



# Australian Association of Musculoskeletal Medicine

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## **Injection of the subacromial-subdeltoid bursa: blind or ultrasound-guided?**

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**BACKGROUND:** Blind injection of the subacromial-sub-deltoid bursa (SSB) for diagnostic purposes (Neer test) or therapeutic purposes (corticosteroid therapy) is frequently used. Poor response to previous blind injection or side effects may be due to a misplaced injection. It is assumed that ultrasound (US)-guided injections are more accurate than blind injections. In a randomized study, we compared the accuracy of blind injection to that of US-guided injection into the SSB.

**PATIENTS AND METHODS:** 20 consecutive patients with impingement syndrome of the shoulder were randomized for blind or US-guided injection in the SSB. Injection was performed either by an experienced orthopedic surgeon or by an experienced musculoskeletal radiologist. A mixture of 1 mL methylprednisolone acetate, 4 mL prilocaine hydrochloride and 0.02 mL (0.01 mmol) Gadolinium DTPA was injected. Immediately after injection, a 3D-gradient T1-weighted magnetic resonance scan of the shoulder was performed. The location of the injected fluid was independently assessed by 2 radiologists who were blinded as to the injection technique used.

**RESULTS:** The accuracy of blind and US-guided injection was the same. The fluid was injected into the bursa in all cases.

**INTERPRETATION:** Blind injection into the SSB is as reliable as US-guided injection and could therefore be used in daily routine. US-guided injections may offer a useful alternative in difficult cases, such as with changed anatomy postoperatively or when there is no effective clinical outcome.