HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

PROFILE ASSESSMENT
Renato Shiratsu
20th April, 2024

PROFILE INFORMATION

NAME	Renato Shiratsu
ORGANISATION	On Morumbi Clinica Medica
DATE OF BIRTH	16th January, 1981
GENDER	Male
HEIGHT	178cm / 70in
WEIGHT	78kg / 171lb
AGE	43

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

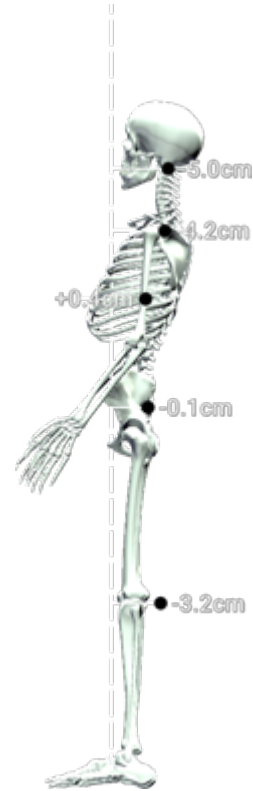# Standing Posture
Posture and Stability Assessment

Standing Posture is a baseline postural assessment that can provide insight into an individual's structural balance, alignment, and postural strategy.
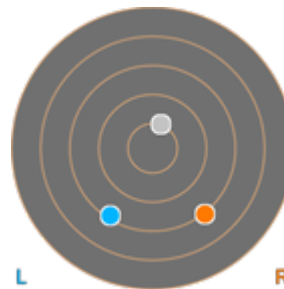
RESULTS

BALANCE SNAPSHOT

SIDETRAK POSTURAL DEVIATION
(SAGITTAL PLANE/SIDE VIEW)

- +5.0cm
- +4.2cm
- +0.4cm
- -0.1cm
- -3.2cm

KEY RESULTS

Neck lateral flexion	3.4° Right ▼
Trunk lateral flexion	0.1° Right ▼
Pelvis Lateral Tilt	0.8° Left ▼
Trunk Flexion	3.4° Posterior

SWAYTRAK MOVEMENT PATHS (KNEES AND CENTRE OF MASS)

L   R

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Single Leg Stand
Balance Assessment

Standing balance over time is assessed while standing on one leg.

Eyes	Open
Surface	Stable
Time	10.0 s

RESULTS

BALANCE RESULTS (LEFT)

SNAPSHOT – START OF TEST	CENTER OF MASS PATH
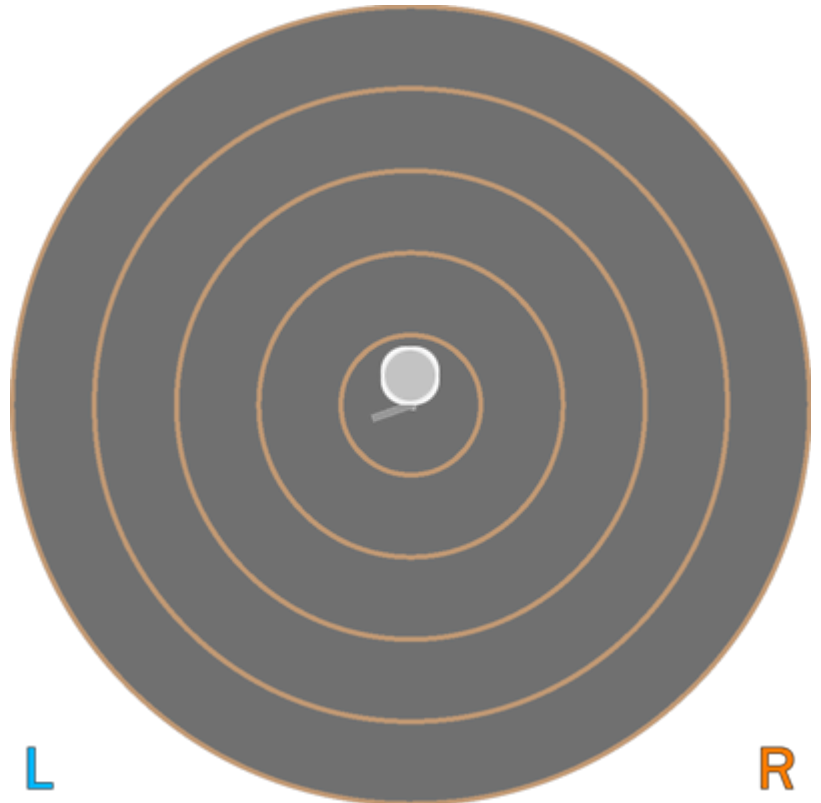
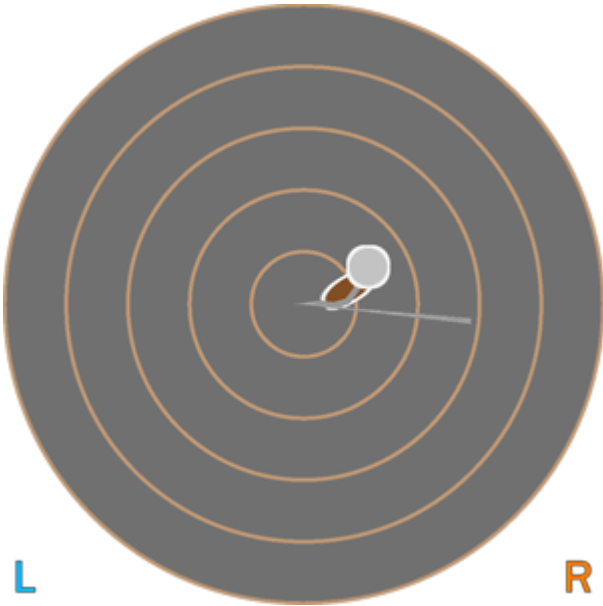| KEY METRICS	RESULTS
Ellipse Area	0.17 cm-2
COM Path Length	10.73 cm
Range – ML	1.08 cm
Range – AP	3.18 cm
Pelvis Lateral Tilt	9.4° Left ▼
Trunk lateral flexion	5.0° Left ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Single Leg Stand
Balance Assessment

Standing balance over time is assessed while standing on one leg.

Eyes	Open
Surface	Stable
Time	10.0 s

RESULTS

BALANCE RESULTS (RIGHT)

SNAPSHOT – START OF TEST	CENTER OF MASS PATH

L   R

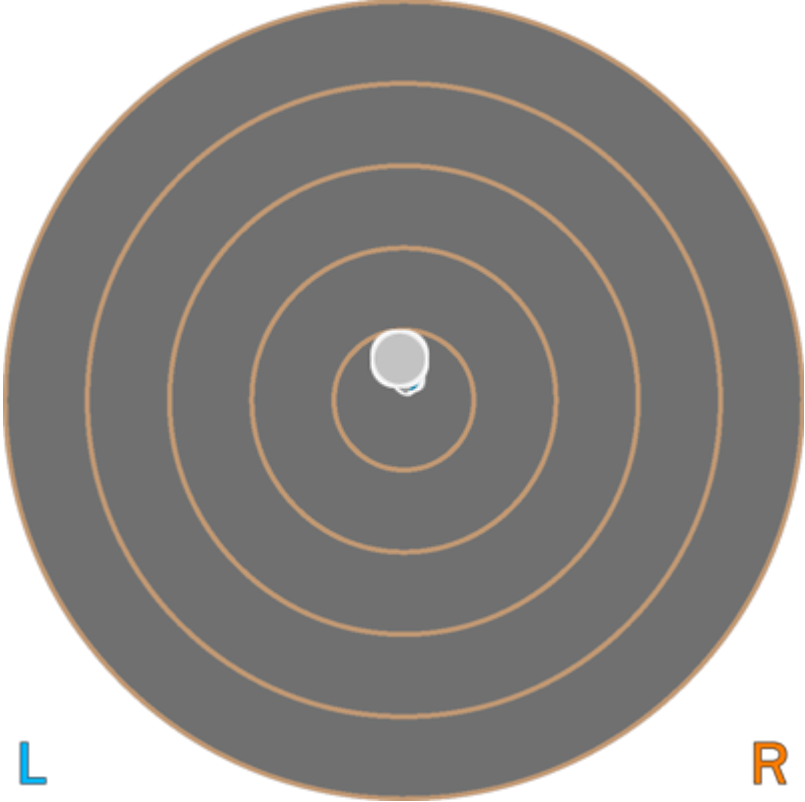| KEY METRICS	RESULTS
Ellipse Area	4.80 cm-2
COM Path Length	21.15 cm
Range – ML	5.55 cm
Range – AP	5.57 cm
Pelvis Lateral Tilt	7.6° Right ▼
Trunk lateral flexion	4.8° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Tandem Stand
Balance Assessment

Standing balance over time is assessed with one foot directly in front of the other.

Eyes	Closed
Surface	Stable
Time	10.0 s

RESULTS

<table>
<tr><td colspan="2" align="center">BALANCE RESULTS (LEFT)</td></tr>
<tr><td align="center">SNAPSHOT – START OF TEST</td><td align="center">CENTER OF MASS PATH</td></tr>
</table>

L   R

KEY METRICS	RESULTS
Ellipse Area	1.07 cm-2
COM Path Length	20.48 cm
Range – ML	4.54 cm
Range – AP	3.61 cm
Pelvis Lateral Tilt	0.8° Left ▼
Trunk lateral flexion	0.3° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

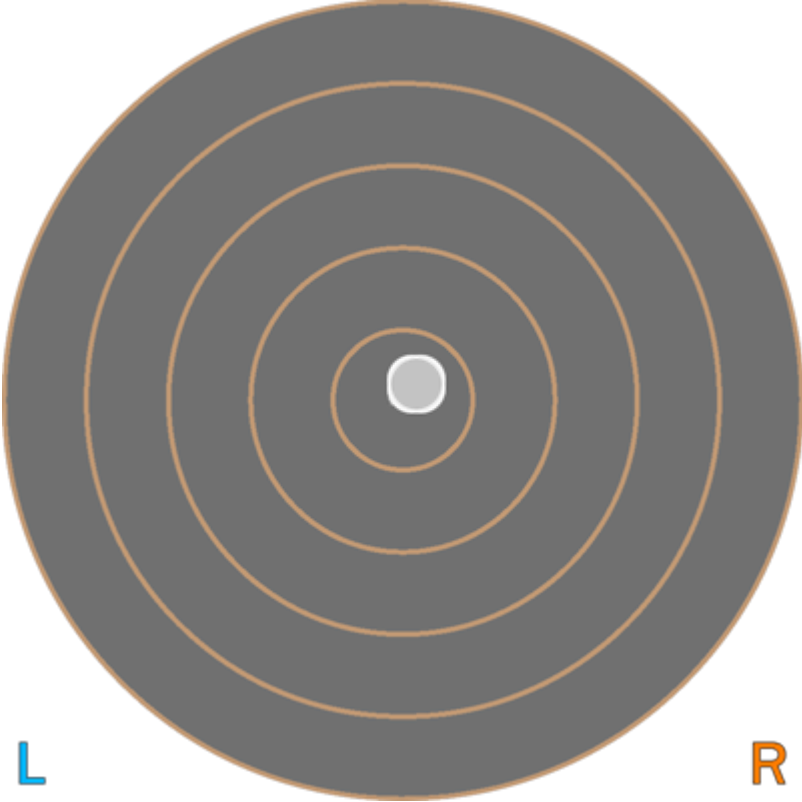## Tandem Stand
Balance Assessment

Standing balance over time is assessed with one foot directly in front of the other.

Eyes	Closed
Surface	Stable
Time	10.0 s

RESULTS

BALANCE RESULTS (RIGHT)

SNAPSHOT – START OF TEST	CENTER OF MASS PATH

KEY METRICS	RESULTS
Ellipse Area	0.62 cm-2
COM Path Length	12.98 cm
Range – ML	2.04 cm
Range – AP	2.30 cm
Pelvis Lateral Tilt	0.7° Left ▼
Trunk lateral flexion	0.1° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Cervical Spine Flexion/Extension
Range of Motion Assessment

Cervical Spine Flexion (forward) / Extension (backwards) calculated by taking the inclination of the head relative to the line of the trunk in the sagittal plane (side view).

RESULTS

PEAK FLEXION SNAPSHOT	PEAK EXTENSION SNAPSHOT

KEY RESULTS	STARTING POSITION	PEAK FLEXION	PEAK EXTENSION	TOTAL RANGE
Flexion/Extension	0.0°	24.6°	8.7°	33.3°
Trunk Flexion	1.0° Posterior	0.1° Anterior	2.6° Posterior	N/A
Trunk lateral flexion	0.7°	0.9° Right ▼	0.8° Right ▼	N/A

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Cervical Spine Lateral Flexion
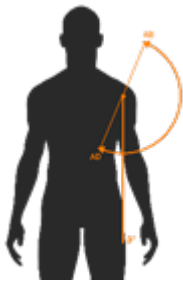**Range of Motion Assessment**

Cervical Spine Lateral Flexion (left and right) is calculated by taking the inclination of the head relative to the line of the trunk in the frontal plane (front view).

RESULTS

PEAK LEFT LATERAL FLEXION	PEAK RIGHT LATERAL FLEXION

KEY RESULTS	PEAK FLEXION (LEFT)	PEAK FLEXION (RIGHT)	IMBALANCE
Lateral Flexion	23.2°	31.8°	+8.6°
Trunk Flexion	3.8° Posterior	6.1° Posterior	N/A
Trunk lateral flexion at Peak Flexion	5.7° Left ▼	7.5° Right ▼	+1.7°

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Shoulder Adduction/Abduction
Range of Motion Assessment

Shoulder Adduction/Abduction is calculated by taking the angle created by the humerus (upper arm) relative to the line of the trunk in the frontal plane (front view).

RESULTS

PEAK ADDUCTION		PEAK ABDUCTION	
LEFT	RIGHT	LEFT	RIGHT

KEY RESULTS	LEFT	RIGHT	IMBALANCE
Shoulder Adduction	62.4°	64.5°	+2.1°
Shoulder Abduction	183.1°	180.4°	+2.7°
Trunk lateral flexion at Peak Abduction	3.4° Right ▼	1.3° Left ▼	+2.2°

PRACTITIONER COMMENTS (LEFT)

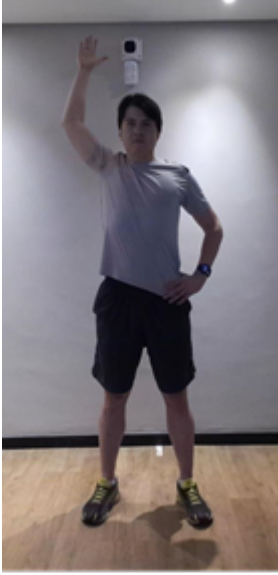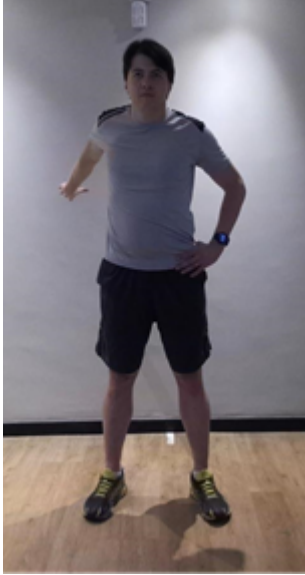**PRACTITIONER COMMENTS (RIGHT)**

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Shoulder Flexion/Extension
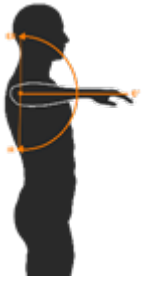**Range of Motion Assessment**

Shoulder Flexion/Extension is calculated by taking the angle created by the humerus (upper arm) relative to the line of the trunk in the sagittal plane (side view).

RESULTS

PEAK FLEXION		PEAK EXTENSION	
LEFT	RIGHT	LEFT	RIGHT

KEY RESULTS	LEFT	RIGHT	IMBALANCE
Shoulder Flexion	198.9°	215.2°	+16.4°
Shoulder Extension	68.9°	69.9°	+1.0°
Trunk lateral flexion at Peak Flexion	1.6° Right ▼	1.0° Left ▼	+0.5°

PRACTITIONER COMMENTS (LEFT)

PRACTITIONER COMMENTS (RIGHT)

HUMANTRAK
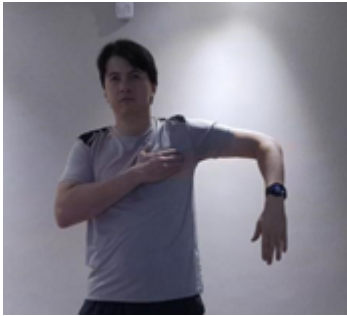MOVEMENT ANALYSIS SYSTEM

Shoulder Internal/External Rotation
Range of Motion Assessment

Shoulder Internal/External Rotation calculated by taking the angle created by the forearm relative to horizontal in the sagittal plane (side view).
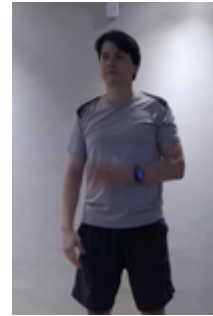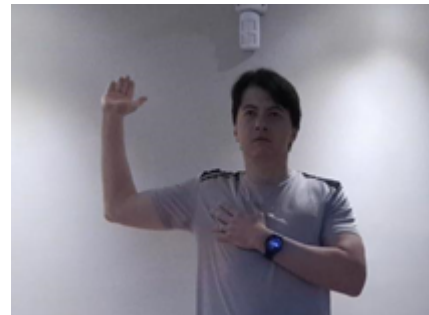
RESULTS

PEAK INTERNAL ROTATION	
LEFT	RIGHT

PEAK EXTERNAL ROTATION	
LEFT	RIGHT

KEY RESULTS	LEFT	RIGHT	IMBALANCE
Shoulder Internal Rotation	69.3°	66.5°	+2.8°
Shoulder External Rotation	98.4°	87.0°	+11.4°
Total ROM	167.7°	153.5°	+14.2°
Trunk lateral flexion at Peak Internal Rotation	2.1° Right ▼	0.5° Left ▼	+1.7°

PRACTITIONER COMMENTS (LEFT)

PRACTITIONER COMMENTS (RIGHT)

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Drop Jump
Lower Body Dynamic Assessment

Drop Jump is used to assess coordination, balance, joint stability and power, requiring the patient to drop from a box or platform and transition from landing into an explosive jump .

Height   unspecified

RESULTS

PHASE	Initial Contact	Peak Knee Flexion
SNAPSHOTS		

Result		
Knee-Ankle Separation Ratio	0.9	1.0
Hip Flexion (Left)	32.8°	73.6°
Hip Flexion (Right)	26.0°	71.6°
Knee Flexion (Left)	34.9°	80.4°
Knee Flexion (Right)	25.9°	78.5°

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
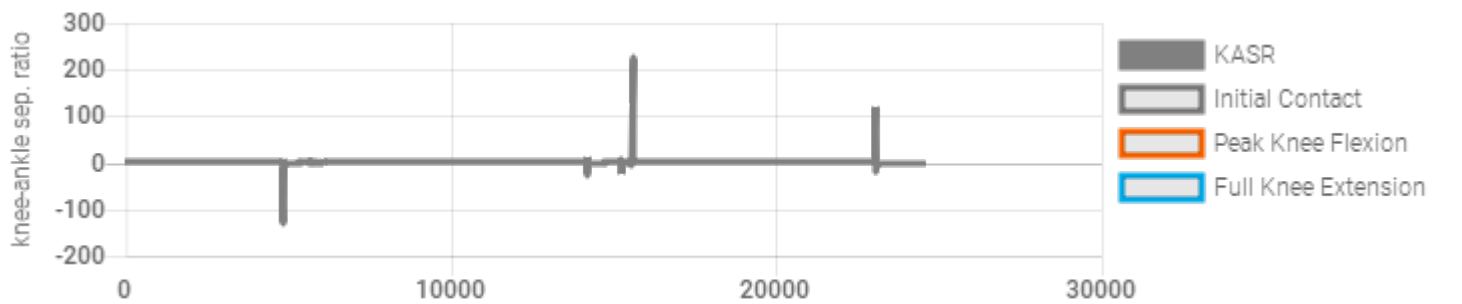
Countermovement Jump
Lower Body Dynamic Assessment

The Countermovement Jump assesses the landing posture during an explosive dynamic exercise.

RESULTS

PEAK KNEE FLEXION
after landing

KEY METRICS (TORSO)		
Jump Height	43.49 cm	
Peak Spine Tilt after landing	10.9° **Anterior**	
Peak Lateral Spine Tilt after landing	2.1° **Left**	
Peak Lateral Pelvic Tilt after landing	2.2° **Right**	

KEY METRICS (LEGS)	LEFT LEG	RIGHT LEG	ASYMMETRY
Peak Hip Flexion after landing	42.1°	39.7°	5.8%
Peak Knee Flexion after landing	57.7°	57.1°	1.1%
Peak Knee Valgus/Varus after landing	7.5° **Varus**	8.7° **Varus**	14.3%

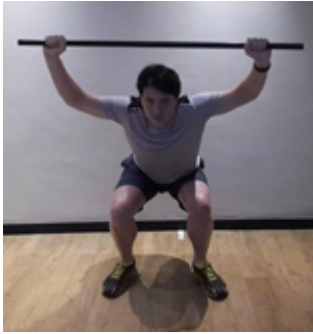## PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Overhead Squat

Lower Body Dynamic Assessment

Overhead squat is a dynamic movement assessment providing insight into an individual's balance, stability, flexibility, and strength.

RESULTS

SNAPSHOTS			
START	REP 1: PEAK KNEE FLEXION	REP 2: PEAK KNEE FLEXION	REP 3: PEAK KNEE FLEXION

KEY RESULTS	REP 1	REP 2	REP 3
Peak Knee Flexion (Left)	117.1°	114.6°	112.0°
Peak Knee Flexion (Right)	119.5°	119.7°	118.0°
Trunk Flexion at Peak Knee Flexion	36.5° Anterior	38.7° Anterior	37.6° Anterior
Trunk lateral flexion at Peak Knee Flexion	3.2° Right ▼	2.8° Right ▼	3.2° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

Single Leg Squat

Lower Body Dynamic Assessment

Single Leg Squat is a dynamic movement assessment that provides insight into an individual's balance, stability, flexibility, and strength.

RESULTS

LEFT LEG			
SNAPSHOTS			
START	REP 1: PEAK KNEE FLEXION	REP 2: PEAK KNEE FLEXION	REP 3: PEAK KNEE FLEXION

KEY RESULTS	REP 1	REP 2	REP 3
Peak Knee Flexion	87.2°	90.0°	92.0°
Knee Displacement (total)	19.4 cm	17.7 cm	30.1 cm
Peak Knee Valgus	17.9° **Valgus**	22.9° **Valgus**	23.7° **Valgus**
Peak Knee Varus	0.4° **Varus**	0.1° **Varus**	2.8° **Varus**
Trunk lateral flexion at Peak Knee Flexion	1.0° **Right** ▼	0.2° **Right** ▼	1.0° **Left** ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

RESULTS

RIGHT LEG			
SNAPSHOTS			
START	REP 1: PEAK KNEE FLEXION	REP 2: PEAK KNEE FLEXION	REP 3: PEAK KNEE FLEXION

KEY RESULTS	REP 1	REP 2	REP 3
Peak Knee Flexion	94.7°	95.6°	84.3°
Knee Displacement (total)	19.6 cm	15.1 cm	22.3 cm
Peak Knee Valgus	14.1° **Valgus**	13.4° **Valgus**	10.1° **Valgus**
Peak Knee Varus	1.8° **Varus**	0.7° **Varus**	5.6° **Varus**
Trunk lateral flexion at Peak Knee Flexion	1.7° Left ▼	0.7° Right ▼	3.8° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

30 Second Sit To Stand
Lower Body Dynamic Assessment

30 Second Sit To Stand is an assessment that provides information on function leg power and strength of participants.

RESULTS

KEY RESULTS	OVERALL
Successful Repetitions	16
Peak Knee Extension	L 3.3° R 3.3°
Knee Displacement	L 8.9 cm R 8.6 cm
Peak Lateral Trunk Flexion	2.9° Right ▼

SNAPSHOTS

START	1st REP: PEAK TRUNK FLEXION	Q1 REP: PEAK TRUNK FLEXION	MEDIAN REP: PEAK TRUNK FLEXION	Q3 REP: PEAK TRUNK FLEXION	LAST REP: PEAK TRUNK FLEXION

KEY METRICS	1st REP	Q1 REP	MEDIAN REP	Q3 REP	LAST REP
Knee-Ankle Separation Ratio	1.0	1.0	1.0	0.9	0.9
Lateral Trunk Flexion	0.1° Right ▼	2.1° Right ▼	0.1° Left ▼	2.2° Right ▼	0.5° Left ▼
Knee Flexion	L 76.8° R 77.1°	L 79.4° R 80.1°	L 75.0° R 76.8°	L 69.0° R 73.6°	L 72.5° R 75.3°
Hip Flexion	L 81.9° R 79.8°	L 82.3° R 79.7°	L 77.8° R 75.7°	L 74.1° R 71.9°	L 74.1° R 71.6°
Trunk Flexion	0.1° Posterior	2.1° Posterior	0.1° Anterior	2.2° Posterior	0.5° Anterior

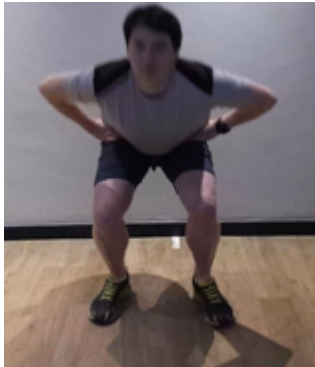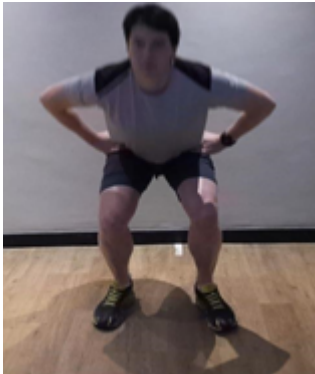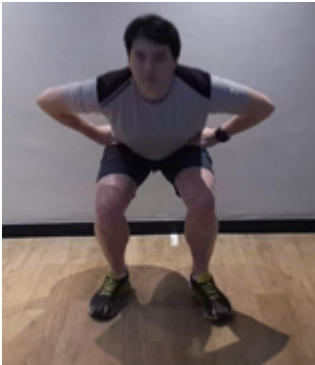Legend: CoM Y Axis, Trunk Flexion

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
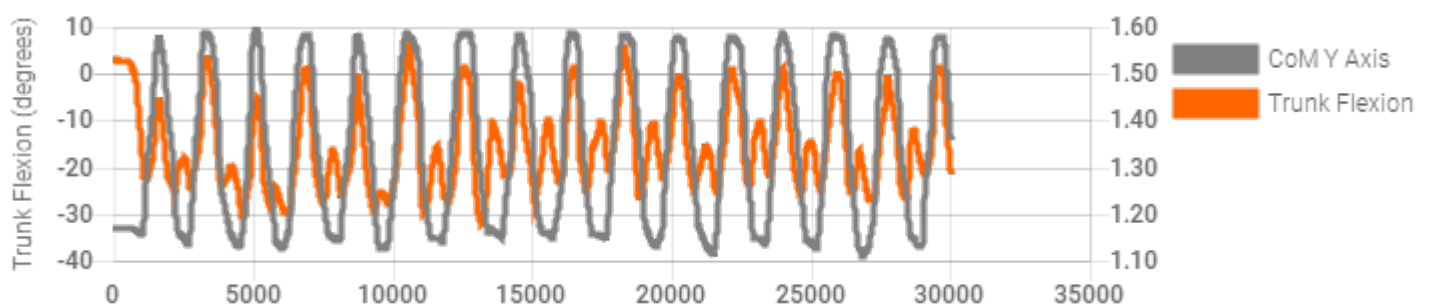
Squat

Lower Body Dynamic Assessment

Squat is a dynamic movement assessment providing insight into an individual's balance, stability, flexibility, and strength.

RESULTS

SNAPSHOTS			
START	REP 1: PEAK KNEE FLEXION	REP 2: PEAK KNEE FLEXION	REP 3: PEAK KNEE FLEXION

KEY RESULTS	REP 1	REP 2	REP 3
Peak Knee Flexion (Left)	113.9°	114.3°	113.5°
Peak Knee Flexion (Right)	114.7°	115.4°	116.7°
Spine Tilt at Peak Knee Flexion	48.2° Anterior	43.1° Anterior	45.6° Anterior
Trunk lateral flexion at Peak Knee Flexion	0.0° Right ▼	4.3° Right ▼	1.4° Right ▼

PRACTITIONER COMMENTS

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM
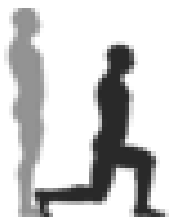
Lunge
Lower Body Dynamic Assessment

The Lunge assesses the strength and range of motion of the knees and hips.

RESULTS

PEAK KNEE FLEXION	
LEFT	RIGHT

KEY METRICS	LEFT LEG	RIGHT LEG	ASYMMETRY
Peak Hip Flexion	72.2°	88.2°	18.2%
Peak Knee Flexion	91.0°	106.5°	14.6%
Peak Spine Lateral Tilt	2.4° Posterior	5.8° Anterior	142.1%
Peak Pelvic Lateral Tilt	1.7° Right	5.4° Right	N/A

PRACTITIONER COMMENTS (LEFT)

PRACTITIONER COMMENTS (RIGHT)

HUMANTRAK
MOVEMENT ANALYSIS SYSTEM