

Barbell Kinematics Between the Split Jerk & Power Jerk

Using Vicon 3D Video Analysis

Twelve males were recruited (height = 1.8 ± 0.1 m; mass = 85.3 ± 10.2 kg; age = 23.4 ± 2.4 years). All participants had a minimum six months experience in both jerk techniques and reported their Split Jerk 1 repetition maximum (1RM: 105.3 ± 19.1 kg). Participants completed 3 repetitions of each jerk technique, at 85% of their Split Jerk 1-RM. Data were collected using 6 3D video cameras, with a sampling rate of 200 Hz and were analysed using Vicon software. A multivariate paired t-test was used to determine the effect of jerk technique on all kinematic variables. Paired samples t-tests were used as post hoc analyses when necessary. An alpha level of ($p < 0.05$) was used for all inferential statistics. Non-significant differences: starting barbell position, lowest barbell position and maximum concentric velocity. Significant differences: peak barbell height, range and displacement greater in the Power Jerk when compared to the Split Jerk ($p < 0.05$). Results suggest that more work is done on the barbell, and greater range of motion, occur during the Power Jerk, while more work may be done on the body during the Split Jerk.

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