

# Effective Alternative Treatments



Hi, I'm Dr. Kukurin and you are receiving this newsletter as a free gift from me. We spend a lot of time working on this publication. It's the same information patients pay for in my office So I'm sure you will find it valuable and I hope you enjoy it. If you have a topic you'd like to suggest for future newsletters just give me a call. ~ Dr. K

## Journal of Rapid Pain Relief

Shoulder and elbow pain, little scientific rationale for treatment and great potential for long term pain and disability.

The upper extremity is an amazingly complex structure that consists of a large number of bones, muscles and nerves. When working properly, the arm and hand are capable of producing a range of fine motor skills like threading a needle or throwing a baseball over 90 miles an hour to a precise location. Unfortunately, the complexity of the upper extremity that allows for these remarkable feats also makes the shoulder, elbow and wrist susceptible to injury.(1) The upper extremity is particularly susceptible to overuse injury.(2) Both the duration of the movement and the number of repetitions appear to predispose the arm to painful syndromes. (2) These Upper extremity pain syndromes are common in the general population, occurring in up to 36% of the general population at any one time.(3). In throwers, such as baseball pitchers, one study found that 57% of pitchers reporting to spring training had some level of shoulder pain. Of even greater concern to throwing athletes is the lack of basic science knowledge of the cause of arm pain syndromes(4) MR imaging demonstrates

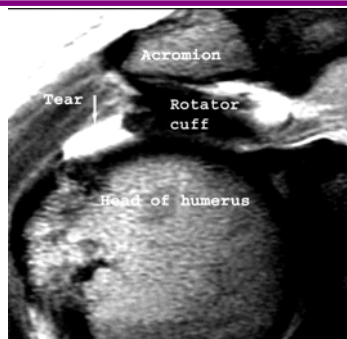


*Throwing motions, such as pitching, combine all of the common risk factors for the development of painful shoulder, elbow and arm syndromes. The picture above illustrates the stresses and strains placed on the shoulder and elbow. Throwing injuries are classic overuse syndromes, including multiple repetitions and long durations. These factors are believed to contribute to tendon degeneration (above).*

structural damage to the tendons and increased signal intensity, but the meaning of these findings is difficult to interpret because the changes on MRI persist even after symptoms subside (5). Another study, examined specimens obtained at surgery from patients suffering from epicondylitis of the elbow.(4) The tissue samples showed very little evidence for inflammation. The great majority of other studies support this finding and also question if an inflammation actually occurs in the tissues surrounding the elbows in these patients.(4) It appears that tendon degeneration rather than tendon inflammation and repair is the most common finding in these patients. Without a good understanding of the pathology of upper extremity pain syndromes, it shouldn't be surprising that most commonly prescribed treatments of shoulder and elbow pain syndromes lack evidence of effectiveness.(4) Studies of various common treatments for shoulder and arm pain produce conflicting results. (3) For example anti-inflammatory drugs, while appearing to help in the short run, were actually less effective than a wait-and-see approach to epicondylitis, in the long run. (6) This same study suggested that physiotherapy was marginally effective in the short run, but more effective than steroid injections in the long run. (6) Wearing an elbow support, while initially reducing pain, showed limited long term benefit. (7) More worrisome for the athlete, is the fact that the long term outlook for arm pain syndromes is not encouraging.(8) Files of 125 patients with lateral elbow pain, treated in a rheumatology clinic, were reviewed 1-5 years after presentation: 26% had recurrence of symptoms, over 40% of patients had prolonged minor discomfort which affected some activities. Thus it becomes obvious that elbow pain often can be associated with prolonged disability (8)It is clear that prevention is key and alternative approaches are required to improve outcomes in painful shoulder and arm syndromes. What can be done? An interesting line of evidence is emerging suggesting a connection between the mechanics of the spine, particularly the neck and upper back, and the function of the upper extremity. (ref 9-15) (Continued >>>)

# Normalizing the Mechanics of the Arm

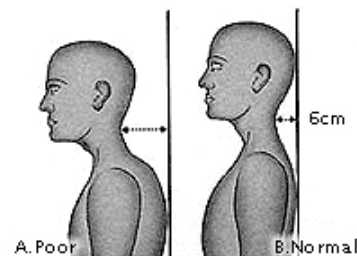
Furthermore evidence is mounting that suggests that problems in the wrist, elbow or shoulder affect the function of other areas of the arm. (16-20) Stated another way, treatment of arm problems should consider the neck, shoulder, elbow and wrist even if only one of these joints is painful. Several studies have linked abnormal posture (specifically head forward posture (figure 1) to shoulder problems and altered shoulder mechanics.<sup>9-11</sup> Other studies document an association between altered cervical joint function, termed vertebral subluxation in the chiropractic profession, and the development of arm pain syndromes, including impingement syndromes, rotator cuff problems and tendonitis.<sup>14-20</sup> It appears that a link has also been established between the neck and elbow problems like lateral epicondylitis.<sup>17-19</sup> And still more evidence is accumulating that suggests the elbow will affect the shoulder and the wrist may contribute to elbow pain.<sup>16,20</sup> Adding manipulative therapy directed at the cervical spine, elbow and wrist to a physical therapy routine seems to accelerate pain reduction in shoulder and painful arm syndromes.<sup>17,18,21</sup> Furthermore eccentric muscle contraction and stretching, like those found in muscle alignment techniques, appear to be effective manual methods to restore normal function and reduce pain in painful arm syndromes.<sup>21</sup> There is also evidence that acupuncture may speed recovery from elbow injuries. Laser, electrical or needle acupuncture can be an



*Repetitive stresses and strains can lead to degeneration and tearing of the tendons. The image to the left is an MRI demonstrating a tendon injury in the shoulder joint. An interesting note, some studies show that many MRI findings persist even after the arm pain is resolved.*

effective adjunct to more traditional treatments.<sup>22,23</sup> Because arm pain syndromes are resistant to most forms of treatment, they are often career threatening, if not career ending, problems in throwing athletes. Therefore a comprehensive approach to arm pain should include therapies directed at improving posture, restoring normal joint function in the neck and upper back as well as evaluating the function of all three major joints of the upper extremity. For the athlete, the rapid pain reduction associated with joint manipulation eccentric muscle contraction and acupuncture may facilitate earlier rehab and shorter stays on the disabled list.

(Figure 1) There is growing evidence that head forward posture like in the illustration to the right and mechanical neck problems are associated with abnormal shoulder mechanics, arm pain and elbow problems.



**Modern methods of chiropractic therapy can quickly reduce abnormal head forward posture and possibly eliminate a risk factor in the development of shoulder and arm pain syndromes in throwing athletes.**

## References

- 1) Overuse injury syndromes of the hand, forearm and elbow Arh Hig Rada Toksikol. 2001 Dec;52(4):403-14.
- 2) Biomechanical models for the pathogenesis of specific distal upper extremity disorders. Am J Ind Med. 2002 May;41(5):353-69.
- 3) Physiotherapy interventions for shoulder pain. Cochrane Database Syst Rev. 2003;(2):CD004258.
- 4) Lateral tennis elbow: "Is there any science out there?". J Shoulder Elbow Surg. 1999 Sep-Oct;8(5):481-91.
- 5) Magnetic resonance imaging in the evaluation of treatment response of lateral epicondylitis of the elbow. Eur Radiol. 2004 Jun;14(6):964-9.
- 6) Corticosteroid injections, physiotherapy, or a wait-and-see policy for lateral epicondylitis: a randomised controlled trial. Lancet. 2002 Feb 23;359(9307):657-62.
- 7) Conservative treatment of lateral epicondylitis: brace versus physical therapy or a combination of both—a randomized clinical trial. Am J Sports Med. 2004 Mar;32(2):462-9.
- 8) Lateral humeral epicondylitis—a study of natural history and the effect of conservative therapy. Br J Rheumatol. 1983 May;22(2):73-6.
- 9) Subacromial Impingement Syndrome: the effect of changing posture on shoulder range of movement. J Orthop Sports PT 2005 Feb 35(2):72-87
- 10) Shoulder Impingement: the effects of sitting posture on shoulder pain and range of motion. Man Ther 2005 Feb 10(1):28-37
- 11) Thoracic position effects on shoulder range of motion, strength, and 3-d scapular kinematics. Arch Phys Med Rehab 1999 Aug 80(8):945-50
- 12) Rotator syndrome of the shoulder and mobility of the cervical spine. Z Rheumatol 1989 Sep-Oct 48(5):223-8
- 13) Cervical Spine and the shoulder Instr course Lecture 1985 34:191-5
- 14) The influence of mobility in the Cervico-thoracic spine and the upper ribs on the mobility of the scapulo-humeral joint JMPT 1996 Sep 19(7) 469-74
- 15) Posture in patients with shoulder overuse injuries and healthy individuals J Orthop Sports PT 1995 May 21(5):287-95
- 16) Mobilization with movement applied to the elbow effects shoulder ROM in subjects with lateral epicondylitis. Man Ther 2001 Aug 6 (3):170
- 17) Effectiveness of manual PT to the cervical spine in cases of lateral epicondylitis. J Orthop Sports PT 2004 Nov 34(11):713-22
- 18) The initial effects of a cervical spine manipulative physiotherapy TX on the pain and dysfunction of lateral epicondylitis. Pain 1996 Nov 68(1):69-74
- 19) Decrease in elbow flexor inhibition after cervical spine manipulation in patients with chronic neck pain. Clin Biom 2002 Aug 17(7):541-4
- 20) Manipulation of the wrist in management of lateral epicondylitis. Phys Ther 2003 Jul 83(7):608-16
- 21) Non operative treatment regime including eccentric training for epicondylitis. Scand J Med Sci sports 2001 Dec 11(6):328-34
- 22) Acupuncture in chronic epicondylitis; randomized controlled trial. Rheumatology 2002 Feb 41(2):205-9
- 23) Comparison of the effectiveness between manual acupuncture and electro acupuncture on patients with tennis elbow. Acupunct Electrother Res 2002 27(2):107-17

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