

101 Ways to Stay in the Game

The best way to fight sports injuries is to avoid them entirely. Here's how to keep your head, hide, and hamstrings ready for every game

--Reporting by Matt Bean, Kate Dailey, Scott Quill, Phillip Rhodes, and David Schipper

They shoot lame horses. Lame athletes, they send to physical therapy. That's why we're fans of not getting hurt in the first place. Here are 101 ways to reach the finish line and, best of all, the bar--to brag about it. You don't want to waste your best stories on an E.R. nurse, after all.

1. Stop and start to fight muscle strains. Sprint-based sports like baseball and basketball churn out a lot of lower-body muscle strains. The fix: stop-and-start drills. "If you train your body to do something that's specific to your sport, then that training should take you through a full season," says Arizona Diamondbacks veteran shortstop Royce Clayton. Try his drill: Run 40 yards at about 70 percent of your maximum effort, slow to a jog for 10 yards, then pick it up again for another 40 yards. Repeat four or five times. You'll be conditioned to sprint to first base, slow down, and charge for second, or run out for a pass if your teammate steals the basketball. There's glory for the first man downcourt.



2. Crouch, tiger. Seventy percent of ACL injuries occur when players are pivoting or landing awkwardly after a jump. Hitting the ground with your knees bent instead of nearly straight greatly reduces the risk, according to a report published in the Journal of the American Academy of Orthopaedic Surgeons.

3. Figure the heatstroke equation. Heatstroke harms many an unwary athlete. Do the math: If the temperature and relative humidity combined equal 160, stay cool and hydrated, says Dave Janda, M.D., director of the Institute for Preventative Sports Medicine. If the number tops 180, exercise indoors, or move to Canada.

4. Protect your nose. Once you wipe out, your surfboard becomes a weapon--boards inflict 55 percent of all surfing injuries. Make it less dangerous by applying a rubber "nose guard" to your board (\$20, ronjons.com). Acting as a front bumper, it wraps around and caps the pointy front end of your board. "If it hits you, it doesn't really hurt," says pro windsurfer Tristan Boxford.

5. Replace your funky equipment. Stressing joints that are out of alignment, also referred to as overuse, is a major cause of sports injuries. Even a bike or racket that's not properly sized for you can cause improper movement patterns that spawn overuse injuries, says Mark Verstegen, M.S., C.S.C.S., director of performance for the NFL Players Association. The extra hundred bucks you spend at the pro shop can save you 10 times that at the orthopedic doctor's office. The choice is yours, sport.

6. Correct your funky swing.

"If your technique isn't right, you'll predispose your body to injury," says Edward Laskowski, M.D., codirector of the Mayo Clinic sports medicine center. That's why you need to seek advice from

the golf pro, the basketball coach, the trainer, the mountain guide. M.J. and Shaq didn't win NBA titles until they met Phil Jackson, after all; you're only as good as the advice you get.

#7-13

DOCTOR YOUR DIET

Stock the fridge and you won't need to overwork the medicine cabinet

Just add water.> "Seventy-five percent of muscle mass is made up of fluid," says Jackie Berning, R.D., nutritional consultant for the Cleveland Indians and Denver Broncos. If you don't drink enough, your risk of strains, sprains, and pulled muscles escalates.

Change your oil.> Omega-3 fatty acids fight inflammation just like aspirin. (And the sources--walnuts, salmon--taste better, too.) That means less pain, more gains.

Go on green.> Leafy green vegetables and citrus fruit boost the blood's alkaline levels, which helps heal wounds faster, says Gay Riley, M.S., R.D., C.C.N., author of *The Pocket Personal Trainer*. They'll also make your blood less acidic, which cuts inflammation.

Give yourself a "C".> "Collagen is abundant in connective tissues, tendons, bones, and muscles," says Riley. Vitamin C is a key component of your body's collagen recipe.

Give yourself another "C": Calcium.> A study from Brigham and Women's Hospital found that injured athletes typically consumed 25 to 40 percent less calcium than their uninjured counterparts--i.e., the winners.

Do it your whey.> Glutathione, an antioxidant, protects your body in many ways, says Riley, and whey powder helps you make more of it. Whey is also the most readily absorbed source of branched-chain amino acids--microscopic muscle-repair kits.

Chug a Coke (or antioxidant-packed iced tea).> In a University of Georgia study, cyclists who downed 10 milligrams of caffeine per kilogram of body weight before a 30-minute ride had significantly less thigh pain than those who took a placebo.

14. If your sport is multidirectional, your warmup should be, too. Think about the wild gyrations you perform during one turnover from offense to defense in basketball. If your groin, back, and leg muscles aren't ready, you'll pull up in pain. Before the game, run backward, forward, sideways, and in quick combos of all directions.

15. Videotape your mistakes, just like Pam and Paris. The camera knows and sees all, Dr. Laskowski says. "But only when you have a knowledgeable person to interpret it." Which is where that coach or pro comes in.

16. Swing a racket with your legs. "People forget to use their legs when they're hitting their serve or other strokes," says Doug Spreen, A.T.C., trainer of tennis pro Andy Roddick. For instance, when you toss the ball up for a serve, you'll stress your lower back if you're not using your legs. Bend your knees and push up and through the serve with your legs, Spreen says. You'll gather power from the strongest part of your body.

17. Loosen your shoulders. An injured rotator cuff can shut down a shoulder, says Spreen, who suggests adding external- and internal-rotation stretching to protect your cuffs. External: Stand with your right arm straight out to the side and parallel to the floor. Bend your elbow so your arm

forms a right angle and your forearm points straight up. Keeping your elbow in place, move your hand back until you feel slight tension in your shoulder. Internal: Same as above, except that your forearm should point straight down toward the floor at the start. Hold each stretch for 30 seconds.

18. Hit the pool early. Inhaling organic material, such as hair, skin, and urine, can cause breathing problems. Schedule your lap sessions early: Fewer people in the pool means less splashing, and less of their debris left behind in the water.

19. Arm yourself to the teeth. Men who wear custom-fitted mouth guards reduce their risk of dental injuries by 82 percent, according to a study from the University of North Carolina at Chapel Hill. Lay out the money for a custom-fitted guard and it'll last for years. So will your smile.

20. Smooth out tendon problems. Ask your doctor about ultrasound needle therapy. The minimally invasive procedure uses ultrasound to guide a needle, which doctors use to smooth bone, break up calcifications, and fix scar tissue. Sixty-five percent of patients who underwent the therapy saw improvement, and a session takes only 5 to 15 minutes.

21. Buy running shoes after work. Shop at night, when your feet are swollen after a day of pounding, advises Chad Asplund, M.D., a physician at Eisenhower Army Medical Center in Georgia and a running-shoe researcher. It approximates how big your feet will be after the first 3 miles of your run.

22. Exercise off road. Unstable surfaces train stable ankles.

23. Beat the heat. Humid environments--i.e., anywhere south of, say, Maine and east of Colorado--only make asthma worse, as Pittsburgh Steelers running back Jerome Bettis well knows. He passed out on the field in 1997 from an asthma attack. "You can't just react to the problem. You have to make sure it's controlled," he says. Even though he can't change midday practice times, you can. Run early. Temperatures are lower, and so are the humidity and ozone levels that can induce an attack. (Find more tips online at lungusa.org.)

#24–27

POP THESE, STOP PAIN

Ease aches before they begin

Control Inflammation

Supplement: Bromelain

Daily amount: 120 milligrams (mg)

"It's almost like putting a chemical cold pack on a bruise or sprain," says Chris Foley, M.D., a professor at the University of Minnesota college of pharmacy. Extremely safe and inexpensive, bromelain has been shown to reduce swelling, bruising, healing time, and pain following physical injuries. A 2002 British study found that it relieved mild knee pain as well.

Shore Up Weak Tissue

Supplement: Glucosamine sulfate Daily amount: 1,500 mg

Think of it as adding cement to a creaky foundation, says David Grotto, R.D., director of nutrition at the Block Center for Integrative Cancer Care. Glucosamine creates polymers called glucosaminoglycans (GAG) that build and strengthen the tissues, preventing tears. Try pairing it with chondroitin, which promotes GAG formation and inhibits degradation enzymes in connective tissue.

Limit Oxidation

Supplement: Green-tea extract

Daily amount: Up to 800 mg

When athletes train and compete, there's a whole lot of cellular combustion taking place. "That combustion has by-products, and if you're not taking care of those by-products, they can be harmful over time," says Dr. Foley, who warns that this could even lead to a higher tendency toward cancer. Antioxidants from green tea can manage your body's oxidative stress.

Encourage Recovery

Supplement: SAM-e

Daily amount: Work up to 1,200 mg

Methylation--a chemical process that helps your body build connective tissue--is important in muscle recovery, inflammation control, and muscle support and stability, says Dr. Foley. If you take NSAIDs (e.g., aspirin and ibuprofen), all they do is block postworkout inflammation. Pop SAM-e instead; it fuels methylation to provide benefits beyond the effect of NSAIDs.

28. Face your attacker. In a lot of sports, it's not whether you'll be nailed, it's whether you'll be able to absorb the blow. Bettis does a footwork drill based on a Latin dance move--the carioca--to maintain his agility and to face linemen squarely. Try it: Move laterally along a straight line, using crossover steps. Facing forward with your shoulders squared and both hands held out in front as if to absorb a tackle, swivel your hips from side to side, rotating to face the sideline. "The more relaxed your hips are, the more responsive they are, and the better your body's going to react to a hit," Bettis says.

29. Assess the course. It doesn't matter whether you're biking, paddling, or skiing--take a dry run down any route first. "You see a lot of paddlers injured because they just don't know what they're getting into," says Tao Berman, a world-class kayaker who holds the record for running the highest waterfall (98.4 feet) in a kayak. "If I look at a fall and think I'm not going to be able to control the way I land, then I walk away." As should you.

30. Take the path of least resistance. Crash landings require stuntmanlike instincts, whether you're smacking the water or the turf. "You want to be as aerodynamic as possible when you hit," says Berman. "Just before impact, I lean forward against the front of my kayak so I don't take a huge hit to my chest as I reenter the water." Use the same technique on a bike or in touch football: "I don't stop short; I just go with the fall and let my body roll through the impact," he says.

31. Practice hard. Performance anxiety narrows your peripheral vision by as much as 3 degrees and slows reaction time by 119 milliseconds, according to the Journal of Sports Sciences. When the going gets tough, the tough rely on the skills they've practiced. It helps keep them cool under pressure, widening their range of vision so they see that linebacker coming and react within milliseconds.

32. Socialize after exercise. Lack of social support upped risk of injury in a University of Washington study.

33. Use a light grip. Gripping a golf club should feel like holding a bird. "Most wrist and elbow injuries occur because people are not gripping the club lightly enough," says Randy Myers, director of fitness at Sea Island Golf Club, in Georgia. To get the feel, swing two clubs at once--it can't be done with a tight grip.

34. Go ahead, sprinkle salt. Especially the night before your August century ride. Extra sodium helps you retain water and stay hydrated while exercising in high temperatures. But stay away from salt pills--they may do more harm to your blood pressure than good for your race.

35. Try this before a triathlon. To avoid training strains, two-time world champion Ironman Tim DeBoom builds endurance by concentrating on the bike--a low-impact way to push yourself. When the race starts in a mad, watery scramble, he gives the competition some distance: "Just pull out to the side and be a little less aggressive." That way, you won't have to learn by broken bones in the face--as DeBoom did.

36. Cancel the victory cigars. A study of army recruits found that smokers were nearly 50 percent more likely than clean-lunged privates to suffer fractures, sprains, and other injuries. Smoking may interfere with wound healing and muscle repair.

37. Slide safely into third. Aim up and over the side of the bag, advises Robert Frederick, M.D., team physician for the Philadelphia Phillies. "Slide over it so your foot or hand is not catching on it." If your slide comes to a sudden stop, your joints take most of the impact.

38. And avoid the guy sliding into second. "Usually, when you see a guy get flipped, it's because he went outside the bag to make the throw," says shortstop Royce Clayton. "If you can't jump and throw, use the bag to protect you," Clayton says. Stand directly behind the bag. "You may not be able to throw [to turn a double play], but at least he's not going to get a piece of you."

39. Check the ozone levels. When you hear the words "ozone alert day," move your workout indoors. A study in the *Lancet* found that those who exercise in high ozone conditions are three times more likely to develop asthma than those who skip workouts on those days.

40. Don't run in wet shoes. Soggy midsoles have 40 to 50 percent less shock-absorbing capability than dry sneaks, Dr. Asplund says. But don't toss your shoes in the dryer; heat can degrade cushioning and support components.

41. Know how to fall. Learning to snowboard is a snap--for your wrists. When you fall, let your butt and back share the impact with your forearms. And wear wrist guards; they may not look sexy, but neither will a cast and sling. The coolest we've seen: K2's new EXO 6.0 (\$10; k2skates.com).

42. Buy a softer hardball. The RIF5SL baseball (\$5) reduces injury risk by 23 percent. Little League Baseball's governing body has approved its use, and it's optional at all age levels. When researchers at Tufts University removed the ball's labeling, few players could tell the difference between the softer ball and the standard ones.

43. Unwind the ankle tape. It loosens after 10 minutes of play, according to the *American Journal of Sports Medicine*. Researchers found that those who wore ankle braces returned to full participation after an injury 2 days sooner than those who were taped.

44. Brace that sprain. And keep it braced for at least 6 months, advises the National Center for Injury Prevention and Control. Most foot and ankle injuries are caused by incomplete healing of prior hurts. Chuck Kimmel, president of the National Athletic Trainers' Association, recommends a lightweight lace-up brace (try McDavid's, \$25, mcdavidusa.com).

45. A brace isn't a cure. Warning: A University of Iowa study found that athletes who wore ankle braces were 61 percent more likely to be injured. Lesson: If you brace a bum wheel, it's still bum. Before you play hard, heal first.

46. Balance your muscles. Your dominant side tends to be stronger, leading to muscular imbalances, which can result in injuries, Dr. Laskowski says. Lift with dumbbells, which isolate each side and balance weaknesses.

47. Avoid cart-required golf courses. Walking the course will keep your back and hips loose between shots, helping prevent muscle pulls and strains, Myers says.



#48–52

SHOCK ABSORBERS

This sports gear takes a beating so you don't have to

By Matt Bean

Sprint Uphill

This treadmill tilts to a full 50 percent incline, boosting your workout while cutting knee-jarring impact. NordicTrack Incline Trainer X10, \$2,300. nordictrack.com

Run Naturally

Conventional running shoes make you foot muscles lazy. The segmented soles on these training aids are designed to mimic the experience of barefoot running—without all the tetanus—which helps you build a stronger stride. Nike Free running shoes, \$85. nike.com

Drive Better

Thermoplastic inserts in these Callaway irons absorb vibration from the titanium clubface. The bonus: a crisp feel and more control. Callaway Big Bertha Fusion irons, \$1,280. callawaygolf.com

Lighten the Load

Flex zones built into this racket add control by preventing the vibration that causes stiffer rackets to jar out of alignment with your hand. It'll keep your elbow happy, too. Head Flexpoint racket, \$200. head.com

Ride Longer

Mountain-bike technology smooths the ride in this road warrior. Potholes be damned. Cannondale Synapse road bike, \$3,200 to \$4,400. cannondale.com

53. Stretch your swing muscles. If you refuse to give up the golf cart, Myers suggests using it as a stretching tool: Stand facing the side of the cart, about a foot away. With your knees slightly bent, reach out and grab the handle on the side. Keeping your arms fully extended, sit back so your buttocks and hips extend out away from the cart. You should feel a stretch in the lower part of your back. Hold for 10 seconds. Repeat twice every hole.

54. Give unsexy muscles their due. Men work their chest and biceps, and forget that the shoulder is a balanced joint that needs strong muscles on both sides, says Dr. Frederick. That makes your shoulders more susceptible to muscle strains when you pitch a fastball or slam a serve. For every set of chest presses you do, perform a set of seated rows, as well.

55. Run for your lives! 36% of lightning deaths occur during recreational activities.

56. Buy one pair at a time. According to Dr. Asplund, running shoes lose cushioning--even if they've never been worn--after 1 to 2 years. Once you start wearing them on the road, they'll lose 50 percent of their shock absorption by 250 miles.

57. Play tennis on clay or grass. "Natural surfaces are kinder to your body," says Kathleen Stroia, A.T.C., vice president of sports sciences and medicine for the Sony Ericsson Women's Tennis Association Tour. Plus, soft surfaces absorb less heat, reducing heatstroke risk.

58. Beware eyeball busters. Basketball is responsible for the most eye injuries, according to the University of Michigan Kellogg Eye Center. Our favorite orb protectors: RecSpecs Maxx line (\$100, www.libertyoptical.net), which meet international safety standards without looking too, you know, goggly.

59. Stop the music. Unplug your iPod before starting down the slopes. "[Music] slows you down mentally," says skier Bode Miller, the 2005 World Cup champion. "You need to process what's ahead of you so you have time to avoid danger." Mountain bikers and trail runners should unplug, as well.

60. Work out in water. Swimming is the perfect low-impact alternative to running. But what if you can't stand swimming? Dr. Laskowski recommends weighted-vest running in the pool. It's low impact for your legs, but provides an amazing heart workout. "Even walking around chest-deep is great exercise," he says.

61. Obey the 15-minute rule after a hit to the head. If you've seen stars for that long, you're out of it--the game, that is, says Edward Wojtys, M.D., a professor of surgery at the University of Michigan. You'll need 10 to 14 days to recover. Avoid any activity that's likely to jar your head. (So unload those Ozzfest tickets.)

62. Strap your boys in. A recent study in the *Clinical Journal of Sport Medicine* found that 47 percent of high-school and college male athletes involved in contact sports do not wear any kind of genital protection. The upshot? These Darwin Award winners are less likely to breed and pass on their genes.

63. Antifreeze your lungs. Inhaling freezing air can inflame airways, which may lead to asthma attacks, according to Finnish researchers. In icy weather, consider donning a Polar Wrap (\$30, www.polarwrap.com). It has a built-in device that uses your body heat to warm the air you breathe before it enters your body.

64. Become a multisport warrior. Love your weekly tennis match? It may not love you back. Excessive repetition of motion increases your risk of developing arthritis. The simplest solution: Change your signature serve. Modifying your movement can help you avoid repeated microtears or fractures.

65. Simulate, but don't emulate. Nobody's asking you to quit your favorite sport. But if you want to last at it, bring similar sports into the mix. Take that tennis nut in tip 64: He should adopt a second sport. "You want to cross-train those muscles in a different way so they adapt in a different way," Dr. Laskowski says. Natural pairings: skiing and soccer, swimming and martial arts, running and cycling, tennis and hoops.

66. Train your brain to heal your ankle. Training sensory receptors in your ankles can help prevent recurrent injury, according to research from the Netherlands. Using a wobble board strengthens what the researchers call "proprioception": the subconscious bond between your nerves and the muscles that do your brain's bidding. Try standing on the board for 5 minutes a day--say, while you're reading the sports section. When that becomes easy, balance with your eyes closed. (And listen to sports on your XM handheld.)

67. Train your brain to stay upright. Here's another good reason to invest in a wobble board. "It helps you work on maintaining your sense of balance and keeping your center of gravity low for surfing, says Tristan Boxford. "It also requires you to move your ankles in a similar fashion to what you'll be doing on the water." Simply standing on the board is great practice for sports in which balance is key: skiing, trail running, surfing, golf.

68. Wash your strawberries. Superpowered infections like MRSA are tough to treat with antibiotics, but the wounds they enter through are. Clean all cuts thoroughly with soap and water, apply an antibiotic ointment such as Neosporin, and then keep them covered and dry.

69. Don't overextend yourself on blocks and dunks. "Keep a 15-degree bend in your elbow when going for a block or a dunk," says Tim Grover, owner of Attack Athletics in Chicago and trainer to many NBA players, such as Michael Jordan and Antoine Walker. Overextending your arm makes you prone to injuries.

70. Protect your metatarsals. Add arch supports to your basketball shoes. It'll cut down on pressure on the outer edge of your foot--stress-fracture central. Over-the-counter insoles earn a good grade from the American Orthopaedic Foot and Ankle Society, and they'll save you a hundred bucks compared with custom inserts. Try Montrail's Enduro Stabilizing insoles (\$20, montrail.com).

71. Juggle. Hand-eye coordination means fast reactions, fewer wrenching motions.

72. Eliminate the heel strikes. When you land after a jump, make sure it's toes first, then heel. "If you land either flat-footed or on your heels, you'll be putting a lot of stress on your Achilles tendons and may cause your knees to hyperextend," Grover says.

73. Keep a cool head for a sound body. Researchers found that athletes with high levels of stress off the field are five times more likely to experience an injury than even-keeled people. One instant decompression tactic: Take your dog on a run with you. Pets can help soothe stress.

74. Cold out? Drink more. "Skiing is just like running track," says Bode Miller. The difference: You're wearing a lot more clothes. Your body sweats during activity; if you can see your breath, you're venting moisture. Store a water bladder under your parka so it won't freeze.

75. Show up early at the golf course. Hit a bucket before your next round. "Most amateurs just show up late and rush to the first tee, take a practice swing, and play," Myers says. By gradually warming up for that first strike, you'll guard against incorrect body rotation on your takeaway--the primary cause of golf-related back injuries (and lost balls).

76. Check the lengths of your legs. When researchers at the University of Oulu, Finland, tracked 31 athletes for nearly 23 years, they discovered that 83 percent of those who experienced multiple fractures--that's several breaks that occur over time, not three at once--had different leg lengths. If you have pain in the hip, knee, or ankle, ask your doctor for a leg measurement during your annual physical. Some discrepancies can be solved with corrective insoles; many simply require strengthening hip flexors or loosening tight hamstrings.

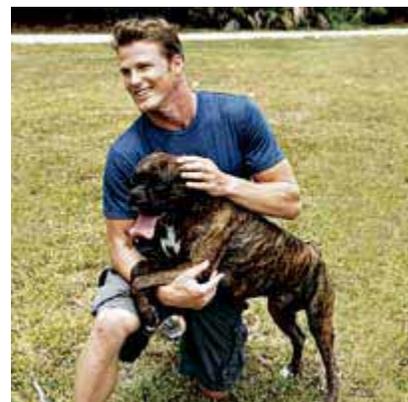
77. Think about lingering concussions. In a study of athletes at the University of Toronto, researchers found that a concussion can cloud an athlete's judgment--and therefore his skills--for up to 21 days after the original bonk.

78. Avoid air-cell hell. Sidestep basketball shoes that have visible air cells in the heels. According to a study published in the *British Journal of Sports Medicine*, these shoes make you four times more likely to injure your ankles because of decreased heel stability. Try the Brand Jordan Team 10/16 (\$110, jumpman23.com) instead. Its footbed is so low that it feels like a dress shoe.

79. Check your water losses. Weigh yourself before and after a long workout in hot weather. If you've lost more than 3 pounds by the time you're finished, you're dehydrated and could be at risk of heatstroke. Invest in a water pack so you can easily sip throughout your workout. Hydrapak's Superfly model (\$40, hydrapak.com) fits unobtrusively against the small of your back.

80. Eliminate fungus. Nail fungus is a serious--and sport-stopping--consequence of running. "Trauma to the toe caused by running can make the nail bed more susceptible to infection," says John Mozena, D.P.M., a marathon runner and a member of the Road Runners Club of America. "Sweaty socks are breeding grounds for fungi." Mitigate the mold-growing conditions with JoxSox (\$7, joxsox.com). They're designed to wick away moisture and circulate air next to the skin, which frustrates fungi.

81. Before every swing, stretch. Try this before each golf shot: Grasp a club in both hands like a handlebar, hold it parallel to the ground, and lift it overhead. Bend forward at the waist with your shoulders as parallel to the ground as possible. With your arms extended, raise the club as far as you can overhead and behind you. It'll keep you from seizing up on the 18th, Mr. DiMarco.



The Prehab Workout

INJURY-PROOFED IN 5 MINUTES

These exercises improve posture, reduce risk of injury, and help you perform better in sports. Aim for eight to 16 repetitions every day. It'll cost you 5 minutes but save months on the DL.

Adapted from *Core Performance*, by Mark Verstegen, M.S., C.S.C.S.

Swiss-Ball Y

Objective: To improve shoulder stability and increase scapular (upper-back) strength

Lie on a Swiss ball with your back flat and your chest off the ball. Your arms should hang down (thumbs forward). Glide your shoulder blades back and down, and lift your arms till you form a Y. Return to the starting position.



Swiss-Ball T

Objective: To improve shoulder stability and increase scapular strength

Same starting position as for the Y, but your palms should face forward. Pull your shoulder blades in toward your spine and extend your arms straight to the sides to create a T with your torso. Return to the starting position.



Swiss-ball W

Objective: To improve shoulder stability and increase scapular strength

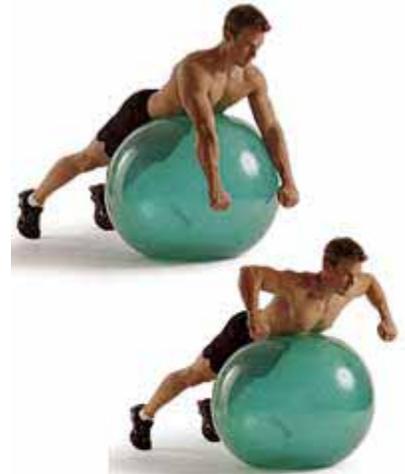
Same starting position as for the Y, but bend your arms and squeeze your elbows in toward your ribs. Rotate your arms toward the ceiling, squeezing your shoulder blades together. Return to the starting position.



Swiss-Ball L

Objective: To improve shoulder stability and increase scapular strength

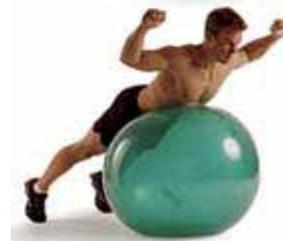
Same starting position as for the Y, except your palms should face behind you. Bend your elbows so that your upper arms create a pair of L's. Rotate your arms so your palms face the floor. Retrace the pattern to the starting position.



Swiss-Ball Pushup Plus

Objective: To stabilize core and shoulders, and strengthen shoulders, chest, and triceps

Get in the pushup position on the Swiss ball, hands beneath your shoulders. Keeping your abs tight, lower yourself until your chest grazes the ball, then push yourself back up as far away from the ball as possible.



Glute Bridge

Objective: To get your rear (glutes) in gear by coordinating all the surrounding muscles

Assume the precrunch position, with arms flat and a rolled towel between your knees. Squeeze your glutes and raise your body into a straight line. Pause, then lower your hips toward the floor, but don't touch it.



Front Bridge

Objective: To strengthen and stabilize shoulders, core, and hips

Stretch out with your weight on your toes and forearms, elbows bent 90 degrees. Your body should be in a straight line from ears to heels. Keep your chin tucked and your navel pulled



toward your spine. Hold for 10 to 20 seconds.

Side Bridge

Objective: To strengthen and stabilize shoulders, core, and hips

Lie on your side with your upper body propped up on your forearm, the elbow directly below your shoulder. Now push your hips up so your body is in a straight line from ankle to shoulder. Hold for 10 to 20 seconds, then switch sides.



90. Diagnose your trouble with a motion MRI. X-rays and scans show pictures of the problem area only while it's at rest. But dynamic kinematic MRI imaging, which enables patients to reproduce joint motion while being scanned, can pinpoint the exact spot in their range of motion at which the problem occurs. The technology works for the knees and ankles, and is available at any hospital that has an open MRI.

91. Own the shoe that matches your game. Play tennis in tennis shoes. Unlike running shoes, which are made with an angled bottom to promote linear movement, tennis-shoe soles are flat, for optimal side-to-side motion.

92. To strengthen muscle, lengthen it. Muscles that are strengthened as they lengthen can absorb more force, and this means less potential for tendon trouble. "It's called eccentric training," says Dr. Laskowski. Here's an ideal move for runners: In a calf raise, lift for 2 seconds, then spend 10 seconds lowering the weight. "The tissue is lengthening as it's contracting, and that trains it for force absorption and greater strength."

93. Protect this joint. In a recent University of Iowa study, researchers examined young amateur athletes involved in contact sports--basketball, soccer, and wrestling--and found that wearing knee pads reduced the rate of lower-extremity injuries by 67 percent. Try Tru Fit pads (\$13, www.thesportsauthority.com); even though their design covers the patella, they won't hinder play.

94. Sit up straight. "The number-one reason people injure their backs is that they've developed muscular weakness," says Bert Fields, M.D., director of Sports Medicine Fellowship at Moses Cone Hospital in Greensboro, North Carolina. "[The weakness] leads to bad posture, and bad posture starts putting uneven weight or stress on the muscles, tendons, ligaments, disks, and vertebrae." Your first line of defense: a straight-shouldered stance.

95. Turn off the afterburners. Dr. Laskowski advises you to stretch after sustained activity. That's when bloodflow is higher in the muscles, which helps them benefit more from the stretch.

96. If you can't run with the big dogs, don't. Choose a league appropriate to your skill level. "Injuries tend to happen when things get out of control," says Robert Pedowitz, M.D., Ph.D., chief of sports-medicine services for the University of California at San Diego department of orthopedic surgery. Think of it this way: To borrow another animal-world metaphor, you'll be a big fish swimming in a small-pool relay lane, and less likely to be swamped.

97. Squat, lunge, and step up. You'll reduce back and hamstring injuries by strengthening your glutes, or butt muscles. "Weak glutes force the hamstrings and lower back to compensate," says Micheal A. Clark, D.P.T., president of the National Academy of Sports Medicine. And because the hamstrings and back muscles are so long and produce so much force, they can bend your torso back like a plastic spoon. "Pretend you're squeezing a quarter between your butt cheeks to engage the glutes any time your hip goes into extension," such as while stepping onto a box or lunging forward, Dr. Clark says.

98. Spend time relaxing in the mountains before your hike. Your exercising heart rate naturally adapts to high altitude, but you have to give it time, says David Pascoe, Ph.D., a professor of human performance at Auburn University. Training--or even sleeping--at high altitude accelerates this process. "You're also going to have a higher respiratory rate and lose more moisture," Pascoe says. So drink extra water, especially before and during hikes.

99. Drink even more. "A simple loss of body water can decrease performance by more than 20 percent," says Verstegen. Water's not enough for exercise lasting over an hour--your body also loses salt, so you need a sports drink containing carbohydrates and electrolytes. Drink even more during games--if you're wearing a uniform, shin guards, and face mask, your body can't dissipate heat as well as when you train in the gym in a T-shirt and shorts.

100. Keep drinking. Another time to drink more is when you travel to a warmer climate for a race. Texas researchers found that it takes 7 to 10 days for your core temperature to acclimate from cold to hot-and-humid conditions. Compensate with a water bottle in hand.

101. Ask your wife or girlfriend to read this article. And have her give you a pop quiz afterward. "Eighty percent of medical decisions are made by women," says Tom Meade, M.D., an orthopedic surgeon at Orthopaedic Associates, in Allentown, Pennsylvania. So if she's armed with the tools to help keep you safe, she'll make sure you use them.