

[IMAGE]

How to Rehab the Right Way

By Jasper Sidhu, DC

With the exception of professional athletes, few people know where to turn after suffering an injury that limits their ability to exercise, perform daily activities - or in worse-case scenarios, even move. The rehabilitation process may seem complicated, but it's actually fairly straightforward (depending on the injury) once you know the basics. Here's a little insight on how to rehab right.

A patient once told me that to really understand their pain and difficulty in getting better, all doctors should experience the same pain so they are more sensitive to what it's really like. Now that I have been undergoing rehab for several months following knee surgery late last year, I can see her point. Rehab is not simply about doing a group of exercises and getting better. It's about knowing what works, what doesn't, what you should avoid, and what you can expect with your rehab. Do you know how to rehab right? Let's review a few of the most important rehab points to remember if you're ever faced (or are currently suffering) an injury, particularly one that causes pain in the low back, the shoulder or the knee - three of the most commonly injured areas of the body.

What Is Rehab?

Rehab - Back - Copyright © Stock Photo / Register Mark Without relying too much on medical terminology, rehab essentially involves any sort of exercise or exercises that will help get you back to as normal as possible following an injury. For most people, this usually consists of basic stretching and strengthening exercises. But did you know that it also involves proprioception (balance) training, endurance exercises, and functional training (training that improves activities of daily living that may have been compromised by your injury)? Rehab also requires a step-by-step system that builds on your successes for you to get to the next level.

Successful Rehab: Six Steps to Remember

1. Control the pain naturally. To do this, some say use ice; some say use heat. Just remember one thing: If you are exercising and experience pain and swelling afterward, use ice to take the swelling down. If you feel your muscles are too stiff and painful before you start exercising, use a few minutes of heat to warm up the

area. Using ice or heat during rehab is a good way to control pain and discomfort.

2. Increase flexibility. Everyone is infatuated with stretching. However, in some cases, it may not be the most important part of your rehab. There are a few things to remember with stretching. Don't try to become the next Olympic gymnast. Overstretching is just as bad as not stretching. Also, it's not just about stretching the areas where you're experiencing problems. It's also about stretching the tight muscles around the area, because the whole area works together. If one muscle stays tight, it will just pull the other ones into getting tight again. Your doctor can help evaluate which muscles are tight and recommend appropriate stretching exercises.

3. Improve endurance. When we think of rehab, most people think of lifting more weights and getting stronger. However, in some cases, your success in rehab has more to do with doing something at *less* intensity, but improving your ability to do it over and over again. For example, building up endurance is probably one of the most important goals in the initial stages for those with back pain. Concentrate more on doing a higher repetition of exercises with frequent breaks in between, rather than trying to do one thing for a longer period of time. When we overdo it, we fatigue. When we fatigue, we start doing things the wrong way, ruining all the improvements we've made with our rehab and risking re-injury.

4. Regain balance. Regardless of whether you have ankle, knee, or low back pain, or even headaches, balance training is *very* important. You can train your body by lifting more, or by stretching until you can wrap your legs behind your head. But what happens when you get off balance and your back goes out? What happens when your knee is strong when you walk straight, but it can't handle a quick change in direction to the side? That's why balance training is just as important as any of the other rehab strategies. The basic balance progression involves doing things on stable surfaces first and then moving to unstable surfaces.

5. Develop strength. This is probably the most popular goal of all rehab programs. However, make sure you build up your strength while always staying within weight ranges that do not elicit pain. The "no pain, no gain" mentality should be abandoned. Also remember to work on balance and flexibility *with* strength, not just by itself. Most strengthening exercises begin with isometric exercises - an example is pushing your arm against a wall. Isometric exercises should always be performed in angles at which there is no pain. Once you can do the isometric exercises at all angles, then you can progress to using elastic bands, light weights, vibration platforms, and overall weight training.

6. Functional training. Remember, this just means practicing activities you did every day prior to the injury. For workers, this means practicing how to lift, or even how to sit properly if your job is sedentary. For athletes, this means practicing the movements of your sports. All too often, people forget everything they've learned and overdo it in trying to get back to where they used to be. It's a typical response because we can see the light at the end of the tunnel. Be patient! Practicing the movements repetitively with lighter loads is more important. Remember, build up endurance with *proper form* first. Functional exercises are similar to balance exercises in that you need to stress your newly rehabbed body in all directions and all positions; in so doing, you'll be confident that you can go back to your normal activities of daily life and not worry about re-injuring yourself.

Keep in mind that these are just guidelines to increase your knowledge of the various elements involved in successful rehab. Which exercises will work for you will depend on the precise injury and a comprehensive screening process by your doctor. Hopefully, you now understand some of the goals of rehabilitation and can better appreciate the steps necessary to get on the road to recovery. Remember, always consult with your doctor whenever you suffer an injury and before beginning any rehabilitation process.

Rehab Protocols for Common Problems

Low Back Injury

Examples include chronic low back pain, disc herniation, spinal stenosis, etc.

Maintain neutral curve of the low back. The neutral position is designed to reduce stresses on the spine. Learning to maintain the neutral position helps you move safely when you sit, stand, walk or lift.

Stretch the tight muscles. This doesn't only mean the low back. We are also talking about the calves, the hamstrings, the gluteals, and even the mid-back muscles. One of the most overlooked muscles is the hip flexors. However, don't overstretch. Find the muscles that have limited movement and stretch them slowly.

Build Endurance. Remember that endurance exercises are more important than strength or flexibility exercises. The most common exercises to start with are planks, side planks, pelvic bridging and quadruped exercises. Notice I did not mention crunches. The reason is simple: Crunches place more pressure on your back than is reasonably acceptable.

Rehab - Lower Back - Copyright © Stock Photo / Register Mark Most exercises are performed for about eight seconds, followed by a rest period. It has been shown that back muscles get tired very quickly. So instead of trying to hold the positions for long periods of time, hold for less time, but build up to doing more repetitions.

Increase strength. Low-back extensions are good; so is progressive weight training while keeping the back in a stable position. Examples include squats, machine pulldowns, chest presses, vibration platform exercises, etc.

Improve proprioception/balance. Good ways to improve balance include standing on one foot with the eyes open and then closed; standing on a rocker or balance board; and performing vibration platform exercises.

Functional exercises. Lifting movements such as squats and lunges are good; so are reaching and twisting movements in a controlled manner. *Note:* Avoid any forward bending at the spine! Flexion movements are to be avoided at all costs since they put unacceptable stresses on the back.

Rehab - Shoulder - Copyright © Stock Photo / Register Mark **Shoulder Injury**

Examples include impingement syndrome, rotator-cuff injury, frozen shoulder, etc.

Improve flexibility. You can accomplish this by stretching the chest (pectorals), mid-back (lats), upper neck (trapezius), and posterior shoulder. One of the most common stretches for the shoulder is the anterior shoulder stretch (placing an arm against a door and twisting your body away). *Avoid this!* It loosens the front shoulder capsule and leads to instability. Always stretch the *back* of the shoulders instead by crossing your arm across the front of your body to the other side.

Build endurance. Build up movements in pain-free ranges of motion. Wall crawls and lifting exercises using very low weights and high repetitions are good options. Always ensure you get adequate rest between each set.

Increase strength. Begin with isometric exercises, avoiding full effort but increasing repetitions. Whenever we strengthen the shoulder muscles such as the rotator cuff, always avoid using greater than 5 lbs of weight. The rotator cuff is a small muscle and more weight does *not* mean better outcomes.

Improve proprioception/balance. This is one of the most overlooked parts of shoulder rehab. You can start with push-ups against the wall, progressing to push-ups on a ball against the wall, to push-ups on the floor, to push-ups on unstable surfaces such as a rocker board, vibration platform or gym ball.

Functional exercises. Gradually build up to throwing, lifting, and reaching activities with no pain. Continue with strengthening exercises while increasing functional exercises.

Knee Injury

Examples include osteoarthritis, runner's knee, post-surgery (ACL, meniscus, etc.)

Rehab - Knee - Copyright © Stock Photo / Register Mark *Ice/heat:* Use ice if you notice any swelling during your rehab process. Heat can be used on muscles prior to initiating exercise as long as there is no swelling, and the heat helps you loosen things up so you're better able to do your exercises.

Increase flexibility. Assess and find muscles that are tight by comparing one side to the other. Muscles to stretch include the calves, hamstrings, thighs, hip flexors, outer thigh muscles, low back, and gluteals.

For post-surgery patients, regaining range of motion is the most important goal in the beginning. Again, this needs to be done in a pain-free setting, concentrating on more repetitions rather than longer periods of exercise.

Build endurance and strength. I put these two categories together because the goal of any knee rehabilitation program is to strengthen the thigh muscles around the knee joint. Quad sets are good: lying down, straightening the knee, pressing it down into the floor or table while consciously contracting the thighs. So are squats, lunges and knee extensions with light weights, concentrating on increasing repetitions rather than weight or time of contraction.

Improve proprioception/balance. Standing on one foot with eyes open and then closed is effective, progressing to standing on uneven surfaces, such as a rocker board or a vibration platform, and then to standing on one foot while catching a ball or doing upper-body movements.

Functional exercises: Good examples here include lunges, progressing from forward lunges to different angles. Side-to-side movements are also important. Essentially, the knee needs to be stressed carefully in all directions so its stability can be assessed before being discharged into normal activities.

Jasper Sidhu, DC, graduated from Canadian Memorial Chiropractic College in 1994 and opened the Downtown Injury Rehab Centre in Windsor, Ontario, incorporating vibration training into the rehabilitation part of his practice. He is vice president of clinical services for WAVE Manufacturing (www.wavexercise.com).

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