# **The Effect of Sleep Positions and Occupation on Shoulder Diseases**



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#### Introduction

The shoulder joint causes a very critical action in people's lives such as positioning the hand in spatial planes and is functionally at an extremely vital point. The shoulder joint is a very complex structure and this not only makes its function special, but also makes it sensitive to external and internal trauma and pressure.

Humans spend one third of their daily time sleeping and the other third doing their job. During sleep, the human body tends to rest and repair damage. Unlike other systems, the shoulder joint is the most exposed joint to pressure and stress during sleeping and also in daily life. Apart from trauma and other stressors, occupational-related shoulder pain is a common reason people seek medical attention.

#### **Methods**

This study was conducted to 48 patients who applied to the our hospital with the complaint of shoulder pain. 24 questions in the questionnaire we prepared were asked to 48 patients. Patients' shoulder pain and history, diagnosis, sleep positions and occupations were questioned in detail, demographic information and many predisposing factors were also questioned. Patients between the ages of 18-70 will be included in our study. Patients with bone-joint tumors, fractures, cervical pathologies, reflected shoulder pain, psychiatric exposures that affect sleep, and those using antipsychotic medication will not be included in our study.

After our survey, we conducted data analysis methods to investigate whether there was a link between sleeping positions, occupations and shoulder pain. p<0.05 will be considered statistically significant.

Side Of The Shoulder Pain According To Dominant Hand



Sleeep Positions Of the patients



There is a significant correlation between the shoulders of the patients who described the pain and their dominant hands (p=0.018). There was no relationship between the shoulders they lie on and the side on which they describe pain (p=0.251) but it is seen that our patients with impingement syndrome describe pain on their shoulders on which they lie. In patients who shared their bed with a partner, there was no relationship between which side of the bed they slept on and the side on which they described pain (p=0.725). A significant relationship was observed between patients who woke up at night due to their pain and those with morning stiffness (p=0.035). When we divided our patients into diagnosis with impingement and other orthopedic pathologies, we found that BMI was not a triggering factor for either group (p=0,17). There was no relationship between the working hours of our working patients and the hours they described pain (p=0.067), but the majority of our patients stated that they felt constant pain during the day. According to the sleeping positions of the patients, there was no relationship between the shoulder they lie on and the side on which they describe pain (p=0,251), but it is seen that our patients with impingement syndrome describe pain on their shoulders on which they lie.





#### Grafik Başlığı

#### Conclusion

Both sleep and occupational activities trigger shoulder pain, but larger studies should be

done to understand the relationship in more detail.

### References

- Linaker CH, Walker-Bone K. Shoulder disorders and occupation. Best Pract Res Clin Rheumatol. 2015 Jun;29(3):405-23. doi: 10.1016/j.berh.2015.04.001. Epub 2015 May 8. PMID: 26612238; PMCID: PMC4836557.
- Kempf B, Kongsted A. Association between the side of unilateral shoulder pain and preferred 2. sleeping position: a cross-sectional study of 83 Danish patients. J Manipulative Physiol Ther. 2012 Jun;35(5):407-12. doi: 10.1016/j.jmpt.2012.04.015. Epub 2012 May 17. PMID: 22608285.
- 3. Werner CM, Ossendorf C, Meyer DC, Blumenthal S, Gerber C. Subacromial pressures vary with simulated sleep positions. J Shoulder Elbow Surg. 2010 Oct;19(7):989-93. doi: 10.1016/j.jse.2010.04.039. Epub 2010 Jul 24. PMID: 20656524.
- 4. Zenian J. Sleep position and shoulder pain. Med Hypotheses. 2010 Apr;74(4):639-43. doi: 10.1016/j.mehy.2009.11.013. Epub 2009 Dec 24. PMID: 20036076.
- 5. Holdaway LA, Hegmann KT, Thiese MS, Kapellusch J. Is sleep position associated with glenohumeral shoulder pain and rotator cuff tendinopathy: a cross-sectional study. BMC Musculoskelet Disord. 2018 Nov 23;19(1):408. doi: 10.1186/s12891-018-2319-9. PMID: 30470225; PMCID: PMC6260856.
- 6. Shanahan EM, Sladek R. Shoulder pain at the workplace. Best Pract Res Clin Rheumatol. 2011 Feb;25(1):59-68. doi: 10.1016/j.berh.2011.01.008. PMID: 21663850.