

Effect of Foam Roller Texture on Recovery

Michael Kasperek

Recovery from exercise is an essential factor in athletic performance and injury prevention. Foam rolling has been proven to increase recovery and is commonly utilized post-exercise. There is limited research examining the effectiveness of different foam roller textures on recovery. This study aims to compare recovery post-maximal effort exercise when using smooth versus grooved high-density foam rollers in collegiate students. To do this, 25-35 participants are being recruited to complete a one-mile max effort run, followed by a set foam rolling protocol focused on the quadriceps, hamstrings, glutes, calves, and shin. Participants are randomly assigned to use either a high-density, smooth-textured foam roller, a high-density, groove-textured foam roller, or no foam roller (control). To assess recovery, blood lactate levels will be measured before, immediately after, and 30-minutes post-run. Subjective pain perception will also be recorded 24, 48, and 72 hours post-exercise using a visual analog scale (VAS) in an online survey. This will provide information on the level of soreness for each foam-rolled muscle group. To analyze the data, a two-way ANOVA will be conducted to evaluate blood lactate levels and soreness across time for the three recovery groups. It is hypothesized that foam rolling will result in reduced pain and clearance of blood lactate faster than no foam rolling at all. It is also hypothesized that the grooved foam roller will enhance recovery compared to the smooth foam roller. This information is significant as it may provide participants and others who exercise frequently with valuable information to improve recovery.