practice. A snapshot of a novice in tennis might tell us that she is performing extremely well given her playing time of eight months of lessons and practice.

Another woman who is a veteran of the pro circuit for five years could play rings around the first woman. Yet, an assessment of the tennis pro informs us that she is performing poorly for her level and her talent.

Any serious athlete embarks on a long journey that spans years and that goes from the introduction to a sport to mastery and the fulfillment of athletic potential. Snapshots along the way evaluate athletic performance at particular stages of the journey.

Different expectations apply to different stages. A crack pilot who has been flying commercial aircraft for fifteen years possesses abilities that

appear like wizardry to a novice pilot. Likewise, in academic areas, expectations change depending upon whether individuals are high school students, college students or post-doctoral fellows. Standards shift again if the evaluation concerns a professional who has been an innovator in her field for years.

In the long view, fully realizing athletic potential may be the aim for a competitor. For the near future--an upcoming competition or the current athletic season--the serious athlete aims to do his or her best. This immediate goal translates to reaching the IPS.

At each stage of an athlete's development, the short-range goal entails achieving the IPS. This short-term goal relates to the ultimate goal of maximizing potential in the way that stepping stones relate to a final destination.

Reaching and maintaining the IPS demand a set of mental skills. A description of these skills and a practice plan for their development provide the athlete with a map of the mental requirements for the IPS.

DESCRIPTION OF THE IDEAL PERFORMANCE STATE

What, precisely, is the Ideal Performance State? How can it be recognized?

Typically, the IPS occurs unexpectedly. The athlete experiences a feeling of significance. Everything becomes special and takes on a surrealistic quality.

Movement is effortless. Everything comes together--timing, perception, motion, and judgment. One operates "in the flow," as scientists from the former Soviet Union label it.

The IPS seems mysterious. This state descends on athletes spontaneously and leaves just as unpredictably.

Sport psychologists attempt to demystify the IPS. Certain investigators explain the state by identifying the characteristics associated with it. Others

use detailed descriptions of the state as a method for helping athletes achieve the IPS at will.

One highly-acclaimed sport psychologist, Lars-Eric Unestahl, examined the IPS through interviews with athletes after peak performances. According to Unestahl, characteristics of the IPS include:

- Deep concentration on the performance
- Dissociation with everything outside the performance area
- Detachment from pain as demonstrated by an increase of pain tolerance
- Elimination of feelings of fatigue
- Perceptual changes, such as an altered sense of passage of time; and visual distortions, such as tunnel vision

Understanding the IPS makes it possible to create this desired state. Marvin Mackenzie, head of Columbia University sport-counselor program, is an authority on the application of Neuro-Linguistic Programming (NLP) techniques to sports. Mackenzie worked with Russ Clune, one of the country's top rock climbers, to study ways to achieve the special state in which Clune did his best climbs.

Clune could do climbs rated 5.12 (next to the hardest rating) consistently. With Dr. Mackenzie's help, Clune analyzed the state in which he achieved his top performances.

Marvin Mackenzie found out that once an athlete became aware of the sensory cues to his "up" feeling, he did not have to wait for the state or mood to happen. He could intentionally create the state of mind (and body) needed for the IPS.

ACHIEVING THE IPS

Using optimal performance strategies for attaining the IPS works only when these methods are incorporated into a multi-dimensional plan for athletic development (as described in the first chapter. Mental training is one of four major bases in an overall program for developing athletic potential).

The other three bases, sports-specific skills, tactical ability and overall fitness, are requirements for athletes seeking the IPS.

To create the conditions for the IPS necessitates practice of the required mental skills. First, athletes are instructed in different mental skills. Then these techniques are practiced in combination.

Combining optimal performance techniques for reaching the IPS requires skilled execution of each mental practice. Only then does the combination of methods produce the right conditions for entering the IPS.

A state, including the IPS, can be specified by three sets of characteristics that make up the state: the physical characteristics associated with the state, the emotional qualities, and the mental set or frame of mind. The optimal performance characteristics required for each aspect of the IPS are:

Components of the IPS	Optimal Performance Characteristics Required
PHYSICAL	Physical characteristics of the best performance state
	Peak stress level
EMOTIONAL	Confidence
	Emotional characteristics of the best performance state
MENTAL	Winning beliefs
	Concentration
	Internal dialogue control

To move into the IPS intentionally, you need to acquire a "feel" for the

state. Start with the *physical* characteristics of your IPS. Ask yourself, "When I perform at my peak level, how do I feel physically?"

To enhance the description, review the best performance exercise (as presented in Gearing Up Mentally For Running). Add the physical characteristics of your best performance to the description of the physical aspect of your IPS.

Also, recall that peak stress level is the stress associated with peak performance. This is the state in which you are neither overpsyched and nervous nor flat and choked. This state of readiness and high motivation can be described by the type and the intensity of the stress symptoms experienced. Gaining awareness of stress responses and identifying the peak stress level were explained in Dealing Effectively With Performance Anxiety. Adding a description of your peak stress level further specifies your IPS.

These two methods within optimal performance training--defining the physical qualities associated with your best performance state and defining the stress symptoms associated with the peak stress level--enable athletes to delineate the physical characteristics of the IPS.

To describe the *emotional* aspect of your IPS, ask yourself, "When I perform at my top level in my sport, how do I feel emotionally?" List the feelings that come to mind as you consider this question.

Two other sources help to fill out this description. Review the confidence exercise (as described in Gearing Up Mentally for Running). Use the confidence exercise to detail the exact feelings that make up "being confident."

The description of the emotional level of the IPS can be enhanced by reviewing the best performance state and noting the emotional features. Generate a list of the emotional characteristics of your IPS based on these descriptions of confidence and your best performance.

The *mental* aspect comprises the third component of the IPS. This is the mindset associated with peak performance. For this part of the IPS, ask yourself these questions, "When I perform at my peak level in my sport, what is the mental outlook that I have?" "What are the beliefs that I hold?"

A well-elaborated description of the mental characteristics of the IPS comes from three sources: a list of winning beliefs, a description of a deep state of concentration, and the guidelines for internal dialogue control. As an athlete, winning means moving toward your goals. To construct your set of winning beliefs, think of the beliefs that occur to you when you are successful and accomplishing what you want in your sport.

Examples of beliefs associated with winning and success are, "I knew all along I'd be successful," "I have great potential," "I know how to achieve what I want," "I trust my ability."

Concentration is another element of the mental level of the IPS. Create a description of your experience in a state of concentration. Focus on the conditions that produce concentration. Your description might include total focus on a single target, sense of tunnel vision, immunity to external distractions.

The final source for the mental part of the IPS is inner dialogue control. Review the guidelines for self-talk (as presented in Gaining Control Over Internal Dialogue). Note the statements that you make to yourself that are associated with your IPS.

Use the information from these three sources to construct a map of the IPS at the mental level. Specifically, write down the heading "Mental Characteristics of the IPS." List: 1) your winning beliefs, 2) a description of your concentration state, and 3) internal dialogue statements you make that are linked to your IPS.

This step completes the sets of descriptions for your IPS, with information for each of the three levels of the IPS: physical, emotional and mental. Together they provide a map of the IPS, which you can use to recreate the IPS at will.

Next, you need to practice moving into your IPS. To do this, instead of describing the characteristics at each level of the IPS, *experience* each of the characteristics.

Creating your IPS is similar to the way an actor moves into a character role. Essentially, you use the information about each of the levels of your

IPS to guide you into this special high-performance state, the role you want to assume.

For example, with the physical characteristics associated with your IPS, start with your optimal stress level. First, review the description you have for the optimal stress level. Then, do your best to *experience* that level of energy.

Follow the same procedure with each of the other descriptions for this level. If one of the physical characteristics is "I feel strong," then focus on this characteristic and experience the bodily state of "feeling strong." Repeat the method with each of the physical characteristics associated with your IPS.

Once you experience the bodily state associated with your IPS, focus on the emotional characteristics of the state. A key emotional attribute associated with top performance is confidence. Use your ability based on the confidence training you have done to *experience* a feeling of confidence. Do the same for each of the other characteristics associated with the emotional aspect of your IPS.

Proceed in a similar way for the mental level. With the mental level, experience the mindset that comes from holding your winning beliefs and being in a state of concentration. Focus your attention on the winning beliefs and adopt those beliefs as true.

It is not only actors who have the ability to change themselves emotionally and mentally. All of us have the ability to change our outlook.

We can make ourselves enthusiastic, allow ourselves to feel sad, reframe beliefs to experience a different perspective. Intentionally altering your experience physically, emotionally and mentally allows you to create the IPS at will.

You might feel strange or artificial the first few times you attempt to create your IPS. Do not let those feelings deter you from continued practice. The benefits from persistent practice of creating the IPS are worth any uncomfortable feelings you may have at first.

After a while, the mental skill of eliciting your IPS becomes automatic. It is

not uncommon for individuals to adopt a "personality" for a performance. Frequently, DJ's have a radio personality; comediennes have a stage personality; and professional speakers adopt a persona that they project from the platform, which has much more showmanship and enthusiasm than they express in other circumstances.

Training yourself to reach and maintain your IPS pulls together important skills of optimal performance. With continued practice of your IPS, you reach new levels of self-regulation and self-mastery.

A PRACTICE PLAN FOR THE IPS

A chain is as weak as its weakest link. Operating in the IPS requires proficiency in each of the skills that help to create the state. A practice plan for the IPS involves repeated practice of each technique connected with producing the IPS.

Incorporating a daily mental practice into your sports training advances you in skill-building with each of the optimal performance characteristics. By setting up a well-structured format, you can develop several of the optimal performance traits simultaneously.

The following practice plan has an efficient format. Use it after you have gone through the initial practice suggested for each exercise (in accordance to instructions given with exercises in earlier chapters).

The time for each section is suggestive. You may want to concentrate more or less on areas depending on your purposes. A chart gives an overview of the plan. A description of the plan's four sections follows.

When you do this daily practice routine, you are visually, kinesthetically, and linguistically programming yourself toward your goals.

OUTLINE FOR THE DAILY PRACTICE PLAN

Step One. Relaxation technique (5 minutes)
Step Two. Goal review (3 minutes)
Step Three. Visualization (5 minutes)
Step Four. Special technique for practice (5 minutes)

Step One. Relaxation Technique (5 minutes)

Use a relaxation technique for approximately five minutes. Experiment with what works efficiently for you.

Any one of a number of methods works well for this first step. You can use a brief relaxation technique, such as the relaxation cue, followed by a meditative technique, such as the repetition of a special phrase or mantra to deepen the state. Or you might use the standard relaxation exercises, either progressive relaxation or the breathing technique for relaxation (see Running and Relaxing).

Step Two. Goal Review (3 minutes)

The second step of the practice routine involves a review of your goals. For the goal review, state each of your goals out loud three times. As you state each goal, do a projection of the goal in which you visualize yourself accomplishing the goal.

For example, a runner's goal is to run a 10K race in less than forty minutes. She first repeats her goal statement out loud, "I run a sub-40 minute 10K." Second, for the projection, she visualizes herself accomplishing this goal by imagining vividly the scene of a race finish in which she crosses the finish line as the race clock shows less than forty minutes.

Step Three. Visualization (5 minutes)

This portion of the practice involves mental rehearsal of an upcoming competition. See yourself performing at your best performance level. Make sure the visualization is accurate and that it incorporates details of your performance.

Divide the time in this section into two parts. Spend half the time doing an external mental rehearsal of the competition you have selected. With the other half, switch to an internal mental rehearsal technique (these rehearsal techniques are described in Gearing Up Mentally For Running).

Step Four. Special Technique For Practice (5 minutes)

The final step involves practicing a technique that is a component skill for the IPS. You might decide on a confidence-training exercise or one of the other exercises associated with the IPS depending upon what you perceive as needed at the time.

You can go through the exercises required for the IPS systematically, practicing each exercise for a number of consecutive days. The number of days you spend on an exercise would depend upon the criteria you set for skill development. For example, you might decide to practice component skills in visualization until you can see color or until you can hold an image steadily without it wavering or becoming distorted.

Having a specific time for mental practices helps ensure that you practice consistently. If possible, do the mental training routine in conjunction with your physical conditioning. Making time for your mental practice routine immediately before your physical workout helps to associate mental and physical training and to view mental training as an integral part of your overall sports training program.

In addition to the on-going mental practice through a daily routine, use these general guidelines immediately before competition:

- Hold winning beliefs
- Use only "correct" internal dialogue (encouraging remarks and instructional statements)
- Modulate your stress level so that you are at the optimal stress level
- Experience a feeling of confidence and other *feelings* associated with your best performance state
- Enter your Ideal Performance State

SUMMARY

By carrying out the mental training practices, you create a new dimension in your athletic training and in your development as an athlete. In essence, you set yourself up as the director in the unfolding play of your athletic life.

It is easy in the midst of travel, training practices, workouts, and competitions to lose sight of the broader purposes in sports. These practices remind you of purposes beyond the immediate game, tournament, or season.

The IPS is a hard and exacting standard to be reminded of on a daily basis. On the other hand, having such a high ceiling for performances opens a door to a different arena in sports. You can remove yourself from the petty occurrences and fluctuations in sports life. And, you can see yourself through the major disappointments and setbacks that occur.

Holding the IPS in mind sparks new ways of thinking and a sense of greater possibilities. The IPS is an internal vision and a standard which is unique to you. Evaluating your performances against this model engenders a new perspective. You begin to think of yourself differently and to see yourself in a directing, self-programming position in life.

The steps that you take to move toward the IPS create patterns which transform you. You chart a course by setting goals. Internal dialogue, which is not keyed to your goals, is transposed.

Acts or thoughts are on or off the mark in relation to your goals. The intention (your goal) that you hold is the force that keeps your beliefs aligned and directed toward your goals. In these ways, you operate strategically.

There is no more shifting in the wind. Your intention holds the desired goal in mind and directs your thoughts and your actions toward that goal. This game--of your intention working as the driving force to create your envisioned goal in reality--is the game of self-development and of creation itself.

References

Krakauer, Jon: *Neuro-Linguistic Programming.* **Ultrasport.** July 1986. (Reported Mackenzie research).

Unestahl, Lars-Eric: *Mental Gymnastics*. From **The Mental Aspects of Gymnastics**. Lars-Eric Unestahl (ed.) Veje Publishers. Orebro, Sweden 1983.

THE NEW ATHLETE

Creating the new athlete involves applying to sports everything we know about developing human performance and human potential. On an individual level, athletes who follow training procedures that develop multiple human capacities engage in the revolutionary and exciting process of building the new athlete.

Optimal performance programs aim to enhance athletic performance. Linked with traditional methods and with other new techniques, they lead to a new field of maximizing human performance. This chapter examines different programs and methods used to create the new athlete, and the part that optimal performance plays in this enterprise.

We also point to the next level in the creation of the new athlete. The next level, only hinted at in current programs, involves the recognition that sport is the perfect laboratory for human development. In this laboratory we can work consciously to create better and higher versions of ourselves.

BUILDING THE NEW ATHLETE

Building the new athlete occurs whenever programs or individuals combine mental and physical training to further athletic development. The new athlete is emerging with the application of special kinds of support, coaching, and scientific information to the training and development of athletes. This process of creating a new athlete is happening on numerous levels in the sports world.

This new wave of change involves adding mental training methods, such as those set forth in this book, to athletes' usual workouts and practices. It is no longer unusual to hear or read about athletes seeking psychological assistance when they feel they are not advancing fast enough or playing consistently enough or when the game becomes stale for them. For example, Tom Gullikson, during the time he was playing Team Tennis with the Phoenix Sunsets, became frustrated with his tennis game, feeling that his game was not fun and he was not going anywhere.

Gullikson saw James Loehr, a sport psychologist, who ran the Center for Athletic Excellence in Denver. Loehr put Tom Gullikson on a psychological training program to change his orientation toward the match so that he experienced it as challenging rather than threatening. Loehr taught Gullikson a pre-match routine that included breathing exercises and visualization.

Other individual athletes add mental training, not so much to overcome a perceived problem, but to enhance their performance by using mental skills to tap more of their potential. Gary Sutton, a tennis player formerly ranked No. 4 in Chicago, amusingly described visits with a "tennis shrink" from which he learned about relaxation techniques, visualization, and the use of a concentration cue.

Teams add mental training or counseling as an ancillary service for team members. The St. Louis Cardinals baseball team hired Bill Little to provide psychological services. Jim Loehr became a consultant to the Colorado Rockies hockey team. The Philadelphia Flyers have former world-ranked tennis player, Julie Anthony, as a sports psychologist, to name a few examples.

Whether with individual teams or individual athletes, this first level of building the new athlete involves the addition of mental training to standard sports-specific and physical skill proficiency training programs.

MULTI-DIMENSIONAL TRAINING PROGRAMS

A second level of the phenomenon of building the new athlete involves training programs that include a broad array of specialists and services. An elite athlete who uses this strategy is Martina Navratilova. Martina has received the most publicity for having a team of specialists to enhance her performance and career longevity as a champion tennis player. Nutritionist and computer whiz, Robert Haas; Nancy Liebermann, friend and motivator; Billie Jean King, coach; and Rick Elstein, reflex trainer, have been figures in her support team.

Determination to tap as much of her potential as possible separates Martina from other top athletes. A team of dedicated specialists and experts back up this aim. When this objective is held by an athlete like Martina who has such an extraordinary base of skills, it becomes understandable why she is sometimes referred to as the "Brave New Athlete." Martina has exemplified a model of the athlete moving toward full potential by using a multi-based training program.

PROGRAMS ON THE NATIONAL LEVEL

What is happening on an individual basis and a team basis represent microcosms of something happening on a larger scale.

Olympic and professional sports organizations have programs designed to maximize athletic potential. Dr. Irving Dardik, a vascular surgeon, who served as chairman of the U.S. Olympic Committee Sports Medicine Council, developed a three-part program for performance improvement in Olympians as well as other athletes. Described in *Quantum Fitness: Breakthrough to Excellence*, a book he co-authored with motivation specialist, Dennis Waitley, this program is one in which mind, body and nutritional concepts are

combined. Weightlifting, plyometrics (skipping), rhythmic running, cardiac monitoring, and mental relaxation are components in this regime in which selected Olympic athletes are trained.

On the professional sports organization level, Kerry Graham, former national president of the Ladies Professional Golf Association (LPGA), created a multi-based training program aimed at the overall improvement of golf. New concepts about equipment and mechanics of the game, as well as teaching methods that tailor the instruction to the student, are areas of change she is implementing. With shifts in these areas--equipment, athletic motion and golf mechanics, and the mental and teaching aspects--Graham expects a marked improvement in the level of golf a player can reach and maintain.

Building the new athlete in terms of designing a program geared to get the most out of a player's potential describes the challenge of the Player Development Program of the United States Tennis Association (USTA). The three-person team comprised of a program director, a director of coaching, and a director of sports science, have the responsibility of designing, organizing and implementing a comprehensive state-of-the-art program based on the sports sciences, that will capitalize on talented players' potential. Plans call for a system for identifying the most talented young players in the country, the establishment of major training centers as well as regional centers, and the creation of a data base on the selected players.

The question facing the principals of these athletic development programs is, "How *do* you maximize the potential of athletes?" What are the components of a program that would help an athlete to reach full potential? Methods of coaching, training schedules, instruction of sports-specific skills, nutrition, sports psychology, biomechanics, functional anatomy, stretching and exercise programs (with type and intensity informed by exercise physiology and specified for age-levels and designed for peak cycling for key competition) are elements to be considered.

What are the right criteria to determine which methods should be included in the program? How do they evaluate the new, unusual methods used in sports programs in other countries, such as the "oxygen cocktail" (a vitamin and mineral solution saturated with oxygen to help rebuild energy stores),

different massage techniques, electrosleep, and pressure chambers for fast recuperation from injuries? How much can be extrapolated or directly applied from the procedures or organization structures implemented in other countries such as Czechoslovakia, Germany and Sweden, which have national organizations that coordinate competitive and recreational sports, and have methods to identify and train potential national-level athletes?

Examining possibilities for building the new athlete continues: from individual athletes who add other dimensions to their sports programs, such as mental training or nutrition, all the way to professional and Olympic sports federations attempting to inaugurate comprehensive programs for training and developing athletes to their full potential.

Optimal performance skills form one part of sports psychology, which, in turn, makes up one piece in the larger puzzle of training and development for actualizing athletic potential. Optimal performance skills are vital in the sense of tapping other dimensions of human resources. The importance of these skills may come principally from the fact that they direct our attention to exceptional abilities and bring up the question of how to extend the capabilities of others.

We are in the exciting and revolutionary position of asking questions about the way to maximize human potential in sports. For the first time in sports history, the accumulated knowledge from all areas of sports science are being pooled to answer questions about optimizing performance.

As is frequently the case in breakthroughs, the understanding that creates the next level in developing athletic potential may come from areas outside of sports.

THE NEXT LEVEL

Another step toward building the new athlete expands the inquiry about maximizing potential. That step involves incorporating methods and knowledge from the human potential movement and from sources concerned with the development of exceptional abilities.

Sports, after all, involve changing the form of the human body and developing and extending physical capacities. Therefore, by definition, sports concern transformation.

The examination of exceptional human abilities across fields, including sports, science and the arts informs us about the best level of achievement in regard to human potential. The study of individuals who produce excellent results consistently tells us about the methods and the strategies that create top achievement and excellence. Understanding what constitutes extraordinary abilities sheds light on how we can evolve toward the goal of maximal functioning of mind and body.

Other sources that inform us about realizing human potential are transformative processes. These are methods which have as their purpose the radical change of human beings in the direction of greater fulfillment of potential. These methods include psychotherapy, yoga, meditation, shamanism.

Frequently, these disciplines are contained within a religious tradition. The great meditation traditions of the East such as the Tibetan Mahayana Buddhist tradition, the Burmese mindfulness tradition and the Hindu yogic tradition demonstrate that through disciplined practice over years systematic effects occur with cognition, perception, experience, and relationships.

The most developed methods for realizing potential seem to be at odds with one another. The transformative methods that come from religious traditions relegate the body and the whole physical dimension of life to a level below the mental and the spiritual levels. The transformative effort is directed at escaping the "vale of tears" at the physical level. Methods

associated with religions focus the transformative effect on the mind, with transformation of consciousness being the desired end result.

In sports and the performance sciences in general, the focus is riveted on the alteration of the human body. Mentioning transforming the mind or consciousness is treated like hocus-pocus. Even among coaches and athletes who acknowledge the importance of mental skills, years, perhaps decades of practice and drills on physical skills and only a two-hour seminar on visualization seem like an appropriate balance between physical and mental skill development for athletic performance.

The conflict between mind and body methods of transformation is ironic because both types of transformative processes produce similar results. Transformative practices, whether physical or mental ones, create numerous effects in physiology, including lower resting heart rate, greater efficiency in breathing, greater resilience to stress, greater tolerance for pain, lower blood pressure.

Physical and mental transformation methods also create characteristic psychological effects. These results include a detachment in observation, heightened awareness, increased ability in concentration, and a deautomatization of perception in the sense of seeing in a rich and creative way as opposed to having habitual patterned perceptions.

Physical transformative methods give rise to extended abilities, physically and psychologically. Mental practices yield a development in capacities, physically and psychologically. The question is: What happens if we combine these types of methods?

Michael Murphy of Esalen Institute suggests that an acceleration in transformative changes occurs by such a combination. Rather than an addictive effect, the combining of physical and mental practices quickens the transformative process exponentially.

Michael Murphy suggests a program for incorporating disciplines such as yoga, meditation and martial arts into athletic training. He outlines steps for this endeavor:

- Incorporate heightened attention, such as that produced by meditation practice.

- Place an emphasis on flexibility and balance in the body, such as that derived from yoga and martial arts training.
- Open the mind to heightened perception that can occur through intense concentration and through meditational practices. These occurrences may include supernormal perceptions of bodily structures and extended abilities in hearing and seeing.
- Use visualization techniques that can be advanced all the way to those used by yogis and master practitioners in the martial arts. These methods produce supernormal levels of awareness.
- Develop relaxation ability. With extended training in relaxation, a quieting of the whole physical state results. And, a sense of equanimity occurs that pervades the emotional level.

Of the suggestions that Murphy makes for broadening athletic programs, four of the five recommendations relate to optimal performance skills. Heightened attention, intense concentration, visualization techniques and relaxation methods are skills that can be developed through optimal performance training.

To approach this new level, first we expand our interpretation of transformative practices beyond that of religious disciplines and martial arts to include sports. Then, we chart the characteristic alterations that happen as individuals evolve to higher levels of performance and functioning. Applying combinations of methods from the human performance sciences and from mental transformation methods accelerates the development of human potential for sports.

Rather than only using physical methods to work with sports development and psychological methods for producing transformed awareness, we apply combinations of practices in sports that allow growth across dimensions.

Sports become a human laboratory for self-development. By blending mental and physical methods and by training with insight and intention, we consciously transform ourselves to higher versions of ourselves. We become the conscious drivers in our evolutionary process.

The new athlete is a model of a human being with realized potentials across physical, emotional and mental levels. This new athlete is an experiment in the perfecting and developing of individuals to the full extent of their capacities.

Athletes can choose this view of sports as a vehicle for conscious development of human potential. With this perspective, the playing field of sports moves to a different level.

CREATING THE ULTIMATE ATHLETE

Any athlete can participate in this new level of sport as self-development. Participation involves the process of creating the ultimate athlete on a personal, individual level. This process begins with a vision of yourself as the ultimate athlete. In this initial step, you construct a picture of yourself developed to your full athlete potential.

Realize that experience, at least conscious experience, begins with inner experience, which might be called, inperience. Inperience precedes experience. It is this vision or inperience which acts as a blueprint for the development of the external experience.

Once you have the concept of yourself as the ultimate athlete, the question is how do you evolve from where you are toward that ideal. A good way to enhance your original concept is to list descriptive characteristics of the ultimate athlete. Characteristics might include a healthy and efficient cardiovascular system, well-defined musculature, fast and slow twitch muscles, beauty and grace, and a sense of well-being.

The next step in creating the ultimate athlete involves visualization. In many respects, visualization might be regarded as the step between inperience and experience. By taking an inner idea or vision and replaying it graphically and repeatedly, you increase the "realness" of the inner experience.

The process of visualization "feeds" the nervous system with the visualized information. Visualizations are treated as experience by your nervous system. The result: *You begin to feel that the inner experience is believable and achievable.* With belief in the inner experience, you move toward actualizing the vision.

Begin the visualization with a relaxation technique. Then mentally review the characteristics in your description of the ultimate athlete.

Picture a location that represents an ideal place of relaxation, such as a beach or a mountain retreat. Then picture the ideal athlete at a distance from you of approximately a football field length. From this distance, perceive the ultimate athlete. Become aware of everything you can about the ultimate athlete--his or her manner, dress, attitude. Stay in the visualization for approximately five minutes absorbing as much information as you can.

Repeat this visualization on a regular and on-going basis. Each time you do the visualization, take steps toward the ultimate athlete, so that you continually shorten the distance between you and him or her.

In the visualization, you move to the point of being in the same space as the ultimate athlete. Until finally, you have the recognition that you are the ultimate athlete. The ultimate athlete is the completed or ideal version of you.

Parallel to the process within the visualization, incorporate a broad span of methods that give you the support, skills and training to develop each of the characteristics associated with yourself as the ultimate athlete. This means applying disciplined effort to sports-specific skill development, as well as incorporating new methods and techniques that develop overall fitness and mental skills.

Evolving toward the ultimate athlete within you means that you are playing out on an individual level the construction of a model for maximizing human potential. By playing this game--of learning ways to tap all of your potential--you develop a broad view of the range of human possibilities and a glimpse of the athlete of tomorrow.

References

Butler, Penny: *Thanks to Training in Psychology, Game Is Fun Again for Tom Gullikson.* **The Arizona Republic.** September 10, 1982.

Dardik, Irving; Waitley, Dennis: **Quantum Fitness: Breakthrough to Excellence.** Pocket Books, Inc. New York 1984.

Kalyn, Wayne: *Building the Brave New Athlete.* **World Tennis.** April 1983.

Matheny, Fred: *Secrets from the Soviets: Lessons for 1988.* **Bicycling.** July 1984.

Murphy, Michael: **The Future of the Body.** J. P. Tarcher. Los Angeles 1992.

Sutton, Gary (as told to Donna Judd): *Afternoon Delight: My Visits with a Tennis Shrink.* **World Tennis.** February 1984.

Winters, Catherine: *Fitness Innovator Dr. Irving Dardik.* **Physician's Sportslife.** November/December 1984.

Zane, Frank: *Bodybuilding in Futureworld.* **Muscle & Fitness.** June 1994.

ABOUT THE AUTHOR

Marie Dalloway specializes in Optimal Performance Training for business and for sports. She has a Ph.D. degree in psychology from the University of Massachusetts.

As a consultant and professional speaker, she has done presentations for major companies such as Honeywell and APS, as well as for top-level athletes, including the U.S. Biathlon Team, the Women's World Championship Judo Team, the Men's World Championship Judo Team, and Leslie Deniz, the silver medallist in the women's discus. She has done optimal performance training at the Olympic Training Centers in Lake Placid, New York and in Colorado Springs, Colorado. Portions of a mental training program that she did were televised by ABC Olympic sports coverage. She has acted as a consultant for the United States Tennis Association (USTA) and has been a recipient of a Sports Science Grant from the USTA.

Marie Dalloway has been a regular writer for the *Arizona Running News* (1984,1985), *Sportsweek USA* (1985), the *Arizona Road Racers* (1986, 1987), *Sun Tennis* (1993, 1994), and *Coaching Women's Basketball* (1995). In addition to numerous articles, she has written two audiocassette tape albums, one on tennis and one on success in business. She has also written a training video for athletes titled, *Visualization Training Exercises.* CD ROMs by Marie Dalloway include *Visualization Exercises for Mental Preparation*, *Stress Control*, and *Focus Under Pressure*.

Books by Marie Dalloway include *Mental Skills for Winning*, *Winning for Women*, *Steps Along the Way, Reflections on the Mental Side of Sports, Performing Under Pressure*, *Stress Control*, and *Focus Under Pressure*, plus a series of training manuals on sport psychology: *Visualization: The Master Skill in Mental Training; Concentration: Focus Your Mind, Power Your Game; Drive and Determination: Developing Your Inner Motivation; Risk Taking: Performing Your Best During Critical Times,* and *Visualization Exercises for Mental Preparation.*

She is the Director of the Optimal Performance Institute in Phoenix, Arizona. Her programs, seminars, and tapes are designed to teach individuals how to develop the traits associated with high achievement.

Books, Videos, and CD-ROMs Available From Performance Media
by Marie Dalloway, Ph.D.:

BOOKS

Visualization: The Master Skill in Mental Training 2nd Edition

This is the state-of-the-art information on visualization skills for sports. **Visualization** gives guidelines and specific exercises for developing mental skills associated with top performance.
ITEM DB-514 • ISBN 1-887168-04-4 • 2000 • Soft cover • 86 pp • 5½ x 8½ • $29.95

Concentration: Focus Your Mind, Power Your Game

Here in easy-to-follow steps you learn how to develop the powerful mental tool of concentration. **Concentration** provides the advanced techniques used in training programs for world-class athletes.
ITEM DB 502 • ISBN 0-9634933-1-0 • 1993• Soft cover • 60 pp • 8½ x 11 • $14.95

Drive and Determination: Developing Your Inner Motivation

Drive and determination constitute critical factors in how far an athlete will develop. This program provides the specific strategies for recruiting your passionate commitment. Tapping this inner motivation sparks athletic performance.
ITEM DB-503 • ISBN 0-9634933-2-9 •1993 • Soft cover • 80 pp • 8½ x 11 • $14.95

Risk Taking: Performing Your Best During Critical Times

Risk Taking instructs athletes in six strategies for developing risk-taking ability. Learn to respond to the risk and pressure of critical situations in sports the way effective risk takers do─with control and high performance.
ITEM DB-504 • ISBN 0-9634933-3-7•1993 • Soft cover • 61 pp • 8½ x 11 • $14.95

Reflections on the Mental Side of Sports

Reflections begins by exploring basic questions about mental training for athletes: What is mental training in sports? What are the signs that it is needed? The second section presents specific mental training methods, including ways to heighten motivation, achieve relaxation and deal with performance anxiety. The final part shows how mental training lends a broader perspective to athletic performance. Sports become a vehicle for self-development and for maximizing human potential.
ITEM DB-505 • ISBN 0-9634933-4-5 •1994 • Soft cover • 143 pp • 8½ x

11 • $14.95

Performing Under Pressure: Mental Techniques for Handling Pressure in Tennis

Performing Under Pressure is a practical, how-to guide that instructs tennis players in seven mental strategies (including pre-competition plans, internal dialogue control, and relaxation methods) for developing pressure-handling ability.

ITEM DB-506 • ISBN 0963493353 •1997 • Soft cover • 167 pp • 8½ x 11 • $18.00

Visualization Exercises For Mental Preparation

Visualization is a skill associated with top achievement. The exercises in this program are practices that help you to develop visualization skill and to improve your performance. The exercises help athletes move into a condition of readiness for competition.

ITEM DBDB-508 • ISBN 0963493388 •1999 • Soft cover •62 pp • 5½ x8 ½ • $24.95

Stress Control

This training program presents a step-by-step approach for developing a mental skill associated with excellence, the skill of regulating stress level. Regulating stress level involves the ability to increase and decrease stress level. By learning to control your stress level, you can perform in the physical energy state that lets you do your best.

ITEM DB-509 • ISBN 0963493396 •1999 • Soft cover • 125 pp • 8½ x 11 • $29.95

Focus Under Pressure

Focus Under Pressure is a how-to guide that instructs athletes in mental methods that train athletes to keep their mind on positive and neutral items in performance and in pressure conditions. The four strategies in this program are designed to assist athletes in learning to respond the way good pressure performers react to pressure—with a focused mind, a sense of being challenged, and an absence of fear and worry.

ITEM DB-510 • ISBN 1887168001 •1999 • Soft cover • 127 pp • 8½ x 11 • $29.95

VIDEOS

Visualization Training Exercises Video

Visualization Training Exercises presents specific exercises and guidelines for visualization training in sports. Learn visualization practices for increasing your confidence, for mentally rehearsing events, and for solving performance problems. The content trains athletes in five visualization practices. Athletes who hone the skills of visualization and who apply them consistently can count on improved performance.

ITEM DV-507 • ISBN 0963493361 •1999 • Video Approx 30 minutes • $29.95

CD-ROMs

Visualization Exercises for Mental Preparation

Visualization Exercises for Mental Preparation on CD-ROM is a multi-media presentation for athletes that provides instruction on a set of visualization techniques so that athletes can gain a sense of readiness and preparedness for competition. The content has been designed to train athletes in five visualization practices. The visualization exercises are framed in a READY SET GO series.

ITEM DCD-511 • ISBN 188716801-X •2000 • Approx. 90 minutes • $69.95

Stress Control CD-ROM

Stress Control is a multi-media presentation that instructs athletes in three main strategies for achieving stress regulation. The three strategies are Stress Detection, Relaxation Methods, and Psyching-Up Procedures. Stress Detection teaches athletes to recognize early signs and symptoms of stress. The regulation tools consist of five relaxation exercises for decreasing stress level and four psyching-up procedures for increasing stress level. The content includes instruction, practices and reviews. The CD-ROM incorporates narration, animation, video clips, and special effects to enliven this presentation on gaining control of your stress level.

ITEM DCD-512 • ISBN 188716802-8 •2000 • Approx. 90 minutes • $69.95

Your Order Form

(Please print clearly)

Name _____ 02_____

Address_____

City _____ State _____ Zip _____

Telephone _____ (In case we have a question about your order)

[ ] **Please charge my:** [ ] **VISA** (13 or 16 digits) [ ] **MasterCard** (16 digits) [ ] **AMEX** (15 digits) [ ] Check enclosed in the amount of $ _____

Card Number: _____ Exp. Date _____ Signature: _____

PRODUCT NO.	NAME OF PRODUCT	PRICE	NO. OF COPIES	TOTAL PRICE
	BOOKS:			
DB-514	Visualization: The Master Skill in Mental Training – 2nd ed.	$29.95		
DB-502	Concentration: Focus Your Mind, Power Your Game	$14.95		
DB-503	Drive and Determination: Developing Your Inner Motivation	$14.95		
DB-504	Risk Taking: Performing Your Best During Critical Times	$14.95		
DB-505	Reflections on the Mental Side of Sports	$14.95		
DB-506	Performing Under Pressure	$18.00		
DB-508	Visualization Exercises for Mental Preparation	$24.95		
DB-509	Stress Control	$29.95		
DB-510	Focus Under Pressure	$29.95		
	VIDEOS:			
DV-507	Visualization Training Exercises	$29.95		
	CD-ROMs:			
DCD-511	Visualization Exercises for Mental Preparation	$69.95		
DCD-512	Stress Control	$69.95		

Shipping & Handling Fees
Add $4.00 for 1st item;
$2.00 for each add'l item
Canada $6.00 for 1st item;
$3.00 for each add'l item
Foreign $9.00 for 1st item;
$6.00 for each add'l item
Payment in U.S. dollars only. Please allow 2-3 weeks for delivery from the time your order is placed.

Return this form with your payment to:
Performance Media
5501 North 7th Ave., #921
Phoenix, AZ 85013-1755 USA

(602) 274-1889 • Fax (602) 274-0466
dalloway@performancemedia.coxatwork.com
www.performance-media.com

SUB-TOTAL	
AZ Residents add 7.5% Sales Tax	
Shipping & Handling (see chart)	
TOTAL	

Please make checks payable to: Performance Media

SPORTS/PSYCHOLOGY

REFLECTIONS ON THE MENTAL SIDE OF SPORTS begins with an exploration of basic questions about mental training for athletes: What is mental training in sports? What are the indications that it is needed? How can it help?

The second section describes specific mental training methods, including ways to heighten motivation, achieve relaxation, deal with performance anxiety, and overcome mental barriers.

The final part shows how mental training lends a broader perspective to athletic performance. Sports become a vehicle for self-development, for exploring possibilities to maximize human potential.

REFLECTIONS is an informative examination of mental training for beginning or seasoned competitors. For athletes from weekend warriors to world-class performers, **REFLECTIONS** presents strategies that enhance performance and expand the athletic experience.

MARIE DALLOWAY, Ph.D., specializes in Optimal Performance Training for sports and for business. She is the Director of the Optimal Performance Institute in Phoenix, Arizona. Her programs, seminars, and books are designed to teach individuals how to develop the traits associated with top performance.

OPTIMAL PERFORMANCE INSTITUTE

COVER DESIGN BY ROBIN ABBOTT