

Landing knee valgus in jump tasks on sand/land

265 **Table 1. Frontal plane projection angles (mean \pm SD) for females and males (left, right and combined) for single leg landing and drop jump**
 266 **tasks across both land and sand conditions.**

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Females							Males					
SLL			DJ				SLL			DJ		
L	R	C	L	R	C	L	R	C	L	R	C	
<u>LAND</u>												
M\pmSD	11.9 \pm 3.5	11.2 \pm 4.8	11.6 \pm 4.1	10.0 \pm 5.0	7.8 \pm 4.9	8.9 \pm 5.0	1.5 \pm 6.9	1.9 \pm 7.5	1.7 \pm 7.1	-2.7 \pm 7.1	-1.0 \pm 10.0	-1.9 \pm 8.6
<u>SAND</u>												
M\pmSD	7.7 \pm 2.5	7.2 \pm 5.6	7.4 \pm 4.2	10.2 \pm 4.5	7.2 \pm 5.5	8.7 \pm 5.1	2.1 \pm 5.3	3.0 \pm 7.4	2.5 \pm 6.4	-1.5 \pm 6.8	0.6 \pm 9.7	-0.4 \pm 8.4

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280 Abbreviations: SLL: Single Leg Landing, DJ: Drop Jump, M: Mean, SD: Standard Deviation, L: Left, R: Right, C: Combined

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282 **Table 2. Mean difference (MD) \pm 90% compatibility limits (CL) with magnitude based**
 283 **decisions, and the second generation p-value (P δ) for all jumps across conditions for male**
 284 **(n =20) and female (n = 11) subgroups.**

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	MD (degs) (90% CL) (Land-Sand)	Qualitative interpretation	Threshold for small (degs)	P δ
<u>Females</u>				
DJ-L	-0.12 \pm 3.0	Unclear	1.1	0.5
DJ-R	0.64 \pm 2.8	Unclear	0.9	0.5
SLL-L	4.3 \pm 2.8	*** moderate/ * large \downarrow	0.6	0
SLL-R	4.1 \pm 3.8	** small/ * moderate \downarrow	1.0	0
<u>Males</u>				
DJ-L	-1.3 \pm 3.2	Unclear	1.4	0.5
DJ-R	-1.6 \pm 3.0	*trivial/*small \uparrow	2.0	0.5
SLL-L	-0.7 \pm 2.2	Unclear	1.2	0.5
SLL-R	-1.1 \pm 1.9	* trivial/* small \uparrow	1.5	0.5

Note: * = possibly, ** = likely, *** = very likely for the qualitative inference. The arrow denotes either an increase \uparrow or decrease \downarrow in knee valgus on the sand surface, **DJ-L** = drop jump landing left, **DJ-R** = drop jump landing right, **SLL-L** = single leg landing left, **SLL-R** = single leg landing right, p δ = second generation p=value

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294 **Table 3. Combined effects of male and female subgroups for each jump between conditions.**

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Jump Task	Mean difference (90% CL) for combined group effects	Qualitative interpretation	Threshold for small
DJ-L	^a 1.2 ±4.3	Unclear	1.7
	^b -0.7 ±2.1	Unclear	
DJ-R	^a 2.2 ±4.0	*small/*trivial ↑ for females	1.9
	^b -0.5 ±2.0	**trivial ↓ for land	
SLL-L	^a 4.9 ±3.0	*** small / ** moderate ↑ for females	1.3
	^b 1.8 ±1.5	* small/ * trivial ↑ for land	
SLL-R	^a 5.1 ±4.0	*** small/ * moderate ↑ for females	1.5
	^b 1.5 ±2.0	* small/*trivial ↑ for land	

Note: a = female – male effects, b = female – male / 2 effects; * = possibly, ** = likely, *** = very likely for the qualitative inference, **DJ-L** = drop jump landing left, **DJ-R** = drop jump landing right, **SLL-L** = single leg landing left, **SLL-R** = single leg landing right.

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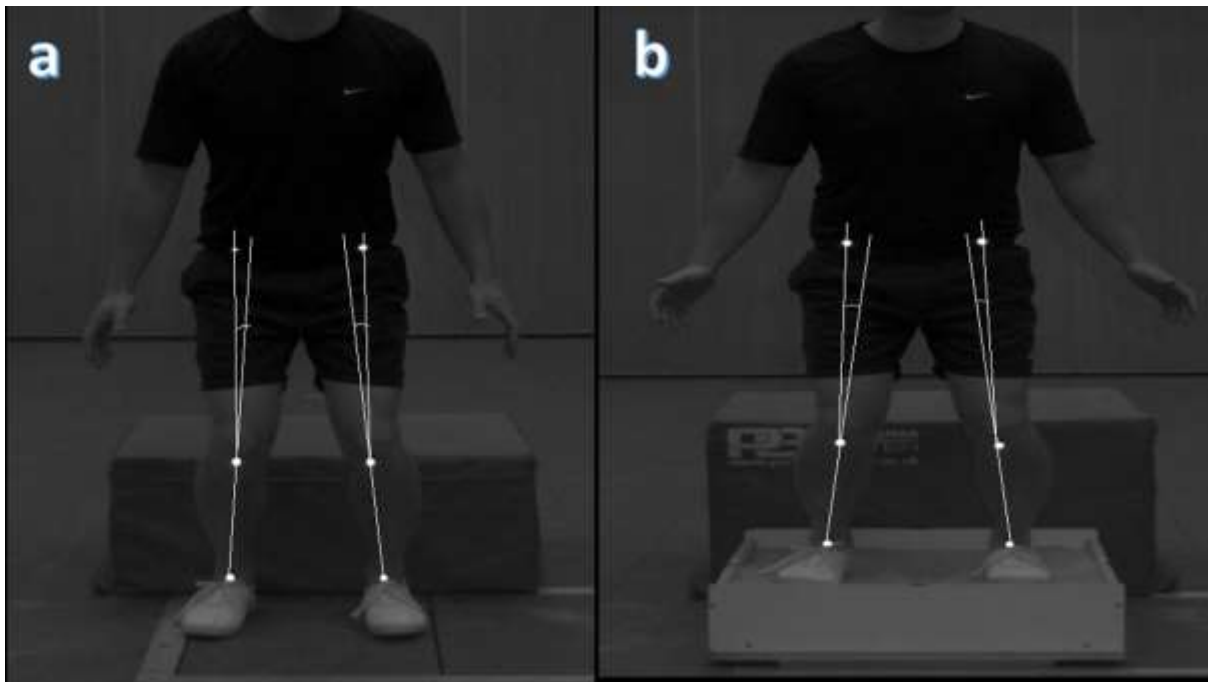
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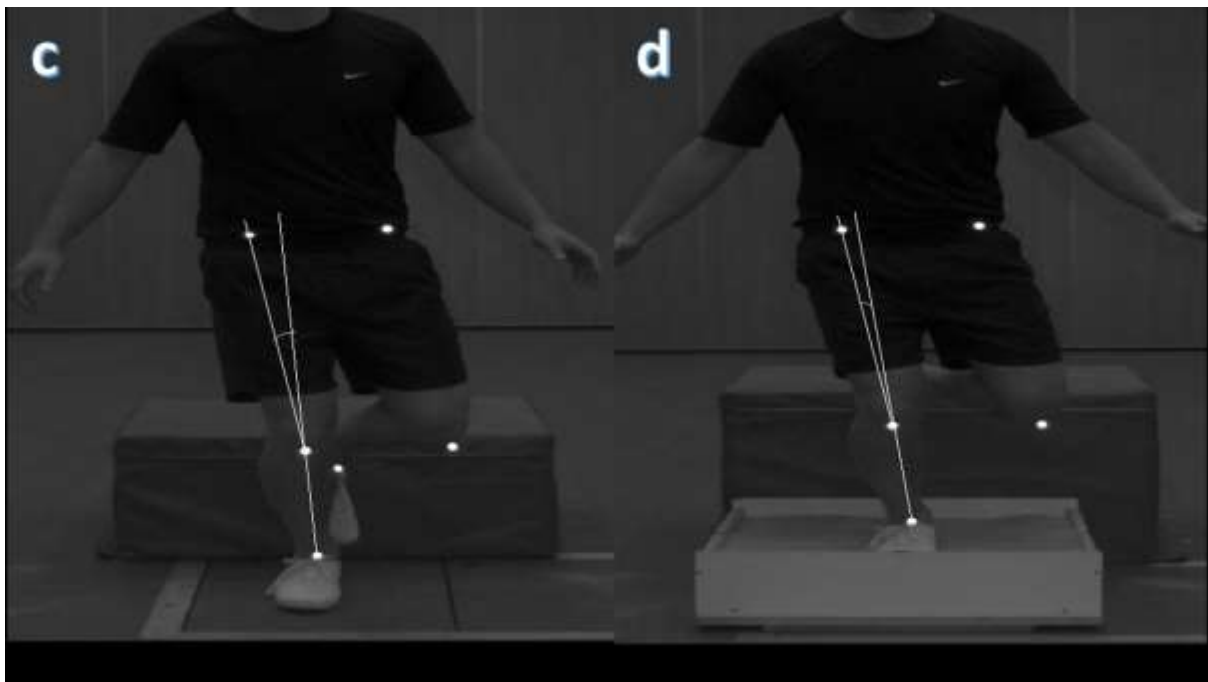
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663 Figure 1



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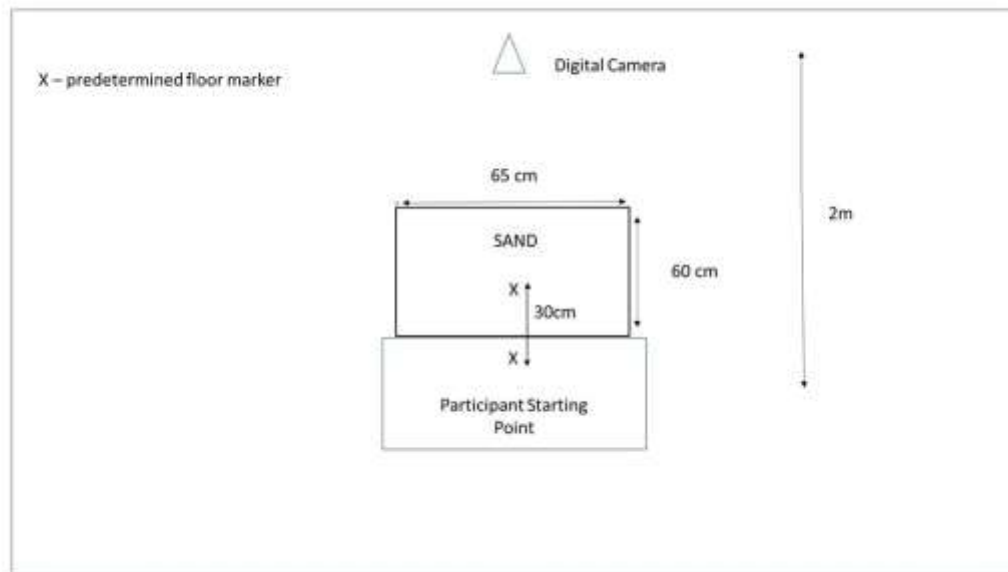
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671 Figure 2



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