

Supplementary Table I RMSE between the Gold-Standard and Estimated GRF for SSL Pre-trained Model during Stance, Swing Phases of Walking and Landing, Flight Phases of Drop Landing.

Dataset	Phase	RMSE ( <i>N/kg</i> )		
		mlGRF <sup>a</sup>	apGRF <sup>a</sup>	vGRF <sup>a</sup>
Overground Walking	Stance	0.04±0.01	0.03±0.01	0.13±0.03
	Swing	0.01±0.01	0.01±0.00	0.05±0.02
Treadmill Walking	Stance	0.02±0.00	0.03±0.01	0.12±0.02
	Swing	0.01±0.00	0.01±0.00	0.06±0.01
Drop Landing	Landing	0.04±0.01	0.05±0.01	0.19±0.05
	Flight	0.01±0.00	0.01±0.00	0.05±0.02

<sup>a</sup> ml: medial-lateral; ap: anterior-posterior; v: vertical