

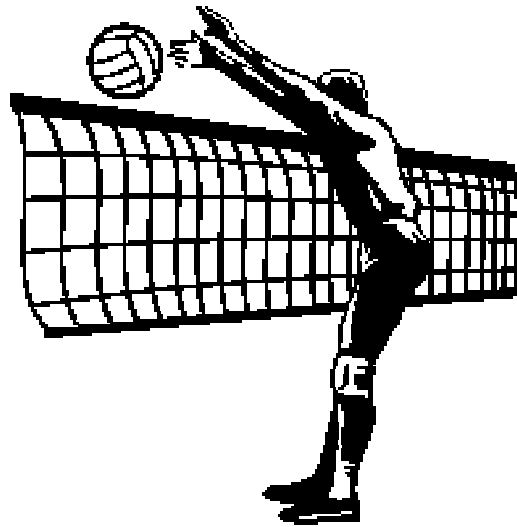
Complete Wallyball



By The
Wallyball Information Network (WIN!)
www.wally.ball.net

If you feel like bragging, remember:

The whistle does not pull the train.



Make the play first, then decide if it was impossible.

So you want to become a better wallyball player. This Wallyball Strategy Guide could help you to do just that. I use this guide when I teach wallyball classes. To my knowledge no wallyball association has assembled a guide like this. I think that they just expect that players will learn this on their own, and I think they are missing the point. In order to grow and expand a sport you need to nurture the sport, and help it grow. You need to take time and work with new players, to build their skills and confidence.

Then the sport will grow.

I offer this guide to anyone who wants it. Use it as you see fit, add to it if you want to. This is what works for me and hopefully it will help you to become a better wallyball player.

I dedicate this guide to the new players of wallyball. You are the future of the sport. Do not change the basics of the game. Do not relax the rules just to get more players. Do not change the rules so that wallyball and volleyball become basically the same game. Both sports should be unique. Let's keep it that way.

I dedicate this guide to three special players. To Lori Ellsworth, for her work in promoting wallyball, for her love of the sport, and endless drive in playing this sport. I am very lucky to have her as my doubles partner. To my kids, Brianna and Jamie, they are part of the future for the sport. They love this game and it shows through their hard work to become better players.

I also dedicate this guide to the original Wallyball Information Network Board of Directors. They will have a huge impact on the future of wallyball. Thank you to Lori Ellsworth, Scott Fuhrman, George Schneider, Jamie Stegeman, and Allison Stegeman.

Please contact me if I can help you with wallyball in any way.

I love this sport.

Steve Fuhrman
Wallyball Information Network (WIN!)
Executive Director
612-581-7718
Executive_Director@Wallyball-Info.com

Wallyball Strategy

As the AUWP Rules Director, I spent over one year rewriting and expanding the wallyball rulebook to make it more clear and detailed to all players. The AUWP Board of Directors discussed and approved all the changes. The rulebook is not perfect, but it is much better than any other rulebook out there.

Rule number one in wallyball is to have fun. Why would anyone want to play a game that they do not have fun? Anyone can play this game. I am quickly approaching my 25th year playing this sport. I play it all year round and when a tournament comes, I play *everyday* of the tournament (even the 6 day tournaments we have here in Minnesota).

If you want to learn more about wallyball strategies, the following information is for you.

Wallyball is not a game for *gorillas*. It is a game for those who are fast with their feet and mind. It is more finesse than power. Wallyball is a game of quick starts and stops. It is a good idea to loosen up those muscles before playing.

Wallyball helps to develop the "Quick-Twitch" (Fast-Twitch) muscles. Muscles that are used for extended periods of activity, such as standing or walking, are made up of muscles with fibers that are called *slow-twitch*. Since these muscles are constantly being used, they need a consistent energy source. The protein myoglobin stores oxygen in muscle cells, which use oxygen to extract the energy needed for constant activity. The more myoglobin there is in the cells, the redder, or darker, the meat.

Muscles that are used for situations where quick bursts of activity are needed, such as fleeing from danger, are made up of fibers called *fast-twitch*. These muscles get energy from glycogen, which is also stored in the muscles.

Quick-twitch fibers are related to fast, explosive movement; slow-twitch fibers are associated with endurance activity. The proportion of quick and slow twitch fibers in your muscles are usually genetically determined and it takes work to make the most of what you're given. The average human has about 50% slow-twitch and 50% fast-twitch fibers. Professional athletes can have a higher percentage of one or the other type. For instance, Olympic sprinters may have as much as 80% fast-twitch fibers and long-distance runners may have as much as 80% slow-twitch. Weight lifters need fast-twitch fibers for quick bursts of strength, and long-distance swimmers need the constant movement provided by slow-twitch fibers.

Wallyball is a game of angles. When to hit the ball hard or attempt a "placed" shot. Wallyball is a game where a server can take you completely out of a match without even getting the ball over the net.

Wallyball Divisions

Open Division

The OPEN Division is the highest level of play. Players know and abide by all the game and ball handling rules of the sport. In OPEN play, a wallyball is often spiked in excess of 80 mph with defensive players able to "dig" balls traveling at that speed. Players generally have many years of experience playing wallyball and/or volleyball. They are an all around consistent player. Nearly all players at this level have played organized volleyball at the collegiate level or club level. They also have been acclimated to tournament play through years of tournament level competition. In addition to very strong volleyball skills, OPEN wallyball players generally have several years of wallyball experience as well. What often separates OPEN level wallyball players from ADVANCED level players with the same volleyball skill level is the amount of experience playing wallyball. Wallyball played at the OPEN level requires a unique skill set that is not entirely transferable from volleyball. OPEN (A Level) volleyball players, as a rule, DO NOT step onto a wallyball court the first several times and excel as wallyball players, but rather take months, if not years to develop into top caliber wallyball players.

Advanced Division

The ADVANCED Division is one step down from the OPEN division. These players know and abide by all the game and ball handling rules of the sport. At this level, players exhibit good proficiency at bumping, setting, and spiking. Players often excel at one or even two of these skills but are not as skilled all around as the OPEN player. Normally, ADVANCED players do not have as much ball control as the OPEN players or cannot set consistently..

Intermediate Division

The INTERMEDIATE Division is one step down from the ADVANCED Division. Players know and abide by all of the game and most of the ball handling rules of the sport. Their skills are still developing, but they are considered a pretty good player. An INTERMEDIATE player is just learning the ball handling techniques.

Novice/Beginner Division

The BEGINNER Division is one step down from the INTERMEDIATE Division. These players are learning the game rules and ball handling skills required for the game. They are on the court to have a great time and learn the game. The BEGINNER 's skills are still developing, and they are mostly a social player.

It does not matter which division a player fits into. All divisions can be very competitive and definitely FUN!

Watch The Ball

Wallyball begins with the serve. The server may stand anywhere behind the three-foot line. The server's feet cannot touch the line until the ball has been struck.

The serve is the most important shot in the game and can be hit directly over the net, off a wall, or over the net and off a wall. You can hit the ball as hard as you like, but the ball may not strike more than one wall and may not strike the other team's back wall or ceiling at all.

If the ball hits the floor before it is returned, the serving team wins a point.

Whether you're playing fours, threes, or twos, how you play the serve will probably indicate how well you're going to do. Watch the ball as the server hits the ball. The server may twist their body in one direction while attempting to hit the ball in another direction. Most servers hit crosscourt. To receive the off-the-wall serve get your whole body down. This will get you ready to get under the ball. Pivot your feet to face the wall. It's at this moment when you have to make that split-second decision: get the ball off the wall or get it before it hits the wall. Personally, I like to let the ball come off the wall to me, but a player may need to try both methods to see which works best for them.

Generally, you start out playing balls off the wall until the server proves to you that they are unhittable that way. Then get close to the wall, challenging the server to change their serve. One thing you cannot do to get close to the ball is to climb the walls. You cannot use the wall to hold yourself up either. You can rub against them, but you cannot propel yourself up a wall with your feet to get a ball.

Serving Comments

When practicing serves, you should practice at least 3 different varieties. In general, a hard, topspin serve, an intermediate normal serve, and a lob creampuff dead-ball serve are good choices to practice. A good serve "pops" off the hand or arm. The ball cannot roll off the fingers. The ball must be cleanly hit.

1. In all normal game situations, you would virtually always use your intermediate serve, which must be in bounds at least 80% of the time. It is meant to make sure the ball is put in play but allows the opponents a chance of making a bad pass.
2. Your ferocious hard, topspin serve should still be 75% or better. There are only a few situations where you should consider using it. NEVER in a close game, whether you're ahead or behind. NEVER right after your team has invested heroic effort into getting a side out. NEVER when your team is presently playing well and just getting bad breaks. This only leaves the circumstance of being in the desperate situation of being far behind in a game where your team's spirit has been (temporarily) broken. In this desperate situation, a ferocious serve trying for ace could be your team's best hope. If you fail, your team was probably going to get snuffed anyway. If you DO get a couple of aces, your team's optimism should return. This should enable ensuing team play, so you should go back to your normal serve rather than rolling the dice again. This is true even if you are still well behind. After all, you must get the ball in play to score points.
3. If you have total confidence in your team's play (compared to the opponents), knowing that we will prevail in any extended rally, you can use a creampuff (dead-ball, non-rotating) lob serve (95% or better). The lack of ball rotation (less than one-half rotation by the time the ball crosses the net) can cause some quirky jumps in the ball. And it gives your team a chance to win the play.
4. The ball must pass over the net without touching a member of the serving team.
5. The ball cannot contact the net or net hardware, two or more walls before being played or landing on the floor, the opponent's back wall or the ceiling of the court.
6. A jump serve is legal.

7. Players must maintain the original serving order throughout the game.
8. No members of the serving team may block the server from the view of the opposing team by raising their hands above their heads, flailing their arms from side to side or forming groups of two (2) or more to hide the actions of the server. Players on the serving team may not deliberately switch their positions to block the server from the view of the opposing team.
9. In two or three person play, players may be in any position on the court. Only the serving order (rotation) must be maintained.
10. In four-person play, players must be in their designated serving positions. After the service, players may move to an alternative offensive or defensive position.
11. When receiving the serve, you must bump the serve - setting the serve is not legal.

Personally I let the receiving team decide what serve I am going to use. I watch their movements before I serve and select which of them is out of position. I then serve to them. I may serve to the weakest passer (male or female). Some parts of the country frown upon serving to the female. Are they the *weaker* player? I don't think so! There is no rule saying don't serve to the woman.

Passing (Receiving the Serve)

If you can't return the serve, you're in big trouble. And if you return it weakly, the setter may not be able to set it, and the spiker will probably have to lob the ball over the net. Get ready to receive the serve by bending the knees slightly, keeping the legs about shoulder width apart, and watch the ball. Do not watch the server, watch the ball. Be ready to spring up if the ball comes at you high and hard off the wall or to get down low in a crouch if the server caroms off the lowest part of the wall.

Before I go into everything you've heard before about footwork, having a good platform, staying low, etc, I think it would be more interesting to go over a couple of abstract ideas that you don't normally find in a wallyball instructional manual.

The first idea is that of "reading" the server. In every sport that I can think of, every player and team tries to foresee what the other team is going to do. Quite often a player only has one or two serves that he uses, so this can be very advantageous for the passers. The passers can adjust their starting positions according to the servers' tendencies, thus giving the passers an easier time passing the ball.

If you don't have the information on a team before you play them, it's still possible to predict where the server is going to serve before he serves. The typical server gives many clues to where he/she is going to serve the ball. The most obvious is where the server is facing. This doesn't always help because sometimes the server might be trying to fool you, but often he/she was taught to face where they are going to serve. Another clue is to look at the server's foot positioning. A lot of times this will be in the direction that the player serves the ball. You can also watch the toss. Sometimes the toss dictates where the ball can be served. For example, if the player tosses the ball inside his/her body line and has to reach to the angle to contact it, there is a good chance that this ball is going to go the cross court. This works for jump servers as well. Many times the server is only able to serve in one direction because of the toss. As the level of play increases, some of these signs will be harder to read, because the server is aware of them as well and will try to hide them, but even at the highest level these signs are very helpful for the passer.

The pass is critical for transition from defense to offense and the return of serve. How good a pass is often dictates how the rest of the play will go. A team that can pass effectively and consistently can challenge any opponent. Each player should master the pass until it becomes second nature.

The pass is often one of the first easy things that new wallyball players learn and also the first thing they forget. The forearm pass is already awkward to new players learning the sport. There is no other sport that uses this part of the body to contact the ball and often new players will try to use their hands instead of their arms.

The first thing you must do is get to the ball. Move to the ball without crossing your feet. Get to the spot before the ball does. Once getting to the ball you must set your position. Often players try to pass the ball without first setting their positions resulting in increasing errors. Place your feet, one slightly ahead of the other and shoulder width apart. Your hands should be joined together with the thumbs parallel to each other. Your knees should be bent and arms extended out from your body so that they are parallel with your thighs. Players will sometime bend at the waist keeping their legs straight. This usually results in a pass that is too low and too fast. Keeping your arms parallel to your thighs will help eliminate balls contacting your arms at or above your elbows, sometimes resulting in a double contact or even worse a facial. Your back should be straight and you should be relaxed and keep your eye on the ball.

Making sure that your hands are together try to receive the ball towards your non-dominant side. Upon contact with the ball extend your legs slightly, and move your arms in a slight forward and upward "poking" motion, trying to use your legs to propel the ball and not your arms. Slant your arms toward the passing target keeping your hips under your center of gravity and tilted forward. Most important and often forgotten is to watch the ball make contact with your arms.

After the hit make sure you keep your hands together and your arms follow the ball towards the target of your pass. Make sure that you do not swing your arms too much. You want to keep them at all times below your shoulders when conducting the forearm pass. Transfer your weight to your forward foot. This will add more power and control to your pass. Players sometime "fall back" on a pass shot resulting in the ball traveling in an arc higher than anticipated. As always maintain eye contact with the ball and prepare for anything.

The forearm pass is one of the easiest things to do in wallyball, but so many people screw it up. If you are a new player, or a seasoned player whose pass shots just aren't doing what you want them to do, then follow these simple steps to a better forearm pass

Here's How:

1. Place your feet shoulder width apart with your knees bent
2. Move to the ball quickly keeping hands apart and set your feet in position before executing a pass
3. Bring your hands together forming a good forearm platform with your thumbs parallel, locking your elbows, and pushing your forearms together
4. Receive the ball with your arms parallel to your thighs, leaning forward and on your left side
5. With contact of the ball, move your arms forward and upward slightly and transfer your weight forward
6. Direct the ball to your target with your shoulders
7. Follow through by keeping your arms below shoulder level, elbows locked and hands together
8. Keep your eye on the ball

Tips:

1. The less movement, or swing, of your arms the more control you will have
2. Make sure your forearms face in the direction you want the ball to go
3. Move to the ball without crossing your feet
4. Try to get to the spot before the ball does
5. Get your body set with both feet on the floor before passing the ball

Most serves are struck off a wall. You must follow the path of the ball and determine where on the wall it will strike and how far it will bounce off.

As soon as you realize that the ball is going to rebound off the wall, shift your feet and body towards that wall. The best way to return the serve and hit it to a teammate is with a forearm or bump pass. This pass works because you are creating a long, wide, flat surface with your forearms to hit the ball.

Do not use your hands to hit the ball. Extend your forearms in front of you, elbows down and hands together, the fingers of one in the palm of the other. Bend slightly at the knees. You have now created a flat surface. The ball should strike both forearms at the same time and then be guided by your arms in the direction you want. Do not “swing “ at the ball, instead flex your knees as you pass the ball. If your elbows are bent, the ball will hit your forearms and fly back over your head. If the forearms are pointed toward the floor, the ball will hit them and drop.

Don't be intimidated by a hard hit off the wall. By flexing your knees and using your forearms, you will soften even the most ferocious of shots.

Take charge of your attitude. Don't let anyone else choose it for you.

Positions

I recommend that new comers to wallyball with little or no volleyball experience play three or four on a side. Those who have played wallyball for a year or more, have attended wallyball classes, or who have played organized volleyball are generally put into either threes or fours, depending on their preference. The players with two years of wallyball experience or volleyball veterans play twos or threes.

Position Specialization

Each player will generally switch to one specific position as soon after the serve as possible. Therefore, each person only needs to fully learn all the offensive and defensive responsibilities and intricacies of that one position. Since in 2's, 3's and 4's there is no lining up; players may start in their preferred position.

Bump Setting

See Passing

Over-Head Setting

Overview

Setting is usually the second contact on your side of the net. It is either the two-handed above-the-head or bump set motion used to place the ball close to the net so a hitter can attack it into the opponent's court.

Many wallyball players find setting to be the single most frustrating skill in the game. Even after they've learned how to pass consistently, hit effectively, serve well, etc., they find it almost impossible to handset a ball cleanly. With a little practice, they can.

Setting is, in fact, the single most biologically natural act in wallyball. You don't have to squat, or jump, or use an overhead swing (all of which are biologically *unnatural*). Instead, you simply let the ball fall into your hands, directly above your forehead, and push it back into the air. Most satisfyingly, the "soft touch" some players have -- which allows them to flip the ball into the air so effortlessly -- is due to a "stretch reflex," a natural, biological reaction they don't even think about. Setting the ball cleanly, once you learn the mechanics and relax, is really quite easy.

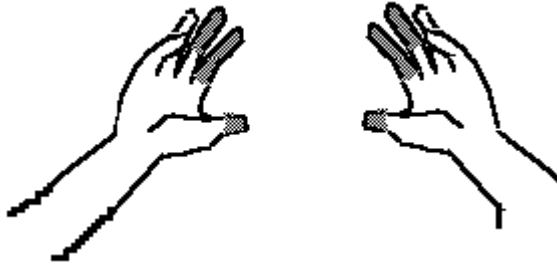
Footwork and preparation

Setting, more than passing, hitting, serving or blocking, *requires* early preparation and correct body position. When performing these other skills, you can get away with sloppiness -- that is, you might not control the ball very well, but you probably won't get whistled for it. In setting, however, poor preparation usually leads to an infraction.

To set the ball cleanly, you must sprint to where the ball is falling so that it will land directly on your forehead. Turn your feet, hips, and shoulders in the direction you intend to set the ball; that is, *don't* face the direction the ball is coming from. Place your feet shoulder-width apart, with your right foot 3" or 4" in front of your left (for reasons we'll discuss later), and your weight on your left foot. Keep your knees slightly bent and your back straight. Raise your hands above your forehead.

As you wait for the ball to fall to you, your arm and hand position is extremely important. Your elbows should be slightly above your shoulders, and positioned at about a 45° angle from your chest. Your elbows will be bent about 90°, which should place your hands 4" or 5" above your eyes, with your thumbs and forefingers about 6" apart.

Your palms should be angled toward each other, with your thumbs pointing at each other or back at your nose (not toward the ball). Your hands must be open, with all your fingers relaxed and slightly curled. "Cock" your wrists by pulling the base of both thumbs back toward your forearms. Your hands should form a large, soft, ball-shaped "cradle" for the ball to land in.



You should now be looking at the ball through a "window" created by your thumbs and forefingers. *Do not reach up and attack the ball; wait for the ball to come to you.* As the ball touches your forefingers and thumbs, quickly (but softly) extend your arms and hands in the direction you want to set the ball. The ball should make contact with all of your forefingers, most of your middle fingers, and the pads (not the tips) of your thumbs. Your ring and pinky fingers will contact the ball as well, but only incidentally. Your palms should never touch the ball.

If you've done a good job of preparing your hands and arms to set -- that is, if your wrists are cocked back and your fingers are relatively relaxed -- the muscles in your forearms will automatically contract in a "stretch reflex" when the ball contacts your fingers. This stretch reflex will flip the ball back into the air, without you thinking about it at all. Of course, to set the ball a long ways, or to set it really high, you'll need to consciously push the ball by extending your body in the directions of the set and flipping your wrists from "inside" to "outside" (from palms facing in to palms facing out). *Do not impart force to the ball by flipping your wrists forward, as in shooting a basketball.*

As you set the ball, take a very deliberate step forward with your right foot and straighten your legs. This will help give the ball forward momentum, as well as providing the momentum necessary to get you to cover the hitter. The ball should only travel in one direction after it contacts the setters hands.

Keys to good setting mechanics

1. Sprint to where the ball is falling and get it above your forehead.
2. Turn your feet, hips, and shoulders in the direction you want to set the ball. Keep your right foot in front.
3. Create a "cradle" for the ball by keeping your hands 6" apart, your fingers slightly curled and relaxed, your wrists cocked, and your thumbs pointing toward each other or your nose.
4. Begin your setting motion as the ball contacts your hands (no earlier), and allow the stretch reflex to do its work.
5. Step forward with your right foot as you extend your body. Follow the ball to hitter to help cover, in case s/he gets blocked. Use your legs.

Setting Philosophy, Positioning, and Strategy

The three rules for effective setting, in order of importance, are:

1. Put up a good set.
2. Put up a smart set.
3. Put up a deceptive set.

The first and most important rule for setters at any level is to put up a "hittable" set. For beginning and intermediate setters this is the *only* rule; if you haven't been setting for very long, just put up the easiest and best set you can (generally, this means you should set left front).

After you become proficient at putting up consistently hittable sets, concern yourself with rule #2: putting up smart sets. Know where your strongest hitter is, as well as where your opponent's weakest blocker is, and set the ball accordingly.

Lastly, and least importantly, after you've mastered rules #1 and #2, try to be deceptive. This does not mean you should back set more, or jump set more, or throw in all sorts of head fakes; rather, it means you should be able to set any position after squaring your body to left front.

This brings us to the setter's positioning. The setter's *offensive* position -- meaning, the position the setter should be in to set up his/her team's attack -- is slightly back of middle front. As soon as the ball crosses into your court, sprint to that position, and *then* react to the pass. Too many setters (again, at all levels) tend to freeze as the pass is made, regardless of where they are on the court. Consequently, they have difficulty handling good passes as well as bad passes. Show some faith in your passers and always sprint to your setting position. (*The setter's *defensive* position -- where s/he should be when the opponent is preparing to attack -- varies according to the strategy a team uses. But his/her *offensive* position is always the same: just back of middle front.)

If the pass is on the money, square your feet, hips, and shoulders to left front, with your right foot slightly forward. This foot placement is significant for several reasons. First, think of your right foot as your "target" foot; always point it at the person you're going to set. Second, this foot placement turns your body *just a little* toward your own court; if you make a mistake, at least the ball will stay on your side of the net. Third, if you have to jump set, you'll have your back to the net for the same reason.

If the pass is within 3' or 4' of your setting position get the ball on your forehead by taking a big step with your left foot, then point your right foot toward your target. If the pass is further away, sprint to where it is falling, plant your left foot and (again) point your right foot at your target. As you set these deep passes, think about transferring your weight from your left hip to your right by stepping toward your target with your right foot as you set the ball.

For non-setters info: *Appreciate your setters!* A great setter is effectively invisible most of the time, making sure to stay out of the way of all teammates while they are doing their things. He magically appears, remembering all three set requests of his hitters. He evaluates the pass coming to him and determines whether any of the exotic quick sets asked of him are still possible. Then he evaluates the strengths of his hitters, the game situation, and the defensive strengths of the individuals in the opponents' front row. He then adds in factors for making sure he is distributing sets reasonably among his hitters so none feel left out and for unique, temporary situations such as a hitter being in a slump. He totals all this up to decide who to set to. Now, he has to become aware of just where that hitter is and whether he is making a good approach, whether he needs to adjust the set for a player who normally makes an early or late approach. He makes adjustments due to what he sees the defense doing. Finally, he adds in the personal preferences of that specific hitter to put the ball a few inches closer, further, higher, lower, inside, quicker, etc, to increase that hitter's performance. As soon as he has made the set, he is supposed to be ready to dig any balls blocked straight down.

Offensive Setting:

In Wallyball we will need to look at each individual team to decide on a proper offense. If the setter is also the largest player or best blocker, the team may just leave him in the front row and have him set from there. If this is the case, it makes the rotations very easy. The first key to running an offense is to communicate. A team needs to be able to communicate with each other where they would like the sets and the form that they get there. First we need a way to communicate this. Below are some diagrams that show possible numbering formats.

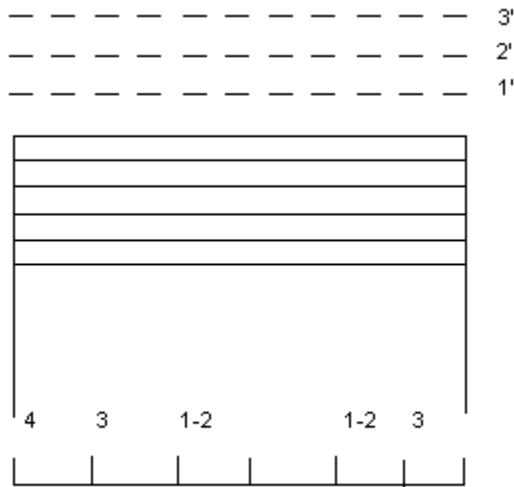


Figure 1.1 Common Numbering System

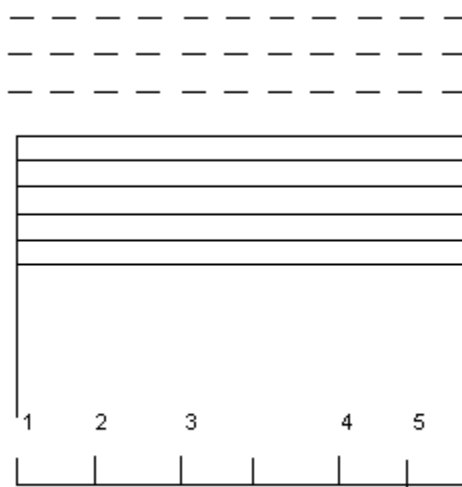


Figure 1.2 Another Common System

The first number in each system represents the location of the set. The second number represents the height of the desired set. Therefore if we want a set that is put far on the left and shot all the way over there we would call it a 41 in the first system and an 11 in the second one. Alternately if we wanted a set for the right side set really high and outside it would be a back 33 in the first system and a 53 in the second. Some teams come up with a common term for each set so they can call it midplay. Common terms are quick, shoot, outside or backside. Also, it should be mentioned that it is possible to set off the walls using both pass sets and normal sets. This can throw the defense off although it does require a lot more communication between team members. The main goal of these examples is to help teams start off with basic offense. Teams are encouraged to look at the strengths of their players and run plays that cater to their play style.

Hitting

Overview

Hitting (aka "spiking") is usually a team's third contact. It is an attempt to end the rally by hitting a ball that the opponent cannot return. All hits consist of three factors. In order of importance, they are:

- placement
- velocity
- steepness

Placement is by far the most important component of any attack. A well placed hit either lands in your opponents' court, giving your team a point or side out, or makes it difficult or impossible for your opponent to attack the ball back into your court.

The second most important component is velocity. Many inexperienced players make the mistake of exchanging placement and control for velocity, and their teams pay the price. What matters is *where* a hit lands, not *how fast* it gets there. Generally, a 80% swing will put more than enough pace on a hit to beat the diggers.

The least important component of any hit is steepness. Obviously, if you hit the ball straight down, your opponents will have a difficult time digging it. They will not, however, have a difficult time blocking it, and they will find it amusing when you repeatedly hit the ball into the net.

This page explains the mechanics of hitting. Although it explains the skill in three parts -- approach, plant and jump, contact -- do *not* think of them as separate tasks. The act of hitting is one fluid motion from beginning to end, and after you learn the basics you must always think of it that way.

*The following description is a step-by-step explanation of a right-hander's attack. Left-handers, of course, do the exact opposite.

Approach

The point of the approach, in scientific terms, is to generate forward momentum that you convert to upward momentum. A good approach jump can be as much as 20% higher than a stationary block jump.

Begin your approach about 6' from the net. If you are hitting a high set, prepare for your approach by standing with your left foot approximately 18" in front of your right, with your weight resting on the ball of your left foot. As the set nears its peak, take two quick sprinting steps, beginning with your right foot. The second step (your left foot) should be on or behind the 3' line, and you must not touch the ground again until you plant and jump.

**What you do behind the 3' line really doesn't matter all that much; in game situations, your footwork back there will be different every time. Just make sure you put your left foot on the 3' line, then plant and jump near the net.

As your body passes over your left foot and the 3' line, prepare to plant and jump by getting into the "power position":

1. Extend your right leg out in front of you, followed quickly by your left leg, so that you can plant both heels almost simultaneously.
2. Get your butt low and behind your heels so that you don't drift into the net after you jump.
3. Extend both arms straight behind you, palms facing the ceiling, so that you can swing both of them as you jump.
4. Drop your chest toward your knees so that you can use your lower back as you jump

If you do all these things between the 3' line and the time you plant, you will be in an excellent jumping position. This "power" position, combined with your approach speed, will do a nice job of converting forward momentum into upward momentum . . . meaning, you will jump high.

Plant

If you get into a strong power position, the plant is a natural continuation of the approach. You first contact the ground with your right heel, with your left foot making contact, almost simultaneously, about 4" or 5" in front of your right foot. This staggered foot position is extremely important because it keeps your right shoulder (your hitting shoulder) away from the net.

As your feet strike the ground (actually, a moment before they strike the ground), begin your jumping motion by uncoiling every body part at once. As you push with your legs, pull as hard as you can with your back and arms. (Many athletes find it more effective to think of jumping in terms of "pulling" instead of "pushing.") Lock or "block" your arms at about eye-level. This blocking action transfers momentum from your arms to your entire body and lifts you a few inches higher. As you leave the ground your back will arch and your heels will curl up toward your butt. You are now in a prime hitting position.

Contact

As your body lifts into the air, both arms will be almost straight in front of you, your back will be arched, your heels will be up, and your right shoulder will be away from the net. Cock your hitting arm by pulling your elbow straight back as far as it will go. Stay in this "hang position" until you start your swing.

As the ball falls in front of your right shoulder, initiate your swing by pulling your left elbow to your side, constricting your abdominal muscles, and reaching toward the ball with your right elbow. Your right hand follows your elbow toward the ball, and your arm straightens an instant before you make contact.

Hit the ball with the heel and palm of your hand, and quickly snap your wrist. This wrist snap imparts topspin to the ball, which causes it to dive down into the opponents' court. Follow through to your right hip, not across your body. Your body will rotate quickly to the left as you swing, and your right shoulder will end up closer to the net than your left. Land softly on both feet and prepare to block.

Ambidextrous Hitting

When any hitter is approaching the net for a hit, the defense builds its blocking based on the location of the shoulder of the hitting hand. That places the block to cover the correct angles. I soon discovered that, in many such situations, when I realized that the blocker was about to snuff me, I could hit the ball left-handed, hard, to a spot where no defender was.

There is a downside. A right-handed hitter is asymmetric while approaching the net, with the hitting shoulder slightly behind and the body somewhat turned. Those things are necessary for maximum power. Since I was regularly hitting with either hand, I discovered that there was an advantage for me to make my approach pretty much face-on to the net. The good part is that, even after I had jumped, I still had the option of hitting with either hand, and I usually decided that based on where the double block was. The slight downside is that a face-on approach eliminates some of the physiological twisting movements that add power to a spike.

Keys to Effective Hitting

1. *Always approach the same way and jump as hard as you can.* Whenever a set is not where you expect it, do not make minor foot adjustments as you plant and jump; these tiny last-second steps kill your momentum. Instead use the same footwork (right, left . . . plant), with a slight directional change when you are on your left foot at the 3m line. Making the adjustment at the 3m line maintains your momentum and gives you a very wide "hitting window." And for goodness sakes, do *not* make the mistake of "half-jumping" at bad sets; that only makes the set less "hittable."

2. *When hitting a high ball, you should not start your approach until after the ball leaves the setter's hands.* Most inexperienced hitters make the mistake of approaching too early, which is bad for two reasons: 1) They have to stop and wait when they get to the net (which kills their forward momentum); and 2) They can't keep the ball in front of their hitting shoulder, where it belongs.

3. *Always hit the ball in play.* Ball control is the key to success, even when you're hitting.

4. *Get back for an approach after you block.* As soon as the ball crosses into your court, turn immediately toward the center of your court and sprint to the start of your approach.

5. *Use a variety of shots.* Good hitters can hit the ball anywhere at any speed.

6. *Lastly, and perhaps most importantly, don't whine at your setter.* A setter's job is to improve bad passes; your job is to improve bad sets.

Blocking

Personal Blocking Skills

Of course, it helps to be able to jump really high, but that is not absolutely essential to good blocking. Being observant and logical are far more important, particularly if you are going to regularly be single-blocking (and not Area blocking). Most hitters got to their current hitting ability by becoming VERY consistent and predictable in their approach and their hitting motion. Watching each of them and learning can give you, as a blocker, a tremendous advantage over the great majority of decent hitters. (It will not be of much use if you wind up competing against Olympic or Pro players! I have occasionally looked like a total fool in that situation!).

Watch any hitter go through a hitting warm-up ten times. You will soon see very consistent patterns that even he may not be aware of. Depending on where he intends to hit, he may approach at a slightly different angle. He may have his shoulder differently, like more forward or farther back, or lower than usual. really beginning players tend to look in the direction they intend to hit, but even experienced players often make a quick glance, or turn their head very slightly one way or the other, for different hits. As the arm motion begins, most hitters display all kinds of clues as to what they are about to try.

By being observant a player can get a lot of information about the likely tendencies of most opponents. When at out of town tournaments, against teams and players you have never seen before, while the other team was warming up with a hitting line, watch their hitters very carefully, looking for any patterns or clues. For example, during warm-ups for the very first match of a tournament, one opposing hitter hit half a dozen balls down so hard that they bounced up and hit the very high roof of the building.

Pretty intimidating! But he seemed to be extremely consistent in certain movements. Watch and learn their movements!

I want to mention one other area regarding blocking. This is more logic. If the hitter and the blocker are in a one on one situation the hitter has to commit to a plan of attack. Then they have to jump and hit. You as the blocker have several advantages. First, you have not committed to anything. So, you have a little bit of

time to decide what you are going to try to do. Whether it be to stuff block or area block. So you have freedom to use that little bit of time after he has committed to his hit, to decide what you want to try to do. You can even increase the time you have for this by slightly delaying when you jump. You can't wait a long time, but if you can jump even 0.1 second after he did (and you both jump the same height) you will be in the air (and capable of blocking and thinking) for 0.1 second additional. That isn't a lot, but it is sometimes really helpful!

Between such a hesitation, the fact that you have time for thinking and choices after he has had to commit to a hit, and your 'scouting report' on that hitter, I believe that you have a tremendous advantage over most hitters! Let them think that they are in control. Let them be bewildered when you block a shot of theirs, or three, or five! They may never understand how or why you block them so well. In future tournaments, they will remember your blocking effectiveness and be intimidated before you ever even do anything! It's great!

Nearly everything discussed here has been mental and logical, being observant, and virtually no mention has been made of physical ability. A certain amount of ability is necessary, of course, but these comments are to suggest that almost anyone could greatly improve their blocking performance.

Be observant. Be logical. Use whatever skills and abilities you have. You can probably be at least three times as good a blocker as you think you are! And consider that, when your team serves, the opposing team gets the first attack, so your blocking is often for points, even better than side-outs!

Psych-Blocking

If you want to block with one player in, then put him in the middle and allow him to freely improvise in 'Psych-Blocking'.

It is very important that your back row players know where and when you will block. They are sometimes VERY distressed at the hotshot psych-blocker! Communication is the key! The blocker needs to let the back-row player(s) know if they will block down the line or cross court. This will enable the back-row player(s) to position themselves in an attempt to cover the court.

Area Blocking

A blocker is part of a team effort. Team blocking is done with that concept centrally in mind. As mentioned in the various position discussions above, for opposing outside hitters, the Outside Blocker lines the center of his body up with the hitting shoulder of the hitter, and continually adjusts to keep this true. In the event that the hitter decides to hit straight, the block will stop the hit. This precision of positioning is critical to the team concept for several reasons. First of all, it intentionally allows a sliver of free court along the sidewall available to the hitter. Second, this positioning establishes the correct positioning of the block, so that the Middle Blocker, who necessarily arrives later, will know where to jump. These being done accurately, his hands block an area roughly at a 20 to 35 degree angle for the hitter, a favorite hitting angle, because geometrically, it represents a very strong hitting motion.

As long as these two blockers are consistently in the precise same positions, the two very strongest hits available to the hitter are discouraged. This only allows one remaining very strong hitting direction, that at about a 45-degree angle toward the middle of the court. But our team concept has arranged our back row player to be exactly right at that one remaining spot.

The only remaining possibilities for the hitter are upward hits, dinks and roll shots (lobs). If a strong side hitter makes a dink just over the double block, this is a symbolic victory. The other team's strongest hitting position didn't even try to actually hit! In this single situation, our back-row player receives the ball.

As long as both of our blockers consistently present their blocks at the correct positions, our entire team concept works very well, and nearly every ball is either blocked or upped. Notice an important fact. The two blockers are **Area Blockers**. They are NOT necessarily actually trying to block everything they could reach. Their consistency of positioning is actually more important to the team concept than their individual blocking skills or effectiveness. The back row player(s) can develop confidence in them of being consistent, so they soon learn exactly where they need to be and what they need to do to do their part in the team defense. You can play in games where you will not block a single ball, but know that you contributed greatly to the team's defensive effort. Since hitters chose not to challenge your blocking ability, they consistently hit balls that your teammates invariably upped. Even without being ever blocked, opposing teams get demoralized when they just can't seem to put the ball away!

Digging

Technique

The starting position is very important. Stand with your feet spread a little more than shoulder-apart, well balanced and ready to move in any direction – one foot slightly in front of the other. Have your arms and hands apart and be ready to run to the ball first, and then dig it. Try not to dive, but dive if you need to. For hard-driven balls, try to cushion the ball to keep it on your side of the net and at least 10 feet high. Pull your arms back a little with the dig, or fall backward with the ball to absorb some of its force. Always use two hands if you can – getting lazy and using one arm will cost you points.

For shots that are far from you, a large part of digging is attitude. Try not to dive, but dive if you need to.

Great defenders believe they can get to any ball, no matter where it is. This demands that you charge the ball, hurling your body toward it to get it up – with two arms if possible. If you can only get one arm on it, use the arm that is closest to the ball – a hard thing to do when you have to use your non-dominant arm. Contact the ball on your forearm, snapping it upward to lift the ball. Remember, the key is to first get the ball up at all costs; then you must get up and attack it. For tough balls, don't worry about accuracy – just try to get the ball up in the middle of the court so your partner can set it.

As in passing, I like to stress the importance of playing the ball low on defense. Being low gives you more time to make a better play on the ball. This is true for balls your partner passes into the net or for covering sets when your partner gets blocked. Staying low under the ball will get you some surprising saves that can turn matches around.

The art of good defense calls for good positioning as much as anything else. Usually you start 8 – 12 feet back from the net (depending on the hitter's ability to hit the ball down steeply and how sharp his cut shot is) and into the court to dig a normal angle shot. From that spot, you have to be ready to go in any direction and distance to get the ball. Too much movement is a common problem. Watch the ball with your eyes. If you notice spin on a ball, you must compensate according to the type of spin. Forward spin will cause a ball to drop faster, reverse spin will cause a ball to rise, while sidespin will cause a ball to "pop-off" a wall harder.

Good position means anticipation, or the ability to read the hitter.

Feet & Hands

- Feet wide apart, hands in front and palms to the ceiling.
- Feet should be at least shoulder width apart.
- Body position is low and balanced with feet pointing straight ahead.
- Arms and shoulders are relaxed.
- Shoulders are forward and hips are back.
- Hands ahead of head.
- Head ahead of shoulders, shoulders ahead of knees, knees ahead of feet.

- Hands are inside of knees, and knees are inside of feet.
BODY STILL FOR THE BALL HIT AT YOU
- Keep body and feet still while waiting to dig and whenever possible during the dig.
MOVE TO THE BALL AWAY FROM YOU
- From the "Feet & Hands" position, step out of this position and chase any ball hit away from you.

On-Court Communication

A group of six to eight people who know each other (and are thus less likely to be self-conscious) can learn the basics of effective communication in less than one hour. To practice this, play three-on-three or four-on-four and have everyone describe *what is about to happen* throughout the entire rally:

- “Short” - When a ball is falling close to the net
- “Mine” - A player will “call” their intention of making a play on a ball.
- “Help” - When a player cannot get to a ball.
- “Shoot” - Push the set outside and low
- "No block"
- "Two blockers"

Keep in mind that you and your teammates should also be describing what the opponent is about to do:

- "It's coming over"
- "Back set"
- “Tip” or “Dink” - A softly hit ball close to the net.

Improved communication will do two things for your team. First, it will cut down on unforced errors that result from a lack of talk, which is all too common at every level. Second, describing what is *about* to happen enhances your anticipatory.

In *real* wallyball, everyone should be moving and watching the ball all the time. Setters move to the pass; hitters prepare to hit; everyone covers the hitter; blockers follow the set; etc. If a rally lasts for more than four or five changes of possession -- that is, if the ball crosses the net more than four or five times -- and you're not winded at the end of the rally, then you're not moving *nearly* enough. You're not consistently putting your body in a position to make the most of each contact.

TWOS

Two players versus two players is the most tiring form of Wallyball. There are several positional variations in twos. You can experiment with one player up and one back, both in the center of the court, or both players towards the back of the court. Keep in mind that it is easier to run forward than to run back, so playing a little deep makes sense. It's also easier to return a shot off the wall when the ball is in front of you. In two deep, each player is responsible for the side he or she is closest to.

Communication is very important. Talk to your partner as you play. This will help prevent both players going after the same ball.

Returning a fast shot off a wall is, in many cases, easier for the player standing farthest from the wall that the ball struck.

If the other team is passing well, and is spiking winners close to the net, and you choose to play one up and one back, it is very important that each player knows what is expected of him or her. The player at the net can aggressively block while the player in the back will do most the digging. The front player can block down the wall (or line) in an effort to setup a cross-court hit for the digger, or if the front player blocks cross-court, the digger will look for a hit along the wall.

If the front player does not block, then they must drop back on the court to help play the ball. In twos, a weak passer, setter, or spiker cannot avoid the ball. A player needs to be good in all phases of the game to play twos well.

Twos is a good game for using dinks and shallow shots off the sidewall. Players often position themselves deep to cover the spikes and aren't able to cover the short shot.

Teamwork is very important in twos.

Threes

In my first strategy, one player is at the net, with two back. In the second, two players are at the net, with one back. To me, having one player in the back would run that player ragged and it would be too easy to serve a winner with just one person back.

There are, however, times during a match when a switch from one up and two back to two up and one back may work to your advantage. Let's say that the other team has been spiking many winners close to the net. By rotating the second player to the net, you now can double block.

As I said earlier, having one player at the net and two back is probably the best formation. A team can simply rotate during a game (each player takes their turn in the front row) or players can move to any position they want to before or after the serve. All the team has to do is maintain their service order.

Below is a common wallyball strategy.

- 1) When receiving the serve, have your best setter up front by the net.
- 2) Bump the served ball to them. This creates an opportunity for both players in the back to spike the ball.
- 3) After the front player sets the ball, the player moves to the back row, and another player stays in the front to become the blocker.

- 4) Now the ball can be passed to the middle of the court, being the setter is in the back row. If the team decides to pass the ball to the front row, the player that is the front row can set, and then rotate to the back row if so desired.

Fours

Fours have many variables and different moves that can be made offensively and defensively. In four-person play, players must be in their designated serving positions. After the service, players may move to an alternative offensive or defensive position. Men and women will alternate service in four-person play.

One of those variables is how to line up. There are three viable ways to position your team in fours. You can line up with two players at the net and two back. Communication among players is very important with this positioning as the middle of the court can go uncovered. One argument for this alignment is that your team always has two blockers at the net.

The second is the diamond, with one player up, two on the sides, and one player deep.

The third is one up and three back, almost the same as the diamond. Both the diamond and the one-three work well against the dominant server.

If a spiker is beating you, double-team him. Make them hit differently. Maybe the setter will set the ball to someone else. With four players, the setter can set to more people going in more directions at more speeds than in twos to threes. Also, if you have two setters you will not fall into patterns and have the same setter setting to the same spiker every play. One thing to remember, the player in the serving position may not attempt to spike or block in four-person play.

*Always maintain your sense of humor,
share it with others when things get too
intense.*

Wallyball Drills

Blocking

ANGLE OF APPROACH

DRILL DESCRIPTION: The hitter should line up on the opposite side of the net at least 3-5 feet to either side of the blocker. The hitter then makes his or her approach and the blocker must slide over, and time their jump with the hitter's. This will work on lateral movement and timing against a live opponent. The blocker needs to watch the hitter's angle of approach, as this will tell a lot about where the ball is going. Throw in some wallyballs and a setter to give this drill a real-game feel.

BLOCKING DRILL

DRILL DESCRIPTION: Coach stands on chair. One coach on far left side of net simulating an outside hitter, the other coach on far right side of net simulating right side hitter. Team forms 2 lines on opposite side of the net, one line corresponding to each coach. Blocker jumps (keeping good form) and coach hits a ball into the block. Blocker shags ball and returns to line. Do this so every player has a chance to go through several times and get a feel for the block. Then alternate and have two blockers, both lining up 2 feet away from the coach. They must shuffle step 2 feet to get to the angle of approach and jump block. This works the team concept of blocking as well as the shuffle step.

Passing

Line a team up in serve receive formation. A player at the attack line uses a two-handed underhand toss to get the ball to the team. The player who "calls" the ball allows the ball to bounce one time before passing to the setter/target. The setter/target catches and returns the ball back to the tosser. The team's is to have consecutive passes to the setter/target in order to rotate. Once one full rotation has been accomplished, the tosser uses an overhead toss from the opposite side at mid court and repeats the drill. After one full rotation, the tosser moves to the end line and serves the ball, but the one bounce is NOT allowed. The goal should remain the same. Coaches should notice that the players are moving their FEET to get behind the ball to pass when the serve segment commences.

Movement and pass strengthening.

Player lays flat on her stomach. The coach then bounces the ball (a hard, overhead bounce) and when the ball bounces the player gets up quickly, following the ball, and passes to the target. This drill is great for conditioning and passing.

Setting

Drill - In a gymnasium with basketball nets, the coach stands behind the basket (off to the side) and tosses "bumps" to the setter. The setter's goal is to set the ball -- with accuracy -- into the basket. A rim should not count. The tosses should vary in height and lateral position. The free throw line is a good starting position for sets. It's harder than it sounds. The goal is to get in as many as possible in a row. Have fun and put the ball to the floor!

Dig-Dig-Attack

A coach stands at the net and spikes the ball to a player at right back base. The player passes the ball to a target and shaggers shag balls. The same player immediately moves to middle-back base and receives another spike from the coach and tries to pass to the target. The player then goes to left back base and digs another spike from the coach. As soon as the player digs the spike, another coach immediately tosses a ball to the strong side for the player to spike. This is a very fast drill. Have the players get in groups of 3. Each player must go through the drill 5 times or some desired number. This drill also helps with conditioning.

Ambidextrous Hitting

Stand 5 feet from the wall; Strike the wallyball so it bounces about 2 feet from the nearest wall. As the ball bounces off the wall back towards you strike it again, using your other hand. Keep this up for 20 hits with each hand. Your goal should be to do this drill without stopping.

Conditioning your “Fast-Twitch” Muscles

Play a regular game of wallyball, one-on-one. All the standard rules apply except you get one bounce on your side (and 3 regular hits). The one bounce call be used at anytime except when receiving the serve. The 1st hit on a serve must be bumped. Your goal is to *push* yourself and try to *not use* the bounce.

Admit your mistakes. It shows character and inner strength.

Set goals, then believe you can achieve them.

Stretching

If you have had any recent physical problems or surgery, particularly of the joints and muscles, or if you have been inactive for some time, please consult your physician before you start a stretching or exercise program.

You will find that regular stretching will do the following things:

- Reduce muscle tension and make you feel more relaxed.
- Help coordination by allowing more free and easier movement.
- Increase range of movement.
- Help prevent muscle strains.
- Develop body awareness. As you stretch various parts of the body, you focus on them and get in touch with them. You get to know yourself.
- Promote circulation.

The benefit of stretching is to increase the range of motion in a particular joint and to help prevent injury. After exercise, stretching can relieve muscle soreness by increasing blood flow to the muscle and increasing oxygen and nutrients to the joint. The blood carries away the toxins including lactic acid thereby preventing muscle soreness.

There are three different methods of stretching including ballistic method, static method and proprioceptive neuromuscular method (PNF).

Ballistic stretching uses repetitive bouncing motions. This can result in injury and is not a recommended method of stretching. The static method is when the stretch is performed to a point of mild discomfort and is then held for 10 to 60 seconds.

This method is the most recommended and the safest. Stretch as far as you can until you feel mild discomfort in the muscle and then hold that position until the stretch eases up. Stretching should never be painful. The stretch should be held at least 15 to 30 seconds or until the discomfort eases up. In most individuals the discomfort in the stretch will ease up after 20 to 30 seconds but some individuals may require longer amounts of time. The stretch should be performed for three to four repetitions.

Stretching can be performed before or after an activity but stretching must follow a warm-up period of five to 10 minutes of light movement. It is essential to warm-up before stretching so that the muscles are warm and prepared to stretch. If one does not warm-up before stretching, the muscle is at increased risk of injury.

A cold muscle will not be able to gain the same benefits as a warm muscle. Stretching before an activity is not necessary, as it has not been proven to prevent injuries. However, a warm up before activities has been proven to decrease injuries.

PNF Partner Stretches

Proprioceptive neuromuscular facilitation (PNF) is widely regarded as the best method to increase overall flexibility in target muscle groups. The technique was originally developed by physiotherapists during the 1940s to assist in the rehabilitation of paralytic patients and encompasses a variety of methods. Probably the most useful for martial artist is the partner-assisted hold/relax method. In simple terms, this involves the target muscle group being stretched to its maximum range of movement (ROM), at which stage the muscle is contracted strongly for at least 6 to 8 seconds. At this point the muscle is relaxed by a reflex triggered by the Golgi tendon organs and deliberately relieved by the stretcher. Once the stretch is reapplied, it should be possible to extend the muscle group slightly further than on the previous attempt, eventually reaching the maximum ROM. With work, the ROM should increase, resulting in improved flexibility.

The following stretches have been developed in order to increase flexibility in the legs as that is where most martial artists feel an increased ROM is most valuable. Although PNF techniques may be executed quite effectively on an individual basis, it is often easier to have a partner to work with as they are able to check that the subject's body and joints are aligned correctly for maximum effect. All the following stretches are partner based for this reason.

Caution: During stretching sessions, any partner should be aware of the level of flexibility of the stretcher. If any degree of pain is experienced by the stretcher, the stretch should be relieved gradually and carefully in order to prevent injury occurring (these techniques should be uncomfortable but certainly not painful).

Please note that I am not a doctor, physiotherapist or any other kind of medical professional. I have researched these stretching methods in some depth and have made every attempt to present the information in a clear and simple manner but I cannot be held responsible for any injuries incurred as a result of any stretching technique detailed here. **It is essential that a good warm-up should be undertaken before embarking upon any form of stretching.**

Bent Leg Hams

Type of stretch: PNF

Muscle group: Hamstrings

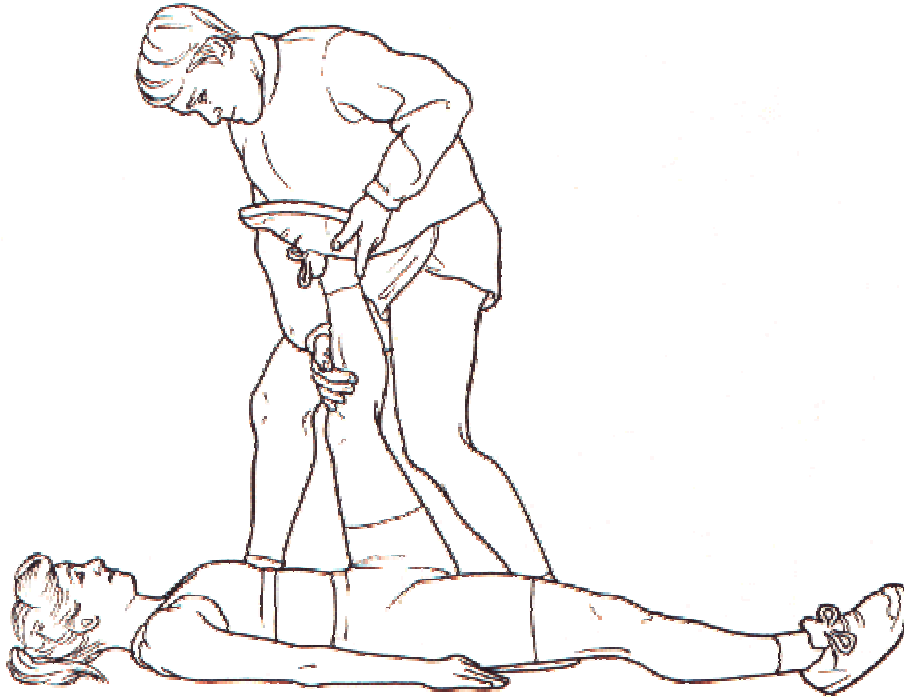


Method

The stretcher lies flat on the floor, the left leg straight and the right knee bent and lifted as far towards the chest as is comfortable. The partner then places the stretcher's right foot on their shoulder with their right hand on top of the stretcher's left thigh in order to prevent unnecessary movement and their left hand behind the stretcher's right knee towards the top of the leg. The stretcher now attempts to push their leg down towards the floor (isometric contraction) for a period of about 6 seconds, during which time their partner resists the movement. The stretcher should now relax for an equal period before their partner begins to straighten the stretcher's knee slightly in order to increase the stretch. Repeat this method for up to four times, taking care not to exceed the stretcher's ROM then perform the same stretch on the left leg.

Supine Straight Leg Hams

Type of stretch: PNF **Muscle group:** Hamstrings



Method

The stretcher lies flat on the floor with both legs straight. The left leg is then raised, keeping the knee straightened, until the current maximum ROM is achieved. At this point, the partner supports the leg by the heel and just below the knee and resists any movement as the stretcher tries to bring their leg back down to the floor. This isometric contraction should last for about 6 seconds, following which the stretcher should relax for a similar period, the leg raised a little further and the stretch reinitiated. Repeat this method up to four times, taking care not to exceed the stretcher's maximum range of movement (ROM) then perform the same stretch on the left leg.

Note: For this stretch to be effective, the subject's hips should remain parallel and flat to the floor throughout the technique.

Sitting Inner Thigh

Type of stretch: PNF **Muscle group:** Short adductors



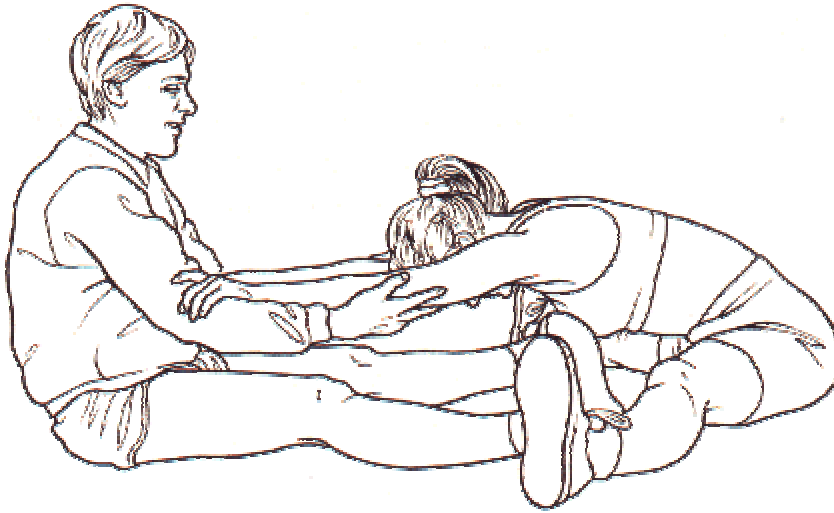
Method

The stretcher sits on the floor with a straight back and the soles of both feet pressed together, as close to the groin as is comfortable. The stretcher then moves their knees towards the ground unassisted and without separating the feet. Once the maximum unassisted ROM has been reached, the partner places a hand on the inside of each knee and resists the movement as the stretcher attempts to bring the knees together. This process should be continued for about 6 seconds before the stretcher relaxes for a similar period as their partner gently attempts to lower the stretcher's knees still lower. Repeat this sequence for up to four times, taking care not to exceed the stretcher's maximum ROM.

Assisted Straddle Stretch

Type of stretch: PNF

Muscle group: Long adductors



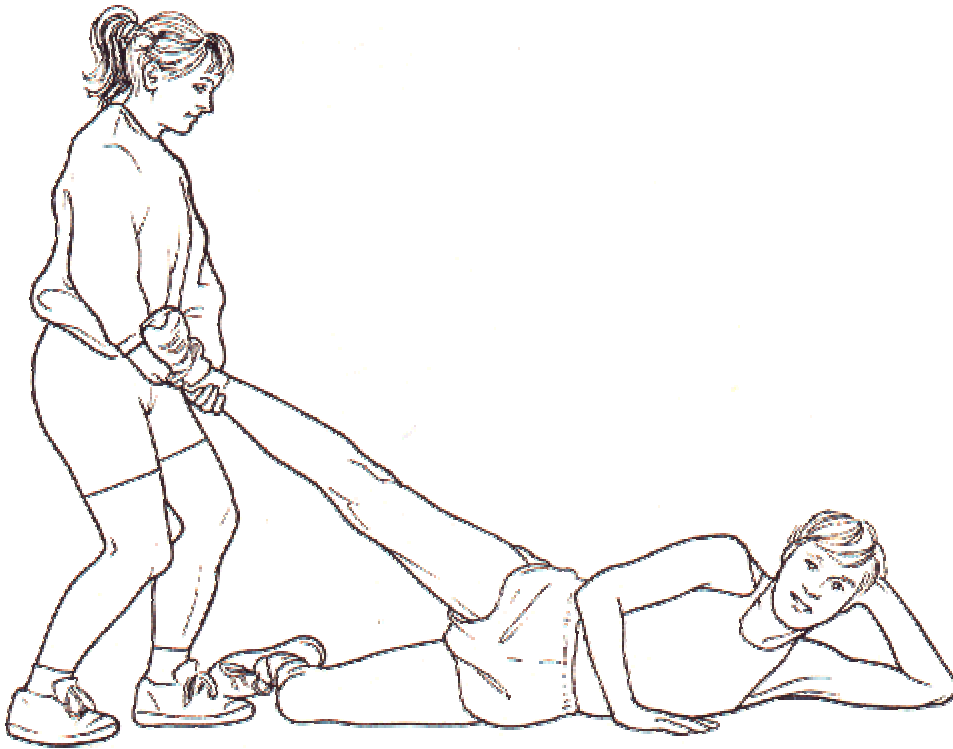
Method

The stretcher sits on the floor with a straight back and both legs extended at as wide an angle as is comfortable. Their partner then places their feet on the inside on each of the stretcher's ankles (**take extra care to ensure that no pressure is being place on the leg anywhere near the knee joints**) with both knees bent and grips the stretcher's arms or hands. Ensuring that the stretcher keeps their back straight, the partner slowly straightens their knees in order to push the stretcher's ankles further apart until the maximum ROM is achieved. Once in this position, the stretcher attempts to pull their ankles back to the centre line, pressing against their partner's legs in the process, for a period of about 6 seconds. The stretcher then relaxes for six seconds before bending forward from the hip as far as possible with the assistance of their partner, remembering to keep the back flat. This position should be held for between 12 to 18 seconds before returning slowly to upright position and relaxing. The partner should then attempt to move the stretcher's legs still further apart before recommencing the stretch. Repeat this technique up to four times, taking care not to exceed the stretcher's maximum range of movement (ROM).

Note: In some instances, the stretcher may be sufficiently flexible that their partner may need to move closer in order to increase the angle of the stretch. This can be done during the stretch but care must be taken to avoid and sudden, jerky movements.

Side Leg Lifts

Type of stretch: PNF **Muscle group:** Long adductors



Method

The stretcher lies on the left side with the left knee bent at the knee and the right leg fully extended, keeping both thighs in alignment with the torso (i.e. both knees should be level with the hips and shoulders). The stretcher then lifts the right leg directly upwards as far as is comfortable, where upon their partner supports the foot and resists any movement as the stretcher uses the long adductors to bring the foot back down to the ground for a period of 6 seconds. The stretcher then relaxes for six seconds and their partner eases the foot slightly higher. The stretch is repeated for up to four times, taking care not to exceed the stretcher's maximum range of movement (ROM), before performing the same stretch on the left leg.

Some stretching examples:

Young teens (anyone still growing): hold stretches for 7-10 seconds.
Adults: hold stretches for 10-20 seconds.

name	muscles	position	description
groin stretch	groin	on feet	feet shoulder width apart, hands on floor to left and right
cat stretches	lower back	hands and knees	arch back up and down
rotation low back stretch	hamstring, lower back	on back	first pull knee to chest, stretching hamstring, then cross the bent leg over the straight leg, keeping both hands on the floor
low back stretch	lower back	on back	on back, pull knees to chest
spinal twist	back, obliques	seated	with one leg straight, bend the other leg and set the foot on the floor on the opposite side of the other knee, put the opposite elbow against the knee
butterfly	groin	seated	press feet together, bring chest to floor
leg lifts	quadriceps, psoas	on front	lift leg, pointing toe up and out
side leg raises	quadriceps, psoas	on side	flex your body backwards - you shouldn't be able to see your toes. Lift leg while flexing toe toward knee.
hamstring stretch	hamstrings	seated	legs straight, touch toes and hold with back straight
seated calf stretch	calf, foot	seated	bend knee slightly, pull on ball of foot and flex foot as much as possible
hurdler's stretch	calf, achilles	standing near wall	While pushing with both hands against the wall, one foot should be near the wall, and the stretching leg further away from the wall. Lean forward while keeping your foot on the floor and feel the stretch in your calf. Leaning forward further will stretch the achilles. You only need to feel a slight stretch in your achilles.
calf raises	calf, shin	standing	With your feet together, raise up as high as possible on your toes, hold, then back down. Repeat several times. Repeat with your toes pointing in and with your toes pointing out.
seated hamstring stretch	hamstrings	seated	do calf stretch, push chest to knee
kneeling quadricep stretch	quadricep	kneeling	one knee on the floor (on kneepad), other leg forward (foot on the floor). With the opposite hand, reach back and grab the back foot, and pull towards that buttock.
shin stretch	shin	on feet	sit on your heels, feet must be flat on the floor
crunches	abs	on back	10 slow, 50 fast (don't pull on your neck!)
bicycles	abs, gluts	on back	30
dual leg lifts	abs, gluts	on back	20
sideways crunches	abs	on side	Lay on your side, but twist your torso into a situp position and do crunches.
kneeling shoulder stretch	shoulders	hands and knees	place hands on floor ahead of you and pull body backwards, try to put your armpits on the ground
pushups	arms, chest	on front	20
overhead shoulder	shoulders	standing	raise your arm straight above your head and let your hand hang behind your head. Push back on your elbow with the other hand.

stretch			
sideways shoulder stretch	shoulders	standing	pull arm sideways across your front
backwards shoulder stretch	shoulders	standing	lace fingers together behind your back, and lift arms upwards while keeping elbows straight
triceps stretch	triceps, chest	standing	hold arms up at 90 degrees, stretch and rotate arms back with wrists flexed, then repeat the motion downward.
neck rotation	neck	standing	stretch only to the sides, not to the front or back

Avoiding Dehydration During Sports

When we sweat, we lose both water and salt. Thus, sweating also can make us dehydrated. Dehydration can't only decrease athletic performance but it can also be dangerous.

Dehydration can occur after as little as 30 minutes of exercise, particularly in hot weather. Dehydration is one of the risk factors for heat exhaustion and heat stroke, which causes over 400 deaths per year. The early stages of dehydration often do not cause any symptoms.

You should know the symptoms of dehydration:

- Dry lips and tongue
- Apathy and lack of energy
- Muscle cramping
- Bright-colored or dark urine

Heeding signs of too much heat

If left untreated, dehydration can escalate to heat exhaustion or heat stroke that can be deadly. The main symptoms for these include:

- Fatigue
- Dizziness
- Nausea or vomiting
- Headache
- Rapid and shallow breathing
- High temperature
- Rapid heart beat
- Decreased alertness or complete loss of consciousness

As dehydration gets worse, people start to feel thirsty. Their mouths may also feel dry. These are the first warning symptoms of dehydration and should not be ignored. With further dehydration, people develop a flushed face, extreme thirst, may stop sweating and develop dry skin. People may no longer urinate or have very small amounts of dark yellow urine. Weakness, dizziness, muscle cramps, headaches, thick saliva, sleepiness. With increasing dehydration you may develop a dry mouth and a dry tongue.

If the dehydration is not corrected at this point, a person may pass out or get very lightheaded. Hot, flushed, dry skin is common, as the body can no longer keep the temperature down. Severe muscle cramps and confusion may also occur at this stage and people in this situation need treatment in the nearest emergency room.

All of these stages of dehydration can and should be avoided. Before athletic activity, drink at least two or three glasses of water. When engaging in vigorous activity in hot weather, people can also lose more than one liter of fluid per hour. Many experts recommend drinking roughly 8 ounces of water every fifteen minutes during athletic activity. Don't wait until you become thirsty to drink fluids. By the time you become thirsty, you already would have lost more body fluids, which can decrease your athletic

performance. A good rule of thumb is to drink fluids regularly. Your body can get rid of excess water, but it cannot take in water without your help.

If you notice you are feeling thirsty, have a dry mouth or notice that your urine has become dark yellow, drink a large amount of water—at least one liter. If you have symptoms of more severe dehydration, such as muscle cramps or weakness, take at least a fifteen-minute break in the shade while drinking as much fluid as you can handle.

Alcohol, coffee, tea and salt tablets increase dehydration and should not be used during sports. Sports drinks are good to use when vigorous athletic activity will occur for more than an hour. These drinks supply salt, which is rarely as important as water. However, with prolonged exercise, these drinks can be alternated with water to prevent a salt imbalance. One 20-ounce sports drink, such as Gatorade, per hour is plenty and additional fluid should be in the form of plain water. Too many sports drink can further dehydrate a person and make them sluggish because of their high carbohydrate load.

Everybody does better when EVERYBODY does better.

Sports Injuries

Ankle

Without proper care, a *sprained ankle* can become a chronic injury.

Just about everyone has twisted an ankle at one time or another; ankle sprains are the most common athletic injury. However, if they're not treated right away and completely rehabilitated before you return to action, they can become a chronic problem.

The ankle is a complicated hinge joint composed of four bones and four major ligaments. The bones are connected by the ligaments, fibrous tissue that gives the joint stability. The ligaments will tear if their range of movement is exceeded. A sprain can range from mild to severe, resulting in equivalent amounts of instability in the ankle.

The most common ankle sprain is an inward twist, with the foot turning underneath the ankle. The three lateral ligaments of the ankle may be so severely torn that you're unable to bear any weight on the injury. Or the sprain might be so mild you can "walk it off" and continue your activity.

In either case, proper treatment and rehabilitation are essential to prevent a chronic problem from developing. The initial treatment for all sprains is RICE: Rest, Ice, Compression and Elevation.

Rest Rest the injured ankle, avoiding any activity that causes further pain. Meanwhile, you can maintain conditioning with activities that won't stress the joint, such as riding a stationary bicycle, using a rowing machine or swimming with leg floats.

Ice Apply ice as soon as possible. Ice decreases pain immediately by numbing the skin and reduces swelling by constricting blood vessels. Much of the pain from an injury is caused by swelling from torn blood vessels. Controlling the swelling helps you make a speedier recovery.

It's best to use crushed ice in a watertight bag covered with a thin cloth so it's not too cold against the skin. Apply it for 15 minutes directly over the area of swelling. Longer applications may cause a rebound dilation of the blood vessels and may actually increase swelling.

Apply the ice every four to eight hours as long as the swelling continues (even as long as a week). You can use chemical ice packs, but many experts warn that because they do not melt the same way as ice, they can overcool the ankle and cause a chemical freeze to the skin.

Compression Compress the swollen area with an elastic bandage. Begin the wrap at the toes and continue it up about four inches above the ankle. If you begin the wrap above the toes, all the swelling is likely to accumulate in the toes. Don't wrap it so tightly that it causes more pain or cuts off the circulation to your toes. While the elastic wrap can reduce further swelling, it usually doesn't provide enough support to prevent re-injury.

Elevation Elevate the injured ankle as much as possible, particularly while applying ice; this allows gravity to drain some of the swelling. Place the ankle higher than the knee, the knee higher than the hip and the hip higher than the heart. Use books, a suitcase or a box under the mattress at night; this works better than a pillow.

Once the swelling is controlled, the next step depends on the severity of the injury. A severe sprain may need to be casted. If you're unable to bear weight on it, or you hear a pop at the time of injury or there is a great deal of swelling and pain, the ankle may be fractured or unstable. In any of those cases, consult a physician.

X-rays should be taken if you cannot walk four steps. They should also be taken if you have tenderness over the bony prominences at the sides of your ankle or the bones in your feet.

If the X-rays do not show a fracture, then you have a sprain. The amount of recovery time you need will depend upon the severity of the sprain and your rehabilitation program. If you're able to bear weight without pain and if swelling and bruising are limited, you can start rehabilitation immediately.

Begin with non-weight-bearing range-of-motion exercises. While sitting, flex the ankle up, pulling gently with a towel. Then push your foot downward against gentle pressure from the towel. You also can flex the ankle to 90 degrees and then press isometrically to the right and left.

It's extremely important not to limp when you walk and bear weight on an injured ankle, even if it is necessary to use crutches. If you walk with a limp, the position-sensing nerves in the foot quickly forget the

correct way to walk and instead learn to limp. Subtle changes in this function can leave you with a chronically imbalanced ankle that is easily re-injured.

Practice walking with a normal heel-toe motion, even just after your injury if you can't walk normally avoid walking at all, because you may be doing further damage. Instead, try rolling a large can using a heel-to-toe motion while sitting. Use crutches to help you walk without a limp, or rest the ankle further.

Rehabilitation

Treating the pain and swelling is just the first step on the road to recovering the full strength and range of motion in your ankle. Rehabilitation includes a complete series of exercises to regain flexibility and to strengthen the ankle and foot to prevent re-injury.

The most effective program is one designed specifically for you and your injury by a certified physical therapist or athletic trainer.

How can you tell when you're ready to return to your sport? Ligaments will usually heal within four to eight weeks, but your comeback may be limited by an underlying weakness of the lower leg muscles and tightness of the Achilles' tendon.

Be sure to stretch the Achilles' tendon and strengthen the lower leg muscles by doing the dorsiflexion (toe raises) and eversion (twisting your ankle outward) exercises.

Most experts agree that chronic ankle injuries result from improper rehabilitation of a previous injury. You must have full range of motion around the joint without pain before returning to the complicated movements in running.

Test yourself first by standing on the sprained ankle alone for two minutes. If you are able to do this without wobbling too much, try walking on your heels for 50 steps, then try a straight-ahead jog. The ultimate test is to run in a figure-eight pattern. If you can do all of these activities without experiencing pain, you're ready to return to action.

Even with the best rehabilitation, some injuries don't heal completely. You may need to use some support for the ankle whenever you participate in sports. Most trainers and physicians agree that taping provides the best support. Some new lace-up and inflatable ankle braces are also showing promise.

With RICE treatment and a proper rehabilitation program, you can soon be up and running again.

Here are some exercises to strengthen your ankle.

Resistive Plantarflexion

For these exercises, you'll need a fairly strong elastic belt or other firm but stretchy material. Hold one end of elastic in your hand and loop other end around foot. Now push foot down against resistance of the elastic.

Resistive Dorsiflexion

Place one end of elastic under the leg of a heavy piece of furniture or other firm support. Sit on floor facing furniture legs straight out in front of you. Loop other end of belt around the top of your foot. Now, try to flex your foot toward your body and against the resistance of the elastic.

Resistive Eversion/Inversion

Sit as described for Resistive Dorsiflexion, toe pointing to ceiling. Turn ankle outward without rolling leg and press for 30 seconds. Then turn ankle inward and press for 30 seconds.

Finger

Jammed Finger The end of a straightened finger or thumb receives a blow (usually from a ball). The ligaments and tendons of the finger are stretched and torn.

A 'jammed finger' is simply a finger which is troubled by a sprain, strain, or dislocation of one of its joints. The jamming may result from an impact with an opponent or teammate, sudden contact with a ball, a fall, or any sudden stretching of a finger. Falls onto hard, unyielding surfaces (for example, a basketball floor) are particularly likely to produce jams. As mentioned, the ligaments between finger bones may tear, especially if the joint is dislocated (ie, if bones move out of their normal relative positions). In a typical jam, a finger joint is forced together, with twisting of the joint involved as well. This compression and torquing often leads to dislocation, which can resolve itself within seconds or might persist until medical attention is received.

Interestingly enough, the joint between the middle bone of a finger and the bone closest to the hand is the one which is most frequently harmed during sporting activity. Also interestingly, the middle finger of the hand is the most likely candidate for jamming. Theories abound about why this is so, but perhaps the best explanation is the simplest one: the middle finger is usually the longest one and thus tends to be most exposed to contact injuries.

How do you know that you have jammed a finger? If your normally straight finger is suddenly crooked, that's clearly an obvious sign of jamming. If your finger joints are not dislocated but your finger is severely painful, swollen, discoloured, and/or relatively immobile, you probably have a jam - and you should stop your sporting activity and seek medical help.

Not surprisingly, many athletes react to a jammed appendage by saying, 'It's just a finger; it will get better on its own in a day or so'. The reality, however, is that untreated jams often get worse over time, with pain and swelling increasing over a period of several days, especially if the finger receives further contacts during training or competition.

If you have dislocated a finger joint, you must first get the joint restored to its normal position. When you look for someone to put you back together, a teammate may be willing to oblige, but you should search for a health-care professional with finger-jam experience instead; inexperienced persons who try to straighten out your finger might actually increase the extent of injury at the damaged joint.

Ice should be applied as soon as possible after a jam occurs (however, if there is a dislocation it should be rectified before the ice is utilised). Icing should occur in 12-minute intervals, with 20-minute breaks between ice applications, for at least the first 24 hours after injury. The injured finger should be elevated, and compression (via an elastic wrap) can be applied; the compression bandage can remain in place continuously. However, you should be certain that the compression is not too great by noting the coloration of your finger nails; if even a faint blue colour appears, the compression is too tight. If over-tightness is identified, remove the compression bandage for a while and reapply it more loosely later.

What to do if the pain persists

If your finger joint is still swollen and 'kicking' with discomfort after 24 hours of treatment, you should consider getting an X-ray of the injured finger to check for a fractured bone. If X-rays show a fracture of one of the finger bones, the finger may need to be set and supported (splinted) or - in some cases - either placed in a cast or corrected surgically. If there is no break, you can try alternating cold and heat applications to the injured digit, 12 minutes of icing and 12 minutes of heating are probably about right.

There is debate about which should come first, but a heat-ice sequence may be the correct one; any increase in inflammation induced by the heat will be toned down by the subsequent ice application. Try this alternating pattern three to four times daily.

One of the most popular treatments for jammed fingers involves 'buddy taping', ie, taping the injured finger to one its adjacent partners. A buddy-taped finger is protected to a certain extent by its neighbour, particularly if the neighbour happens to be the middle finger, and injured athletes can often return to training or competition within a day or two after sustaining the injury, provided the damaged digit is satisfactorily buddy-taped.

As mentioned, if the injury is limited to a strain or sprain, an injured athlete can often return to play soon after sustaining the injury, as long as the injured finger is taped to its adjacent uninjured neighbour (failure to do this increases the risk that a strain will become a sprain or that a sprain will lead to a significant dislocation). The taping, of course, should be undertaken only if pain permits and with the consent of the treating health-care professional. If the pain and/or swelling are severe, however, an athlete may be out of action for a couple of days, and in the case of a break, sport participation may be delayed for a month or more, depending on the sport and the severity of the injury to the joint.

What preventive action to take

Athletes need to know about the steps they can take to reduce their risk of jammed fingers, and it is obvious that increased strength of the fingers, hands, wrists, and forearms should be helpful in warding off injury. Within limits, improved flexibility of the fingers, hands, and wrists should also be injury-preventing. However, in many sports which involve rather violent contacts and falls (for example, basketball, football, football, rugby, volleyball, softball, baseball, and wallyball), jammed fingers can occur even in individuals with very strong and flexible hands. If a spiked ball is coming at 90 miles per hour and strikes the end of your finger dead-on, for example, all the strengthening routines in the world may not prevent your finger from getting a serious jamming, or even a fracture.

Nonetheless, there are strengthening exercises to lower the risk of jammed fingers which might occur as a result of less-high-speed, lower-force impacts. Of course, these exercises are the same as the ones used to 'rehab' a jammed finger after symptoms have subsided. The exertions are designed to upgrade strength and range of motion in the fingers (the latter effect is particularly important when a finger has been immobilised as a result of injury). Here are the key exercises:

(1) **The ball squeeze.** Place a tennis ball or equivalent in the palm of the injured hand and squeeze as forcefully as pain permits for five seconds. Slowly relax the hand. Rest for five seconds. Repeat 10 times at least three times a day. Generally, the more often the sequence can be repeated in a day, the better. From day to day, pain should subside until the exercise can be performed without pain.

(2) **Finger extensions.** Place your hand, palm forward, on a wall or other flat surface. Press the palm toward the flat surface as fully as pain permits and hold for five seconds. Return to starting position and rest for five seconds. Repeat this sequence ten times at least three times a day. The more often the sequence can be repeated in a day, the better. From day to day, pain should subside until you reach a point at which the exercise can be done without pain.

(3) **Finger push-ups.** Assume the regular push-up position, with your arms slightly beyond shoulder width and your body perfectly parallel with the ground, but support full body weight on your finger tips, not your palms. Bend your elbows and lower yourself until the tip of your nose touches the ground, and then immediately push yourself back up into the starting position. Don't forget to fully extend your arms when you come back up. No cheating - don't rest your chest on the ground!

(4) **Diamond finger push-ups.** Just like No. 3, but your feet should be spread shoulder-width apart and your hands should be placed together, making a 'diamond' shape with your thumbs and index fingers. Again, support body weight with your fingers instead of palms, and feel the burn!

(5) **The scorpion.** Get down on your hands and knees, and place your hands directly under your shoulders, with your palms spread on the floor and your knees directly under your hips (the tops of your feet should be

resting on the floor). Straighten your arms, but do not 'lock' your elbows. Place your right forearm on the floor, with your right hand just behind your left wrist. Reach behind you with your left hand, twisting your torso slightly to the left, and grab your right ankle. As you inhale, lift your right knee off the floor, raise your chest until it is roughly parallel with the floor, and look up. Find a comfortable height for your chest and raised leg. Now, lean slightly forward to increase the pressure on your forearm, and steady yourself by pressing your right forearm and right fingers on the floor. Stay in this position for about six inhalations and exhalations, and then repeat the overall manoeuvre with your left forearm bearing body weight. The scorpion improves hand and forearm strength as well as overall coordination and balance, all of which are important during the kinds of falling movements which can create jammed fingers. If you complete the above exercises faithfully, your fingers will be 'stronger than the next man's,' and - most importantly - your risk of getting a painful finger jam will significantly decrease.

Treatment of Jammed Finger:

- Caution - Be certain range of motion is normal (can bend and straighten each finger).
- Soak the finger in cold water for 20 minutes.
- If the pain is more than mild, protect it by "buddy-taping" it to the next finger

Extensor Tendon Injuries

What is an extensor tendon? Extensor tendons, located on the back of the hand, allow you to straighten your fingers and thumb. These tendons are attached to muscles in the forearm. As the tendons continue into the fingers, they become flat and thin. In the fingers, these tendons are joined by smaller tendons from the muscles in the hand. It is these small muscle tendons that allow delicate finger motions and coordination.

How are extensor tendons injured? Extensor tendons are just under the top surface of the skin, directly on the bone, on the back of the hands and fingers. Because of their location, they can be easily injured even by a minor cut. Jamming a finger may cause these thin tendons to rip apart from their attachment to bone. After this type of injury, you can have a hard time straightening one or more joints. Treatment is necessary to get back use of the tendon.

How are these injuries treated? Most extensor tendon injuries are treated with a splint. Cuts that actually split the tendon may need stitches, but tears caused by jamming injuries are usually treated with splints. Splints stop the healing ends of the tendons from pulling apart and should be worn at all times to make sure the finger stays straight until the tendon is fully healed. Sometimes a pin is placed through the bone across the joint as an internal splint.

WHAT IS TENNIS ELBOW (Wallyball Elbow)?

Tennis Elbow is actually tendonitis of the wrist extensor muscles.

Micro tears in part of the tendon surrounding the elbow and muscle coverings are the first stages in Tennis Elbow development. After the initial tears heal, repeated tears commonly occur in the same areas of tissue. This eventually leads to hemorrhaging or the formation of rough tissue and calcium deposits. Collagen then leaks from the injured areas, causing inflammation and pain. Untreated tears and injuries cause so much pressure that they cut off the blood flow and pinch nerves responsible for controlling muscles in the arms and hands.

WHAT CAUSES TENNIS ELBOW?

Tennis Elbow can be caused by injury, repetitive movement, strain or the overuse of muscles. Pain is most obvious when gripping objects and extending the arm, such as when swinging a tennis racquet or holding a cup of coffee. Despite its name, Tennis Elbow doesn't just occur in tennis players. Anyone who uses the same movements while gripping items can fall victim. This includes golfers, computer users, machinists,

carpenters, mechanics, painters and a host of other professions and activities. When muscles are strained or overused, they become inflamed, and painful to the touch.

Inflammation can also occur from direct injury, such as bangs and bumps. In these cases, muscles generally tear, causing pain and swelling, and recurrence is common.

Inflammation can also occur without definite cause, though this is rarely the case. Arthritis, rheumatism and gout have sometimes caused Tennis Elbow. Persons who suffer neck problems or nerve disorders are also at risk of developing Tennis Elbow.

Other causes of Tennis Elbow include incorrect grips, poor hitting positions, using a metal framed tennis racquet, improperly carrying a briefcase or other heavy object, or spending too much time using isolated muscle groups in the elbow area.

SYMPTOMS

Recurring pain on the outside of upper forearm.

Pain immediately below the bend in the elbow.

Pain that radiates from the elbow to the wrist.

Difficulty or pain when extending forearm.

Numbness or tingling in shoulder, elbow or wrist.

Stiffness that restricts movement of elbow.

PREVENTION

STRETCHING is the easiest way to avoid Tennis Elbow and other muscle injuries. Allow yourself 15-minutes of stretching time before exercising or overusing elbow muscles. Make certain arm muscles are thoroughly warmed before beginning more strenuous activity.

TAKE BREAKS. Resting overused muscles when pain first appears will help to avoid serious injury. If Tennis Elbow is suffered as a result of computer usage, handling tools or similar activities, allow yourself 15-minutes of rest time every few hours. Relax muscles during this time by allowing your arms to dangle at your sides. Before returning to work, stretch the arms out in front of your body, over your head and behind your back.

LIFT heavy objects with your palms facing your body. This will put less strain on the elbow region.

STRENGTHEN overused muscles with exercise or hand and wrist weights. Cock your elbow and with palms down, repeatedly bend your wrist up and down.

SWIVELING exercises are another effective way to strengthen muscles. Sit in a chair with your feet flat on the ground. Hold a heavy object (like a hammer) in your hand. Place your right elbow against your right side. Lift the forearm until it's parallel with the floor. Twist your wrist 10 times, using the same motion as you would to turn a combination lock. Repeat with the other hand.

WARNING

Chronic inflammation of the tendons can lead to permanent injury and disability. If pain persists for more than a few days or at home treatment fails to show improvement, contact your doctor.

TREATMENT

Discontinuing activities that cause the pain is the first step to proper treatment of Lateral Epicondylitis. Using the R.I.C.E. method (rest, ice, compression and elevation) of acute injury treatment is extremely helpful to reduce pain and swelling. Icing the elbow for 10-15 minutes at a time will decrease the inflammation and swelling and relieve pain. Wrapping the forearm near the elbow may help protect the injured muscles as they are healing.

Seeing a physical therapist may be indicated if the pain doesn't subside. Physical therapists can use ultrasound or other modalities to help heal the damage of an injury. Additionally, they may prescribe flexibility and strengthening exercises to allow you to return to the activity. In some cases, a wrist splint or brace may be recommended.

ICE. If you suddenly develop pain in the elbow region, pack your arm in ice immediately to reduce swelling. This will often help to relieve pain, as well.

REST. It's important, especially if you have tears to muscles and tendons, to rest the arm completely. Do not continue activities, which over use or place unneeded strain on the elbow for 1-4 weeks.

HEAT therapy helps to reduce pain, as does ultrasound and physiotherapy treatments. Applying moist heat for up to 3-hours, twice daily will help to keep your arm at rest and make you more comfortable.

ANTI-INFLAMMATORY drugs can be used for the treatment of pain and inflammation.

SEVERE cases sometimes require an injection of steroids to the affected area. See your doctor for more information.

BRACES are sold over-the-counter in many shops and drugstores. Braces can help to isolate muscles and reduce the amount of range elbow muscles can use.

CREAMS, which warm joints, work well to reduce pain and inflammation. Topical ointments specifically designed to treat Tennis Elbow are now available over-the-counter.

SURGERY is sometimes performed when general measures fail to reduce the pain and suffering of Tennis Elbow. Surgery for this condition is rare, but can be done. Surgery consists of cutting the main tendon loose and reshaping the rounded bump of your elbow. Other surgical techniques remove granulated tissue or repair tissue altogether.

Knee Injuries

What is jumper's knee?

Jumper's knee, also known as patellar tendonitis, is a condition characterized by inflammation of the patellar tendon, which connects the kneecap to shin bone (tibia). The condition may be caused by overuse of the knee joint, such as frequent jumping on hard surfaces.

What are the symptoms of jumper's knee?

The following are the most common symptoms of jumper's knee. However, each individual may experience symptoms differently. Symptoms may include:

- pain and tenderness around the patellar tendon
- swelling
- pain with jumping, running, or walking
- pain with bending or straightening the leg

- tenderness behind the kneecap

The symptoms of jumper's knee may resemble other conditions or medical problems. Always consult your physician for a diagnosis.

How is jumper's knee diagnosed?

In addition to a complete medical history and physical examination, diagnostic procedures for jumper's knee may include a radiograph of the knee. This would involve a negative image of the knee, taken with photographic film, using exposure to x-rays or gamma rays passing through matter or tissue in the body.

What the athlete can do depends on the extent or grade of the injury:

Grade 1: Pain only after training

- Continue training but apply ice or cold therapy to the injury after each training session.
- Wear a heat retainer or support.
- See a sports injury specialist / therapist who can apply sports massage techniques and advise on rehabilitation. An eccentric strengthening program is generally recommended.

Grade 2: Pain before and after exercise but pain reduces once warmed up.

- Modify training activities to reduce the load on the tendon. Stop jumping or sprinting activities and replace them with steady running or swimming / running in water if necessary.
- See a sports injury specialist / therapist who can apply sports massage techniques and advise on rehabilitation.

Grade 3: Pain during activity which prevents you from training / performing at your best.

- Rest completely from the aggravating activity. Replace it with swimming / running in water (if pain allows).
- See a sports injury specialist / therapist who can apply sports massage techniques and advise on rehabilitation.

Grade 4: Pain during every day activities which may or may not be getting worse.

- Rest for a long period of time (at least 3 months!).
- See a sports injury specialist / therapist who can apply sports massage techniques and advise on rehabilitation.
- If the knee does not respond to rehabilitation then consult an Orthopaedic Surgeon as surgery may be required.

Treatment for jumper's knee:

Your physician based on will determine specific treatment for jumper's knee:

- your age, overall health, and medical history
- extent of the condition
- your tolerance for specific medications, procedures, or therapies
- expectations for the course of the condition

- your opinion or preference

The best course of treatment for jumper's knee is to discontinue any activity that is causing the condition, until the injury is healed. Other treatment may include:

- nonsteroidal anti-inflammatory medications
- rest
- ice pack application (to reduce swelling)
- stretching and strengthening exercises

Inflammation of the quadriceps insertion

What is inflammation of the quadriceps insertion?

The insertion of a muscle is the point where it attaches to the bone. The quadriceps muscles insert at the top of the kneecap. Over use can cause the tendon where they insert to become inflamed.

What are the symptoms?

- Pain during and after exercise. If you contract your quads with your leg straight you might also get pain.
- Pain can also be felt when pressing in along the top of the kneecap.
- Stiffness the day after training can also occur.
- Pain when standing from a crouched position.

What you the athlete do:

- Apply R.I.C.E. (Rest, Ice, Compress, Elevate).
- Apply heat and use a heat retainer.
- Stretch the quadriceps muscles.
- See a sports injury professional who can advise on rehabilitation.

A Sports Injury Specialist or Doctor might:

- Prescribe anti-inflammatory medication (e.g. Ibuprofen).
- Use sports massage techniques.
- Apply a plaster cast for some weeks.
- Give you a steroid injection.

Stretching the quadriceps is a very important part of rehabilitation of this injury and must not be neglected. Rest is unfortunately also important. If you do not rest, it will not get better!

Inflammation of the hamstring tendons

What is inflammation of the hamstring tendons?

The hamstring muscles consist of the Biceps femoris, Semitendinosus and Semimembranosus. These muscles are used to bend (flex) the knee. Inflammation of these muscles can result from a partial rupture that has not healed properly or through overuse, particularly accelerating and decelerating.

What are the symptoms?

- Tenderness and swelling over the bit where the tendon inserts onto the bone.
- Pain when you try to bend the knee against resistance.
- Stiffness after exercise.

What can the athlete do?

- Rest and apply ice / cold therapy.
- See a sports injury professional who can advise on treatment and rehabilitation.

What can a sports injury specialist do?

- Prescribe anti-inflammatory medication such as ibuprofen.
- Apply ultrasound or laser treatment.
- Prescribe a full rehabilitation program consisting of pain reduction, stretching, strengthening and sports massage techniques.

Muscle cramps

A cramp is a sudden muscle contraction. Cramps occur in muscles when they are overstressed. To avoid overstressing muscles, warm up before any vigorous activity and avoid sudden increases in your exercise levels. Cramps can also be caused by dehydration. Be sure to drink plenty of fluids before, during, and after you exercise.

If you experience a muscle cramp, take the weight off the muscle. Slowly place it in a position where the pain is minimal. Very gently, massage the muscle area to promote the flow of blood. Although a severe muscle cramp can be very painful, there is rarely permanent damage.

ONE OR MORE OF THE FOLLOWING MAY CAUSE THESE CRAMPS OR SPASMS:

- * working a muscle too hard
- * staying in the same position too long
- * not drinking enough water while exercising or working
- * doing a new activity that your muscles are not used to
- * poor nutrition
- * not stretching before and after a physical activity and
- * poor circulation to the muscle

Regular exercise and drinking plenty of fluids will prevent most of this type of muscle cramping.

Sometimes muscle cramps or spasms mean you have a more serious medical problem. You may need immediate medical attention.

SEE YOUR HEALTHCARE PROVIDER IF YOU HAVE ANY OF THE FOLLOWING:

- * frequent muscle cramps or spasms
- * cramps in the abdominal area
- * muscle cramps after overheating or

* cramps or spasm that do not relax

SOME TREATMENTS FOR MUSCLE SPASM AND CRAMPS INCLUDE:

* gentle massage to the cramped muscle

* stretch the muscle out of the spasm carefully and slowly

* alternate heat and cold on the muscle for 1 to 2 minutes for a total of 15 minutes, then massage and stretch again

- avoid exercising muscles that cramp repeatedly until your healthcare provider evaluates you

Bruises

WHAT YOU SHOULD KNOW

A bruise, known medically as a contusion is an injury that does not break the skin. A bruise may take 2 or 3 weeks to heal.

Causes

A blow that breaks small blood vessels under the skin.

Signs/Symptoms

Bleeding under the skin causes it to turn black and blue. As the bruise heals the skin color changes from purple to green to yellow. Bruises may be accompanied by pain or swelling.

Care

Wrapping the injury with an ace wrap may slow the bleeding under the skin. If the bruise is really bad, you may need a splint to keep the area from moving during the healing process.

WHAT YOU SHOULD DO

- You may continue your normal daily activities, but you should rest the injured area for a few days.
- Apply ice to the injury for 15 to 20 minutes each hour for the first 1 to 2 days. Put the ice in a plastic bag and place a towel between the bag of ice and your skin.
- After the first 1 to 2 days, you may put heat on the injury to help ease the pain. Use a heating pad (set on low), a whirlpool bath, or warm, moist towels for 15 to 20 minutes every hour for 48 hours.
- For 48 hours, keep the injury lifted above the level of your heart whenever possible to reduce pain and swelling.
- If you have a splint, wear it until your doctor says you may take it off or until your follow-up visit. If the fingers or toes near the bruise become numb or tingly, you may need to loosen the splint. Call your doctor for instructions if you are not sure how.
- You may use over-the-counter medicines to relieve the pain. Always take as directed.

Call Your Doctor If...

- The pain becomes worse.
- You develop a high temperature.
- The swelling around the bruise gets worse.
- You see redness or red lines near the bruise.

What should you take?

Most athletes will use an over-the-counter (OTC) pain reliever at some time. These drugs, in fact, are some of the most widely used and least understood of all drugs. They are reliable and effective when used

appropriately for moderate pain relief. Their great advantage over prescription medication is that they are non-addictive. There are a number of brand name pain relievers that are marketed (and formulated) for a variety of uses. Some people think they are all the same, while others may believe that each pill works differently. The truth lies somewhere in between.

There are actually only two basic types of over-the-counter pain relievers:

1. NSAIDs (nonsteroidal anti-inflammatory drugs). These include aspirin, ibuprofen (Advil and Motrin), naproxen sodium (Aleve), and ketoprofen (Orudis KT)
2. Acetaminophen (Tylenol and Panadol).

NSAIDs vs. Acetaminophen

NSAIDs

NSAIDs prevent the body from manufacturing prostaglandins, substances that are produced naturally by the body. Prostaglandins have many functions, such as protecting the stomach lining, but some also cause pain and inflammation. NSAIDs work by blocking all prostaglandins. So while they block those that cause pain, they also block those that protect the stomach lining and can, therefore, cause stomach upset or gastrointestinal bleeding in some people. The risk increases with long-term use of NSAIDs. NSAIDs are effective at reducing aches, pain, fever, and inflammation.

Aspirin is classified as an NSAID, but its unique properties warrant special mention. Aspirin is an inexpensive, effective, nonaddicting pain reliever that reduces inflammation and fever.

It has also been shown to help prevent heart attacks, and may well have other long-term benefits, including reducing colon cancer risk. It acts as a blood thinner and, therefore, can prevent blood clots.

Aspirin is not without its risks, though. Children under 16 who have chickenpox or flu symptoms, due to the risk of Reye's syndrome, should not take it. It is also not recommended for those with stomach problems, ulcers, kidney disease, bleeding disorders or aspirin allergies.

Acetaminophen

Acetaminophen (Tylenol and Panadol), is believed to act on the pain centers in the brain. They are the safest pain relievers because they don't block prostaglandins, and therefore don't cause any GI bleeding. Acetaminophen reduces pain and fever; however, it is not effective at reducing inflammation. It is ideal for treating osteoarthritis, or treating those with high blood pressure. High doses of acetaminophen may damage the liver, and rare reactions have been seen, such as rash and urinary problems.

What's right for you?

It is always best to consult with your personal physician before you need to take a pain reliever. And if you take medications for any other medical condition (such as high blood pressure, arthritis, diabetes, ulcer or even acne), you should understand the possible interactions and side effect, so be sure to check with your physician or pharmacist before taking an OTC pain reliever.

In general, Ibuprofen (Advil, Motrin), Naproxen sodium (Aleve) or ketoprofen (Orudis KT) are the over-the-counter pain reliever of choice for anyone suffering from a sports injury that results in pain, swelling and inflammation. Buy generic, if possible. Generic brands work in the same manner and must meet the same standards as the brand-name equivalent, but will save you money. Always follow the label directions and don't exceed the recommended doses. Don't take OTC drugs for more than 10 days, unless you've talked with your doctor or pharmacist first.

*Look inside for your strength, then
share that strength with others.*

Disclaimer: This content is subject to change as new health information becomes available. The information provided is intended to be informative and educational and is not a replacement for professional medical evaluation, advice, diagnosis or treatment by a healthcare professional.

Sources

Wallyball Information Network

WWW.Wally.Ball.Net

Association of United Wallyball Players

WWW.AUWP.ORG

Wallyball International Inc

www.eteamz.com/wallyball/

American Wallyball Association

WWW.Wallyball.Com

"The Official Book of Wallyball"

Co-authored Joe Garcia and Murray Dubin

Tom Wilson's Volleyball Page

www.onlinesports.org/tw/old/index2.html

The Flexibility Factor by Malcolm Brown and June Adamson

*The Advanced Karate Manual by Vince Morris and Aidan
Trimble*

Stretching Scientifically by Thomas Kurz MSc

The Sports Doctor

www.sportsdoctor.com

Thank you to all the wallyball and volleyball players who helped in reviewing this guide

Wallyball Information Network

www.wally.ball.net

Release 5 - 02/2005