Background: The patient is a twenty-one year-old female with complaints of insidious onset, left posterior elbow pain. The only finding in the patient’s past medical history included a flu vaccination one day prior to the onset of symptoms. The initial onset of symptoms included sharp pain and an inability to fully extend the elbow. The patient monitored the condition over two days noting that symptoms progressed to include increased pain and swelling in the involved joint. This increased symptomology resulted in further loss of elbow range of motion in both flexion and extension. The patient presented to an athletic trainer for assessment of the condition. Visual inspection revealed moderate swelling over the posterior aspect of the left elbow, just superior to the olecranon process. Palpation demonstrated point tenderness along the medial supracondylar ridge and over the distal triceps tendon. Increased temperature was also noted over the posterior and medial portion of the elbow. Active range of motion was limited to 92 degrees of elbow flexion and -23 degrees of elbow extension. Strength testing and special tests were deferred secondary to pain. Neurologic exam was grossly within normal limits bilaterally. Differential Diagnosis: Differential diagnosis in this patient included ruling out triceps tendinitis, olecranon bursitis, cellulitis, rheumatoid arthritis, deep vein thrombosis and serum sickness. Treatment: The patient was then referred to an orthopedist for assessment. Plain radiographs were ordered to rule out joint pathology. Diagnostic testing was negative for joint pathology and the patient was subsequently referred to a hand specialist for further assessment. The hand surgeon diagnosed the patient with acute reactive synovitis secondary to the flu vaccination. Initial treatment included cryotherapy and compression to the involved joint. The patient was subsequently referred to a physician for assessment and was placed on a seven day regimen of Bactrim. The patient was also instructed to take NSAIDS as needed to control of inflammation. Following two days of treatment, the patient noted a slight decrease in pain and swelling. Discoloration was noted along the medial aspect of the left elbow. This slight decrease in symptomology was followed by a sudden increase in pain and swelling in the involved extremity necessitating referral to the hand specialist. The hand specialist recommended the patient continued to be treated with oral anti-inflammatory medication and antibiotics. Approximately ten days after onset, the involved elbow demonstrated no edema and normal range of motion. Uniqueness: A diagnosis of acute reactive synovitis secondary to an injection is unusual, with an incidence of approximately 5% in health individuals. Furthermore, the patient denied pain or loss of function in the left upper extremity. Conclusion: This case demonstrates the importance of obtaining a thorough past medical history in order to determine possible uncommon, underlying causes of orthopedic dysfunction. Given the recent prevalence of flu vaccinations amongst secondary school and college-aged patients, the athletic trainer is more likely to be confronted with cases like this one. Word Count: 483.