Injury Management I - My Aching Lower Back

A low back injury, what an awful thought. It probably happens more than you think. How many of you have experienced low back pain? I have on several occasions, and I even train my lower back weekly. No one is oblivious to it. I'm sure we've all experienced it. Strain something while lifting or twisting. It can even occur sneezing. Each step taken generates small twitches or twinges to the injured area. Lay down and it's hard to get up. Try bowling with an injured low back…you can't bend forward or straighten up, the arm swing is restricted, and how do you get down into the finish position. It's painful!

Low back injuries have been found to be one of the most prominent medical problems in society. Across the age continuum, some 30 million Americans alone are afflicted with low back complications. In lieu of its seriousness, how many of you engage in some type of low back conditioning program? I will go out on a sturdy limb and say very few.

Design of the Spine

Let's take a moment and look at the spine. The anatomical design and positioning of the spine allows for a high degree of mobility front to back, side-to-side, and left to right. The spine runs from the base of the skull (C1) to the end of the tail bone (coccyx). The spinal column, comprised of 33 bones or vertebrae, serves to provide for your posture and is more of a central base of support for many things. The spine is a vital set of bones made up of seven cervical, 12 thoracic, and five lumbar vertebrae. As the spinal segments progress downward from the neck (cervical) region, they grow larger to accommodate for your upright posture. Each vertebra consists of a neural arch through which the spinal cord passes, and several projecting processes serve as attachments for muscles and ligaments. The low back, referred as the lumbar, is considered the foundation of the spine. The lumbar portion of the spine is composed of five vertebrae (L1-L5) and considered the major support of the low back.

BACK PAIN AND BOWLING

Back afflictions are second only to foot problems in order of incidence throughout life. Lumbar problems are the most common work-related injury we see in industrial medicine. **In sport, back problems are relatively common and most often result from congenital conditions, mechanical problems, or traumatic factors.** In bowling, the traumatic and sometimes mechanical factors are the primary causes of lumbar injuries.

The lower back is tremendously taxed while we bowl.

- It supports the body's weight.
- It enables you to maintain stability and balance throughout the approach.
- It helps you exert and resist force swinging and throwing the ball.

Over the course of several games and many days of continuous bowling, the lower back becomes fatigued, taxed, drained of energy, and downright tired. This is when injury susceptibility is greatest.

HOW IT HAPPENS

Here's how I've seen it, You are up at the counter or in the bathroom at the center - maybe the snack bar - you don't wear shoe covers or were too hurried to use them - it's your turn - rush back down to your pair - grab your ball, set and concentrate, go, then instantly STOP at the line, pulling back as a natural instinctive reaction or reflex. The back is wrenched, pulled, strained, hurt, and boy can you feel it - you don't let anyone see your pain - maybe you do, yet you still grab your ball and try to shrug it off to convert the washout you just left. Wrong move, for it only worsens the situation. At least for you it does. Sound familiar. It has happened to me. One occasion I was off my feet completely for a good 3 days.

So what do you do? Let me rephrase that. What are you planning to do if you injure your lower back while bowling? Injury Management, the title, as it says, is a plan to manage and handle the injury. A plan that is clearly defined before and after the injury occurs. If you are a bowling instructor or a coach, this should be grabbing your attention. Every instructor needs an outlined plan for the most common bowling-related injuries. If a student incurs an injury under your care, you are somewhat accountable. Legally, that hasn't been contested yet, in bowling at least, but morally and ethically you are obligated to offer some form or sort of guidance to the student. So, over the next couple months, I want to give you some rather simple injury management guidelines to follow.

LUMBAR INJURY MANAGEMENT GUIDELINES (Preventive)

Tips to Minimize Your Risk

Tip 1 - Make yourself aware of the potential problems. Don't minimize the importance of shoe covers. Get something on your shoes, and you might stick your way to a serious back problem. Be aware that your shoes are generally a primary cause of lumbar strains.

Tip 2 - Check your shoes each and every time you step onto the approach. I like to slide mine a few times forward and backward as I'm waiting to step up. Take a quick millisecond to check your shoes each time you leave and re-enter the bowler's area.

Tip 3 - Warm-up before you start bowling. It may seem silly to some of you, but the first few minutes of bowling is usually when most injuries occur. Why - due improper warm up. Some of you will probably never lay down on the floor to stretch before you bowl. Others of you have made a concerted effort to incorporate some form or warm-up prior to your bowling. Either way, just know that a good warm-up before you bowl will minimize your risk of lumbar injury.

Tip 4 - The Most Important Tip - Exercise your back weekly to prevent an injury. A person in good physical condition will generally reduce their risk of lumbar injuries. However, if your fitness level is sub par, the risk of your injury is nearly doubled, and even tripled if you bowl more frequently than average.

> Exercise has been found to be an effective means for preventing and treating low back injury enabling individuals to restore proper muscular balance and low back & hamstring flexibility.

WAYS TO IMPROVE YOUR LOWER BACK

Many sport-specific conditioning programs usually include exercise to strengthen and condition the lower back. The Bowling-Specific Training Program does just that. You can obtain your copy online at www.briggsconsulting.com.

Lumbar fitness is an important, not to be neglected ingredient, when considering any type of training whether it is for work, school, sports, or just your quality of life. Try this beginner low back exercise, and begin to take an appropriate step to minimize your risk of lumbar injury.

Low Back (Lumbar) Extensions

The low back, often referred as the lumbar spine, is one of the most easily injured parts fo the body. It is hard to strengthen, due to its awkward position on the body (can't be visually seen), and it often neglected by even the most dedicated of exercisers. The low back can only be strengthened through proper exercise dedicated to it and directed at it. In sport science, we teach the low back extension to all beginner and intermediate exercisers who want to train their lumbar spine.

I suggest performing 1-2 sets of 8-12 repetitions of lumbar extensions 3 times a week. Ly prone on the floor (face down) and place your chin in your hands (Diagram 1). Clasp the hands under the chin as a base of support; however, avoid pulling with the hands on the chin.

To begin this exercise, contract the low back and slowly raise the upper torso upward to your peak or highest point while keeping the lower abdominals and hips in contact with the floor (Diagram 2). Relax the legs and concentrate on the low back contacting and doing all the work. Hold the peak range of your motion, or your highest point possible, for 1-2 seconds, and then return to the starting position.

This exercise requires direct contraction of the quadratus lumborum (low back muscle), hip extensors, glutes, and the hamstrings, all of which support and assist the low back. In my opinion, the lumbar extension is the best exercise for those with weak low backs.

There you have it. Train you low back to avoid lumbar injuries. Next month, another injury management topic.