Table 3. Single measurement: Mean and SD

		SIT (N = 38)		EO (N = 33)		FT (N = 23)		EC (N = 25)		FO (N = 23)	
		Test	**Retest**	**Test**	**Retest**	**Test**	**Retest**	**Test**	**Retest**	**Test**	**Retest**
Time-domain	1. AP Acc Range [m/s^2]*	**0.027 (0.022)**	**0.029 (0.038)**	**0.053 (0.085)**	**0.045 (0.051)**	0.052 (0.029)	0.053 (0.031)	**0.061 (0.043)**	**0.057 (0.034)**	0.065 (0.066)	0.07 (0.086)
	2. AP Acc rms [m/s^2]**	**0.003 (0.002)**	**0.003 (0.003)**	**0.005 (0.003)**	**0.005 (0.003)**	**0.006 (0.003)**	**0.006 (0.003)**	**0.008 (0.005)**	**0.008 (0.004)**	**0.008 (0.006)**	**0.008 (0.006)**
	3. ML Acc Range [m/s^2]*	**0.029 (0.019)**	**0.027 (0.022)**	**0.064 (0.143)**	**0.06 (0.135)**	0.07 (0.049)	0.068 (0.046)	**0.064 (0.051)**	**0.056 (0.045)**	**0.075 (0.077)**	**0.086 (0.135)**
	4. ML Acc rms [m/s^2]**	**0.003 (0.001)**	**0.003 (0.002)**	**0.005 (0.006)**	**0.005 (0.006)**	**0.007 (0.004)**	**0.007 (0.004)**	**0.008 (0.007)**	**0.007 (0.005)**	**0.009 (0.008)**	**0.009 (0.008)**
	5. AP Gyr Range [rad/s]*	0.058 (0.047)	0.052 (0.037)	**0.091 (0.155)**	**0.084 (0.123)**	**0.135 (0.09)**	**0.128 (0.112)**	**0.093 (0.07)**	**0.085 (0.071)**	**0.145 (0.102)**	**0.149 (0.156)**
	6. AP Gyr rms [rad/s]**	**0.007 (0.004)**	**0.007 (0.003)**	**0.009 (0.007)**	**0.008 (0.006)**	**0.016 (0.009)**	**0.015 (0.01)**	**0.013 (0.009)**	**0.012 (0.008)**	**0.019 (0.012)**	**0.017 (0.013)**
	7. ML Gyr Range [rad/s]*	0.085 (0.083)	0.084 (0.119)	**0.159 (0.268)**	**0.129 (0.149)**	0.181 (0.102)	0.177 (0.122)	0.19 (0.151)	0.155 (0.097)	**0.232 (0.27)**	**0.218 (0.291)**
	8. ML Gyr rms [rad/s]*	**0.009 (0.008)**	**0.009 (0.01)**	**0.016 (0.015)**	**0.014 (0.011)**	**0.021 (0.011)**	**0.019 (0.011)**	0.024 (0.017)	0.022 (0.013)	**0.027 (0.023)**	**0.024 (0.023)**
	9. AP Jerk Range [m/s^3]**	**0.092 (0.021)**	**0.095 (0.028)**	**0.155 (0.129)**	**0.14 (0.08)**	**0.18 (0.086)**	**0.168 (0.071)**	**0.214 (0.159)**	**0.206 (0.151)**	**0.234 (0.236)**	**0.228 (0.179)**
	10. AP Jerk rms [m/s^3]*	0.976 (0.404)	0.993 (0.503)	2.555 (7.025)	1.66 (2.57)	1.757 (1.076)	1.762 (1.019)	**1.956 (1.468)**	**1.826 (1.288)**	2.367 (2.926)	2.585 (3.963)
	11. ML Jerk Range [m/s^3]**	**0.127 (0.049)**	**0.129 (0.057)**	**0.18 (0.151)**	**0.178 (0.152)**	**0.244 (0.122)**	**0.232 (0.116)**	**0.278 (0.241)**	**0.241 (0.172)**	**0.282 (0.182)**	**0.294 (0.226)**
	12. ML Jerk rms [m/s^3]*	1.382 (0.731)	1.365 (0.928)	**2.444 (4.845)**	**2.187 (4.355)**	2.895 (2.013)	2.527 (1.635)	**2.404 (1.941)**	**2.062 (1.697)**	2.757 (2.456)	3.242 (4.63)
	13. Mag Acc mean [m/s^4]**	**0.004 (0.002)**	**0.004 (0.003)**	**0.007 (0.004)**	**0.007 (0.005)**	**0.01 (0.005)**	**0.009 (0.005)**	**0.012 (0.009)**	**0.011 (0.006)**	**0.016 (0.012)**	**0.015 (0.01)**
	14. mean Frequency [Hz]*	0.146 (0.013)	0.147 (0.014)	**0.14 (0.018)**	**0.139 (0.018)**	**0.13 (0.017)**	**0.132 (0.016)**	0.145 (0.024)	0.148 (0.022)	**0.101 (0.018)**	**0.099 (0.02)**
	15. Distance [m/s^4]**	**0.003 (0.002)**	**0.004 (0.002)**	**0.007 (0.004)**	**0.007 (0.005)**	**0.01 (0.005)**	**0.009 (0.005)**	**0.012 (0.009)**	**0.01 (0.007)**	**0.017 (0.013)**	**0.016 (0.011)**
	16. Displacement [mm/s^4]*	12.743 (2.552)	13.164 (3.212)	**16.596 (6.198)**	**16.662 (6.767)**	**21.599 (8.429)**	**20.987 (7.626)**	**11.328 (7.902)**	**10.591 (6.376)**	**11.607 (6.88)**	**11.385 (5.784)**
	17. Mean velocity [mm/s^4]*	0.001 (0.001)	0.001 (0.001)	0.002 (0.002)	0.002 (0.001)	0.002 (0.001)	0.003 (0.002)	**0.004 (0.003)**	**0.004 (0.004)**	0.005 (0.008)	0.003 (0.002)
	18. Path [mm/s^4]**	**17.999 (10.041)**	**18.591 (13.494)**	**32.486 (21.629)**	**31.659 (23.214)**	**44.765 (21.554)**	**42.246 (21.111)**	**25.098 (17.685)**	**23.183 (13.531)**	**25.757 (18.823)**	**24.342 (17.201)**
	19. Area [m/s^5]*	**0.0 (0.0)**	**0.0 (0.0)**	**0.0 (0.001)**	**0.0 (0.001)**	**0.001 (0.001)**	**0.001 (0.001)**	**0.001 (0.002)**	**0.001 (0.001)**	0.001 (0.002)	0.001 (0.002)
	20. Circle area [mm/s^4]*	0.0 (0.001)	0.0 (0.001)	**0.001 (0.002)**	**0.001 (0.003)**	**0.001 (0.001)**	**0.001 (0.001)**	**0.002 (0.004)**	**0.002 (0.002)**	**0.003 (0.006)**	**0.003 (0.006)**
	21. Ellipse area [mm/s^4]*	**0.001 (0.001)**	**0.001 (0.002)**	**0.002 (0.004)**	**0.002 (0.005)**	0.003 (0.003)	0.003 (0.004)	0.006 (0.01)	0.004 (0.005)	**0.006 (0.01)**	**0.006 (0.01)**
Frequency-domain	22. AP 50% Freq [Hz]*	11.395 (3.1)	11.712 (2.958)	7.599 (2.132)	7.602 (1.996)	**6.966 (1.871)**	**7.172 (2.134)**	**5.896 (1.827)**	**6.091 (2.212)**	6.617 (1.505)	6.894 (2.197)
	23. AP 95% Freq [Hz]*	**44.66 (1.539)**	**44.55 (2.041)**	**41.644 (2.986)**	**42.025 (2.99)**	40.177 (3.586)	41.343 (2.551)	**39.185 (4.149)**	**39.496 (3.676)**	**39.411 (4.281)**	**39.627 (4.106)**
	24. Ap Total power *	22.035 (3.514)	22.374 (3.279)	19.5 (2.54)	19.792 (2.761)	**19.218 (2.387)**	**19.386 (2.416)**	11.648 (1.405)	11.652 (1.494)	12.726 (1.706)	12.948 (1.784)
	25. Ap Spectral centroid [Hz]*	**0.32 (0.046)**	**0.324 (0.047)**	0.253 (0.038)	0.256 (0.038)	**0.235 (0.042)**	**0.244 (0.04)**	**0.214 (0.035)**	**0.219 (0.043)**	0.225 (0.038)	0.229 (0.044)
	26. ML 50% Freq [Hz]**	**11.126 (2.521)**	**11.419 (2.492)**	**7.937 (1.66)**	**8.044 (1.744)**	**7.11 (1.362)**	**7.234 (1.542)**	**7.128 (1.73)**	**7.383 (1.864)**	**6.838 (1.368)**	**7.216 (1.344)**
	27. ML 95% Freq [Hz]**	**42.63 (2.317)**	**42.893 (2.399)**	**39.92 (4.252)**	**39.996 (5.018)**	**36.897 (4.396)**	**37.728 (4.73)**	**37.107 (5.156)**	**37.845 (5.324)**	**35.567 (5.548)**	**36.341 (5.472)**
	28. ML Total power **	**23.181 (2.807)**	**23.256 (2.758)**	**21.13 (2.42)**	**21.435 (2.506)**	**19.429 (1.908)**	**19.868 (2.293)**	**13.417 (1.688)**	**13.718 (1.898)**	**12.962 (1.433)**	**13.458 (1.547)**
	29. ML Spectral centroid [Hz]**	**0.299 (0.043)**	**0.303 (0.043)**	**0.244 (0.042)**	**0.249 (0.046)**	**0.216 (0.033)**	**0.222 (0.04)**	**0.218 (0.041)**	**0.226 (0.047)**	**0.204 (0.037)**	**0.212 (0.039)**
Complexity	30. LDE AP *	**0.009 (0.003)**	**0.009 (0.003)**	**0.012 (0.003)**	**0.012 (0.003)**	**0.012 (0.002)**	**0.012 (0.002)**	0.013 (0.003)	0.013 (0.002)	0.011 (0.002)	0.011 (0.003)
	31. ApproxE AP *	1.168 (0.235)	1.203 (0.221)	**0.94 (0.208)**	**0.976 (0.211)**	**0.905 (0.209)**	**0.931 (0.192)**	**0.744 (0.176)**	**0.758 (0.183)**	0.823 (0.19)	0.831 (0.218)
	32. SampleE AP *	1.107 (0.266)	1.148 (0.245)	**0.865 (0.214)**	**0.897 (0.229)**	**0.828 (0.217)**	**0.848 (0.205)**	**0.669 (0.193)**	**0.692 (0.203)**	0.771 (0.214)	0.763 (0.254)
	33. LDE ML *	**0.008 (0.002)**	**0.008 (0.002)**	**0.01 (0.002)**	**0.009 (0.002)**	0.011 (0.002)	0.01 (0.002)	0.01 (0.002)	0.009 (0.002)	**0.01 (0.002)**	**0.01 (0.002)**
	34. ApproxE ML **	**1.116 (0.191)**	**1.138 (0.196)**	**0.968 (0.224)**	**1.006 (0.228)**	**0.84 (0.162)**	**0.87 (0.192)**	**0.822 (0.196)**	**0.866 (0.217)**	**0.774 (0.179)**	**0.79 (0.198)**
	35. SampleE ML *	**1.035 (0.233)**	**1.062 (0.232)**	**0.898 (0.231)**	**0.936 (0.25)**	0.762 (0.164)	0.79 (0.193)	**0.768 (0.234)**	**0.825 (0.254)**	0.722 (0.201)	0.714 (0.221)

Balance features with a good-excellent reliability (≥0.75) in at least one task are marked with a *. Features with good-excellent reliability in all condition are marked with **. Features with Good-excellent intraclass correlation coefficient values (ICC) are reported in boldface. The formulas and units of all features are described in table 1 and 2 of the supplementary material.

The algorithm to process the data and calculate balance features is available on GitHub:https://github.com/RichardFel/Reliability-of-Balance (accessed on 10-07-2021).

Table 4. Averaged measurement: Mean and SD

		EO (N = 33)		FT (N = 23)		EC (N = 24)		FO (N = 23)	
		Test	**Retest**	**Test**	**Retest**	**Test**	**Retest**	**Test**	**Retest**
Time-domain	1. AP Acc Range [m/s^2]*	**0.048 (0.058)**	**0.051 (0.08)**	0.057 (0.036)	0.075 (0.121)	**0.078 (0.101)**	**0.082 (0.137)**	0.063 (0.054)	0.072 (0.071)
	2. AP Acc rms [m/s^2]*	**0.005 (0.003)**	**0.005 (0.004)**	**0.006 (0.003)**	**0.007 (0.005)**	**0.009 (0.006)**	**0.009 (0.007)**	0.008 (0.005)	0.008 (0.006)
	3. ML Acc Range [m/s^2]*	**0.059 (0.113)**	**0.072 (0.196)**	0.081 (0.066)	0.101 (0.173)	**0.098 (0.171)**	**0.103 (0.233)**	0.079 (0.067)	0.103 (0.139)
	4. ML Acc rms [m/s^2]*	**0.005 (0.005)**	**0.006 (0.008)**	**0.008 (0.006)**	**0.009 (0.009)**	**0.01 (0.012)**	**0.01 (0.014)**	0.009 (0.008)	0.011 (0.013)
	5. AP Gyr Range [rad/s]*	**0.085 (0.123)**	**0.091 (0.15)**	0.142 (0.091)	0.161 (0.192)	**0.124 (0.162)**	**0.128 (0.191)**	**0.155 (0.118)**	**0.162 (0.143)**
	6. AP Gyr rms [rad/s]**	**0.009 (0.007)**	**0.009 (0.007)**	**0.016 (0.009)**	**0.017 (0.013)**	**0.015 (0.012)**	**0.015 (0.014)**	**0.02 (0.014)**	**0.02 (0.016)**
	7. ML Gyr Range [rad/s]*	**0.163 (0.261)**	**0.153 (0.238)**	0.2 (0.164)	0.245 (0.364)	**0.235 (0.299)**	**0.231 (0.377)**	0.223 (0.23)	0.254 (0.305)
	8. ML Gyr rms [rad/s]*	**0.016 (0.015)**	**0.015 (0.014)**	**0.022 (0.016)**	**0.024 (0.025)**	**0.027 (0.022)**	**0.027 (0.03)**	0.026 (0.021)	0.029 (0.03)
	9. AP Jerk Range [m/s^3]*	**0.15 (0.099)**	**0.153 (0.133)**	0.189 (0.089)	0.211 (0.208)	**0.25 (0.228)**	**0.257 (0.298)**	0.244 (0.196)	0.28 (0.275)
	10. AP Jerk rms [m/s^3]*	**2.035 (4.105)**	**2.106 (5.139)**	2.108 (1.577)	3.428 (8.546)	**3.001 (5.391)**	**3.619 (9.249)**	2.396 (2.344)	2.852 (3.401)
	11. ML Jerk Range [m/s^3]*	**0.178 (0.134)**	**0.191 (0.206)**	0.265 (0.147)	0.283 (0.264)	**0.321 (0.329)**	**0.312 (0.378)**	0.315 (0.237)	0.423 (0.542)
	12. ML Jerk rms [m/s^3]*	**2.154 (3.466)**	**2.66 (6.927)**	3.231 (2.3)	4.315 (9.143)	**3.755 (6.926)**	**4.212 (10.723)**	2.988 (2.285)	4.058 (5.395)
	13. Mag Acc mean [mm/s^4]**	**0.007 (0.005)**	**0.007 (0.006)**	**0.011 (0.006)**	**0.011 (0.008)**	**0.013 (0.01)**	**0.012 (0.011)**	**0.016 (0.011)**	**0.017 (0.013)**
	14. mean Frequency [Hz]*	**0.139 (0.018)**	**0.139 (0.019)**	**0.13 (0.015)**	**0.132 (0.016)**	0.143 (0.023)	0.145 (0.019)	**0.1 (0.017)**	**0.1 (0.018)**
	15. Distance [mm/s^4]*	**0.007 (0.005)**	**0.007 (0.006)**	**0.011 (0.006)**	**0.011 (0.008)**	**0.013 (0.011)**	**0.012 (0.012)**	0.017 (0.012)	0.019 (0.015)
	16. Displacement [mm/s^4]*	**16.714 (6.366)**	**17.207 (8.243)**	**22.623 (9.2)**	**23.074 (11.602)**	**11.997 (7.877)**	**11.858 (8.393)**	12.331 (7.258)	14.613 (13.01)
	17. Mean velocity [mm/s^4]*	0.002 (0.001)	0.002 (0.001)	0.003 (0.001)	0.003 (0.002)	**0.004 (0.003)**	**0.004 (0.003)**	0.004 (0.005)	0.004 (0.003)
	18. Path [mm/s^4]*	**32.744 (23.372)**	**33.213 (28.722)**	**48.451 (28.307)**	**49.366 (37.654)**	**27.203 (21.302)**	**27.075 (25.066)**	26.33 (18.252)	29.28 (24.464)
	19. Area [mm/s^5]*	0.0 (0.001)	0.001 (0.002)	0.001 (0.001)	0.001 (0.003)	**0.002 (0.004)**	**0.002 (0.006)**	0.001 (0.003)	0.004 (0.011)
	20. Circle area [mm/s^4]*	**0.001 (0.002)**	**0.001 (0.005)**	0.002 (0.003)	0.003 (0.007)	**0.004 (0.009)**	**0.005 (0.017)**	0.003 (0.006)	0.006 (0.017)
	21. Ellipse area [mm/s^4]*	**0.002 (0.005)**	**0.003 (0.008)**	**0.004 (0.006)**	**0.005 (0.011)**	0.008 (0.013)	0.009 (0.025)	0.007 (0.012)	0.012 (0.027)
Frequency-domain	22. AP 50% Freq [Hz]*	7.547 (2.078)	7.553 (1.903)	6.975 (1.848)	7.224 (2.083)	**6.256 (1.813)**	**6.481 (2.155)**	**6.793 (1.566)**	**7.042 (2.064)**
	23. AP 95% Freq [Hz]**	**41.597 (2.981)**	**42.052 (2.607)**	**39.963 (3.699)**	**41.111 (2.635)**	**38.985 (4.22)**	**39.466 (3.875)**	**39.312 (3.952)**	**39.681 (3.789)**
	24. Ap Total power *	**19.473 (2.45)**	**19.788 (2.545)**	19.23 (2.262)	19.566 (2.382)	**12.101 (1.466)**	**12.154 (1.662)**	12.867 (1.449)	12.932 (1.433)
	25. Ap Spectral centroid [Hz]**	**0.252 (0.038)**	**0.254 (0.035)**	**0.235 (0.042)**	**0.245 (0.037)**	**0.22 (0.035)**	**0.224 (0.042)**	**0.227 (0.037)**	**0.232 (0.04)**
	26. ML 50% Freq [Hz]**	**7.964 (1.71)**	**8.044 (1.745)**	**7.052 (1.402)**	**7.084 (1.489)**	**7.2 (1.724)**	**7.401 (1.926)**	**7.001 (1.319)**	**7.205 (1.335)**
	27. ML 95% Freq [Hz]**	**39.84 (4.443)**	**39.985 (4.706)**	**36.386 (5.019)**	**37.131 (5.04)**	**36.717 (5.588)**	**37.23 (5.625)**	**35.598 (5.135)**	**35.95 (5.537)**
	28. ML Total power *	**21.164 (2.423)**	**21.369 (2.423)**	**19.327 (2.211)**	**19.679 (2.089)**	**13.6 (1.622)**	**13.728 (1.866)**	13.007 (1.463)	13.182 (1.796)
	29. ML Spectral centroid [Hz]**	**0.244 (0.043)**	**0.248 (0.045)**	**0.213 (0.036)**	**0.219 (0.039)**	**0.219 (0.044)**	**0.224 (0.048)**	**0.207 (0.036)**	**0.212 (0.039)**
Complexity	30. LDE AP **	**0.012 (0.003)**	**0.012 (0.003)**	**0.012 (0.003)**	**0.012 (0.003)**	**0.013 (0.002)**	**0.013 (0.003)**	**0.011 (0.002)**	**0.011 (0.002)**
	31. ApEn AP *	**0.945 (0.201)**	**0.968 (0.205)**	**0.9 (0.206)**	**0.915 (0.212)**	**0.759 (0.182)**	**0.775 (0.2)**	0.827 (0.172)	0.83 (0.198)
	32. SampEn AP *	**0.869 (0.208)**	**0.891 (0.22)**	**0.82 (0.213)**	**0.83 (0.225)**	**0.687 (0.198)**	**0.712 (0.221)**	0.77 (0.197)	0.761 (0.233)
	33. LDE ML **	**0.01 (0.002)**	**0.01 (0.002)**	**0.011 (0.002)**	**0.011 (0.002)**	**0.01 (0.002)**	**0.01 (0.003)**	**0.01 (0.002)**	**0.01 (0.002)**
	34. ApEn ML **	**0.977 (0.217)**	**1.0 (0.227)**	**0.826 (0.181)**	**0.847 (0.209)**	**0.825 (0.22)**	**0.852 (0.239)**	**0.771 (0.176)**	**0.77 (0.221)**
	35. SampEn ML *	**0.908 (0.226)**	**0.932 (0.244)**	**0.747 (0.183)**	**0.768 (0.213)**	**0.773 (0.255)**	**0.812 (0.277)**	0.716 (0.197)	0.703 (0.229)

Balance features with a good-excellent reliability (≥0.75) in at least one task are marked with a *. Features with good-excellent reliability in all condition are marked with **. Features with Good-excellent intraclass correlation coefficient values (ICC) are reported in boldface. The formulas and units of all features are described in table 1 and 2 of the supplementary material.

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