Are cervical pillows effective in reducing neck pain?
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CRD summary
This review assessed the use of cervical pillows for neck pain. The authors concluded that there was insufficient evidence to determine the efficacy of such pillows for chronic neck pain. This conclusion accurately reflects the results of a well-conducted review of poor-quality studies and is likely to be reliable.

Authors' objectives
To assess the effectiveness of cervical pillows in decreasing neck pain.

Searching
The following electronic databases were searched to May 2005: MEDLINE (from 1966), CINAHL (from 1982), AMED (from 1985), EMBASE (from 1988), PubMed (from 1966), SPORTDiscus (from 1830), the Cochrane Library, DARE (from 1968), the Cochrane CENTRAL Register (from 1968), Australasian Medical Index (from 1968), AusSport (from 1929) and PEDro (from 1929); the search terms were reported. Citations were tracked and references of identified articles were checked. Manufacturers were also contacted. No language restrictions were employed.

Study selection
Studies of patients described as having acute or chronic neck pain were eligible for inclusion. Studies of patients whose pain resulted from a systemic disease were excluded from the review. All included studies examined chronic pain. The majority of patients were female and were described as being in their middle years. Studies were required to assess the effect of cervical pillows on neck pain and to report at least one pain outcome measure. The included studies used visual analogue scales (VAS), the Borg pain scale and a daily pain diary to assess pain. The secondary review outcomes included activity limitations, sleep quality, and medications. Included studies also reported on compliance, adverse effects and satisfaction. Studies that used cervical pillows in conjunction with another therapy, or in which the patient was otherwise receiving additional therapy, were excluded from the review. Several different types of pillow were used in the included studies. No inclusion criteria for the study design were reported. The included studies were randomised controlled trials (RCTs), prospective cohort studies and pre-test post-test intervention studies. Treatment duration in the included studies ranged from 10 days to 4 weeks.

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Two reviewers independently assessed the validity of the included studies using the PEDro scale, which assesses both internal and external validity and includes an assessment of randomisation, allocation concealment, baseline comparability, blinding, losses to follow-up and use of intention-to-treat analysis. Any disagreements were resolved by discussion.

Data extraction
Effect sizes (Cohen's d) with 95% confidence intervals were calculated for each outcome using methods appropriate to the study design. Two reviewers independently extracted the data.

Methods of synthesis
The studies were combined in a narrative. Differences between the studies were discussed in terms of quality and outcomes assessed.

Results of the review
Five studies (n=134) were included in the review. Three studies were RCTs (n=86), of which two used crossover designs, one study was a prospective cohort, (n=20) and one was a pre-test post-test design (n=28).
The quality of the studies was low, with PEDro scores ranging from 3 to 5 out of a possible 10.

The results of the studies were mixed. No differences in pain were found when a roll cervical pillow and a semi-customised cervical pillow were compared with usual pillow, but positive effects on pain were reported for a water-based pillow compared with usual pillow, for a cervical pillow compared with a travel pillow, and for a cervical pillow with no comparator.

Results for use of analgesics, sleep quality and duration, activity, drop-outs and satisfaction were also reported.

**Authors' conclusions**
There was insufficient evidence to conclude whether cervical pillows reduce chronic neck pain.

**CRD commentary**
The review question was clear with defined inclusion criteria, except for study design. The authors searched a wide range of databases and made additional attempts to identify studies, thereby reducing the chance that some relevant studies were not included in the review. Appropriate methods to minimise bias and error were used at all stages of the review process, and an appropriate validity assessment was carried out. The decision to employ a narrative synthesis appears correct, and study characteristics and consequent clinical heterogeneity were discussed. The authors’ conclusions are appropriately cautious given the poor quality and small size of the included studies and their contradictory results; these conclusions are likely to be reliable.

**Implications of the review for practice and research**
Practice: The authors did not state any implications for practice.

Research: The authors stated that high-quality randomised trials are required before cervical pillows can be recommended in clinical practice.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.