

Physician Alert

Advanced physical therapy rehabilitation provides optimal recovery from sports injuries.

Introduction.

High-school and college athletes, weekend warriors, exercise enthusiasts and professional athletes all share two common goals: the desire to prevent injury and to recover from injury quickly. Physical therapy and rehabilitation focuses on meeting the needs of these active patients.

As more Americans are attempting to keep their bodies physically healthy through regular exercise, more seniors and women are actively participating in both organized and leisure sports. As a result, physical therapists are seeing more sports-related injuries such as those sustained by joggers, runners, golfers, tennis players and amateur and professional athletes.

Physical therapists who are educated and experienced in the prevention and treatment of orthopedic and sports injuries offer referring physicians, school coaches and patients of all ages the specialized expertise needed to effectively prevent and treat sports-related injuries resulting from today's active lifestyles.

Mechanisms of injury.

Sports injuries are often thought of as injuries that only occur as a result of participating in professional or school sports. However, 30,000,000 children and adults between the ages of 6 and 21 engage in out-of-school sports programs. Approximately 95% of sports injuries are due to minor trauma involving soft-tissue injuries such as contusions, muscle pulls, sprains, strains and cuts or abrasions. The other 5% are due to major trauma,

which can result in dislocations; fractures; stress fractures, tears in cartilage, muscle, tendons and ligaments; and head, neck, shoulder and spine injuries.

Injuries can occur to tissues as a result of compression forces such as falls

- *While 40% of musculoskeletal injuries occur in or around the home, 20% occur during sports activities or on school playing fields.*
- *Approximately 61,000,000 Americans sustain injuries each year. Nearly 33,000,000 are musculoskeletal injuries.*
- *Thirty million children and adults between age 6 and 21 engage in out-of-school sports programs.*
- *Approximately 95% of sports injuries are due to minor trauma involving soft-tissue injuries such as contusions, muscle pulls, sprains, strains and cuts or abrasions.*

and collisions; tension forces such as from traction or hanging movements; shearing forces such as those activated by throwing motions, twisting and repetitive-motion trauma.

Prevention through education.

Physical therapists and rehabilitation specialists have the additional education required to provide patients with expertise in preventing and treating sports injuries.

Physical therapists frequently work closely with local high-school, college and professional athletic coaches in educating both the coaches and the athletes in injury prevention.

At times, the physical therapist may be present at athletic games to provide treatment for on-site injuries.

Importance of early treatment.

The human body is a highly sophisticated communication system that provides information that reinforces an individual's conscious efforts to position and move his or her body. This system is of particular importance to athletes, because it acts as a guidance system to stabilize the smallest movements of muscles and joints and help athletes avoid injury and perform in sports.

A sports injury such as a torn ligament or muscle can result in the body's built-in computer activating pain receptors. When this happens, the message that a part of the body needs protection is received, causing loss of motion and strength and faulty body mechanics.

The longer an athlete stays out of training after an injury, the harder it is for the body to recover. That's why physicians, physical therapists and trainers emphasize a quick response to injury and early rehabilitation. Physical therapists typically begin both pre- and post-rehabilitative treatment with modalities designed to reduce inflammation and swelling, increase circulation, relax muscles, prevent atrophy and decrease pain.

Treating a variety of problems.

Athletes come in all shapes, sizes and ages. They are gymnasts, skiers, skaters, swimmers, ball players, tennis buffs, rowers, bowlers, joggers, fishermen, golfers, rugby players, weight lifters, cyclists, surfers and equestrian enthusiasts. Even sports performed after a proper warm-up and with the right equipment

can still result in injury.

From strains, sprains and fractures to severe spinal injuries, every athlete presents his or her own unique challenges for the physical therapist and sports medicine rehabilitation specialist. Typical sports injuries can include:

- *Injuries of the hip, thigh and pelvis*
- *Injuries of the hand and wrist*
- *Injuries of the elbow*
- *Injuries of the shoulder*
- *Hypothermia/hyperthermia*
- *Facio-maxillary injuries*
- *Injuries of the spine and neck*
- *Knee, ankle and foot injuries*

Four-phase recovery process.

The function of physical therapy is to identify, correct and alleviate acute or prolonged musculoskeletal or neurological dysfunction. At Physical Therapy and Sports Assessment Center, the first step in rehabilitation treatment is to assess the patient's condition to ensure that treatment is effective, accurate, reliable and appropriate for the patient's stage of healing. The assessment includes a patient history, objective measurements and specific testing to establish rehabilitation goals and to develop an effective, individualized treatment plan. Rehabilitation is separated into four phases:

• Phase I – Protective – 0-4 weeks

During Phase I, local modalities are used to control pain, reduce swelling, increase circulation, relax muscles, reduce inflammation, enhance muscle contraction and combat scar adherence. These may include: heat and/or cold pack therapy, ultrasound, electrical stimulation, TENS, iontophoresis, biofeedback, deep-tissue massage, manual traction, mechanical traction and myofascial release techniques.

Range of motion exercises are also used to help patients regain mobility. During this phase, depending on the injury, the physical therapist may also initiate strengthening exercises such as isometrics and/or manual resistance.

• Phase II – Mobility – 4-8 weeks

The goal of Phase II is to facilitate the patient's functional progression by increasing strength, endurance and range of motion. This is accomplished through the use of therapies designed to gradually increase the patient's tolerance, including advanced mobility, strengthening, stabilizing and endurance therapeutic exercises and activities.

• Phase III – Strength & Conditioning

Phase III includes advanced strengthening and stabilization techniques and

introduces the patient to plyometric techniques with the goals of further increasing agility, range of motion, strength, stability and endurance.

• Phase IV – Return To Play

Phase IV includes advanced plyometrics, sports-specific activities and Return To Play (RTP) activities to progress patients to a point where they can return to their chosen sport.

Excellent patient care. Leading-edge technologies.

Physical Therapy and Sports Assessment Center prides itself on exceptional patient service through consistent, personal attention and support, thorough evaluations, individualized treatment plans, accurate documentation and patient education. Exercise, of course, is a crucial part of all sports rehabilitation. PTSAC provides state-of-the-art exercise equipment and therapies, including:

- *Therapeutic exercise*
- *Postural evaluation and retraining*
- *Back school*
- *Gait training*
- *Neuromuscular re-education*
- *Soft-tissue mobilization/massage therapy*
- *Electrical muscle stimulation*
- *Ultrasound*
- *Iontophoresis/phonophoresis*
- *TENS.*
- *Biofeedback and exercise for incontinence*
- *Cryotherapy/moist heat*
- *Isokinetic testing and exercise*
- *Joint mobilization*

Conclusion.

Athletes need the best rehabilitative care possible. Sports injuries come in many forms, with low back pain, ACL injuries and repetitive stress topping the list. It has become imperative among patients and their physicians to find the least invasive means to treat injuries. The licensed physical therapists at Physical Therapy and Sports Assessment Center offer patients noninvasive treatments to help them manage and overcome the pain of sports injuries and more.

For more information, please contact one of our six convenient locations to serve your patients' needs.

Edward P. Lee, PT Founder/Director

BS: (*summa cum laude*) Physical Therapy, Howard University, Washington, DC

Postgraduate Studies: Oakland University, Rochester, MI

BS: Physical Education/Minor in Biology, South Carolina State College (with honors)

Member: American Physical Therapy Association – Orthopedic & Private Practice Sections, National Football League Players Association

Continuing Education: Topics include Functional Orthopedics I, World-Class Care in Orthopedic Rehabilitation & Sports Medicine, among others

Physician-trusted solutions for:

- *Back & neck pain*
- *Spinal conditions*
- *Headaches*
- *Shoulder & arm pain*
- *Leg, hip, knee, ankle & foot pain*
- *Hand pain/carpal tunnel syndrome*
- *Sports injuries/reassessment*
- *Work injuries*
- *Auto injuries*
- *Arthritis pain*
- *Postsurgical rehabilitation*
- *Adolescent orthopedics*
- *Women's health*
- *Numbness & tingling*
- *TMJ pain*
- *Incontinence*

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