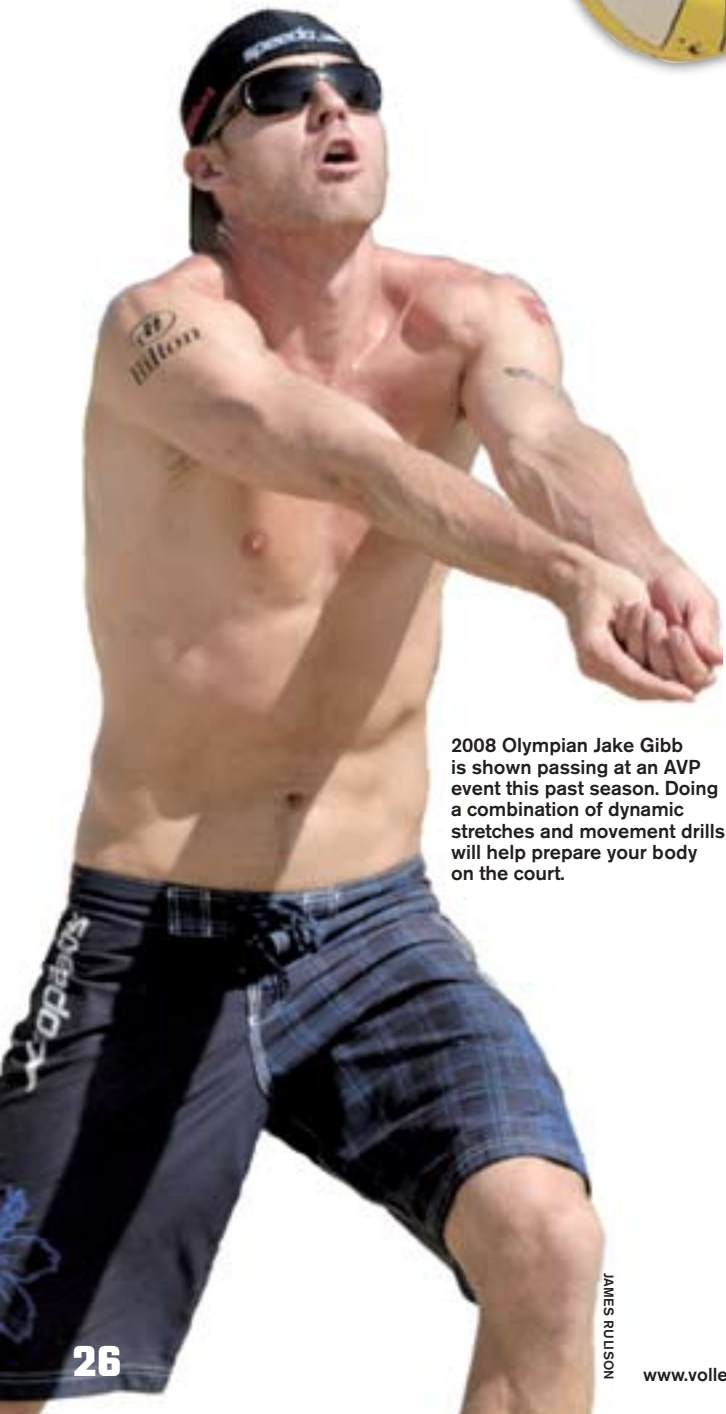


10 Ways To Reduce Injury Risk



2008 Olympian Jake Gibb is shown passing at an AVP event this past season. Doing a combination of dynamic stretches and movement drills will help prepare your body on the court.

THESE TIPS WILL HELP KEEP YOU MOTORING OUT ON THE COURT.

BY MIKE CAZA

Over 190,000 volleyball-related injuries are reported each year in the United States and estimates say approximately 60 percent of those are preventable with a proper training program.

Investing in a proper training program can mean more time practicing and playing volleyball rather than sitting in a doctor's office, going to physical therapy three days a week to rehabilitate an injury and watching out-of-pocket expenses add up and confidence levels plummet.

The good news is many of these injuries are preventable. Here are 10 ways to reduce your risk of volleyball injuries.

1 Warm Up Dynamically, Not Passively

It is essential to warm-up dynamically before practices and games by doing a combination of dynamic stretches and movement drills to prepare the body for the demands of volleyball. Sitting on the ground performing slow, static stretches ranging from 10-30 seconds will predispose athletes to injury due to the lack of neuromuscular activation.

If you think about jumping as an example, the neuromuscular system has to fire rapidly in order for the athlete to effectively jump high. Sitting on the ground and passively stretching does not stimulate the neuromuscular system specific to what is required in a movement like jumping.

Training Tip: Keep your legs relatively straight and roll through your ankles from heel to toe in a skipping motion the length of the court. You can add in arm swings across your body at the same time. This will actively stretch the lower leg and shoulder area. Go down and back twice.

2 Proper Athletic Position

I see a lot of volleyball players that have a tough time getting into a good athletic position. A lot of athletes tend to round their backs when lowering before a jump or when bumping the ball. This places extra stress in the lower back joints and reduces power output on the court. If the lower back is constantly rounding, eventually this can lead to injury.

Training Tip: Bend from your waist rather than your lower back and then flex your knees. This will keep your back in a neutral position.

3 Build Core Strength

If you took a garden hose, pushed the handle and then saw leaks in the hose there would be less water pressure coming out of the end. An athlete with a weak core is similar to the garden hose in the sense there will be less power coming out of the legs and arms due to the weak links in the core.

The body will compensate for this weakness by placing more stress in the lower back, shoulder, knee and ankle joints as a result.

Training Tip: A good core exercise is to get into your athletic position, tighten your abs and then take a 5-pound dumbbell or medicine ball and swing it up and down quickly from your thighs to your shoulders. Keep your abs tight and braced. The swinging motion should be done quickly, which forces the core muscles to stabilize. Perform 25 reps. Swinging up and down is 1 set (repeat 2-3 sets). ▶



Hawaii native Lindsey Berg helped Team USA to a silver medal at the 2008 Olympics. Adequate rest is critical in a balanced training program.

4 Increase Leg & Hip Strength

Being able to jump higher, hit harder and move quicker is a byproduct of leg strength. Your legs are always in contact with the ground in volleyball and are your base of strength for virtually every volleyball skill. I see so many players that are weak in their legs and they wonder why their knees and lower back hurt. Think about driving a car with flat tires all the time. The car is weak, vulnerable to breakdown and can't perform at a high level. If you want to reduce your risk of injuries and improve athleticism while executing your volleyball skills, get your legs and hips stronger.

Training Tip: Lie on your back with your knees bent at 90 degrees and feet flat on the floor under your knees. In one motion, push through your heels and lift your butt off the ground. Return back to the starting position and repeat 10 times. This is a good exercise to strengthen the hamstrings.

5 Take Time Off

Take 1 day off each week and 3 days off every 2 months. I have worked with several athletes that train seven days a week. Their bodies cannot recover due to overtaxing their central nervous system. Eventually something has to give and injury results. In order to truly develop as an athlete, it is important to understand the value of rest and how it fits into a balanced training program. More is not always better.

6 Sleep 8 Hours A Night

During sleep, the body replenishes itself and forms new muscle tissue while getting back into balance. Athletes that get really sore or feel sluggish the day after a practice or game may be seeing signs that their bodies did not recover sufficiently due to lack of sleep. Don't underestimate the importance of sleep because a lot of chemical reactions take place in your body during sleep that is vital to your progress as an athlete.

7 Improve Muscle Elasticity

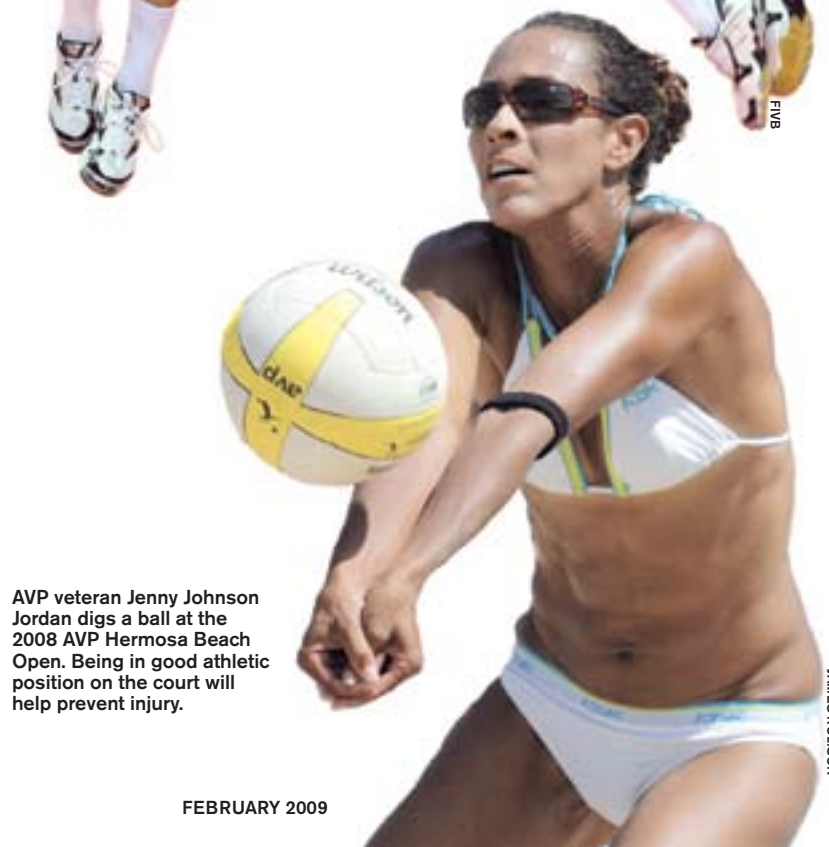
You can improve the explosiveness, or what I like to call "elasticity" of muscles by doing plyometrics 2 days a week. Plyometrics are highly intense jumping exercises that when done properly can improve the rate the muscles stretch and shorten (elasticity) leading to better speed and jumping power.

If you observe volleyball players that look like they are playing with steel toe boots on, they need to improve muscle elasticity. Even more important is having the ability to decelerate the body on landing and then re-accelerating into another jump or movement on the court. Volleyball players that lack the ability to decelerate their body with good elasticity put more stress on the joints and that eventually leads to injury.

Training Tip: Try jumping rope 2 days a week for about 10-15 minutes. Perform 20, 40, 60, 80 and 100 revolutions to start. Rest for about 20 seconds between each set and then work back down (100, 80, etc.). Take 2 days off between jump-rope days.



Kevin Hansen is shown setting Ryan Millar at the 2008 Olympics in Beijing.



AVP veteran Jenny Johnson Jordan digs a ball at the 2008 AVP Hermosa Beach Open. Being in good athletic position on the court will help prevent injury.

8 Increase Hip and Quadriceps Stretching

The nature of volleyball loads the quadriceps and hips more than the hamstrings, so for this reason, these muscles usually get tight in volleyball players. I have seen a lot of volleyball players that stretch their hamstrings so much they become too flexible or hypermobile. Being too flexible and too inflexible can lead to injuries, so as a general rule of thumb, spend more time stretching the tight areas and less on the flexible areas in an effort to create better muscle balance.

Training Tip: A good way to stretch your quadriceps is to lie on your side, pull your bottom knee up toward your rib cage and then grab your top ankle with your top hand and pull your heel into your butt. Reach the leg back until you feel a good stretch in the quadriceps.

9 Strengthen Shoulders And Arms

If you had a linked chain and pulled out one of the links from the chain, it would affect the chain as a whole. Think of your entire arm and shoulder complex as a linked chain. Your arm and shoulder complex function as one unit. As an example, if the arms are strong and the shoulders are weak, or vice versa, more stress is placed on the shoulder and elbow joints which can lead to injury. It is important to build strength throughout the entire arm and shoulder complex to improve hitting and reduce injury risks associated with strength imbalances and overall weakness.

Training Tip: An easy way to start strengthening your wrist

and hand is to take a tennis ball and squeeze it 20 times in each hand. Perform 3 sets on each hand 2 to 3 days each week.

10 Eat Protein

Eat approximately 20 grams of protein right after a practice or game. Playing volleyball stresses and breaks down muscle tissue. If it is not replenished, losses in strength and speed can occur. Your muscle is protein, so it is important to ingest a good source of protein within 1 hour after playing to jumpstart the recovery process.

Training Tip: Pack a protein bar in your bag before you leave for practice so you can have it immediately afterward. Chocolate milk is another good source of protein and carbohydrates that is a good recovery drink after practices and games. ■



Mike Caza is the owner and director of performance at Premier Sport Conditioning in Twinsburg, Ohio. A world-class high jumper (7'5"), Mike is the creator of Breakthrough Vertical Jump Training, a 12-week program designed to enhance vertical jumping ability. For more information, visit www.mikecaza.com.