



THE POSTURE OF SLEEP

Bill Schultz, President & Founder of AlignMed

AlignMed designs and manufactures unique clothing that integrates the domains of medicine, ergonomics and fabric technology which offers a complimentary approach to improve upon sleep habits by assisting in weight distribution and unloading of the spine, neck, scapula and hips during the unconscious process of sleep.

Aligned as the missing component requires a simple understanding of the process of muscle activity and its relation to workplace sleep. In sleep we are not mindful of our movements and they can often embody awkward position patterns or conform to sleep postures which create excessive stress. This can exacerbate musculoskeletal pain and elevate the risk of waking up with stiff muscles or joint pain. It is for these reasons that the concept of functional clothing that stimulates advantageous muscle activity during the unconscious process of sleep is a good idea. Unlike pillows and mattresses, Alignmed garments dynamically move with the position of the body to provide unconscious support and biofeedback.

The technologic solution comprises the use of controlled resistance bands (NeuroBands™) mounted symmetrically into comfortable, form-fitting garments. The touch and tension of NeuroBands provides a passive therapy of muscle support and biofeedback that interacts with muscles and joints on a subconscious level. The user is required to do nothing differently during sleep to achieve impactful results besides wear the product.

Scientific research regarding sleep position and waking neck and lower back pain suggest that individuals who wake in the morning with symptoms that were not present the night or are worse in the morning than when they retired the preceding night, are probably either using unsuitable bedding and/or adopting inappropriate postures during the night.

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“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.

Adoption of habitual sleep positions can start in childhood and eventually lead to musculoskeletal pathologies and be made worse by poor daily posture habits. These sleep adaptations are affected by conscious choices on how we sleep and the bedding we choose but are equally influenced by the unconscious movement process during sleep.

NOTES ON SLEEP RESEARCH AND SLEEP POSTURE AS IT PERTAINS TO USE OF ALIGNED GARMENTS:

1) Recognize that we spend up to a third of our life lying down. Sleep posture is how muscles and joints, especially those of the spine, load and transfer weight onto one another based on the unconscious position of your body. The shifting of bones, muscles and the subsequent weight distribution affects musculoskeletal health during waking hours.



Conscious sleep controls starts and stops when we decide what surfaces we will sleep upon and cover ourselves or what we wear to bed. The primary use of a mattress or pillow is for pressure distribution.



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.

3) 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.

4) Sleep position and spinal vertebrae (cervical-thoracic-lumbar) 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.

5) Clinical advice to support the spine during sleep 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. However, all agree that the tummy sleep position should be avoided. A position of logic with Alignedmed is that this advice is limited once the unconscious process of sleep occurs. A Posture Shirt™ can support and activate neuromuscular activity during the unconscious process of sleep.