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Sleep Support for Rehab Patients

By Kim Christensen, DC, DACRB, CCSP, CSCS

People under professional care for various acute or chronic neck problems often read articles in popular magazines discussing special "neck support" pillows.¹ Cervical support pillows are recommended by many chiropractors and other health care professionals. The authors of a 1998 comparison study of three types of bed pillows wrote, "From a patient's perspective, neck support is an important part of a comprehensive physiotherapy program."² Most bedding stores and sleep shops have at least one special pillow (and often there are several) for people with neck pain.

While many doctors of chiropractic have recommended cervical support pillows for years, the scientific evidence for benefit has been skimpy, at best.²⁻⁶ Empirical and anecdotal reports from patients who reported "improved sleep" and "decreased pain" have often been all that is available.¹

Three Professional Findings

Let's review three scientific studies³⁻⁵ that attempted to answer some of the questions regarding cervical pillows. Although each of these three took different investigative approaches and evaluated different pillows - which means that the findings are not directly comparable, and no definitive conclusions can be made - the results are still worth consideration, since they give us some guidance in selecting a support pillow for our patients.

Two-pillow comparison. In a study³ performed at the Johns Hopkins University School of Medicine, Drs. Lavin, Pappagallo, and Kuhlemeier recruited 46 subjects with chronic neck pain and cervicogenic headaches. The investigation compared the subjects' daily pain levels, sleep quality, and medication consumption during one week on their own pillow, followed by two weeks each on two special neck support pillows. One of the pillows was a "cervical roll" style and the other was a "water-based cervical pillow." A statistically significant improvement in all scores was recorded when using the water pillow. Most subjects preferred the water pillow to their own pillow, and many had a very difficult time sleeping on the roll

pillow. In fact, the researchers reported that some of the patients had to discontinue the two-week trial of the roll pillow due to significant discomfort.

The investigators felt that the higher satisfaction ratings of the water pillow were due to its ability to conform better to the position and shape of subjects' heads and necks during various sleep positions. They believed that the roll pillow was not well-tolerated due to its tendency to exaggerate the extension of the neck when supine (since there was no support underneath the head).

Single-style. A small feasibility study⁴ at Canadian Memorial Chiropractic College seemed to find very different results. After recording two weeks of baseline pain ratings in 30 subjects with chronic neck pain, the researchers supplied a roll-type cervical pillow (a soft, cylindrical shape). Of those who persevered in using the pillow for four weeks (many subjects found it very uncomfortable initially), most reported decreases in neck pain. However, three subjects reported increased neck pain during use of the pillow, and two women dropped out of the trial, saying they were unable to tolerate the discomfort they experienced while using the cylindrical pillow.

Since the data collected do not reflect these "pillow failures," and since there was no placebo or comparison with other pillows, this study's conclusions should be considered overly optimistic. This demonstrates the difficulty in designing a scientifically valid and practically useful scientific investigation.

Six-pillow comparison. At Lund University Hospital in Sweden, researchers studied the responses of 55 subjects to three nights on each of six different pillows.⁵ However, none of the six pillows included subjects' own pillows, and none was the same as the two types studied in the previous experiments. Since no "roll-type" pillows were included, we are left without a practical comparison to the other studies.

The subjects in this experiment rated the six pillows for comfort, but were also asked about pain reduction and sleep improvement. The six pillows varied in their design, materials and construction.

One pillow stood out from the rest as the most comfortable, and also the most likely to decrease chronic pain. Rated the "best" by both men and women, this pillow was made of soft polyurethane, with two firm supports along the edges - one side high and the other side lower. This pillow supplied an easily tolerated support for the neck, while the two different sides provided a choice of heights. The pillow that rated the lowest was the one that most closely resembled a roll pillow.

The investigators concluded that the optimal neck pillow to reduce neck pain and improve night rest was a soft, not-too-high pillow with support for the cervical lordosis from a choice of firmer cores. Since the participants used each pillow for only three nights apiece, and only comfort ratings were evaluated, no conclusions can be drawn from this study regarding the long-term effects of these pillows on pain or sleep patterns.

When to Recommend a Support Pillow

When patients report chronic neck pain, cervicobrachialgia, and/or cervicogenic headaches, or when a patient has been instructed to perform rehabilitative cervical exercises, a cervical support pillow should be considered. This is especially true when the pain is described as being worse in the morning and improving during the day. If sleep disturbances are part of the history, or if there is a history of injury to the neck, a comfortable, yet supportive pillow should be a part of the chiropractic treatment recommendations.

The correct pillow will vary depending on the size of the person and the amount of neck support that can be tolerated. Roll-type cervical pillows are initially uncomfortable, and may worsen some patients. A pillow that supplies a choice of sides is more likely to be helpful to a broader range of patients. It is also important to re-evaluate your patients' pillows, to ensure that proper cervical support continues over time.

Recommending the use of a good cervical support pillow (and supplying one that has a good track record) can be one of the most useful adjunctive procedures to rehabilitative treatment of neck pain. Patients appreciate the doctor who goes beyond the office setting to give advice regarding supportive home activities, and even specific sleep recommendations.

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Kim Christensen, DC, DACRB, CCSP, CSCS

Director, Chiropractic Rehabilitation and Wellness Program

PeaceHealth Hospital

Longview, Washington

kchristensen@peacehealth.org

Click [here](#) for more information about Kim Christensen, DC, DACRB, CCSP, CSCS.



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