

Using Microtechnology (GPS) To Examine The Impact Of Ramadan Fasting On Physical Performance In Football Players

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Purpose: Previous studies have shown adverse effects of Ramadan fasting on continuous aerobic-type of exercise performances. However the impact of Ramadan fasting on prolonged intermittent exercise, in particular during a sport-specific match play, has not been studied. The aim of the present study therefore was to examine the effects of Ramadan fasting on players' physical performance during an actual 90-min football match, played in the heat, using global positioning system (GPS) microtechnology. **Methods:** Match running performance data and other physiological responses were collected from 13 trained Muslim players during four football matches [data was averaged over two matches played in the non-fasted state (Control, CON) and two matches were played in the Ramadan fasted state (RAM)]. Players' pre-match dietary intake was standardized across all matches. Sleep hours and training load prior to matches were also recorded. **Results:** Over the 90-min match, players in the fasted state (i.e., RAM match) covered a significantly lower total distance, ran less within the moderate- and high-intensity zones, and had a lower work rate as compared to that in the non-fasted state (i.e., CON match) [all differences were $P < 0.05$, effects sizes = small to large]. **Conclusion:** Physical performance during a football match was adversely affected by the observance of the Ramadan fast.