



ALIGNMED CAN IMPROVE SLEEP POSTURE AND QUALITY OF SLEEP

Bill Schultz
President and Founder Alignmed, Inc.

Sleep disorders can be caused by a variety of issues but AlignMed's focus is on how sleep postures can be improved to affect the quality of sleep, including the abnormal pathologies of sleep apnea, headaches, back, neck, shoulder, hip and leg pain. It is well published in medical literature that body positions during the unconscious process of sleep can interfere with normal physical, mental, social and emotional functioning. We have reviewed outcomes regarding sleep position to determine the validity of wearing tactile touch and controlled tensions built into AlignMed's Evidence Based Apparel.

Conceptually AlignMed's product line can help quality of sleep by facilitating an improvement in the unconscious postures that take place during sleep. Key to the effect is how NeuroBands help evenly distribute loads upon the musculature of the spine, hips, shoulders, neck, knees and feet.

CONSCIOUS THERAPY VS. UNCONSCIOUS THERAPY:

It is your conscious decision to choose the best mattress, pillow and sleep position. This conscious choice loses its effect once asleep as we gravitate to sleep positions that are based largely on our daily physical habits and the movement activity that makes up our waking life.

"Your sleep positions can strain your back and lead to the development of back pain. Sleep positions can affect existing back pain. Similarly, back pain is more likely to keep you awake when sleeping position provides no relief." (Mayo Foundation for Education and Research).

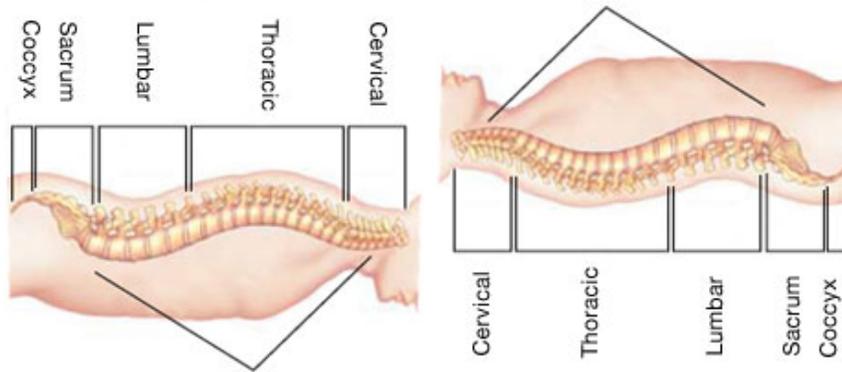
- 1) Conscious controls occur when we decide what surface we will sleep upon or what we wear to bed. The primary use of a mattress or pillow is for pressure distribution, or what we refer to as Static Sleep Distribution or SSD. The design premise for these product is in the use of materials and how they are constructed to positively affect pressure distribution throughout the body during sleep. What is important to comprehend is that static equipment has a different effect once the unconscious process of sleep kicks in.
- 2) In reality, any positive effect SSD will have is relative to the underlying pathology of the user; the SSD cannot comprehend the anatomy and physiology the user brings to sleep.
- 3) The AlignMed difference is an anatomic matrix of NeuroBand panels, bands and seams worn on the body to more intimately distribute loads across muscles and the joints they support. There is also the benefit of unconscious biofeedback for muscle retraining over time. Load transfer built into garments, is conceptually

equal, or more effective than what you lie on. The concept of wearing your bedding, or what we refer to as 'Dynamic Sleep Distribution' or DSD, is a disruptive innovation or a paradigm shift in the approach to improving sleep.

SLEEP POSTURE IS IMPORTANT:

Habitual sleep positions start in childhood and adapt over time. Sleep positions are based largely on good or bad daily posture behaviors that become habitual, or affected as a result of traumatic injuries or injury over time. Sleep positions can be altered by conscious choices on how we sleep and the bedding we choose, but conscious choices have limited influence on the unconscious movements and load distribution once we fall into sleep.

The spine, shoulder, neck, hip and leg muscles load the joints they support during sleep by transferring weight based on the position of your body. This is important because the shifting of bones, muscles and the subsequent weight distribution affects the quality of sleep and the resulting musculoskeletal health.



Stomach Sleeper

Back Sleeper

- 1) Adults are able to provide valid, reliable and consistent self-reports of their sleep position. Most commonly people sleep in the semi-fetal position, followed by the full-fetal, prone (tummy) and supine (back) positions. Although individuals have a pattern of constancy with regard to sleep position, as age advances this pattern changes with increased preference for the side sleep position, decreased preference for the prone (tummy) sleep position, less changes in position during the night and increased amounts of time spent in one position, lasting between 45 and 110 minutes. Again, adaptive sleep behaviors are relative to the movements and pathology of the subject during their 24 hour daily cycles (circadian rhythm).
- 2) Videotape studies show that adults change their body position an average of 11 to 13 times per night, with the majority of sleep time spent lying on the side. This amount of movement further diminishes the efficacy of Static Sleep Equipment but hypothetically would validate the use of AlignMed products as Dynamic Sleep Equipment.
- 3) Sleep position and spine pain symptoms are related. Many experts have suggested that poor neck and lower back posture and support during the night may be responsible for waking with neck, hip and back pain; stiffness, headache and shoulder blade or arm pain. Headaches originating from sleep posture,

specifically related to the neck, are called cervicogenic headaches. At AlignMed, we believe sleep disorders, relative to scapula/shoulder position, are sorely missed in the published literature. One should not overlook the scapula/shoulder or scapula thoracic position. As it is, AlignMed's use of NeuroBands as controlled resistance therapy on muscle and joints has been shown effective in the treatment of scapula, shoulder, neck and Cervical-thoracic-lumbar dysfunction. Conceptually, the modality of Touch-Tension load distribution should work as well in the unconscious process of sleep.

- 4) Supporting the spine during sleep. Written advice regarding sleep position first appeared in 1946 when it was suggested that people should lie on their side with the gap between the head and mattress filled (with a pillow) so that the head was an equal distance from each shoulder in a semi-fetal position. Although most authors suggest that a neutral position of the neck is optimal for spinal health some suggest sleeping on the back, while others suggest either sleeping on the side or on the back. However, all agree that the tummy sleep position should be avoided.

Again, the position of Alignmed is that this advice is limited once the unconscious process of sleep occurs; a Posture Shirt, AlignMe Bra, GaitLigns, CoreLign Shorts, and MyLign Modular Tops can support and activate neuromuscular activity during the unconscious process of sleep.

Bill Schultz | President & Founder



2909 Tech Center Drive, Santa Ana, CA 92705

T 714-352-8761 C 714-606-9804

bschultz@alignmed.com alignmed.com