

Table 1. Metric Definitions

Metric	Abbreviation	Definition	CMJ	SL CMJ	CMJ-R
System Weight	SW	Identified by an optimization loop; the lowest vertical ground reaction force (1-second average) applied to the system center of mass during the weighting phase.	✓	✓	
Countermovement Jump Height (m)	CMJ-JH	The change in system center of mass position between the point of take-off and peak positive vertical displacement of the system center of mass. Calculated using the vertical velocity of the system center of mass at the instant of take-off and the equations of uniformly accelerated motion during the countermovement phase	✓	✓	
Rebound Jump Height (m)	R-JH	The change in system center of mass position between the point of take-off and peak positive vertical displacement of the system center of mass. Calculated using the vertical velocity of the system center of mass at the instant of take-off and the equations of uniformly accelerated motion during the rebound phase of the CMJ-R task			✓
Countermovement Jump Momentum (kg.s ⁻¹)	CMJ-JM	The vertical momentum of the system center of mass at the point of take-off during the countermovement phase	✓	✓	
Rebound Jump Momentum (kg.s ⁻¹)	R-JM	The vertical momentum of the system center of mass at the point of take-off during the rebound phase of the CMJ-R task			✓
Countermovement Depth (m)	CMJ-CMD	The peak negative vertical displacement of the system center of mass during the countermovement phase	✓	✓	
Rebound Depth (m)	R-CMD	The peak vertical displacement of the system center of mass during the rebound phase of the CMJ-R task			✓
Force at Minimum Displacement (N)	FMD	The vertical ground reaction force applied to the system center of mass at the point of the peak negative vertical displacement of the system center of mass	✓	✓	✓
Average Braking Force (N)	ABF	The average vertical ground reaction force applied to the system center of mass during the braking phase	✓	✓	✓
Peak Braking Force (N)	PBF	The peak instantaneous vertical ground reaction force applied to the system center of mass during the braking phase	✓	✓	✓
Rebound Time to Peak Braking Force (ms)	R-TPBF	Time taken to achieve the peak braking force during the rebound phase of the CMJ-R task			✓
Average Propulsion Force (N)	APP	The average vertical ground reaction force applied to the system center of mass during the propulsion phase	✓	✓	✓
Peak Propulsion Force (N)	PPF	The peak instantaneous vertical ground reaction force applied to the system center of mass during the propulsion phase	✓	✓	✓
Time to Takeoff (ms)	TTT	The total time taken from the initiation of movement to the instant of take-off	✓	✓	✓
Contact Time (ms)	CT				
Braking Net Impulse (Nm)	BNI	The net vertical impulse applied to the system center of mass during the braking phase	✓	✓	✓
Takeoff Velocity (m/s ⁻¹)	Tov	The vertical velocity of the system center of mass at the instant of take-off	✓	✓	
RSI (Au)	RSI	The time taken to complete the flight phase divided by the total time taken from the initiation of movement to the instant of take-off (e.g. Time to Take-off).	✓	✓	✓
mRSI (Au)	mRSI	The jump height calculated using the vertical velocity of the system center of mass at the instant of take-off divided by the total time taken from the initiation of movement to the instant of take-off (e.g. Time to Take-off).	✓	✓	✓

Metric	Abbreviation	Definition	CMJ	SL CMJ	CMJ-R
Stiffness		The vertical ground reaction force applied to the system center of mass at the instant of peak negative vertical displacement of the system center of mass divided by the peak negative vertical displacement of the system center of mass	✓	✓	✓
Unweighting Phase (ms)		The time taken to complete the unweighting phase	✓	✓	
Braking Phase (ms)		The time taken to complete the braking phase	✓	✓	
Propulsion Phase (ms)		The time taken to complete the propulsion phase	✓	✓	
Flight Time (ms)	FT	The time taken to complete the flight phase	✓	✓	✓
Landing Stiffness		The vertical ground reaction force applied to the system center of mass at the instant of peak negative vertical displacement of the system center of mass divided by the peak negative vertical displacement of the system center of mass during the landing phase	✓	✓	✓
Peak Landing Force (N)	PLF	The peak vertical ground reaction force applied to the system center of mass during the landing phase	✓	✓	✓
Average Landing Force (N)	ALF	The average vertical ground reaction force applied to the system center of mass during the landing phase	✓	✓	✓
Average Braking Velocity (ms ⁻¹)	ABV	The average vertical velocity of the system center of mass during the braking phase.	✓	✓	
Peak Braking Velocity (ms ⁻¹)	PBV	The peak negative instantaneous vertical velocity of the system center of mass during the braking phase	✓	✓	
Average Braking Power (W)	ABP	The average mechanical power applied to the system center of mass during the braking phase	✓	✓	
Average Relative Braking Power (W/Kg)	ARBP	The average mechanical power applied to the system center of mass during the braking phase relative to system mass.	✓	✓	
Peak Braking Power (W)	PBP	The peak negative instantaneous mechanical power applied to the system center of mass during the braking phase.	✓	✓	
Peak Relative Braking Power (W/Kg)	PRBP	The peak negative instantaneous mechanical power applied to the system center of mass during the braking phase relative to system mass.	✓	✓	
Average Propulsive Power (W)	APP	The average mechanical power applied to the system center of mass during the propulsion phase	✓	✓	
Average Relative Propulsive Power (W/Kg)	ARPP	The average mechanical power applied to the system center of mass during the propulsion phase relative to system mass	✓	✓	
Peak Propulsive Power (W)	PPP	The peak instantaneous mechanical power applied to the system center of mass during the propulsion phase.	✓	✓	
Peak Relative Propulsive Power (W/Kg)	ARPP	The peak instantaneous mechanical power applied to the system center of mass during the propulsion phase relative to system mass.	✓	✓	