

THE LOW BACK LOWDOWN

ATHLETIC TRAINERS PERSPECTIVE

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The Evaluation

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The lumbar spine, or low back is a remarkably strong and resilient structure of the body. It is where vertebrae stack upon each other to form the lower portion of the spine that assists in supporting the weight of our upper bodies.

It provides the stable base needed for us to give a young child a piggy back ride and is often thought of by sport and Madden enthusiasts as the integral part of an expression meant to represent someone giving a game their all, or “putting the team on his back.” It is the foundation that makes up the core structure of the body...

If you can't tell from my long winded description, I am very fond of the back and all it does for us, which is why my colleague Thomas and I have decided to begin our new **2021 “Athletic Trainers Monthly Perspective” article series** on the low back. Throughout the year we plan to educate our readers and patients on all things low back as it is one of the top body parts we evaluate in the training room.



This first article will focus and give you an inside look of the evaluation process for low back pain (LBP). Perhaps following this brief read and feeling armed with the knowledge of what to expect during a visit with us, you'll consider setting up an appointment for your pain or discomfort. We hope you enjoy the series!



Working as an athletic trainer, I have witnessed plenty of other clinicians groan or roll their eyes at the thought of a patient reporting LBP. LBP means they will have to assess and consider the involvement of other body parts (hips, pelvis, etc) and factors to effectively treat and determine the source of pain (1). My reaction is the opposite. I marvel with an eagerness to take my crack at assisting them because while the back may be a great structure, it is also an area of the body where people experience the most pain and discomfort.

LBP, is defined as “pain localized below the 12th rib and above the gluteal folds with or without leg pain(1).” It is a well known and reported statistic that **80% of the population will experience back pain at**

some point in their lifetime and rare for a person not to experience LBP before reaching the age of 50(1,4).

In knowing how prevalent LBP is, why wouldn't I want to lend a helping hand to a suffering LBP patient? Rather than grumbling and dreading the inevitable, I might as well rise to the occasion, and feel I have done my best to do so! I have worked with the backs of athletes, middle-aged patients, and even members of my own family. While working at another university, I was the athletic trainer for the men's and women's crew teams and based on the nature of their sport, I got plenty of reps in the evaluation, care, and management of backs.

The process can be tedious, but from start to finish I've outlined what an athletic trainer will do to assist you.



The first part of the examination process is collection of the **patient history**. This is where I really dive in to understand the nature of the patient's pain. I get the who, what, when, where, and how answers pertaining to the injury. I discuss the intricacies of the sport, it's mechanics, ask for dates relating to when the pain started, if there are any radiating symptoms or constant/intermittent pain patterns, and if there are any particular positions or treatments that have been utilized to aid in subsiding the pain. That is what we can do for you! You don't have to be an athlete for us to assist in figuring out what activities of your daily life may be causing you discomfort. We will talk through everything together. Athletic trainers are experts at jogging your memory and pulling the necessary information out of you.

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OBSERVATION

The next portion of a back exam is **observation**. I observe one's posture, note if there is any abnormal curvature of the spine or distortion of the pelvis, and assess for any leg length discrepancies or gait issues (1,2). I look for inflammation, skin color changes, and even certain developed hair growth patterns (2). While the main focus may be the back, the anatomical structures above and below the affected area are all taken into consideration and observed to determine their possible involvement in the patient's dysfunction and pain.

With **palpation**, I get my hands on the patient to press and feel for any inflammation, deformity, skin temperature changes, and pain that is point tender over the injured area. Athletic trainers use their knowledge of anatomy and important anatomical landmarks, such as the spinous processes, SI joints, iliac crests, and ASIS/PSIS to determine if a condition is affecting bone or soft tissue in the low back. Years ago, while working with my crew athletes I had become so confident in collecting their injury history and palpating the vertebrae of the lumbar spine and sacrum, that I could immediately determine they were experiencing a stress reaction or fracture of the vertebrae. That is nothing to brag about, especially since these injuries would keep them out of their boats for a while, however it just goes to show how much information can be collected in these first three steps of an evaluation.

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PALPATION



RANGE OF MOTION

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Range of motion testing offers an athletic trainer information on a patient's ability to move and function. As a clinician, I often test a patient's ability to move actively (on their own volition with muscle contraction), passively (motion is clinician assisted), and resistively (motion is performed against clinician resistance) (2,3). Manual muscle testing can also be performed as it gives information on the patient's ability to withstand varying amounts of resistance within a specific muscle group (2).

Typically following ROM testing, the neurological exam, or **lower quarter screen** follows. Depending on the pain pattern described by the patient or any noticeable gait or strength abnormalities, I will perform a lower quarter screen which assesses the distribution of one's peripheral nerves. Both dermatomes (skin) and myotomes (muscles) are tested to determine the sensory and motor abilities of single spinal nerve roots (2). Lower body reflexes can also be tested, which include the patella, achilles, and hamstring deep tendons (2,3).

LOWER QUARTER SCREEN

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SPECIAL TESTS

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Special orthopedic tests wrap up the physical examination and are tests which are used to narrow down and diagnose the injury (2,3). These tests help to rule in or rule out a condition the athletic trainer may feel the patient is suffering from after having gathered all of the above pertinent information. There are many of these tests for all different parts and conditions of the body, each with their own specific name, often honoring the clinician who founded it.



If you made it to the end, I hope you have found this description of a typical low back evaluation process informative. Yes, an initial evaluation can be lengthy, but, you can see just how much care and attention must be given to more than just the low back in a LBP evaluation! This is why on our [webpage](#) we recommend scheduling a one hour appointment for all trunk and back injuries. May your anxieties be eased knowing that RecWell's athletic trainers can assist you. We will evaluate you and if needed, refer you to another medical provider if more diagnostic information is necessary.

"I PROMISE YOU, WE'VE GOT YOU"

- RecWell Athletic Trainers

References:

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3. Starkey, C., Brown, S.D., & Ryan. J. (2009). Examination of orthopedic and athletic injuries. F. A. Davis Company.
4. The McKenzie Institute International. (2014). Mechanical diagnosis and therapy: Lumbar spine.



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Alysia became RecWell's head athletic trainer with the program's inception in the Fall of 2018. To contact her with your injury questions or get in touch with any of the other athletic training staff please visit [RecWell Athletic Training](#).



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