

Limited evidence to support removable splintage for wrist buckle fractures in children

Clinical question	How effective is removable splintage for undisplaced wrist compression (buckle) fractures in children?
Bottom line	Four trials compared removable splintage versus a traditional below-elbow cast. There was no short term deformity recorded in all 4 trials, and, in one trial, no refracture at 6 months. Parents strongly favoured removable casts. The review also included other intervention trials for wrist buckle fractures, including trials of below-elbow versus above-elbow casts. No difference in redisplacement of reduced fractures or cast-related complications were found, but below-elbow casts were less restrictive during use and avoided elbow stiffness. One trial evaluating the effect of arm position in above-elbow casts found no effect on deformity. Three trials found percutaneous wiring significantly reduced redisplacement and remanipulation but one of these found no advantage in function at 3 months.
Caveat	Some of the trials used poor methods that meant their results were potentially unreliable. Although subcutaneous wire fixation prevents redisplacement, the effects on longer term outcomes including fracture were not established.
Context	Approximately one third of all fractures in children occur at the wrist as a result of falling onto an outstretched hand. Some fractures are relatively minor, involve a bulging of the bone surface (buckle fractures) and are traditionally treated with a below-elbow plaster cast. Where there is bone displacement, treatment usually involves an above-elbow cast or surgical fixation.
Cochrane Systematic	Abraham A et al. Interventions for treating wrist fractures in children. Cochrane Reviews 2008,

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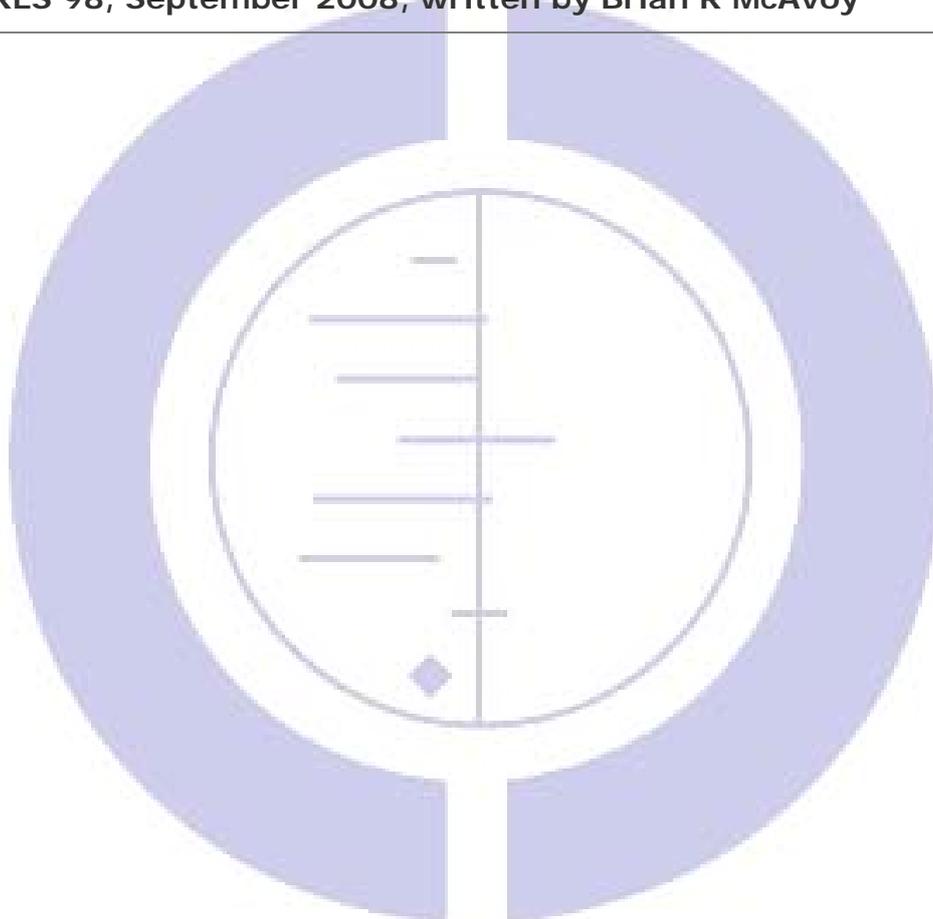
PEARLS

Practical Evidence About Real Life Situations

Review

Issue 2. Article No. CD004576. DOI:
10.1002/14651858. CD004576.pub2. This review
contains 10 studies involving 827 children.

PEARLS 98, September 2008, written by Brian R McAvoy



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