HUMANTRAK
MOVEMENT ANALYSIS SYSTEM

# PROFILE ASSESSMENT

Ricardo MANTOVANI

9th April, 2024

## PROFILE INFORMATION

| NAME | Ricardo MANTOVANI |
|---|---|
| ORGANISATION | On Morumbi Clinica Medica |
| DATE OF BIRTH | 21st March, 1969 |
| GENDER | Male |
| HEIGHT | 189cm / 74in |
| WEIGHT | 97kg / 213lb |
| AGE | 55 |

# 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

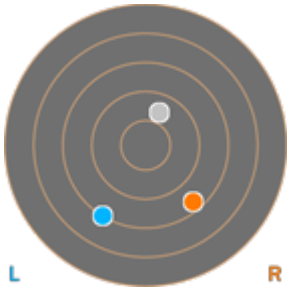
### BALANCE SNAPSHOT

### SIDETRAK POSTURAL DEVIATION (SAGITTAL PLANE/SIDE VIEW)


### KEY RESULTS

| | |
|---|---|
| Neck lateral flexion | 1.2° Right ▼ |
| Trunk lateral flexion | 0.1° Right ▼ |
| Pelvis Lateral Tilt | 0.4° Left ▼ |
| Trunk Flexion | 1.2° Posterior |

### SWAYTRAK MOVEMENT PATHS (KNEES AND CENTRE OF MASS)




### PRACTITIONER COMMENTS

# Single Leg Stand

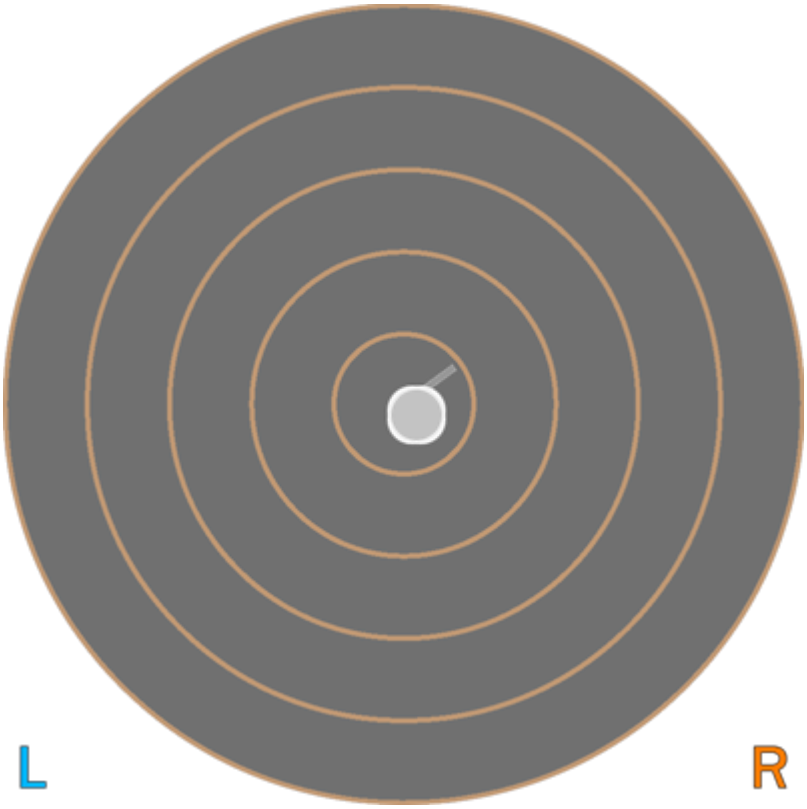
**Balance Assessment**

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** | 0.62 cm-2 |
| **COM Path Length** | 22.48 cm |
| **Range – ML** | 1.94 cm |
| **Range – AP** | 2.10 cm |
| **Pelvis Lateral Tilt** | 5.5° Left ▼ |
| **Trunk lateral flexion** | 3.0° Left ▼ |

### PRACTITIONER COMMENTS

# Single Leg Stand

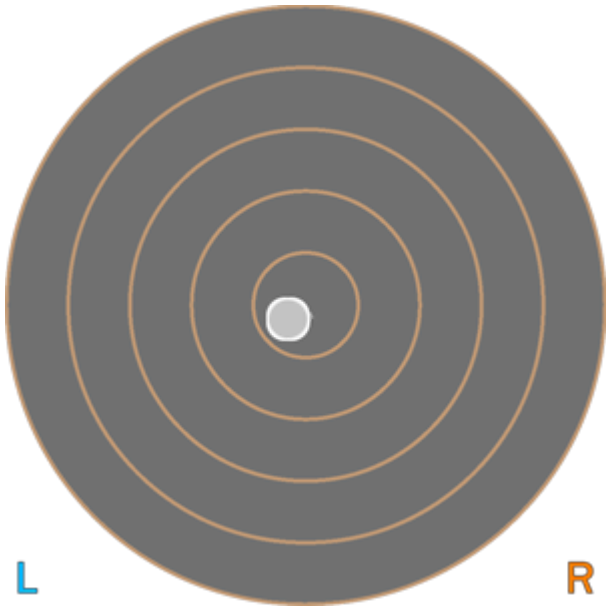
**Balance Assessment**

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 |
|---|---|
|  |   |

| KEY METRICS | RESULTS |
|---|---|
| Ellipse Area | 0.58 cm-2 |
| COM Path Length | 14.30 cm |
| Range – ML | 2.24 cm |
| Range – AP | 1.45 cm |
| Pelvis Lateral Tilt | 9.0° Right ▼ |
| Trunk lateral flexion | 5.2° Right ▼ |

PRACTITIONER COMMENTS

# Tandem Stand

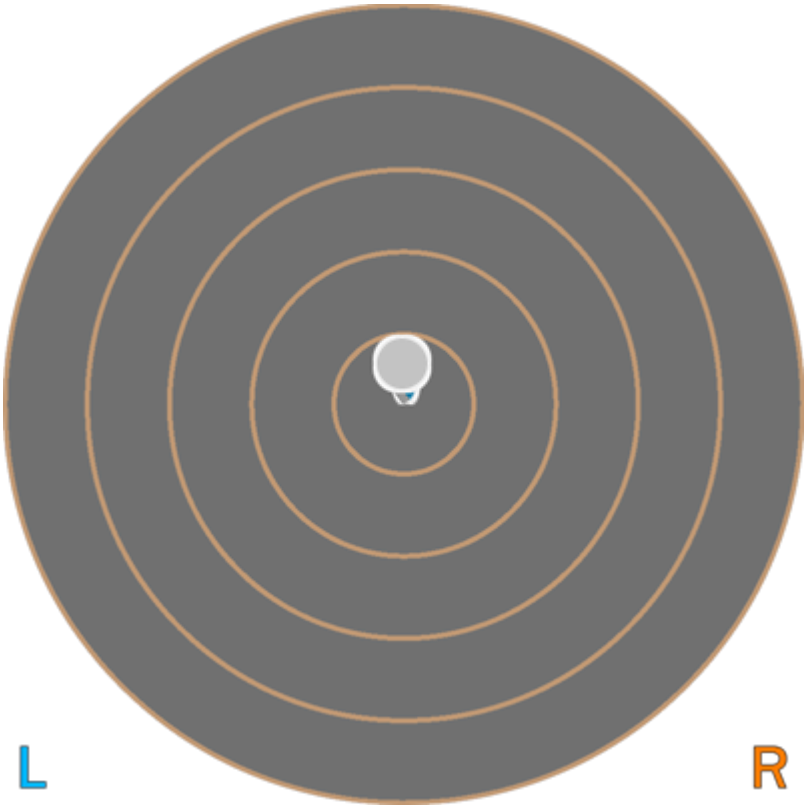
**Balance Assessment**

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 (LEFT)

| SNAPSHOT – START OF TEST | CENTER OF MASS PATH |
|---|---|
|  |   |

| KEY METRICS | RESULTS |
|---|---|
| **Ellipse Area** | 0.78 cm-2 |
| **COM Path Length** | 24.17 cm |
| **Range – ML** | 2.58 cm |
| **Range – AP** | 4.36 cm |
| **Pelvis Lateral Tilt** | 0.7° Right ▼ |
| **Trunk lateral flexion** | 0.9° Right ▼ |

PRACTITIONER COMMENTS

## Tandem Stand

**Balance Assessment**

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

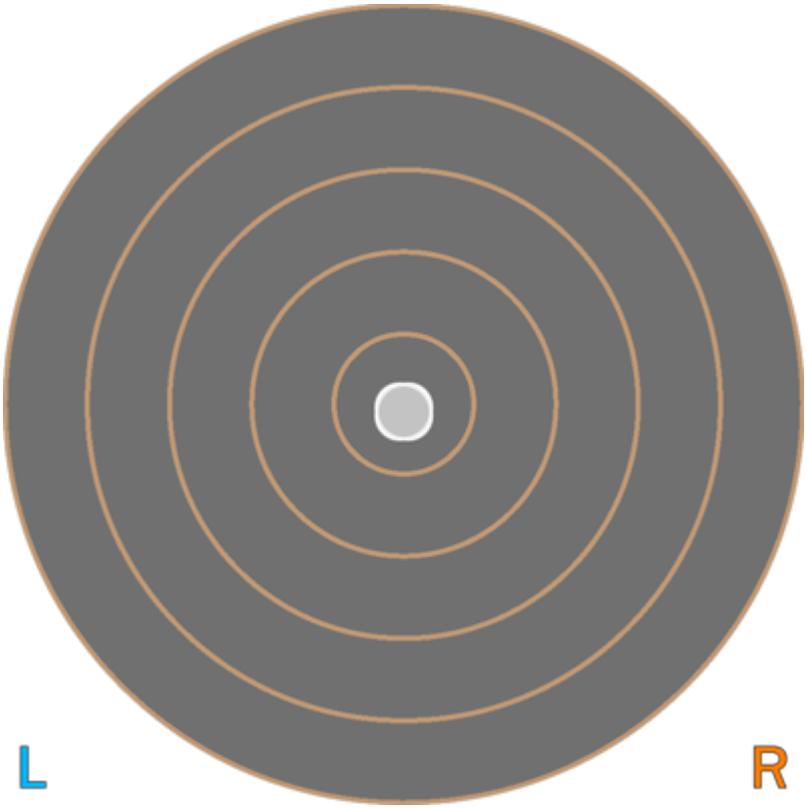
| | |
|---|---|
| **Eyes** | Closed |
| **Surface** | Stable |
| **Time** | 10.0 s |

# RESULTS

## BALANCE RESULTS (RIGHT)

### SNAPSHOT – START OF TEST

### CENTER OF MASS PATH




| KEY METRICS | RESULTS |
|---|---|
| **Ellipse Area** | 0.99 cm-2 |
| **COM Path Length** | 21.69 cm |
| **Range – ML** | 3.22 cm |
| **Range – AP** | 2.17 cm |
| **Pelvis Lateral Tilt** | 0.4° Left ▼ |
| **Trunk lateral flexion** | 0.2° Right ▼ |

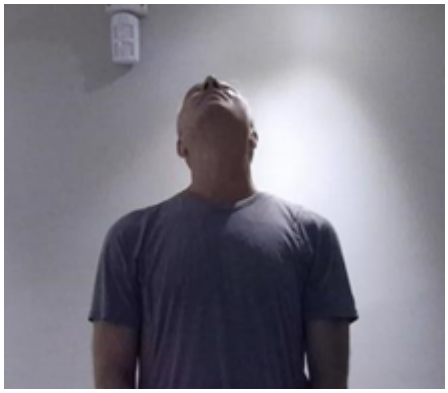
### PRACTITIONER COMMENTS


# 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° | 8.7° | 23.8° | 32.5° |
| **Trunk Flexion** | 5.0° **Posterior** | 3.2° **Posterior** | 10.7° **Posterior** | N/A |
| **Trunk lateral flexion** | 0.2° | 0.7° **Right** ▼ | 1.1° **Right** ▼ | N/A |

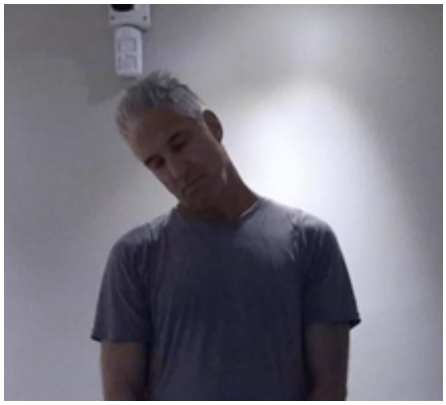
### PRACTITIONER COMMENTS


# Cervical Spine Lateral Flexion

**Range of Motion Assessment**

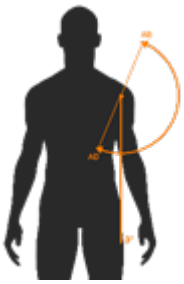
Cervical Spine Lateral Flexion (left and right) is calculated by taking the inclination of the head relative to the line of the trunk in the frontal plane (front view).

## RESULTS

| PEAK LEFT LATERAL FLEXION | PEAK RIGHT LATERAL FLEXION |
|---|---|
|  |  |

| KEY RESULTS | PEAK FLEXION (LEFT) | PEAK FLEXION (RIGHT) | IMBALANCE |
|---|---|---|---|
| **Lateral Flexion** | 19.7° | 21.7° | +2.0° |
| **Trunk Flexion** | 6.7° **Posterior** | 6.4° **Posterior** | N/A |
| **Trunk lateral flexion** at Peak Flexion | 4.0° Left ▼ | 3.7° Right ▼ | +0.3° |

### PRACTITIONER COMMENTS

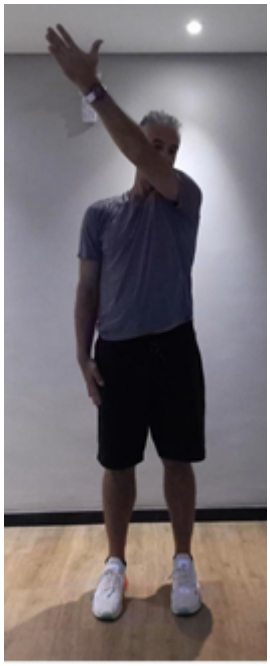
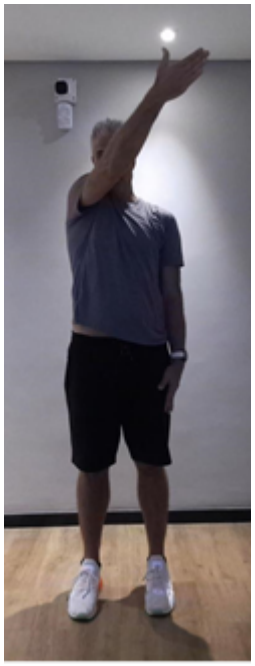
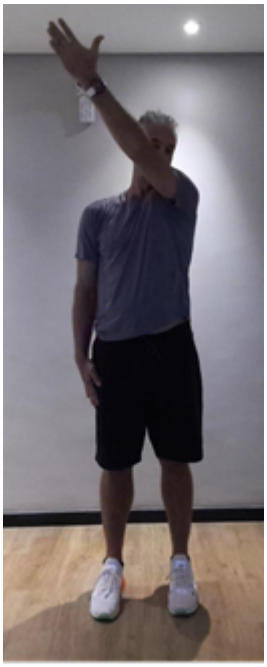
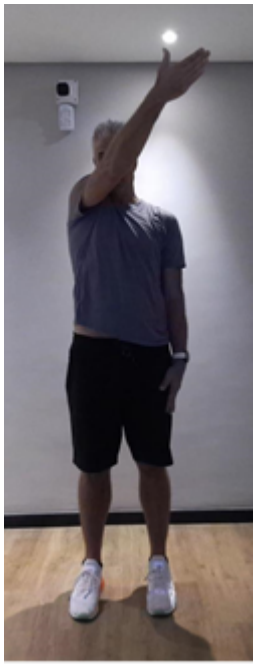


# Shoulder Adduction/Abduction

**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** | 108.8° | 105.9° | +2.9° |
| **Shoulder Abduction** | 258.8° | 260.3° | +1.5° |
| **Trunk lateral flexion** at Peak Abduction | 1.4° Left ▼ | 1.3° Right ▼ | +0.0° |

PRACTITIONER COMMENTS ( LEFT )

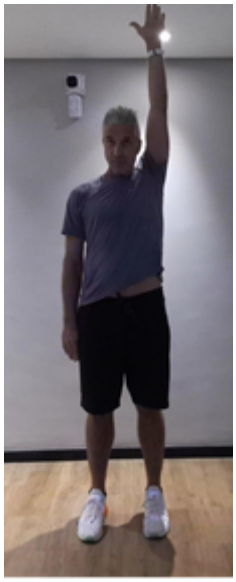
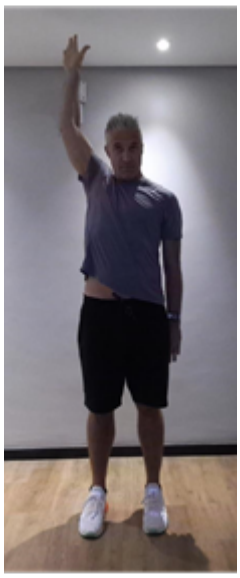
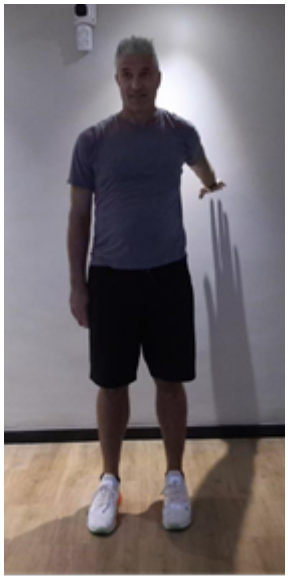
PRACTITIONER COMMENTS ( RIGHT )

# 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).

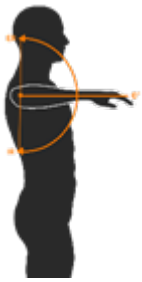
## RESULTS

| PEAK FLEXION | | PEAK EXTENSION | |
|---|---|---|---|
| LEFT | RIGHT | LEFT | RIGHT |
|  |  |  |  |

| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| **Shoulder Flexion** | 188.3° | 198.5° | +10.2° |
| **Shoulder Extension** | 70.4° | 81.9° | +11.5° |
| **Trunk lateral flexion** at Peak Flexion | 0.4° Left ▼ | 1.5° Left ▼ | +1.1° |

PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )



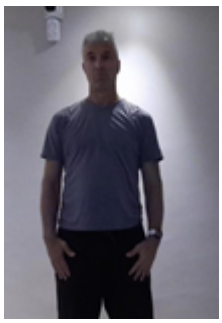
# Shoulder Internal/External Rotation

**Range of Motion Assessment**

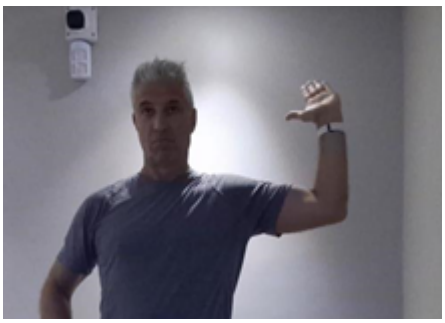
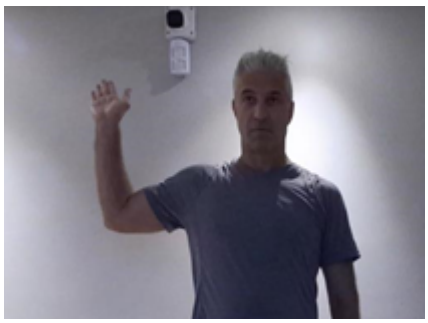
Shoulder Internal/External Rotation calculated by taking the angle created by the forearm relative to horizontal in the sagittal plane (side view).

## RESULTS

### PEAK INTERNAL ROTATION

| LEFT | RIGHT |
|---|---|
|  |  |

### PEAK EXTERNAL ROTATION

| LEFT | RIGHT |
|---|---|
|  |  |

| KEY RESULTS | LEFT | RIGHT | IMBALANCE |
|---|---|---|---|
| **Shoulder Internal Rotation** | 68.3° | 90.3° | +22.1° |
| **Shoulder External Rotation** | 91.5° | 71.7° | +19.9° |
| **Total ROM** | 159.8° | 162.0° | +2.2° |
| **Trunk lateral flexion** at Peak Internal Rotation | 0.4° Left ▼ | 2.5° Left ▼ | +2.1° |

PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )

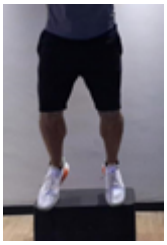
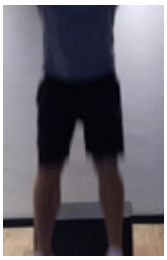
# Drop Jump

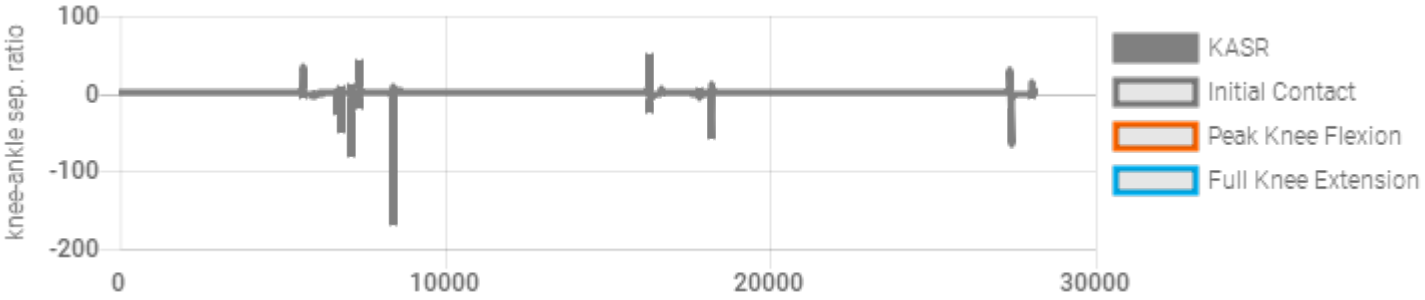
**Lower Body Dynamic Assessment**

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 ) | 46.4° | 42.5° |
| Hip Flexion ( Right ) | 53.4° | 42.5° |
| Knee Flexion ( Left ) | 33.9° | 63.7° |
| Knee Flexion ( Right ) | 47.6° | 61.5° |




PRACTITIONER COMMENTS

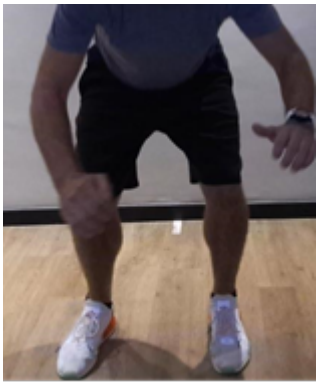
# Countermovement Jump

**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** | 40.65 cm | | |
| **Peak Spine Tilt** after landing | 42.1° **Anterior** | | |
| **Peak Lateral Spine Tilt** after landing | 5.1° **Left** | | |
| **Peak Lateral Pelvic Tilt** after landing | 4.5° **Right** | | |
| **KEY METRICS (LEGS)** | **LEFT LEG** | **RIGHT LEG** | **ASYMMETRY** |
| **Peak Hip Flexion** after landing | 84.8° | 86.6° | 2% |
| **Peak Knee Flexion** after landing | 76.0° | 78.8° | 3.5% |
| **Peak Knee Valgus/Varus** after landing | 31.9° **Varus** | 23° **Varus** | 27.8% |

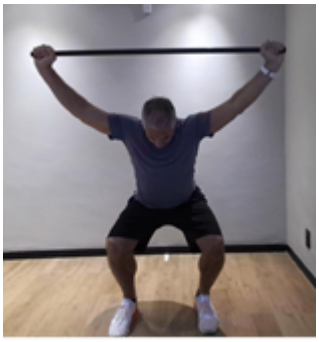
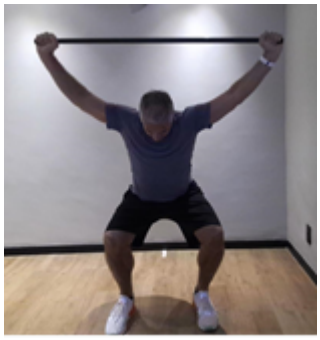
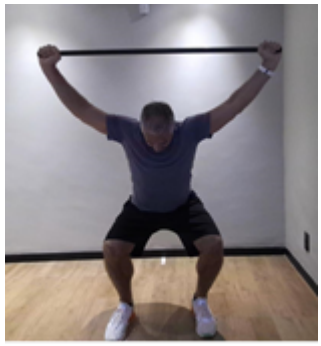
**PRACTITIONER COMMENTS**

# 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 )** | 98.5° | 98.5° | 100.3° |
| **Peak Knee Flexion ( Right )** | 100.3° | 102.1° | 103.2° |
| **Trunk Flexion** at Peak Knee Flexion | 31.3° **Anterior** | 31.1° **Anterior** | 30.6° **Anterior** |
| **Trunk lateral flexion** at Peak Knee Flexion | 1.5° **Right** ▼ | 0.5° **Right** ▼ | 0.2° **Left** ▼ |

### PRACTITIONER COMMENTS

# 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 |
|---|---|---|---|
|  |  |  |  |

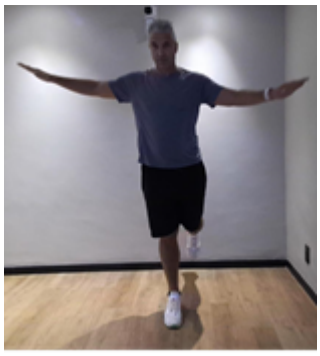
| KEY RESULTS | REP 1 | REP 2 | REP 3 |
|---|---|---|---|
| **Peak Knee Flexion** | 68.9° | 76.2° | 79.2° |
| **Knee Displacement (total)** | 15.4 cm | 23.0 cm | 22.3 cm |
| **Peak Knee Valgus** | 4.3° **Valgus** | 6.6° **Valgus** | 4.9° **Valgus** |
| **Peak Knee Varus** | 5.7° **Varus** | 16.8° **Varus** | 10.4° **Varus** |
| **Trunk lateral flexion** at Peak Knee Flexion | 2.9° Left ▼ | 1.4° Left ▼ | 5.2° Left ▼ |

### PRACTITIONER COMMENTS

# 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** | 60.5° | 59.0° | 70.4° |
| **Knee Displacement (total)** | 14.5 cm | 14.5 cm | 26.5 cm |
| **Peak Knee Valgus** | 11.1° **Valgus** | 5.9° **Valgus** | 21° **Valgus** |
| **Peak Knee Varus** | 2.5° **Varus** | 5.8° **Varus** | 0.6° **Varus** |
| **Trunk lateral flexion** at Peak Knee Flexion | 4.0° **Right ▼** | 12.3° **Right ▼** | 3.9° **Right ▼** |

### PRACTITIONER COMMENTS

# 30 Second Sit To Stand

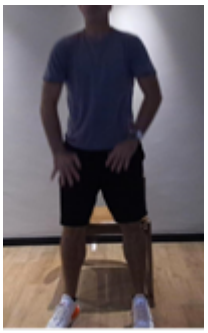
**Lower Body Dynamic Assessment**

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

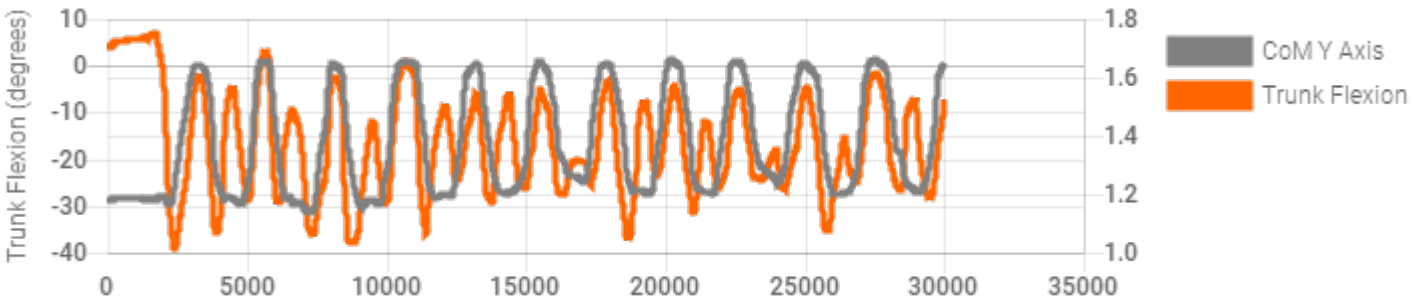
## RESULTS

| KEY RESULTS | OVERALL |
|---|---|
| Successful Repetitions | 12 |
| Peak Knee Extension | L 4.1° R 4.7° |
| Knee Displacement | L 14.9 cm R 16.9 cm |
| Peak Lateral Trunk Flexion | 5.7° 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 | 1.2 | 1.2 | 1.1 | 1.2 | 1.1 |
| Lateral Trunk Flexion | 0.6° Left ▼ | 2.7° Right ▼ | 1.1° Right ▼ | 0.4° Right ▼ | 0.6° Right ▼ |
| Knee Flexion | L 79.3° R 82.6° | L 76.8° R 79.2° | L 70.0° R 75.4° | L 75.7° R 80.5° | L 72.1° R 77.8° |
| Hip Flexion | L 77.7° R 79.0° | L 74.6° R 75.4° | L 67.9° R 71.0° | L 77.9° R 80.9° | L 76.3° R 79.2° |
| Trunk Flexion | 0.6° Anterior | 2.7° Posterior | 1.1° Posterior | 0.4° Posterior | 0.6° Posterior |

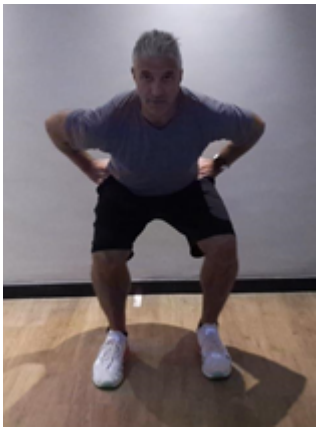
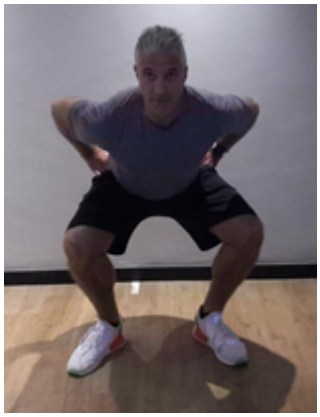
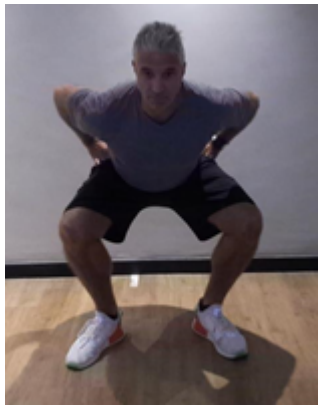


# Squat

**Lower Body Dynamic Assessment**

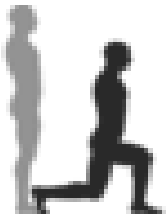
Squat is a dynamic movement assessment providing insight into an individual's balance, stability, flexibility, and strength.

## 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 ) | 108.0° | 116.6° | 117.9° |
| Peak Knee Flexion ( Right ) | 108.5° | 119.5° | 118.7° |
| Spine Tilt at Peak Knee Flexion | 41.9° Anterior | 42.9° Anterior | 43.1° Anterior |
| Trunk lateral flexion at Peak Knee Flexion | 4.7° Left ▼ | 2.1° Left ▼ | 1.2° Left ▼ |

### PRACTITIONER COMMENTS



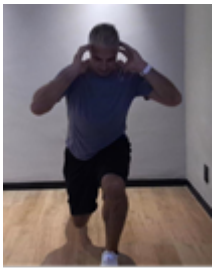
# Lunge

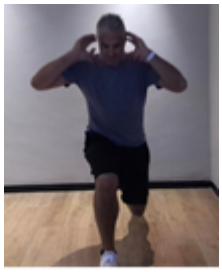
**Lower Body Dynamic Assessment**

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 | 57.9° | 54.3° | 6.2% |
| Peak Knee Flexion | 73.2° | 71.8° | 2% |
| Peak Spine Lateral Tilt | 1.2° **Anterior** | 0.1° **Anterior** | N/A |
| Peak Pelvic Lateral Tilt | 1.2° **Left** | 0.5° **Left** | N/A |

PRACTITIONER COMMENTS ( LEFT )

PRACTITIONER COMMENTS ( RIGHT )