



Body System: Musculoskeletal		
Session Topic: Tendinopathy		
Educational Format		Faculty Expertise Required
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
Professional Practice Gap		Learning Objective(s) that will close the gap and meet the need
<ul style="list-style-type: none"> • A knowledge and practice gap exists to diagnose tendinopathy, and to identify complications and associated conditions. • A knowledge and practice gap exists to develop evidence-based treatment strategies specific to type, location, and severity of tendinopathy. • A knowledge and practice gap exists to counsel patients on self-management, prevention, and strategies for returning to work or return to play. • Medical skill necessary to provide optimal care and management musculoskeletal problems, such as sprains, strains, and dislocations; overuse/repetitive motion injuries; splinting/casting, wrapping, and taping; and imaging modalities related 		<ol style="list-style-type: none"> 1. Use evidence-based practices to diagnose patients presenting with joint pain for tendinopathy, and assess for red flags indicating infection or other serious condition. 2. Develop an evidence-based treatment strategy for patients with tendinopathy. 3. Counsel patients diagnosed with tendinopathy on prevention and immediate self-treatment strategies. 4. Coordinate referral to physical therapy for tendinopathy.
		Outcome Being Measured
		Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



<p>to the management of musculoskeletal issues</p> <ul style="list-style-type: none"> • Data from a recent AAFP CME Needs Assessment survey indicates that family physicians have a statistically significant and meaningful gap in the knowledge and skill to effectively and efficiently utilize imaging studies for musculoskeletal conditions, diseases, and injuries in the optimal management of their patients. • Family physicians perform musculoskeletal injections in practice, but of those who do not, 33% say it is because they lack the training. 		
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ACGME Core Competencies Addressed (select all that apply)

X	Medical Knowledge		Patient Care
X	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism		Systems-Based Practice

Faculty Instructional Goals

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
 - Visit <http://www.aafp.org/journals> for additional resources
 - Visit <http://familydoctor.org> for patient education and resources



- Provide recommendations for using evidence-based practices to diagnose patients presenting with joint pain for tendinopathy, and assess for red flags indicating infection or other serious condition.
- Provide recommendations for developing an evidence-based treatment strategy for patients with tendinopathy.
- Provide strategies and resources for counseling patients diagnosed with tendinopathy on prevention and immediate self-treatment strategies.
- Provide strategies and resources for coordinating referral to physical therapy for tendinopathy.

Needs Assessment

There are more than 9.6 million office visits to family physicians from patients presenting with neck, shoulder, or leg pain annually.¹ Chronic tendon injuries are commonly presented to the primary care physician, and have a significant impact on the ability of patients to work, exercise, and perform routine daily activities.² Every year, as many as 1-2 million persons present with plantar heel pain,¹ with men and women affected equally.^{3,4}

Practice Gaps

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians knowledge and practice gaps with regard to diagnosis and managing overuse/repetitive motion injuries; performing efficacious musculoskeletal exam techniques, as well as a statistically significant and meaningful gap in the knowledge and skill to effectively and efficiently utilize imaging studies for musculoskeletal conditions, diseases, and injuries in the optimal management of their patients.⁵ CME outcomes data from 2013-2015 AAFP FMX (formerly Assembly) musculoskeletal sessions, including *Bursitis and Tendonitis* sessions, suggest that physicians have knowledge and practice gaps with regard to the use of appropriate exam techniques and maneuvers; ordering lab and diagnostic tests; evidence-based recommendations for steroid injections and other treatments; and the recognition and management of specific syndromes.⁶⁻¹⁰

The 2010 AAFP *Practice Profile Survey* reports that the most common imaging modalities used in family physicians' practices are electrocardiography tests (which 94% of respondents offer) and x-rays (which 46% offer). Respondents cite the most common reasons for not having these mechanisms available as the equipment being too expensive and not desiring the diagnostic procedures.¹¹ Qualitative research indicates, however, that "patient convenience and satisfaction are improved by the presence of on-site radiography. Traveling to another facility, especially for the elderly and the disabled, places an additional burden on patients and caretakers."¹² The AAFP confirms that family physicians are not only well trained and well positioned to offer initial diagnostic imaging and interpretation, but their use of imaging modalities enhances patient access and care.¹³

In cases in which patients have imaging tests conducted at facilities outside of a family physician's office – such as an emergency department – it is imperative that the results of the tests be communicated between providers. A journal article reported that "34% of U.S. patients reported some kind of medical error. Over half of these patients claimed that their primary care



physicians did not communicate directly with them about their treatment options or care decisions. In addition, 9-23% of patients who underwent blood testing, radiography or other diagnostic examinations experienced a delay in being notified about abnormal test results.”¹⁴ Of course, the onus of responsibility of relaying such results ultimately lies with the provider who interprets them, but family physicians can help to ensure that both they and their patients receive the necessary information to understand the diagnosis and move forward with treatment options.

Primary care physicians commonly see patients with musculoskeletal injuries. Among the most difficult to treat are overuse tendon injuries (tendinopathies) of the foot and ankle.¹⁵ When patients present with foot and ankle pain, tendinopathies are often missed and assumed to be just an ankle sprain, which can lead to chronic pain and deformity.¹⁶

Physicians may improve their care of patients with chronic tendon injuries by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:^{2-4,16,17}

- Eccentric exercise should be the first-line treatment for chronic midsubstance Achilles tendinopathy.
- Corticosteroid injections, bracing, and nonsteroidal anti-inflammatory drugs are not effective in providing long-term relief for chronic degenerative tendon injuries.
- Rehabilitative exercise is an effective therapy for chronic tendon injuries.
- Magnetic resonance imaging is the preferred imaging modality for chronic elbow pain.
- Spurring at the Achilles tendon insertion site or intratendinous calcifications on plain radiography indicate Achilles tendinopathy.
- Nonsteroidal anti-inflammatory drugs and acetaminophen provide short-term pain relief for patients with tendinopathy but do not affect long-term outcomes.
- Protection, relative rest, ice, compression, elevation, medications, and rehabilitative exercise modalities to promote healing and pain relief should be recommended for tendinopathy. There are no clear recommendations for the duration of relative rest.
- Eccentric strength training is an effective therapy for Achilles tendinosis and may reverse degenerative changes.
- Treatment of posterior tibial tendinopathy should be based on the severity of dysfunction; improper therapy can lead to a painful flat-footed deformity.
- Magnetic resonance imaging is the preferred imaging modality for chronic elbow pain.
- Ultrasonography and magnetic resonance imaging can be useful in diagnosing plantar fasciitis by showing increased plantar fascia thickness and abnormal tissue signal.
- Nonsteroidal anti-inflammatory drugs can provide short-term improvement in pain from plantar fasciitis when used with other conservative therapies.
- Prefabricated and custom-made foot orthotics are effective in reducing heel pain and improving foot function in patients with plantar fasciitis.
- The use of anterior night splints can improve plantar fasciitis pain.
- Corticosteroid injections can provide relief for acute and chronic plantar fasciitis.
- Extracorporeal shock wave therapy is a viable treatment option for chronic recalcitrant plantar fasciitis.



These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Management of chronic tendon injuries²
- Diagnosis and treatment of plantar fasciitis³
- Diagnosis of heel pain⁴
- Adding health education specialists to your practice¹⁸
- Envisioning new roles for medical assistants: strategies from patient-centered medical homes¹⁹
- The benefits of using care coordinators in primary care: a case study²⁰
- Engaging Patients in Collaborative Care Plans²¹
- Encouraging patients to change unhealthy behaviors with motivational interviewing²²
- Familydoctor.org – Plantar Fasciitis (patient education)²³
- Familydoctor.org – Tennis elbow (patient education)²⁴

References

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