

## Impact of three different phases of UK Covid-19 lockdown restrictions, Covid infections and Covid vaccination status on runners training distance and pace.

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### Introduction and Purpose

The Covid-19 pandemic changed physical activity levels. Running participation became more popular to help maintain a healthy body weight and reduce the risk of severe Covid-19 symptoms, whilst improving overall physical and mental health. Lockdown restrictions and 'Work From Home' directive also facilitated time availability for fitness activity participation. This study aimed to compare the impact on running activities of the third Covid-19 lockdown period in the UK, during the phased exit from lockdown and once all restrictions ended.

### Material and Methods

Baseline data from 1671 participants of 'Running Through', a prospective cohort study of community runners, joggers and Nordic walkers were collected via electronic survey between February – December 2021. Lockdown categories chosen were determined based on UK Covid restrictions. Mean distance (km/week) and running pace (min/km) were analysed and adjusted for injury status, covid infection and covid vaccination.

### Results

	Overall	Full Lockdown Pre March 8 2021	Tiered/Phased Lockdown Mar 8 – Jul 19 2021	No Restrictions Post Jul 19 2021
Total person weeks	31568	1905	17965	11221
Distance, km/week	22.1 (9.3, 35.0)	28.7 (14.2, 43.2)	22.5 (10.0, 35.0)	20 (8.3, 33.3)
Pace, min/km	6.2 (1.4)	6.00 (1.9)	6.21 (1.7)	6.21 (1.5)

Distance run per week was also significantly reduced when adjusted for recent injured -9.61 (95% CI- 10.19, -9.04) and covid infection -3.12 (95% CI -4.36,-1.88) but not covid vaccination. During lockdown the mean pace was significantly faster than when restrictions ended. However, when adjusted for covid infection, covid injection status and recent injury only injury influenced mean running pace 0.15 (95% CI 0.11, 0.20).

### Conclusion

Mean distance ran was greater during the winter lockdown rather than during the restriction-free summer. However, covid cases increased as restrictions ended and covid infections significantly influenced reduced weekly distance. Covid vaccinations did not significantly impact running pace or distance.

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