ANIMAL REHABILITATION

SPECIAL INTEREST GROUP

President's Message

Kirk Peck, PT, PhD, CSCS, CCRT

If "WE" Fail To Define Our Practice, Then Who Will?

Animal rehab from a physical therapy standpoint is at a crossroads. The authority, and more importantly the obligation, to define the clinical practice of animal rehabilitation resides in "us" as members of the Animal Rehabilitation Special Interest Group. As noted in the heading of this section, if we fail in this task then trust me, individuals who do not practice on animals will be left questioning what we do, why we do it, and what educational background grants us the privilege to treat non-human species. Unless you are completely out of touch, these questions have already been asked many times over by some individuals who literally do wonder why some physical therapists are so interested in treating animals. It is therefore time to act on this issue and clarify what competencies are required to practice on animals.

If physical therapists and physical therapist assistants wish to gain credibility and ensure longevity of practice on animals, then conducting a quality Practice Analysis of animal rehabilitation is absolutely without hesitation a necessity. This is why a Task Force has been developed by the SIG officers to specifically achieve this goal. Task Force members have been participating in scheduled phone conferences to discuss 4 major topics:

(1) redesign and complete a comprehensive practice analysis on animal rehabilitation;
(2) complete a 50 state analysis of PT and Veterinary Practice Acts, including regulations, to determine current authority for physical therapists to practice on animals;
(3) review the current status of postgraduate educational opportunities for PTs and PTAs to gain competencies in animal rehab; and
4) draft a White Paper on PT Animal Rehabilitation in the United States.

Anticipated Outcomes of the Task Force

When the Task Force completes its goals as stated above, then 3 things will become possible: (1) the ARSIG can use the White Paper to educate and justify the practice of animal rehab to external constituencies including legislatures, other health professionals, and even members of our own profession; (2) publish the results of the practice analysis survey to establish a foundation for minimal competencies required to competently practice on animals by PTs and PTAs; and (3) facilitate the ARSIG's role as a political advocate to assist state jurisdictions in creating legal language to address scope of practice revisions as needed.

The following table provides a little perspective on how the Task Force intends to accomplish its mission:

Task Force Timeline

Task	Timeframe	Progress	Anticipated Outcome
Complete comprehensive practice analysis (PA) survey	July 2016	Survey is in draft form	Survey ALL members of the ARSIG. Goal is 60% or greater return rate.
Review PT & Vet practice acts for all 50 states	Completed	Completed	Summary table of all 50 states. Outcome: Only six (6) states have explicit language allowing PTs to practice on animals.
Summarize current educational programs & educational requirements related to animal rehab for the PT & PTA	By CSM	In Progress	Outline current post entry-level certification/ diploma options and other educational programs in existence leading to competencies for PTs and PTAs to treat animals.
Draft a "White Paper" on animal rehab	July 2016 *Draft a "fact sheet" by August 2015.	Cannot be fully completed until "after" the Practice Analysis is completed.	Completed a preliminary draft "fact sheet" to include comprehensive summary of animal rehab in the United States. Finalize White Paper after completion of Practice Analysis.

California Veterinary Medical Board

By the time you read this edition of *OPTP,* the California Veterinary Medical Board (VMB) may have already held a public hearing on the proposed regulatory language to mandate "direct supervision" over PTs. The current timeline is for a July/ August public hearing, "if" the Board effectively notifies the public 45 days in advance.

To re-emphasize, if the VMB succeeds in their goal to limit the ability for PTs to practice on animals through regulatory language, then all PTs and PTAs in California will be negatively impacted. I am not sure how best to articulate the problem in

CA if regulations are passed other than to say that PTs and PTAs will be treated more like "techs" when treating animals, garnering a significant lack of respect for the level of education and competence therapist's possess. Given all that the PT profession has strived for over the past 15 to 20 years to gain respect as a valuable asset to the health care team in human medicine, the proposal under review by the CA VMB would be a setback in that aspect of animal care.

The Dilemma of Term and Title Protection

The use of Term and Title for PTs treating animals has been a source of some debate. Generally speaking PTs can use the term "Physical Therapy" and title of "Physical Therapist" when treating animals "*if*" respective PT scope of practice language includes animal rehab as part of practice. If, however, the laws regulating PT practice are limited to humans, then using the term physical therapy when treating animals becomes blurred. In this case, the best recommendation is to use the phrase "animal rehabilitation."

If the Physical Therapy Practice Act in a state jurisdiction has explicit language that protects the term, "Physical Therapy" and title, "Physical Therapist Assistant," then generally the law applies to all non-PT health professionals. Therefore, veterinarians who provide rehab care to animals should not call their services "physical therapy" nor claim that they are a physical therapist when treating animals. When in doubt, questions regarding term and title protection should always be addressed with appropriate professional regulatory boards or Health Departments in respective jurisdictions.

Call for *OPTP* Submissions

To promote, educate, and advance the practice animal rehabilitation, I encourage members to submit articles related to clinical pearls, critiques of recently published articles, unique case studies, or abstracts of primary research. Please contact the President or Vice President of the ARSIG if interested in submitting an article for review.

Sandy Heaven!!

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VP Report

Stevan Allen, MAPT, CCRT

The ARSIG, in conjunction with the Orthopaedic Section, is pleased to announce our newest addition to the library of Independent Study Courses: **Physical Therapy Examination of the Equine Patient**. The monograph provides comprehensive coverage of examination procedures and progressive rehabilitation of the equine patient. In addition, several clinical case studies are included to enhance learning. Written by Arlene White, PT, M. Anim St. Physiotherapy and Melissa King, DVM, PhD, experienced authors in the field of equine rehabilitation, this is a must read for those practicing or conducting research with equine clients.

Also available is the two set series, PT Evaluation of the Animal Rehabilitation Patient (Canine). The first monograph was written by Lisa Bedenbaugh, PT, CCRT, and Evelyn Orenbuch, DVM CAVCA, CCRT: PT Evaluation of the Animal Rehab Patient and Michael R. Lappin, DVM, PhD, DACVIM is the author of the second monograph: Zoonosis and Animal Rehabilitation. These two monographs present animal rehabilitation for the canine population. The importance of using clinical reasoning skills to guide the assessment for each animal patient is emphasized. Also, a team approach to rehabilitation of the animal patient is highlighted, along with specific treatment intervention strategies. A companion monograph covers recognition of the clinical signs of disease in humans and animals that are associated with zoonotic diseases. Implementation of proper infection control and intervention is a focus. Case studies are provided for each of the monograph. We are confident that these two monographs will be an excellent addition to your reference library. You can order both on the Orthopaedic Section Website at http://www.orthopt.org/content/education/available_independent_study_courses.

IAPTAP
International Association of
Physical Therapists
in Animal Practice

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Many national associations have formed in the past 15 years for practitioners interested in treating animals, including our own Animal Rehabilitation Special Interest Group (SIG), under the Orthopaedic Section of the APTA. Similar to our grassroots efforts, other physical therapists and physiotherapists throughout the world have been active in the process of gathering support to be recognized by their parent associations. The World Confederation of Physical Therapy offers a way for therapists with a passion for helping animals to organize within a subgroup and establish more open communication on an international level. Leadership from several SIGs across the globe worked together to meet the requirements for application to form an international subgroup, and the IAPTAP was subsequently recognized within WCPT in 2011.

There are currently 10 member countries that belong and support the international subgroup: Australia, Canada, Finland, Germany, Ireland, South Africa, Sweden, Switzerland, the United Kingdom, and the United States. Our goals are to encourage high standards of physical therapy education, research, and practice; to encourage communication and information exchange; to promote research and evidence-based practice; to assist WCPT member organizations in developing animal special interest groups, and to foster collaborative relationships with other health professionals and professional groups to improve animal health and welfare.

Each member country is represented on the Executive Board and volunteers serve for 4-year periods. I have had the honor of representing the Animal SIG within IAPTAP these past sev-

eral years. We "meet" periodically via email and have worked together to write the constitution and bylaws and select a logo. We are currently focused on expanding the website, creating a newsletter, and gathering functional outcome tools to share.

The founding IAPTAP President is one of our own long-term members and former SIG Vice President, Steven Strunk. The Vice President of IAPTAP is Donna LaRocque from Canada. Our Treasurer is Brigitte Stebler from Switzerland. Our incoming IAPTAP President is Ansi Van Der Walt from South Africa. Ansi qualified as a physiotherapist from the University of Pretoria in 2001. She obtained her MSc Physio from the University of Witwatersrand in 2010. Ansi is actively involved in the treatment of both horses and dogs and competes in both equestrian and canine sporting events.

You are welcome to reach out to any of the IAPTAP officers or the member country representatives with your ideas, questions, or concerns.

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Donna LaRocque devonpt@telus.net

For more information regarding this group, visit their website at www.wcpt.org. Under the drop-down menu of subgroups, choose "animal practice."

Tendinopathy - Literature Review & PT Management of the Canine Patient

The following is an edited excerpt from a research study entitled, *"Rotator Cuff Tendinopathy in a Wheaten Terrier: A Physical Therapy Case Report"* by Amie Lamoreaux Hesbach, tDPT, CCRP, CCRT. The study was part of required dissertation for Dr. Hesbach's Doctorate Degree in Physical Therapy.

Tendinopathy in the canine patient is a complicated and often difficult pathology to treat. Dr Hesbach provides a comprehensive overview of the condition, in addition to common clinical signs and symptoms, followed by suggested treatment interventions for the canine patient.

[Contributions to this article were provided in the Introduction, the addition of figures/photos, and narrative edits to the original manuscript to meet publication guidelines by Kirk Peck PT, PhD, CSCS, CCRT]

CANINE TENDINOPATHY

Amie Hesbach, tDPT, CCRP, CCRT

Clinical Presentation of Tendinopathy

Forelimb lameness associated with supraspinatus tendon injuries is described as mild to moderate, usually in medium to large adult dogs, and often present bilaterally (though rarely is lameness observed bilaterally).[1] The patient's lameness is described as insidious, without known traumatic incident, chronic in nature, and lameness that worsens throughout the day, even with minimal to moderate activity.[1] Tendinopathy may also lead to more pronounced lameness after heavy exercise or exertion.[2] In addition, the client might report that the pet is often reluctant to jump down or descend stairs.[3]

Physical examination of a patient with supraspinatus tendinopathy will reveal pain with direct palpation over the supraspinatus tendon and greater tubercle (Figure 1), objective muscle atrophy, and pain or spasm with shoulder extension and abduction.[4] Pain or spasm upon shoulder flexion while stretching the biceps brachii tendon (eg, shoulder flexion with elbow extension) suggests involvement of the biceps brachii.[1,2] Of interest, Canapp et al[2] found that 94.5% of canine patients had biceps brachii involvement in combination with supraspinatus tendinopathy.

Diagnostics

In canine patients with localized pain to the shoulder joint, medical imaging with radiographs, diagnostic ultrasound (US), and/or magnetic resonance imaging (MRI) might prove beneficial. These imaging studies will help ascertain whether the source of discomfort is from the elbow, shoulder, or cervical spine. On radiographic evaluation, supraspinatus tendon degeneration might present with subtle calcification located cranial and medial to the greater tubercle. This is distinguished from biceps brachii tendinopathy, which has characteristic calcification present caudal to the intertubercular groove, closer to the humeral head.[1] In addition, alterations at the supraspinatus tendon insertion with mineralization (with or without impingement of the biceps brachii tendon) are apparent on MRI in the canine patient with tendinopathy.[2]

Evaluation of tendinopathy using diagnostic US will reveal alterations in shape (concavity), size (enlargement), and echogenicity at the tendon (Figures 2 and 3). Fiber patterns are often irregular in appearance, while full-thickness tendon tears present with tendon fiber retraction.[2]

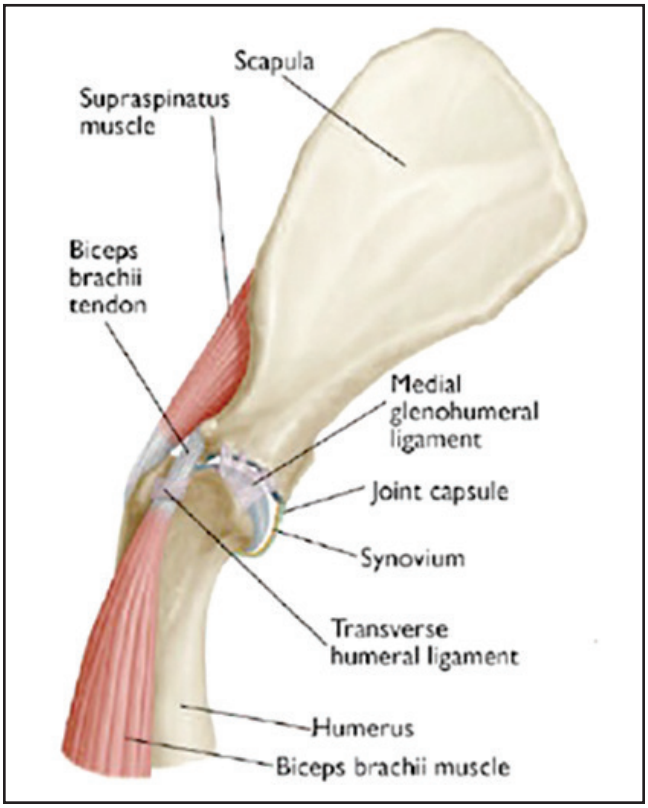

Figure 1. Canine shoulder anatomy.

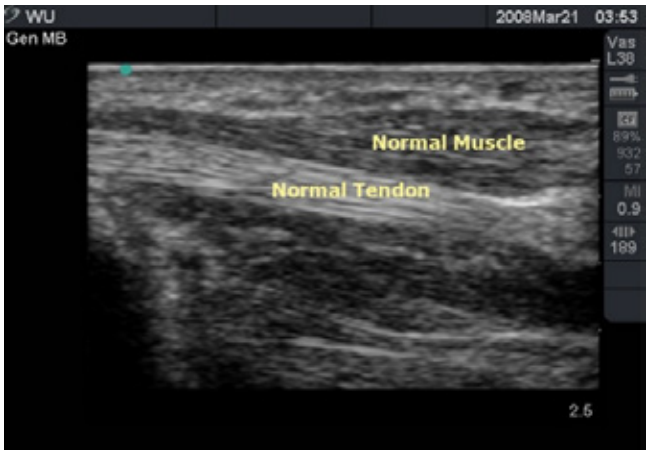

Figure 2. Normal tendon – diagnostic ultrasound.

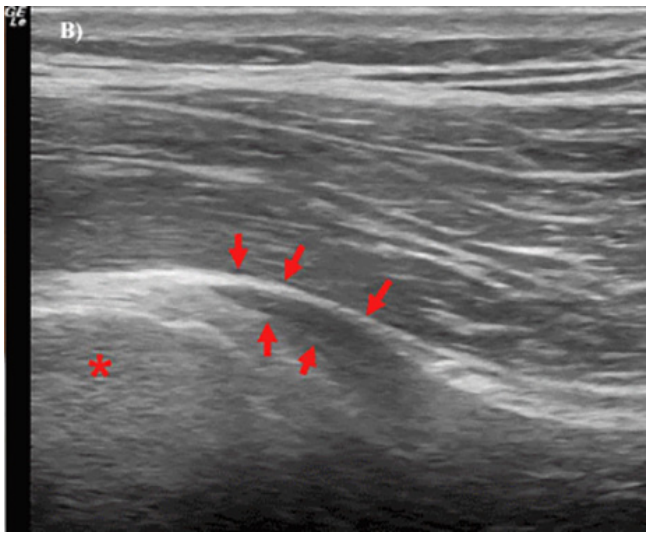

Figure 3. Arrows indicating site of tendinopathy.

Evaluation of the Tendinopathy Patient

Evaluation of the canine patient with suspected or diagnosed supraspinatus tendinopathy includes subjective and objective data, both of which are assessed at initial presentation and reassessed throughout the progression of rehab. Patient data collected as part of physical therapy examination includes: client history and report; subjective client rating scales of function and pain (Helsinki Chronic Pain Index (HCPI) and Canine Brief Pain Inventory (CBPI); goniometric measurement; girth assessment—as an indirect measure of strength; functional mobility and gait evaluation, including lameness scales/scores; and client description of functional limitations and disability.

Goniometry is a reliable and objective method for determining range of motion of joints in healthy dogs, though through clinical experience, there is some variation between and among breeds.[5,6] Of greater priority to the clinician is the ROM required by specific joints during functional activities, such as walking, trotting, stair climbing, and jumping. In addition, girth measures, or anthropometric assessment of limb circumference, may be used as an indirect measure of strength and muscle mass.

Though difficult to quantify, assessment of gait and functional mobility is integral to the development of a physical therapy plan of care and determination of applied interventions. Description of patient strategies for functional mobility, especially in absence of kinematic analysis, might demonstrate limitations in ROM, flexibility, muscle force production, and motor control. In addition, the patient should be evaluated during transitions of movement (eg, rising from lying to sitting to standing and reverse), ambulation (eg, walking, trotting, and galloping) and functional postures (eg, postures for eating/drinking and urinating/defecating), and movements (eg, stair climbing, jumping into a vehicle or onto a bed or couch) to further assess biomechanical strategies, abilities, and disabilities. The therapist may then determine which muscles are weak or painful based on anatomy and biomechanics, and through observation of movement strategies used by the canine patient. Lameness scores, though only representing a numerical value of a subjective descriptor, are widely used in veterinary medicine and represent a method of communication with other members of the veterinary medical team (Table 1).[7] Therefore, lameness scores should be included as part of a routine examination.

Treatment Strategies for Tendinopathy

Physical therapy treatment strategies typically focus on mechanisms of injury with a goal to promote healing of damaged or degenerated tissues and avoid exacerbations. The EdUReP model addresses tendinopathy through *education*, periods of tendon *unloading*, controlled tendon *reloading*, and *prevention* strategies, including client education on anatomy, etiology, and "self"-management skills.[8]

Supraspinatus tendinopathies in the canine patient have historically been nonresponsive to traditional treatment with NSAIDs, intraarticular steroid injections, and rest (or controlled activity).[2,3] Use of radial extracorporeal shockwave therapy (rESWT) and regenerative medicine have demonstrated some positive results when used in conjunction with PT.

Goals of PT for patients with tendinopathy include: manage pain, reverse the disease progression at the level of the pathology, protect the tendon from repeated trauma or exacerbation, restore normal biomechanics, progressively strengthen the stabilizers, incorporate eccentric contractions,[4] return to previous levels of activity uninhibited by symptoms or impairments, prevent disease recurrence, and enable the client to manage the patient's condition independently.[8]

Manual therapy for tendinopathy may also be indicated for the canine patient if joint restrictions are noted as part of the biomechanical evaluation. Manual therapy serves to restore normal joint function and reduce areas of impingement that may be a source of pain and dysfunction. Modalities, incorporated early in the PT regimen for management of pain, also contribute to improved health and potential repair of injured tissues.

Table 1. Lameness Scores[7]

Lameness score (5)	Descriptor
0/5	Normal
1/5	Slight, intermittent lameness
2/5	Obvious weight bearing lameness
3/5	Severe weight bearing lameness
4/5	Intermittent nonweight bearing lameness
5/5	Continuous nonweight bearing lameness

Education of the client in understanding the need for activity modification, restrictions, and relative rest is integral to patient recovery. Tendon unloading, through relative rest, behavioral modification, and the use of more efficient movement patterns will help the patient avoid fatigue in and further damage to weakened tissues. Controlled reloading is accomplished through guided introduction of body weight supported activities progressing to resisted movements to encourage increased dynamic stabilization and eccentric muscle contractions. Successful rehab will enable the canine patient to participate in high level functioning activities that require core stabilization, dynamic balance, and gait on uneven surfaces (Figure 4).

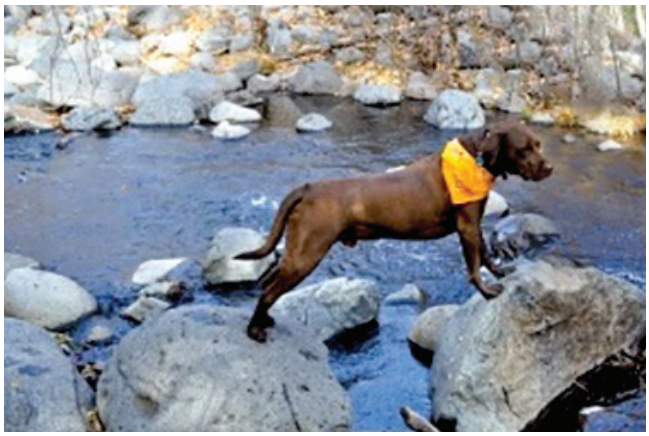

Figure 4. Dynamic stability on uneven terrain.

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Another Successful Annual Orthopaedic Section Meeting Held in Phoenix

The 2015 3rd Annual Orthopaedic Section Meeting in Phoenix, Arizona, highlighted the physical therapist's role in the rehabilitation of lower extremity injuries and impairments of the hip, knee, and ankle through an active learning environment, small group discussions, and hands-on labs.

Industry experts in manual therapy, biomechanics, movement science, regenerative rehabilitation, sports injury analysis, orthopaedic surgery, radiology, stem cell research, ACL reconstruction rehabilitation, and rheumatology addressed various lower-extremity dysfunctions commonly seen in orthopaedic practice. In addition, meeting participants received great information regarding curriculum resources available to facilitate the development of orthopaedic residency programs. Throughout the conference, attendees engaged in active learning sessions with colleagues while enjoying the luxurious amenities and atmosphere provided by the beautiful Arizona Grand Resort and Spa in lovely Phoenix, Arizona.

Following section breakout sessions, attendees shared their thoughts about the Annual Meeting:

"Every year I enjoy attending CSM, but it is often challenging to dialogue with presenters because of the large crowds. Therefore, I prefer the intimate setting of the annual orthopaedic section meeting."

"It was great to speak with other academicians to discuss future research collaboration opportunities."

"I received great career advice, and connected with a potential faculty mentor. It was great to reconnect with friends, clinical mentors, and colleagues in orthopaedic practice."

"The hands-on portion of the breakout sessions was phenomenal; I received great feedback from orthopaedic experts regarding patient handling techniques."

As the Orthopaedic Section continues to grow and expand this Annual Meeting, we will continue to assess and measure feedback from attendees and Section members to provide quality continuing education to advance clinical practice. We would like to thank all of the presenters, exhibitors, and attendees for making this event a great success! If you missed out this year, please mark your calendars for May 5-7, 2016, for the 4th Annual Orthopaedic Section Meeting in Atlanta, Georgia.

Index to Advertisers

CSM 2016
February 17-20, 2016
Anaheim, California

Golf Injuries:

Prevention & Management

An Independent Study Course Designed for Individual Continuing Education

Independent Study Course 25.2

Course Description

This 3-monograph series will educate the registrant on the kinesiology of the golf swing, injury prevention strategies, and comprehensive rehabilitation program design. The authors have exceptional backgrounds and experiences in treating the golf athlete. Each monograph is designed for the registrant to be able to immediately apply the content to patient care. In addition to the written work, one author has created a library of video clips showing numerous exercises that can be used at various stages of rehabilitation.

Topics and Authors

- **Kinesiology and Biomechanics of the Golf Swing**
  Ada Wells, MPT, PMA®-CPT, TPI-Level 3 Medical
- **Strength & Conditioning for Golf Injuries**
  Brandon Schomberg, DPT, OCS, SCS, CSCS, CGFI-MP3
- **Common Golf Injuries**
  Steven Pavlet, PT, DPT, MS, OCS, ATC

Continuing Education Credit

Fifteen contact hours will be awarded to registrants who successfully complete the final examination. The Orthopaedic Section pursues CEU approval from the following states: Nevada, Ohio, Oklahoma, California, and Texas. Registrants from other states must apply to their individual State Licensure Boards for approval of continuing education credit.

Course content is not intended for use by participants outside the scope of their license or regulation.

Editorial Staff

Christopher Hughes, PT, PhD, OCS, CSCS—Editor

Gordon Riddle, PT, DPT, ATC, OCS, SCS, CSCS—Associate Editor

Sharon Klinski—Managing Editor

Learning Objectives

Upon completion of this course, the participant will be able to do the following:

- Cite the incidence and prevalence of common injuries of the golfer.
- Identify the postures, mechanics, and pathomechanics associated with the golf swing.
- Identify common golf injuries according to etiology and body region.
- Develop intervention strategies to minimize golf injuries.
- Identify key elements during each phase of the golf swing motion, including grip, address, backswing, downswing, impact, and follow through.
- Identify the kinematic requirements of the critical body segments during each phase of the golf swing.
- Identify at least 3 examples of different swing styles based on differing body types.
- Identify and differentiate between efficient and faulty swing characteristics.
- Describe how the stretch-shorten cycle and ground reaction forces contribute to maximum club head speed at impact.
- Describe which phases of the golf swing motion increase the torsion, compression, and shear in the lumbar spine.
- Identify stress potentials in the upper and lower extremities during the golf swing.
- Apply knowledge of the golf swing to assist in designing rehabilitation programs and improving performance.
- Apply evidence-based strength and conditioning concepts to assist golf athletes of all skill levels with injury prevention and improved golf performance.
- Appreciate the role of the neuromuscular system in generating an optimal golf swing.
- Explain general timelines, precautions, and contraindications for safely returning to golf.
- Apply clinical screening tools for functional analysis of the golfer and assist in developing injury prevention programs and proper golf warm-up routines.

For Registration and Fees, visit orthopt.org/content/c/25_2_Golf_Injuries

Additional Questions—Call toll free 800/444-3982

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