[IMAGE]

Playing to Win: Injury Prevention Is the Key

By Alex Guerrero

With nearly 12,000 rushing yards, San Diego Chargers running back LaDainian Tomlinson is on track to become the National Football League's most prolific runner. He's starting his ninth year in the league and is less than 7,000 rushing yards (four to five seasons) short of the all-time career mark, held by former Dallas Cowboys running back Emmitt Smith. A former MVP of the NFL, LaDainian owns or shares 28 Chargers team records and holds the NFL record for most total touchdowns scored in a single season. And none of it happened by accident.

While LaDainian has suffered his share of injuries over the years (including last year), he's stayed remarkably healthy in a sport (and at a position) that features constant physical contact. After all, he's already played for eight years when the average NFL player's career is only 3.5 years. So, how's he done it? The same way you can do it. It's all about injury prevention. Whether you're an All-Pro running back like L.T. or a weekend warrior, the goal is the same: You undoubtedly want to lower your chances of incurring an injury while participating in your favorite sport. Fortunately, there are some general rules for injury prevention that apply to all sports, which is important because sports scientists suggest injury rates could be reduced by 25 percent if athletes took appropriate preventative action. Here are a few tips on how to stay healthy and reduce your risk of suffering an injury.

The #1 Rule: Don't Overdo It

LaDainian Tomlinson with football - Copyright â Stock Photo / Register Mark The amount of training you do plays a key role in determining your real injury risk. Studies have shown that your best direct injury predictor may be the amount of training you completed last month. Fatigued muscles do a poor job of protecting their associated connective tissues, increasing the risk of damage to bone, cartilage, tendons and ligaments. If you are a runner, the link between training quantity and injury means total mileage is an excellent indicator of your injury risk. The more miles you accrue per week, the higher the chances of injury. One recent investigation found a marked upswing in injury risk above 40 miles of running per week. Of course, this can be minimized and often avoided by regular chiropractic and massage therapy treatments, along with getting adequate rest between training sessions. The point isn't to avoid exercise, but rather to

appreciate that overdoing it can lead to injury, and that when your muscles are fatigued, they need rest. It's about knowing what your body can handle at any particular point in time.

Says LaDainian: "I know my body real well and I know exactly what I need to do and when to get in shape. I start a couple of weeks after the last game. You get broken down, and you get weak [during the season], so I start with the basics: core, hips, shoulders, and then I move into the more functional stuff, building strength through movement." L.T. and other professional athletes also use an anti-inflammatory cream before and after physical activity to minimize pain and overuse injuries.

If You Can Predict an Injury, You May Avoid an Injury

If you have been injured before, you are much more likely to get hurt again than an athlete who has been injury free. Regular exercises have a way of uncovering the weak areas of the body. If you have knees that are put under heavy stress because of your unique biomechanics during exercise, your knees are likely to hurt when you engage in your sport for a prolonged time. After recovery, if you re-establish your desired training load without modification to your biomechanics, your knees are likely to be injured again. In layperson's terms, that means figuring out why you got injured in the first place and how to avoid it from happening again.

The second predictor of injury is probably the number of *consecutive* days of training you carry out each week. Scientific studies strongly suggest that reducing the number of consecutive days of training can lower the risk of injury. Recovery time reduces injury rates by giving muscles and connective tissues an opportunity to restore and repair themselves between workouts.

Specific Factors Influencing Injury Risk: Which Apply to You?

Psychological Factors

Some studies have shown that athletes who are aggressive, tense and compulsive have a higher risk of injury than their more relaxed peers. Tension may make muscles and tendons tighter, increasing the risk that they will be harmed during workouts. Try some breathing exercises or visualization before starting your workout to ensure you are as relaxed as possible.

Weak Muscles

Many injuries are caused by weak muscles that are simply not ready to handle the specific demands of your sport. This is why people who start a running program for the first time often do well for a few weeks, but then suddenly develop foot or ankle problems, hamstring soreness or perhaps lower back pain as they add the mileage on. Their bodies simply are not strong enough to cope with the demands of the increased training load. For this reason, it is always wise to couple resistance training with regular training. Your body needs to be stronger before it can handle the "new" demands being put on it.

Muscle Imbalances

LaDainian Tomlinson jersey - Copyright â Stock Photo / Register Mark Screening for muscle imbalances is the current cutting edge of injury prevention. The rationale behind this is that there are detectable and correctable abnormalities of muscle strength and length that are fundamental to the development of almost all musculoskeletal pain and dysfunction. Detection of these abnormalities and correction before injury has occurred should be part of any injury prevention strategy. Assessment of muscle strength and imbalances, as well as regular chiropractic and massage therapy, can be beneficial in this strategy.

Muscle Stiffness

Technically speaking, muscle stiffness refers to the ratio between the change in muscle resistance and the change in muscle length. Muscle stiffness is directly related to muscle injury risk, so it is important to reduce muscle stiffness during your warm-up. Research indicates that only dynamic stretches (slow, controlled movements through the full range of motion) decrease muscle stiffness. Static exercises (holding a stretch in one position for a period of time) do not decrease muscle stiffness. This suggests that dynamic stretches are the most appropriate exercises for warming up; static stretches are perhaps more appropriate for the cool-down period, as they help to relax the muscles and increase their range of movement.

Trigger Points

When pain syndromes develop, certain locations on the body called trigger points develop. A "trigger point" (TP) is a thick knot in a muscle that is palpable and tender (even painful to the touch). A diagnostic sign of a trigger point is a so-called jump sign. This sign is produced by accurately palpating the TP to produce pain in the area of referral as well as muscle contraction (or a jump) of the involved extremity.

Treatment of a TP (separating the fibers of the muscle knot) can be achieved by applying direct pressure to the point for 10 to 20 seconds, gradually releasing the pressure and repeating the process four or five times. The amount of pressure, which will depend on the sensitivity of the TP, can be applied by using one or both thumbs. A number of treatments may be required but as the sensitivity of the TP reduces it will become harder to find.

Trigger points are an early warning to a potential serious injury, getting checked for TPs is very beneficial. A regular massage is well worth it as the therapist, when conducting a massage, can check for TPs and treat them. I also always use an anti-inflammatory cream when treating TPs to help reduce pain and inflammation, which helps the healing process.

The Value of Sport-Specific Training

Resistance training can fortify muscles and make them less susceptible to injury, especially if the strength-building exercises involve movements that are similar to those used in the performance of the sport. As L.T. says, "Football is a movement game. You don't lie down, like you're on a bench press, and tackle somebody; skill players want to be quick, so you don't need to do a lot of heavy lifting, not all the time."

For example, if you are a thrower, then lots of time should be spent developing muscles at the front of the shoulder that increases the force with which you can throw, but you must also work systematically on the muscles at the back of the shoulder which control and stabilize the shoulder joint.

By following these simple recommendations, you can live an active life and enjoy the sports and other activities that make you feel great. That's what keeps LaDainian Tomlinson going strong, and that's what can keep you doing the same thing when you're working out, playing your favorite sport or just playing with the kids. To learn more about ways to stay in shape and avoid injury, talk to your doctor.

Injury Prevention Tips

- Avoid training when you are tired; you should be strong and ready to exercise.
- Increase your consumption of carbohydrates during periods of heavy training.
- Match increases in training with increases in resting. (Rest is how the body regenerates.)
- Precede any increase in training load with an increase in strengthening.
- Treat even seemingly minor injuries very carefully to prevent them from becoming a big problem.

- If you experience pain when training, *stop* your training session immediately.
- Never train hard if you are stiff from the previous effort.
- Pay attention to hydration and nutrition (water before exercise, electrolyte drink during exercise and water after exercise).
- Use appropriate training surfaces.
- Check that training and competition areas are clear of hazards.
- Check that equipment is appropriate and safe to use.
- Introduce new activities gradually and make sure you are clear on how to perform them safely.
- Allow lots of time for warming up before your workout/activity and cooling off after your workout/activity.
- Review training and competition courses beforehand.
- Train on different surfaces, using the right footwear.
- Shower and change immediately after the cool-down (after exercise).
- Stay away from infectious areas when training or competing very hard.
- Be extremely fussy about hygiene, particularly in hot weather.
- Monitor daily for signs of fatigue; if in doubt, ease off your workouts for a day or two.
- Get regular massages to keep muscles loose and blood circulating properly.

Alex Guerrero is a sports therapist who works with many professional and world-class athletes. He specializes in sports injury, rehabilitation, performance enhancement and nutrition.

Page printed from:
http://www.toyourhealth.com/mpacms/tyh/article.php?id=1236&pagenumber=3&no_paginate=true&no_b=true