The Art of Pickleball by Gale Leach, Copyright © 2022. Introduction Pickleball is a fun, fast-paced game that is hugely popular around the world. Easy to learn, it can be played by people of all ages in a relatively short period of time, and the small size of the court allows it to be played nearly anywhere. While learning to play pickleball in 2004, I searched for books that would explain how to become a better player. The sport was still relatively new, and only a couple of books were available. After reading Bill Booth's tips on the Sun City Grand Pickleball Club website, I began taking notes as better players shared their expertise. Those notes formed the basis of this book—the result of examining what excellent players do that novice players do not. I searched out information about other racket sports, watched videos, read online sources, and included the notes I took as I learned the sport and became a better player. Also included is the distillation of interviews with many pickleball players, professional and aspiring. The people I interviewed didn't always agree about the best way to make a shot or the strategies that should be employed in certain situations. Because of that, you'll find contradictory information in these pages. Ask five pickleball players what they do in a given situation or how they do it, and you'll get five different answers. As with any sport, pickleball seems to have many "right" ways to play. Because of that, I've included differing methods when significant disagreement occurred, or when it seemed that multiple options might help you discover what would work best for you. It will be up to you do decide what you like. Few of you will read this book from cover to cover. Books of this sort generally contain too much information for that kind of reading to be useful. Only the information you're ready for—that takes you from where you are today to a step above—will make sense and be helpful. I hope you will read the sections of this book that interest you and browse the rest from time to time. Perhaps you'll leave this book sitting on your coffee table and pick it up periodically. Books like this can be read again as you learn more about the game and your skills improve. Perhaps later you'll discover new things upon rereading a passage that you missed the first time, or you'll find new interest in something you weren't ready for earlier. That's the best reason to come back and read this book: as your game improves, you will need to change your techniques and strategies, and you'll be seeking new information. Here's a general plan for learning and improving your pickleball game. Learn how to play and practice. New players should read the rules and learn the basics of how to hit the ball and move on the court. Then study new ways to hone your skills as you improve. Watch and talk with players who play better than you do. Analyze what they're doing and why, and ask to play games with them. Have someone videotape your play and watch it to see what you're doing—not what you think you do. Make sure you do things correctly from the beginning, so you don't have to unlearn bad habits later. Practice against a wall or with a partner, so you get intensive training on specific strokes. Once you do that, your game will improve. Learn to warm up and stretch properly, and do it every time you play. Pickleball is easy to pick up quickly, but that doesn't mean you shouldn't treat it as seriously as any other sport. Sadly, injuries in pickleball are common and fall into two main categories: not warming up enough before play and going past your limits during play. Only you know your limits, and sometimes you'll play harder than you should. Don't overlook warming up so your body will be as ready to play as you are. Practice the skills you know until you can do them without thinking. Then learn new ones. You won't get better without practice, but pickleball practice is fun and easy. People have told me they enjoy going out to practice even more than they enjoy competitive games. Remember—you learn from mistakes as well as from the greatest shots. Get out and practice! Become a better partner. Having good communication on the court is essential, but there are other ways to play better together, too. Talk with your partner about things you can do to improve your communication and rhythm on the court, as well as how to minimize your weaknesses and maximize your strengths. Practice communicating along with bettering your strokes. Have fun. In your zeal to become a better player, don't become frustrated or angry if you have a bad day or lose a match. Remember, you will become better with practice, and you'll always play better if you relax. Be kind to yourself. Enjoy the game and have fun. Look to the glossary of terms in Appendix A when a term isn't clear, and check my website (www.galeleach.com) for resources regarding pickleball equipment, useful videos, and information that came about after this edition was finished. I hope you enjoy this book. I enjoyed writing it, and I learned a tremendous amount from the other players who shared their expertise and stories. Please contact me with comments, questions, or suggestions. I'd love to hear from you. gale@galeleach.com www.galeleach.com A Short History of the Sport■[1] One summer day in 1965, Joel Pritchard, then a U.S. Congressman, and his friend, Bill Bell, returned to Pritchard's Seattle-area home following a game of golf. They found their children complaining about being bored. Pritchard suggested the kids invent a game to play, and the young ones disappeared. When the children had been gone for some time, the fathers headed out to search for them. They found the kids playing on an unused badminton court with some old racquets, a net, and a ball, since a birdie was nowhere to be found. The volleying continued happily for the rest of the afternoon. The next morning, Pritchard and Bell found that, instead of cooking breakfast, the moms had joined the kids on the court. They were having a great time, using table tennis paddles instead of the old badminton racquets. When they accidentally discovered that the ball bounced well on the pavement, Pritchard lowered the net to tennis height. The paddles broke quickly, so the dads cut some new ones from scrap plywood and began searching for a different ball. The WIFFLE ball they found was close, but it didn't last long and was designed to curve. Eventually, they found the Cosom Fun Ball which worked perfectly. They knew they had a great game. Two weekends later, friend and neighbor Barney McCallum joined in the play and became the third founder of the sport. As time went by, others discovered pickleball. McCallum wrote a one-page list of rules. He began by altering the rules of badminton to deal with the different equipment and the change of net height. As in badminton, each person had only one serve, although McCallum allowed the server to put one foot over the line (to accommodate a large tree that was in the way). He also made play between the adults and kids fairer by insisting that serves be made underhand (no overhead smash serves allowed). But the player at the net still had a distinct advantage, so they made it illegal to volley the ball while standing in the area between the net and the badminton service area line. This area was eventually extended to seven feet from the net and was renamed the "non-volley zone," or, as it's affectionately known to players, "the kitchen." The origin of the name "kitchen" is unknown. More rules were added as time went by. In 1967, Pritchard built the first, permanent pickleball court in the backyard of his home in the Magnolia Bluff neighborhood in Seattle, WA. Other players built more courts in that area and on Bainbridge Island soon after. Jump forward fifty-plus years, and pickleball is played as a competitive sport worldwide. Pro players travel full-time to national and international tournaments. Coaches offer at-home and traveling pickleball instruction. Communities are building more and more courts to accommodate the growing demand from local residents.[2] Pickleball is part of the curriculum in schools from elementary to university. And four years ago, a Pickleball Hall of Fame was created to recognize individuals who have achieved exceptional results in pickleball play and/or made exceptional contributions to the game. Not bad for something that began as an afternoon diversion to conquer boredom. Why "Pickleball"? People have always questioned where the name pickleball originated. In their book, History of Pickleball: More Than Fifty Years of Fun!, Jennifer Lucore and Beverly Youngren (daughter/mother) write: "Given that no pickles are used in pickleball, the game obviously has a very interesting and unique name." Some said the name came from Pritchard's wife, Joan, who reported that "the combination of different sports reminded me of the pickle boat in crew, where oarsmen were chosen from the leftovers of other boats." Two of the three founders and all of their families said the game was named after the Pritchard's dog, Pickles. This dog liked to hide in the bushes, dash out when a ball came his way, grab it, and run—thus "Pickles' Ball." Whatever its origin, the crazy name is here to stay. Chapter 1 Overview of the Game The official rules of pickleball can be found online at the websites of USA Pickleball (usapickleball.org) and the IFP (the International Federation of Pickleball, www.ifpickleball.org). The rules document covers all aspects of play from scoring through tournaments, as well as rules for players using wheelchairs or who have other specialized needs. You can also find a basic rules summary and a list of the most recent revisions. Revision of the rules is a continuing process as the game evolves, so check these websites periodically for updates. Pickleball combines elements of tennis, table tennis, and badminton. Two people playing singles or four people playing doubles use hard paddles to hit a perforated plastic ball back and forth over a net. A pickleball court is roughly one fourth as large as a regulation tennis court—about the same dimension as a badminton court. The area on either side of the net is divided into left and right service areas and a non-volley zone. The playing area is the same, whether you're playing singles or doubles. Figure 1. The dimensions and areas of a regulation pickleball court.[3] Each pickleball game begins with a serve, after which players hit the ball back and forth, until someone violates a rule (called a fault). This process from serve to fault is known as a rally. Any player or team can win a rally, but only the serving player or team can score a point. The first side to reach 11 points with at least a 2-point margin wins the game, though social and tournament games are often played to 15 or 21 points. The best two out of three games to 11 points wins a match. When tournament games are played to 15 points, one game wins the match. Game Sequence At the start of a game, the server stands behind the baseline of the right service area and hits the ball with an underhand motion. The ball must travel over the net and land in the diagonally opposite service area. In either a singles or doubles game, the opponent (receiver) also stands near the baseline. In doubles, the opponent's partner stands just behind the non-volley zone line, while the server's partner remains behind or near the baseline (see Figure 2). Figure 2. The first serve of a game always begins in the right (even) court. The ball must land within the diagonally opposite court. Following the serve, a "two-bounce rule" requires that players on both sides of the net let the ball bounce once before hitting it back. After that, any player may hit a volley in the air or make a groundstroke off the bounce. Figure 3. The two-bounce rule states that the ball must bounce twice after a serve: once on the receiver's side and once on the server's side. After that, any player may hit a ball in the air or after a bounce. After winning a point in a singles game, the serving player moves behind the baseline of the other service area and serves again. That player keeps serving from alternating courts until he faults, and the ball passes to his opponent (called a side-out). In a doubles game, both team members get to serve before a side-out—with one exception that occurs during the first service of a game. Allowing both members of a doubles team to serve before their opponents would give that starting team a large initial advantage. To counter this, the first server serves only until his team faults. The opponents then get the ball. Play resumes normally after that, with both team players serving before the ball passes to the opponents. After that, when a doubles team wins a point, the partners switch places and the first server serves from behind the baseline of the other service area. This repeats until the opposing team wins a rally. The second server then takes over, until the opponents win again, which results in a side-out. After a side-out, the server hits the ball from behind the baseline of the right-hand court. In doubles, the server's partner and the receiving player remain near their baselines in order to hit a ball that may bounce deep in their territory (because of the "two-bounce" rule). At the start of a doubles rally, the receiving team has an advantage, since one of the team members starts at the non-volley zone line. The distance the ball must travel causes part of the disadvantage, along with the fact that certain winning shots are unavailable from the baseline. Players try to move up toward the net as soon as possible, but they must also respect the rules for the non-volley zone: anyone touching that zone with any part of their body, clothing, or accessories may not volley the ball (hit it in the air) without causing a fault. All other strokes are acceptable in the non-volley zone (affectionately known as the "kitchen"). Faults In everyday play, you must state the score before serving and you are responsible for calling faults honestly and promptly on your side of the court. Your opponents will call the faults on their side. When partners disagree, the call always benefits the opponents. Players are expected to cooperate with one another and to give the other player the benefit of the doubt. During tournaments, a referee will call the score and service foot faults, non-volley zone infractions, and serves that don't make it into the correct service area. Players are expected to make their own line calls. If a dispute arises over a line call, the players may appeal to the referee, but he will rule on the line call only if he saw it clearly. A ball is considered good if it lands anywhere on or inside the perimeter lines of the court. An exception to this rule is during a serve, when all lines of the diagonally opposite service area, except the non-volley zone line, are good. This means that the served ball is in if it lands on the sideline, centerline, or baseline. The serve is out if the ball lands in the non-volley zone or on its line, or if the ball lands outside of the diagonally opposite service area. Figure 4. Judging whether or not a ball is out. Panels A and B show that part of the ball is on the line, which means the ball is good. A ball must land completely outside the lines to be called out (as in Panel C). Many faults can occur in pickleball. The majority of errors happen when the ball hits the net, lands out of bounds, or players commit line violations. The result of any fault is a dead ball. The ball is dead the moment the fault occurs—not when a player or referee calls it. This fact is important when both a player and the opponent fault. For example, suppose Regina hits a hard drive that grazes Dan while he dodges what he thinks will be an out ball. Dan calls a fault on himself for being hit with the ball. Regina's partner interrupts, saying Regina made a foot fault on her serve. In this case, the ball was dead immediately after Gina's foot fault, so Dan's fault is nullified. The following list of faults is not comprehensive, but it provides a summary of common (and some less common) faults. While serving, it is a fault if you swing your paddle and miss the ball. However, you may drop the ball and let it hit the court surface with no fault as long as you don't swing at the ball. It is a fault if you volley a ball while standing in the non-volley zone line at any time without penalty. The only fault is if you volley a ball while there. It is a fault if you volley a ball while standing behind the non-volley zone line behind the baseline. This fault occurs even if the ball is dead when your momentum causes you to enter the zone. A fault occurs if you volley the ball and any part of your clothing touches the ball is dead. You lose the rally if you are hit by a ball in play. It doesn't matter where you are when the ball hits you (even out of bounds). The ball might touch your clothing and this rule applies. One player stated an easy way to understand this: it's your fault if you are in the way of the ball. The exception is a fault if your body, clothing, accessories (such as hats, visors, jewelry), or paddle touch the net or any part of the net system. It is a fault if a player deliberately touches the net with his hands, even if he knows the ball would have landed out of bounds. Lesser-Known Rules You may switch your paddle from one hand to the other to hit a ball. This is often done to hit a forehand a ball that comes to your backhand side. You may switch your paddle from one hand to the other to hit a ball. This is often done to hit as a forehand a ball that comes to your backhand side and side paddle contacts the ball below your waist. (This can be difficult.) Before, during, and after a serve, non-serving partners may stand anywhere on or inside the court, and right sides with the server after the serve.[4] The partner not receiving the serve may stand anywhere on his side of the net—even outside of bounds. If an object" (such as a pole or even the referee; see the "Glossary of Terms" in Appendix A for more information) after it has bounced on the court, before it bounces on the court, it is a fault. If you hit a ball that goes over the net, bounces, and then comes back over the net to your side, occasionally due to extreme backspin on the ball. The net posts are out of bounds, so any ball touching a net post creates a fault. The cords, or any ball touching a cord (even outside the boundaries of the court) that then lands inside the court boundaries is good. You may legally reach over the net there is no restriction regarding the required height of the ball in this type of shot (it does not need to be hit higher than the top of the net). Particularly difficult: catching the ball when it's tossed to you and calling the score when serving in doubles. It's not that hard—calling the score. In general, each player on a doubles team will serve before the other team gets a chance. The player on the right-hand court always starts as Server 1 and the other player as Server 2. Server 1 serves until his team loses a rally. Server 2 then serves until his team loses another rally. The server serves the same way: the player in the right-hand court serves first and is designated Server 1, and so on. Because of the new rules, the score that is called just before serving. Here's how it works: You call your team's score first, followed by the other team's points, the other team has 4 points, and you're the first server on your side, you'd call the score as: "6 - 4 - 1." The only exception is the first service of each game, when only one player on the starting team serves the ball. Allowing both members of a doubles starting team a large initial advantage. To counter this advantage, the first server serves only until his team faults. The opponents then get the ball. Play resumes normally after that, with both team players serving before the ball passes to the opponents. To keep things simple, Server 2" and calls the opening score as "0-0-2." If he makes a point, his score would then be "1–0–2," and so on. If he loses a point, the opponents would serve. When the original server gets the service again, he would call the score as (for his team. When you are serving and your team wins a point, you and your partner switch places on your numbers don't change. When your team loses a rally, the serve passes to your partner. If your team loses a rally, the serve passes to your partner. If your team loses a point, the opponents will serve next. You can know if the game score should be even or odd using a method that has to begins, observe the player who serves first on each side. If play continues properly and players move when the initial server is on the right (the same court where he began) and odd when he's on the left the right-hand court when his score is even and from the left-hand court when his score is odd. Note Take note of your team's positions at the start of a game. Based on that, you'll know that whenever should be even; when you play in the other service area, your score should be odd. Chapter CAUTION: The fitness/exercise information provided in this chapter is intended for general reading consult your doctor prior to starting any fitness or exercise program. This information is medical conditions and is not a substitute for professional medical advice or a medical exercise counselor may be valuable to tailor an exercise and fitness program to your individual beyond the basics, you will need to be in good shape physically. Your pickleball game will things: strength, aerobic endurance, and flexibility. You may be shaking your head, saying require a lot of strength—that's part of what makes it so enjoyable and allows everyone to, a certain amount of muscle strength is required to prevent injury to your elbows, shoulders injury in pickleball is common but can be avoided through proper conditioning. Starting that will help strengthen your joints and muscles. Do it two to three times per week utive days because your muscles need time to recover. Good aerobic endurance is well through an entire match, no matter how much your opponent makes you run. Sometimes, points before a winner is declared. If you're in good shape with good endurance, you won't be worn out before the match ends. The best way to increase your endurance aerobic activity, such as walking, running, cycling, or swimming. To gauge whether you of aerobic exercise, talk out loud. You should be able to carry on a breathy conversation't talk at all, your routine is too difficult. If you can speak more than about ten word breath, increase your workout. Depending on the number of times per week that you play aerobic activity), tailor the number of times a week that you engage in other aerobic fitness guidelines for all people suggest 3 times per week for 30 minutes at a minimum. If you are trying to increase that and work up to your best fitness level by game time. It's been said that is the best key to winning pickleball games. Becoming fit certainly can't hurt. Flexibility helps prevent injury and allows you to reach shots that otherwise might get by you. Some to the court, doing a few stretches, and then starting a game. Taking time to warm up properly and keep you in the game and not on the sideline. Warming up does more than just loosen formance. An improper warm-up, or no warm-up at all, can increase your risk of injury. The n, improved elasticity and contractibility of muscles, and greater efficiency of your respirator rform a complete warm up and stretch at home and do a quick refresh once they reach the court t the courts just prior to game time. Find your best routine and stick to it. Warm Up A good, gen wed by aerobic activity. Spend at least ten minutes warming up. Begin with joint-rotations from ate joint motion by lubricating the joint with fluid, permitting it to function more easily. Perform s ockwise. After joint rotations, begin aerobic activity such as fast walking, jogging, or riding a bik ises your core body temperature and gets your blood pumping. Increased blood flow in the mus s the possibility of injury. After you are warmed up, begin static stretching. Stretch Once you r mu retching. Begin with your back, followed by your upper body, and then your lower body. Static st point where you feel resistance. Don't bounce. Instead, stretch until you feel resistance, hold the ch all of these muscles before a workout, at least stretch those that will be used the most when y (front and back of upper leg), groin, triceps (back of upper arm), and shoulders/neck. Safety on ize play for all ages and sexes have made it possible for people who could not play other court rtain things you shouldn't do. The safety tips given here are important and shouldn't be ignor juries and having more fun. Stepping on a pickleball can cause a player to fall, and such acci er game, hold your paddle or your hand in the air and call "ball" loudly enough that all playe e. Even if you think they are out of the way, a gust of wind can carry them onto the court, c outdoor court surface by pressing down on it with the toe of your shoe. If moisture come play. Remove stray dirt, gravel, or leaves from outdoor courts before play begins. Extra p ies can be a hazard if stepped on and should be removed. If you are playing on a homem acles, sharp objects, or other hazards are removed as much as possible from the playing layers know about possible hazards before starting play. Pickleball is played in many venue ace around the court that is suggested for safety. One source mentioned that the indoor locati on wh he proximity of the chairs to the service line created a hazard when players swung their paddl es back when serving. n playing pickleball. Protective eyewear is also a good idea if you don't wear glasses. Inexp ensive sets of goggles are available rance, but they might save your eyesight or make you feel more confident if you are worried about being hit o reach oncoming shots. To do this safely, learn to shuffle properly using a step-to-step motion. Step out with the foot on the side to which you're moving. Bring your other foot up within a few inches of the first. Don't move your feet too close together. Step out with the first foot again. When you reach the correct position, prepare and step into your swing as usual. If you need to move farther than just a couple of steps, pivot, run to the spot, and prepare for your shot. Figure 6. Shuffling across the court. Shuffling is considered by some to be the best method to reach an area beyond a single step, whether side to side or moving backward. 1) Step out with leading foot in the direction you want to go. 2) Then bring the trailing foot in toward the leading foot. 3) Shift your weight to your leading foot again. 4) Repeat these movements until you are in position to hit the ball. Don't Back Up to Reach a Ball One of the easiest ways to fall and be seriously injured is to back up while looking up to retrieve a ball. More falls in pickleball happen this way than any other. The next most common cause of injury comes from reaching for a shot beyond your balance point. Spills from both of these things can result in injuries to all portions of the body, depending upon what hits the ground, fence, or wall. I've seen players with casts, crutches, bruises, and scars as a result of "going for it" or running backward when they shouldn't have. If you need to move back one or two steps, first turn toward the side where the ball will come. Turning toward the ball side will put you in position to make the shot when you get there (See Figure 7 the following section) and/or cross-step until you are behind the ball. TIP: There are two schools of thought regarding who should retrieve an overhead shot when you're playing doubles. After you turn, shuffle (see the method is to note the direction where the ball will land and let the player who can make a forehand shot retrieve the ball. Other players feel that, if the lob is over only one player's head, the non-volley zone line. One method, regardless of whether it's on his forehand or backhand side. Figure 7. To move backward for a ball, first turn to the side where the ball will come. Then take a step and 1) shuffle, 2) cross-step, or 3) run (as shown in the picture) toward the baseline until you are behind the ball. When you are in position, stop and prepare for the shot. If you need to move backward a long distance, turn around, and then run, shuffle or cross-step back. When you reach the spot where you think the ball will come, turn again to hit the shot. This is necessary most often when you're at the non-volley zone and a lob is heading for the back court. Injury Even with all the proper precautions, injuries happen. Before going back out on the court, take the necessary time to recover. It's common to see players fall and get up quickly, saying, "I'm fine," when they should take a minute or more to ensure it's truly the case. Repetitive stress problems can also occur after repeated motions of the hand and/or arm. Strengthening your muscles to avoid developing these problems is best. If you do develop symptoms, don't ignore them. Many players don't take these problems seriously and continue to play, despite pain or other symptoms that can lead to chronic, lingering issues, if not cared for properly. Consider changing your equipment or how you use it. Get a lighter paddle, add tape to your grip to make it larger, or change the way you hold the paddle. Have someone watch you swing to make sure you're doing it properly. Sometimes a very simple change will bring instant results. Strengthening and flexibility exercises should help reduce the pain and will encourage healing. Compression bands or braces may ease the symptoms, too. Heat and cold packs are often helpful. Ask your doctor or other medical professional what you can do to help alleviate the problem. Chapter 3 Equipment Paddles Paddles come in many sizes, shapes, and materials, and new models are introduced frequently. The paddle surface must be rigid, non-compressible, smooth, non-reflective, and must not add length of any paddle must not exceed 17 inches. Shape, thickness, and weight are not regulated. The International Federation of Pickleball (IFP) tests paddles to ensure they meet the criteria, and they publish a list of acceptable paddles on their website (www.ifpickleball.org). Only paddles that have been approved by the IFP are allowed in tournament play. At the time of this book's printing, nearly 950 paddles were on their list! Selecting a Paddle The most important factors in paddle selection are price, weight, and grip size. Secondary considerations are the material, size of the paddle head, and length of the handle choice is a very individual process. Many vendors and manufacturers allow you to try paddles prior to purchase. You can find good information at many websites. In particular, the "Paddle Guide" at Pickleball Central has detailed specifications and comparison information that can help you choose wisely. If you're a new player, know that ordering on line can be disappointing. Try to demo paddles to get the best one for you. If you plan to play in tournaments, make sure it's USA Pickleball rated. Figure 8. Examples of different brands and types of paddles. Note that some have larger playing surfaces and shorter handles, or vice versa. Pictures reprinted with permission of Pickleball Central, LLC. To put the selection process in perspective, though, let me share a story. As a novice player, I once complained that my mid-range paddle could be the reason my shots didn't go as planned. Overhearing this, a champion player pulled me aside and reached into his paddle bag. Out came a paddle just like mine that he'd used to win his last tournament. Equipment is important, but it's the player shots who wins the game. Paddle Price At the time of this book's printing, paddles range in price from $50 for composite paddles to $200 for graphite. My recommendation is to purchase the best paddle you can afford. Compared to a set of golf clubs or skis, the price of a pickleball paddle is minimal. You're unlikely to look back and say, "I wish I'd bought a cheaper paddle." It's a piece of equipment that will give you hours of pleasure. Paddle Weight Paddles range in weight from about 6 to 12 ounces. Heavier paddles take longer to swing and are harder to control, but their added mass helps propel the ball, making it go farther. Lighter paddles allow you to hit the ball faster and offer more control, but more effort is required to hit a strong stroke. Because speed is important when you're volleying quickly at the net, most players choose a mid- to lightweight paddle in the 6.5 to 7.75-ounce range. Paddles over 8 ounces can cause tennis elbow and shoulder issues. Tennis players and others who are physically strong and prefer a powerful hit sometimes choose a heavier paddle to give them an edge. Table tennis players, young players, or adults dealing with physical issues usually find a mid- to lightweight paddle to be the best choice. Grip Size Most paddles have grips that range from 4 to 4½ inches in circumference (see Figure 9). A larger grip provides stability and is generally easier on your arm, but a grip that is too large can cause elbow problems. Smaller grips allow for more wrist action, which can help you put spin on the ball. Wrist action can also enhance powerful serves. Competitive players often customize their grips using tapes or sleeves to give the paddle an exact fit. Figure 9. Measuring the circumference of the paddle grip. This grip is approximately 4-1/4 inches around. I've seen two methods for determining your correct grip size. The first involves measuring your paddle hand (see Figure 10). Place a ruler so that the 0 end is in line with the tip of your ring finger. Read the value where the scale touches the bottom horizontal crease of your palm or aligns with the "V" of your hand and thumb. This should be your ideal grip size. Figure 11 shows that the correct grip size is between 4-1/4 and 4-1/2 inches. If you are between sizes, choose the smaller one. The second method consists of grasping a paddle of a known grip size and observing the amount of space between the fleshy part of your palm and your fingertips (see Figure 11). Slip your index finger between the fingertips and heel of your hand gripping the paddle. Your index finger should fit snugly. If not, choose a smaller or larger grip size. This method is also a good way to verify that the paddle you're selecting will be a good fit. Figure 10. Measuring your paddle hand for the correct grip size. Figure 11. Second method for determining grip size. In addition, the butt of the handle should extend beyond the edge of your hand farthest from your thumb. If it doesn't, consider a paddle with a longer handle. NOTE: Most paddle manufacturers have standard grip sizes (not various sizes, like tennis racquets). It's often necessary to resize the grip yourself. A good video describing how to do this can be found on Jennifer Lucore's All Pickleball website.[7] Paddle Length and Head Shape As shown in Figure 8, considerable variation exists among brands. Novice players typically prefer a shorter handle and a larger head surface. A paddle with a smaller head is usually lighter, however, which can be of benefit to reduce strain on the arm and add speed. Some models are narrower in order to extend length. I don't recommend these for a beginner, despite the additional reach they offer. If you consistently hit in the center of your paddle, you might find one of these helpful. Paddle Materials The first paddles were made of wood and were quite heavy. The weight allowed extra power on a hard swing, but they proved to be tough on shoulder, elbow, and wrist joints after repeated use. The first advance in pickleball paddle construction used the same material found in the bulkheads of airplanes. It had a honeycomb core, and its outside facing was fiberglass edged with plastic. These composite paddles were lightweight and responsive, and players took to them quickly. Most paddles available today still have a core and a facing. Common core materials are Nomex, polymers (synthetic organic materials used as plastics and resins), aluminum, and gels. Standard facings are made of fiberglass, graphite, and carbon fiber. Generally, any core may be paired with any facing, giving you a wide range of choices. Composite Core Materials Nomex is hard and its honeycomb size is small, so it lasts a long time. Nomex paddles are louder than polymer. The power, or "pop," produced by Nomex is less than polymer, but it allows excellent control. Polymers are generally softer than Nomex and have a larger honeycomb, but they are still very durable. They are quieter and have good "pop," but that comes at the cost of some control. Aluminum cores are heavier and denser than polymer, and they offer less power. They offer great control, though they're noisy and are more prone to dents. Proprietary gel cores reduce impact vibration and maintain light weight and durability on some high-end paddles. Paddle Facings Fiberglass is not as durable as graphite or carbon fiber, but it offers more power ("pop"). Graphite is strong and provides great control at the cost of some power compared to fiberglass. Carbon fiber is more durable than graphite and offers excellent ball control, although at the cost of some power. SIDEBAR: When to Replace a Paddle Most high-quality paddles will last a year or more, depending on how much you use them. If you play every day or you are a hard hitter, expect having to replace it after a year or so. Paddles used in recreational play should last up to three years. How long a paddle lasts also depends on how you care for it. Don't leave your paddle in the hot sun or in damp areas for long periods of time. Use a paddle cover to protect it from banging against other items. Don't clink your paddle against your partner's or bang it on other items. Instead, touch paddle handles instead as a "high five" after a good rally. Clinking your paddle can lead to grooves or dents that may affect your paddle's playability. When your paddle loses the feel and responsiveness that you loved—no more pop, but rather a dull thud when you hit the ball, for example—it may be time to purchase a new one. Nearly all paddles come with a warranty that can vary from 6 months to lifetime coverage. In addition, some stores offer guarantees against defects for certain periods of time. Most warranties don't cover normal wear and tear. Factors that come into play in making a judgment regarding your paddle's usability are: Dull sound. Most new paddles typically have a somewhat hollow sound when you make a good hit. If it sounds more "dead" than before, the interior material may be compressed or damaged. Unresponsive feel. Nearly all paddles are more responsive when you hit their "sweet spot." [8] Paddle face is uneven or has depressions or grooves. These low points can be slight and tough to notice, but they can affect the way your paddle responds. Lift your paddle so the light shines across the surface to check for these. Pickleballs At the time this book was published, the IFP had approved sixty-one balls for tournament use. Some are designed specifically for indoor or outdoor use and are labeled as such. Figure 12. Various types and brands of pickleballs. Outdoor balls have 40 smaller holes and are thicker for durability. Indoor balls are thinner and have only 26 larger holes that create more windage. Composite created with images reproduced with permission from Pickleball Central, LLC. Outdoor Pickleballs Outdoor pickleballs fly faster and farther than indoor balls and can attain greater spin. They typically have 40 smaller holes and are thicker for durability and less resistance to wind. The most commonly used brands of outdoor pickleballs are Franklin, ONIX, Dura, and TOP. These are rotationally molded, which means they are seamless. Some outdoor balls are manufactured specifically to reduce the amount of noise they make when hitting the paddle as certain communities have enacted noise ordinances near the courts. Indoor Pickleballs Most indoor pickleballs have 26 larger holes and are made of thinner materials. These larger holes cause more windage, so the balls fly more slowly and less high or far. Approved balls maintain the flight characteristics, weight, and bounce height of the ball originally used for pickleball, which was a 26-hole ball made by Cosom. At the time of this printing, the most commonly used brands of indoor pickleballs are Dura Big-Hole Indoor Balls, Jugs Indoor, Gamma Photon Indoor, ONIX Fuse Indoor, and Midnight Indoor balls. Numerous online sites have information about pickleballs and how to choose brands or types that will meet your needs. Two I recommend: Pickleball Central (https://www.pickleballcentral.com/ Pickleball_Selection_Guide_Balls_s/158.htm) Pickleball Guide (https://pickleballguide.net/best-pickleball-balls/) Clothing and Other Equipment Most pickleball players use only a small amount of equipment when they play: good court shoes, socks with cushioned soles and heels, loose-fitting clothing, sunblock and a visor or sunglasses (if playing outside), a paddle, and some balls. You can also purchase pickleball towels, ball machines, head and wrist bands, rosin powder, paddle cleaning kits and more, but most players consider these items nice to have but not essential. This section covers the items that most players find essential. Shoes It is not wise to wear running shoes to play pickleball. Invest in a pair of good court shoes with vertical sides and flat soles. Running shoes have indentations or treads which can grip the surface, causing potential falls, sprains, or tears. I suggest a pair of cushioning socks (wear them when trying on the shoes). One source mentioned that he always buys lightweight shoes and that doing so has helped reduce fatigue during play. Until recently, shoes designed specifically for pickleball didn't exist. Manufacturers are now marketing pickleball shoes that are very similar to those designed for tennis and other racket sports. Such shoes are considered to be safest when playing pickleball. Figure 13. Two examples of court shoes. Images reproduced with permission from Pickleball Central, LLC. Quite a few online sites have detailed information about the various brands of shoes available, along with recommendations that are updated frequently. Two I can recommend are Carolina Pickleball (https://www.carolinapickleball.com/best-pickleball-shoes/) and Pickleball Portal (https://www.pickleballportal.com/gear/best-pickleball-shoes/). Before buying a new pair, consider what you need. Most shoes will work well, whether you're playing indoors or outdoors. Your shoes must be comfortable, and they must give enough support to your arch and ankle to keep you safe. Socks Don't underestimate the importance of your socks when it comes to performance during pickleball. The right socks will help you avoid blisters and have more fun playing. The wrong socks won't keep your feet dry or blister-free. Many online sites recommend various brands of socks, but I suggest checking out Pickleball Portal's top picks[10]: Thorlos thick-cushion crew socks and ankle socks designed specifically for tennis and pickleball. How are pickleball socks different from tennis socks? More padding in the Achilles tendon area and extra padding around the toes to prevent injury. Other socks may also be fine for your needs, especially if you're only interested in recreational play. Figure 14. Pickleball socks have extra padding around the Achilles' tendon area. Pickleball gloves can help with your grip on the paddle. Sock photo reprinted with permission from Thorlos. Glove images reproduced with permission from Pickleball Central, LLC. Gloves Some players use gloves to get a better grip, especially when they play outside on hot days. Some use half-finger gloves that expose the tips of the fingers and thumb. Other gloves have extra padding on the thumb and forefinger that is designed to relieve fatigue. Using a glove is fine if your hand sweats, but be aware that you lose the direct feeling or touch of the paddle. Chapter 4 Grips, Paddle Angles, and Ball Placement Pickleball is similar to tennis, racquetball, table tennis, and paddleball. As with those sports, you must perform a series of individual elements to make a shot. The way you hold the paddle and how you stand and move on the court influence where your shot will go. How you grip the paddle will determine the angle of the paddle face and, therefore, the direction and possible spin of the ball. Much of this comes naturally to the novice pickleball player. Still, it's wise to learn the best way to play before having to "unlearn" something that will make it harder for you to improve your game later. While there really isn't any "correct" way to do most things in pickleball, it's worth taking the time to learn the accepted best ways to hold the paddle, hit the ball, and move on the court. Your body will be happier, and your game will be better. What is the best way? Ask five players how they do something, and you might get five different answers. Which is right? In general, whatever works best for you. The four basic elements of the physical game are: How you hold the paddle, The paddle angle as you hit the ball, Your body position before, during, and after the impact, and The motion and direction of your swing, including the follow through. Holding the Paddle Having a grip on your paddle doesn't mean you should hold it tightly. Grasp the paddle handle firmly enough that you don't lose it during play. A relaxed grip is best for all but the strongest shots. Most players use one grip for all strokes and vary the paddle angle to change the direction of their shot. I recommend using the basic forehand or "hammer" grip: grasp the handle as you would a hammer, with the "V" located between your thumb and index finger resting over the top of the handle. If the handle is the right size, your thumb and index finger should touch. Some advanced players use variations on the forehand grip, like the different grips in tennis. Besides the basic grip, this book covers different grips for backhand and overhead shots. Changing the orientation of the paddle in the hand allows you to present a flat paddle face to the ball, no matter where it is in relation to your body. Whatever grip you use, unless you are adding spin to the ball, you should keep the orientation of the paddle face constant. Your hold on the grip determines the direction of the ball, and your swing—initiated from your shoulder and moving toward the target—will carry the ball over the net. Forehand Grip Most players find the basic forehand grip is all they need, even for backhands, overheads, and volleys. Because of that, it is the preferred grip at the non-volley zone line, where fast play leaves little time to switch from one grip to another. The easiest way to orient this grip in your hand is to grasp the handle the same way you would a hammer. Center the "V" formed between your forefinger and thumb over the flat bevel along the top of the handle. Your knuckles will fall in a line approximately 45 degrees from the line of the handle. Figure 15. The basic forehand or "hammer" grip, showing the "V" between the thumb and fingers over the edge of the paddle handle. The butt of the handle should be about even with the edge of your hand and should extend about half an inch beyond your little finger. Grasp the handle firmly, but not tightly. Most people wrap their thumb around the handle, so that it touches or overlaps their other fingers, and they rest their fingers next to one another, as when holding a hammer. The forehand grip is best for shots requiring power. Some players spread their first finger farther from their others, in what's known as a pistol grip (see Figure 16). Some find this slightly looser grip more comfortable and also prefer that the angle of the hand and wrist is more ope