

Contralateral ACL rupture is More Common than ACL Graft Rupture in Australian Netballers after ACL Reconstruction

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Introduction:

Netball is the most popular team sport for females in Australia, and involves over 20 million players worldwide. Despite being a non-contact sport, knee injuries are common, accounting for the majority (42%) of injury insurance claims in Australian netballers.

Despite netballs popularity netball, and the high prevalence of ACL injuries in this population, there is a lack of long-term evidence regarding the rate of reinjury to the ACL graft or CACL after ACL reconstruction in this sport.

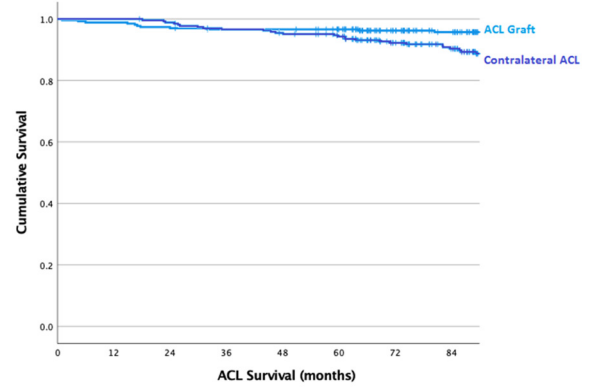
The aim of this study was to determine Anterior Cruciate Ligament (ACL) graft and contralateral ACL (CACL) survival in patients who have undergone ACL reconstruction (ACLR) with hamstring autograft following netball injuries, and determine factors associated with repeat ACL injury and return to netball.

Methods:

From a prospectively collected database, a consecutive series of 332 female netballers who underwent primary ACLRs using hamstring autografts were identified. Subjects were surveyed at a minimum of five years following reconstruction, including details of further ACL injuries to either knee, return to netball or other sports and psychological readiness with the ACL-RSI score.

Results:

264 participants (80%) were reviewed at the mean follow up of 9 years (60-180 months). There were 12 ACL graft ruptures (5%) and 35 contralateral ACL ruptures (13%). ACL graft survival was 97% and 97%, 96% at 2, 5 and 7 years respectively. CACL survival was 99%, 94%, and 90% at 2, 5 and 7 years respectively. The 7-year ACL graft survival was 97% in those 25 or more and 93% in those



under 25 years ($p=0.126$). The 7-year CACL survival was 93% in those 25 or more and 85% in those under 25 years (HR 2.6, 95%CI 1.3-5.0, $p=0.007$). A family history of ACL injury was reported by 32% of participants. A return to netball was reported by 61% of participants. The mean ACL-RSI score was 65 in those who returned to netball and 37 in those who did not ($p=0.001$).

Conclusions:

ACLR with hamstring autografts is a reliable procedure for netballers with a survival rate of 96% at 7 years, allowing 63% of participants to return to netball. Adolescent netballers had a one in three chance of repeat ACL injury following ACLR. Contralateral ACL injury occurred with more than double the frequency of ACL graft rupture in netballers, and was increased by 2.6x in those <25 years. The results of this study indicate that further efforts are required to reduce the risk of reinjury in younger populations who are returning back to netball.

This study was supported by



	All Ages n=267	Age 20 or less n=55	Age >20 n=212	P
ACL graft Rupture	11 (4%)	5 (9%)	6 (3%)	0.037
Contralateral ACL Rupture	27 (10%)	13 (24%)	14 (7%)	0.001
Any further ACL injury	37 (14%)	17 (31%)	20 (9%)	0.001