

**TITLE**

Evaluating the Biomechanics of the Pediatric Foot in Turner Syndrome

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|                                | Heel Strike (0%) |          |         | Toe off (~61%) |          |         | Heel Strike (100%) |          |         |
|--------------------------------|------------------|----------|---------|----------------|----------|---------|--------------------|----------|---------|
|                                | x °              | y °      | z °     | x °            | y °      | z °     | x °                | y °      | z °     |
| <b>Forefoot Hindfoot Angle</b> |                  |          |         |                |          |         |                    |          |         |
| x = DF+/PF-                    | 7.75 ±           | -6.19 ±  | 12.17 ± | 1.79 ±         | 2.32 ±   | 13.08 ± | 7.8 ±              | -5.48 ±  | 14.12 ± |
| y = SUP+/PRO-                  | 1.42             | 0.90     | 1.68    | 4.90           | 2.00     | 2.53    | 2.45               | 1.48     | 2.29    |
| z = ADD+/ABD-                  |                  |          |         |                |          |         |                    |          |         |
| <b>Forefoot Tibia Angle</b>    |                  |          |         |                |          |         |                    |          |         |
| x = DF+/PF-                    | 7.13 ±           | -51.52 ± | 13.65 ± | -20.25 ±       | -49.01 ± | 41.89 ± | 4.24 ±             | -58.23 ± | 13.11 ± |
| y = SUP+/PRO-                  | 2.83             | 3.49     | 3.85    | 12.32          | 6.34     | 8.24    | 6.7                | 3.69     | 6.09    |
| z = ADD+/ABD-                  |                  |          |         |                |          |         |                    |          |         |
| <b>Hindfoot Tibia Angle</b>    |                  |          |         |                |          |         |                    |          |         |
| x = DF+/PF-                    | -3.72 ±          | -44.64 ± | 9.25 ±  | -25.83 ±       | -50.50 ± | 33.24 ± | -9.04 ±            | -52.08 ± | 9.64 ±  |
| y = IN+/EV-                    | 2.26             | 3.78     | 2.13    | 7.02           | 4.47     | 4.88    | 8.32               | 4.30     | 4.64    |
| z = INT+/EX-                   |                  |          |         |                |          |         |                    |          |         |
| <b>RHXFFA</b>                  |                  |          |         |                |          |         |                    |          |         |
| x = DF+/PF-                    | 17.54 ±          |          |         | 35.32 ±        |          |         | 15.01 ±            |          |         |
|                                | 3.46             |          |         | 6.84           |          |         | 4.40               |          |         |

Table 1 Mean Inter-Segmental Angles through the gait cycle in sagittal (x), frontal (y) and transverse planes (right foot)

DF(+)/PF (-) Dorsiflexion/Plantarflexion

Sup(+)/Pro (-) Supination/Pronation

Add(+)/Abd(-) Adduction/Abduction

In(+)/Ev(-)Inversion/Eversion

Int (+)/Ex(-) Internal rotation/External rotation

