**Supplementary Digital Content 3**

Values for peak anterior TFJ shear forces, peak TFJ compression forces and peak TFJ medial compartment compression forces for participants from the three step frequency groups eliminated from the study.

§Indicates values outside two standard deviations from the mean

LSF= Low Step Frequency Group

MSF=Middle Step Frequency Group

HSF=High Step Frequency Group

TFJ = Tibiofemoral joint

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **LSF1** | **LSF2** | **MSF1** | **MSF2** | **HSF1** |
| **PEAK\_TFJ\_SHEAR (BW)** | 0.93§ | 2.20 | 2.14 | 3.20§ | 2.25§ |
| **PEAK\_TFJ\_COMPRESSION (BW)** | -11.40 | -12.60§ | -9.90 | -13.53§ | -9.80 |
| **PEAK\_MEDIAL\_TFJ\_COMPRESSION(BW)** | -7.60 | -7.90 | -4.36§ | -8.48§ | -6.13 |

§*Indicates values outside two standard deviations from the mean*