# Tips from Other Journals

**Adult Medicine**

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## Screening for Prostate Cancer Does Not Affect Mortality Rates

**Background:** Prostate cancer is the second most common cancer in men worldwide, and the second deadliest cancer among men in the United States. Screening for curative early-stage disease has been supported as a means to decrease mortality, but controversy persists about the benefits and harms. A 2006 systematic review from the Cochrane Library reported insufficient evidence to support or refute the benefits of prostate cancer screening. However, this review was based on two randomized controlled trials that had significant design flaws. Since that time, four additional large studies have been published. Djulbegovic and colleagues performed an updated systematic review and meta-analysis on the effect of prostate cancer screening on overall and disease-specific mortality.

**The Study:** The authors searched electronic databases, including Medline, Embase, and the Cochrane Registry of Controlled Trials; abstract proceedings; and bibliographies of all eligible studies from January 1, 2005, to July 13, 2010. Studies published before the previous systematic review was completed were eligible. Randomized controlled trials that compared screening versus no screening of asymptomatic men were eligible if they included prostate-specific antigen (PSA) testing with or without digital rectal examination (DRE). Studies that included participants with previously diagnosed prostate cancer were excluded.

The primary outcomes were all-cause and prostate cancer–specific mortality, diagnosis of prostate cancer, effect of screening on stage at diagnosis, false-positive and false-negative results, harms of screening, quality of life, and cost-effectiveness. The quality and limitations of each study were evaluated on multiple criteria; individual outcomes were given a quality of evidence rating of high, moderate, low, or very low. The effects of screening were reported as relative risks for all outcomes studied.

**Results:** Of 493 relevant references, six randomized clinical trials met inclusion criteria. Of these, five used PSA testing with or without DRE, and the sixth added PSA testing to DRE during the study. The evidence was considered moderate quality for all-cause and disease-specific mortality. Four trials with 256,019 participants provided data for all-cause mortality, and five trials with 302,500 men were used to calculate prostate cancer–specific mortality. No differences in all-cause or disease-specific mortality between the screened and unscreened groups were found. Based on low-quality evidence, screening resulted in a 46 percent relative increase in prostate cancer diagnoses, although subgroup analysis attributed most of this to stage I cancer. Screening did not improve diagnosis of stages II, III, and IV prostate cancer. This study has some notable limitations. Methodologic problems in the studies resulted in the evidence being downgraded from high to moderate quality for mortality, and the relatively short length of follow-up (i.e., four to 14 years) may not have been sufficient to detect differences in mortality. Finally, the evidence was insufficient to assess screening on high-risk groups.

**Conclusion:** The authors conclude that screening effectively diagnoses more early-stage prostate cancers. The best available evidence suggests that screening does not improve overall or prostate cancer–specific survival.

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**Source:** Djulbegovic M, et al. Screening for prostate cancer: systematic review and meta-analysis of randomised controlled trials. *BMJ.* September 14, 2010;341:c4543.

## Casting vs. Splinting for Wrist Fractures in Children

**Background:** Fracture of the distal radius is the most common fracture in children. These fractures are traditionally placed in a short arm cast for four to six weeks, but this can lead to poor hygiene and can cause additional damage if the cast fits poorly. Additionally, use of the cast saw can cause distress in children. Evidence from studies involving adults has shown splinting to be a safe alternative, but it has yet to be confirmed in children. Boutis and colleagues conducted a randomized controlled trial to determine if splinting was as effective as casting in the treatment of minimally angulated wrist fractures in children. ▶

## Tips from Other Journals

**The Study:** The authors enrolled children five to 12 years of age with minimally angulated (15 degrees or less) greenstick or transverse fractures of the distal radius. Of the 96 children who met inclusion criteria, 46 were placed in a splint and 50 were placed in a cast, each for four weeks. Children in splints were advised to remove the splint only for hygienic reasons. The angle of displacement of the bone was determined in the sagittal plane of the radiography. The authors defined 15 degrees or less as translation displacement of 5 mm or less on the frontal plane. Children with an injury that was older than five days; who had a buckle, open, or pathologic fracture; or whose fracture involved the growth plate were excluded from the study. Additionally, children with congenital wrist anomalies, coagulopathies, multisystem trauma, multiple injuries to the same limb, or developmental delay were excluded. Six weeks after the initial application of the immobilization device, physiotherapists assessed the children's physical function, using single-blinded methodology. Parents completed a weekly diary to record pain scores and compliance with treatment and were contacted three months after treatment to assess recovery.

**Results:** The authors found no significant differences between the groups based on each patient's range of motion, grip strength, and ability to complete activities six weeks after initiation of treatment. There were also no significant differences between the immobilization devices in the irritation, itching, and discomfort reported. Six children had to wear their immobilization device for an additional two weeks because the angulation of their fracture had increased to 25 degrees by the fourth week; these children were evenly divided between the two groups. Based on parental reports, splint use became less frequent by the end of four weeks. The primary difference between the groups occurred at week 6 when 5 percent of parents and 12 percent of children in the splint group reported they would have preferred a cast, whereas 60 percent of parents and 68 percent of children in the cast group reported they would have preferred a splint. None of the children required surgical intervention during the follow-up period.

**Conclusion:** The authors conclude that splinting appears to be safe, effective, and preferred by patients and parents. However, care must be taken to correctly diagnose fracture type to determine whether splinting is an appropriate alternative to casting.

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**Source:** Boutis K, et al. Cast versus splint in children with minimally angulated fractures of the distal radius: a randomized controlled trial. *CMAJ.* October 5, 2010;182(14):1507-1512. ■