

NEUROMUSCULAR TRAINING

# Racquetball

WITH DAVE PECK

***SYBERVISION***<sup>®</sup>

*The Leader In Sports Achievement Technology*<sup>™</sup>

***P E R S O N A L   T R A I N I N G   G U I D E***







## ***A MESSAGE FROM THE PRESIDENT***

I am honored to introduce you to SyberVision's revolutionary new athletic training technology — Neuromuscular Programming.

Your SyberVision training program is the result of years of extensive research and development. It is designed to quickly and easily improve your athletic performance by giving you a mastery of fundamental skills — the basic building blocks of athletic success. With this mastery, you'll be able to play better, be more competitive and play with a higher level of enjoyment as you participate in your sport.

Your SyberVision training is unlike other video training programs. As you watch your videocassette, you'll notice that there is no talking or verbal instructions on the tape — only beautiful images of movement performed by a model athlete. Each movement has been under-scored with music composed specifically to complement and enhance the smooth and rhythmic motion of the model.

Each motion has been filmed at varying angles and speeds (variations of regular and slow motion) that give you the feeling of being part of the action. The filmed skills are scientifically edited and presented according to a precise mathematical formula that correlates with the way your brain converts images of movement into neuromuscular memory. It is the understanding and proprietary application of this knowledge that makes the SyberVision tapes so powerfully effective.

Research has shown that you get better results from the program if you have a basic understanding of how the movement is performed — if you know what to look for as you're watching the tape. Rather than clutter the tape with confusing explanations of how the skill is performed, we make it simple by giving you this knowledge in two easy steps:

First, your video contains computer enhanced sequences of movement that beautifully outline and breakdown the seemingly complex motion into simple components.

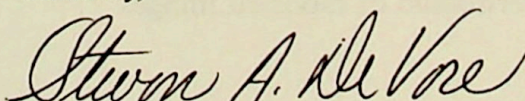
Second, these computer-enhanced sequences are cross-referenced and simply explained in this training guide. Each fundamental is broken down into three or four simple, easy to remember "watching keys." As you watch your model repeatedly perform the skill, you will, with an "educated eye" be able to instantly identify key elements of the movement — reinforcing your understanding of the skill while at the same time maximizing the benefits of your neuromuscular training experience.

Your SyberVision training program is a total learning system. Four audiocassettes expand and reinforce your video training experience by giving you an understanding of the science of neuromuscular training, insights into developing winning skills and attitudes... and even a way to recreate the vital images and sensations from your video as you listen to its musical soundtrack.

This Personal Training Guide is a valuable resource that will instruct you in the best times and ways to use your video- and audiocassettes, and when and how to physically reinforce your skills after your neuromuscular training system begins to work.

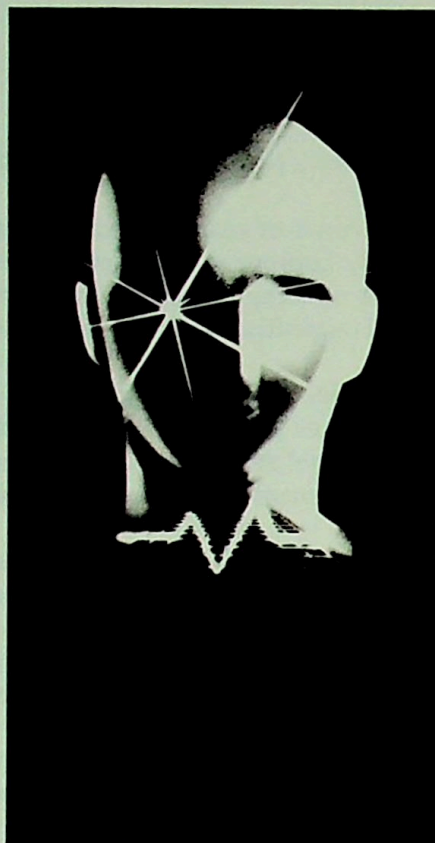
The combined use of each of the three media — video, audio and print — with SyberVision's advanced technology, will make your SyberVision training a truly pleasurable and thoroughly effective training experience.

*Sincerely,*



*Steven A. DeVore*  
Steven A. DeVore





### ***THE SYBERVISION LOGO***

The SyberVision logo is designed to symbolize the technological and philosophical elements of the neuromuscular training process.

***THE HEAD:*** Symbol of expanded intelligence through technology. The emergence from darkness into light. Its three-dimensional form represents depth of vision — richness of imagery.

***THE LIGHT BURST:*** Represents the link between the eye and the brain. Images of movement passing through the eye to the brain. The feeling of motion from within as the images are converted by the brain into neuromuscular memory.

***THE GRID:*** Perspective and efficiency gained through scientific research and application of high technology to personal achievement training.

***THE NERVE IMPULSE:*** Signifies the neural transformation of modeled images into perfect patterns of movement.


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# **I Introduction To Neuro-Muscular Training**

You have purchased one of the most advanced and effective racquetball training programs available today. Your SyberVision racquetball program is based on and incorporates the latest findings in the behavioral and brain sciences. Supported with advanced computer and video technology, the program represents the "state-of-the-art" in learning delivery systems.

SyberVision Racquetball with Dave Peck is designed for racquetball players of all levels—from beginner through advanced. It is an innovative system for teaching, reinforcing and dramatically improving your racquetball performance by patterning your skills after one of the world's great racquetball players.

This instruction booklet is an integral part of the program. The information and instructions in this booklet will explain how to use the scientifically produced SyberVision program. **IT IS IMPERATIVE THAT YOU READ THIS BOOKLET BEFORE YOU WATCH YOUR SYBERVISION VIDEOCASSETTE FOR THE FIRST TIME.**

Before you get into the program, let's first define a few terms and simply explain the concept of "Neuro-Muscular Programming."

First of all, what does the word "SyberVision" mean? SyberVision derives from the words "*cybernetics*" (except we have replaced the "c" with the phonetically similar "S") and "*vision*."

Cybernetics is the science of guiding a system (you) toward an ideal goal state (repeatable, fundamentally sound racquetball strokes) through the feedback of goal relevant information (repeated *sensory* exposure to a highly skilled model). Once you receive the information, your nervous system processes and adjusts it until the goal state is realized and maintained (high level racquetball skills become a habit).

"Vision" is taken from the use of video generated images as the primary source of feedback information.

Secondly, what is "Neuro-Muscular Programming"? The performance of an athletic skill or movement by your body's muscles and skeletal system is directed by a set of nerve units in your brain—a neural "blueprint" or representation of the motion. These blueprints are formed through repetitious practice—performing the movement over and over until it becomes an automatic or conditioned reflex (you don't have to think about it).

The quality of the movement is dependent upon the quality of your practice—whether or not the movement is practiced correctly. Perfect physical practice makes for ideal skills and leads to consistency and confidence. Imperfect practice consolidates imperfection, leading to inconsistency, self-doubt and unpredictable results under pressure.

Through the SyberVision system of sensory imaging, your nervous system responds to the observed modeled skills almost as if your muscles and body were physically performing the desired action, over and over. The same nerve pathways that are stimulated by perfect physical practice are similarly activated and reinforced by watching your SyberVision Racquetball tape.

This forming of a skill in your brain and nervous system by repeatedly performing the skilled movement (physical practice) of neurological stimulation combined with practice (our method) is "Neuro-Muscular Programming."



## How Does SyberVision Neuro-Muscular Programming Work?

Your SyberVision training system works on three levels:

(1) By watching a model repeatedly perform mechanically correct, picture perfect skills, you are able to retain in your mind a clear sensory image (a memory of sight, sound and feel) of the ideal skill. This image serves as a mental reference you can call upon to guide your body through the actions of your sport.

(2) As you watch the model perform, you are watching mechanically and functionally correct form. If you have a basic understanding of mechanics then your viewing experience is enhanced — you not only see what correct form is, you also understand why it is correct. You will be able to adapt this knowledge to your performance and make simple mechanical adjustments when necessary.

(3) As you watch a skill on the scientifically produced videocassette, your nervous system reacts as if it were physically performing the skill. As the vision and sense of rhythm and timing associated with movement comes into your brain from your senses, your brain transforms this information into neuro-muscular memory. This transformation is based on a mathematical formulation (Fourier Analysis) performed by the brain to create the vicarious performance experience unique to SyberVision videocassettes.

The same nerve pathways that are stimulated and reinforced during ideal physical practice are excited and reinforced through watching the SyberVision model repeatedly perform the skills on the tape.

Simply, you sit back, relax and watch the tape. The SyberVision technology does the work for you.

***In no way do we suggest that SyberVision is a complete substitute for the physical racquetball training experience. It only enables you to have access to high performance skills that can be more consistently reinforced when you actually play racquetball.***

The four audiocassettes included in your SyberVision training package supplement and reinforce your SyberVision video training experience.

The first cassette, "Mind, Body and High-Technology: The Ultimate Personal Achievement System" gives you a more detailed overview of the science of neuro-muscular programming.

On the second cassette, "The Mind of a Champion: A Personal Interview with Dave Peck" your video model becomes personalized. You'll hear Dave tell how he developed his racquetball skills and how you can apply his experience and philosophy to greatly improve your racquetball.

The third cassette, "The New Psychology of Athletic Achievement: The 12 Keys To Racquetball Success," identifies and discusses 12 psychological strategies discovered by SyberVision researchers to dramatically improve your racquetball both recreationally and competitively.

The fourth cassette, "Images of Achievement: The Power of Holographic Sound," contains the same soundtrack that's on your videocassette. As you watch your videocassette, the images of movement and the musical background become associated. Then, when you listen to the audio soundtrack, the images and sensations you experienced as you watched your video are neurally activated and recalled — reinforcing within you the image and rhythm of perfect racquetball form. Directions on how to use the audio soundtrack are explained later in this training guide.



It is recommended that you first review this guide, casually watch your videocassette and then listen to the supplemental audiocassettes. With this initial overview, you'll be adequately informed and prepared to successfully begin your SyberVision training experience:

**IMPORTANT NOTE:** For the neuro-muscular training process to work, your SyberVision tape must be of the highest quality and resolution. All tapes are produced to insure the highest video and audio resolution. If the tape is duplicated by a home video recorder, just enough video and audio resolution will be lost to render the duplicated tape ineffective for neuro-muscular training. Home video recorders are not equipped with the necessary electronics to transfer a high resolution image from one tape to another.



## **II. How Your SyberVision Videocassette is Organized**

Your SyberVision Racquetball program is organized into three main parts:

**1. Introduction:** Approximately 5 minutes of masterful racquetball performed by Dave Peck and Gregg Peck (Gregg is currently the number 4 ranked professional racquetball player in the world). Dave Peck powerfully demonstrates his classic racquetball skills and his natural ability to functionally adapt the fundamentals to fiercely competitive game. The introduction shows why Dave Peck is one of the world's great racquetball players and establishes a motivational climate for the viewer—setting the proper mood for viewing and processing the fundamentals modeled by Peck later in the program.

**2. Fundamentals.** Dave Peck models the fundamentals of winning racquetball form. The presentation of each modeled fundamental is based on a timing and sequencing formula that best interfaces with and excites your nervous system. No matter what your body build, size and current stroking style, the SyberVision technology will enable your brain and nervous system to “custom-convert” Dave Peck’s winning form to meet your specific physical demands. Technique for the following fundamentals is demonstrated:

- A. The Drive Serve
- B. The Lob Serve
- C. Forehand Ground Stroke
- D. Backhand Ground Stroke
- E. Forehand Ceiling Ball
- F. Backhand Ceiling Ball
- G. Cut Off Shot
- H. Overhead Drive
- I. Grip Change

Each fundamental is divided into three segments:

- A. Fundamental repeated in regular and slow motion.
- B. Computer Enhanced Movement. Fundamental movement is amplified and simplified through computer enhancement. The body, racquet and ball are highlighted to demonstrate the simple mechanics of the movement.
- C. Fundamental repeated in slow and regular motion.

**3. Conclusion.** Peck again demonstrates his master skills and winning drive in competition with Gregg Peck—putting together the fundamentals he modeled earlier in the program.

Originally composed music accompanies each section of the program. The music accentuates the ideal tempo, rhythm and timing associated with the optimal racquetball form and aids in the absorption and retention of the modeled skills.



# III. How To Watch Your SyberVision ● Videocassette

Your SyberVision program is designed for three levels of use:

**(1) Basic Neuro-Muscular Training.** Casually watching the program for entertainment, relaxation as well as training. Enjoying the benefits of "vicarious" racquetball while you relax in the comfort of your home.

**(2) Bio-Mechanical Reinforcement.** Watching the program with an "educated mechanical eye." Understanding and identifying correct technique (i.e. the relationship between upper and lower body movement) and having the technique reinforced visually, over and over. A simple explanation of technique is included in this training guide. Studying this section will make you a more intelligent viewer and optimize your neuro-muscular training experience.

**(3) Advanced Neuro-Muscular Training.** A viewing technique that enables you to enhance the neuro-muscular training benefits of the program.

Each level can be used independently or in association with each other. Since the Basic Neuro-Muscular training is self-explanatory (simply watch the scientifically produced videocassette) our focus in this section will be on Bio-Mechanical Reinforcement and Advanced Neuro-Muscular Training.

## Bio-Mechanical Reinforcement

Viewing the SyberVision videocassette for bio-mechanical reinforcement is a four step process:

### ***Step One:***

Select and watch a fundamental segment (e.g. Drive Serve) on your video to get a general overview of the motion. Note: Work on only one fundamental at a time.

### ***Step Two:***

Study the fundamental technique outlined in the bio-mechanical section of this guide until you can recall from memory each of the phrases that make-up the fundamental movement.

### ***Step Three:***

Watch the video again. Visually identify each of the movement phases as you watch. Pay particular attention to the Computer Enhanced Movement sequence.

### ***Step Four:***

After watching, close your eyes and slowly replay in your imagination the video model performing each phase of the movement.

Repeat each of the above steps until you feel you have developed a conceptual as well as visual understanding of the mechanics involved in each fundamental movement.



# **Advanced Neuro-Muscular Training**

SyberVision Advanced Neuro-Muscular Training is a three-step process:

## ***Step One: FUNDAMENTALS TRAINING***

As you watch each stroke on the tape, imagine that your body and mind is a sponge that will absorb and retain all of the information that comes in through your senses. Do not try to consciously memorize the movement on your tape or do a detailed mechanical analysis of each swing.

As you recall, each fundamental stroke sequence is divided into three segments (1) modeled fundamentals; (2) Computer Enhanced Movement; and (3) modeled fundamentals. Select one of the fundamental sequences (e.g. The Serve) and do the following as you watch:

*Segment 1:* Absorb and lose yourself in the sweetspot sounds, the fluid tempo and rhythm of the motion and music.

*Segment 2:* As you watch the Computer Enhanced Movement focus your attention on the highlighted body parts (head, shoulders, arms, hips, knees, feet), the movement of the racquet and the impact of the racquet through the ball. Identify a specific highlight that best magnifies the sense of movement and stay focused on that highlight.

*Segment 3:* Imagine that you have stepped inside Dave Peck's shoes and imagine that you are watching yourself on the screen.

The following is a list of recommended viewing guidelines for each modeled fundamental that will best maximize the feelings of fluid motion and rhythm (the repetition and natural flow of fundamentals within a sequence) as you watch any of the three segments:

### **A. Whole Body Focus**

Watch the total, fluid motion of the body. Establish a rhythm and sense of motion, allowing your body to feel the fluidity and rhythm of each movement. You will begin to sense an internalization of movement and positive psychological reaction, "He makes it look so simple! It is simple! I can do that." A desire to play racquetball should also well up inside of you.

### **B. Lower Body Focus**

After you establish a rhythm and a sense of motion focus on the action of the footwork, knees and waist. Allow your body to feel and experience the lower body movement you are observing.

### **C. Upper Body Focus**

Focus your attention on the shoulders, arms, elbows, and racquet as it passes cleanly through the ball.

## ***Step Two: YOUR MENTAL INSTANT REPLAY***

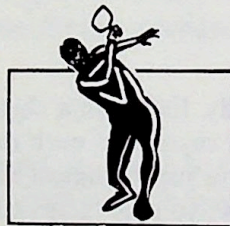
After you have finished viewing the fundamental sequence, turn off your cassette, close your eyes and do the following:



A. Imagining that your forehead is a television/movie screen,\* replay in slow motion any of the visual and sensory elements (sense of movement, rhythm of music, positive feelings and emotions) associated with the fundamental you just saw. Replay each motion about 10 times.



B. Still imagining that your forehead is a television/movie screen, replay in slow motion any of the visual and sensory elements associated with Computer Enhanced Movement section.



\*The positioning of the imaginary screen is important. When you imagine, with your eyes closed, the screen on the forehead, your eyes move upward to an approximate 20 degree angle. The eyes in this particular position, increase your ability to concentrate, attend, and focus upon external sensory information (replay what you observed) with greater clarity.

When you imagine the screen in the abdomen, your eyes move downward to an approximate 20 degree angle. The eyes, in this position, increase your ability to better internalize, feel and apply to yourself your sensory observations.

For a more detailed description of the relationship of eye movement to neural processing refer to the audio self-improvement program "The Neuropsychology of Achievement" available from SyberVision Systems, Inc.



C. Imagining that your abdomen is a television/ movie screen, imagine that Dave Peck has stepped inside your body and is guiding you through the motions of fluid, temp-rich form.

Replay in slow motion any of the visual and sensory elements (sense of movement, rhythm of music, positive feelings and emotions) associated with the fundamental you just saw. Replay each motion about 10 times.



### ***Step Three: POSITIVE REINFORCEMENT***

To reinforce your mental instant replay, reverse your tape to the start of the fundamental you were working on and watch it in a relaxed, casual manner.

The key feeling you want to capture and reinforce is the emotion "I can do that! It's not as difficult as I thought it was. Peck makes it look so simple and effortless. I can play like that!"



# **IV. When To Use Your SyberVision Videocassette and Audio Soundtrack**

The more you watch your SyberVision videocassette the faster you'll improve and the more accomplished you'll become as a racquetball player. Many people prefer to casually use the program for entertainment and relaxation prior to a racquetball match. The program is designed to significantly improve your racquetball skills through this type of viewing. Simply by watching the tape and listening to your audio soundtrack a few times a week will significantly sharpen your skills and improve your racquetball performance.

For the more serious "student" of the sport there is a more comprehensive training program that includes bio-mechanical as well as neuro-muscular training.

## **30-DAY TRAINING**

After you have casually watched your video a few times, you should begin a 30-day training program that consists of two weeks of Bio-Mechanical Reinforcement and two weeks of Advanced Neuro-Muscular Programming. Work on one fundamental per day during this 30 day period.

## **BEFORE YOU PLAY**

Assuming that you play racquetball once or twice per week, the night before you play, you should review the entire program before you go to bed. Absorb yourself in the program and let your hopes, aspirations and emotions take wing.

If you do this, you will find that on the court, you'll be able to lock into a fluid and graceful rhythm and synchronize your performance to what you saw and experienced on the tape.

## **ON THE COURT**

On the day of play or competition, put yourself in "slow motion" and do almost everything at half speed. Get up early enough to have a nice relaxed shower, enjoy a light breakfast, get your equipment in order and have a leisurely, unrushed, drive or walk to the courts.

**CAUTION: DO NOT RUSH.** If you do, you will upset your stroke metabolism and throw your timing and tempo out of whack. Also, go light on the coffee and caffeine laden drinks. Caffeine will create a tempo-robbing rush in your nervous system.

When on the court, follow these simple steps to unlock your storehouse of fundamentally pure neuro-muscular memory:

1. Before starting play, let go of your feelings of inadequacy and self-imposed limitations.
2. Imagine, for that day, you are Dave Peck or any other racquetball player you admire. Imagine that he, not you is stroking the racquet. Don't let any bad shots or mistakes throw you mentally off track.



3. When you find you are losing consistency or control in any of your strokes, simply activate your positively stored neuro-muscular memory by:
  - A. Visualizing Dave Peck executing the shot you want to make. See the flight of the ball go to the target.
  - B. Take a deep, slow breath and slowly exhale, feeling the relaxation penetrating your arms, hands, shoulders, hips and legs.
  - C. Swing as fluidly and relaxed as you can to duplicate the shot you visualized.

## **AFTER THE GAME**

As soon as possible after playing, review the whole tape as you did in "Before You Play," following the same procedures as outlined there.

This last step is critically important because it will allow your nervous system to make positive adjustments and corrections as well as reinforce the positive elements of your racquetball experience for that day.

If you don't have access to a video player, listen to the audio soundtrack and mentally replay the highlights of that day's racquetball experience in your imagination.

## **DURING THE WEEK**

If you're a weekend racquetball player, you should watch your tape at least two times during the week — not including your casual viewing the evening before an outing. Work on sharpening your mechanics as well as on your tempo and rhythm by following the instructions for bio-mechanical and advanced neuro-muscular training. Select the viewing sequences which you feel need the most work.

## **THE SYBERVISION SOUNDTRACK — AUDIO REINFORCEMENT**

To further reinforce the images, rhythm and tempo associated with your SyberVision video tape, we recommend that you listen to the musical soundtrack as much as possible — especially when you don't have access to a video player (when you are driving in your car or exercising). As you begin to listen, you will notice the music triggers in your mind the images associated with the music on the video.

In the beginning of your SyberVision training program, don't expect a sudden surge of success. Though you'll notice immediate improvement in many areas of your game after viewing your tape a few times, you will still make mistakes and will still have bad habits. Make up your mind to give the SyberVision program a chance to work and then stick with it during your play. Be patient and let your nervous system gradually make the transition into positive new habits.



# V. Biomechanical Analysis: How to Watch Your Videocassette With an Educated Eye

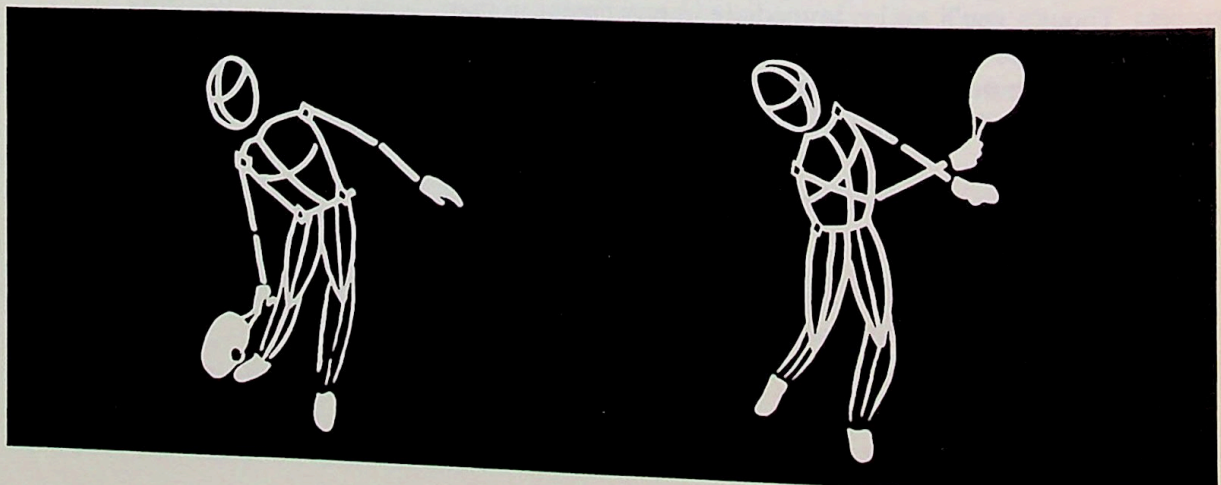
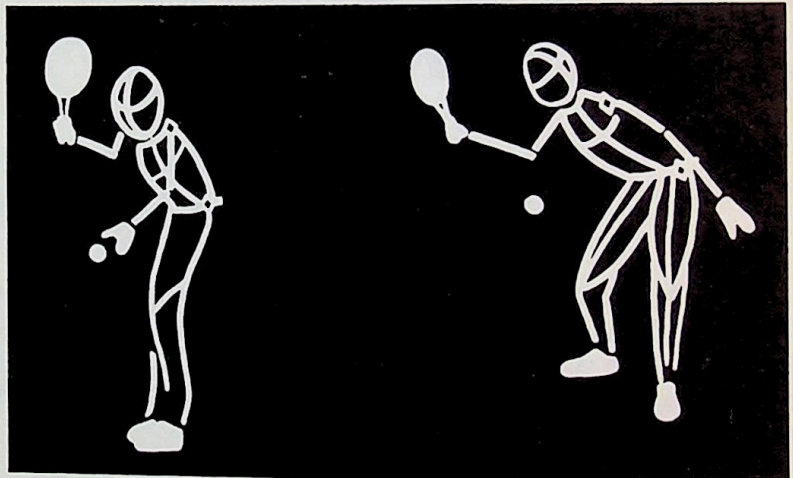
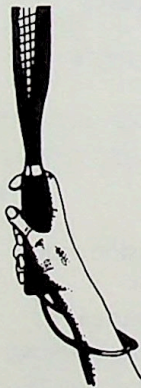
Following is a simplified bio-mechanical analysis of the fundamental racquetball skills that are modeled on your SyberVision videocassette. Studies have shown that your neuro-muscular training experience is enhanced if you have a basic understanding of technique — the images are more meaningful and impacting if you watch with an educated eye.

It is recommended that you study each of the fundamentals below in correlation with the corresponding fundamental on your SyberVision videocassette.

After a few weeks of watching the videocassette, studying the bio-mechanics of form and actually playing, fundamentally sound racquetball habits will have become a permanent part of your game.

## THE DRIVE SERVE

The drive serve is your power weapon. It should be hit hard and low to the front wall so that the ball stays low as it jets into the backcourt. Ideally it should bounce twice in the backcourt before hitting either the right or left deep corner. The drive serve can be separated into five fundamental phases: the grip, the set up, the forward swing, contact, and follow through.



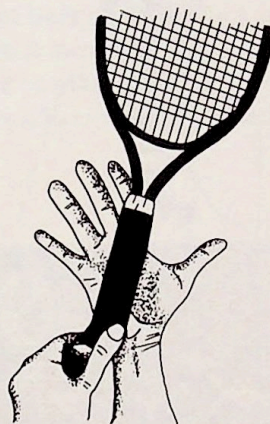


**1. The Grip:** The basic grip for serving, forehand groundstrokes, lobs, cut off shots (volleys) and overhead drives is the forehand or "trigger grip." This grip can be illustrated in five steps:

- A. Imagine a diagonal line from the inner heel of your hand to the first joint of your index (or trigger) finger.



- B. The racquet handle is placed on this line.



- C. Close the hand and slide the trigger finger up near the neck of the racquet.

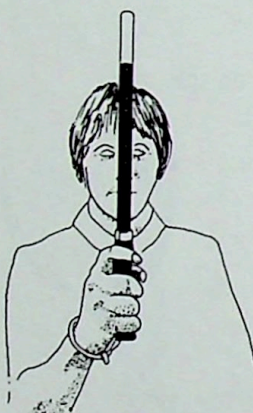




Notice how a V has been formed over the racquet.



The trigger finger in the proper position.



**2. The Set Up:** Set-up midcourt toward the rear of the service zone. Legs one stride apart. Knees flexed. Take racquet back to top of backswing. Cock wrist. Forearm is at a 90-degree angle to upper arm (about ear-high). Body is coiled with most of the weight on the back foot so the ball can be stepped into.





**3. The Forward Swing:** Softly drop the ball at a point in line where your front foot will be when you make contact with the ball. As ball bounces up, start to step into the shot. As ball begins to fall, plant the front foot and uncoil lower body into shot, throwing all of your weight onto your front foot.



**4. Contact:** Swing racquet forward and down smoothly. As the racquet approaches the ball, your weight should be mainly on your front foot. Make firm and hard contact with the ball in the power zone (just ahead of your front instep, below the knee — no more than 12 inches off the floor). At the moment of contact, your racquet strings must be parallel to the front wall. Your wrist, which has been cocked backward to get the racquet high, must now uncock and snap through the moment of contact with the ball — transferring the momentum and power of your body to the ball.





**5. Follow Through:** Smoothly follow through in the direction you want the ball to go. Let the momentum of the swing carry the racquet out and across your body finishing high on the opposite side of the body. At the end of the follow through, only the toes of your rear foot are touching the ground, indicating that all of your weight is forward.





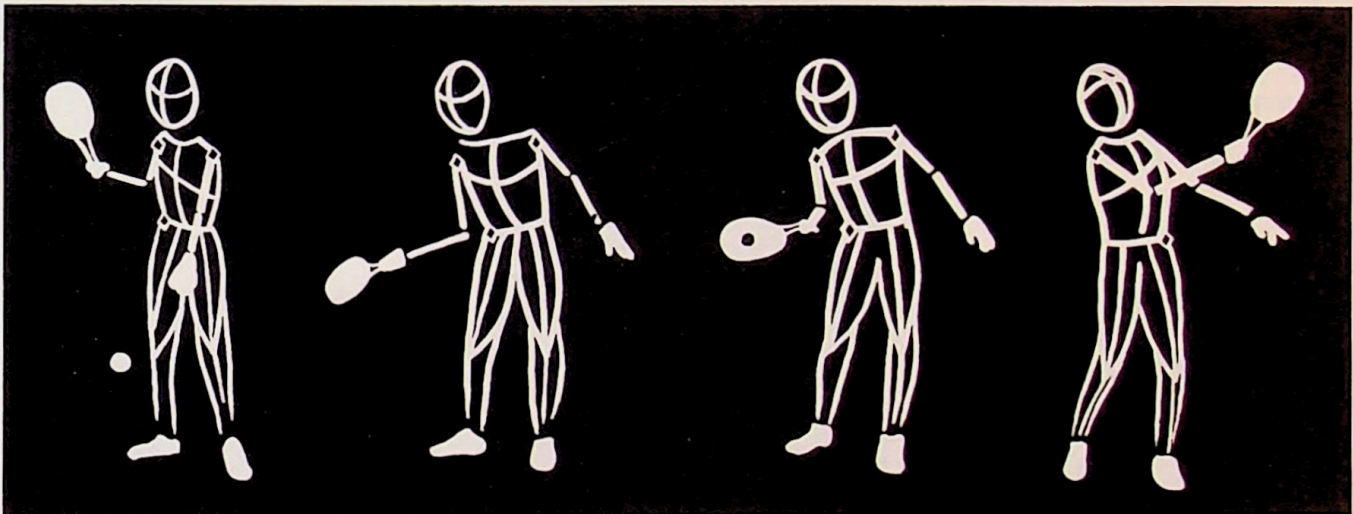
## THE LOB SERVE

The lob serve is almost the direct opposite of the drive. It is a slow shot hit high to the front wall so that it falls along the side wall, brushing the wall before bouncing and almost dying very near the back wall.

The key to a perfect lob serve is to hit the ball with a finely tuned touch deep to the back corner and yet still have it catch the side wall, so lightly that it does not bounce off into center court for a "plum" shot. Performed correctly, the lob serve will force your opponent to try a difficult wristy stroke in an attempt to hit the ball off the side wall. Though easy to return, the lob serve is difficult to return aggressively.

There is no wrist action in the lob serve since accuracy is what you want and not power and speed. Keep your hitting arm bent and tighten up your wrist. Concentrate on a compact hitting motion.

The lob serve can be analyzed in four phases: the set-up, forward swing, contact, and follow through.



**1. The Set-Up:** Stand near the center of the serving court in a serving position similar to the drive serve. (Don't broadcast your intent to serve a lob by assuming an erect position.) Identify a spot on the front wall and aim for it. Bounce the ball high enough to make contact at chest level.

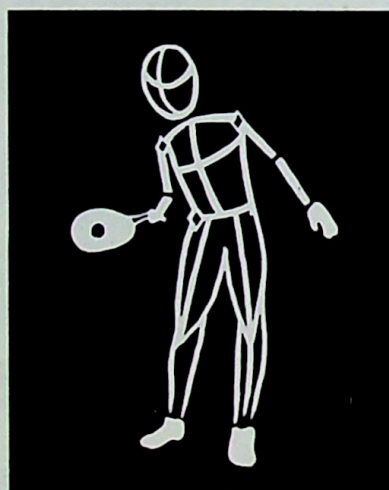




**2. Forward Swing:** Start your forward swing as the ball rises. Swing your racquet with a lifting motion (down and under the ball) keeping your wrist cocked so that you make contact with the racquet face open.



**3. Contact:** Softly lift the ball upward with a firm and smooth pushing motion. Don't weakly "pop" the ball off your racquet but hit it firm enough so that it rebounds deep into the back corner.



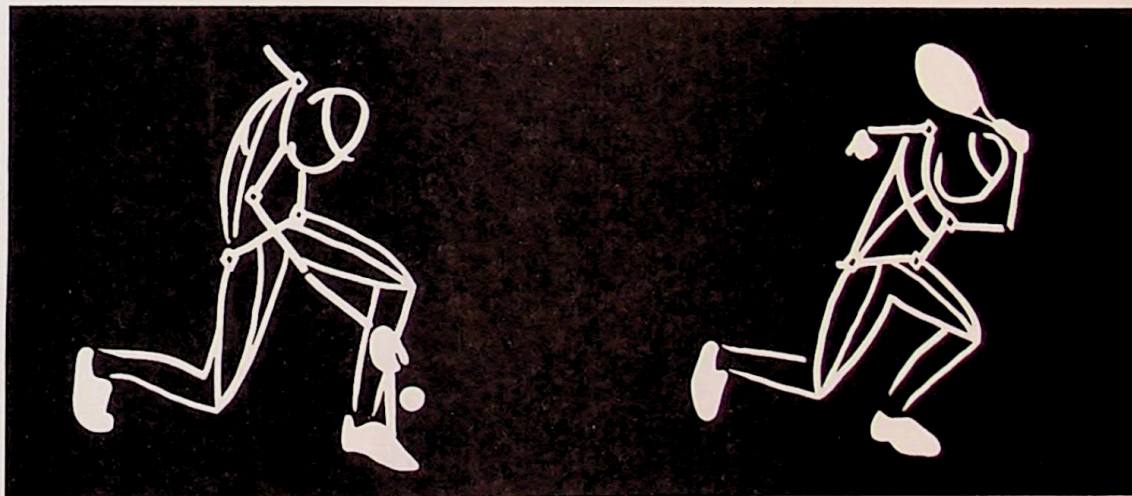
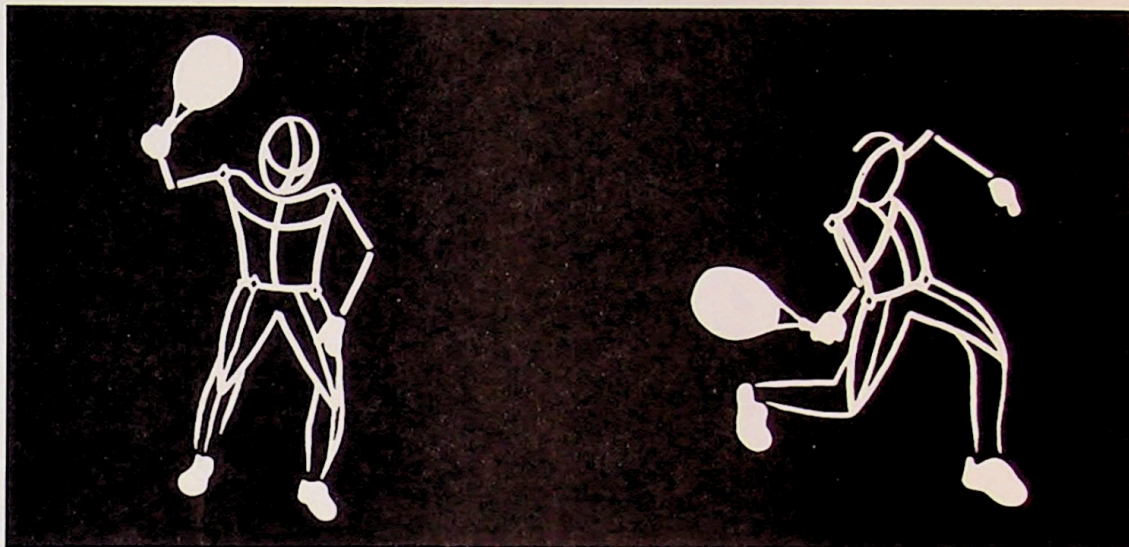
**4. Follow Through:** Follow through high in the direction you want the ball to go and finish the stroke with the racquet on the opposite side of your body.





## THE FOREHAND GROUND STROKE

The forehand is racquetball's basic stroke—the most potent weapon in your arsenal of skills. The forehand is used 70% of the time compared with other strokes. The forehand can be analyzed in four phases: the set-up, the backswing, contact and follow through.





**1. The Set-Up:** As you arrive in the set-up position you should be sideways to the ball's line of flight. Your legs are a long stride apart, knee flexed and your body is coiled like a spring. As the ball travels toward you, your racquet moves all the way back to the top of your backswing. As your arm pulls your racquet back, your elbow comes up until it's ear-high. Your wrist is cocked. Your front foot points to where you want the ball. Your weight is on your back foot so you can step into the ball.



**2. Forward Swing:** As the ball comes into your hitting zone uncoil your body and throw all of your weight onto your front foot. As your racquet swings forward lead with your elbow, keeping your wrist laid back in a cocked position.





**3. Contact:** At contact most of your weight should be on your front foot and your eyes should be watching the racquet face hit through the ball. At the moment you hit the ball, the racquet face must be parallel to the front wall. Just before contact, you should uncock your wrist and begin your wrist snap and allow the snap to continue until after the ball leaves the racquet. The wrist snap is what gives you power. The wrist acts as a bridge between the power generated by your body and the power transferred to the ball.



**4. Follow Through:** After contact, don't try to slow your arm motion. Let the natural momentum of the swing carry through naturally. Your weight will be on your front foot and your body will be low. Do not move upward as you complete the stroke. Your racquet should finish high on the opposite side of your body so that you are facing the front wall looking at the ball over your shoulder. GET YOUR RACQUET BACK EARLY FOR THE NEXT SHOT.

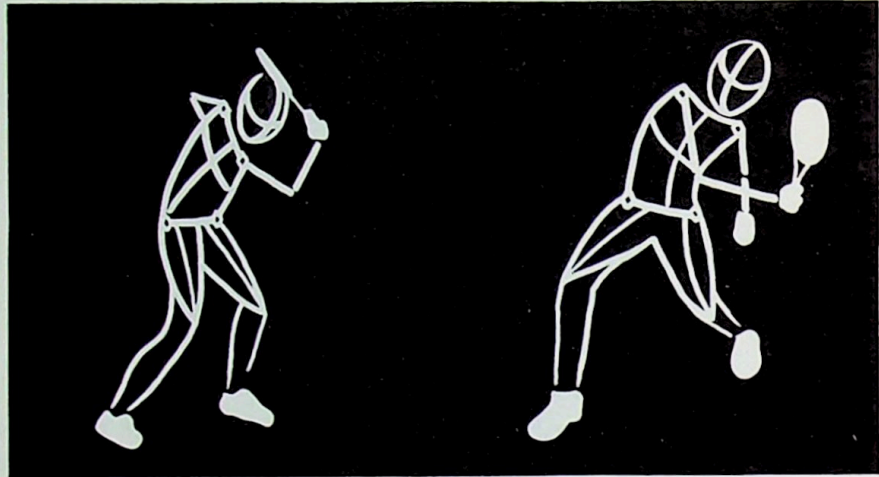
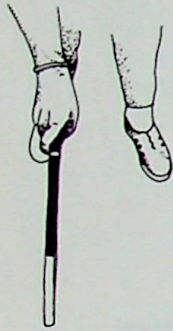




## BACKHAND GROUND STROKE

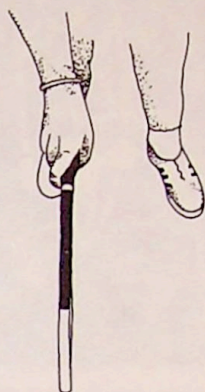
The backhand groundstroke is almost a mirror image of the forehand ground stroke, except for the grip adjustment and rotation. You should allow more elbow room for the backhand than you do for the forehand because the backhand brings the racquet arm all the way across your body, a feeling very similar to throwing a Frisbie. Imagine you are hitting the ball with your shoulder rather than the racquet—turning your shoulder into the shot.

The backhand can be analyzed in six phases: the grip change, the set-up, the backswing, mid-swing, contact and follow through.





**1. The Grip Change:** The grip change for a backhand is a slight counterclockwise rotation to the left. The trigger finger rotates slightly over the top and the thumb down under. The grip change is illustrated on the last fundamental section on the videocassette.



**2. The Set Up:** The racquet is pulled back, the wrist is fully cocked, the hitting arm is bent almost 90-degrees at the elbow, the knees are comfortably bent, the shoulders are coiled and pointing toward the wall. Take the racquet back quickly into its cocked position (not pulled in against your chest) and wait for the ball.



**3. The Backhand Swing:** The hitting arm begins to extend with the racquet still held back with the wrist fully cocked. Weight shift is accomplished with a step forward. The front leg is weighted for a forceful thrust off the leg.





**4. Mid-Swing:** Just before contact, the right arm is nearly extended, the wrist is starting to snap, and the shoulder is pulling the racquet through the shot.



**5. Contact:** Contact is made off the front foot. The racquet arm is fully extended, the wrist has completed its snap, and the eyes are focused down at the point of impact.



**6. Follow Through:** The wrist has fully snapped and is held firm. The legs are bent through contact and the follow-through. The body stays low. The shoulders continue to open up as the momentum of the swing is completed. Pull through with your shoulders. The racquet points to the right wall at the finish.





## FOREHAND CEILING BALL

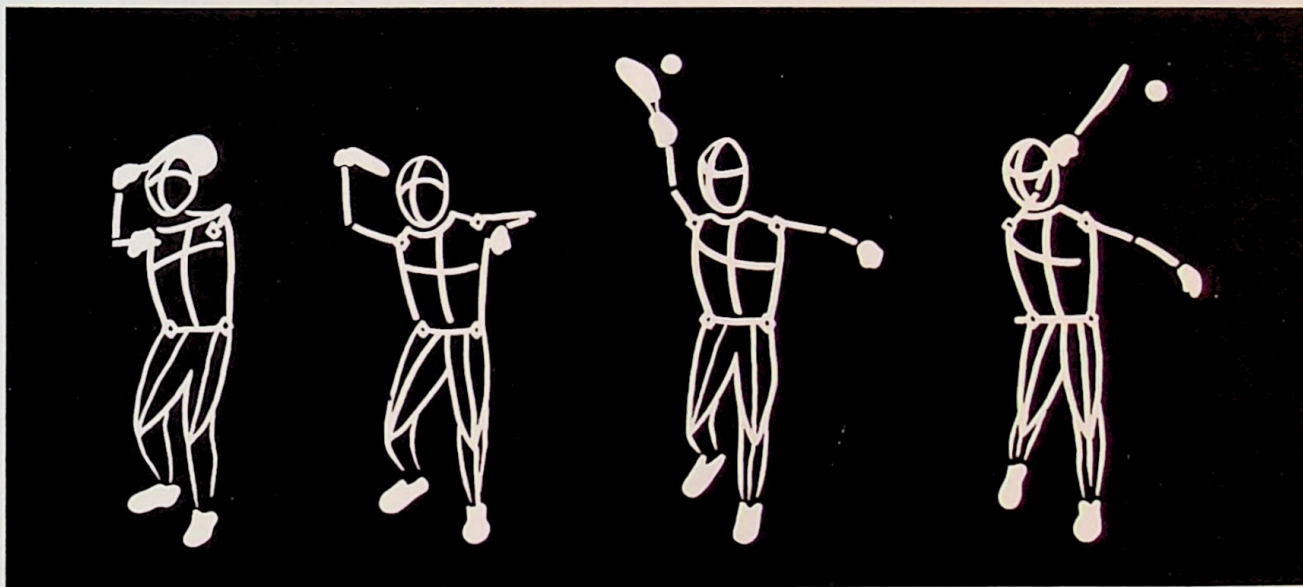
The forehand ceiling shot is normally hit from deep backcourt, aiming for the ceiling target about 3 feet from the front wall. The ball will then deflect into the front wall and take its first bounce in the service zone area and end up near the back wall.

The ceiling shot is a defensive shot that forces your opponent out of the center court zone and presents him with a head-high bouncing ball that is difficult to return aggressively. Ideally, the ceiling shot will end up in your opponent's weakest area — the backhand corner.

The fundamentals for a forehand ceiling shot are basically the same as the overhead drive except for the angle of racquet placement. The racquet face is open, facing the ceiling in the forehand ceiling shot. The racquet in the overhead drive is tilted down into the front wall at impact.

It is critically important on the ceiling shot (as it is with all racquetball shots) to keep your eye on the ball throughout the stroke. The sensation you should feel as you execute the shot is similar to throwing a football, baseball or your racquet over a fence.

The forehand ceiling shot can be analyzed in four phases: the set-up, the swing, contact, and follow-through.





**1. The Set-Up:** Your racquet is taken back early behind your head until its head is pointing almost to the floor. Your wrist is fully cocked. Your racquet arm elbow is pointing high. Your eyes are sharply focused on the ball. Your knees are slightly bent for balance.

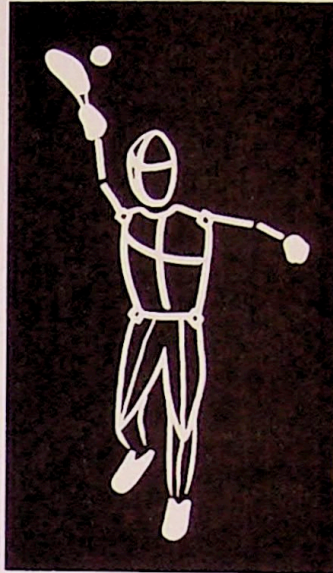


**2. The Swing:** The basic motion of the ceiling ball swing is that of throwing a baseball or football. Your racquet is brought up and forward to hit the ball when the ball is just ahead of your body. The racquet face is open—not vertical.





**3. Contact:** Just prior to contact your wrist begins to snap and continues to snap strongly through the contact with the ball.



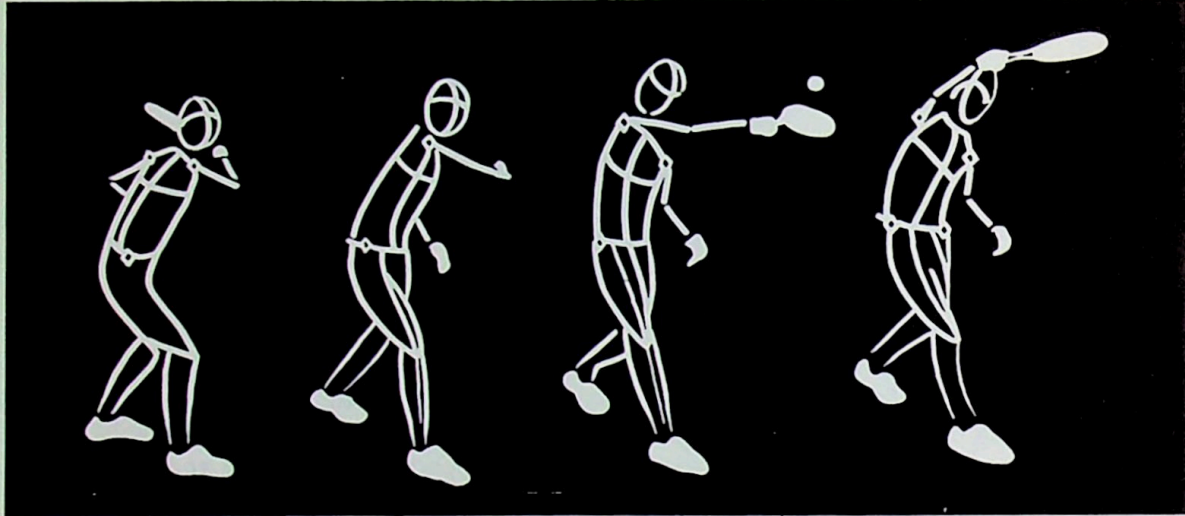
**4. Follow-Through:** You follow-through fully in front of your body with the racquet finishing on the opposite side of your body. The full follow-through allows you to hit the ball firmly with enough power to travel the distance to the front wall, bounce off the ceiling and the front wall and rebound all the way into the back court. A softly hit ceiling shot is an easy “plum” for your opponent.





## BACKHAND CEILING BALL

The backhand ceiling shot is not hit with an overhead action like the forehand ceiling shot. It incorporates more of a shoulder-high sweep that goes upward and across. The backhand ceiling shot uses the same elements of the fundamental backhand stroke except that you swing up at the ball on a slight angle. Refer to the backhand fundamentals in this section of the study guide. The basic backhand ceiling shot can be analyzed in four phases: the set-up, the swing, contact, and follow-through.



**1. Set-Up:** In the basic backhand set-up, the racquet is held up behind the head and the hitting shoulder is slightly rotated.





**2. Swing:** Once the ball is sighted, step toward the side wall on about a 45-degree angle and rotate the shoulder up and through the ball.



**4. Follow-Through:** The follow-through is a natural motion of the hitting shoulder — let the momentum of the shoulder carry all the way through the swing.



**3. Contact:** Contact is made about chest high. Upon contact, direct the ball to your racquet.





## CUT OFF SHOT

The cut off shot or volley is a ball hit as it comes to you in the air, at waist height or below. The cut off is an aggressive shot that puts pressure on your opponent by giving you control of center court and an opportunity to hit a kill shot. Your goal is to direct the cut off into the nearest front corner, about 1 to 10 inches high. Don't attempt to hit a cut off if the ball is chest level or above. If you do, it will not go low to the front wall and will set your opponent up for a plum.

There are four basic elements of the cut off to master if you want to be proficient at this aggressive shot: readiness, swing, grip and eye control.

- 1. Readiness:** Always be ready to hit a cut off so you can set up quickly with good balance. Never be caught by surprise. Anticipate every cut off situation.
- 2. Swing:** The key to an effective cut off is accuracy rather than power. To increase your accuracy you want to get down low so that you can drive the ball as low and as straight to the front wall as possible. This requires a short, compact and open-stanced swing. While you swing shift your hips forward and extend your elbow as fast as possible. Use a full follow-through.
- 3. Grip:** Tighten your grip at impact so that you make solid impact with the ball. The face of the racquet must be square to the ball. If you hold your racquet weakly, the speed of the ball will move and deflect the racquet face in your hand.
- 4. Eye Control:** Keep your eyes on the ball and keep your head down throughout the shot. Don't look up or away too soon or the ball will deflect upward off your racquet. As you raise your head or eyes, your racquet face will have a tendency to open up.

## OVERHEAD DRIVE

You should use the overhead drive when you are in the back court and are hitting a high-bouncing ball (over your head) or a ceiling shot. The ball should hit the front wall at about 3 feet from the floor. To get your racquet in the proper striking position imagine that you're scratching your back with your racquet, reach up for the ball, snap your wrist at contact and then fully follow-through.

The overhead drive is hit with basically the same motion as the forehand ceiling ball except the racquet is angled into the front wall at impact rather than at the ceiling. Review the fundamentals for the forehand ceiling ball. As you watch the overhead drive on the video pay particular attention to the angle of the racquet as it hits through the ball.

## GRIP CHANGE

The explanation for the grip change (from forehand to backhand, backhand to forehand) is listed under the Backhand Ground Stroke in this section of your study guide. Study the instructions and illustration and watch the changing grips on this section of your video until you understand and can initiate the proper changes.









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