

A SELECTION OF TEN CURRENT READINGS ON MUSCULOSKELETAL DISORDERS AVAILABLE AS FREE FULL-TEXT

Selection of readings made by A/P Prof Goh Lee Gan

The URLs of the articles are given below the reference.

OSTEOPOROSIS

Reading 1

Nied RJ, Franklin B. Promoting and prescribing exercise for the elderly. *Am Fam Physician*. 2002 Feb 1;65(3):419-26.

<http://www.aafp.org/afp/20020201/419.pdf>

Michigan State University, East Lansing, USA.

ABSTRACT

Regular exercise provides a myriad of health benefits in older adults, including improvements in blood pressure, diabetes, lipid profile, osteoarthritis, osteoporosis, and neurocognitive function. Regular physical activity is also associated with decreased mortality and age-related morbidity in older adults. Despite this, up to 75 percent of older Americans are insufficiently active to achieve these health benefits. Few contraindications to exercise exist and almost all older persons can benefit from additional physical activity. The exercise prescription consists of three components: aerobic exercise, strength training, and balance and flexibility. Physicians play a key role in motivating older patients and advising them regarding their physical limitations and/or comorbidities. Motivating patients to begin exercise is best achieved by focusing on individual patient goals, concerns, and barriers to exercise. Strategies include the “stages of change” model, individualized behavioural therapy, and an active lifestyle. To increase long-term compliance, the exercise prescription should be straightforward, fun, and geared toward a patient’s individual health needs, beliefs, and goals.

OSTEOARTHRITIS

Reading 2

Thomas KS, Muir KR, Doherty M, Jones AC, O'Reilly SC, Bassey EJ. Home based exercise programme for knee pain and knee osteoarthritis: randomised controlled trial. *BMJ*. 2002 Oct 5;325(7367):752.

<http://bmj.com/cgi/reprint/325/7367/752.pdf>

Academic Rheumatology, City Hospital, Nottingham NG5 1PB.

ABSTRACT

OBJECTIVES: To determine whether a home based exercise programme can improve outcomes in patients with knee pain. **DESIGN:** Pragmatic, factorial randomised controlled trial of two years' duration. **SETTING:** Two general practices in Nottingham. **PARTICIPANTS:** 786 men and women aged ≥ 45 years with self reported knee pain. **Interventions:** Participants were randomised to four groups to receive exercise therapy, monthly telephone contact, exercise therapy plus telephone contact, or no intervention. Patients in the no intervention and combined exercise and telephone groups were randomised to receive or not receive a placebo health food tablet. **MAIN OUTCOME MEASURES:** Primary outcome was self reported score for knee pain on the Western Ontario and McMaster universities (WOMAC) osteoarthritis index at two years. Secondary outcomes included knee specific physical function and stiffness (scored on WOMAC index), general physical function (scored on SF-36 questionnaire), psychological outlook (scored on hospital anxiety and depression scale), and isometric muscle strength. **RESULTS:** 600 (76.3%) participants completed the study. At 24 months, highly significant reductions in knee pain were apparent for the pooled exercise groups compared with the non-exercise groups (mean difference -0.82, 95% confidence interval -1.3 to -0.3). Similar improvements were observed at 6, 12, and 18 months. Regular telephone contact alone did not reduce pain. The reduction in pain was greater the closer patients adhered to the exercise plan. **CONCLUSIONS:** A simple home based exercise programme can significantly reduce knee pain. The lack of improvement in patients who received only telephone contact suggests that improvements are not just due to psychosocial effects because of contact with the therapist.

TENOSYNOVITIS

Reading 3

Pal B. 10-minute consultation: Paraesthesia. *BMJ*. 2002 Jun 22;324(7352):1501.

<http://bmj.com/cgi/reprint/324/7352/1501.pdf>

Withington Hospital, Room 10, Home 4, Manchester M20 2LR.

SUMMARY

A woman of 45 comes to you with tingling ("pins and needles") and numbness in the fingers and hands. It has been getting gradually worse for about three months. What would you do in the 10 minute consultation? The issues to be covered are the history, areas affected, when does the paraesthesia occur, the effect of cold on the symptoms, effect of keyboard or mouse use of the fingers and hands, and the use of medications. Examine the upper limbs and affected areas. Decide on the investigations depending on the diagnosis made – carpal tunnel syndrome, ulnar nerve palsy, Raynauds's phenomenon, or systemic disease.

LOW BACKACHE

Reading 4

Humphreys SC, Eck JC, Hodges SD. Neuroimaging in low back pain. *Am Fam Physician*. 2002 Jun 1;65(11):2299-306

<http://www.aafp.org/afp/20020601/2299.pdf>

Center for Sports Medicine and Orthopaedics Foundation for Research, Chattanooga, Tennessee, USA.

ABSTRACT

Patients commonly present to family physicians with low back pain. Because the majority of patients fully or partially recover within six weeks, imaging studies are generally not recommended in the first month of acute low back pain. Exceptions include patients with suspected cauda equina syndrome, infection, tumor, fracture, or progressive neurologic deficit. Patients who do not improve within one month should obtain magnetic resonance imaging if a herniated disc is suspected. Computed tomographic scanning is useful in demonstrating osseous structures and their relations to the neural canal, and for assessment of fractures. Bone scans can be used to determine the extent of metastatic disease throughout the skeletal system. All imaging results should be correlated with the patient's signs and symptoms because of the high rate of positive imaging findings in asymptomatic persons.

ARTHRITIC CONDITIONS

Reading 5

Lane SK, Gravel JW Jr. Clinical utility of common serum rheumatologic tests. *Am Fam Physician*. 2002 Mar 15;65(6):1073-80.

<http://www.aafp.org/afp/20020315/1073.pdf>

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ABSTRACT

Serum rheumatologic tests are generally most useful for confirming a clinically suspected diagnosis. Testing for rheumatoid factor is appropriate when rheumatoid arthritis, Sjogren's syndrome or cryoglobulinemia is suspected. Antinuclear antibody testing is highly sensitive for systemic lupus erythematosus and drug-induced lupus. Anti-double-stranded DNA antibodies correlate with lupus nephritis; the titer often corresponds with disease activity in systemic lupus erythematosus. Testing for anti-Ro (anti-SS-A) or anti-La (anti-SS-B) may help confirm the diagnosis of Sjogren's syndrome or systemic lupus erythematosus; these antibodies are associated with the extraglandular manifestations of Sjogren's syndrome. Cytoplasmic antineutrophil cytoplasmic antibody testing is highly sensitive and specific for Wegener's granulomatosis. Human leukocyte antigen-B27 is frequently present in ankylosing spondylitis and Reiter's syndrome, but the background presence of this antibody in white populations limits the value of testing. An elevated erythrocyte sedimentation rate (ESR) is a diagnostic criterion for polymyalgia rheumatica and temporal arteritis; however, specificity is quite low. ESR values tend to correlate with disease activity in rheumatoid arthritis and may be useful for monitoring therapeutic response.

Reading 6

Lockshin MD. Endocrine origins of rheumatic disease. Diagnostic clues to interrelated syndromes. *Postgrad Med.* 2002 Apr;111(4):87-8, 91-2.

http://www.postgradmed.com/issues/2002/04_02/lockshin2.htm

Barbara Volcker Center, Hospital for Special Surgery, Cornell University Joan and Sanford I. Weill Medical College, Graduate School of Medical Sciences, New York, NY, USA.

ABSTRACT

Heightened awareness of endocrine abnormalities is important in evaluation of patients presenting with musculoskeletal symptoms. Endocrine disorders such as diabetes, hyperthyroidism, hypothyroidism, hyperparathyroidism, hypoparathyroidism, hyperadrenocorticism, and acromegaly cause a unique array of rheumatic manifestations. Such conditions include Dupuytren's contracture, carpal tunnel syndrome, chondrocalcinosis, pseudogout, scleredema, and osteoporosis. Characteristic changes on radiologic evaluation and serum enzyme testing are additional clues to these atypical presentations. Consideration of a possible endocrine cause early in the evaluation may improve management in patients with such an underlying disorder.

DIAGNOSTIC & THERAPEUTIC JOINT INJECTION**Reading 7**

Tallia AF, Cardone DA. Diagnostic and therapeutic injection of the shoulder region. *Am Fam Physician.* 2003 Mar 15;67(6):1271-8.

<http://www.aafp.org/afp/20030315/1271.pdf>

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ABSTRACT

The shoulder is the site of multiple injuries and inflammatory conditions that lend themselves to diagnostic and therapeutic injection. Joint injection should be considered after other therapeutic interventions such as nonsteroidal anti-inflammatory drugs, physical therapy, and activity-modification have been tried. Indications for glenohumeral joint injection include osteoarthritis, adhesive capsulitis, and rheumatoid arthritis. For the acromioclavicular joint, injection may be used for diagnosis and treatment of osteoarthritis and distal clavicular osteolysis. Subacromial injections are useful for a range of conditions including adhesive capsulitis, subdeltoid bursitis, impingement syndrome, and rotator cuff tendinosis. Scapulothoracic injections are reserved for inflammation of the involved bursa. Persistent pain related to inflammatory conditions of the long head of the biceps responds well to injection in the region. The proper technique, choice and quantity of pharmaceuticals, and appropriate follow-up are essential for effective outcomes.

Reading 8

Cardone DA, Tallia AF. Diagnostic and therapeutic injection of the elbow region. *Am Fam Physician*. 2002 Dec 1;66(11):2097-100.

<http://www.aafp.org/afp/20021201/2097.pdf>

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ABSTRACT

Joint injection of the elbow is a useful diagnostic and therapeutic tool for the family physician. In this article, the injection procedures for the elbow joint, medial and lateral epicondylitis, and olecranon bursitis are reviewed. Persistent pain related to inflammatory conditions responds well to injection in the region. Indications for elbow joint injection include osteoarthritis and rheumatoid arthritis. Corticosteroid injection is an accepted treatment option for medial and lateral epicondylitis. Olecranon bursa aspiration and injection are useful when that bursa is inflamed. The proper techniques, choice and quantity of pharmaceuticals, and appropriate follow-up essential for effective outcomes are discussed.

Reading 9

Tallia AF, Cardone DA. Diagnostic and therapeutic injection of the wrist and hand region. *Am Fam Physician*. 2003 Feb 15;67(4):745-50.

<http://www.aafp.org/afp/20030215/745.pdf>

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ABSTRACT

Joint injection of the wrist and hand region is a useful diagnostic and therapeutic tool for the family physician. In this article, the injection procedures for carpal tunnel syndrome, de Quervain's tenosynovitis, osteoarthritis of the first carpometacarpal joint, wrist ganglion cysts, and digital flexor tenosynovitis (trigger finger) are reviewed. Indications for carpal tunnel syndrome injection include median nerve compression resulting from osteoarthritis, rheumatoid arthritis, diabetes mellitus, hypothyroidism, repetitive use injury, and other traumatic injuries to the area. For the first carpometacarpal joint, injection may be used to treat pain secondary to osteoarthritis and rheumatoid arthritis. Pain associated with de Quervain's tenosynovitis is treated effectively by therapeutic injection. If complicated by pain or paresthesias, wrist ganglion cysts respond to aspiration and injection. Painful limitation of motion occurring in trigger fingers of patients with diabetes or rheumatoid arthritis also improves with injection. The proper technique, choice and quantity of pharmaceuticals, and appropriate follow-up are essential for effective outcomes.

Reading 10

Zuber TJ. Knee joint aspiration and injection. *Am Fam Physician*. 2002 Oct 15;66(8):1497-500, 1503-4, 1507.

<http://www.aafp.org/afp/20021015/1497.pdf>

Saginaw Cooperative Hospital, Michigan, USA.

ABSTRACT

Knee joint aspiration and injection are performed to aid in diagnosis and treatment of knee joint diseases. The knee joint is the most common and the easiest joint for the physician to aspirate. One approach involves insertion of a needle 1 cm above and 1 cm lateral to the superior lateral aspect of the patella at a 45-degree angle. Once the needle has been inserted 1 to 1 1/2 inches, aspiration aided by local compression is performed. Local corticosteroid injections can provide significant relief and often ameliorate acute exacerbations of knee osteoarthritis associated with significant effusions. Among the indications for arthrocentesis are crystal-induced arthropathy, hemarthrosis, unexplained joint effusion, and symptomatic relief of a large effusion. Contraindications include bacteremia, inaccessible joints, joint prosthesis, and overlying infection in the soft tissue. Large effusions can recur and may require repeat aspiration. Anti-inflammatory medications may prove beneficial in reducing joint inflammation and fluid accumulations.
