ELIMINATING BACK PAIN

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Of all common ailments that undermine our well-being, back pain is probably the most widely suffered. Estimates indicate that one out of every three adults suffer some degree of back pain every day. It is a leading cause of absence from work, second only to the common cold. And back pain is the most common reason for filing a workers compensation claim. Additionally, research shows that once you have a bout of back pain, there is a good chance you will suffer from it in the future. Recurrence rates for low back pain are 50 percent in the 12 months after the initial bout.

The purpose of this special report is to give you an understanding of the causes of back pain and then a variety of approaches you can take to prevent, alleviate, or more quickly heal your back pain.

THE CAUSES OF BACK PAIN

Why is the back such a trouble spot for human beings? Anthropologists explain that the back is caught in an evolutionary gap. When humans began standing erect instead of moving on "all fours," the back was forced to meet more new demands than any other body part. Previously the back was a straight, relatively unburdened "suspension bridge" connecting the head and the legs; then it evolved to become the support, balance, and pivot point for the entire body.

The spinal disks in your back are like flat, circular capsules about an inch in diameter and one-quarter inch thick. They are made of a tough, fibrous outer membrane which surrounds an elastic-like core and are embedded between bones called vertebrae which make up the spinal column. The disks are held in place by ligaments which connect them to the vertebrae and by surrounding sheaths of muscle. Children’s disks have a gelatinous filling that helps to absorb shock from the spine. But by early adulthood this filling in the disks begins to harden and by middle-age the disks are touch and unyielding, with a consistency like hard rubber.

In animals that walk on all four legs, the disks serve simply for flexibility, so the back may bend without the vertebrae grinding against each other. However, since humans began standing upright, the disks must maintain not only this same flexibility but also absorb the continued crushing from body weight and pressure. What a change in job description!

It is the disks that prevent the weight of our upper body from pushing the spinal bones together and destroying them. Each disk in the lower back routinely supports one-half of a person's total body weight. In certain bending and sitting postures, a single disk is subject to multiple pushes and pulls adding up to 650 pounds of pressure. Such pressure or an abrupt twist, blow, or jerking movement to an unconditioned back can rupture a weakened disk or force it to move even a tiny bit out of alignment with the rest of the spine. Disk problems can masquerade as every kind of back annoyance including deep, dull aches, little twinges, stiffness or short-lived spasms in the back or legs.

To those whose backs have never "gone out," it is mystifying to observe a healthy-looking person, without visible injury, who is unable to sit, stand, move, or even lie down without excruciating pain. We shudder and resolve that it will never happen to us, because we will be more careful to avoid sudden strain. However, one distinctive aspect of back injuries is that they often occur without warning, triggered by easy, routine activities such as tying a shoe—or seemingly, by nothing at all! I've actually experienced my back slipping out on me while I was just sitting in a chair!

Stiffness and pain in the back are often accepted as an inevitable part of aging. The inability to bend and touch one's toes is regarded by many as a natural part of growing older. Most people don't realize that an inflexible spine makes them highly susceptible to sudden, severe back problems that, once developed, will threaten them for the rest of their lives. In hatha yoga, flexibility of the spine at any age is considered one of the most important objectives, augmenting the health of the entire body.

Before you think that back pain is not a threat to you, remember that most back sufferers were once as pain free as you are. Back pain is suffered by people with demanding jobs, such as construction workers and nurses, but anyone can be a victim, even those with sedentary jobs. Poor posture at a desk job causes the slumping and slouching that can lead to an aching back.

NOTE: While most back pain is caused by a muscle strain, a pulled muscle or a similar injury, back pain can also be caused by a viral infection, menstruation or premenstrual syndrome, arthritis, or scoliosis. Less common causes that are much more serious include bladder infection, endometriosis, ovarian cancer, ovarian cysts, or a herniated or ruptured disk. You should call your doctor if significant pain lasts more than a week, you have a fever along with the back pain, there is redness or swelling on the back, the pain travels down the legs below the knee, the pain is the result of a severe blow or fall, or there is weakness or numbness in a leg. If the back pain is caused by an injury you received at work, examination by a doctor is required by workers compensation laws.[1]

CHRONIC TRAUMA AND ITS ROLE IN BACK PAIN

Though we often think of back injuries having a sudden onset, the fact is that they are often caused by *chronic trauma*—strain on your back from poor posture and everyday activities. Chronic trauma can be caused by sitting slumped in a chair, bending and lifting with your knees straight, sleeping on a poor mattress, or driving long distances with your back in a poor position.

Oddly enough, many of these habits don't cause pain when you're doing them; you may even feel comfortable in a position that is putting strain on your back. But the strain on your back piles up day after day like snow on a rooftop, until one day all the tiny accumulated snowflakes cause the roof to cave in. One day the cumulative burden of years of strain causes the back to "go out." The triggering incident may be major, such as an auto accident or a fall down the stairs, or minor, such as bending to pick up a pen or reaching for an item on a top shelf. Or the back pain may appear to be triggered by nothing at all; you simply wake up one day in excruciating pain.

It is this build-up effect of chronic trauma that makes back problems so unpredictable and preventive care so important. When back pain strikes, it reveals a lifelong pattern of strain that may be difficult to treat. If you have a well-conditioned, healthy back, you will be less prone to problems; even a major trauma from an accident will cause less damage and recovery will be faster.

[1] A.D.A.M. Internet Health Inc. Website, “Back Pain, Low,” 1999.

EMOTIONAL STRESS AND ITS ROLE IN BACK PAIN

Dr. Andrew Weil, the author of a number of best-selling books, including *Spontaneous Healing*, and one of the foremost experts on alternative medicine, says that the muscle spasms that lead to back pain often have an emotional basis.[2] A typical day brings dozens of situations that arouse strong, active emotions—urgency, impatience, excitement, anger, irritation, frustration. Our bodies experience the same immediate, intense physical reactions to these emotions that enabled primitive humans to survive. Adrenaline pours through the system, the heart beats faster, muscles clench.

The primitive man or woman, thus stirred, responded to these situations with physical action—by running, fighting, hunting, or doing whatever the situation required. But in modern civilization we learn to stifle these impulses. Many jobs demand that we express emotions that are different from those we feel—smiling graciously at a demanding customer, hiding our impatience toward a slow trainee, keeping a new idea "under wraps" until the advantageous moment. Even when we don't have to deny our emotions, our opportunities for physical expression are limited. How many of us can do more than just slam down the phone when we receive a disturbing call or lean on the horn when stuck in a traffic jam? This unreleased drive to take physical action is caught in the back, shoulders, and neck dozens of times a day, adding to the stiffness and tension created by sitting.

The link between our emotions and our muscles is constant and inevitable. No matter how well-controlled one is, subtle feelings affect the body. Emotional stress or tension causes your muscles to tense and contract. Your back muscles bear this emotional fatigue even when you are just sitting or standing. Additionally, the more tension your muscles are holding, the more additional tension is created by ordinary movements. Just as tension in your head and neck can cause a tension headache, so, too, can tense back muscles lead to pain in the back. At this point, the tension actually lowers your physical abilities—a person who can easily lift 200 pounds with no problems might suffer back pain when they lift 20 pounds. Those who are able to handle their emotions effectively and appropriately benefit in numerous ways—including the health of their backs!

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[2] Andrew Weil, M.D., *Ask Dr. Weil* Website, “Plagued by an Aching Back,” January 27, 1997.

Your back muscles are "working" even when they are supporting a motionless back and spine. If one of these muscles has a knot of tension or weariness, the surrounding muscles are strained because they have to do their own work plus the work of the affected muscle. Eventually this one tense muscle can lead to a small pain. It may start as a mild annoyance in one spot and then expand, wearing out your back muscles and sapping your energy in the course of an afternoon.

Dr. Weil explains how stress and its related emotions can lead to back problems: "Most chronic back pain is not due to structural injury but to unbalanced muscular contraction and inflammation resulting from an unbalanced pattern of nervous control of the musculature. One expert on chronic back pain calls this problem TMS for tension myositis syndrome (myositis means 'inflammation of muscles,' and tension implies that the cause is a neuromuscular imbalance). He has a great record of clinical success based on nothing more than talking to patients and convincing them of the true nature of their pain. …For more on this subject, read *Healing Back Pain* by John Sarno, MD (New York: Berkeley, 1987). … In my experience all chronic back (and neck) pain should be considered TMS until proved otherwise, and most therapeutic effort should be directed at your head: specifically at changing your patterns of thinking, feeling, and handling stress that lead the nervous system into this abnormal pattern."[3]

If you have never had back problems, improved posture and exercise can strengthen your back to avert any problems down the road. If you are a sufferer of any type of back pain, improved posture and exercise can help you on the road to recovery.

PREVENTING BACK PAIN

I can't over-emphasize the importance of frequent breaks during long stretches of sitting. The simple act of standing up and walking around your office or up and down the hallway for two or three minutes every hour is more beneficial for your back than half an hour of walking at the end of the day. Every break in the pattern of continuous sitting is a relief from the build-up of tension in the back. It's good to pace and stretch whenever you can while you are working. Find ways to adapt your work habits so you can move about from time to time. To assist you in moving more while you are working, use a drafting table as an extra desk. Position it high enough so you can stand properly

while using it. It will give you the option of working in either a sitting or standing position. If you suddenly feel a knot of tension or twinge of discomfort in your back, you may be able to prevent a full-blown back ache with a quick Shiatsu massage treatment for the lower back (see page 00) or a few preventive yoga stretches.

POSTURE

While your mother may have told you to stand straight, she probably didn't know the basics of correct posture since most of us weren't taught them. When your body is improperly aligned, every part of your system encounters stress, including your organs, your muscles, and your spine; the stress on the body caused simply by poor posture has a big impact. An observant look around a crowded room will give testimony to the fact that most people have poor posture—their shoulders and backs are rounded forward, their heads tilted forward, and their chests caved in. Usually only minor adjustments are needed in the way you hold your body during certain activities to correct a posture or movement problem.

In his book *BK: Behavioral Kinesiology*, Dr. John Diamond says: "People with poor posture not only look bad, they expend a great deal more energy than they have to, whether they're standing, sitting, walking, or performing some task. They are continually fighting gravity rather than using it to advantage. If your body is improperly aligned, gravity will pull you in the direction in which most of your weight is concentrated. If each main section of your body—head, chest, hips, legs—is properly supported by the part below, gravity will actually help you remain upright."[4]

A so-called "straight" spine actually has several natural curves, some of which developed as man adapted to an upright stance. The key element in posture is keeping the back as straight as possible, so weight is evenly distributed and the natural curves are balanced, with no part of the back burdened with more than its share of work. The following posture guidelines will help you to avoid the chronic trauma that can lead to serious back problems.

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[3] Andrew Weil, *Natural Health, Natural Medicine,* (Houghton Mifflin, 1990), pp. 262-263.
[4] John Diamond, M.D., *BK: Behavioral Kinesiology*, (Harper & Row, 1979), p. 117.

YOUR STANDING POSTURE

Although most adults were admonished as children to "stand up straight, get your shoulders back," this posture is not desirable. Forcing the shoulders back may thrust the stomach out, exaggerating the curve of the spine, just above the buttocks, which is called the lumbar-sacral curve. This is a crucial area for lower back strain. Also, as you throw the shoulders back, you tend to jut the head forward, over-stretching the neck and rounding the shoulders. Here's a simple exercise that will help your body learn the posture for proper standing, as advised by Leon Root, M.D., and Thomas Kiernan in their book *Oh, My Aching Back*:

POSTURE FOR PROPER STANDING

1. Lift your head as far away from the toes as possible, yet keep your chin tucked in.
2. As you do this, contract the muscles in your buttocks so that your pelvis thrusts forward.
3. Hold this position for a minute. Initial awkwardness should pass; as you continue holding it, you may feel your spine "coming awake" with tingling sensations.

This exercise should be done as often as possible. It will help relieve immediate aches, while strengthening back muscles and developing a new posture habit.[5]

If the muscles in the stomach, abdomen, and buttock are weak, backache can result from standing in one place for a long time. Several hatha yoga postures work specifically to tone these areas. I suggest that you get a book or video on yoga. The following movements will be especially helpful in strengthening your back: cobra, half locust, full locust, and the knee to chest movement.

An easy remedy for the strain on the back caused by standing is to rest one foot at a time on a footrest or stool that is six to eight inches high. This straightens the lower spine. That's why the taverns of yesteryear traditionally had a brass railing along the bottom of the bar; it enabled the customers to stand comfortably for longer periods of time, while buying and consuming more drinks. Using a footrest both at home and work can be helpful even during brief activities such as

[5] Leon Root, M.D. and Thomas Kiernan, *Oh, My Aching Back* (Signet, 1985), p. 90.

shaving and brushing your teeth. If you have to stand for long periods of time, moving around every few minutes will also help to shift the weight and alleviate tension in the back.

Your standing posture is also impacted by your shoes. Back specialists all agree that high heels are bad business for the back. In recent years, makers of women's shoes have responded to the growing demand for lower heels. More and more fashionable low-heeled shoes are now available as women are dictating comfort through their buying habits. While recognizing that personal choice is the determining factor, I hope you'll take some expert opinions into consideration before donning another pair of high heels.

Describing how raised heels harm the lower back, Dr. Bernard Finneson says: "It's as if you were standing on the side of a sharply sloping hill and facing down toward the bottom … You don't lean forward despite the fact that the shoe is built so that this would happen if it were not for your built-in stabilizers … You correct this strange angle by leaning backward and so increase the natural curvature of your lower back, and you also swivel your hips a bit. In short, you become swaybacked, which is definitely not good for your back."[6]

Most experts agree that a flat shoe or a low heel of one inch or less is desirable. These shoes can alleviate a lot of back pain, especially for women who have traditionally worn high heels. However, there will be an adjustment period as a woman switches from high heels to lower-heeled shoes which can initially be painful. This adjustment period is necessary because, over time, the Achilles tendon has literally become shorter; wearing lower-heeled shoes will gradually stretch it out again. So it's best to wear the lower heels for short periods at first and then extend the time as you become more comfortable.

Many women who feel high heels are a must at work now wear comfortable shoes or sneakers on their way to work and then change to high heels once they get there. This is a "step" in the right direction!

[6] Bernard E. Finneson, M.D. and Dr. Arthur S. Freese, *Dr. Finneson on Low Back Pain* (G.P. Putnam & Sons, 1975), p. 72.

Your Sitting Posture

When you sit—no matter how you do it—you put a lot of stress on your back. Believe it or not, even when you are sitting correctly you are putting twice as much pressure on the spinal disks as when you are standing. When you are sitting improperly this pressure is even greater, placing hundreds of pounds of unnecessary pressure on these disks. For most of us, sitting takes up a major part of our day. We sit at a desk or a computer, while commuting, and while relaxing, reading, or watching television.

The universal recommendation from back experts is to abandon soft, overstuffed sofas and chairs. Slumping, in any kind of chair, puts unnatural curves in the back and focuses weight on various points on the spine. Straight chairs with hard, firm backs are recommended. The best chair allows you to sit with the small of your back snugly against its back and your feet flat on the floor. Leaning slightly forward rather than back against the chair's cushion, with your knees comfortably apart and your heels on the floor, will also help to keep your spine in its natural position.

To find the most comfortable sitting position, you might also try putting a rolled-up towel under your tailbone. Use a hand towel and roll it up several different ways to determine the thickness that helps.

Any chair that you use for prolonged periods of time should be checked according to the following guidelines:

1. When you sit in the chair, your lower back should be straight.
2. Your knees should be at the same level or a bit higher than your hip joints.

If the chair is too high, your feet will dangle and your knees will be lower than your hip joints. This posture leads to a swayback condition and could result in lower back pain sooner or later in your life. When the chair is too high the addition of a footstool can bring the knees to the proper height and keep the lower back straight. Sitting on high stools is never advised.[7]

When working at a computer, adjust the height of your work surface and/or your chair so your arms are parallel to the floor and your wrists are straight. While maintaining this proper arm position, you should also be able to keep your feet flat on the floor. If not, use a footstool. Also, if

[7] *Ibid.,* p. 239.

needed, use a backrest so your lower back is comfortably supported. A document holder can help to reduce neck and eyestrain. Another helpful item to reduce strain on the arms and wrist is a gel-filled wrist rest.

While working at a desk, many people slouch forward while leaning on their elbows. This characteristic office pose usually pushes the buttocks backward and forces the upper body to "hang" from the shoulders. This can increase the arch in the lower back and force it to support extra weight.

When the legs are extended straight out onto a hassock or stool, there is a tendency to slouch, moving the buttocks gradually forward as the shoulders press into the back of the chair. This position is harmful to the lower back. To counteract this problem when using a hassock or stool, bend your legs slightly at the knee.

Another way to alleviate stress on the body is to use a headset if you spend a great deal of time on the telephone. The same thing applies if you are using a cell phone.

Elevating the feet, carefully, in any of the ways I've described improves circulation because the blood no longer has to travel "uphill" from the feet. The veins, valves, and surrounding muscles get a rest; habitual raising of the feet and lower legs can prevent varicose veins. In many Asian countries this manner of sitting, usually on the floor, is typical.

YOUR SLEEPING POSTURE

Did you know that there are right and wrong ways to sleep? And that you can alter your sleep position through practice?

Your sleeping posture can actually cause physical damage. An example of a posture that can cause problems is sleeping with one arm under your head, using the arm as a pillow. A variation of this posture is placing your arm under the pillow. A person who frequently sleeps this way may suffer severe strain in the neck and shoulders. And yet they may be mystified as to the cause of their pain. The fact is that any sleeping posture which causes pressure on a body part can lead to restricted blood flow. The symptoms of restricted blood flow can include loss of circulation, muscle pain, spasms, even chronic neuritis, or rheumatism. The immediate impact of this problem may be subtle, similar to the feeling you have when a limb has “fallen asleep.” Yet the long-term effect could lead to a severe impairment.

An incorrect sleeping posture can also lead to other problems and aggravate poor posture. For instance, sleeping on the stomach exaggerates swayback or lumbar lordosis. Even if you don't sleep on your stomach, you should be aware that sleeping on your side can have the same impact.

Robert Rodale, founder and former editor of the health magazine *Prevention*, was once troubled for several months by leg pains so severe that he was forced to abandon his bicycling and walking routines. After an assortment of fruitless diagnostic tests and treatments, he traced the cause to his sleeping position: "… as I was resting on my left side… My left leg was tucked under my right, which meant that from the waist down, I was actually lying on my stomach. My whole body was coiled and twisted. Even though that was a pleasant, relaxing way to sleep, I could now see clearly that the twist in my lower body could be thrusting my pelvis forward and putting my lower spine out of position."[8]

I had a similar experience. I was sleeping with one leg extended straight down and the other leg positioned as if I was planning to take a giant step. While I was comfortable, I started noticing back pain in the morning. I switched to the sleeping position which is recommended by doctors—on the side, with both knees bent, legs stacked one atop the other—and the pain disappeared. The next best position is flat on your back with a cushion tucked under the knees to prevent swayback.

Your mattress is another important factor. No sleeping position is good on a soft mattress, because the mattress will sink in certain spots, curving the spine. Even an orthopedic mattress may not give the firmness needed by the low back pain sufferer. Most doctors recommend putting a plywood board between the mattress and box spring. The board should be about three-quarters inch thick; the thicker it is, the harder the mattress will feel. A mattress placed directly on the floor is another good solution. One's sleeping accommodations really cannot be "too hard" for the health of your back. If you find it comfortable and feasible, it is perfectly all right to sleep on a floor or platform.

Noting that his back problem improved after six months of correct sleep posture, Rodale cautions against expecting instant results. Because the back often takes years of abuse before acting up on us, it may take time for improvements in your posture and sleep position to take effect.

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[8] Robert Rodale, "Build Health While You Sleep," *Prevention*, Vol. 28, February 1976, p.30.

Happily, those of us who correct our posture now may prevent back problems before they become evident.

You can actually program yourself to sleep in the correct position by preparing your mind before sleep:

1. Get into the correct position, nestle into it comfortably, and concentrate on maintaining that position all night.
2. Visualize yourself as if from above, lying just as you are, sleeping peacefully all night. As long as you have decided this is the position you prefer, you may be surprised at how easy it is to "program" yourself for the night.

Take these steps before going to sleep for a week or two and you will find that your body begins to naturally respond to these directions. Soon you will find it automatic to sleep in the programmed position.

YOUR DRIVING POSTURE

When you're driving, your seat should be pulled forward so your knees are slightly higher than your hip joints. When your knees are resting at the right height, your lower back will be flat against the seat. Never push the seat so far back that you must reach for the pedals.

When driving long distances use the cruise control. Also, get out of the car to stretch at least once an hour. These stops may seem like breaks in the progress of your driving but they will be worthwhile in the long run. Three or four hours of driving without a break puts several times more strain on the back and all of your muscles than if you had stopped each hour for a five- to ten-minute break.

Some yoga exercises such as the umbrella posture can be done in a restroom or by the roadside, with near-wondrous results for the road-weary driver. The following exercise is also an excellent way to “shake” out the tension your muscles are holding:

THE SWIMMER'S SHAKE

The Swimmer's Shake is done on dry land and will get the kinks and stiffness out of your body. You'll also feel relaxed and energized by it. Don't strain when you do this exercise. Be very light and gentle in your movements, not hard or fast. It can be done standing or sitting.

1. Pretend that you've just gotten out of a swimming pool and you want to shake all the water off your body. However, instead of shaking your whole body at once, like a shaggy dog, begin to shake gradually by first shaking the droplets of water off your hands, then your forearms, and then the whole arm. Spend 10 seconds shaking each part of the arm. As you gently shake, think about your hands and arms being more flexible and loose.
2. Next, begin shaking and flexing one foot for 10 seconds, then the calf and the foot for another 10 seconds, and then your whole leg for 10 seconds. As you shake, think about your leg becoming more flexible and loose. Repeat on the other leg.
3. Now shake your whole body—arms, legs, head, torso—as if you're dancing. Allow your arms to fly all around your body. Do so for 15 to 20 seconds. Keep breathing as you shake.

Remember, your aim here is to release the tension from all your joints and muscles so be sure your shaking, twisting and rotating are gentle. Have fun with this exercise since no one's watching. If you're driving, you can do the Swimmer’s Shake on a break in the privacy of a bathroom stall.

YOUR POSTURE WHEN LIFTING

Here are some common-sense rules for lifting and bending to pick up objects:

- Let your legs, not your back, do the work. This admonition applies whether you’re lifting a heavy package or a slip of paper. Bend your knees when you lift something, and never lean forward from the waist with your knees stiff. Squat in front of a heavy object, move it close to your body, and then slowly rise so that your legs and knees do the work.
- Don't lift anything heavy without help, and then plan what each of you will do so there's no sudden load or twisting.

- When moving an object from one place to another, shift the position of your feet and avoid any sudden twisting movements of your torso when either lifting or setting down the load.
- Keep the object as close to your body as you can, and avoid lifting from a bent-forward position. Don't reach across furniture to open a stuck window (move close to the window); don't reach forward to pull an item out of the back seat or the trunk of your car. When you want to exert force, get close to the object.
- Get a firm footing before lifting; a foot that slips can mean a slipped disk as well.
- Get a firm grip on the load, preferably with your fingers completely under the object, and be sure both load and fingers are dry, as moisture can lead to the load slipping and force you to make a sudden twisting movement.[9]

YOUR POSTURE WHEN BENDING

The recommendations for proper bending when lifting apply to all bending situations, whether or not you are lifting an object. Bend at the knees, not at the waist, and avoid prolonged forward bending whenever possible. If you need to stoop low for an extended time—for instance while searching in a file cabinet—squat on your heels, sit on a stool, or sit on the floor.

Any action that causes you to bend the upper back—such as brushing your teeth, shaving, or washing dishes—can be the beginning of a backache. When you are bending in this manner, about half of your total body weight must be supported by the upper back, which is not designed to support this burden. The muscles are additionally strained by the angle, which can approach ninety degrees. To alleviate the potential for back problems when performing a task that requires this position, raise one foot on a low stool.

[9] Finneson and Freese, p. 241.

THE IMPACT ON YOUR POSTURE OF BEING OVERWEIGHT

The significance of excess weight deserves to be mentioned at this point since it influences posture and abdominal control as well as adding to the weight load on the spine. Excess weight is a handicap to your back.

Commonly the first development of an overweight condition is a protruding abdomen, which causes the pelvis to tilt forward from the top, curving the lower spine and potentially leading to pain. The extra weight carried around the middle has been likened to carrying a ball and chain all day long.

The Posture for Proper Standing earlier in this chapter includes what is referred to as a "pelvic tilt." This posture automatically moves the pelvis backward at the top and forward at the bottom; it causes the buttocks to be "tucked in" and gently flattens the lower back curve. This desirable position is the *opposite* of the pull exerted on the pelvis by a "spare tire" abdomen.

HOW TO MAXIMIZE THE HEALTH OF YOUR BACK

The health of your back will benefit from a healthy diet, vitamin and mineral supplements, and an exercise program. As we age, our bones become more porous and less dense. The skeletal structure gradually deteriorates as the bones become softer. This condition is called osteoporosis. When an older person breaks a hip, osteoporosis is usually the culprit as the hip bones simply become brittle and shatter.

While men suffer from osteoporosis as well as women, women are especially susceptible to this condition. According to Dr. John Lee, "Osteoporosis is the disease American women are most likely to develop as they age. It is the most common metabolic bone disease in the United States: Over 45 percent of white women age 50 or more have bone mineral density over two standard deviations below the mean of normal young women. The lifetime risk of fracturing a hip, spine, or forearm is 40 percent for white women in the United States. Osteoporosis annually causes over 1.5 million fractures at an estimated cost of over $10 billion. The personal cost in quality and quantity of life is incalculable."[10]

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[10]John R. Lee, M.D., with Virginia Hopkins, *What Your Doctor May Not Tell You About Menopause* (Warner Books, 1996), pp. 150-151.

Osteoporosis is a disease that takes 20 or 30 years to fully develop. Both the severity of the condition and the age of onset vary greatly. In addition, not every elderly person experiences it. The variation appears to be largely due to nutrition and exercise. There is growing evidence that supplementing your daily intake of nutrients throughout life will strengthen your skeleton against this type of debilitating deterioration. No matter what your age, there is hope. Dr. Christiane Northrup says, "Bone is dynamic living tissue, and therefore osteoporosis—at least in part—can be reversed."[11]

DIET AND NUTRITION

Let's look at some of the nutrients which are essential for strong bones and a healthy back. They include vitamins C and D and calcium in bone building. Women can also benefit from using a natural progesterone cream, which I will also discuss.[12]

Vitamin C

Vitamin C has a role as a key building material of collagen, which is the glue holding together the connective tissue, tendons, ligaments and other supporting structures of bone, cartilage, and muscle. Since spinal disks are basically made of cartilage, strengthening the collagen in your cells is crucial in preventing the rupture of disks in the first place.

In a seven-year study of more than 500 patients with early disk lesions, surgery was avoided by a significant percentage after they began taking large doses of vitamin C. Of those who had surgery, recovery was more speedy and few needed repeat surgery. The effectiveness of vitamin C in these cases was confirmed by the fact that symptoms would recur in patients within about three months after they stopped taking these large doses of C. And then, within three months after they resumed the vitamin C treatment, maximum relief was once again experienced by these patients.[13]

More and more research is revealing vitamin C to be a wonder vitamin. Since it is water-soluble, there is little chance that too much will accumulate in the system by over-dosing on vitamin

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[11]Christiane Northrup, M.D., *Women's Bodies, Women's Wisdom*, (Bantam Books, 1994), p. 454.
[12]Lee and Hopkins, pp. 159 to 169.
[13] Leonard Lear, "Here's Help for Your Aching Back," *Prevention*, Vol. 29, February 1977, p. 107.

C supplements. Any excess that the body does not need at the moment is simply excreted. If you are taking too much vitamin C you will develop diarrhea. If that occurs, simply reduce your dosage level and the diarrhea will stop.

Taking a vitamin C supplement of 2,000 to 3,000 milligrams per day will help to keep your back healthy. It is very difficult to get this amount of vitamin C from the food you eat. As an example, one orange contains only about 57 milligrams of vitamin C. You would have to eat an enormous amount of foods rich in vitamin C to reach the levels I'm recommending here.

Vitamin C will not "cure" a bad back; nor will any other nutrient by itself. Most nutrients are synergistic; they work together chemically in the body. For example, an adequate protein intake of 50 to 70 grams a day is also needed for collagen formation. Also, nutrition and exercise work together to build muscle and tissue strength for the back.

Vitamin D

Vitamin D plays another key role in the building of bone. This vitamin is essential for the absorption and utilization of calcium and phosphorus and facilitates mineralization of the bones. Vitamin D is available from sunlight; exposing your face, arms and hands to the sun for 20 to 30 minutes a day three times a week from the spring through the fall will provide approximately 300 units of vitamin D. However, in most climates in the winter, you will be getting very little vitamin D from the sun so that is when a supplement is even more important. Supplementation with 300 to 400 IU is beneficial.

Calcium

The dairy industry has spent millions of dollars advertising the connection between calcium and strong bones. While it is true that calcium is vital for the formulation of strong bones and teeth, as well as many other functions, it is not true that dairy foods are your best source of calcium. Dr. John Lee explains, “The common perception, sponsored by the dairy association, is that dairy products are the primary source of calcium. Missing from this amusing perception is the fact that well over 70 percent of the people on earth live in the equatorial zone (between the tropic of Cancer and the tropic of Capricorn), where food plants grow year-round and cows’ milk is not used. These

people have better bones than we in the more northern industrialized areas have. Also missing from the dairy perception is the fact that cows get the calcium for their bones and milk from plants they eat." [14]

Vegetarians require less calcium than meat-eaters. This is because meat is high in protein and more calcium is needed by the kidneys to buffer the acidic protein waste products before they can be excreted in the urine. If there is not sufficient calcium in the bloodstream to carry out this process, calcium is pulled from the bone, creating a negative calcium balance.[15]

The fact is that vegetables provide a great deal of calcium. If you are a vegetarian and your diet consists mostly of high quality foods, you may not require additional calcium supplementation. Other foods rich in calcium include almonds, blackstrap molasses, brewer's yeast, carob, dulse, figs, filberts, kelp, oats, prunes, sesame seeds, and tofu. However, if you eat meat, you should take a calcium supplement. Look for calcium citrate, which results in better calcium absorption than other types. To be sure the calcium tablets you take are absorbed into your system, do a little experiment. Place one tablet in a glass of warm water and shake it. Let it sit for 24 hours. If the calcium has not dissolved, stop using that brand. If it has dissolved, it is okay to use.

I have recently found an excellent product called Coral Calcium that helps the body to absorb and use the calcium in your diet. The story of Coral Calcium is interesting. About 20 years ago a British journalist from the *Guinness Book of Records* interviewed "the world's oldest documented living person" on an island off the coast of Japan. Shigechiyo Izumi was in good health at the age of 115 and had worked until he was 105. The journalist was surprised to learn that Mr. Izumi's health and vitality were the rule instead of the exception on this island, where most inhabitants were physically fit, had low incidences of serious illness and enjoyed a long lifespan. After searching for a common thread, a team of researchers looking into this anomaly found that the water drunk by the residents of the islands was different from water anywhere else in the world.

The difference in the water was attributed to the coral reefs upon which this particular chain of islands was built. Unlike other coral reefs, these reefs are made of Sango coral, the only coral out of 2,500 species of coral that has life-giving benefits. Sango coral is composed of calcium,

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[14]Lee and Hopkins, pp. 170-171.
[15]*Ibid.,* p. 171.

magnesium, sodium, potassium, essential trace minerals and many other microscopic elements essential to human life. In fact, the composition of Sango coral is identical to that of the human skeleton and is widely used for bone grafts throughout the world.

Over a decade ago, the Japanese government authorized the mining of the coral sand that accumulated on the sea floor around Okinawa. This was done by way of a unique process that is able to extract the Sango coral without disturbing the living coral reefs. This coral sand is marketed as Coral Calcium and is packaged in one gram packets, similar to small tea bags. When the packets are placed in water, the properties of the coral are dispersed into the water.

In addition to helping the body to absorb and use available calcium, Coral Calcium also helps to assimilate other vitamins and minerals; cleanse the kidneys, intestines and liver by breaking down heavy metals and drug residues in the body; protect the body from free radical damage; increase muscle and joint mobility; combat arthritis and heart disease; increase your body's oxygen levels; control digestive problems; regulate blood sugar; manage blood pressure; and neutralize harmful acids that lead to illness.

A couple years ago I began experiencing some low back pain when I first got up in the morning. After a shower and 10 to 15 of yoga, the pain would be gone until the next morning when the scenario was repeated. When I found Coral Calcium, I thought it was worth a try to see if it would help. After only three weeks of taking it, the pain was gone. I've continued to take Coral Calcium and the low back pain has not returned in over two years.

Coral Calcium is available by mail order. Call toll free at 888-948-1634 or 757-431-1317 for a brochure and ordering information.

For Women Only: Natural Progesterone

Women have been led to believe that osteoporosis can be halted by hormone therapy such as estrogen replacement therapy. This theory became popular in the 1950s and the pharmaceutical industry has touted it ever since. While it is true that estrogen replacement therapy has proven itself in preventing osteoporosis, the negative side effects of this treatment, including higher incidence of cancer, is unacceptable to many. In recent years, primarily due to the work of physician John Lee, natural progesterone is being used as a natural alternative to hormone replacement therapy. Many

holistic physicians are now urging women of all ages to consider using a natural progesterone cream to prevent osteoporosis.

Dr. Lee explains: "The makers of Premarin and other estrogen manufacturers would have us all believing that estrogen loss is the major hormonal factor in osteoporosis in women. If that is so, why does significant bone loss occur during the 10 to 15 years before menopause, when estrogen levels are still normal? In the United States, it is a fact that peak bone mass in women occurs in the mid thirties, and that a good percentage of women arrive at menopause with osteoporosis well under way. The more important factor in osteoporosis is the lack of progesterone, which causes a decrease in new bone formation. Adding progesterone will actively increase bone mass and density and can *reverse* osteoporosis."[16] While Dr. Lee points out that natural progesterone alone is not a magic bullet for curing osteoporosis, its use has benefited millions of women—along with proper diet, weight-bearing exercise, and vitamin and mineral supplementation.

Dr. Lee's book, *What Your Doctor May Not Tell You About Menopause: The Breakthrough Book on Natural Progesterone,* explains why natural progesterone may be the only hormone supplement a woman needs as she ages.

EXERCISE

In today's world, we are increasingly sedentary, parking as close as possible to the supermarket, sitting for hours behind our desks and in front of our computers and TVs, and doing less and less manual labor. A proper exercise regimen can strengthen your back and add to your flexibility so you won't ever develop back problems. Exercises that stretch the hamstrings and the abdominal muscles help to support the back.

Even if you've already suffered from back pain, it's not too late to begin an exercise program. A recent study of patients who had suffered from low back pain for one to six months revealed that the patients who included exercise in their recovery program reported less back pain and took an average of 38 percent less days off from work than those who did not exercise.[17]

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[16] *Ibid.,* pp. 159-160.

[17] Moffett, J.K.; Torgerson, D.; Bell-Syer, S., et al. "Randomized Controlled Trial of Exercise for Low Back Pain: Clinical Outcomes, Cost and Preferences," British Medical Journal, July 31, 1999: Vol. 319, No. 7205, pp. 279-283.

An important component of a physical fitness program is *strength training*. Many people think of bodybuilders when they think of working with weights. But bulging muscles are not the goal for most of us—in fact, the power lifting required to attain them can be injurious. Rather, the average person needs strength training for two reasons—to tone muscles and build muscle endurance. Most people begin to lose muscle tissue in their thirties. By including strength training in your exercise routine, you will build muscles, increase bone density, and increase stamina.

Strength training also helps you lose weight and reduce body fat because it increases the body's average calorie-burning rate. Additionally, strong muscles will help you to prevent musculoskeletal injuries which are often the result of muscle weaknesses and imbalances. Studies have shown that strength training also reduces the risk of diseases such as diabetes, osteoporosis, heart disease, and colon cancer. Lower back pain, arthritis pain, blood pressure, and cholesterol levels are also positively impacted by those who add strength training to their exercise routine.

In a study published in the *New England Journal of Medicine*, one hundred frail men and women from a nursing home worked with weight training. Eighty-three percent of them required a cane, walker or wheel chair to walk. The study used only two weight resistance exercises, both for muscles in the legs. At the end of the study muscle strength had increased an average of one hundred and thirteen percent. That goes to show that you're never too old to benefit from exercise![18]

The key to strength training is resistance. There are actually two halves to any strengthening exercise—the *concentric phase*, in which you lift a weight, and the *eccentric phase*, in which you release or lower the weight. The eccentric phase should be done slowly, resisting the weight and the pressure of gravity. Research has shown that it is extremely important that you focus equally on the two phases—both are vital to the process. The resistance doesn't have to be in the form of weights—it could be cans of tomatoes or jugs of water. Your own body weight can also be used as resistance, as in calisthenics such as push-ups.

A physically fit person also enjoys the benefits of *flexibility.* It is important that your body remain flexible for the proper functioning of all your body's systems. Flexibility in the body will also counteract problems such as stiffness in the limbs, neck, and spine which can lead to difficulty falling asleep, as well as contribute to headaches, backaches, and other discomforts.

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[18] Julian Whitaker, M.D., *Dr. Julian Whitaker's Health & Healing Newsletter,* September 1994, pp. 1-2.

Improved balance is another benefit of regular exercise. Studies have shown that the ancient exercise tai chi can be extremely helpful in improving the balance of senior citizens. When compared with a group of seniors who were hooked up to a high-tech computer system designed to help improve balance, the group who took tai chi classes had definite advantages—and they suffered 50 percent fewer falls. Experts believe the bodies of those who practiced tai chi were able to counteract changes in balance because they learned how to move their bodies differently. Instead of "fighting" when thrown off balance, they learned to move "with" the imbalance. Tai chi classes are available at YMCAs, health clubs, and martial arts schools.[19]

In addition, an ongoing exercise program, even a moderate one, can lower your cholesterol levels, control your weight, reduce the possibility of heart disease, and add to your energy. People with serious health problems such as arthritis have also benefited from moderate exercise. In a study of older women, a moderate exercise program, combined with weight loss of as little as ten pounds, was found to vastly reduce the pain of osteoarthritis. There is also research showing a connection between regular exercise and longevity.

If you've given up on exercise, or if exercise seems just too difficult for you, think again. You need to begin with the level of exercise that's right for you. In only a few days of regular exercise, you will be amazed at the improvements in your vitality, endurance, and strength.

YOGA

Yoga is a great way to strengthen your back, improve flexibility, and balance your nervous system. Hatha yoga is one of a number of systems in the 5,000 year old Indian tradition called yoga. Hatha yoga is the yoga of the physical body which includes numerous physical postures or positions called "asanas" as a means to give the body and the mind strength, flexibility, relaxation, and the ability to concentrate. Many people perceive yoga as a series of difficult contortions that take years of study and practice. While it's true that it may take you quite some time to work up to the advanced postures, as a beginner you are able to start at the exact level for which your body is ready and also receive immediate benefits.

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[19] "Legends of the Falls," *Prevention,* Rodale Press, December, 1996, p. 26-28.

There are many physical benefits of doing yoga on a regular basis. The list of areas which yoga impacts is extensive, including slowing the heart rate, lowering blood pressure, reducing adrenaline and stomach secretions, lowering blood sugar, reducing cholesterol, and reducing mental fatigue. The movements are good for stretching and toning the muscles, gently exercising the heart and lungs, adding to gracefulness, bodily control and general health. It also improves breathing capacity, reaction time, and metabolism.

Yoga relaxes the entire body, including the muscles, and is therefore beneficial for any disease or condition that can be helped by relaxation, including chronic tension headaches, anxiety, muscle aches and pains, insomnia, morning stiffness, high blood pressure, asthma, and other respiratory diseases. Yoga also increases flexibility and helps to correct bad posture which has gotten locked into the body. When you see an elderly person who hasn't exercised regularly, the lack of flexibility and poor posture is immediately noticeable. Even a moderate amount of yoga done on a regular basis will allow you to maintain and expand your flexibility far beyond others your age. After even a week of doing a few minutes of yoga on a daily basis, you'll find that your ability to stretch has been extended to a surprising degree.

Before I started doing yoga, I had a bad back. It was constantly annoying me, and once every couple of months, it would go "out," causing severe pain all the time. At the age of twenty-four I had lived with this condition for most of my life. When I first did yoga, I could stretch only a few inches in some directions. However, in a short period of time I became much more limber and flexible. I was amazed because my back problems totally disappeared.

An excellent sitting position that helps to keep the body in proper alignment is the cross-legged posture called the lotus position in yoga and known to many as the Asian way of sitting. If you're not used to doing the Full Lotus, start with the Half Lotus position:

HALF LOTUS SITTING POSTURE

1. Bend your right leg at the knee so the leg is lying in front of you with toes pointing to your left.
2. Bending the left knee, place that leg on top of your right leg. (The toes on your left foot will be facing right.)

The legs should be crossed *loosely* so you are not cutting off circulation at the knees. In this position, your back is almost naturally supported in a comfortable way; it is also restful for both the back and the legs.

If you have trouble getting your legs into the Half Lotus position, try it for a few minutes each day. You will be amazed at how quickly your muscles become limber. Once you are easily doing the half-lotus position, you can graduate to the full lotus.

FULL LOTUS SITTING POSTURE

1. Bend your right leg at the knee and place your right foot on top of your left knee. (The toes on your right foot will be pointing to your left.)

Bending the left knee, place the left leg over the right leg and rest your left foot on top of your right knee. (The toes on your left foot will be pointing to your right.)

I strongly urge you to incorporate yoga into your exercise regimen. There are many good books, videos and classes available that will show you how to do it.

THE ISOROBICS EXERCISER

For the past twenty years I've been using an exercise device called the Isorobics Exerciser. This device, which was initially developed for the NASA astronauts, gives a complete workout, and it has the additional advantage of being lightweight. Since I'm constantly on the road doing seminars, I really like the convenience of this two-and-a-half pound device that fits easily into my suitcase. Once I'm in my hotel room, I need only to attach it to a door, and I'm ready to exercise.

When I first saw the Isorobics Exerciser demonstrated at a convention I didn't believe it could possibly include all of the components for effective exercise. The presenter asked for a volunteer who was in good shape to demonstrate a 22-second exercise that would make you feel as if you had a complete workout. I accepted the challenge. Twenty-two seconds later, I was surprised—I really felt as if I had a full workout. I was sweating, I was breathing hard, and my arms were shaking inside. That convinced me to get the Exerciser.

After about six weeks of using the Isorobics Exerciser regularly four to seven times a week, I noticed some important changes. One night at the final banquet at a convention, I wound up dancing for over two hours straight. Until that time I had never lasted more than four dances before I needed to take a rest. The Isorobics Exerciser was the only change I'd made in my exercise routine. During this same period my pulse rate also dropped from 70 to 60 beats per minute. Twenty years later my heart rate is around 63 beats a minute and my blood pressure is 106 over 60. This means my heart is not working as hard to pump the same amount of blood through my system.

The Isorobics Exerciser compresses the amount of time it takes to exercise. For instance, just one repetition on the device equals 14 repetitions on Universal gym equipment. Let's look at the reasons it is so effective.

A few decades ago the exercise rage was *isometrics*. Isometrics simply involves isolating certain muscles and holding them in static contraction for a short time. This is great for building muscle strength. But there are two shortcomings to isometrics exercises in terms of effective exercise: (1) isometrics work only for the particular muscles you are contracting; that means you'd have to do isometric exercises on all of your muscles groupings to have a complete workout, and (2) isometrics doesn't do anything for you aerobically.

Another form of exercise is called *isotonics*. Isotonics involves movement coupled with a weight, such as lifting a barbell. When a weight lifter first picks up a 90-pound barbell to do a curl, the weight will feel like 90 pounds. However, when he does the curl, inertia will help to carry the barbell up to the curl position. In addition, when the arms are bent at the top of the curl, there is a fulcrum effect which means the 90 pounds will feel as if it weights only 50 pounds. This means your muscles are not being given a full workout over the full range of motion.

A third type of exercise is called *isokenetics*. During this kind of exercise, you control the speed and resistance throughout the full range of movement. Universal gym, Nautilus equipment, and the Isorobics Exerciser are examples of exercise devices that effectively employ this concept. Of these, I prefer the Isorobics Exerciser. This device controls both the speed and the resistance of the exercise by combining isometrics and isotonics movements. It takes less time to tune your body using the Isorobics Exerciser than to exercise by any other method. Using just the Isorobics

Exerciser for only seven to fifteen minutes four to seven times a week will allow you to reach the goals you have set for your body.

The Isorobics Exerciser is also designed to meet the different exercise requirements of men and women. Men are interested in arm strength, back strength, smaller waistlines, and increased flexibility. Women generally want to firm the back of their arms and their bustlines, reduce the waistline, and firm the buttocks and inner part of the thighs. It isolates particular groups of muscles while it raises your heart level to its target heart rate, giving you an effective aerobic workout.

A number of studies have found that regular use of the Isorobics Exerciser yields impressive results. By using the Exerciser regularly for 90 days you will increase your flexibility from 75 percent to 100 percent. Many people also have a two- to four-inch reduction in their waistline and lose at least a few pounds of weight. Even those who don't lose weight find that their weight has been redistributed. You may also have a significant drop in your cholesterol and triglyceride levels and a 10- to 14-beat drop in your resting pulse rate. That level of change in your heart rate alone will save your heart a minimum of 14,000 additional beats per day. And on top of all of this you'll feel better!

The Isorobics Exerciser has been used on Apollo and Gemini space flights as well as by many athletic teams, including the Minnesota Vikings and the Dallas Cowboys. Athletic teams have found that regular use of the Exerciser also cuts down on athletes' injuries.

There are also exercises you can do with the Isorobics Exerciser for improvements in specific sports. For example, you can use the Exerciser to duplicate the motion of driving a golf ball and increase your driving distance from 12 to 36 yards. Professional baseball pitchers have also used it to increase velocity up to eight miles per hour.

The Isorobics Exerciser works and it can work for you if you are willing to commit seven minutes a day to using it. It is available by mail order and even comes with a sixty-day money-back guarantee. Call toll free at 888-948-1634 or 757-431-1317 for a brochure and ordering information.

TREATING BACK PAIN

Traditional medical treatments for back injuries have included exercise, bed rest, and prescription drugs to relieve pain and relax muscles. In the most severe cases surgery was

performed. But surgery has lost favor with medical experts because of so few successes. Many patients continued to suffer back pain after surgery; sometimes the pain was worse, even after repeated attempts at surgery.

Most standard medical treatments of back injuries are treating only its symptoms: painkillers, muscle relaxers, and cortisone are often prescribed to make the patient more comfortable and attempt to alleviate muscle spasm. Taking these drugs habitually to relieve unpleasant symptoms is simply masking the problem and not addressing the cause of the pain. Also, there is growing concern about the overuse of prescription medications, most of which have some negative side effects.

IMMEDIATE TREATMENT OF BACK PAIN

- Rest and move as little as possible for the first day or two. After that, avoid any position that is painful and sit as little as possible. If you can walk, try a small amount of walking in between sessions of being prone.
- Apply an ice pack on the affected area for 15 to 20 minutes every hour or two. When the pain level lessens, begin to alternate application of cold and heat. Soaking in a hot tub may also be helpful at this point.
- Take a homeopathic remedy called Arnica Montana in a potency of 12X or 30C, which is available from most health food stores. Take three or four pellets every hour or two for the first day; then reduce to four times a day for a total of four to five days. Put the pellets under your tongue and allow them to dissolve. Do not eat or drink anything for 15 to 20 minutes before or after taking any homeopathic remedy. Coffee, mint and camphor should be avoided when taking homeopathics. Be sure products such as toothpaste and liniment do not contain mint or camphor.
- Take aspirin or ibuprofen which help with both the pain and any inflammation, rather than acetaminophen, which does not reduce inflammation.
- Use a counterirritant product such as Ben-Gay or Tiger Balm over the affected area.

CHIROPRACTIC

With little success to show for the traditional treatments of muscle relaxers, pain killers, and anti-inflammatory drugs, the medical establishment is now turning in surprising numbers to a treatment for back pain that it once scorned—chiropractic. According to Yale University study published in the August 18, 1999 issue of *The Journal of the American Medical Association,* chiropractic "… is, in its standard form, effective against the most common forms of low back pain."

Many insurance plans, HMOs, and PPOs now pay for chiropractic treatments. This new respect and acceptance of the century-old system of spinal manipulation is the result of its success. Studies conducted at both the College of William and Mary and the Medical College of Virginia showed that chiropractic care reduces insurance costs. Another study which was reported in the *Western Journal of Medicine* revealed that patients are extremely satisfied with chiropractic care—in fact, they were three times more likely to be satisfied with their treatment than patients of medical doctors. Chiropractic patients were also able to return to activity much sooner than those who received traditional medical care—on an average of 10.8 days versus 39.7 days for medical patients.

According to chiropractic theory, misalignments of the body's skeletal structure produce both pain and nerve interference. These misalignments, called subluxations, create disturbances in the nervous system. Through their hands-on "adjustments," chiropractors attempt to correct these misalignments, thereby eliminating the nerve interference and allowing the body to heal itself. Millions of adherents of chiropractic believe it promotes healing of neck and back problems such as whiplash injuries, neuralgia, sciatica, bursitis, tendinitis, lumbago, disk problems, and muscle sprains. In addition to these conditions which are skeletal in nature, the system is credited by many with healing organic ailments such as hypertension, arthritis, chronic fatigue, heart trouble, and many other problems.

Chiropractic, just like traditional medicine, is constantly being refined as new discoveries are incorporated in the system. Some chiropractors focus specifically on manipulation while others also incorporate ultrasound therapy, electrical stimulation therapy, nutrition and physical therapy in their practice. Also, a variety of adjustment techniques are employed by chiropractors today.

One innovative chiropractic system, Directional Non-Force Technique (DNFT), was developed by Dr. Richard Van Rumpt in the late 1930s. A radical departure from traditional or conventional chiropractic, its uniqueness stems from two sources. One is the diagnostic technique which is referred to as the Van Rumpt leg check or the reactive leg reflex, which provides very precise diagnosis of the location of subluxations. The second unique aspect of DNFT is its method of correcting subluxations—a very specific light force thrust.

My co-author, Norma, suffered debilitating pain from a whiplash injury for eight years. Treatment by several different chiropractors helped to ease pain, but the injury still caused constant pain. Then she found Dr. Christopher John, the successor to DNFT originator Van Rumpt. Dr. John told Norma DNFT would correct her condition in eight to ten sessions and that she would require follow-up chiropractic only occasionally after that. Amazingly, his prognosis was correct and Norma is now pain-free after years of suffering. She is now on a "maintenance" schedule and gets DNFT adjustments every six to eight weeks.

Dr. John points out that DNFT has a reputation for success in difficult chiropractic cases where other methods have failed, with a minimal number of treatments. Even some disk problems, which traditionally have been considered impossible to heal, have been successfully corrected by DNFT treatment. You can locate a DNFT chiropractor by calling or writing: Directional Non-Force Technique, 8530 Wilshire Blvd., Suite 200, Beverly Hills, California 90211; phone 310-657-2292 or on the web at www.nonforce.com.

I had my own successful experience with chiropractic. I started to experience pain across the upper part of my back. Within hours afterwards I would experience a burning sensation in my esophagus. I went to my regular doctor and he thought the pain was caused by acid reflux which is due to a valve between the esophagus and stomach not closing properly. This would result in hydrochloric acid from my stomach entering my food pipe and causing the pain. I went through a variety of medications prescribed by him. It didn't help. He even had a specialist put a TV scope down my throat to see what was going on. He found nothing.

Finally, I went to my chiropractor. He felt the back pain and stomach pain were connected since they were located exactly opposite each other. After several treatments the pain lessened and after a number of additional sessions over several months it disappeared entirely. As an aside, when

I told my doctor and the specialist about the success of the chiropractic treatments, they didn't think the two problems were connected. However, they both said if it works to continue it.

OSTEOPATHY

Like chiropractic, osteopathy originated as a method of manipulation, though it is based on a different approach. Traditional osteopathic treatment focuses on optimizing blood circulation to maintain or restore health. Manual therapy by an osteopath has been found to be as effective at relieving chronic lower back pain as traditional medical care, according to a study published in *The New England Journal of Medicine* (November 4, 1999).

Unfortunately, many of today's osteopaths *do not* incorporate manipulation in their practice of medicine. After the death of its founder, Andrew Still, in 1917, osteopathy gradually merged with orthodox medicine, incorporating drugs and surgery into its practice. Therefore, if you want to find an osteopath who does manual therapy, you will have to ask the osteopath's office if that type of therapy is included in the practice.

APPLIED KINESIOLOGY

Applied Kinesiology was developed by a chiropractor, Dr. George Goodheart. In this healing system, various muscles which correspond to the organs of the body are used to locate imbalances in the body's energy. Corrections are then made by stimulation of the corresponding organ. Viewing Applied Kinesiology as complimentary to their practice, many chiropractors have incorporated it as a part of their treatment.

ACUPUNCTURE

Acupuncture is an ancient Chinese healing system in which the practitioner inserts very thin needles into specific points on the body to stimulate the flow of energy to organs and tissues. It is also believed that the needles stimulate nerve pathways in the brain, in part by the release of natural painkillers called endorphins, which are morphine-like compounds produced naturally by the body. Acupuncture has gained greater mainstream acceptance today because it has proven successful as yet another drug-free way to treat conditions that range from back pain to smoking and drug

addiction. Like the other healing systems I've discussed, the principles of acupuncture focus on the body's own innate healing powers and its ability to regenerate.

SHIATSU

Shiatsu is a method of "hands-on" bodywork which can be done on yourself or by another person to promote healing and relaxation. Specific shiatsu treatments can be done to treat back pain, as well as common health problems such as tension headaches, sinus headaches, migraines, sore throat, and stiff neck and shoulders. The treatments take from 90 seconds to five minutes. While it is wonderful to have a bodywork professional treat you personally, that's not always possible. The fact that shiatsu is a healing system you can do on yourself in just minutes makes it invaluable to people who are constantly on the run--like most of us.

I've taught shiatsu to hundreds of thousands of people who have attended my speaking engagements. At one convention, I spoke to an audience of three hundred college student government leaders. No one in the audience had ever heard of shiatsu. At the beginning of the session I asked how many of them had headaches. Almost the entire audience raised their hands. I learned they had been working hard and partying for the three previous days and nights. So I taught them to do the shiatsu treatment for headaches. After the treatment I asked how many of them still had headaches. Not one hand went up.

Shiatsu and How It Works

Shiatsu is a Japanese pressure point massage technique that's been around for thousands of years. Its origin is believed to be in the Chinese technique of acupuncture in which needles are inserted into specific body points to promote healing. The Japanese then coupled this concept with the use of massage. In English, the word *shiatsu* means "finger pressure." Shiatsu is similar to the system known as acupressure.

There are several theories as to why shiatsu works:

1. The hard pressure that is applied causes an increase in the flow of blood to the area pressed. The additional blood carries off wastes from all the cells in the area and brings

increased amounts of fresh oxygen, nutrients, hormones, antibodies, and white blood cells.

2. Like acupuncture, Shiatsu pressure stimulates the nerve endings and acupuncture meridians (energy pathways) of the body so the body is able to heal itself.
3. In physics there's a principle that every action has an equal and opposite reaction. When you press hard on a point then release it, the muscles and blood vessels contract first and then stretch, causing them to relax.
4. Shiatsu relaxes and loosens the muscles, not only at the point pressed but in the surrounding area as well. This action is akin to that of a pebble thrown into a lake. The pebble dropped in one spot makes ripples over a large surface of water. (However, our muscles may need to be pressed at several locations, with repetition, before the treatment reduces or eliminates the pain or tension.)
5. An increased production of endorphins, the body's natural pain suppressant secreted by the brain, may be stimulated by the shiatsu pressure.

If Shiatsu is done properly, the specific pain will disappear or at least be greatly reduced. Even if the pain of injuries such as sprains and pulled muscles can be relieved with shiatsu, I'm not suggesting using it as a replacement for seeing a doctor. The treatment for lower back pain which follows is safer, faster and more effective than the aspirin, pain reliever, or cold tablet for which most people would reach. With Shiatsu you ingest no chemicals, and the benefits are immediate. If you do this shiatsu treatment several times in one day and feel no relief, you should see a doctor.

THE BASICS OF SHIATSU

Correct Shiatsu pressure is described as a cross between pleasure and pain. You should exert a hard steady pressure on each point. Use your thumbs as much as possible. The biggest mistake most people make in doing Shiatsu is not pressing hard enough.

When treating another person, use the person's "ouch" reflex as a pressure guide. Tell the person to say "ouch" immediately if he or she feels pain. Then let go immediately and press on the

next point. Interestingly, a person may feel pain at one point, and one inch away feel no pain at all, even though the pressure is the same.

Work with the same intensity on each point and let the person you're working on judge when the pressure is too hard. When a person says "ouch," mentally note the location of that point. Then, when repeating the same treatment the second time through, begin by pressing very gently when you come to the location of the "ouch" point. Slowly build the pressure up. You'll be pressing longer than usual, but it's a building pressure rather than a steady one. Surprisingly, you may be able to press harder than the first time around without causing pain.

Another way to experience the pressure you should be using is to place your thumb on a bathroom scale and lean on it until the scale registers 15 to 20 pounds (30 to 40 pounds with both thumbs). When working on yourself, it may be hard to get a strong pressure with your thumb on some points, such as the top of the head. When that occurs, put your middle finger on top of your index fingernail and press. (See “A” in Illustration.) Or try pressing with the flat of your index finger, supported by your thumb. (See “B” in Illustration.) Don't use your knuckle; just the flat, outside part of the finger. These alternate ways of pressing are also useful in giving your thumbs a rest, since they may not be used to applying so much pressure.

When doing the Shiatsu back treatment, go through all the pressure points at least twice. Do so a third time if the person still feels pain or discomfort. On yourself, go through the treatment three or four times since you're not able to exert as much pressure on yourself as on another person. After three or four times through the pressure points, it's best to wait an hour or so before doing it again. Waiting lets the body respond even more deeply to the healing. Shiatsu can be done with complete safety, over and over again.

The following Shiatsu treatment is for low back pain. Follow the diagrams to learn the shiatsu points, but don't worry about pressing on the exact location of each point. The body has a sympathetic and parasympathetic area surrounding each nerve ending. By pressing in the vicinity of the nerve ending, you stimulate that nerve ending to transmit the healing message to the proper body part. Shiatsu points therefore don't have to be "hit" as accurately as acupuncture points, since acupuncture requires that the acupuncture needle be inserted into exact spots. Unless otherwise noted, the instructions are written for the person who is "treating" or working on another person.

SHIATSU LOWER BACK TREATMENT

This treatment will get rid of or greatly relieve lower back pain, strain, and fatigue. You can do it sitting up, lying down, or even standing.

The instructions below are written for you to use on yourself. If you are doing this treatment on someone else, have the person lie face down on a firm surface (not a bed), with eyes closed. You should kneel on the person's left side. If you feel more comfortable straddling the person, make sure you don't sit on the buttocks, since this can cause a strain on the person's back.

Press each point for 3 to 7 seconds:

1. Begin at the fifth lumbar vertebra. To find it, divide the back in half horizontally, then drop down 2 inches from this dividing line. (Remember, you don't have to be at exactly the right place, just in the area.) Don't press directly on the spine. Press on both sides of the spine simultaneously, using your thumbs.
2. Move down alongside the spine, an inch at a time, and press each point for 3 to 7 seconds, until you reach the end of the spine at the tailbone.
3. Next, find the place where the spine and the hipbone meet. Press both sides simultaneously with your thumbs. Then continue moving away from the spine along the hipbone and press on four pairs of equally spaced points until you are at the side of the body.
4. Return to the place where the spine and the hipbone meet. The next 4 points form an upside down "V" ending in the middle of each buttock. Press the first point where the hip and spine meet, then move down the "V" one inch and press on both sides. Continue until you are at the middle of each buttock.
5. Divide the buttock in half with an imaginary line across the center of the buttock. Next go to the side of the body and move your thumbs half way up towards the hipbone. Press on each side 3 to 7 seconds.
6. Move below the imaginary line to the lower, outer portion of the buttocks on both sides and press both sides simultaneously.

7. Repeat all steps a second time. If there is still pain or stiffness, go through this treatment a third time, then wait and repeat it in one hour.