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LEVEL B EXERCISES

Level B Exercises are the next step up from your ROM and Level A Exercises. You may begin these as early as two to three weeks post-op/post-injury and continue until you have them mastered and are ready to move on to Level C. As always, I want to keep the time frame vague to allow you to progress through the program *at your knee's pace*. You should not feel held back or, for that matter, pressured to advance. Each new move is designed to rehabilitate your knee and minimize pain, not serve as an end in itself.

Here are some clues regarding readiness: Moving on to Level B assumes you are doing pretty well, and perhaps feeling a bit bored with Level A. You might not be able to perform all of the Level B exercises perfectly, but do the ones you can. With a bit more healing time, and *deliberate practice*, you will soon be doing them all with excellent form. Use one of the aerobic training programs (e.g. stationary cycling, treadmill, or elliptical) or core exercises (e.g. sit-ups) to get a good warm-up. Always end with stretching and a cool-down activity (same as your warm-up or—better yet—water exercises). Be sure to exercise BOTH legs, but do a few extra reps on the surgical/injured leg to help get your body back in balance.

One muscle quality that is left out of many recovery programs is *speed*. You should have started working on changing speed during your exercises, movement patterns, aerobic training and water exercises. It may not seem like you are moving fast, because you aren't. You certainly will not be moving at work pace or sports-competition pace, but it is the *change* in speed that you are looking for—even if it is slow, slower, and slowest! The changes in speed will prime your neuromuscular system for life challenges to come.

You should notice that these four exercises are merely variations on Level A—and that is exactly the point. They build on what you already know. Combined with your movement patterns and aerobic training programs, these moves are all your knee needs and, frankly, all it can handle at this point.

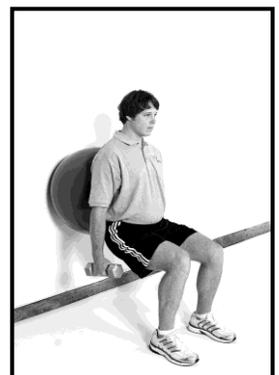
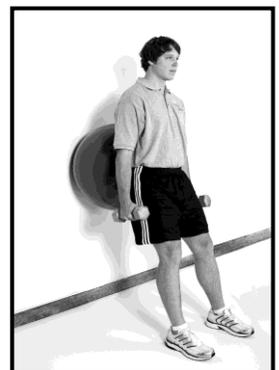
Level B - Exercise 1: Squat - Double Leg (with or without stability ball)

Purpose: To improve functional strength and balance.

Starting Position: Begin with feet shoulder-width apart. Hold a chair or other secure object as in Level A, or, if you're feeling good, add in the stability ball (aka physioball, exercise ball). This adds a new element of balance. Place your feet just in front of your hips and lean backwards thus working slightly different muscles than the standard squat. The next variation, as pictured, is adding dumbbells.

Action: Squat as if you are sitting down in a chair. Keep your lower back straight and strong. Start by just doing "quarter squats" to 45 degrees; eventually, you may go down as low as 90 degrees. Do at least 3 sets of 10 reps, twice a day.

Note: Keep weight evenly distributed on both legs. Feet remain flat on the floor. Depending on the size of the stability ball you may have to move your feet further forward than your normal squat position. Do not add in dumbbells until your form is perfect.



Level B - Exercise 2: Hamstring Bridges (Double leg)

Purpose: To strengthen hamstrings of course. No one has strong enough hamstrings. No one. Most people stretch their hamstrings and strengthen their quads, but not enough people do the opposite. The hamstrings are a friend of the ACL, so whether you're recovering from an ACL tear or you'd like to avoid one, get those hamstrings pumped.

Starting Position: Lie on your back with your heels on a chair or bench. Your hips and knees should be flexed to 90 degrees, with arms out to the side for stability.

Action: Press your heels into the chair and lift your hips until they are well off the floor. Lower your hips without touching them to the floor, and repeat. Strive for 3 sets of 10 reps, twice a day.

Note: The key to this exercise is to press the heels into the chair! You can also use a stability ball and the rolling will allow more motion in your knee. Ideally, the ball should be as tall as your thigh bone.



Level B - Exercise 3: Lateral Step-Up

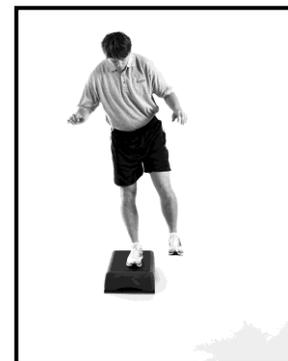
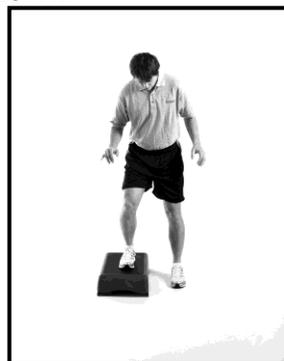
Purpose: Moving sideways is not just a part of sports, but everyday life, such as negotiating wet or icy sidewalks. Lateral step-ups combine strength, coordination (agility) and balance into one practical motion.

Starting Position: Stand next to a 3 inch box or step that is strong enough to hold your weight (most steps are 6 inches tall). As your strength increases, so should the height of the box/step.

Action:

1. Step laterally (sideways) onto the box and shift your weight completely to that leg.
2. Push down into the box, while lifting the opposite leg off the floor.
3. Stand up fully, but short of locking the knee out straight. Maintain a good co-contraction.
4. Lower your opposite foot back to the floor slowly. This is sometimes called the "eccentric" part of the exercise ("lowering the weight"). Eccentric motions are often better than "concentric" motions (lifting the weight) when it comes to gaining strength. Return to starting position. Do 2 sets of 15 reps, twice a day. Go slow!

Note: The key is to NOT push off the floor but to push on the stepping foot. Keep the weight on this stepping foot as you slowly lower yourself down.



Level B

Exercise 4: Squat – Single Leg

Purpose: To become strong and balanced, one leg at a time.

Starting Position: Begin with weight on the front leg, using a chair or the table for balance.

Action: Perform strong, slow, even squats. Start by only going down about 30° (barely bending the knee). Slowly progress deeper as you improve. Lift the back leg and lose the chair as balance improves. This is a tough exercise: 3 sets of 6 slow reps, twice a day.

Note: The squat is such an important motion in life that I put variations of it in all three exercise Levels. Single leg squats, like leg balances, should be done obsessively. That means when you are in line at the DMV, at the grocery check-out, or waiting for a train, you should do some Single Leg Squats.



Fitting Level B into Your Life

All four of these exercises are vital motions for your knee's health. In addition to your exercises and movement patterns, add different aerobic training programs over the course of the week depending on your personal choice or weather. Structure your week into hard days and easy days. For example, Monday-Wednesday-Friday can be 60- to 90-minute workouts including your ROM stretches, Level A and B exercises, movement patterns and an aerobic training activity such as treadmill walking or cycling. These activities do not have to be done in one block, but can be broken into multiple sessions. Only by you sticking to this rehab program will I be able to fulfill my promise of getting you and your knee *better* than before the injury or surgery.

Level B Sample Daily Workout Schedule

Day	Exercise	Training	Movement Patterns
Monday (Hard)	<p>Morning:</p> <ul style="list-style-type: none"> - ROM Stretches - Level A Exercises <p>Evening:</p> <ul style="list-style-type: none"> - ROM Stretches - Level B Exercises 	<p>Choose One:</p> <ul style="list-style-type: none"> - Elliptical - Cycling - Water training 	Work, hobby, or sport-specific movements at slow speed; emphasize coordinating upper and lower body movements.
Tuesday (Easy)	<p>Morning:</p> <p style="padding-left: 20px;">ROM Stretches</p> <p style="padding-left: 20px;">Slow and luxurious!</p> <p>Evening:</p> <ul style="list-style-type: none"> - ROM Stretches 	<ul style="list-style-type: none"> - Water program - Cycling - upper body exercises 	Imagery: Watch a game. Appreciate movement away from the ball. ROM stretches while doing this.
Wednesday (Hard)	<p>Morning:</p> <p style="padding-left: 20px;">ROM Stretches</p> <p style="padding-left: 20px;">Level A exercises</p> <p>Evening:</p> <p style="padding-left: 20px;">ROM Stretches</p> <p style="padding-left: 20px;">Level B exercises</p>	<ul style="list-style-type: none"> - Elliptical - Cycling - Water training 	Air tennis, air basketball, air golf, etc. can be “played” with a racket or club, but not with a ball. Happy feet.
Thursday (Easy)	<p>Morning:</p> <ul style="list-style-type: none"> - ROM Stretches - Level A Exercises <p>Evening:</p> <ul style="list-style-type: none"> - ROM Stretches 	<ul style="list-style-type: none"> - Water Training - upper body exercises 	Imagery: (20 min. of any sport) Get yourself in a passive stretch position while doing this. Close your eyes and feel it, smell it, hear it, see it.
Friday (Hard)	<p>Morning:</p> <ul style="list-style-type: none"> - ROM Stretches - Level A Exercises <p>Evening:</p> <ul style="list-style-type: none"> - ROM Stretches - Level B Exercises 	<ul style="list-style-type: none"> - Elliptical - Cycling - Water training 	Job simulation. Ball toss, shoot hoop, 7 irons, etc. but <i>easy</i> .
Saturday (Easy)	<p>Morning:</p> <ul style="list-style-type: none"> - ROM Stretches - Level B Exercises <p>Evening:</p> <ul style="list-style-type: none"> - ROM Stretches 	<ul style="list-style-type: none"> - Stretch - Upper body 	Find someone who is not competitive to play with. Any sport, 25-50% speed.
Sunday (Off!)	ROM Stretches	-Move around in water.	Watch game while doing ROM stretches.