ACL REHAB RESEARCH STUDY OVERVIEW

Sport Science Rehab & Performance × University of Ottawa Biomechanics Lab

Beyond the knee: understanding movement and recovery after ACL reconstruction. This research partnership explores how strength, movement patterns and whole-body biomechanics change throughout rehabilitation, with the goal of improving clinical decisions about when it may be appropriate to return to running and progress toward sport.

SAFER DECISIONS
Improve return-to-run decision-making after ACL reconstruction.

REDUCE RISK
Support safer progression into running, jumping and cutting.

UNDERSTAND MOVEMENT
Identify compensations that may persist during recovery.

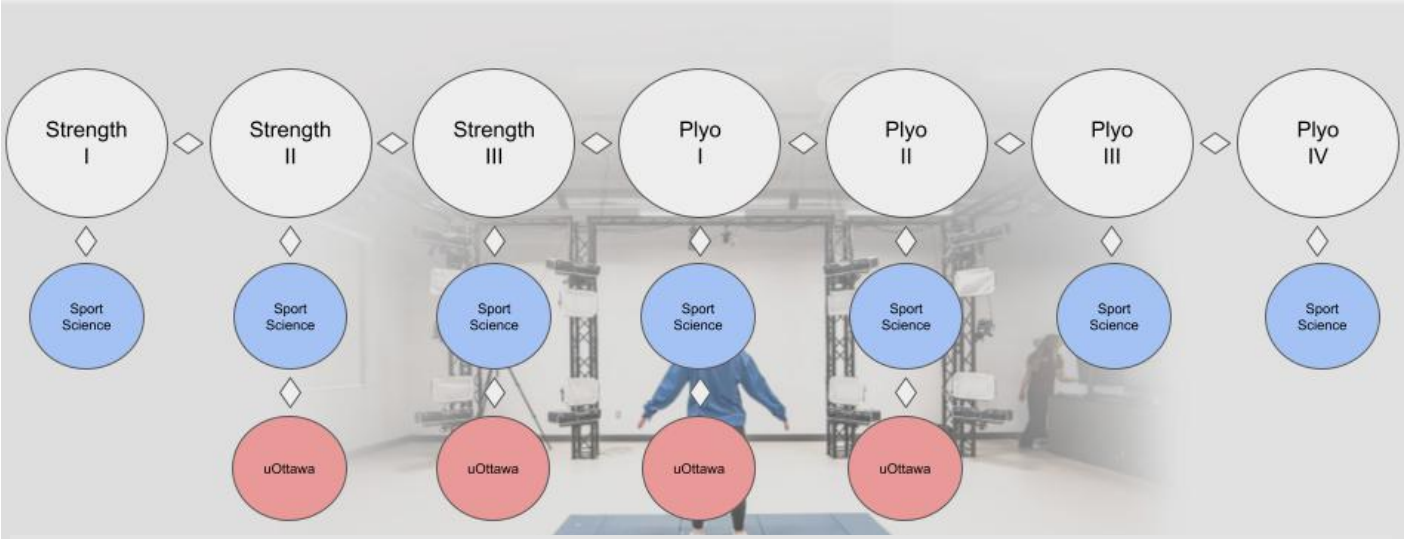
WHAT DOES THE STUDY INVOLVE?

Researchers assess how participants walk, run, squat, jump and change direction. Testing combines advanced technology and physical assessments to build a more complete picture of recovery:

- **3D motion capture** to assess movement mechanics and coordination
- **4D morphology scans** to examine thigh size and structural changes
- **Force plates** to measure how each leg produces and absorbs force
- **Strength assessments** to track physical capacity and differences between limbs

TESTING SCHEDULE

All testing to be completed at the end of each rehabilitation phase



Four planned uOttawa visits, with a possible fifth visit if an additional Strength 4 phase is needed.

WHO MAY BE ELIGIBLE?

- Assigned female at birth
- Are 15–30 years old
- Had ACL reconstruction with or without a meniscal tear
- Were physically active 2–3 times per week at the time of injury

Answering yes to all four suggests you may be eligible; the research team must confirm eligibility.

BENEFITS FOR PARTICIPANTS

- Enhanced data and decision-making criteria for Rehab and Surgical Team
- Detailed data and feedback to help understand rehabilitation progress
- Optimized exercise prescription by virtue of improved decision-making capabilities
- One month of complimentary access to the Sport Science Supervised Rehab Gym

RECOVERING FROM ACL SURGERY? HELP ADVANCE THE FUTURE OF REHABILITATION.

INTERESTED? ASK OUR FRONT DESK FOR AN INTEREST FORM.

Complete the form on the final page and return it directly to reception. With your permission, we will connect you with the University of Ottawa student researcher to discuss eligibility and arrange testing once clinically cleared.

First visit: planned for the same week as Sport Science Strength 2 testing, subject to availability.

HW Health / Sport Science Rehab & Performance

(343) 574-1788 | Info@sportsciencecanada.com | sportsciencecanada.com/research

Expression of interest is not research consent. Eligibility and participation are confirmed by the study team.

ACL RESEARCH STUDY • SPORT SCIENCE × UNIVERSITY OF OTTAWA

Your ACL Study & Rehabilitation Guide

Take part in research alongside your rehabilitation.

Sport Science is partnering with the University of Ottawa to better understand how leg strength and whole-body movement recover after ACL reconstruction. The goal is to help clinicians make more informed decisions about returning to running and progressing rehabilitation.[2][4]

Eligible participants receive:

- Free University of Ottawa study participation and study-related testing.
- One complimentary month at the Sport Science Supervised Rehab Gym.
- Additional movement information to help your team understand rehabilitation progress.[2][4]

What is included?

- Four planned uOttawa visits at Strength 2, Strength 3, Plyo 1 and Plyo 2 exit; a possible fifth visit if an additional Strength 4 phase is needed.
- **A closer look at movement:** body measurements, questionnaires and movement testing, with walking, jogging, jumping and more demanding tasks introduced across the study visits.[3]
- **Information to support your rehabilitation:** additional data and feedback may help your clinical team identify progress and areas needing attention.[2][4]
- **Supervised gym access:** one free month to use rehabilitation equipment and receive coach support while following your prescribed program.[2][4]

Could you be eligible?

The preliminary screen covers people **assigned female at birth, aged 15–30**, who were regularly physically active before injury and are following the Sport Science ACL rehabilitation protocol.[2][4] **An associated meniscal injury or meniscus repair is permitted.** The research team confirms full eligibility.

You can connect with the clinic with a **suspected or confirmed ACL injury—you do not need a surgery date**. The team can plan your rehabilitation, check study eligibility and explain when participation could begin.

While you are under the care of your physiotherapist and rehabilitation team, all University of Ottawa study participation is free. Regular physiotherapy and rehabilitation fees, and gym membership beyond the complimentary month, are separate. Participation does not guarantee faster recovery or earlier clearance.

Interested? Complete the interest form on the final page.

Return it directly to our front desk. With your permission, we will connect you with Lucie Courtois, the University of Ottawa student researcher, who will email you from lcour081@uottawa.ca to discuss eligibility and arrange your first study visit. The first visit is planned for the same week as Strength 2 testing, once clinically cleared and subject to availability.

Your uOttawa study contact: Lucie Courtois | lcour081@uottawa.ca

Clinic: (343) 574-1788 | Info@sportsciencecanada.com

YOUR REHABILITATION SUPPORT

A team around you.

Individualized care, from your first assessment into the gym

The five pillars of your care

- **Integrated:** Your physiotherapist, rehabilitation and performance team work together, with other specialists involved as needed.[1][2]
- **Individualized:** Your goals, surgery, associated injuries and response to rehabilitation shape your program.[1][2]
- **Criteria-based:** Clinical assessment and objective testing guide progression—not time after surgery alone.[1][2]
- **Research-informed:** Current evidence and ongoing review inform your care.[1][2]
- **Professional-grade resources:** Specialized equipment, testing technology and coaching support your program.[1][2]

Explore the overall Sport Science ACL rehabilitation program

Before your surgery

The preoperative goals are to restore knee range of motion, balance and joint-position awareness (proprioception), stability and strength, helping prepare you for postoperative rehabilitation. Bring available imaging reports, specialist information and rehabilitation instructions.

After your operation

First postoperative visit: typically **day 4–5 after surgery**.
Bring: your **surgical note and surgeon's rehabilitation parameters**, including any restrictions for a meniscus repair or other procedure.
Initial schedule: approximately **two rehabilitation sessions per week for the first 4–6 weeks**, adjusted to your recovery and surgical requirements.

Ready for the gym-based Strength 1 program?

Your physiotherapist reviews these early-stage milestones:

- Full knee extension—straightening your knee.
- Full or near-full knee flexion—bending your knee.
- Walking without crutches with a normal gait.
- Good quadriceps control during an active straight-leg raise, walking and mini-squats.
- Progressing towards descending stairs with control.

Your team considers these milestones alongside your surgeon's parameters and any associated injury or repair. Your individualized exercise plan, coaching and clinical reviews continue as gym training progresses.[2]

YOUR REHABILITATION ROADMAP

Your recovery roadmap

Clinical care continues throughout; research adds four planned visits and a possible fifth.

Progression is individualized. Stages can overlap, and return to jogging, running and controlled sport skills is guided by your team—not a fixed calendar.[1][2]

STAGE	FOCUS + NEXT-STEP REVIEW	TESTING CHECKPOINT
01 Injury assessment / prehab	Restore knee movement, balance, stability and strength; plan the next steps.	Sport Science clinical assessment
02 Immediate postoperative care	Healing, knee motion, quadriceps activation and walking. Review the Strength 1 entry milestones.	Physiotherapy review before gym integration
03 Strength 1	Build gym-based strength, balance and movement control. Review readiness for further strength loading.	Sport Science phase-exit testing
04 Strength 2	Progress leg and trunk strength and movement control. Review next loading and running-related goals.	Sport Science testing + uOttawa planned visit 1 • about 30 min [3]
05 Strength 3	Build strength and single-leg capacity. Review readiness for more demanding jumping and landing work.	Sport Science testing + uOttawa planned visit 2 • about 45 min [3]
OPTIONAL Strength 4—if needed	Additional strength development before Plyo 1 when your team identifies a need. Repeat Strength 3 assessments to review progress and readiness for jumping and landing work.	Repeat Sport Science Strength 3 testing + repeat uOttawa Strength 3 study testing—an additional university visit.
06 Plyo 1	Develop jumping, landing, braking and running capacity. Review balance, landing, strength and power.	Sport Science testing + uOttawa planned visit 3 • about 60 min [3]
07 Plyo 2	Progress power, hopping, multidirectional movement and faster running. Review the next sport-specific demands.	Sport Science testing + uOttawa planned visit 4 • about 75 min [3]
08 Sport skills / practice	Progress controlled skills, change of direction and non-contact practice; add contact and reactive drills as appropriate.	Sport Science testing + team review
09 Return to sport / competition	Build practice exposure towards games and competition, with ongoing strength and performance work.	Individual return-to-sport review

The Strength 1 entry milestones are in the rehabilitation-support section. Later next-step reviews describe reassessment focus, not additional numerical pass thresholds. Your individual program sets detailed targets.

Four uOttawa visits are planned at Strength 2, Strength 3, Plyo 1 and Plyo 2 exit. If an additional Strength 4 phase is needed, Sport Science and uOttawa repeat the Strength 3 assessments, bringing the total to five university visits.

YOUR RESEARCH VISITS

A closer look at your movement.

What to expect at the University of Ottawa

Four planned uOttawa visits, with a possible fifth visit if an additional Strength 4 phase is needed. Measurements track change; movement tasks become more demanding at later stages.[3]

1 | Strength 2 exit · About 30 minutes

Consent and initial forms; questionnaires; body-composition measurements; standing-position and knee-movement assessments; treadmill walking and jogging.[3]

2 | Strength 3 exit · About 45 minutes

Repeat questionnaires and measurements; standing-position assessment; two-leg jumping, kettlebell swings and repeated squats; treadmill walking and jogging.[3]

3 | Plyo 1 exit · About 60 minutes

Repeat questionnaires and measurements; two-leg jumps with and without arm movement, single-leg jumps, kettlebell swings and squats; treadmill walking, jogging and running.[3]

4 | Plyo 2 exit · About 75 minutes

Repeat questionnaires and measurements; jumping, hopping, a 180-degree change-of-direction task, kettlebell swings and squats; treadmill walking, jogging, running and sprinting.[3]

“Plyo” means plyometrics: jumping, landing and related power exercises. Your team coordinates the research appointments with your rehabilitation milestones.

How does the information help?

The research examines links between lower-limb deficits and whole-body movement after ACL reconstruction. It aims to improve return-to-running decisions and identify movement compensations.[2][4] University testing adds information; your treating team continues to guide rehabilitation progression.

Your complimentary gym month

At the Sport Science Supervised Rehab Gym, you follow your individualized exercise program while a coach provides equipment setup, technique cues and feedback.[2] The clinic can explain when your complimentary month begins and the membership options after that month.

Explore the research study

YOUR TESTING LOCATION + FIRST APPOINTMENT

University of Ottawa Biomechanics Lab

Faculty of Health Sciences building, 200 Lees Avenue, Ottawa

The study team will provide room and arrival instructions. We aim to schedule your first visit during the same week as Sport Science Strength 2 testing, once clinically cleared.

Optional Strength 4 visit: repeat the Strength 3 assessments at Sport Science and uOttawa.

REGISTRATION + FREQUENTLY ASKED QUESTIONS

Ready to learn more?

Ask questions first. Decide when you have the information you need.

How to express interest and arrange testing

Complete an interest form and return it directly to our front desk.

Use the form on the final page, or ask reception for a copy. With your permission, the clinic will share your referral details with Lucie Courtois, the University of Ottawa student researcher. Expect an email from lcour081@uottawa.ca about eligibility and scheduling.

Your first visit is planned for the same week as Strength 2 testing, subject to clinical clearance and availability. The study team confirms eligibility and obtains separate research consent before testing. Expressing interest does not enrol you.

Is all rehabilitation free?

No. While under the care of your physiotherapist and rehabilitation team, all University of Ottawa study participation and study-related testing are free. Research participants also receive one free month of supervised rehab-gym membership. Physiotherapy, regular rehabilitation services and ongoing gym membership are separate.

What if I had a meniscus repair?

An associated meniscal injury or meniscus repair is permitted. Bring the surgical note and your surgeon’s parameters so the team can account for the procedure when planning rehabilitation and testing. Overall study eligibility still needs to be confirmed.

Does study testing clear me for sport?

No single research appointment determines clearance. Your rehabilitation team considers clinical recovery, objective testing, movement quality and the demands of your activity when planning progression.[2] Participation does not guarantee an earlier return.

Can I change my mind?

Yes. Research participation is voluntary. You can withdraw without giving a reason and without affecting your existing entitlement to clinical care. The consent process explains privacy, data use and any limits on removing data already collected.[5]

What if I am under 18 or not eligible?

For participants under 18, the team explains consent arrangements for your circumstances.[5] You can still receive rehabilitation if you are not eligible for the research or choose not to take part.

343-574-1788 · info@sportsciencecanada.com

ACL rehabilitation

Research study details

Source markers: [1] Sport Science ACL clinic webpage; [2] clinic ACL information pack, April 2026; [3] ACL study task list; [4] study webpage; [5] TCPS 2 consent guidance. Eligibility, fees and early-care details incorporate clinic updates supplied October 23, 2026.

Draft for study-team review. This guide does not replace the study information, consent form or your individualized rehabilitation plan.

ACL Research Study - Expression of Interest

HW Health / Sport Science Rehab & Performance x University of Ottawa

Interest and permission to be contacted only - not research consent. This form does not enrol you, confirm eligibility or clear you for testing. Participation is optional and does not affect access to clinical care.

Four planned uOttawa visits, with a possible fifth visit if an additional Strength 4 phase is needed.

1. Your contact information

Name: _____

Phone: _____ Email: _____

Preferred contact: [ ] Phone [ ] Email Best time to reach you: _____

Optional parent/guardian contact, if appropriate: _____

2. Where are you in your ACL rehab?

Tick ONE box: choose the furthest stage you have reached. This helps us plan when to contact you about your first University of Ottawa visit.

[ ] **Before surgery (pre-op):** I have not had my ACL surgery yet.

[ ] **Early rehab after surgery:** I am working with my physiotherapist and have not started the gym-based rehab program.

[ ] **Gym-based rehab:** I have started the gym program but have not completed Strength 1 testing.

[ ] **Strength 1 testing completed:** I have completed Strength 1 testing, or progressed beyond this stage.

[ ] **I am not sure:** please check with my rehabilitation team.

Your first university visit is planned for the same week as Strength 2 testing, once clinically cleared and subject to eligibility, research consent and appointment availability.

3. Preliminary eligibility - check one per statement

To the best of my knowledge:	Yes / No / Unsure
I was assigned female at birth.	[ ] Yes [ ] No [ ] Unsure
I am 15-30 years old.	[ ] Yes [ ] No [ ] Unsure
I have undergone ACL reconstruction. A meniscal tear or repair is permitted.	[ ] Yes [ ] No [ ] Unsure
I was physically active 2-3 times per week before injury.	[ ] Yes [ ] No [ ] Unsure
I am following the Sport Science ACL rehabilitation protocol.	[ ] Yes [ ] No [ ] Unsure

The study team confirms full eligibility. You may express interest before surgery or clinical clearance.

4. Interest and permission to share this referral

[ ] I am interested in learning more about the ACL research study.

[ ] I authorize HW Health / Sport Science Rehab & Performance to securely share this form, my clinical-clearance status and my Strength 2 testing date with the University of Ottawa ACL study team. I give that team permission to contact me about eligibility and scheduling. This does not authorize sharing my full clinical record.

Name: _____ Signature: _____ Date: _____

You may decline participation or ask the clinic/study team to stop recruitment contact. The study team will explain the separate research consent process, including arrangements for participants under 18, before testing.

Your uOttawa study contact: Lucie Courtois, student researcher
Expect an email from lcour081@uottawa.ca about eligibility and scheduling.

Testing location: University of Ottawa Biomechanics Lab, Faculty of Health Sciences building, 200 Lees Avenue, Ottawa. Room and arrival instructions will be provided.

Return directly to front-desk staff - do not leave on a public sign-up list.
(343) 574-1788 | Info@sportsciencecanada.com
DRAFT - study-team review of recruitment/privacy procedures required before use.