

UNLOCKING THE MYSTERIES OF SLEEP

Simple Solutions for Overcoming
Insomnia, Snoring, Sleep Apnea
and other Sleep Disorders

by **Dr. Raymond Hall**



PREFACE

Have you ever woken up and felt like you hadn't slept at all? Did you experience body soreness, a headache, or neck stiffness? If so, you probably wished you'd slept better to be more equipped to face the challenges of the day.

It's been known throughout history that getting a good night's sleep is essential for the overall health and well-being of everyone. Billions of people across the globe spend approximately one-third of their lives asleep, and yet the purposes and particular benefits of sleep generally ***remain a mystery.***

Quality sleep is crucial for mental and physical well-being: coping with stress, recovering from illness, solving problems, improving performance, and simply----getting the most out of life. Lack of proper sleep can lower energy, impair memory, decrease ability to think creatively, and even compromise the immune system. A solid night's sleep provides beneficial rest, increased energy, clarity of focus, and may aid in achieving and maintaining ideal bodyweight.



Achieving healthy sleep is simply one of the best wellness gifts you can give yourself!

I've written this e-Book to help you 'unlock the mysteries of sleep'. Sleep has historically been misunderstood and under-recognized as an essential part of our health. My goal is to give you practical knowledge and insight to 'improve your life through better sleep ®'.

WARNING:

This eBook is for your personal use only. You may **not** give away, share, or resell this Intellectual Property in any way without permission.

All Rights Reserved. Copyright © 2015 - Hall Innovations, LLC

ABOUT DR. RAYMOND HALL

Dr. Raymond Hall, a highly regarded integrated wellness chiropractic physician, inventor, author, lecturer, sleep care expert, and television personality, has been recently honored by International Association of Healthcare Providers as the '**TOP CHIROPRACTOR IN CALIFORNIA IN 2015**' and for three consecutive years (2013 – 2015), the International Association of Chiropractors named Dr. Hall **TOP CHIROPRACTOR IN LOS ANGELES**. As a spine specialist for over 31 years, Dr. Hall has treated more than 10,000 people with neck and back complaints --- including many celebrities and professional athletes. He's helped pioneer cooperative medicine by combining modern day wellness and Sports Medicine Chiropractic and fully integrating with the best physicians in Orthopedic Medicine. As a sought after lecturer in the fields of sports, sleep, and wellness, Dr. Hall has been on the roster for TED-X Malibu, a guest on over 15 radio shows and almost a dozen television shows such as "**The Doctors**", "**Dancing with the Stars**," "**Great Day Houston**". He was also featured on **Fox 11's** nationally syndicated special on "**Text Neck**." As an inventor of sleep, health and wellness products, he has applied for six patents, two that are registered and four more that are patent pending. Dr. Hall has also invented two neck pillows (PILLO1) as well as four other devices for health and wellness. Dr. Hall lives in Malibu, California.

***Medical Disclaimer**

You should not rely on this information as a substitute for, nor does it replace professional medical advice, diagnosis, or treatment. If you have any concerns or questions about your health, you should always consult with a physician or other Health-care Professional. Do not disregard, avoid, or delay obtaining medical or health related advice from your health-care professional Because of something you may have read in this eBook. The use of any information provided on this site is solely at your own risk.

CONTENT

CHAPTER 1	Sleep Stages.....	5
CHAPTER 2	Common Sleep Disorders	8
CHAPTER 3	Tips for Treating Disorders	11
BONUS #1	Dr. Hall's Top 10 Insomnia Tips	15
CHAPTER 4	'Sleep Intermission'	16
CHAPTER 5	Neck Pain & Sleep Tips	17
CHAPTER 6	'Text Neck' & Remedies	20
BONUS #2	Dr. Hall's 'Text Neck' Test	21
CHAPTER 7	Sleep and Weight Loss	23
CHAPTER 8	Menopause & Sleep	24
CHAPTER 9	The 'Right Way' To Sleep	26
CHAPTER 10	How to Choose the Right Mattress Firmness Consistent with YOUR Spinal Needs	27
BONUS #3	The PILLO1 Challenge	34
BONUS #4	Dr. Hall's Sleep Journal	35

Chapter 1: SLEEP STAGES

It's important to understand the '*mystery of sleep*', so you can better understand how to attain 'good' sleep. There are four stages of sleep that create what is called a "**cycle of sleep**". The body typically moves through 4 to 5 different cycles during a healthy sleep. Each cycle lasts **90-120 minutes**.

FOUR STAGES CREATE A SLEEP CYCLE

- 1) **N-1: Light Sleep (Pseudo or Drowsy phase)**
- 2) **N-2: Transitional Sleep**
- 3) **N-3 Deep Sleep (Delta" Sleep)**
- 4) **N-4: REM Sleep**

Stage (1): (N-1) Theta Waves

DROWSY; PSEUDO SLEEP

This is the transition period from wakefulness to a sleep cycle, and usually lasts 5-10 minutes. The eyes remain closed as a person becomes extremely drowsy and begins transitioning into the deeper stages of sleep. **One can be easily awakened during this beginning stage.**

Stage (2): (N-2) Sleep Spindle Waves and K Complexes

TRANSITION PHASE / LONGEST SLEEP

Stage 2 is the transition from pseudo sleep into a deeper delta sleep. This is the longest phase of sleep--- **typically lasting 20 minutes**. Brainwave activity and muscle tone fluctuate as the heart rate slows and the body temperature lowers. **Healthy adults generally spend nearly half of their time sleeping in Stage 2.** People over 60 usually experience a higher percentage of Stage 2 sleep---which explains why they are often more restless and easily awaken and are aroused.

Stage (3): (N-3) Deep or “Delta” Sleep

DEEPEST SLEEP; BEAUTY SLEEP

This stage of sleep is where the body repairs, rejuvenates and lays down protein in muscle tissue. It is also considered **the primary stage that strengthens and enhances the immune system**. People are much less responsive to noise and other distractions during Delta sleep. It is also considered **the “beauty sleep” phase**---as it is the time when proteins are generated in the skin for rejuvenation. There is also an increase in protein synthesis in the skin as well as in an increase in metabolism and hydration.

(Note: In 2008, the United States Sleep Profession combined stage 3 and 4 into what is now considered stage 3).

REM SLEEP MAY BE ASSOCIATED WITH DEVELOPMENT OF CREATIVE THINKING and IMPROVED MEMORY.

Stage (4): “REM” or “Stage R” Sleep (Rapid Eye Movement)

Usually considered the “DREAM PHASE”

The REM stage accounts for approximately 20-25% of one’s sleep. The amount of time spent in REM sleep increases throughout the night, especially in the hours prior to waking, during which it is possible for some people to experience as much as *60 minutes of continuous REM*. **This phase is often called the dream phase** because most dreams occur during this period. It is characterized by very rapid vacillation (side to side movement) of the eyes, during which the thalamus produces very low amplitude short wavelengths similar to the alpha waves that we produce while we’re awake. It is also called **“paradoxical” sleep** as the muscles throughout the body are essentially turned off; yet, the brain has its highest level of activity, similar to one’s conscious state. The wavelength themselves resembles a wakeful state of short amplitude with high frequency brain waves. This most helpful switching off of muscles prevents the acting out dreams, which dramatically lowers our risk of injury during sleep. Imagine if every time someone dreamt about running, they actually got up out of bed while asleep and ran through the hallway!

An important and interesting phenomenon that REM sleep provides is that **it essentially transforms short incidental thoughts or ideas formed during the day into permanent memory.** For example, the myriad of facts and figures gathered throughout the day can be more permanently impressed on the brain for recall later in life---similar to transferring content from a flash drive to a hard-drive, for long-term storage. Another interesting aspect of REM sleep is that, according to research performed at the University of San Diego, *REM sleep is associated with cognitive recognition and the development of creative thinking.* Though REM sleep decreases with age, it remains a very important stage that rounds out the memory and creativity and may contribute to the rejuvenating aspects of sleep. **If you awaken from the REM phase in the morning, you'll typically feel much more rejuvenated.** This sleeping brainwave most aligns itself with the awakened state and offers the best transition to start your day with focus and energy.

SLEEP IS FUEL FOR THE BODY!

4 to 5 CYCLES COMPRISE A 'FULL NIGHT'S SLEEP'.

7 – 8 HOURS IS BENEFICIAL TO MAINTAIN GOOD HEALTH.

What comprises a FULL night's sleep?

Stages 1-3 are NREM. Non-rapid eye movement (NREM) sleep consists of three stages, each of which may last from 5 to 20 minutes. **The completed sleep cycle consists of a progression through these 3 stages plus a 4th period of REM sleep (Stage R, or "REM" stage).** Actually, a person starts to become drowsy falling into a pseudo sleep in stage 1, goes to stage 2, finishes stage 3, then reverts to stage 2 before entering REM. *These 4 stages create what is called a "cycle" of sleep. 4 – 5 cycles per night comprise a "full night's sleep."*

NOTE: IF YOU ARE NOT FEELING RESTED AFTER A NIGHT'S SLEEP, OR FEEL LIKE YOU ARE NOT GETTING ENOUGH 'GOOD' SLEEP, IT'S IMPORTANT TO DETERMINE THE CAUSE. START BY FILLING OUT A SLEEP JOURNAL (PRINT OUT DR HALL'S SLEEP JOURNAL) AND DISCUSS WITH YOUR DOCTOR. YOU MAY EVEN NEED TO HAVE A "SLEEP STUDY" TO FIND THE ANSWERS.

Chapter 2: COMMON SLEEP DISORDERS

SNORING, SLEEP APNEA, and INSOMNIA

There are many reasons people suffer chronic sleep challenges. Poor nutrition, improper bedding, spinal misalignment, discomfort, and other health issues, contribute to the lack of good, quality sleep. **Pain, anxiety, and sleep disorders are three main causes of sleep impairment.** Here's some helpful information on possible causes and effects of the **three most common sleep disorders**, as well as remedy tips.



SNORING

If you snore, you're not alone. In fact, 90 million Americans snore! **This common breathing ailment affects 40% of women and 60% of men.** Snoring is not a laughing matter---*especially for anyone who has tried to sleep with someone who snores loudly.* It is estimated that snoring causes 27% of couples over the age of 40 to sleep in separate bedrooms. As we age, especially after the age of 50, our breathing passages narrow

due to a decrease in muscle tone and/or increase in the size of fatty tissues in and around the breathing airway. With tissue fluctuation, airflow and pressure increase, resulting in more friction, a deeper vibration, and a longer acoustic wavelength.

Body weight also affects breathing. A ten-pound *increase in body weight can significantly increase snoring.* Recent studies suggest that *snoring can also cause thickening and abnormalities in the carotid artery*, which is a potential precursor to atherosclerosis (buildup of plaque inside the arteries). This is a serious condition that can lead to a variety of diseases, and should not be ignored.

SLEEP APNEA

Severe, habitual snoring can be the result of a serious sleeping condition called 'OSA' (Obstructive Sleep Apnea). Sleep Apnea is especially common among men, affecting at least 4 percent of the male population. Sleep Apnea occurs when the soft tissue in the back of the airway collapses during sleep, causing a blockage, which triggers an unconscious awakening and sudden inhale or sharp gasping. This sudden, involuntary gasp for air can disrupt sleep hundreds of times throughout the night.

THIS SUDDEN INVOLUNTARY GASP FOR AIR CAN DISRUPT SLEEP HUNDREDS OF TIMES THROUGHOUT THE NIGHT

A person is more at risk for Obstructive Sleep Apnea (OSA) if they are male, have a family history of the disorder, or are obese. When the airway is obstructed during sleep, oxygen flow is cut off momentarily, increasing the pressure, functionality, and a significant increase in workload for the heart which over time, may lead to heart disease.

Sleep Apnea also disrupts REM sleep when the brain wakes the person to gasp for air. Restorative sleep is impaired contributing to next day lethargy, lowered productivity, diminished mental effectiveness, and overall mood imbalance.

If you or someone you know experiences chronic snoring or sleep apnea, it may be prudent to consult with a doctor to decide on the appropriate treatment.



INSOMNIA

If you regularly experience trouble falling asleep, you may have Insomnia. **Insomnia is a common sleep disorder involving the inability to fall asleep and/or stay asleep.**

Symptoms may include but are not limited to:

- Difficulty falling asleep most nights
- Obsessive thoughts about getting enough sleep
- Feeling un-refreshed when upon waking up
- Waking up several times during the night
- Feeling tired during day

Anxiety and depression are two of the most common causes of insomnia.

There are other ailments that can cause insomnia: pain, stiffness, stress, grief, poor sleep habits, travel, caffeine, nicotine, alcohol, medication (especially containing stimulants), and change of work schedule or environment. Insomnia can also develop as a result of medical conditions such as chronic pain, breathing difficulties, bladder issues requiring frequent urination, arthritis, cancer, heart or lung disease, an overactive thyroid, strokes, and other diseases.

Chapter 3: TIPS FOR TREATING DISORDERS



TIPS FOR TREATING SNORING AND/OR SLEEP APNEA

Avoid alcohol or sedatives

Having a drink or taking medication may sound like a good way to get some uninterrupted sleep, but these options will actually increase snoring and/or sleep apnea by relaxing the muscles of the neck, making breathing more difficult.

Exercise regularly and keep weight intact

This is one of the best home remedies for snoring. Sleep Apnea and snoring sufferers can usually decrease severity by losing weight through healthy eating and regular exercise. *Losing just ten pounds can make a big difference.* Weight loss will also decrease the risk of heart disease and high blood pressure. Start with 30 minutes of cardio three times a week and cut back on saturated fat, white flour and sugar in the daily diet.

Sleep with proper support

Flat -back sleeping can lead to snoring as gravity can cause the airway to close up and the jaw to retrude (go backwards toward throat). It is recommended that snorers switch to a side sleep posture to help keep the airway open naturally. If you are a back sleeper, make sure you use a cervical pillow with proper support and perhaps look at elevating the head with a pillow insert or elevate your entire upper body with an upper body wedge.

MANY EXPERTS RECOMMEND TRYING 'ALTERNATIVE SLEEP REMEDIES' BEFORE RESORTING TO MEDICATION

TIPS FOR TREATING INSOMNIA

If you desire to fall asleep faster or stay asleep longer, despite what you may have been told by billions of dollars worth of TV commercials, sleeping pills may not be the answer. *Common prescription sleeping medications include:* Ambien, Lunesta, Halcion, and anti-anxiety medications such as Xanax and Valium. When used on a regular basis, sleep medications carry a risk of dependency, since the user may not be able to sleep without them. Common side effects of prescription sleeping pills include burning or tingling in the hands, arms, feet or legs, constipation, diarrhea, dizziness, headache, stomach pain and uncontrollable shaking. **Sleep medication side effects also include bizarre behaviors like sleepwalking, sleep driving, or even sleep texting.** One recent study suggests sleeping pills may even increase the risk of death, cancer, diabetes and weight gain. Over-the-counter sleep medication like Tylenol PM is not meant for long-term use either, due to diminished effectiveness over time and potential serious side effects, including next-day drowsiness.

The **TOP SIX FACTORS** that affect sleep are:

EXERCISE, NUTRITION, HYDRATION, BEDDING, NAPS, and WEIGHT

Numerous sleep experts recommend alternative, natural sleep remedies before resorting to conventional medication. Relief from insomnia may be experienced through natural remedies such as: **Melatonin, chamomile tea, Valerian, Kava, Calcium, Magnesium and Fish oils.** Natural and Health food stores also offer a variety of products containing herbs and other natural products which are believed to aid relaxation and sleep.

STAY HYDRATED.

DRINK 8 -- 10 GLASSES (8 OZ.) WATER DAILY.

The following **9 SIMPLE TIPS** can offer some relief from persistent sleep problems:

Take an afternoon nap or siesta~

Resting just 10-20 minutes in the early afternoon can improve productivity.

Go to bed eight hours before the sun rises~

This corrects the circadian rhythm and encourages natural melatonin production.

Exercise 20-30 minutes every day~

Power walking is a good basic daily exercise.

Maintain proper body weight~

Reduce weight (if necessary) to improve breathing.



Stay hydrated~

Hydrate with 1-2 glasses of water before you sleep. *It's estimated in the U.S. that 7 out of 10 people are chronically dehydrated.* Even mild dehydration can disturb sleep by reducing melatonin. Dehydration not only disturbs sleep, it affects electrolyte balance, digestion, detoxification, blood pressure, and disrupt the body's cooling system. As you age, you lose some of your thirst control monitoring mechanisms. People over 50, and especially over 60 need to maintain water intake throughout the day and before bedtime. Its important drink 8 to 10 glasses of water per day; and I believe 1 glass before bedtime.

Be consistent

Go to bed and wake up at the same time every day to create a normal cycle of sleep.

Proper nutrition. Eat low protein, low fat meals in the evening and eat at least 3 hours before you go to sleep. If you want to enjoy a simple late night snack, choose tryptophan-producing foods such as bananas, eggs, cereal and milk, and nuts.



Good bedding. Support your body! Seek out a mattress that properly supports your spine – not one that molds around you. Select a pillow that properly supports your head and neck depending on your sleep posture (side or back sleeping).

Sleep cool. Keep the temperature between 68° and 72°F in a well ventilated room. Choose a comfortable mattress, bedding, and pillow that sleep cool.

If you continue to experience chronic pain, anxiety, Insomnia, snoring, and/or Sleep Apnea, it is important to consult with your doctor or chiropractor, to determine if you there may be a more serious cause that requires medical intervention.

BONUS #1

DR. HALL'S TOP 10 TIPS FOR REDUCING INSOMNIA

- **Maintain a cool (68-72 degrees) dark sleep environment**, which improves melatonin production.
- **Limit caffeine intake** to 1-2 cups, **especially at least 4-6 hours before bed-time**. Some people may need to limit caffeinated coffee all together to get good sleep.
- **Limit alcohol intake**. Alcohol highly disrupts the second half of your night's sleep (also increasing heat production) and reduces the mentally restorative REM sleep. Alcohol also suppresses breathing and can precipitate sleep apnea (see below).
- **Exercise Regularly**. Research shows that people who perform regular, moderately intense aerobic exercise for 30 to 40 minutes four times a week, fall asleep twice as quickly and sleep almost an hour longer than those who do no exercise at all. *It is best not to exercise late in the day.*
- **Cognitive Behavioral Therapy (CBT)**. CBT treats insomnia by modifying dysfunctional or destructive thoughts, emotions and patterns of behavior. Benefits can last an entire year after treatment ends. *Thoughts lead to feelings, which lead to reaction*, so it is important to focus on positive---not negative thoughts.
- **Use Relaxation Techniques**. Meditation and muscle relation exercises such as Yoga, Tai Chi and deep breathing to help quiet the mind and improve natural sleep.
- **Consider taking supplements**: Calcium, Magnesium and fish oil supplements aid in relaxation and promote falling asleep faster.
- **Discontinue use of TVs, tablets or smartphones before bedtime**. Blue light emitting from the screens on these devices may alter the body's biological clock and suppress the natural production of melatonin critical to the normal sleep-wake cycle.
- **Keep a consistent sleep schedule**. Going to bed and getting up at the same time every day is critical for sleeping well. Try using use a sleep diary tool or sleep mobile app to track your daily sleep habits.
- **Select the proper pillow**. Traditional pillows push your neck forward and out of alignment ---causing neck pain that may contribute to sleep trouble. Consider switching to a cervical pillow (such as PILLO1) to help maintain a healthier sleep posture.

Chapter 4: SLEEP INTERMISSION

*“Most people over the age of 30 experience a natural phenomenon that I call a **Sleep Intermission**.”*



Don't stress out if you find yourself waking up in the middle of the night. **'Sleep Intermissions'** are natural for people over the age of 30 and also common for people over the age of 50.

Typically, waking once or twice to urinate during the night for a 'sleep intermission' shouldn't be disruptive to a good night's sleep. With proper hydration, your body should be allowed to release your bladder after several hours of sleep and it's much better to fall asleep with proper hydration than to try to deprive yourself of fluids. In fact, I believe it is a natural and healthy way to reduce toxins and naturally allow the body temperature to decrease when you get up from bed during the night. If you awaken naturally between 2:00 and 4:00 am, you will most likely awaken during or directly following a REM sleep cycle, which should allow you to be more wakeful and somewhat alert. Try not to stay awake for more than 20 or 30 minutes during this intermission phase.

Chapter 5: NECK PAIN & SLEEP TIPS



NECK STIFFNESS CAN HINDER SLEEP

What causes a stiff neck?

If your neck feels uncomfortable, tight or tense, or if you suffer pain or difficulty in moving your head from side to side or up and down, you may be experiencing neck stiffness. Neck stiffness is often caused by strain on the soft tissues of your neck. Many daily activities can cause neck stiffness, strain or sprain:

- Sports injuries or any activity that involves repeated 'side to side' head turning
- Forward Head Posture: Poor posture while sitting at a desk or texting
- Excessive physical stress that leads to tension in the neck and shoulders
- Abnormal neck position for a long period, i.e. cradling a phone ear to shoulder
- Sleeping in a position that strains the neck muscles, such as stomach sleeping
(note: Many pillows push the neck out of natural alignment and cause stiffness)

Getting a good night's rest is one of the easiest and most effective ways to relieve a stiff neck---as long as you have the right pillow that supports your neck and keeps your head in a neutral position. You really should check out **PILLO 1** the pillow that I invented and patented in 2004 that will help maintain your neck in the perfect neutral spine position throughout the night; allowing your neck to heal while you sleep.

SOME HEALTHY TIPS **TO EASE NECK PAIN FOR SLEEPING**

Sleep on your back or side. Do NOT sleep on your stomach. Sleeping on your side is a fine alternative. However, **sleeping on your back allows for a neutral alignment of back and neck.** Allow yourself enough time for a good night's sleep by going to bed early. **7 to 8 hours** is ideal, providing adequate time for a full deep sleep.



Use a cervical pillow designed to achieve perfect neck position, allowing for restful, healing sleep.

A neck massage with a soothing muscle relaxing gel or lotion, before going to bed, will increase blood flow to a tense or painful neck.

Limit alcohol and caffeine before bed to help relax your muscles for a deeper sleep.

Visit a chiropractor and ask for a personal assessment of your sleeping position.

Severe and persistent neck pain may be a symptom of a more serious condition and should not be ignored. Consult your Doctor or Chiropractor for neck stiffness treatment options.

CARRYING LARGE PURSES OR GYM BAGS MAY CAUSE BACK AND NECK PAIN.



The benefits of having everything you might need during your day within reach are obvious. Less obvious are the dangers of lugging around a giant sack of personal items. Large bags have become a major culprit in causing discomfort and potentially long-term pain in your back or neck.

Four easy tips for reducing the strain of carrying a heavy bag:

- Use a bag with a wide, padded strap or a bag that hugs close to your body.
- Transfer the weight often, switching shoulders whenever possible.
- Clean and organize your purse regularly. You probably don't need two water bottles, a book, 3 magazines, all of your makeup, dead batteries, 5 pens AND, an assortment of mystery items you didn't realize were in there.
- After finishing your busy day, get a good night's sleep. If you have neck and back pain, try using a cervical pillow designed to place your body in perfect alignment giving you an extended period of back, neck and shoulder pain relief, release, and relaxation.

Chapter 6: 'TEXT NECK' & REMEDIES

TEXTING, FORWARD HEAD POSTURE, & NECK PAIN

We are obsessed with text messaging. Americans send an estimated *6 billion* text messages every day. Texting may be a convenience, but an associated health implication known as “Forward Head Posture” (FHP), reverses the normal “C-curve” of the cervical spine; potentially causing chronic neck and shoulder pain.

“FORWARD HEAD POSTURE” **CAN REVERSE THE**
NORMAL 'C-CURVE' OF THE CERVICAL SPINE



“**Forward Head Posture**” increases weight of the head on the spine, causing abnormal leverage, and can lead to long-term muscle strain, disc herniation, and pinched nerves. There’s an increase of young people suffering a new common phenomenon “**Text neck**” (*neck and shoulder pain as a result of constant texting*). Research suggests that FHP may cause the part of the brain that deals with abnormal gravity/posture relationships and processing, to rob energy from your thinking, metabolism, and immune function.

BONUS #2

DR. HALL'S 'TEXT NECK' TEST

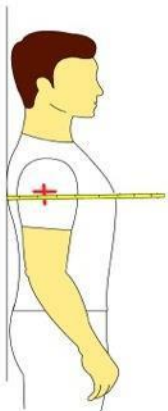
Take Dr. Hall's easy and effective test to determine if you have Forward Head Posture (FHP) or "TEXT NECK." You will need: **a wall, a friend, a measuring tape or ruler.**



(1)

Stand with your back up against a wall with your feet 2-3 inches from the wall so your buttock lightly touches the wall but you remain in good balance.

Notice: Is your mid back (approximately 2-3 inches below the shoulder blades) touching the wall, or are your shoulder blades touching the wall?



(2)

In the same position, find the midpoint of the top or outer part of your shoulder (see illustration).

Have a friend measure the distance from this point on the shoulder to the wall, and take note of the measurement (*1).



(3)

In the same position with your head and neck in "normal posture", have a friend measure the distance between the wall and the opening of the ear canal.

Take note of the measurement (*2) and subtract it from the measurement you found in Part 2, that is: $*2 - *1 = D$ (the Difference).

INTERPRETING THE 'TEXT NECK' TEST RESULTS:

Test #1:

Optimally, your shoulder blades, not your mid-back, should be against the wall.

If your mid-back is predominately touching the wall, you might have a thoracic posture known as Hyper-kyphosis. *This is not healthy in itself, and may set you up for Forward Head Posture due to compensations the neck must create to balance the spine.*

Tests #2 + 3:

The distance between the wall to shoulder and wall to ear should be equal.

Up to 10 pounds of stress are added to the muscles, tendons and ligaments of the neck for every additional inch of forward head position (measurement #1). *This causes real neck pain and an increased load on the spine.*

Simple home remedies for relieving a stiff neck:

1. Sleep on a firm mattress with a specially designed cervical pillow.
2. Slowly stretch your neck by moving your head up and down, side to side, and from ear to ear. Hold for at least 10 seconds in each position.
3. A neck Massage improves blood flow and relaxes your muscles.
4. Ice and heat: Use ice to relieve inflammation for the first 48 to 72 hours after stiff neck symptoms begin; then switch to heat wrap or heating pad.

These home remedies for chronic neck stiffness are not intended to be sole replacements for what could be deemed as necessary medical care. Consult your doctor to rule out possible serious conditions and learn more about available treatment options.

CHAPTER 7: SLEEP & WEIGHT LOSS

SLEEP AND WEIGHT LOSS: **THE SECRET CONNECTION**

Is there a connection between sleep and weight loss? **The answer may surprise you!** When it comes to losing weight, most people focus on diet or exercise, but **getting a good night's sleep is one of the best ways to lose weight.**

How does sleep affect weight gain and weight loss?

Hormones

Researchers know that hormones called Leptin and Ghrelin play a key role in weight gain and weight loss. The two hormones modulate appetite in a kind of “*checks and balances*” system. Leptin tells the brain when it is full and Ghrelin tells the brain when it is hungry. **When you are sleep deprived**, your body makes more Ghrelin hormone than Leptin hormone, *causing your appetite to increase*. Maintain a good sleep schedule to keep your Leptin and Ghrelin hormones in balance and your appetite regular.

Energy Boost

When a person is sleep deprived, they crave simple carbohydrates and sugar, for a quick energy boost. We all know the feeling of being fatigued and craving unhealthy junk food like candy, fast food or pizza. Beware: unnecessary calories may sneak up on you and lead to undesirable weight gain.

Dream Sleep

REM/dream sleep is one of the primary indicators of good quality sleep, as it is the sleep state in which the brain is most active. **This active state burns more calories than other stages of sleep**, using glucose to fuel brain activity. The more REM sleep you get, the more calories you burn and the easier it will be to lose weight as you sleep.

Don't ignore the essential connection between sleep and weight loss --- weight gain.

WANT TO LOSE WEIGHT? GET A GOOD NIGHT'S SLEEP!

CHAPTER 8: MENOPAUSE & SLEEP

Perimenopause, menopause, and postmenopausal phases are a natural part of every woman's life. ***But there's no reason hormonal changes should prevent a good night's sleep.*** The effects of menopause on the body can have a negative impact on the quality of your sleep, unless you follow **some simple guidelines** (page 25).

Perimenopause can be described as the "transition phase" when a woman's body begins to stop ovulating and gradually begins to decrease the production of the hormones estrogen and progesterone. This normal phase of life usually begins anywhere between the ages of 35 to 55. Perimenopause can last six months to several years but usually spans about four years. Menopause officially begins when menses cease for 12 consecutive months.

THE PERIOD FROM PERIMENOPAUSE TO THE END OF ACTUAL MENOPAUSE IS WHEN WOMEN EXPERIENCE SYMPTOMS THAT CAUSE THE MOST SLEEPING PROBLEMS.

The most common effects are insomnia, hot flashes, mood disorders, and sleep disordered breathing (*repeated episodes of loud snoring or obstructive sleep apnea*). In fact, 61% of women between perimenopause and menopause report **insomnia**---often in conjunction with depression and anxiety as the most common symptoms. 75 to 85% of women experience hot flashes, **caused by the decrease of estrogen**. 25% of those same women experience hot flashes for up to 5 years.

Fortunately, there are steps that can be taken to minimize the impact these effects have on sleep during this often-challenging phase of life.

SIMPLE TIPS **FOR NIGHT-TIME MENOPAUSE SYMPTOMS**

Cooler temperatures promote better sleep. Wear light clothing made of breathable linens and use a gentle fan to decrease ambient and body temperatures. In warmer climates air conditioning may be the best choice. ***Room temperature between 68° and 72° is ideal.***

Maintain **HEALTHY WEIGHT** for your size and body type.

Estrogen replacement therapy and other **hormone replacement therapy** may also help reduce or eliminate hot flashes.

Decrease or eliminate **nicotine** and **caffeine** from your diet.

Avoid large meals, especially **late evening**.

Decrease alcohol consumption--- especially 2 to 3 hours **before bedtime**.

The right choice in bedding can also contribute to a better night's sleep”.



****A natural latex or coconut bio-foam mattress may be the best choice for a woman experiencing changes in her body's temperature.***

Oil based memory foam mattresses can warm up and retain heat during the night, while latex and other bio foams---especially coconut with ventilation channels to allow dissipation of heat, substantially reduce heat generation and retention, resulting in a cooler sleep environment and can result in a more restful and restorative sleep.

CHAPTER 9: THE ‘RIGHT’ WAY TO SLEEP

SLEEP POSTURE

Is there a “right” way to sleep? The simple answer is “yes”. There is three sleep positions: back, side, and stomach. *But they aren’t all good for you.*

THE BACK, SIDE, or STOMACH?

Most sleep researchers advise against sleeping on the stomach. This position may add pressure to your abdomen and chest, causing forced neck rotation and potential chronic pain.



Doctors and sleep researchers agree that **the best sleep position is on your back**, provided you are using the proper pillow. Here are some back sleeping benefits:

1. Spine and hips lengthen when back sleeping
2. Neck and back are properly supported
3. The abdominal region will be free from low-back pressure
4. Lungs are more open and relaxed for proper breathing

Sleeping on your side is the second best position. Spinal alignment won’t be negatively affected, but the spine may be in flexion, causing stress to the tendons, ligaments, and muscles. Sleeping on your side also might shorten your hip flexors, which may damage your back while you sleep. *Side sleeping is not beneficial for long-term or chronic pain.*

CHAPTER 10:

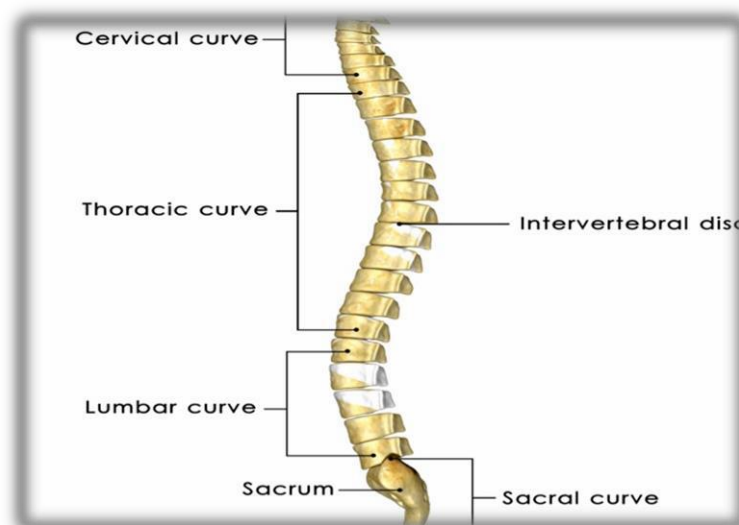
How to Choose the Right Mattress Firmness Consistent with YOUR Spinal Needs

What Type of Support in a Mattress is Best for YOUR Spine?

A MATTRESS WITH OPTIMUM SPINE SUPPORT

A good night's sleep should be good for your spine. Your choice of a sleep system can make all the difference in the world, so it's important to choose a mattress that provides the optimum support for your spine. Most people should choose a mattress based on a combination of support and comfort, both of which are beneficial to the spine. Since comfort is a much more objective criterion (we each have our own idea of what constitutes "comfort"), let's talk about support.

Our bodies need "pushback" within the mattress support system. A soft and comfortable top layer is fine, but a coil subsystem is imperative for a mattress to provide the correct support. No matter what your preferred sleep posture is (back, stomach or side), your back needs support in order to maintain the four primary curves of the spine: **cervical, thoracic, lumbar, and sacral**.



The primary function of the spine is to provide support for the musculoskeletal system as well as to serve as a critical encasement for the Spinal Cord system. **The natural spinal curves serve to distribute pressure and stress across the spine and back when the body is in motion, and even during sleep!** They are designed to create balance while the body is in a standing or sitting position, and enhances the body's agility, strength, and endurance.

The *cervical* and *lumbar* curves need pushback or “resiliency” in order to keep from falling out of alignment while the body is at rest (lying down). Resiliency is defined as: **the ability of an object to spring back into place or recover quickly from directional pressure.** The wrong mattress, *or especially the wrong pillow*, can force the head and neck into a compromised forward flex position, which may result in the spine losing a great deal of its ability to absorb stress.

The *thoracic* and *sacral* spine curves also need support, but ironically, for the opposite reason. These curves generally need correction, or straightening, to correct the effects of gravity that comes from spending the most of day standing upright. **If the spine loses the natural curve and alignment, the result is an unequal weight-bearing distribution that can lead to disc injury, pain, and arthritis.**

Unfortunately, most memory foam mattresses lack pushback. Memory foam is good for temporary comfort and decent for pressure relieve, though useless for pushback support. Pushback support is important for side sleepers as well. The spine needs to stay straight and not allow for transient scoliosis, which also disturbs the weight-bearing distribution of the spine. Support is also important for stomach sleeping (which is however, the least recommended). If the body isn't properly supported, the back can be forced into a position that can be very strenuous on the spine, especially for people with spinal stenosis or degenerative arthritis.

Any bed system you choose should offer proper support of the spine. This is why I recommend a six-inch spring coil for resiliency as a base for any mattress, no matter what foam or other material makes up the top portion of the mattress. There are two types of mattresses that I prefer and highly recommend.

Which Mattress Firmness is Right for You?

All sleepers are not alike. For the best night's sleep possible, it is important to sleep on a mattress with the level of firmness that is appropriate for you based on: **sleep position, history of back pain, age, body weight, and personal preference.**

USE THE CHART BELOW TO DETERMINE WHICH MATTRESS IS RIGHT FOR YOU:

*Note: If you check off **four or more in one firmness category**, you would most likely benefit from that level of firmness in your mattress.*

SOFT (or PLUSH)

- Side sleeper or stomach sleeper
- Body weight of 110 pounds and under
- No back pain or minimal back pain
- Looking for ultimate, soft, pressure-relieving comfort
- Very thin body type
- All ages

MEDIUM

- Back or Side sleeper
- Body weight of 110-200 pounds
- Back pain sufferer or seeking prevention of back pain
- Thin to medium build
- Age 10 to 100

FIRM

- Back or side sleeper
- Body weight of 200 pounds or more
- Age 10 through 60
- Back pain sufferer or highly seeking prevention of back pain
- Slightly more body fat

LATEX FOAM AND PLANT BASED FOAM MATTRESSES:

I recommend mattresses made of natural Latex foam that provide a durable and comfortable pushback resistance and plant-based foam mattresses that provide a “neutral resiliency” appropriate comfort and allow spring coils to support the lifting of the spine.

When choosing a sleeping system that offers maximum support and comfort, which do you think should require the most consideration--- a mattress or pillow?

The correct mattress firmness can make an important difference in the amount and quality of sleep you get each night. **Treat yourself to the mattress you deserve!**

From a structural standpoint, the bed supports 3 out of 4 curves of the spine (cervical, lumbar, thoracic and sacral) and the entire lower extremity. However **proper support of the cervical curve is most critical**. The cervical curve supports the head, where the body's central nervous system connects to the brain. The brain sends information into the spine through the medulla oblongata.

All of the nerves that travel into the upper extremities are from the set of 5 cervical nerves that control sensory and motor to your hands, wrists, forearms and shoulders. Therefore, the answer to which is more important - mattress or pillow? *It's a toss-up*. The mattress is important for the support and comfort of the entire body below the shoulders, *however...*

THE PILLOW IS CRITICALLY IMPORTANT TO THE NERVOUS SYSTEM AND THE FUNCTIONING OF YOUR HEAD & NECK

In fact, the cervical curve is thought to essentially control the remainder of the body, as the other spinal curves will generally compensate to accommodate the head and neck position. A pillow that doesn't provide proper support can lead to rounding of the shoulders, hyper kyphosis (exaggerated curve of the spine), decrease pulmonary function, increased pain and injury to the neck and upper back, and decreased overall balance and function.

“No one should sleep on an ordinary pillow!” - Dr. Raymond Hall

USE A CERVICAL PILLOW TO REDUCE NECK PAIN AND IMPROVE SLEEP.

What is a cervical pillow?

Cervical pillows are designed to support your head and neck in proper alignment during sleep. We spend one third of our lives sleeping, yet rarely pay attention to our body's sleeping position. During the sleep cycle, our muscles relax significantly, so a cervical pillow plays a crucial role in maintaining the neck's natural arch. Without the support of a cervical pillow, an improper sleep posture position could be the source of annoying day-time neck and back pain.



FINDING THE BEST CERVICAL PILLOW FOR YOU:

Cervical pillows come in various shapes, sizes and materials. Your pillow should be ergonomically designed to support your neck while you sleep. No two bodies are the same, so it's important to find the best shape for your specific body shape and size.

There are several factors to consider when choosing the right cervical pillow:

Mattress

Is your mattress firm or soft? Do you use a soft feather mattress pad? Do you sink downwards into your mattress? The firmness of your mattress will affect how much neck support is needed and therefore indicate **the optimum pillow firmness and size.**

Material

Many cervical pillows are made of memory or latex foam. *Many foam pillows have been shown to contain toxic, even carcinogenic chemicals that may be harmful to breathe in at night.* Next generation **latex pillows made from naturally derived breathable latex foam**, such as the pillow I designed, present long-term healthier options.

Sleep Position

Are you a side sleeper, back sleeper or stomach sleeper? Cervical pillows should support your neck's proper alignment at the correct angles for your particular sleep position. Some pillows may work well for back sleeping, but do not support the head and neck properly in a side sleeper position. Be sure to select a pillow that will support your particular sleep posture.

Transition Time

If you are switching from a traditional pillow to a cervical pillow, plan for transition time of to adjust. Traditional pillows push our necks out of natural alignment, but after years of unhealthy positioning, our necks have grown accustomed to it.

IMPROVE YOUR SLEEP:

Use a natural latex pillow, such as Dr. Hall's patented cervical pillow.

People across the globe are raving about how they wake up feeling better by using **PILLO1**.



About 1

I designed PILLO1 to help everyone obtain a comfortable night's sleep. My unique patent-pending design incorporates three different types of foam density in precise dimensions to provide complete relaxation of the head and neck, **for both back and side sleepers.**

If you're using an old-fashioned pillow, i.e., one that's too hard, too soft, the wrong shape or even made of the unhealthy materials, *you may be deprived of a good night's sleep.* Most ordinary pillows force the head and neck into a forward flex position causing muscle, tendon, disc and nerve tension. This unnatural posture can also lead to a change in spinal alignment. The wrong pillow can leave you with a lack of neck and head support, and may even cause snoring and/or sleep apnea.

The PILLO1 Original is primarily designed to keep your head and neck in a neutral position throughout the night. PILLO1 also supports your spine and helps your neck develop the correct C-type curve, significantly reducing pressure and stress of the spine and surrounding muscles, allowing your body greater opportunity to heal while you sleep.

The unique construction of the PILLO1 Original offers two sleep surfaces and three different densities in one pillow. It features a lateral soft support for the face, jaw, and head for side sleeping, and a center cradle with an optional firmer or softer neck contour for back sleeping. PILLO1 is made from naturally derived breathable latex foam.

PILLO1 is **20 times more durable**, **7 times more breathable** and **33% more pressure relieving** than most ordinary visco foams. The unique ventilation channels allow airflow throughout the pillow, keeping your head and neck cool throughout the night. These features make **PILLO1** a great choice for those suffering with asthma or allergies.

PILLO1 AS SEEN IN



www.PILLO1.com

improving your life through better sleep®

BONUS #3

The P I L L O 1 Challenge

To find out if you're getting the quality of sleep you deserve, take my two-week **P I L L O 1** challenge. **The results will surprise you, and may lead you to make positive and beneficial health changes in your sleep habits.**

WEEK #1: *Use your existing pillow. Then determine the length and quality of your typical night's sleep by using the following guidelines:*

- **Keep a sleep journal for a week.** (See page 35). Record the time you go to sleep and wake up. Calculate the total number of hours you sleep each night.
- **Rate the quality of your sleep from 1 - 10 (10 being the best).** Factors should include: Did you wake up during the night? Did you toss or turn in your sleep? Did you have trouble falling asleep? Were you hot during the night? Etc.
- **Multiply the time you spent sleeping by your 'quality of sleep' score.** The ideal number for an adult is 8 hours of sleep at rate of 10, for a total sleep score of 80.
- **Create a list of "Contributing factors".** For a score less than 80, consider what may have contributed to your poor sleep:
 1. Did you take any pain or sleep medications before bed?
 2. Did you drink any alcohol before bed?
 3. When did you eat dinner? Right before bed, or earlier?
 4. Did you get any exercise during the day?
 5. How stressed did you feel during the day?
 6. What type of pillow do you use? Flat? Contour?
 7. What was the temperature/lighting of the room you slept in?
 8. Did you snore? Did you toss and turn?
 9. Are you waking in the morning with stiff neck pain or back pain?

WEEK #2: *Try the P I L L O 1 cervical pillow. Rate your sleep by using the same guidelines. Then compare your results to week #1.*

After sleeping on your new P I L L O 1 cervical neck pillow for one week, I predict that your sleep score will improve quite dramatically. The head and neck neutral position and ultimate comfort that **P I L L O 1** provides has improved the lives of thousands of people across the world. I hope you'll find the same results! Thank you so much for taking this PILLO1 challenge!

Please let us know your results by sending them to Info@PILLO1.com

Dr. Hall's Sleep Diary

The best way to track your sleep and learn from your results is to write the answers to these very simple questions.
Please share your results with your doctor, friends & family.

Weekly Diary for Week Starting: / / Name							
	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Complete Before Your Bedtime	Number of cups of regular coffee:						
	Number of alcoholic drinks and time:						
	Nap time and lengths:						
	Exercise type and duration:						
	Number of 8 oz glasses of water						
	Before 6 PM :						
	After 6 PM :						
	Evening meal main course and time :						
How sleepy did I feel during the day today? 1 = Very tired, could barely stay awake 2 = Somewhat tired 3 = Fairly alert 4 = Wide awake							
Complete in the Morning	Time I went to bed last night:						
	Time I woke up this morning:						
	No. of hours slept last night:						
	Estimated number of awakenings:						
	How many times I went to the bathroom:						
	Did I awaken? (alarm, noise, light, naturally)						
	How awake did I feel when I got up this morning? 1 = Sleepy 2 = Awake but a little tired 3 = Wide Awake						
	How many dreams do you remember having?						
	Generally speaking, during the night I felt: 1. Comfortable 2. Cold 3. Warm / Hot						

If you'd like to share Dr. Hall's Sleep Journal with friends and family, visit <http://www.pillo1.com/sleepdiary.pdf>

Dr. Hall's final thought:

Creativity is the product of imagination and knowledge can be a conduit to better health, and a more productive life. Implementing the prudent adjustments to your lifestyle that I've suggested throughout this e-Book may result in better sleep, improved mental acuity, increased creativity, and abundance of health. I sincerely hope that I've been able to ***'unlock some of the mysteries of sleep'*** and that you've gained beneficial knowledge that you can apply to everyday life.

...

Wishing you health, blessings, and happiness ~

Dr. Raymond Hall

