

Anterior cruciate ligament reconstruction (ACLR) – middle phase rehabilitation

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What is the middle phase of ACLR rehabilitation?

The middle phase of ACLR rehabilitation is 3-6 months post-surgery.

In this middle phase, it is crucial you complete regular exercise at least twice a week to continue to increase the strength and control of your operated knee.

Following your final session in the ACLR early rehabilitation class, you should now be able to:

- fully bend and straighten the operated knee
- be able to jog for 5 minutes on a treadmill.

An assessment will have been completed to test the strength and balance of your operated knee, and you will also have been asked to complete a questionnaire on your progress so far.

If you are aiming to return to high-intensity or demanding sports that require jumping, pivoting and changing direction on your affected knee, you will have been booked onto the ACLR rehabilitation late class about six months post-surgery. This class will allow you to get ready to return to sport. If your goals do not include these activities, you do not need to attend the ACLR rehabilitation late class.

Middle phase exercise programme

This exercise programme has been designed to progress and optimise the strength and control of your operated knee. It should be performed on a minimum of two non-consecutive days each week

Aerobic exercise

Running

- Start with 5 minutes running on a treadmill/outdoors.
- Progress this by 1 minute each week, but maintain the same running speed (one of the ACLR class physiotherapists will guide you on an advisable running speed.)

What pain is OK?

- General muscle soreness
- Slight joint discomfort after a workout or the next day, that is gone in 24 hours
- Slight stiffness at the beginning of a run or walk, that disappears after the first 10 minutes.

What pain is not OK?

- Pain that is keeping you awake at night.
- Pain that you experience at the beginning of the run/walk, and that gets worse as you continue.
- Pain that changes your stride.

Static bicycle/Cross-trainer

You may also want to complete low-impact aerobic exercise on a static bicycle or cross-trainer (moderate intensity, 5-30 minutes).

Resistance training

It is important to strengthen the surrounding muscles of both knees to get the best results from the surgery.

These muscles include the quadriceps, hamstrings and gluteals, which all have significant roles in the functioning of the knee.

It is important to progressively add external weight/load to each exercise. It is recommended that a 2-10% increase in load should be applied when you can comfortably perform a particular exercise for 1-2 repetitions more than the targeted number on two consecutive training sessions.

Volume: Aim to complete 2-3 sets of 8-12 repetitions.

Rest Period: 1-2 minutes between sets.

Dynamic lunges



Stand with both feet together.

- Take a stride forwards with the operated knee. As the foot of the operated knee impacts the floor, bend both knees to 90 degrees.
- Repeat the same exercise but leading with the opposite leg.
- Add hand weights to increase difficulty.

Single leg squat



- Stand on the operated knee and look straight ahead.
- Bend the knee slowly, aiming for 90 degrees, counting for four seconds going down, and two seconds for coming back up.
- Repeat the same exercise but stand on the opposite leg.
- Add a hand weight held into the chest to increase difficulty.

Two-legged Bosu squats



- Stand on a Bosu ball with your feet shoulder width apart and slightly turned out.
- Complete a squat aiming for both knees to bend to 90 degrees. Count for four seconds going down, coming back up for two seconds.
- Add a hand weight held into the chest to increase difficulty.

Single leg press



Sit on a leg press machine.

- Line up the foot of your operated leg with your chest on the platform and push back through your heels without locking your knee.
- Slowly lower the platform until your knee is at 90 degrees.
- Repeat the same exercise with the other leg.

Single leg Romanian deadlifts



- Hold a hand weight/bar in front of you at hip level. Shoulders should be back and the standing leg slightly bent.
- Slowly lower the weight, keeping it close to your body.
- Your trunk should come down at the same pace as the other extended leg comes up so they are in line with your spine.
- Lower the weight until you can feel your hamstrings tightening.
- Repeat the same exercise with the other leg.

Single leg hamstring curls



- On a seated hamstring curl machine, rest one of your legs on top of the curling pad with the other off to the side.
- While keeping your upper body still, squeeze the hamstrings to curl the pad as far down as possible, counting for 2 seconds, then return the pad slowly, counting for 4 seconds.
- Repeat the same exercise with the other leg.

Step-ups with opposite leg follow-through



- Place the foot of your affected leg on a step/box.
- Extend the knee and hip to step up onto the step. Follow through with the other leg, bringing your hip up to 90 degrees. Hold for 3 seconds and then step back down with the unaffected leg, slowly lowering through the affected knee.
- Repeat this exercise with the other leg.
- Add hand weights or a weighted bar and/or increase the height of the step to increase difficulty.

Gym ball curls



- Complete a bridge on a gym ball with both feet resting on the ball.
- Bend both knees to move the ball towards you and then return to the start at a steady pace.
- Complete on legs separately to increase difficulty.

Training diary (record and track your progress)

	Date	Date	Date
	Time/weight/ sets and reps	Time/weight/ sets and reps	Time/weight/ sets and reps
Running/ bicycle/ cross-trainer			
Dynamic lunges			
Single leg squat			
Two legged Bosu squats			
Single leg press			
Single leg Romanian deadlifts			
Single leg hamstring curls			
Step-ups			
Gym ball curls			

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Single leg press			
Single leg Romanian deadlifts			
Single leg hamstring curls			
Step-ups			
Gym ball curls			

What happens after the middle phase of rehabilitation?

We expect that you will now be able to run for 10 consecutive minutes. On your first session in the ACLR rehabilitation late class, you will be assessed for strength, balance, power and landing ability. Your goals of rehabilitation will be explored.

The ACLR rehabilitation late class is to get you ready to return to sport. The late phase of rehabilitation includes exercises to build your strength, power, impact tolerance, change of direction and agility.

On your final session in the ACLR rehabilitation late class, you will be re-assessed to make sure you are ready to return to the sports you are aiming to complete.

Contact us

If you have any questions or concerns during the middle phase of rehabilitation, please contact the physiotherapy department, **t:** 020 7188 5094 (option 3) Monday to Friday, 8am-5.30pm. Please ask for a call back from the ACLR class physiotherapists.

You can email the physiotherapy department, **e:** gst-tr.physioadmin@nhs.net. Please put "FAO ACLR class physiotherapists" in the subject line.

We aim to get back to you as soon as possible and if deemed necessary, a formal review can be organised.

For more information leaflets on conditions, treatments and services offered at our hospitals, please visit **w:** www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748, Monday to Friday, 9am-5pm

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints)

e: complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

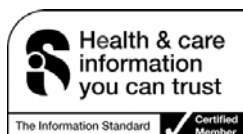
t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

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t: 0800 731 0319 **e:** members@gstt.nhs.uk

w: www.guysandstthomas.nhs.uk/membership



Leaflet number: 4674/VER1

Date published: December 2018

Review date: December 2021

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A list of sources is available on request