**Supplementary Material**

**Supplemental Figure 1.** Comparison of physical activity/HRV parameters between controls and patients with DMD

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Physical activity and HRV parameters that showed significant differences between controls and patients with DMD are shown in box-and-whisker plots. (**A**) Physical activity; (**B**) Fat burning; (**C**) Total number of steps; (**D**) Total active distance; (**E**) Average step rate; (**F**) Average exercise intensity during walking; (**G**) Exercise; (**H**) Degree of forward lean during walking; (**I**) Maximum heart rate during active; (**J**) Maximum exercise intensity during active; (**K**) LF norm during arousal. Blue box, controls; Red box

, patients with DMD. Each statistical significance was shown in corresponding parameter in Table 3 or 4.

**Supplemental Figure 2.** Correlation between the timed motor function tests in patients with DMD and physical activity parameters

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Correlation between the timed motor function tests (10MWT, NSAA, and 6MWT) and HRV parameters during arousal that showed significant differences in patients with DMD are shown in linear regression analysis. (**A**) Correlations between 10MWT and (**A**) Average heart rate, between NSAA and (**B**) Average heart rate, (**C**) TF, and (**D**) VLF. Correlations between 6MWT and (**E**) LF/HF. Each correlation coefficient and *p* value was shown in Table 7.

**Supplemental Table 1. Correlation between physical activity parameters and timed motor function tests in patients with DMD**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Time to stand from supine | | 10MWT | | NSAA | | 6MWT | |
|  | COR | *p* value | COR | *p* value | COR | *p* value | COR | *p* value |
| Basal metabolism | -0.308 | 0.501 | -0.011 | 0.982 | 0.654 | 0.111 | 0.448 | 0.314 |
| Physical activity | 0.639 | 0.122 | 0.093 | 0.843 | -0.156 | 0.738 | 0.070 | 0.882 |
| Fat burning | 0.640 | 0.122 | 0.093 | 0.843 | -0.157 | 0.737 | 0.068 | 0.884 |
| Total energy consumption | -0.027 | 0.953 | 0.030 | 0.950 | 0.575 | 0.176 | 0.471 | 0.286 |
| Total number of steps | -0.152 | 0.746 | 0.378 | 0.404 | -0.610 | 0.146 | -0.565 | 0.186 |
| Total active distance | -0.164 | 0.725 | 0.363 | 0.424 | -0.576 | 0.176 | -0.603 | 0.152 |
| Average step rate | 0.217 | 0.640 | 0.566 | 0.185 | -0.334 | 0.464 | -0.610 | 0.145 |
| Average exercise intensity during walking (METs) | -0.506 | 0.246 | -0.053 | 0.911 | 0.332 | 0.468 | -0.399 | 0.375 |
| Exercise | -0.478 | 0.278 | 0.032 | 0.947 | -0.067 | 0.887 | -0.467 | 0.290 |
| Degree of forward lean when walking | -0.729 | 0.063 | -0.192 | 0.680 | 0.230 | 0.620 | 0.236 | 0.611 |

10MWT, 10-meter walk test; NSAA, North Star Ambulatory Assessment; 6MWT, 6-minute walk test; COR, correlation coefficient calculated by Pearson’s linear regression; ns, not significant