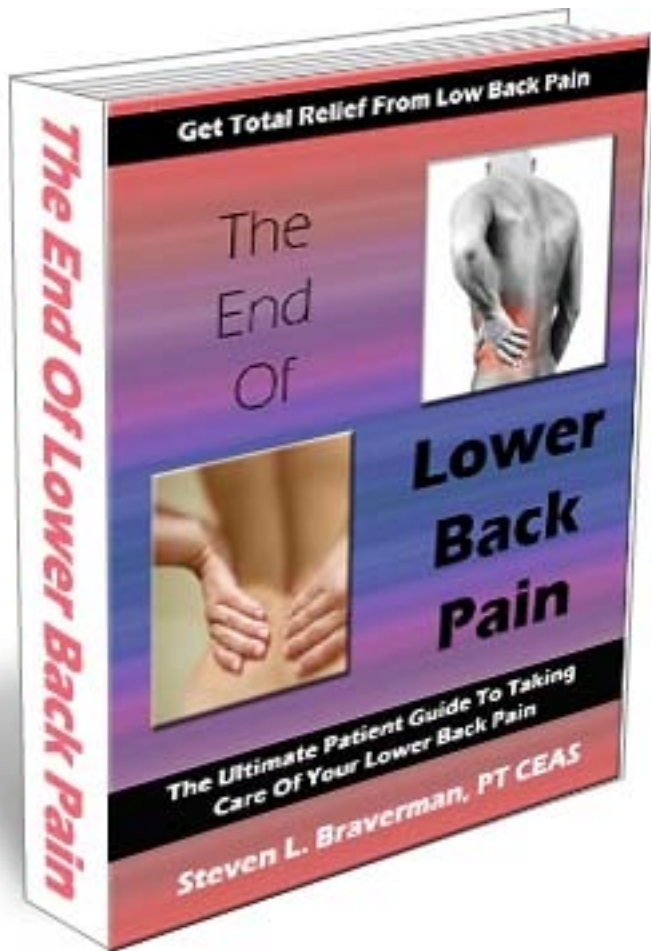


THE END OF LOWER BACK PAIN



BY

STEVEN L. BRAVERMAN, PT CEAS

Disclaimer

The information in this book is not a replacement for the services of a physician, physical therapist or health care professional.

Please do not use this e-book to diagnose or treat a medical or health condition.

Please consult a physician in all matters relating to your health, and use discretion when using any of the strategies mentioned here.

Thank you and enjoy the e-book.

Steven L. Braverman, PT CEAS

President, *RESTORE Physical Therapy & Ergonomic Consultants of New York*

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Dear Reader,

Thank you for downloading this e-book. I have compiled this as a quick resource to enable you to deal with low back pain. Statistics show that a large number of adults exhibit back pain symptoms every year. The severity of low back pain can range from mild to severe, and can, in some cases, cause symptoms of nerve compression (lack of sensation, paralysis) if left untreated.

In addition to finding useful information on lower back pain in this e-book, you will be pleased to learn that you are now on my exclusive newsletter subscriber list.

This entitles you to some cutting edge information on health, wellness and injury prevention, all delivered to you at regular intervals each month.

Each edition will feature valuable tips, health plans, expert advice and informative articles to keep you healthy and live without pain. You can share this excellent resource of healthy living with your acquaintances, by forwarding it to their email address or asking them to sign up, FREE for them. This newsletter is my commitment to improving your health as your preferred healthcare professional

Thank you!

In good health,

Steven L. Braverman, PT CEAS

WHAT CAN YOU EXPECT



The goal of this book is to help you maintain the right spinal alignment on a daily basis. Over a period of time, you will notice that your posture improves and you experience an increased sense of comfort while driving and performing day to day activities. Within a few weeks, you will find yourself adjusting your posture for all activities, including work, travel and household chores to

maximum the comfort and minimize the strain on the lower back.

The exercises you are about to learn will help you develop self-awareness and improved posture. Since all physical activities require your spine to be in its optimum shape, these exercises serve several purposes and build a foundation for long term strength and well being.

With regular exercise, the flexibility of your lower back improves. You may experience some discomfort. However, this is a normal consequence of properly executed exercises. Over a period of time, discomfort will reduce. This implies your lower back is getting stronger and becoming more functional.

BACK IN BALANCE



The above picture reflects a straight back with properly developed and balanced muscles around the spine. This facilitates optimum balance and posture in lower back. It is important to exercise muscles evenly on all sides to develop and maintain **muscle balance**.

In addition, the blood circulation around the vertebrae and the inter-vertebral discs will also improve.

As a result, the lower back becomes stronger and more flexible!

BEFORE YOU BEGIN

Always consult a physician or a licensed physical therapist before starting an exercise plan to determine if you are ready to start exercising.

All the exercises mentioned in this book are designed to relieve pain in your lower back. Therefore, if an exercise is increasing the pain, please discontinue and consult a certified provider.

Caution: If you experience pain during an exercise, discontinue it. Proceed with the other exercises in the routine. A few days later, try the same exercise again, if it is still painful drop it from your routine for some time.

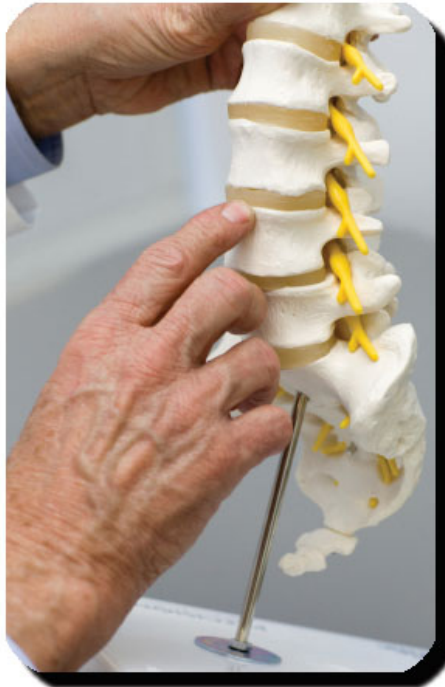
In the early stages, you may not be able to repeat an exercise to the specified count but do not allow that to discourage you. As the lower back gets stronger and flexible you will reach the

right strength level.

Let us start by learning more about the structure of the spine. This will help understand the lower back and its movements in greater detail.

SECRETS OF YOUR BACK, **THE SPINE & THE VERTEBRAE**

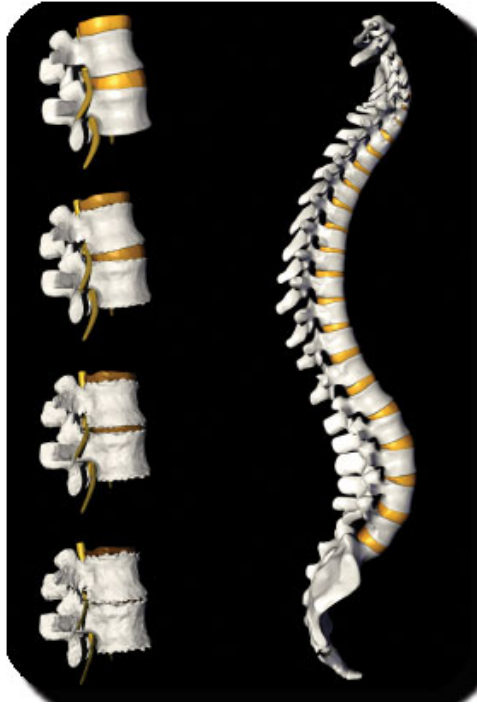
The spine provides the structural framework to the entire body. The spinal cord runs through the middle of the spine and serves as the main highway of the nervous system by connecting the brain with other parts in the body. The vertebrae of the spine surround and protect the spinal cord.



It is imperative to keep the spine healthy and in good shape. When seen from the side, a normal spine reveals an S-shape. This unique curvature effectively absorbs forces of varying nature and intensity that are exerted on the body in an average day.

Similar to shock absorbers in a car, the spine transforms shocks into movement. This movement of the spine in response to an external impact is facilitated by its S-shaped curvature. If the spine would be completely straight, the impact would affect the vertebral discs directly. As a result, the vertebral discs would tear out much sooner and expose the spinal cord to the peril of these forces.

Therefore, a healthy back is similar to a shock absorption system that transforms force into movement within the reach of the S-shape.



A stiff lower back does not move easily and causes too much exertion on the vertebral discs leading to excessive disc compression. When your lower back is accustomed to the wrong posture (neglect), it cannot absorb shock without causing damage to the discs.

The vertebrae of the back are not simply stacked on top of each other but are separated by small elastic discs, similar to tiny cushions.

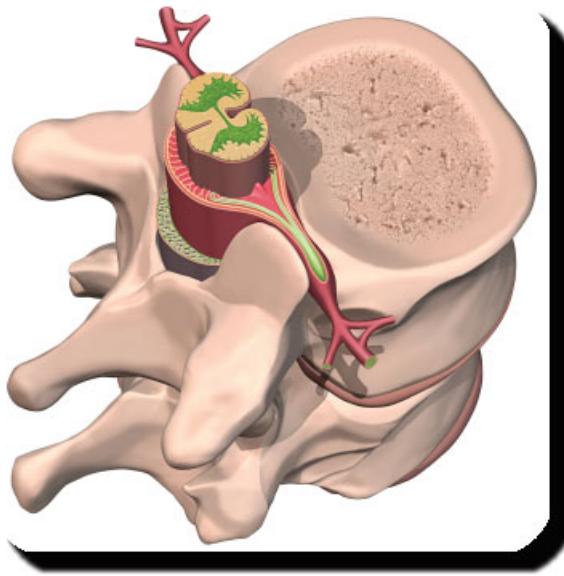
Healthy discs are elastic and a little ‘squishy’ and make up 20-25% of the total length of the vertebral column.

A vertebral disc is made of a gel-like center (nucleus pulposi) and an outer wall (annulus fibrosus).

Healthy adult vertebral discs consist of almost 90% water, just as in healthy infants. As one grows older, the body is unable to retain optimum water level in the discs. In a stiff lower back, the vertebral discs dry out more and become thinner. To maintain optimum hydration of the vertebral discs, good blood circulation in the vertebral region is necessary. **This is achieved by a sustained and progressive use of the muscles surrounding the vertebrae.**

A lower back without sufficient movement does not get enough blood circulation. This causes insufficient hydration of the discs. Discs in

a rigid lower back, therefore, thin out faster as there is no shock absorption mechanism in place to stop them from wearing out.



Remember: good circulation = good hydration

Without adequate movement and exercise people tend to become overweight which places additional strain on the discs and reduces blood supply to them. Thinner discs result in spinal instability (too much motion between adjacent vertebrae) resulting in inefficient muscle control, pain and poor function.

THE BEST WAY TO TREAT YOUR BACK

Research shows that the best way to treat the lower back is by increasing mobility and strength in a progressive, controlled manner.

This requires a plan to:

- 1) Strengthen muscles, so they can bring and keep vertebrae in position and
- 2) Increase blood circulation around the discs, thereby allowing the discs to suck up all the fluid they need to make the lower back supple.

For best results, an exercise program should stress on:

1. Increasing mobility of the back
2. Aligning the vertebrae
3. Increasing circulation
4. Decompression of the discs

5. Strengthening of the muscles

The exercises in this e-book are in line with the above goals.

A sedentary lifestyle is one of the main reasons for low back pain. Lack of physical exercise, poor posture and excessive sitting are only a few of the many factors that strain the lower back.

Lower back pain may be an early symptom of future back problems like a herniated disc or a “frozen” back.

Most painful conditions of the back originate due to the neglect of a healthy lifestyle.

Fortunately, a well planned routine of exercises for the lower back can assist in restoring the spine or getting it closer to its original, painless and functional state. The secret to regaining a normal, functional spine is training

the muscles of the lower back and strengthening them to keep a healthy posture. Strong and supple muscles will keep the lower back in good shape for a long time.

It is important for your body to maintain the right posture at all times. The muscles of the body have to be trained to achieve the natural posture for sitting and working. The following are the guidelines that help train muscles to keep a healthy posture while sitting.



- Lower arm should extend horizontally
- The knee-hollow should not touch the edge of the chair
- Lower back should be sufficiently supported
- The display should be on a natural height

- Elbows should be supported by the armrests of the chair
- Feet should lie flat on the ground

If you suffer from a bulging or herniated disc, here are some areas that your healthcare professional will help you focus on:

One: mobilize the back

Two: align the back

Three: decompress the spine

Four: strengthen the muscles of the back

Five: Maintain a healthy diet!

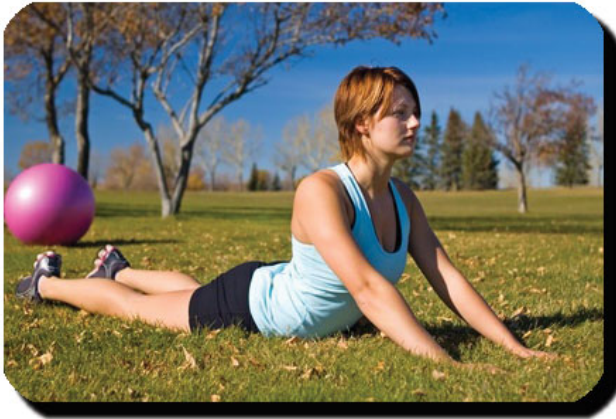
Clearly, four out of the five areas require exercising on a regular basis; therefore, exercise is the first and most important step in treating lower back problems.

People suffering from a herniated disc

should start exercising in a very controlled manner. It is advisable to start under the vigilance of a physician or a physical therapist.

SAY GOODBYE TO YOUR LOW BACK PAIN

Here are some recommendations for your exercise routine. Always consult your physical therapist to get a customized exercise program best suited for you.



SIDEWAYS LEG LIFT

Stand up straight with your feet slightly apart. Hold your hands slightly above your chest. Now lift the right leg up sidewise, without bending the knee, then bring it back to the ground slowly. Perform the same steps 10 times,

before repeating with the other leg. Do at least two sets of this routine.

This exercise increases blood circulation around the hips and the lower back. Increased circulation will help heal the discs of the lower back and increase the blood supply to the muscles you are training in this area. Pelvis and SI-joint also benefit from the increased blood circulation in their region. This exercise may seem very simple but it works well to restore mobility in the lower back.

KNEE TO SHOULDER

Lie down flat on the floor; with your left foot resting flat against it. Next, lift up your left leg and fold both hands around the knee. Now, pull your knee slowly towards your left shoulder. Hold this position for a few seconds before pulling again with a little more effort and then slowly straighten your leg on the floor. This will relax and

lengthen your gluteal muscles.

Repeat the same process with the other leg.

This process is to be performed 10-20 times with each leg.

BRIDGING

Lie down flat on the floor and put both feet flat on the ground. Hold your arms next to your body and slowly lift your buttock into the air. Go up till you feel your tailbone comes off the ground. Keep this position for a few seconds and then relax.

Repeat this movement, but now lift up your tailbone and the lowest vertebra off the ground. Keep this position and relax again. Every time you relax and return your body to the ground, you have raised one more vertebra. Ultimately, only the back of your shoulders should remain touching the floor with the whole vertebrae

column in air.

In this exercise, you keep rolling up and down your spine, off the ground and then back. Concentrate on your back lifting off the ground one vertebra at a time and when going back down, one vertebra at a time touches the ground.

HAMSTRING STRETCH

Lie down flat on your back and lift up your left leg as far as possible while maintaining a small amount of bend at the knee.

Now fold your hands behind the knee. Pull towards your chest.

As soon as you feel resistance and tension, stop pulling. Keep that position for a few seconds, then pull a little bit further and maintain that position for a few seconds. Then lower the leg back to the floor. Hold for 20 sec and repeat 3 times. As you progress repetitions start to keep

less and less bend at the knee joint. Stop this exercise if it causes lower back or buttock pain.

Repeat the same steps with your other leg.

LOWER TRUNK ROTATION

Lie down flat on the floor with your feet resting flat on the ground and heels as close as possible to your bottom. Put out your arms left and right at a 90-degree angle.

Now turn your head left while at the same time turning both legs to the right. Next, slide your upper leg (the left leg in this case) over the lower leg so your left ankle rests on your right knee. Please refer to the second picture above.

Keep this position for a few seconds, then slide your left leg back on top of your right leg and bring both legs back up straight again. You should be in the starting position as illustrated in the first picture above.

SIDE LEG LIFTS

Lie down flat on your right side. Stretch out your right arm above and rest your left hand on your hip, parallel to the ground.

Now lift up your left leg as high as possible. Bend your leg at the knee and bring your knee to your shoulder. Use your hand to pull your knee slightly towards the shoulder. Repeat this exercise five times, then turn on to your other side and do the same steps.

ALTERNATING ARM & LEG

Lie down flat with your face down, arms extended above the head. Now lift your right arm and left leg at simultaneously. Hold for a few seconds then put them down. Now do the same with your left arm and right leg.

Repeat 10 times for each of the two combinations.

A WORD OF CAUTION

If any of these exercises increase pain, or cause tingling/ numbness of the limbs or back, stop immediately and consult a physician or a licensed physical therapist. In such cases, there will be some modifications made to the exercises specific to your spine's condition.

If you have any questions regarding your diagnosis, feel free to ask your doctor, and be sure to call your physical therapist.

WELL DONE!!!

Congratulations on taking the right steps to improve the health of your lower back. These were some exercises designed to put you on a track to healthy life by relieving the pain in the lower back.

About The Author

Steven L. Braverman, PT CEAS is a licensed physical therapist practicing in New York City. Mr. Braverman graduated from the physical therapy program at the State University of New York at Stony Brook in 1986.

Mr. Braverman is the founder and president of Steven L. Braverman, PT PC (RESTORE Physical Therapy) in New York City, specializing in the evaluation and treatment of orthopaedic, sports and spinal injuries. Mr. Braverman is also a Certified Ergonomic Assessment Specialist earning certification from the Back School of Atlanta.

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