

**TITLE**

The impact of body fat on three dimensional motion of the paediatric foot during walking

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Table2. Summary of principle component analysis of 3D foot segment angles. PC1 to PC4 represent the principle components extracted from each waveform. Only the parts of waveform that contributed to explain the variance in each component are shown

| Segment                                 | Principle component  |                 |                      |                 |                      |                 |                      |                 |
|---|----------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|-----------------|
|   | PC1                  |                 | PC2                  |                 | PC3                  |                 | PC4                  |                 |
|   | % Variance explained | % of gait cycle | % Variance explained | % of gait cycle | % Variance explained | % of gait cycle | % Variance explained | % of gait cycle |
| Shank-calcaneus:<br>sagittal plane      | 33.94                | 7 to 25         | 25.51                | 45 to 55        | 21.99                | 93 to 1         | 16.19                | 63 to 65        |
| Shank-calcaneus:<br>frontal plane       | 48.91                | 3 to 51         | 46.57                | 55 to 97        | -                    | -               | -                    | -               |
| Shank-calcaneus:<br>transverse plane    | 53.01                | 99 to 55        | 43.78                | 61 to 89        | -                    | -               | -                    | -               |
| Calcaneus-midfoot:<br>sagittal plane    | 96.56                | 0 to 100        | -                    | -               | -                    | -               | -                    | -               |
| Calcaneus-midfoot:<br>frontal plane     | 97.39                | 0 to 100        | -                    | -               | -                    | -               | -                    | -               |
| Calcaneus-midfoot:<br>transverse plane  | 99.31                | 0 to 100        | -                    | -               | -                    | -               | -                    | -               |
| Midfoot-metatarsal:<br>sagittal plane   | 49.68                | 7 to 53         | 48.45                | 57 to 1         | -                    | -               | -                    | -               |
| Midfoot-metatarsal:<br>frontal plane    | 96.97                | 0 to 100        | -                    | -               | -                    | -               | -                    | -               |
| Midfoot-metatarsal:<br>transverse plane | 98.76                | 0 to 100        | -                    | -               | -                    | -               | -                    | -               |