

Here are lists of exercises that may be part of an ACL recovery program:

List 1:

Phase 1: Early Post-Operative ACL Rehabilitation (0-2 weeks):

1. **Quad Sets:** Isometric contraction of the quadriceps muscle to maintain muscle tone.
2. **Ankle Pumps:** Pointing and flexing the ankle to improve blood circulation.
3. **Heel Slides:** Slowly sliding the heel towards the buttocks while lying down to work on knee flexion.
4. **Straight Leg Raises:** Lifting the leg straight while lying down to strengthen the quadriceps.
5. **Glute Sets:** Contracting the gluteal muscles to maintain hip strength.
6. **Calf Raises:** Gentle calf muscle contractions to prevent calf weakness.
7. **Patellar Mobilization:** Gentle knee cap (patella) movements to improve mobility.
8. **Passive Knee Extension:** Assistance from a therapist to gently extend the knee.
9. **Isometric Quadriceps Contractions:** Contracting the quadriceps without moving the knee.
10. **Passive ROM Exercises:** Gentle range-of-motion exercises with the help of a therapist.

Phase 2: Intermediate ACL Rehabilitation (2-6 weeks):

1. **Mini-Squats:** Partial squats to work on knee bending and leg strength.
2. **Wall Slides:** Sliding down a wall while squatting to improve squatting mechanics.
3. **Bridging:** Lying on the back, lifting the hips off the ground to strengthen the glutes.
4. **Hamstring Curls:** Lying face down, bending the knee against resistance (with therapist assistance).
5. **Step-Ups:** Stepping onto a low platform to improve leg strength.
6. **Stationary Bike:** Gentle cycling with low resistance for knee mobility and cardiovascular fitness.
7. **Balance Exercises:** Exercises like single-leg balance to improve stability.
8. **Prone Leg Raises:** Lying face down and lifting one leg to work on hip and glute strength.
9. **Active Knee Extension:** Extending the knee actively (with therapist assistance).
10. **Terminal Knee Extension:** Working on fully extending the knee.

Phase 3: Advanced ACL Rehabilitation (6-12 weeks):

1. **Lunges:** Forward or reverse lunges to strengthen the legs.
2. **Leg Press:** Using a leg press machine to work on leg strength.
3. **Mini-Squats on Bosu Ball:** Squats on an unstable surface to challenge balance.
4. **Step-Ups (higher step):** Stepping onto a higher platform to increase leg strength.
5. **Stationary Bike (increased resistance):** Cycling with increased resistance for more strength.
6. **Wall Sit:** Holding a squat position against a wall for endurance.
7. **Clamshells:** Side-lying leg lifts to work on hip stability.
8. **Russian Twists:** Seated rotation exercises for core strength.
9. **Monster Walks:** Sideways walking with resistance bands to strengthen hips.
10. **Side Leg Raises (with ankle weight):** Lying on the side and lifting the top leg with added weight.

Phase 4: Return to Sports-Specific Training (12+ weeks):

1. **Squats (bodyweight):** Performing squats without added weight to build leg strength and stability. Focus on proper form and control.
2. **Squats with Resistance (e.g., dumbbells):** Adding resistance, such as dumbbells or a barbell, to squats to increase the intensity and challenge your leg muscles.

3. **Deadlifts (with proper form):** Engaging in deadlift exercises with correct form to strengthen the lower back, hips, and legs. It's crucial to learn proper technique to avoid injury.
4. **Box Jumps:** Jumping onto a box or platform to improve explosive leg power and landing mechanics. Start with a low box and progress to higher ones.
5. **Single-Leg Box Jumps:** Similar to box jumps, but performed on one leg to enhance balance, strength, and agility.
6. **Plyometric Drills (e.g., jumping and landing):** Incorporating various jumping and landing exercises to improve proprioception, coordination, and explosive strength.
7. **Agility Ladder Drills:** Performing quick footwork drills on an agility ladder to enhance agility, speed, and coordination.
8. **Cone Drills:** Running, weaving, and changing directions around cones to simulate sport-specific movements and improve agility.
9. **Cutting Drills (zig-zag movements):** Practicing sharp, directional changes similar to those needed in sports like soccer or basketball.
10. **Sports-Specific Drills (e.g., dribbling, passing, shooting):** Gradually reintroducing sport-specific movements and skills relevant to your chosen sport. This phase aims to bridge the gap between rehabilitation and competitive play.

Phase 5: Functional ACL Recovery (12+ weeks):

1. **Proprioception Drills (balance boards, stability discs):** Using balance boards, wobble boards, or stability discs to challenge and improve balance and proprioception (awareness of your body's position).
2. **BOSU Ball Squats:** Performing squats on a BOSU ball (half-dome stability device) to enhance balance and core stability.
3. **Single-Leg Romanian Deadlifts:** Executing a single-leg deadlift motion to improve balance, strength, and stability in the hip and hamstring muscles.
4. **Depth Jumps:** Jumping off a height and immediately jumping upward upon landing to develop explosive power and control.
5. **Agility Cone Drills (with direction changes):** Incorporating direction changes into agility cone drills to mimic sport-specific movements more accurately.
6. **Sled Pushes/Pulls:** Pushing or pulling a weighted sled to improve leg strength, power, and endurance.
7. **Medicine Ball Throws (against a wall):** Throwing a medicine ball against a wall with explosive force to build upper body strength and core stability.
8. **Cable Exercises (e.g., cable lunges):** Using cable machines to perform resistance exercises, such as cable lunges, to target specific muscle groups and functional movement patterns.
9. **Forward and Backward Running:** Incorporating backward running to enhance agility, balance, and overall leg strength.
10. **Sport-Specific Practice:** Engaging in practice sessions relevant to your sport, gradually increasing the intensity and incorporating more sport-specific movements and drills.

List 2:

Phase 1: Early Stage (0-2 weeks post-surgery or injury):

1. **Ankle Pumps:** While lying down, move your ankle up and down to improve blood circulation and prevent blood clots.
2. **Quadriceps Sets:** Tighten your thigh muscles while sitting or lying down to help activate the quadriceps muscles around your knee.

3. **Straight Leg Raises (SLR):** Lie on your back and raise your injured leg while keeping it straight. This exercise helps strengthen the quadriceps.
4. **Heel Slides:** While lying down, slide your heel towards your buttocks, bending your knee. This exercise helps improve knee flexion.
5. **Gluteal Sets:** Squeeze your buttock muscles while lying down or sitting to engage your hip muscles.
6. **Passive Knee Flexion:** A therapist or helper gently bends your knee to increase your range of motion.
7. **Passive Knee Extension:** Similar to the previous exercise but focuses on extending your knee.
8. **Patellar Mobilizations:** Gentle knee cap movements to reduce stiffness.
9. **Ankle Alphabet:** Write the alphabet with your toes to improve ankle mobility.
10. **Calf Raises (non-weight bearing):** While seated or holding onto a support, raise your heel to work your calf muscles without bearing full body weight.
11. **Seated Leg Press (machine with low resistance):** Use a leg press machine with minimal resistance to start building leg strength.

Phase 2: Intermediate Stage (2-6 weeks post-surgery or injury):

1. **Active Knee Flexion:** Bend your knee using your own muscles, increasing your range of motion.
2. **Active Knee Extension:** Straighten your knee using your own muscles, focusing on full extension.
3. **Standing Calf Raises:** Raise your heel while standing on both feet to work the calf muscles.
4. **Mini Squats:** Perform shallow squats with proper form to build leg strength.
5. **Wall Slides:** Lean against a wall and slide down while bending your knees. This exercise works on your squatting motion.
6. **Bridging:** Lie on your back, bend your knees, and lift your hips off the ground to strengthen your glutes and hamstrings.
7. **Prone Leg Lifts:** Lie on your stomach and lift your injured leg to strengthen your glutes and hamstrings.
8. **Seated Leg Raises:** Sit on a chair and raise your injured leg to strengthen the quadriceps.
9. **Step-Ups (low step):** Step up and down from a low step, gradually increasing difficulty.
10. **Stationary Bike (non-resistance):** Use a stationary bike with minimal resistance to improve knee mobility and strengthen leg muscles.
11. **Hamstring Curls (machine with low resistance):** Use a hamstring curl machine with low resistance to target your hamstring muscles.

Phase 3: Strength and Stability (6-12 weeks post-surgery or injury):

1. **Clamshells:** Lie on your side with your knees bent at a 90-degree angle. Keeping your feet together, lift your top knee as high as you can without moving your pelvis. This exercise targets the hip abductors.
2. **Side-Lying Leg Raises:** Similar to clamshells, but instead of bending your knees, keep your legs straight and lift the top leg.
3. **Lunges:** Take a step forward with one foot and bend both knees, lowering your body toward the ground. This exercise strengthens your quadriceps, hamstrings, and glutes.
4. **Single Leg Balance Exercises:** Stand on one leg with the other leg lifted off the ground. Try to maintain your balance for a set amount of time.

5. **Proprioception Drills (balance board, wobble board):** Use balance boards or wobble boards to challenge and improve your balance and proprioception (awareness of your body's position in space).
6. **Bosu Ball Exercises:** Stand or perform exercises on a Bosu ball, which is a half-sphere with a flat base. This helps improve stability and strength.
7. **Leg Press (machine with increased resistance):** Continue to use a leg press machine, but increase the resistance to challenge your leg strength further.
8. **Leg Extension (machine with increased resistance):** Similarly, use a leg extension machine with higher resistance to target your quadriceps.
9. **Step-Ups (higher step):** Perform step-ups on a higher step or platform to increase the intensity of the exercise.
10. **Wall Sits:** Hold a seated position against a wall, as if you were sitting in an invisible chair. This exercise strengthens your quads and improves endurance.
11. **Isometric Quadriceps Contractions:** Contract your quadriceps without moving your knee joint. This can be done by pressing your knee into a towel or by using resistance bands.

Phase 4: Advanced Strengthening (12+ weeks post-surgery or injury):

1. **Squats (body weight):** Perform squats without weights, focusing on proper form and control.
2. **Squats (with resistance):** Add resistance, such as dumbbells or a barbell, to your squats to increase strength.
3. **Deadlifts (light weights):** Perform deadlifts with light weights to strengthen the posterior chain, including the hamstrings and glutes.
4. **Romanian Deadlifts:** This is a variation of the deadlift that primarily targets the hamstrings and lower back.
5. **Lateral Step-Ups:** Step onto a platform from the side, working on lateral leg strength and stability.
6. **Box Jumps (low box):** Jump onto a low box and then step down. This plyometric exercise helps improve explosive leg strength.
7. **Agility Ladder Drills:** Use an agility ladder for footwork and quick directional changes, which are important for sports-specific movements.
8. **Plyometric Exercises (e.g., jumping):** Incorporate jumping exercises to enhance power and agility. This should be done with proper guidance and in a controlled manner.
9. **Single-Leg Squats:** Perform squats on one leg to challenge balance and strength.
10. **Cable Leg Raises:** Use cable machines to perform leg raises, targeting hip and thigh muscles.
11. **Leg Press (higher resistance):** Continue to increase resistance on the leg press machine for greater strength gains.
12. **Leg Extension (higher resistance):** Similar to the leg press, increase resistance on the leg extension machine.
13. **Wall Sits (with medicine ball):** Hold a wall sit while squeezing a medicine ball between your knees to add resistance.
14. **Side Planks:** Strengthen your core and hip muscles by holding a side plank position.
15. **Bosu Ball Squats:** Perform squats while standing on a Bosu ball for added instability.
16. **Resistance Band Exercises (e.g., lateral walks, monster walks):** Use resistance bands to target hip and thigh muscles, improving stability and strength.
17. **Sport-Specific Drills (e.g., running, cutting, pivoting):** Work on drills specific to your sport or activity to ensure that you can safely return to your athletic endeavors.

List 3:

Phase 1: Initial Post-Operative Phase (Weeks 1-2):

1. **Ankle Pumps:** This exercise involves gently moving your ankle up and down to improve blood circulation and reduce swelling.
2. **Quad Sets:** Tighten and contract your thigh muscles while keeping your leg straight. This exercise helps maintain muscle activation.
3. **Heel Slides:** Slowly bend and straighten your knee by sliding your heel towards your buttocks while lying down. This improves knee mobility.
4. **Passive Knee Extension:** A therapist or helper assists in gently extending your knee to regain full range of motion.
5. **Straight Leg Raises (Supine):** While lying down with your leg straight, lift your leg several inches off the ground. This exercise strengthens the quadriceps.
6. **Gluteal Sets:** Squeeze your buttock muscles to strengthen the glutes and support knee stability.
7. **Patellar Mobilizations:** Gently move the patella (kneecap) to prevent adhesions and maintain joint mobility.
8. **Active Ankle Dorsiflexion:** Move your ankle to pull your toes towards your body to maintain ankle mobility.
9. **Ankle ABCs:** Draw the alphabet with your toes to improve ankle mobility.
10. **Seated Marching:** Sit in a chair and lift your foot off the ground while marching in place. This helps improve leg strength and coordination.

Phase 2: Early Strengthening (Weeks 3-6):

1. **Mini Squats:** Perform shallow squats with proper form to start building leg strength.
2. **Wall Slides:** Slide your back down a wall into a partial squat position, working on quad strength and control.
3. **Standing Hip Abduction:** Lift your leg sideways while standing to strengthen the hip muscles.
4. **Bridging:** Lie on your back with knees bent and lift your hips off the ground to work on hip and glute strength.
5. **Short Arc Quads:** Lift your straight leg using a foam roller or a rolled-up towel as support. This strengthens the quadriceps.
6. **Terminal Knee Extensions:** Use a resistance band to work on knee extension and quad strength.
7. **Heel Raises:** Stand on your tiptoes to strengthen calf muscles.
8. **Clamshells:** Lie on your side with knees bent and open and close your legs like a clamshell to work on hip muscles.
9. **Standing Calf Raises:** Perform calf raises while standing on a step or an elevated surface.
10. **Prone Leg Raises:** Lie face down and lift your leg to strengthen your glutes and hamstrings.

Phase 3: Intermediate Strengthening (Weeks 7-12):

1. **Step-ups:** Use a stable platform or step, and step up and down with one leg at a time. This exercise helps build leg strength and balance.
2. **Lunges:** Step forward or backward with one leg, bending both knees to create a lunge. It strengthens the quadriceps, hamstrings, and glutes.
3. **Hamstring Curls:** Using a leg curl machine or resistance band, flex your knees against resistance to strengthen your hamstrings.

4. **Side Leg Raises:** Lie on your side and lift the top leg, focusing on strengthening the muscles on the side of your hip.
5. **Leg Press:** Use a leg press machine to strengthen your quadriceps, hamstrings, and glutes.
6. **Wall Sits:** Sit against a wall with your knees at a 90-degree angle. This exercise builds endurance in the thigh muscles.
7. **Swiss Ball Leg Curls:** Lie on your back with your feet on a stability ball and lift your hips while curling the ball toward your buttocks. This works on hamstring and glute strength.
8. **Bosu Ball Exercises:** Perform various balance and stability exercises on a Bosu ball, like squats and lunges, to improve core stability and leg strength.
9. **Russian Twists:** Sit on the ground with your knees bent and twist your torso to each side while holding a weight or medicine ball. This targets core muscles.
10. **Planks:** Hold a plank position to strengthen your core, which is crucial for overall stability.

Phase 4: Advanced Strengthening (Weeks 13-24):

1. **Squats:** Perform full squats with proper form to enhance leg strength.
2. **Deadlifts (with proper form):** Lift weights from the ground while maintaining a straight back and bending at the hips and knees. This exercise builds overall strength.
3. **Box Jumps:** Jump onto and off of a sturdy box or platform to improve power and agility.
4. **Lateral Cone Hops:** Jump laterally over cones or markers to enhance lateral stability and agility.
5. **Single-Leg Balance Exercises:** Stand on one leg while performing various balance drills to improve stability and proprioception.
6. **Resistance Band Work:** Utilize resistance bands for various exercises that target different muscle groups.
7. **Cable Exercises:** Perform strength training exercises using a cable machine to target specific muscle groups.
8. **Pistol Squats:** A challenging one-legged squat that improves balance and strength.
9. **Depth Jumps:** Step off an elevated surface and immediately jump upon landing. This exercise improves explosive power.
10. **Agility Ladder Drills:** Perform various footwork drills using an agility ladder to enhance speed and agility.

Phase 5: Return to Sport/Activities (Weeks 25+):

1. **Sport-Specific Drills:** Focus on exercises and drills specific to your chosen sport or activity.
2. **Plyometric Training:** Incorporate explosive, jumping exercises like box jumps and depth jumps.
3. **Agility Training:** Work on agility, quick direction changes, and cutting movements.
4. **Speed Training:** Enhance your speed and sprinting abilities.
5. **Balance and Coordination Drills:** Continue to improve balance and proprioception through challenging exercises.
6. **Functional Testing:** Undergo functional tests to assess your readiness to return to sport.
7. **Sport-Specific Skills:** Refine and practice the specific skills required for your sport or activity.
8. **Full-Body Strength and Conditioning:** Maintain a well-rounded strength and conditioning program.

9. **Game Simulation:** Participate in controlled game simulations to gradually reintroduce competitive play.
10. **Gradual Return to Competitive Play:** Slowly transition back into competitive play under the guidance of a sports therapist or trainer, ensuring that you are fully prepared.

List 4:

Phase 1: Prehabilitation (Pre-surgery or immediately post-surgery):

1. **Ankle pumps:** This exercise involves moving your ankles up and down while seated or lying down. It helps improve blood circulation and prevents ankle stiffness.
2. **Quad sets:** Contract your thigh muscles (quadriceps) and straighten your knee while keeping your leg flat on the ground. Hold for a few seconds. It's an isometric exercise to strengthen your quads.
3. **Gluteal sets:** Contract your glute muscles (buttocks) while lying on your back with your knees bent. Hold for a few seconds. This helps activate your glutes and maintain hip strength.
4. **Heel slides:** While lying down, gently slide your heel toward your buttocks, bending your knee. This exercise helps improve knee flexion.
5. **Passive knee extension:** With the help of a therapist or a strap, gently extend your knee to regain full extension.
6. **Straight leg raises:** Lie on your back and lift your straightened leg off the ground. This exercise targets your quadriceps and hip flexors.
7. **Ankle dorsiflexion:** Point your toes upward while seated or lying down. It helps maintain ankle mobility.
8. **Ankle circles:** Rotate your ankle in circles to improve ankle joint mobility.
9. **Patellar mobilizations:** Gently massage or move your kneecap to reduce stiffness and improve patellar tracking.
10. **Heel prop (while lying down):** Place a rolled-up towel or cushion under your heel while lying down to maintain knee extension.
11. **Wall slides (gentle squatting):** Stand against a wall and slide down into a squatting position while keeping your back against the wall. This exercise improves knee and hip mobility.
12. **Static hamstring contractions:** While seated or lying down, tighten your hamstring muscles without moving your leg. This helps maintain hamstring strength.

Phase 2: Early Mobility and Range of Motion (Weeks 1-2):

1. **Active-assisted knee flexion:** Sit on the edge of a chair and use your non-injured leg to assist in bending your injured knee gently.
2. **Active knee extension (prone hang):** Lie face down and let your injured leg hang off the edge of a table or bed to help regain full knee extension.
3. **Seated knee flexion with a towel:** Sit on a chair and loop a towel under your foot. Pull the towel towards you to bend your knee.
4. **Seated heel slides:** Sit on a chair with your foot on a towel. Slide your heel back and forth to improve knee flexion.
5. **Standing quad sets:** Stand and contract your quadriceps to straighten your knee while bearing weight on it.
6. **Wall calf stretches:** Stand facing a wall, lean forward with your hands on the wall, and extend the injured leg behind you to stretch your calf.
7. **Standing hip abduction:** Stand and lift your injured leg to the side while keeping it straight. This strengthens your hip muscles.

8. **Standing hip adduction:** Stand and move your injured leg across your body while keeping it straight. This exercise targets the inner thigh muscles.
9. **Mini-squats with support:** Perform shallow squats with support (e.g., holding onto a stable surface) to work on knee flexion and extension while improving balance.

Phase 3: Strengthening and Gait Training (Weeks 3-6):

1. **Step-ups (low step):** Stand in front of a step or sturdy platform. Step up onto it with your injured leg, then lower yourself back down. This exercise helps improve strength and stability in the leg.
2. **Mini squats without support:** Perform shallow squats without holding onto anything for support. This further works on your knee and hip strength.
3. **Leg press (machine):** Use a leg press machine at the gym to strengthen your quadriceps, hamstrings, and glutes. Start with low resistance and gradually increase it as you progress.
4. **Clamshells (hip abduction):** Lie on your side with your knees bent at a 90-degree angle. Lift your top knee while keeping your feet together. This exercise strengthens the hip abductors.
5. **Leg raises (side-lying):** Lie on your side with your injured leg on top. Lift your injured leg as high as comfortable, working on hip abduction strength.
6. **Bridge exercises:** Lie on your back with your knees bent and feet flat on the ground. Lift your hips off the floor, engaging your glutes and hamstrings. This exercise targets the posterior chain.
7. **Mini-lunges:** Perform small forward or reverse lunges, focusing on balance and control. Start with a short range of motion and gradually increase it.
8. **Seated leg curls (machine):** Use a leg curl machine at the gym to work on hamstring strength. Start with low resistance and increase it over time.
9. **Wall sits:** Hold a seated position against a wall for a set amount of time. This exercise builds quad and glute strength.

Phase 4: Progressive Strengthening and Balance Training (Weeks 7-12):

1. **Single-leg balance exercises:** Stand on your injured leg and work on balance by holding the position for increasing amounts of time. You can progress to doing this on an unstable surface.
2. **Step-ups (higher step):** Use a higher step or platform for step-ups to increase the challenge to your leg muscles and balance.
3. **Single-leg mini squats:** Perform single-leg squats without support, working on balance and strengthening the leg.
4. **Leg press with added resistance:** Increase the resistance on the leg press machine to continue building leg strength.
5. **Leg curls with added resistance:** Increase resistance on the leg curl machine to challenge your hamstrings.
6. **Bulgarian split squats:** Stand with one foot behind you on a bench or platform and perform squats with the other leg. This is an excellent exercise for leg strength and balance.
7. **Resistance band exercises (e.g., lateral walks):** Use resistance bands to perform exercises that target the hip abductors and adductors, improving stability.
8. **Swiss ball exercises (e.g., hamstring curls):** Lie on your back with your feet on a Swiss ball and perform hamstring curls. This challenges hamstring strength and balance.
9. **Bosu ball exercises (e.g., squats):** Perform squats on a Bosu ball to further enhance balance and stability.

Phase 5: Advanced Strengthening and Functional Activities (Weeks 13-24):

1. **Plyometric exercises (e.g., jumping drills):** Engage in jumping exercises to work on explosive leg power and proprioception.
2. **Box jumps:** Jump onto a sturdy box or platform and back down. This exercise improves power and coordination.
3. **Agility ladder drills:** Perform quick footwork drills to enhance agility and coordination.
4. **Cone drills:** Set up a series of cones and practice changing direction quickly to mimic sports-specific movements.
5. **Single-leg hops:** Hop on your injured leg to improve single-leg stability and power.
6. **Running drills (if cleared by your therapist):** Gradually reintroduce running to your routine if your healthcare provider approves.
7. **Sports-specific drills (e.g., cutting and pivoting):** Work on movements specific to your sport or activity, focusing on agility and speed.
8. **Cycling (stationary or road):** Incorporate cycling for cardiovascular fitness and leg strength.
9. **Swimming (gentle laps):** Swimming is a low-impact way to build cardiovascular endurance and maintain overall fitness.
10. **Rowing (machine):** Use a rowing machine to engage both upper and lower body muscles for a full-body workout.
11. **Yoga or Pilates for flexibility and core strength:** Incorporate yoga or Pilates to improve flexibility, balance, and core strength, which are important for overall function and injury prevention.

Remember, the timeline for progressing through these phases can vary from person to person, depending on factors like the extent of the injury, surgery, and individual progress. Always follow your physiotherapist's advice and recommendations to ensure a safe and effective ACL recovery.