Immediate Effect of Graston Technique Versus PNF Stretching on Hamstring Flexibility in Undergraduate Students.

Anil Shankar Raut, St Andrews College of Physiotherapy, Pune.

Dr. Dr. Pooja Chungade (PT), Assistant Professor, St Andrews College of Physiotherapy, Pune.

Dr. Albin Jerome (PT), Principal, St Andrews College of Physiotherapy, Pune.

A B S T R A C T

Background:
Hamstring tightness is frequently observed among undergraduate students, mainly due to prolonged sitting and reduced physical activity. Decreased flexibility can limit range of motion, alter posture, and increase the risk of musculoskeletal problems such as low back pain and knee dysfunction. Various therapeutic approaches, including Proprioceptive Neuromuscular Facilitation (PNF) stretching and the Graston Technique (GT), are commonly used to improve flexibility and muscle function

Objective:
To compare the immediate effects of the Graston Technique and PNF stretching on hamstring flexibility in undergraduate students.

Methodology:
A randomized controlled trial was conducted on 50 undergraduate male students aged 18–25 years. Participants were divided into two groups: Group A received PNF stretching and Group B received the Graston Technique. Hamstring flexibility was assessed using the Active Knee Extension (AKE) test before and after intervention. Both interventions were applied according to standardized protocols. Statistical analysis was performed to determine within-group and between-group differences.

Results:
Both groups demonstrated statistically significant improvement in hamstring flexibility following intervention ($p < 0.001$). However, the Graston Technique group showed a greater reduction in AKE values compared to the PNF group. The difference between the groups was statistically significant ($p < 0.05$), indicating superior effectiveness of the Graston Technique.

Conclusion:
Both PNF stretching and the Graston Technique are effective in improving hamstring flexibility immediately after treatment. However, the Graston Technique provides greater improvement and may be considered a more effective intervention for immediate results.

Keywords:
Hamstring tightness, Graston Technique, PNF stretching, flexibility, range of motion, students.