



The Benefits of Sleep

Quality sleep is critical to maintaining the body's peak performance. The complex process of attaining a quality sleep pattern can be compromised by a number of factors that you may or may not have even considered.

Stress

Stress is an important factor when trying to physically get to sleep in the first place. When stress levels are high, muscles will be tense, blood flow is decreased, and the brain is overactive. This often leads to muscle tension in the neck, especially if the pillow being used is not comfortable and supportive. Aside from reducing stress, a comfortable, cozy, yet supportive environment, with low pressure and low shear is required in order to:

- allow for muscular recovery
- remove pressure from bony prominences (shoulders, hips, knees, and ankles)
- and enable the musculo-skeletal system to relax

Alcohol

One of many misconceptions about reducing stress and improving sleep, relates to consuming alcohol at night to aid the sleep process. Unfortunately, this is only a short term solution, as alcohol affects the natural melatonin produced, which is the hormone governing the sleep pattern. Although alcohol can sometimes facilitate the person to fall asleep, the sleeper will often wake after a few hours, and be unable to get back to sleep.

Other Facts Relating To Sleep

- The average number of movements in sleep is approximately 50-80, although this can be reduced to 18-20 on the correct sleep surface. The human body has approximately 700 muscles, most of which need to relax during sleep! Certain muscles, such as calf muscles act as blood pumps and assist circulation during

sleep, but most muscles associated with the spine should relax when sleeping.

- Insomnia, a total lack of sleep, can be attributed in many cases to a poor or unsuitable mattress, or even something as simple as an incorrect pillow. Many insomniacs are simply over-sensitive to poor skeletal support, shoulder compression, or dysfunction of the cervical spine (neck). Stress related insomnia can be relieved when the muscular system is allowed to recover during sleep, which will normally give longer periods of sleep to these sufferers.
- Choosing the right pillow is very important in achieving a good night's rest. A good pillow will support the skull and neck without applying undue pressure, as it conforms to the exact shape of the sleeper, thus spreading the weight evenly and uniformly along the vertebrae. Pillows are a constant cause of frustration for many. Aside from aggravating the neck, many pillows can affect the shoulder as well. The shoulder should not be placed at 90 degrees to the mattress as this may trigger spasms in the trapezius muscles. The trapezius muscles perform a variety of actions, including acting as a platform for elevating the skull, so it is very important that they relax completely during sleep. If the shoulder is placed slightly forward on the mattress, in front of the sleeper, assuming the mattress can accommodate this position, the risk of applying pressure on the trapezius muscles and forcing the scapula (shoulder blade) towards the spine is reduced. In contrast, when positioned in the 90 degree position, sleepers may wake up with neck and upper arm pain and altered sensation to the little and ring fingers. If a pillow applies excessive pressure to the neck in the back sleeping position, particularly the C2, C3, vertebrae, then treatment that has been provided will almost always be compromised. Pressure can irritate the nerve sheaths, sensitive muscles, and facet joints in the neck. Equally, if the joints are not resting easy, the inflammatory process may be sustained and any recovery will be much more difficult.
- Shoulder compression on a firm surface will often force the scapula (shoulder blade) towards the junction of the upper spine and neck, and affect the C6/C7 vertebrae. The nerve pathway at this site travels down the arm, and causes either upper arm pain or pins and needles in the little and ring fingers or both, especially if there is already a problem in this area. Shoulder problems are also often caused by referred pain from the neck. Therefore, stabilizing the neck during sleep is of paramount importance! Put some thought into choosing a good pillow - In addition to finally getting a great night's sleep, you may end up saving yourself from neck and shoulder pain too!