



## **ESWT to enhance healing after ACL reconstruction of the knee**

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### Introduction

ACL reconstruction of the knee is one of the most common operations in sports medicine. The most common autografts used are the hamstring grafts and the bone-tendon-bone grafts although quadriceps tendon graft is gaining popularity. One of the negative points for hamstring grafts is the slow healing at the tendon bone interface with tunnel widening and cyclops lesions. Biological augmentation of graft healing has been done using growth factors, biomaterials, stem cells, gene therapy, platelet-rich plasma, and bone substitutes.

### Material & Methods

Wang et al in studied the effect of ESWT in the healing of tendons in bone tunnels in rabbits and dogs and showed tendon healing and neovascularization. These results were published in three papers between 2002 and 2005. In 2014, Wang et al concluded from a RCT that ESWT improves ACL reconstruction. They also showed that tibial tunnel enlargement was significantly reduced after ESWT.

### Results

In 2022, a similar study was done using radial pulse waves on hamstring ACL grafts. Although sample size was small and the follow-up was not very long, they concluded that radial pressure waves improved graft incorporation.

### Discussion

I have started using ESWT in patients who have pain and tenderness at the tibial and femoral tunnels after 3 months. There is growing interest in the use of ESWT to enhance healing especially for hamstring grafts. Although the number of studies are limited and it is not a standard indication for ESWT, future study is indicated.