

Anterior Cruciate Ligament (ACL) Reconstruction Protocol

Your Logo

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branded knee protocol &
information leaflet packages

ACL REHAB - PHASE 1

Goals:

- Control pain and effusion
- Terminal extension ASAP
- Preserve patellofemoral mobility
- Aim for 130° flexion within 6/52
- Normal gait and movement patterns

Earliest timeframes:

Driving: left knee 2/52, right knee 6/52,
Breaststroke swimming 12/52
Return to full contact sports 6 months

Immediately post-op (O/P physio arranged for 1/52)

- Swelling management (Cryocuff/elevation/optimal loading).
- **NB:** cryotherapy only influences pain, not effusion.
- Gentle active-assisted knee flexion and extension.
- Patella mobilisation (superior/inferior, medial/lateral).
- TAQ's, SLR. Remove cricket splint once able to SLR.
- WBAT: use EC's until able to walk without a limp.
- Monitor for evidence of distal neurovascular deficit and infection.

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Strength:

- Consider electrostimulation if patient unable to voluntary contract quadriceps.
- CKC (e.g. leg press, squats, step ups) **between 0-60°** with no more than body weight.
- OKC knee extension (90-45°) **without weight** for HS-graft, **with weight** for BPTB from **week 4**.
- Increase OKC extension by 10° each week from week 5 (i.e. 90-0° by week 8)
- Concentric and eccentric training of the gluteal, hamstrings and calf muscles.
- Monitor for increasing temperature, effusion or pain; if required consider NSAIDs.

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Neuromuscular training:

- Double legged proprioceptive ex's (e.g. Bosu balance forwards and backwards).
- Increase difficulty by adding perturbation, progressing to single leg once FWB.
- Correct alignment of trunk and lower limb during exercises and gait.

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Cycling:

- Static bike with no resistance once able to fully rotate on pedals.

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Criteria for progressing to Phase 2:

- Closed wound
- No pain with Phase 1 exercises
- Minimal synovitis/effusion
- Normal patellofemoral mobility, tibiofemoral ROM 0-120°
- Voluntary quadriceps contraction
- Normal gait and correct movement patterns with exercises.

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ACL REHAB - PHASE 2

Goals:

- Maintain patellofemoral and tibiofemoral FROM
- Increase strength
- Increase difficulty of neuromuscular and perturbation training
- Maintain good quality movement patterns
- Start jogging and sports specific training

Strength:

- Start CKC exercises through FROM and add weight from **week 8**, progress to one legged ex's ☐
- OKC ex's through FROM **without weight** for HS-graft, **with weight** for BPTB from **week 8**. ☐
- Add weight/resistance to OKC for HS-graft from **week 12** ☐
- Increase load on the gluteal, hamstrings and calf muscles. ☐
- Decrease repetitions and increase resistance for all strength exercises. ☐

Neuromuscular training:

- Increase difficulty of proprioceptive ex's (e.g. Bosu balance sideways). ☐
- Increase intensity of perturbation, progressing to single leg once FWB. ☐
- Correct alignment of trunk and lower limb during exercises, walking and jogging. ☐

Cycling and ambulation:

- Outdoor cycling ☐
- Cyclic exercises (e.g. cross trainer or rower) ☐
- Start jogging in **week 10-12** if competent and no increase in pain, effusion or temperature ☐
- Increase cardiovascular training (mainly aerobic) ☐
- Start sports specific agility work ☐

Criteria for progressing to Phase 3:

- Correct qualitative performance of phase 2 exercises ☐
- Limb symmetry index (LSI) >80% for quads and hamstrings strength ☐
- LSI >80% for hop battery tests ☐
- Patient questionnaires will be automatically emailed to patient ☐

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ACL REHAB - PHASE 3

Goals:

- Return to sport or physically demanding work

Strength:

- Intensify sports specific strength training

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Neuromuscular training:

- Increase difficulty of neuromuscular and perturbation training with single legged jumps and emphasis on sports specific movements
- Maintain quality of movement/performance during strength and sports exercises

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Cycling and ambulation:

- Increase cycling or jogging intensity and duration
- Build sports specific load regarding energy expenditure (aerobic, anaerobic)
- Build sports specific load regarding surface (grass, court etc)

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Sports Specific Training

- Increase intensity of agility training
- Restart training with patient's team

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Criteria for returning to play:

- No knee pain with sports specific activities
- No giving way or fear of giving way during sports specific activities
- Active dynamic gait pattern and symmetrical jogging pattern
- Correct quality of performance with all sports specific activities
- Limb symmetry index (LSI) >90% for quads and hamstrings strength
- LSI >90% for hop battery tests
- Drop test with analysis of movement (trunk, knee valgus and knee flexion when landing)
- Use ACL-RSI to measure patient's psychological readiness/confidence in return to sports
- Minimal 6 months since surgery

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Returning to sports >9 months post-op, and ensuring the patient has completed the return to sport criteria significantly reduces knee re-injury rate.

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