

# OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Wayne Terai

## Low-Back Pain and Exercise

*Incidence of low-back pain (LBP) has increased dramatically over the past few decades. In fact, four out of five adults will experience LBP at some point in their lives.*

*As an adjunct to chiropractic care for LBP, Dr. Terai often recommends regular exercise. But what exercises are best? Read on to learn the latest news regarding LBP and exercise.*



### LBP Basics

Dr. Terai explains that LBP is typically classified as chronic or acute. While acute pain generally lasts a few days or weeks, chronic pain persists for months or longer. Chronic back pain can be progressive, or occasionally flare up and subside.

The chiropractic approach is highly effective for patients with both acute and chronic LBP. In addition to exercise recommendations, the chiropractic protocol involves searching the spine for the presence of a condition known as *vertebral subluxation*.

This common malady is characterized by areas in the spine where movement is restricted or bones (vertebrae) are slightly out of alignment. Using safe,

gentle maneuvers known as *chiropractic adjustments*, Dr. Terai realigns the vertebrae causing the condition.

### LBP Is the Body Yelling “Help”!

LBP is the body’s way of indicating that something’s amiss. Masking this critical warning with painkillers doesn’t solve the problem’s underlying cause. And worse yet, continual use of pain medication is linked to a host of side effects. Why not reconsider the use of pain-relieving drugs and schedule a chiropractic appointment?

### Winning Workout Regimen

A daily, 30-minute walk is an easy way to stay active and burn calories. However, a comprehensive workout program is superior for disability related to LBP, according to new research presented in the journal *Spine*.

As part of the experiment, researchers divided 71 LBP sufferers (36 men and 35 women) into two workout groups. Participants either walked each day or engaged in a graded workout, emphasizing stabilizing exercises. After 12 months, researchers assessed the participants’ levels of pain and disability, physical health, fear-avoidance of exercise and self-reliance.

“At 12 months, between-group comparison showed a reduction in perceived disability in favor of the exercise group, whereas such an effect for pain emerged only immediately postintervention. Ratings of physical health and self-efficacy beliefs also improved in the exercise group over the long term, though no changes were observed for fear-avoidance beliefs.”



### *Specific Exercise Plans Developed for Patients by Dr. Wayne Terai*

Now that you know the general benefits of exercise for LBP, it’s time to get specific. The same exercises aren’t right for every patient. Dr. Terai works one-on-one with patients to custom-design exercise plans addressing each individual patient’s unique condition, and provide you with specific exercises and instruction. Schedule an appointment today to discuss what exercises are right for you.

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The study's authors conclude that "a graded exercise intervention, emphasizing stabilizing exercises, for patients with recurrent LBP still at work seems more effective in improving disability and health parameters than daily walks do." (*Spine* 2009;34:221.)

### Resistance Training

Novel research shows that adding resistance training to your workout regimen wards off LBP. What exactly is "resistance training"? Simply stated, it's any exercise where muscles contract against an external resistance. It can be accomplished with weights, rubber exercise tubing, your own body weight, water bottles, etc. Resistance training amplifies strength, tone, mass and endurance.

As part of a recent analysis, researchers compared resistance training to standard aerobic exercise for musculoskeletal health, body composition, pain, disability and quality of life in patients with chronic low-back pain (CLBP). Researchers divided 27 CLBP study volunteers equally into three groups: (1) resistance training, (2) aerobic exercise or (3) a no-exercise control group. During the 16-week study, participants increased the intensity and amount of exercise.

Researchers measured each group's progress after eight weeks and again at 16 weeks. The resistance training exercisers "significantly improved" musculoskeletal fitness, pain, disability and quality of life (QOL). Conversely, the aerobic exercise group "showed no significant improvements in pain, disability, or QOL." However, aerobic exercisers exhibited more "significant improvements" in flexibility, cardiovascular stamina and leg power than

the resistance group.

"This study indicates that whole-body periodized [resistance training] can be used by training and conditioning personnel in the rehabilitation of those clients suffering with CLBP." (*J Strength Cond Res* 2009 Epub.)

This research is certainly not suggesting that patients skip their cardiovascular workout. Instead, focus on maintaining a balance between aerobic and strengthening exercises.

### Core Strengthening

Strengthening core muscles prevents LBP. Core exercises work both the abdominal and the lower-back muscles.

One large-scale analysis measured core muscle power in 1,527 LBP sufferers (739 men and 788 women) in their seventies. Participants reporting higher LBP severity during the previous year had less muscle strength in three key core muscle groups: lateral abdominals, lumbar paraspinals and rectus abdominis.

The researchers documented a "link between trunk muscle composition and history of LBP." They conclude: "Improving trunk muscle quality may lead to reduced LBP severity and improved functional status." (*J Gerontol A Biol Sci Med Sci* 2005;60:882-7.)

### Ease the Pressure

Strong abdominal and low-back muscles work to ease pressure off the spine, in turn reducing LBP. Research shows that core exercises lessen stress on the spine more than merely resting does. In one experiment, participants

first performed military presses to simulate "loading" the spine. Next, the individuals either rested or performed abdominal exercises, while the researchers measured spinal loading. The result? The abdominal exercises produced greater recovery (*Clin Biomech* 2007;22:972).



### Aquatic Exercise

Water lovers rejoice! New research — performed in Finland — shows that swimming and other types of aquatic exercise are beneficial for LBP.

After reviewing 17 years of research data, investigators selected seven clinical trials. Each study focused on LBP patients who used water workouts to combat pain and disability. To assess LBP severity, the studies looked at disability assessments, pain questionnaires, pain rating scales and the number of work days lost due to LBP.

"There was sufficient evidence to suggest that therapeutic aquatic exercise is potentially beneficial to patients suffering from chronic low back pain and pregnancy-related low back pain," write the study's authors. "There is further need for high-quality trials to substantiate the use of therapeutic aquatic exercise in a clinical setting." (*Clin Rehabil* 2009;23:3-14.)



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