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## **Cervical Support Pillows: Useless or Helpful?**

**by John K. Hyland, D.C., D.A.C.B.R., D.A.B.C.O., C.S.C.S.**

Patients with chronic and/or acute neck pain are presented with information from various marketing sources regarding special “neck support” pillows. Many doctors of chiropractic, physiotherapists, and even surgeons recommend cervical support pillows. Most bedding stores have at least one special pillow (and often there are several) for people with neck pain. Is there any scientific support for the claims made for better sleep, lowered neck pain, and fewer headaches? When one of your patients has chronic neck problems, or has received an injury to the neck, does it make sense to recommend a cervical support pillow? Which of the many different designs of support pillow is most likely to be helpful for most patients? Are there any risks or problems associated with the use of cervical pillows?

### **Empirical Usage**

While many doctors of chiropractic (myself included) have used and recommended cervical support pillows for years, the scientific evidence for benefit has been skimpy, at best. Empirical and anecdotal reports from patients who describe improved sleep and decreased pain have often been all that is available. In my case, since I felt the biomechanical arguments made sense, I have recommended (and sold) cervical support pillows for many years. To decide which specific pillow to stock and sell from my office, I have personally tried numerous pillows, and even experimented on my family over the years. Let's review three reasonably good scientific studies which have attempted to address some of the questions regarding cervical pillows.

### **Scientific Studies**

Unfortunately, these three studies took different investigative approaches and evaluated different pillows. This means that the findings are not directly comparable, and no definitive conclusions can be made. However, the results are worth reviewing, since they give us some guidance in selecting a support pillow for our patients.

*Comparing Two Pillows.* In a study performed at the Johns Hopkins University School of Medicine, (1) Drs. Lavin, Pappagallo, and Kuhlemeier recruited 46 subjects with chronic neck pain and cervicogenic headaches. The investigation compared their daily pain levels; sleep quality, and medication consumption during one week on their own pillows, followed by two weeks each on two special neck support pillows. One of the pillows was a "cervical roll" (Jackson-type pillow), 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.

In conclusion, 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 the subjects' head and neck 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).

*Looking at One Pillow.* A small feasibility study at Canadian Memorial Chiropractic College seemed to find very different results. (2) 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 cylinder shape). Of those who persevered in using the pillow for four weeks (many subjects found the pillow to be very uncomfortable initially), most reported decreases in neck pain. However, three subjects described 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 when 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.

*Comparing Six Pillows.* At Lund University Hospital in Sweden, researchers studied the responses of 55 subjects to three nights on each of six different pillows. (3) Unfortunately, none of the six pillows included their own pillows, and none were 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 the most likely to decrease chronic pain. The pillow rated the “best” by both men and women 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 which 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, and only comfort ratings were evaluated, no conclusions can be drawn from this study regarding the long-term effect of these pillows on pain or sleep patterns.

## **Conclusion**

When chiropractic patients report chronic neck pain and/or cervicogenic headaches, 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 with a history of injury to the neck, a comfortable, yet supportive pillow should be a part of the chiropractic treatment recommendations.

The right pillow will vary depending on the size of the person and on the amount of neck support that can be tolerated. Roll-type cervical pillows are initially uncomfortable, and may worsen some patients. A pillow which supplies a choice of sides is more likely to be helpful to a broader range of patients. It is also important to re-evaluate the pillows of your patients to ensure that new ones are purchased when the present pillows are found to have lost their original amount of support with 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 chiropractic 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.

## **References**

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### **About The Author**

Dr. Hyland is a 1980 graduate (*cum laude*) of Logan College of Chiropractic. He is a Diplomate of both the American Board of Chiropractic Orthopedists (DABCO) and the American Chiropractic Board of Radiology (DACBR). He is also a Certified Strength and Conditioning Specialist (CSCS). A popular speaker for Foot Levelers, he is a postgraduate lecturer for several chiropractic colleges and a frequent contributor to chiropractic publications.