

## **Effects of static stretching on repeated sprint and change of direction performance.**

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**PURPOSE:** To examine the effects of static stretching during the recovery periods of field-based team sports on subsequent repeated sprint ability (RSA) and change of direction speed (CODS) performance. **METHODS:** On four separate occasions, 12 male team-sport players performed a standardized warm-up, followed by a test of either RSA or CODS (on two occasions each) in a counterbalanced design. Both tests involved three sets of six maximal sprint repetitions, with a 4-min recovery between sets. During the break between sets, the participants either rested (control [CON]) or completed a static stretching protocol (static stretch [SS]). The RSA test involved straight-line sprints, whereas the CODS test required a change of direction (100 degrees) every 4 m (total of four). Mean, total (sum of six sprints), first, and best sprint times (MST, TST, FST, and BST, respectively) were recorded for each set. **RESULTS:** There was a consistent tendency for RSA times to be slower after the static stretching intervention, which was supported by statistical significance for three performance variables (MST 0-5 m set 2, MST 0-20 m set 2, and TST set 2;  $P < 0.05$ ). This tendency was also supported by moderate effect sizes and qualitative indications of "likely" harmful or detrimental effects associated with RSA-SS. Further, sprint times again tended to be slower in the CODS-SS trial compared with the CODS-CON across all sprint variables, with a significantly slower ( $P < 0.05$ ) BST recorded for set 3 after static stretching. **CONCLUSION:** These results suggest that an acute bout (4 min) of static stretching of the lower limbs during recovery periods between efforts may compromise RSA performance but has less effect on CODS performance.