

Chapter 6: Sleep & Rest

We need at least 7 or 8 hours of sleep each night for proper human body function. Cell generation and hormone production essential to healing the daily wear and tear on our bodies only occurs in the deepest stages of sleep.



- **20%** suffer from sleep disorders that rob us of the sleep we need
- **25%** suffer from neck, hip and back conditions that inhibits a good night's sleep
- We will spend **24 years** of our lives in bed and less than **25%** of us sleep on a bed that properly supports our body curvature

Ergonomists refer to the mattress as an *“antigravity machine”* reducing compression on body structures while supporting the natural shape of the spine.

....here are some thoughts worth sleeping on!

Sleep & Rest and Ergonomic Risks

The *Ergonomic Risk Factors*

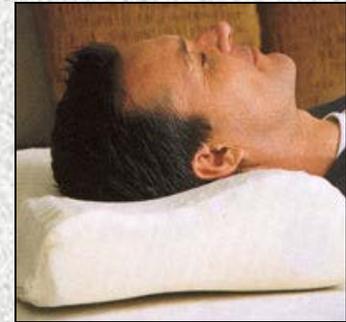
- Awkward spine postures due to poor fit of mattress
- Awkward head/neck postures due to poor fit of pillow
- Aggravation of neck/spine disorders due to awkward sleeping positions
- Aggravation of hand/wrist disorders due to awkward sleeping postures
- Awkward body postures while reading or using a laptop in bed



Sleep & Rest

Essential Tips & Techniques

- Find a mattress that supports your natural curves
- People with more curves need the top 2" to be softer, especially if they sleep on their side
- Back sleepers generally need less contouring or softness because there's less curvature to support
- Find a pillow that supports your sleeping position and your comfort - the selection of the right pillow is as important as the mattress
- If you read in bed, use pillows/cushions to support your back and neck
- Avoid using your laptop in bed altogether – its stressful on back, neck, wrists and arms!
- If you find that you wake up with sore wrists from contorting them in your sleep, experiment with handheld pillows or use a wrist splint



Use of a brace to reduce wrist aggravation

In our sleep, many of us have the habit of tucking the hands under our body, under our chin or within the bedding for warmth.

This often results in severe wrist extension (bent back) or flexion (bent forward) which can cause discomfort and aggravate a wrist disorder.

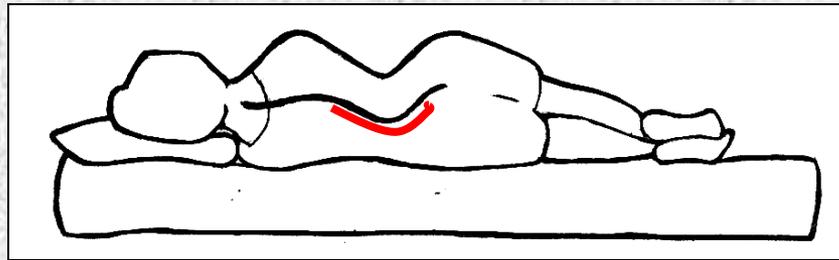
If this sounds like you, try using a small pillow that you can hold with both hands while you sleep to avoid tucking them.

If this doesn't work, the most successful method of correcting this problem is the use a rigid wrist splint* to maintain a straight wrist posture as you sleep... *not so warm and fuzzy but it works.*

**If you are under a doctor's care, discuss the type of brace to use*

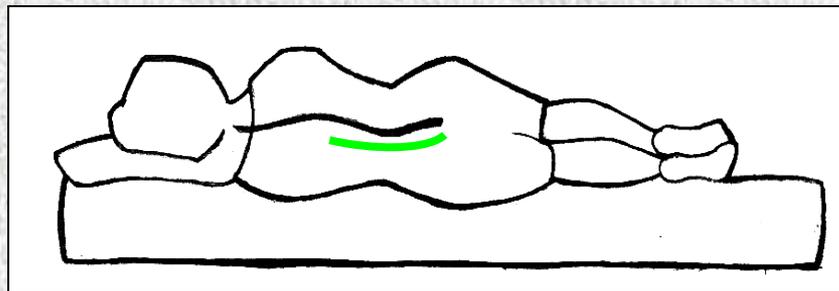


Find a mattress/bedding that fits your curves!



Lots of curves on **FIRM** mattress- **BAD!**

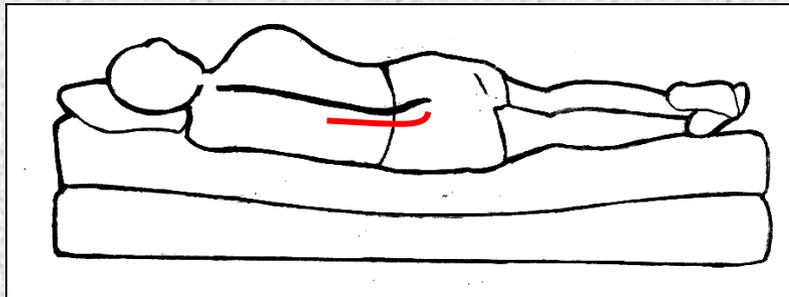
If a person with accentuated body curvature sleeps on a FIRM mattress, it can result in a bent spine posture. This is uncomfortable and puts excessive pressure on the discs which can result in back problems over time.



Lots of curves on **SOFT** mattress- **GOOD!**

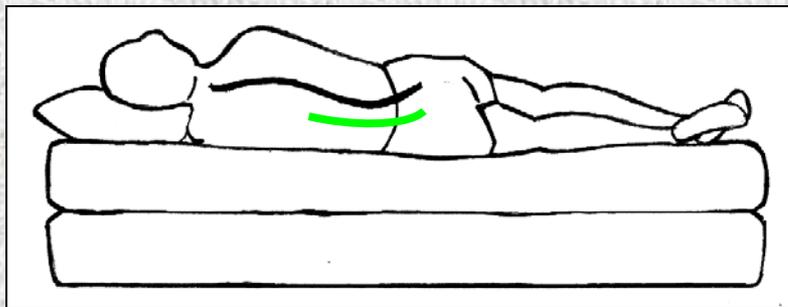
A SOFT mattress is a better choice for a person with a lot of body curvature. Note how the spine straightens when lying on a mattress that compresses a bit. A pillow top overlay could also be applied to the FIRM mattress to achieve this affect.

Find a mattress/bedding that fits your curves!



Little curves on **SOFT** mattress- **BAD!**

If a person with very little body curvature sleeps on a **SOFT** mattress, it can result in a flattened spine causing discomfort and increased disc pressure.



Little curves on **FIRM** mattress- **GOOD!**

A **FIRM** mattress is often a better choice for people with less curvature. Note how the low back curve in his spine is restored with the firmer support



*Even little critters
prefer a mattress
that fits their curves*



If you wake up with a stiff/sore back, neck or hips, it's probably time for a new mattress



Most people will actually go for years tossing and turning night after night and awaken with a stiff neck, back or hips and never consider that it's their mattress that's robbing them of a good night's sleep.

If you've experimented with pillows under your neck, between your knees and under your low back and it has no effect on relieving the soreness and stiffness, you should consider replacing your mattress.

Buying a mattress

Essential Tips & Techniques



- Test mattresses- take your shoes off and lie on each mattress for at least 5 minutes and if there are two people – test together for dual support without weight transfer and ample space for body movement
- Bring or ask to use a pillow of your preferred softness/thickness
- Look for a gentle firmness in the mattress but one that still conforms to your body curves nicely. It shouldn't pose any sense of pressure on the hips, upper back and shoulder contact points.
There shouldn't be any gaps between your body and the mattress.
- Check out data, information and consumer reports on the Internet before you begin testing but ultimately its your body comfort that matters.
- The most expensive mattress isn't necessarily the right one for you.

Keep in mind, you'll spend one-third of your life on a mattress so a "bargain bed" is no bargain when it comes to getting a good night's sleep!

Improving the comfort of your mattress



If you're looking for a bit more cushioning for your curves that your current mattress doesn't provide, a mattress topper or overlay might be all you need.

The specialty mattress

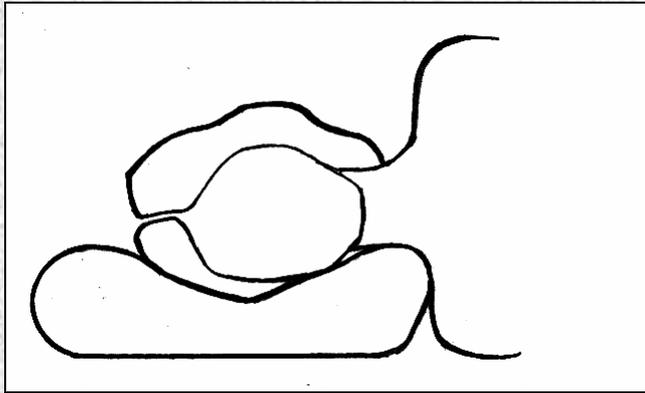


If you have special needs arising from neck, back or hip disorders, your mattress can play a critical role to help control symptoms and aid in the healing process.

In such cases, it is better to shop for a mattress with recommendations from your doctor or therapist at a specialty back store with knowledgeable staff.

To learn more about good ergonomic guidelines for special bedding, check out www.spine-health.com and www.spineuniverse.com

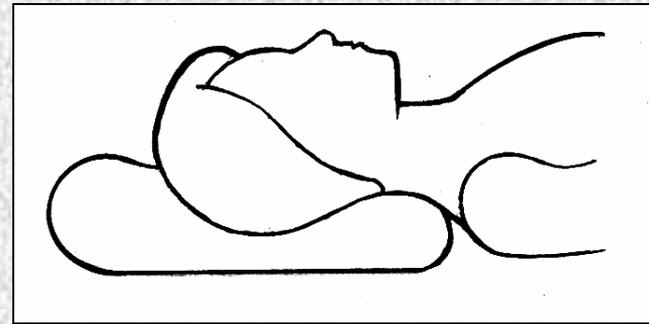
Finding the right pillow



Side-sleepers need a thicker pillow with more cushioning to support the neck/shoulder girdle region.

Larger persons also need more cushioning to fit their anatomy.

Sleep experts suggest that you experiment with 2 pillows: one large pillow used as the base of support for the head and one small pillow to support the neck curve.



Back-sleepers generally need a softer/flatter pillow since there's less neck and shoulder girdle contours to support.

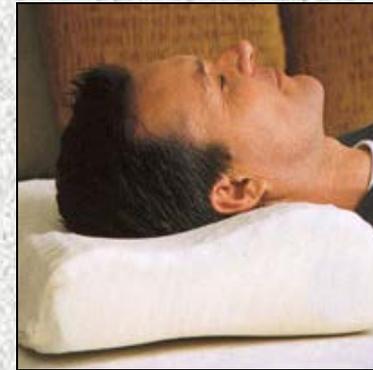
Also consider...

If your mattress is **SOFT**, you need a softer/thinner pillow.

If your mattress is **FIRM** you need a firmer/thicker pillow.

Pillows come in all shapes and sizes

...try something different



If you suffer from neck/cervical or shoulder issues and conventional pillows don't provide what you need, try a specialty pillow like a contoured neck pillow or neck roll. These are typically firm foam or memory foam that are designed to give optimal and precise support and because they are molded, must be well-fitted to your contours.

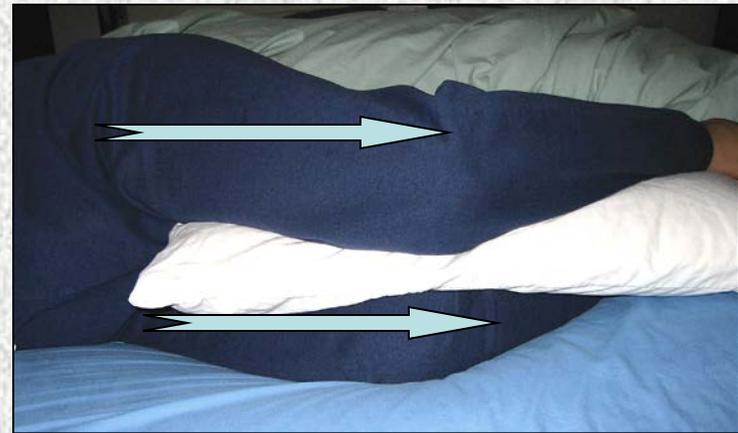
Specialty orthopedic outlets like **Relax the Back** in San Francisco or **Back Designs** in Berkeley have knowledgeable staff to assist in the selection of a pillow with the right contours to fit your spine and sleep style.

Use a leg pillow to support your curves *...and relieve pressure on the spine*

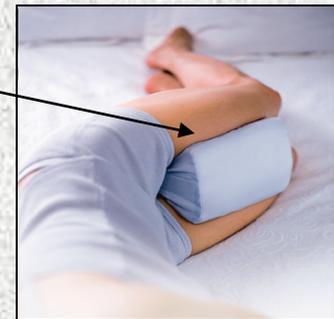
By placing a pillow between your legs, the upper leg can rest above the lower to straighten the legs which reduces the uncomfortable pull on the low back and hips.



People with pronounced body curvature when lying on their side rotate the upper leg forward which pulls on their low back and hips causing discomfort and restless sleep. Ask any pregnant woman the relief this provides!



Contoured wedge pillow shaped like an hour glass engages the thighs to keep the legs aligned as you move



Use a knee pillow to preserve your curves



Back-sleepers, particularly with accentuated body curves often experience low back discomfort because the legs are lower than the buttock mass and this pulls the spine into extension ...flattening the spine unnaturally.

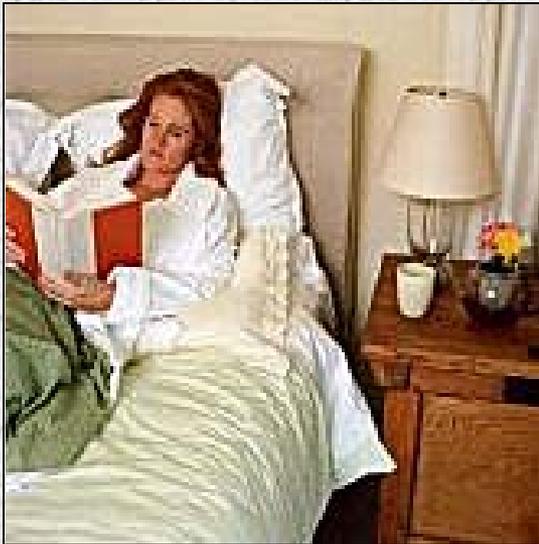
If you're a back-sleeper, you might try placing a pillow under your legs since elevating the knees helps to preserve the curve and unload stress on your lumbar spine.

Reading in bed without neck & back support



While these postures might appear to be relaxed and harmless, both require static loading of the neck and back muscles. If you get caught up in a good read with your neck bent forward like this you will end up with a sore neck or a muscle spasm... not to mention the effect on your wrist supporting your head!! **OUCH!**

Reading in bed...the right way



Prop yourself up with pillows to support your back and neck and elevate the reading materials toward your eyes.



Go for some comfortable ergo cushions and reading tablets to ensure good support and neutral neck and spine postures.

Tools for neck/back support



An added neck cushion could provide better support here



A large reading pillow with low back contour



A convertible reading pillow for reading, TV viewing and resting



The bed lounger cushion with adjustable neck pillow and arm support for holding reading material up to the eyes

Tools for neck/back support ...



Work-in-bed Pillow for neck & back support



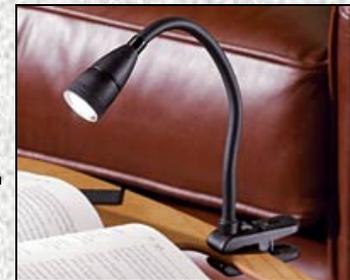
Leg Wedge Cushion for under the knees to prop reading materials on your lap



Book Gem reading stand with clamp to hold papers vertically



Laplander reading platform you with cushion you place on your lap to elevate materials to the eyes and a good writing surface



Reading lamp clamps to Laplander platform for good reading light source

Check out this specialty outlet for reading & writing tools
www.levenger.com ...great gift ideas too!

Avoid using your laptop in bed



Lying on your stomach while using the laptop puts stress on both the low back and neck... and isn't a good position for your wrists either!



This position requires bending the trunk and the head forward, supporting body weight on one arm as the torso is twisted sideways and extending the wrist back to type.

Computing in bed for work or relaxation



She's using a bedside stand to elevate her laptop screen and pillows to support her back.

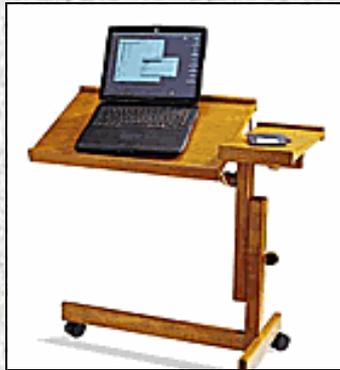
She appears to be doing work.



He's using a good bed reading cushion to support his back and a food tray to elevate his laptop screen.

He appears to be watching music videos.

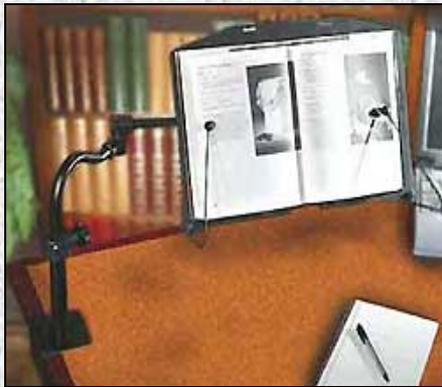
Tools to support good work postures in bed



Portable and adjustable bed stands for your laptop and reading/writing materials



Tools for good support when computing in bed



Articulating reading stand that clamps to your side table



Laptop platform with cushion to elevate the screen to be level with your eyes



Work-in-bed pillow with adjustable neck roll to support your back when using the laptop

Where to find more information



Resources- ergonomic guidelines for sleep

www.sleepfoundation.com - sleep and bedding guidelines

www.dea.human.cornell.edu - ergonomics of mattress

www.spineuniverse.com - sleep and mattress guidelines

www.spine-health.com - musculoskeletal disorders, sleep and mattress

www.health.uab.edu.com - sleep and bedding guidelines

www.sro.org - Stanford Sleep Research Center- sleep disorders

www.nhlbi.nih.gov - National Institute of Health- sleep disorders

Sources- bedding and tools for sleep and working in bed

www.backdesigns.com- pillows and mattresses

www.sitincomfort.com - bedside tables

www.relaxtheback.com - bedding and pillows

www.1-computerdesk.com - bedside laptop tables

www.backbenimble - back cushion for work in bed

www.leengers.com - reading tools, laptop accessories and back cushions

www.comfortchannel.com - reading stands and cushions

www.sleeptrain.com - mattresses

www.mattressdiscounters.com - mattresses

www.europeansleepworks.com - mattresses