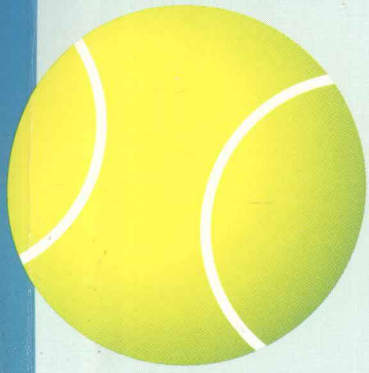


the **EVERYONE** series



TENNIS everyone



Fifth Edition
Chafin and Moore

Acknowledgments

The authors would like to express deep appreciation to several individuals who assisted in the preparation of this book. Sincere thanks are in order to Mike Chafin, Steve Beeland, Louise Fletcher, Izel Rivera and Doug DeMichele for the many hours spent on the courts as subjects for photographs; to Al Ring, A.P. Brown, Wayne Sandefur and John Baxter for posing for the doubles photo; and to Sue Packing and P.A. Lee for participating in photographs. The authors are also grateful to Mike Floyd, owner of Court Side Sports, for allowing the use of his well-equipped tennis shop.

Table of Contents

Chapter 1	Tennis—Today and Yesterday	1
Chapter 2	Equipment and Facilities	9
Chapter 3	Scoring and Playing the Game	25
Chapter 4	Gripping the Racket	41
Chapter 5	Principles of Stroking	51
Chapter 6	Basic Footwork Patterns	57
Chapter 7	The Forehand	67
Chapter 8	The Backhand	79
Chapter 9	The Serve	93
Chapter 10	Auxiliary Strokes	107
Chapter 11	Singles Strategy	123
Chapter 12	The Doubles Game	139
Chapter 13	Conditioning for Tennis	155
Chapter 14	Practice Drills	165
Chapter 15	Tournaments and Officiating	179
	Appendixes	191

Tennis—Today and Yesterday

WHY TENNIS?

At this point you are probably asking yourself, "Why did I choose tennis?" Or perhaps you are already an occasional player and are asking the question, "Why do I continue to play this crazy, frustrating game?"

Whatever your reason, it is possible that in the next few weeks you will arrive at a decision that will affect your lifestyle and habits for the remainder of your life. However, if by chance you should decide that the game of tennis is not for you, at least the decision will be made on the basis of sound information and a fair trial.

As a non-contact sport, tennis offers a wide range of diverse benefits to all participants. First and foremost, the game is one of motor skill requiring a strong emphasis on hand-eye coordination with a corresponding emphasis on speed, strength, endurance and agility. This in no way minimizes the fact that the ability to stroke a tennis ball correctly is fundamental to long-range success. Equally important is the mental aspect to the game, one that is not found in many other athletic endeavors. It is impossible to be a winning tennis player and not be reasonably intelligent. Additionally, you must possess the ability to calculate while engaged in a fiercely contested point. It has been said that tennis requires more mental involvement from its participants than any other sport.

While many tennis matches have been decided on the endurance level of the players, one of the best aspects of the game is that it can be adapted to the participant's age, sex and level of competition. Like checkers players, older participants frequently develop a seasoned degree of gamesmanship, which offers some compensation for legs that may have lost their youthful spring. The doubles game can also be enjoyed as long as a person can maintain some degree of mobility. Tennis, as with some other sports, also has its own handicapping system. Should you feel you are too accomplished to play with someone, try beginning each game with a one- or two-point deficit and see how quickly the competition is evened!

In terms of a fitness activity, tennis is decidedly better for you than most other sports. Discounting running and swimming, which burn more calories but are boring and repetitious, tennis probably offers more advantages than any other activity. Approximately 40 million people in the United States alone have decided that burning up to 500 calories an hour, increasing muscle strength without a great increase in muscle size, releasing tension in a wholesome manner, and socializing both for business and pleasure are definitely to their liking. Most also agree that tennis is fun; therefore, it is their answer to the current fitness drive. Tennis is played throughout the world, and the nature of the game is such that both sexes can compete with and against each other.

Another aspect of tennis that has remained through the years is the capacity for developing true sportsmanship despite the intense competitive nature of the game. The cheating tennis player is an oddity rather than the rule, and whenever players do not conform to the unwritten code, they are quickly abandoned by other players.

By this time, you may be convinced that tennis is the game for you and you are anxious to get on the courts. However, there are several points to consider.

First, tennis need not cost you a lot of money. If you choose to join a private club, play at night or indoors and purchase the most expensive equipment, the cost could amount to a considerable sum of money. However, if you play on public courts and select moderately priced equipment, the game will cost considerably less than golfing, skiing or boating.



Tennis dress of yesteryear

Second, tennis requires a commitment of time if you really want to improve your skill level. It is not one of the easiest games to master, however, almost everyone who perseveres can become reasonably adept at stroking the ball. They may not look and play like professionals, but they will derive many of the same benefits that keep most tennis players returning to the courts year after year. Another caution: Once “hooked” you will probably play the game for the rest of your life!

ORIGIN OF THE GAME

The history of ancient civilizations indicates that a form of tennis was probably played by the early Greeks and Romans. Other evidence indicates that the Chinese were batting a ball back and forth more than 7,000 years ago, and that the Egyptians and Persians also played some kind of a ball and racket game as early as 500 B.C.

The most solid and recent evidence, however, indicates a tennis-like game being played in France about 1200 A.D. The French game called *jeu de paume*, or “game of the hand,” consisted of hitting a stuffed object over a rope with the bare hand. Rackets did not make an appearance until about 1400 A.D. England and Holland had both accepted the sport by this time and Chaucer referred to the game by using the present name, which is probably a derivative of the French word *tenez*. The game prospered greatly in France and England. However, the French Revolution almost obliterated the sport, since at that time it was considered a game of the rich.

These earliest contests did not much resemble our present game. It was not until 1873 that Walter C. Wingfield, a British army major, introduced a new outdoor game which, while incorporating many other aspects, was more similar to our present grass court game. He chose to name his game *sphairistike*, a Greek word meaning “to play.” Since the name was too difficult to pronounce, let alone spell, the English quickly began calling the game “tennis on the lawn” and eventually lawn tennis.

The game quickly spread throughout the British empire, and in 1874, Mary Outerbridge, who was vacationing in Bermuda, brought the game with her to New York. As a member of the Staten Island Cricket Club, she quickly received permission to lay out a court on an unused portion of the cricket grounds.

Although the game was not an overnight success in America, it was only a few years before every major club in the East had courts. There was little standardization in these early years. With each club having its own rules, conflicts gradually arose. Finally in 1881, an older brother of Mary Outerbridge convened a meeting of the leading New York clubs to

bring some order to the confusion. The outcome of this meeting was the establishment of the United States Lawn Tennis Association, which later became the United States Tennis Association.

The first United States championship was held in Newport, Rhode Island, that same year and was won by Richard Sears, who subsequently defended and held his title for the next six years. In 1915, the tournament was permanently moved to the West Side Tennis Club in Forest Hills, Long Island, and was held there through 1977. In 1978, the tournament was moved to Flushing Meadows, New York.

At approximately the same time, another tournament of tremendous importance was being inaugurated at Wimbledon, England. The subsequent elegance and tradition have established this tournament as perhaps the most important tournament in the world.

A few years later in 1884, Wimbledon began its annual tournament for women, and as the ladies gradually began to shed their voluminous clothing, their game became indistinguishable from that of the men.

Boris Becker of West Germany made tennis history in July, 1985, when, at the age of 17, he defeated Kevin Curren in the finals of the men's singles at the prestigious Wimbledon Championships. This made Becker the youngest player ever to win at Wimbledon. He became an instant hero to the tennis world, primarily due to his youth and his excellent court demeanor.

The Davis Cup, one of the most prestigious awards in tennis, was originated by Dwight Davis who, while still a student at Harvard, donated

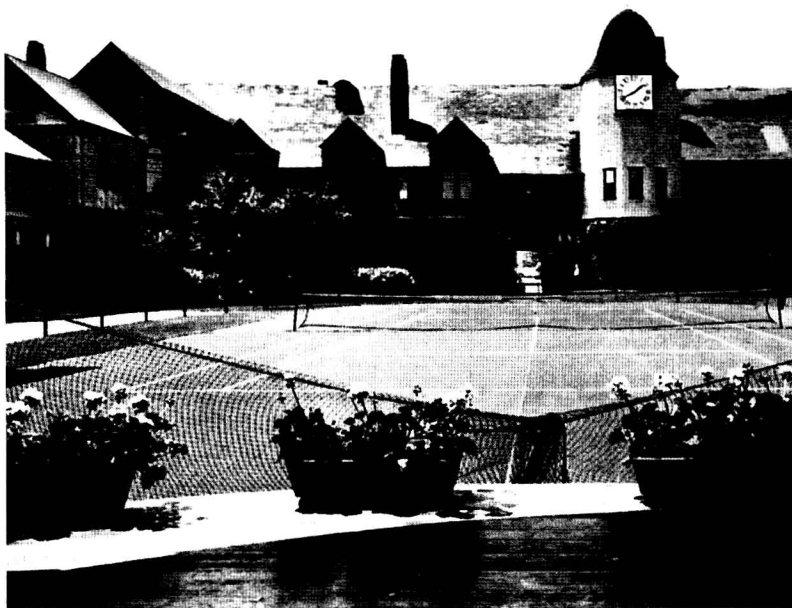


The Davis Cup, prestigious award in team tennis

a cup to be awarded to the winner of a team match between England and the United States. Today this competition has grown to include teams from all over the world and has contributed greatly to world understanding among tennis players.

INTERNATIONAL TENNIS HALL OF FAME

The Newport Casino was the major site of early tennis in the United States. It is the home of the International Tennis Hall of Fame, which houses a modern pro shop, a shop for tennis memorabilia and a museum of tennis from its early beginnings. Located at the casino is the only "court tennis" court in the United States.



The International Tennis Hall of Fame in Newport, Rhode Island

THE GRAND SLAM

The tennis world recognizes this magnificent achievement as the pinnacle of success. It is very rarely accomplished and has been achieved by very few players. To win the Grand Slam, a player must win the championships of Australia, France, England and the United States in the same season. While several players, including Bjorn Borg, have

come close, only five have been successful. Two were men and three were women. One player succeeded twice.

Date	Player
1938	Don Budge (American)
1943	Maureen Connolly (American)
1962	Rod Laver (Australian)
1969	Rod Laver (Australian)
1970	Margaret Court (Australian)
1988	Steffi Graf (West German)

Other tournaments of major importance are:

The Wightman Cup. Annual competition in singles and doubles between women's teams from Great Britain and the United States. It began in 1923.

The Federation Cup. This annual event denotes worldwide competition between women's teams, similar to the Davis Cup. It began in 1963 and has been dominated by Australia and the United States.

Chapter 1: Evaluation

1. What are some of the benefits afforded to players who participate in the game of tennis?
2. How does tennis help to develop honesty?
3. How many calories per hour can be burned by the average tennis player?
4. Briefly trace the origin of tennis.

5. Where was the first U.S. Tennis Championship held?

6. Who was the person who “imported” tennis to the U.S.?

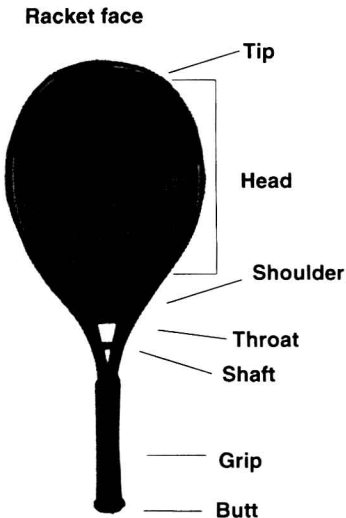
7. What was the origin of the Davis Cup?

8. Define the “Grand Slam.”

Chapter 2

Equipment and Facilities

RACKETS



Parts of the tennis racket

Tennis racket manufacturing is a fast growing and lucrative enterprise. Only a few years ago, there were but a handful of racket manufacturers charging less than \$25 for their best unstrung frames. Now there are many, and the prices have increased nearly tenfold. The tennis industry is constantly marketing new rackets. Multicolored rackets and multi-composition frames of exotic materials are available. The wide-body racket is losing some of its popularity as more variable body rackets are being marketed. What you see today, may not be the "in thing" of tomorrow, nor is there any guarantee that all new changes increase proficiency.

Make your equipment selections without worrying about purchasing the most current fads and styles. All rackets, even the most expensive, deteriorate with time, causing loss of power and control; however, the harder substances lose their strength and stiffness more slowly.

QUESTIONS AND ANSWERS

Why do some of the more expensive rackets such as graphite and boron get such poor marks for abrasion resistance?

Many of these so-called miracle fibers wear very quickly. Because of their hardness, they tend to be brittle and chip when striking the court surface. Some manufacturers feature a hard strip of nylon or polyurethane around the outer frame of the racket. Others have developed a replaceable bumper guard for protection. A simple and inexpensive protection in use for years is hospital tape or rubberized electrical tape.

Is flex or flexibility in rackets important?

Very flexible rackets tend to provide more power but less control. A stiffer frame will give a player less power but more control. From a beginner's standpoint, *control* is far more important than speed.

What do the various markings on the handle of my racket mean?

If you have markings, you probably have a quality racket. The numbers and letters themselves indicate the handle size, weight of the frame, and sometimes special model numbers. Handle sizes are indicated by the numbers 4 3/8, 4 1/2, 4 5/8 and 4 3/4. Some recent models use only the numbers 3, 4, 5 and 6 to designate 3/8, 4/8, 5/8 and 6/8. See the chart below.

Racket weight is usually designated by the letters L, M or H immediately following the handle size. The letters indicate a range in ounces and may vary according to the manufacturer.



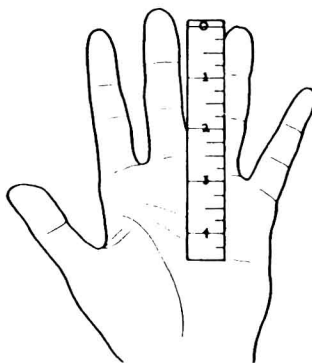
Markings on racket handle

or	
4 3/8 L	←→ 3 L
4 1/2 L	←→ 4 L
4 1/2 M	←→ 4 M
4 5/8 L	←→ 5 L
4 5/8 M	←→ 5 M

What size and weight racket should I have?

At this point in your tennis career, it is impossible to say with certainty. However, several guidelines may assist you in your initial choice.

If you shake hands with a racket handle, the tip of your thumb should be able to touch the first joint of your middle finger. Also, the average grip size for women is usually 4 3/8 - 4 1/2 and



One way to determine handle size is to measure the distance of the ring finger to the long crease in the palm



Selecting the proper racket is an important part of the game

for men it is 4 1/2 - 4 5/8. If your hands are unusually large or small for your sex, this would have to be adjusted.

Another widely used method of determining handle size is to measure the distance from the tip of your ring finger to the long crease in the palm, as illustrated in the diagram on page 10.

If your present grip is too large, your arm will probably be tiring very quickly. If the grip is too small, the racket will twist more readily in your hand, making it appear that you are not gripping the handle tightly enough.

How will I know if I need a lighter racket?

Research indicates that for swings of equal speed, the medium-weight racket hits the ball deeper and faster than the light racket. This assumes the rackets are identical except for weight. The best advice is to *pick the heaviest racket that you can handle comfortably.*

Baseliners generally use a head-heavy frame while serve-and-volley players usually prefer a head-light frame. To determine your racket's status, adjust it on a thin balance point until it is perfectly balanced, mark the point, then measure from that point to the tip of the head. If the racket is 27 inches long, the balance point should be 13 1/2 inches. If the balance point is closer to the head, it is head-heavy, and if it is closer to the handle, the racket is head-light.

How do racket materials compare?

The racket materials chart on page 12 may help. Note that the ratings range from 1-8, with 1 being the most or best.

How can a player control the additional power generated by the midsized and oversized rackets?

A player with a wristy, floppy, short swing will have trouble controlling midsized and oversized rackets. To be effective with an oversized racket, try swinging in a smooth, fluid manner and go for a stiffer racket rating. A relatively stiff swing with little wrist usually works best.

What size handles do the pros use?

Sixteen quarterfinalists in a recent tournament were surveyed with the following results: of eight men, two used 4 1/2 and six used 4 5/8; of eight women, two used 4 3/8, four used 4 1/2 and two used 4 5/8.

What kind of racket would be best for someone with a relatively slow swing?

In general, players having slower swings or compact strokes will benefit from the increased power generated by a stiff-framed racket. Players with faster swing speed generally do better with a more flexible frame.

What is the latest in the “wide body” concept in tennis rackets?

Since 1987 and the Wilson Profile® racket, wide body rackets have tended to decrease in width from approximately 28 millimeters to about 24 millimeters. Players were finding too much power in the originals and were complaining that they were losing ball control and touch. This means they were hitting the ball long and out of the court. Average racket weight also appears to have changed. Ultra-light rackets (under 10 ounces) seem to be on the rise, and anything over 13 ounces is becoming scarce.

What kind of racket should a player use if prone to tennis elbow?

Look for a light racket that is more flexible than average, has cushioned

Racket Materials Chart*

Material	Cost	Strength	Abrasion Resitant	Stiffness	Vibration Absorption
Wood	Least Expensive (1)	8	8	8	1
Boron	Most Expensive (8)	2	7	1	5
Steel	Inexpensive (2)	6	1	2	6
Aluminum	Inexpensive (3)	7	1	6	6
Titanium	Moderate (4)	5	1	4	6
Fiberglass	Moderate (4)	4	4	7	2
Kevlar	Expensive (5)	3	5	5	3
Graphite	Expensive (6)	1	6	3	4

*Rackets range from 1-8 with one being the most or best according to category.

grips and a shock absorbing system. Also, string at the lower end of the recommended tension and with a thinner string.

What are some of the important racket ratings?

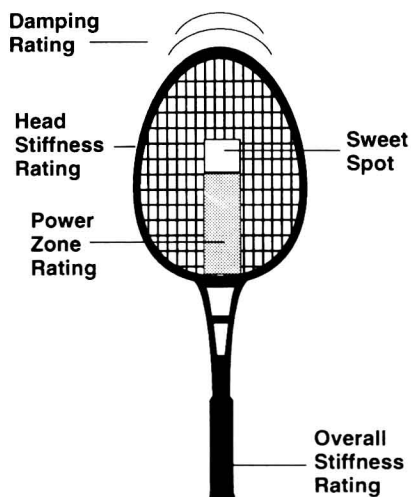
Vibration Damping Rating: Indicates how quickly impact vibrations disappear.

Sweet Spot: The point on the racket face giving the least vibrations on ball contact.

Power Zone Rating: This zone is usually located just below the sweet spot center. Balls striking above the power zone tend to lose power as they move nearer the top of the racket.

Overall Stiffness Rating: Indicates "racket feel" to a player.

One to four is usually very flexible. Six to ten usually denotes a stiff racket. Stiff rackets typically provide more power and consistency.



Are bumpers or frame guards necessary? Can they affect racket performance?

Bumper or frame guards are usually made of lightweight polyurethane or nylon and are designed to fit specific rackets. This market has developed because of the present high price for racket materials such as boron and graphite which, while strong, do not hold up well to court contact. Most older tennis players have used some type of tape to achieve the same purpose—it just doesn't look quite as classy, but it's cheap.

Assuming use of the same material, is there any difference in using a 3/4" grip wrapping as opposed to 1"?

Because the 3/4" grip is narrower, there will be more turns around the handle and less distance between the grooves. Some players believe that more depressions or grooves on the handle give better racket control through reduced slippage. The 1" grip with fewer grooves does seem to be more comfortable. However, it's a matter of personal preference.

What are the advantages of synthetic grips as opposed to leather?

It is generally accepted that moisture is the chief cause of racket slippage. Leather tends to be brittle and lacks moisture absorbent qualities at around 50°F. At 90°F it absorbs well but quickly becomes saturated.

Synthetic wrapping can absorb moisture up to 9 or 10 times better and will give up internal moisture if wiped with a towel. Therefore, many



Disposable grip tape

intermediate and advanced players use a disposable grip tape (above) to give better feeling to the handle. Disposable tape gives a secure grip and is easily replaced when soiled.

players feel a synthetic grip provides a more secure grip in high, humid temperatures.

Is it possible to clean a sweaty, dirty and slick racket grip?

The racket grip must be clean and slightly tacky for expert performance. Obtain a stiff bristle brush, water and biodegradable soap. Wet the grip, soap it down and scrub thoroughly. Then rinse and allow to dry. Rebrush the dry grip to restore its tack. Many

STRINGS

Racket strings have a self-contained vocabulary. The more important terms follow:

Gauge: This represents the diameter of a string. The thinner the string, the higher the number. An 18 gauge string would be thinner than a 15 or 16 gauge. Generally, the thicker the string the more durable, and the thinner the string the more responsive.

Tensile Strength: This is a measure of overall strength. Synthetic strings range from about 140 pounds to over 220 pounds.

Elongation: This represents the amount of potential stretch in a string. All strings have some stretch, but excessive elongation will produce a sawing action and more wear, plus a lowering in tension. Strings range from about 5% (gut) to 18% (monofilament nylon) with the majority averaging around 10%.

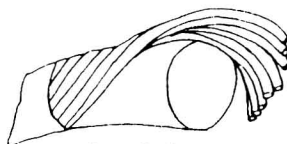
Almost all strings may be classified into one of the following groups:

Monofilament Nylon: Evolved in the 1950s as the first synthetic racket string. Relatively weak, using one strand of thick nylon that is highly susceptible to temperature variances and elongation.

Core String: Highly durable and is the most commonly used. Consists of a single or multiple core surrounded by individual nylon fibers. Core string is usually coated with urethane for protection against moisture.



Monofilament Nylon



Core String