



ACL HEALING RESPONSE PROTOCOL

The ACL healing response procedure is a surgical technique that may be performed on skeletally immature patients with an ACL-injured unstable knee. Multiple holes are made in the bone at the origin of the disrupted ligament. The stump of the ligament is also perforated multiple times over its entire length to aid blood clot invasion. The disrupted end of the ligament is manipulated into the correct anatomical location with a probe but no fixation device is used. The marrow clot surrounds the end of the ligament and holds it in place. This technique may restore stability to the knee without violating the growth plate.

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

- Cricket splint applied in theatre
- Swelling management (Cryocuff)
- Gentle passive knee flexion and extension
- TAQ's, SLR
- Patella mobilisation (superior/inferior, medial/lateral)
- Crutch assisted walking, gradually increasing WB over the next 6 weeks.

2-6 weeks post-op

- Progress to active-assisted ROM
- Low resistance CKC work (small knee bends, bridging, heel raises, leg press)
- Double legged proprioceptive exercises (balance mat, wobble board).

At 6 weeks post-op

- Change from cricket splint to ACL brace (order from orthotics). ACL brace to be worn at all times and removed at 6 weeks for ADL's (continue to use during sporting activities).
- Discard crutches
- Start static bike.

6-12 weeks post-op

- Increase strength exercises to include eccentric loading (side dips, step downs etc)
- Start single leg proprioceptive exercises
- Start gentle OKC exercises (limit knee extension to 40-90°, avoid patellofemoral pain)
- Transfer to ACL rehab class.

3 - 6 months post-op

- Start sport specific exercises (agility, strength, plyometrics) – start ACL advanced class once top level ACLR exercises completed comfortably.

6 months + post -op

- Earliest return to full activity
- ACL brace to be used during athletic activities through at least the first year post-op to further protect the maturing healing site.

References:

Steadman, J.R. et al (2006) A Minimally Invasive Technique ("Healing Response") to Treat Proximal ACL Injuries in Skeletally Immature Athletes, The Journal of Knee Surgery. Vol 19 (1), pp 8-13.

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