Appendix 2. Changes in muscle size and strength from Week 0 – Week 4 (0-4), Week 4 – Week 8 (4-8), and Week 0 – Week 8 (0-8). Data are represented as group averages ± standard deviations for each measurement. Groups are represented as: C = Control, FS = Foot strengthening exercise, MSW = Minimalist shoe walking. Seven muscles were measured (ABDH = Abductor Hallucis, FDB = Flexor Digitorum Brevis, FDL = Flexor Digitorum Longus, FHB = Flexor Hallucis Brevis, QP = Quadratus Plantae, TA = Tibialis Anterior, TP = Tibialis Posterior). Three strength tests were conducted (Doming, GT = Great toe flexion, LT – Lateral toes flexion).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | C | FS | MSW | Between groups p value |
| ABDH  (cm2) | 0-4 | -.007 ± .039 | .113 ± .116 \* | .129 ± .142 \* | .000 |
| 4-8 | -.013 ± .043 | .073 ± .073 \* | .048 ± .096 \* | .002 |
| 0-8 | -.021 ± .042 | .186 ± .134 \* | .176 ± .190 \* | .000 |
| FDB  (cm2) | 0-4 | -.010 ± .049 | .070 ± .098 \* | .105 ± .059 \* | .000 |
| 4-8 | -.015 ± .056 | .144 ± .126 \* | .056 ± .056 \*† | .000 |
| 0-8 | -.025 ± .052 | .213 ± .144 \* | .161 ± .088 \* | .000 |
| FDL  (cm2) | 0-4 | -.006 ± .067 | .062 ± .108 | .101 ± .128 \* | .010 |
| 4-8 | -.015 ± .070 | .144 ± .128 \* | .096 ± .103 \* | .000 |
| 0-8 | -.021 ± .077 | .206 ± .142 \* | .197 ± .127 \* | .000 |
| FHB  (cm) | 0-4 | .002 ± .040 | .107 ± .109 \* | .031 ± .069 † | .001 |
| 4-8 | -.018 ± .062 | .096 ± .127 \* | .033 ± .070 † | .002 |
| 0-8 | -.016 ± .058 | .203 ± .151 \* | .064 ± .076 \*† | .000 |
| QP  (cm2) | 0-4 | -.014 ± .046 | .121 ± .123 \* | .138 ± .153 \* | .000 |
| 4-8 | -.001 ± .066 | .153 ± .164 \* | .081 ± .078 \* | .001 |
| 0-8 | -.014 ± .073 | .274 ± .172 \* | .218 ± .164 \* | .000 |
| TA  (cm) | 0-4 | -.006 ± .079 | .072 ± .090 \* | .065 ± .110 \* | .035 |
| 4-8 | -.017 ± .057 | .067 ± .082 \* | .055 ± .067 \* | .002 |
| 0-8 | -.024 ± .059 | .139 ± .125 \* | .120 ± .106 \* | .000 |
| TP  (cm) | 0-4 | .018 ± .050 | .107 ± .075 \* | .090 ± .113 \* | .006 |
| 4-8 | -.008 ± .026 | .101 ± .135 \* | .063 ± .075 \* | .003 |
| 0-8 | .010 ± .045 | .207 ± .158 \* | .153 ± .136 \* | .000 |
| Doming  (kg) | 0-4 | 1.69 ± 3.27 | 3.19 ± 2.26 | 2.21 ± 3.45 | .375 |
| 4-8 | -1.08 ± 2.68 | 1.80 ± 2.37 \* | .970 ± 3.11 \* | .014 |
| 0-8 | .614 ± 2.80 | 4.99 ± 3.42 \* | 3.18 ± 4.18 \* | .004 |
| GT  (kg) | 0-4 | .552 ± 2.09 | .980 ± 1.42 | 1.13 ± 1.62 | .594 |
| 4-8 | -.207 ± 1.77 | 1.29 ± 1.73 \* | 1.17 ± 1.59 \* | .020 |
| 0-8 | .345 ± 1.95 | 2.28 ± 1.84 \* | 2.30 ± 2.18 \* | .006 |
| LT  (kg) | 0-4 | -.244 ± 1.23 | .506 ± 1.30 | .309 ± 1.77 | .440 |
| 4-8 | .303 ± 1.07 | 1.42 ± 1.63 \* | .773 ± 1.23 | .047 |
| 0-8 | .059 ± 1.02 | 1.76 ± 1.99 \* | 1.08 ± 1.72 \* | .010 |

\*significantly different than C (p<0.05), † significantly different than FS (p<0.05)