1 PATIENT & ASSESSMENT DETAILS

PATIENT **Mr. Sample Walking**	AGE **42 yrs**	SEX **Male**	HEIGHT / WEIGHT · BMI **172 cm / 68 kg · 23.0**
CONSENT **Obtained – 12/10/2026**	ASSESSMENT DATE **12/10/2026**	CLINICIAN **Dr. A. Sample (PT)**	ASSESSMENT **Walking Movement Analysis**
FRAMES ANALYSED **20 of 20**	REPORT ID **RX-W20261012-SW-102927**	CHIEF COMPLAINT **Right hip pain after walking 20 minutes for 2 months**	

2 CLINICAL IMPRESSION

MOVEMENT FINDINGS (FOR CLINICAL INTERPRETATION)

None of the screened movement patterns was matched

The measured angles do not match any of the screened movement patterns. Isolated deviations, if any, are listed below.

GAIT TIMING

Left		Stance 62% · Swing 38% · Stride 1.08 s
Right		Stance 62% · Swing 38% · Stride 1.08 s

3 FINDINGS AT A GLANCE

No clearly abnormal gait pattern was identified.

54 measurements  Normal 54 · Minor 0 · Major 0

This report is generated from 2D video / photographic measurements and rule-based interpretation against published reference values. Marker placement: manual selection by the assessor (20 frames). Generated by Rollaxis Research & Education Edition for teaching, learning and research only – not for clinical diagnosis or treatment.

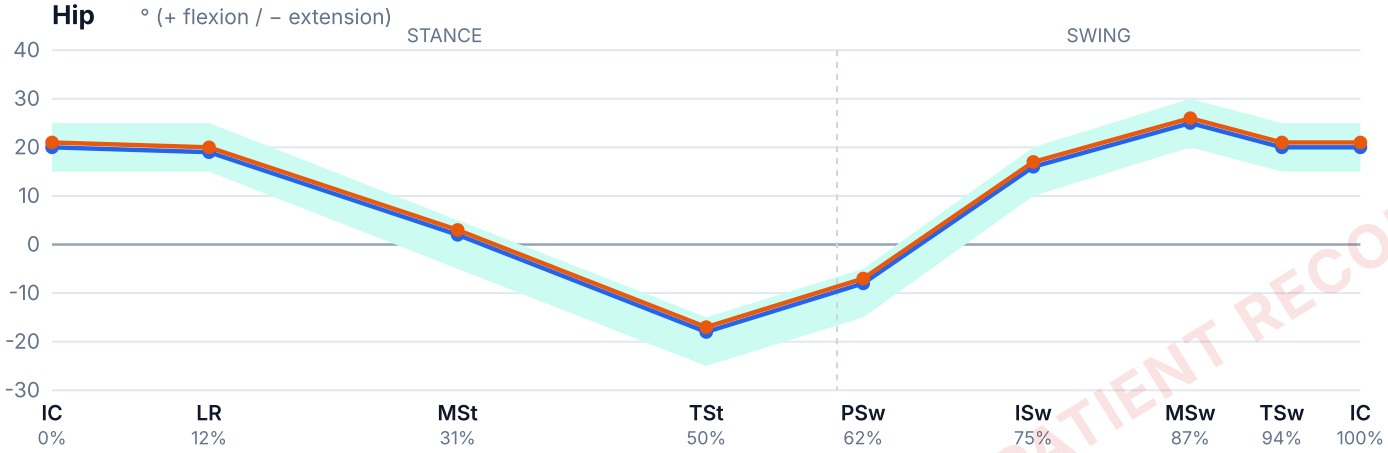
SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

4 JOINT ANGLES THROUGH THE GAIT CYCLE

Left · Right · Normal range · outside normal range

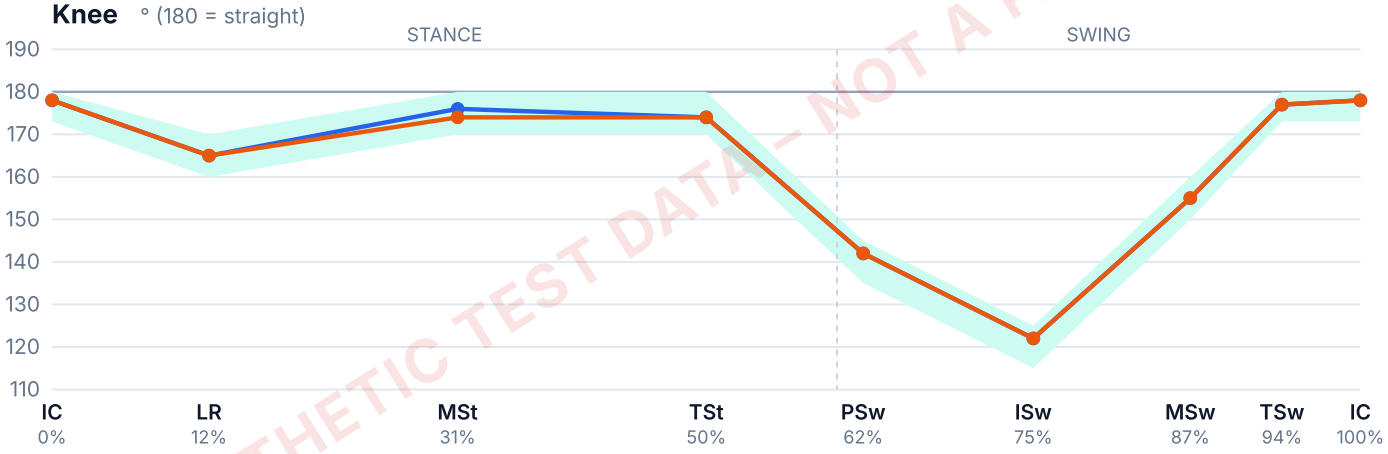
Hip

° (+ flexion / – extension)



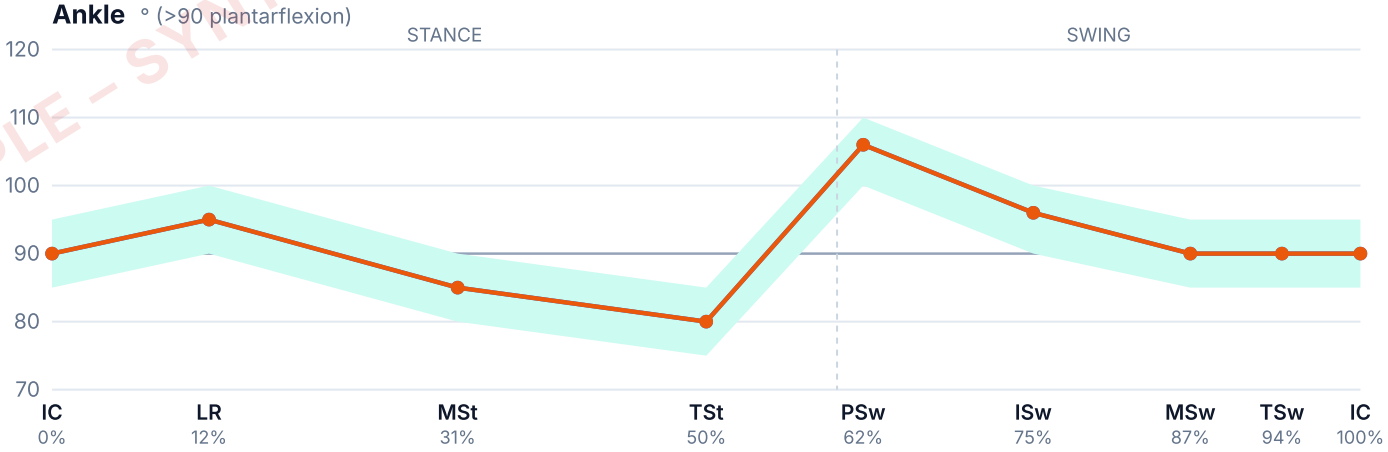
Knee

° (180 = straight)



Ankle

° (>90 plantarflexion)



SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.

5 SIDE VIEW (SAGITTAL PLANE)

PHASE	HIP			KNEE			ANKLE		
	L	R	NORMAL	L	R	NORMAL	L	R	NORMAL
Initial Contact	(+) 20.0°	(+) 21.0°	(+) 15° to (+) 25°	178.0°	178.0°	173° to 180°	90.0°	90.0°	85° to 95°
Loading Response	(+) 19.0°	(+) 20.0°	(+) 15° to (+) 25°	165.0°	165.0°	160° to 170°	95.0°	95.0°	90° to 100°
Mid Stance	(+) 2.0°	(+) 3.0°	(−) 5° to (+) 5°	176.0°	174.0°	170° to 180°	85.0°	85.0°	80° to 90°
Terminal Stance	(−) 18.0°	(−) 17.0°	(−) 15° to (−) 25°	174.0°	174.0°	170° to 180°	80.0°	80.0°	75° to 85°
Pre-Swing	(−) 8.0°	(−) 7.0°	(−) 5° to (−) 15°	142.0°	142.0°	135° to 145°	106.0°	106.0°	100° to 110°
Initial Swing	(+) 16.0°	(+) 17.0°	(+) 10° to (+) 20°	122.0°	122.0°	115° to 125°	96.0°	96.0°	90° to 100°
Mid Swing	(+) 25.0°	(+) 26.0°	(+) 20° to (+) 30°	155.0°	155.0°	150° to 160°	90.0°	90.0°	85° to 95°
Terminal Swing	(+) 20.0°	(+) 21.0°	(+) 15° to (+) 25°	177.0°	177.0°	173° to 180°	90.0°	90.0°	85° to 95°

6 REAR AND FRONT VIEWS (MID STANCE)

MEASURE	LEFT	RIGHT	NORMAL
Pelvic drop	(+) 1.7°	(+) 4.6°	0° to (+) 5°
Rear-foot angle	(+) 4.0°	(+) 5.0°	0° to (+) 6°
Patella–2nd toe alignment	(+) 0.4°	(−) 0.4°	(−) 5° to (+) 5°

Major more than 5° outside normal **Minor** up to 5° outside

7 HOW TO READ THE ANGLES

Ankle 90° = neutral, above 90° = plantarflexion · Knee 180° = straight, above 180° = hyperextension · Hip (+) flexion, (−) extension · Pelvic drop (+) = opposite side drops · Rear foot (+) = eversion · Patella (+) = medial to 2nd toe. Values are taken at the end of each phase.

8 METHOD

2D video gait analysis. Frames at each gait phase were captured from side, rear and front recordings; skin markers over the bony landmarks were placed by the assessor (or suggested automatically and then checked and corrected by the assessor). Results depend on camera alignment and marker placement.

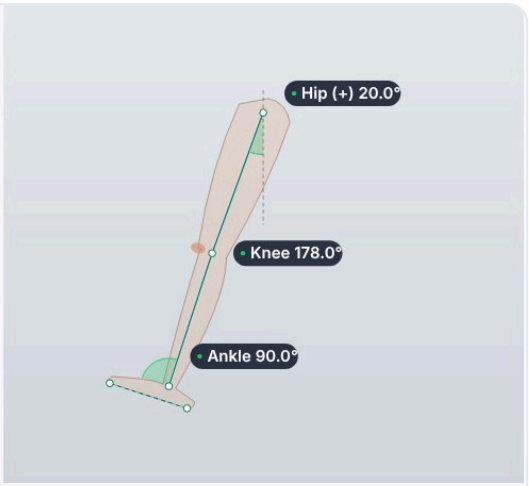
SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

9 GAIT PHASES – MARKED FRAMES

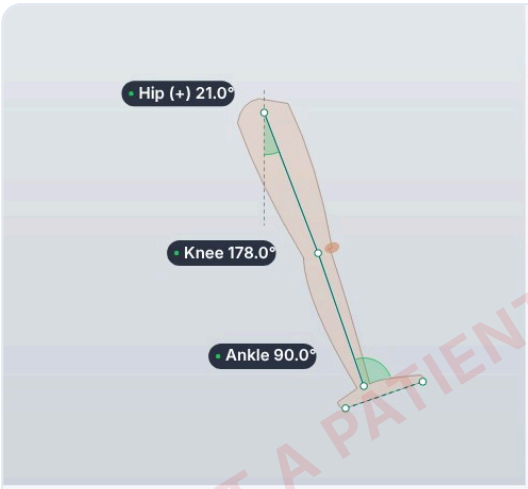
Initial Contact

Gait cycle 0–2%: the instant the foot first touches the ground (normally the heel).

LEFT



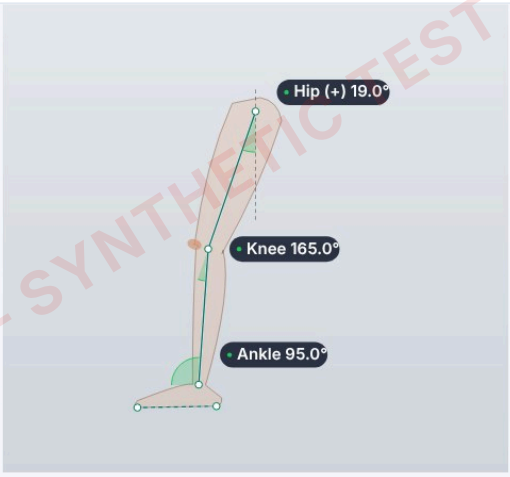
RIGHT



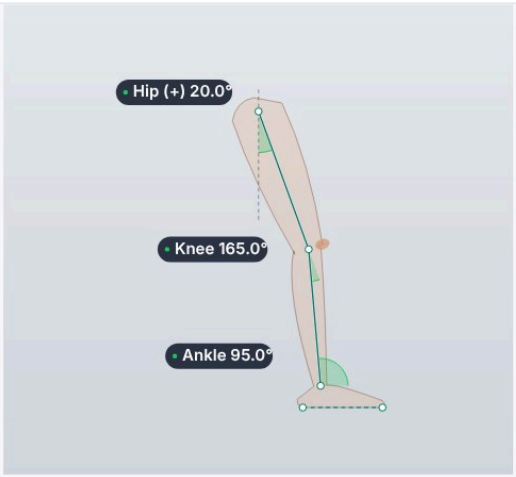
Loading Response

Gait cycle 0–12%: from initial contact until the opposite foot lifts off (first double support). Capture the last frame before the opposite toe-off.

LEFT



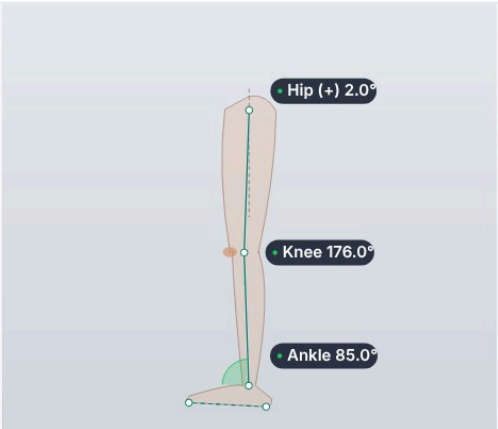
RIGHT



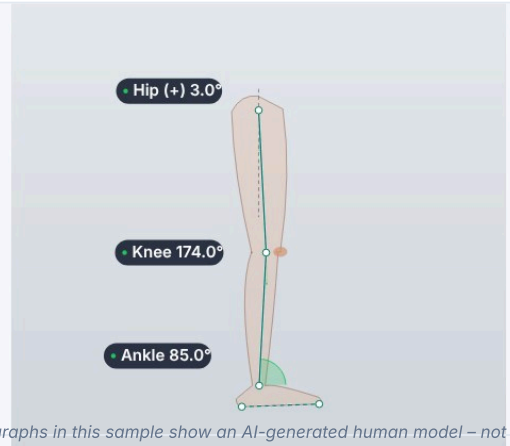
Mid Stance

Gait cycle 12–31%: from opposite toe-off until the heel of this foot begins to rise (body weight progresses over the foot). Capture the frame just before heel rise.

LEFT



RIGHT



SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.

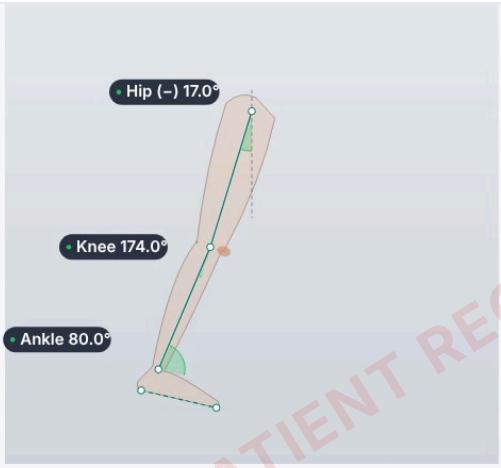
Terminal Stance

Gait cycle 31–50%: from heel rise until the opposite foot strikes the ground. Capture the frame of opposite initial contact.

LEFT



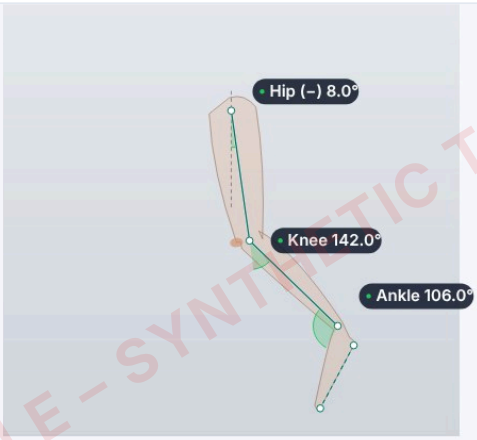
RIGHT



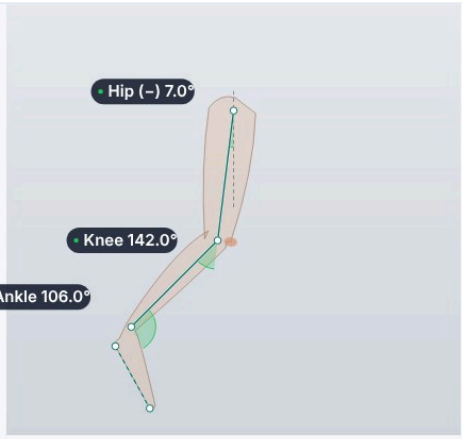
Pre-Swing

Gait cycle 50–62%: from opposite initial contact until toe-off of this foot (second double support). Capture the last frame before toe-off.

LEFT



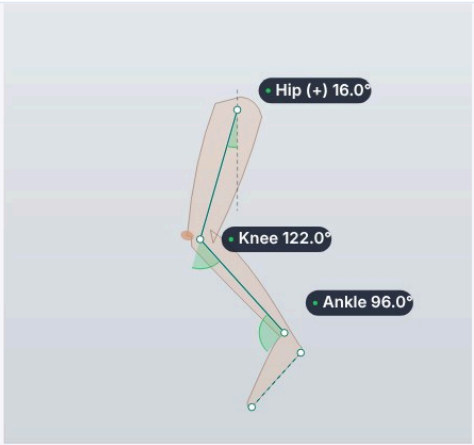
RIGHT



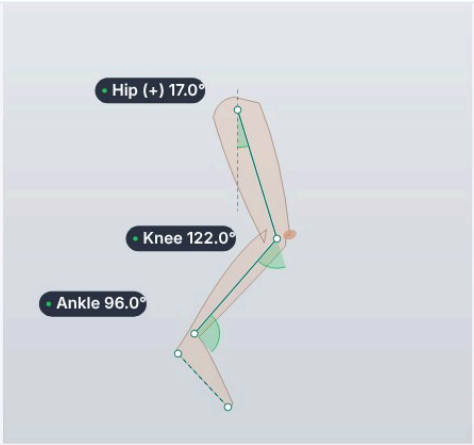
Initial Swing

Gait cycle 62–75%: from toe-off until the swing foot passes the stance foot (feet side by side). Capture the frame where the feet are side by side.

LEFT



RIGHT



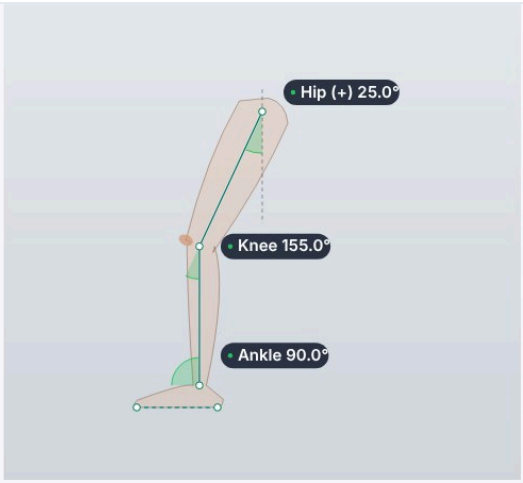
SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.

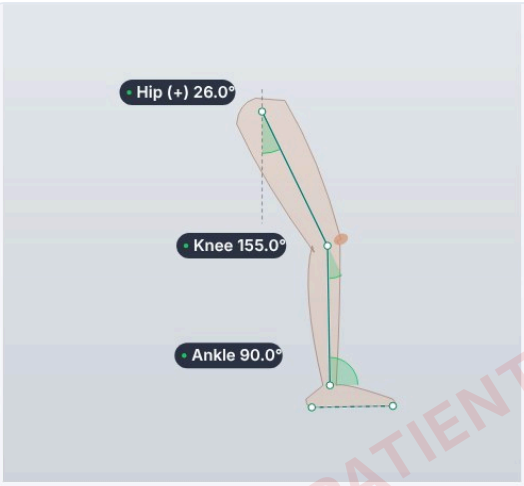
Mid Swing

Gait cycle 75–87%: from feet adjacent until the tibia of the swinging leg is vertical. Capture the tibia-vertical frame.

LEFT



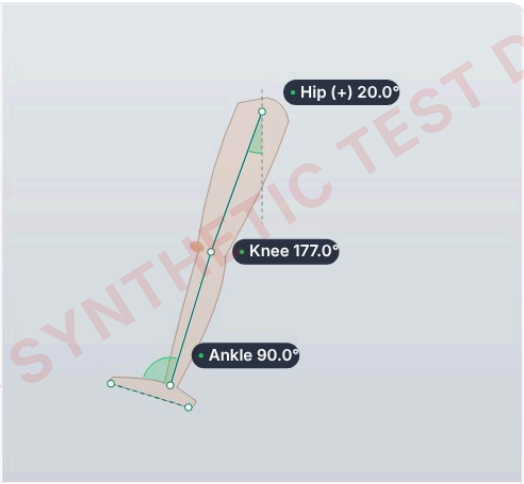
RIGHT



Terminal Swing

Gait cycle 87–100%: from tibia vertical until the foot strikes the ground again. Capture the last frame before the next initial contact.

LEFT



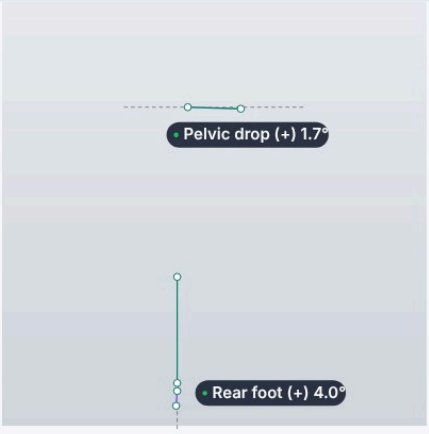
RIGHT



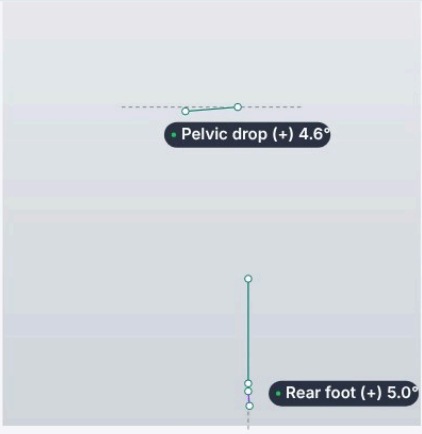
Mid Stance – rear view

Pelvic drop and rear-foot angle

LEFT



RIGHT



SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.

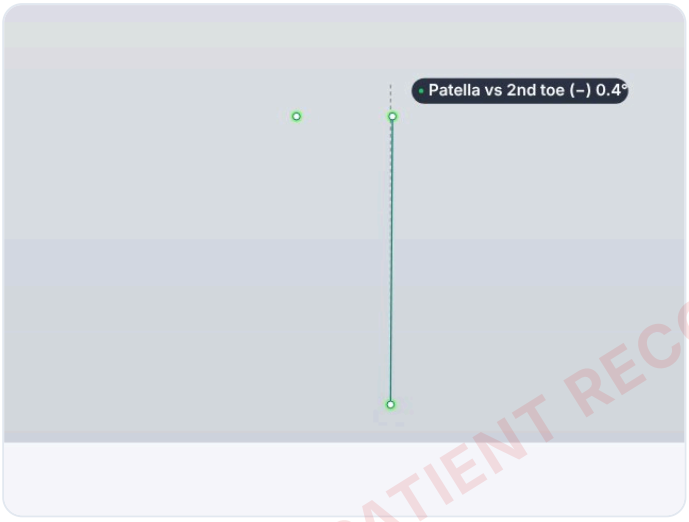
Mid Stance – front view

Patella relative to the 2nd toe

LEFT



RIGHT



SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

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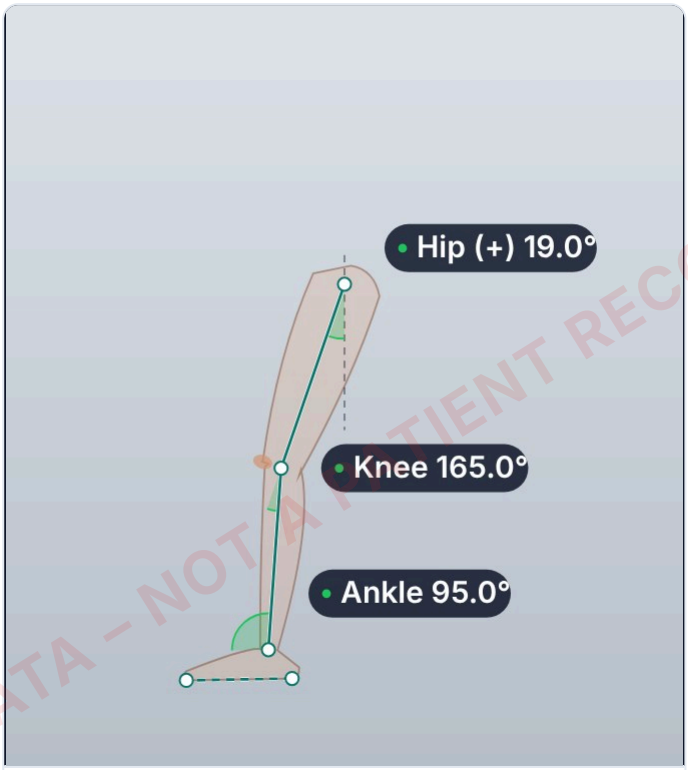
10 PATIENT PHOTOGRAPHS

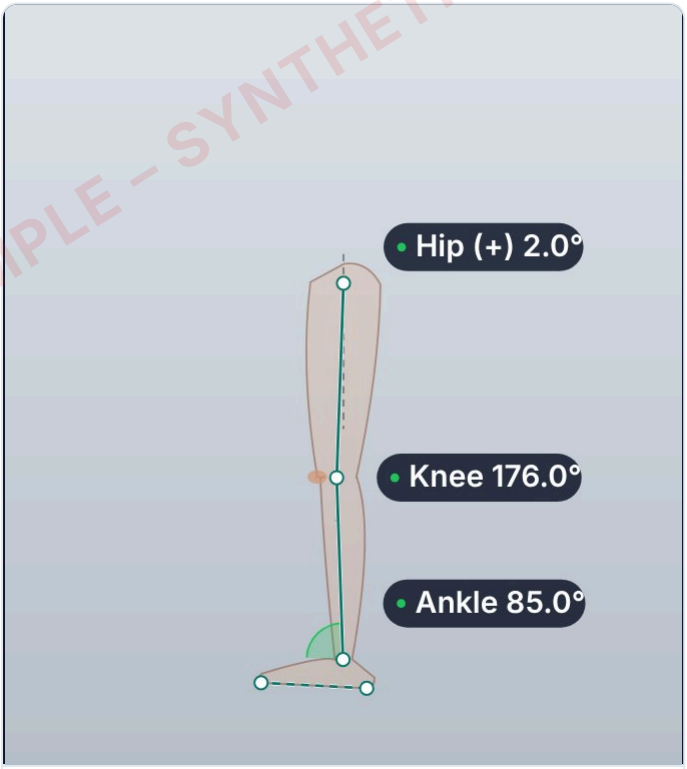
Original frames with the analysis markers, lines and angles drawn on the photograph.



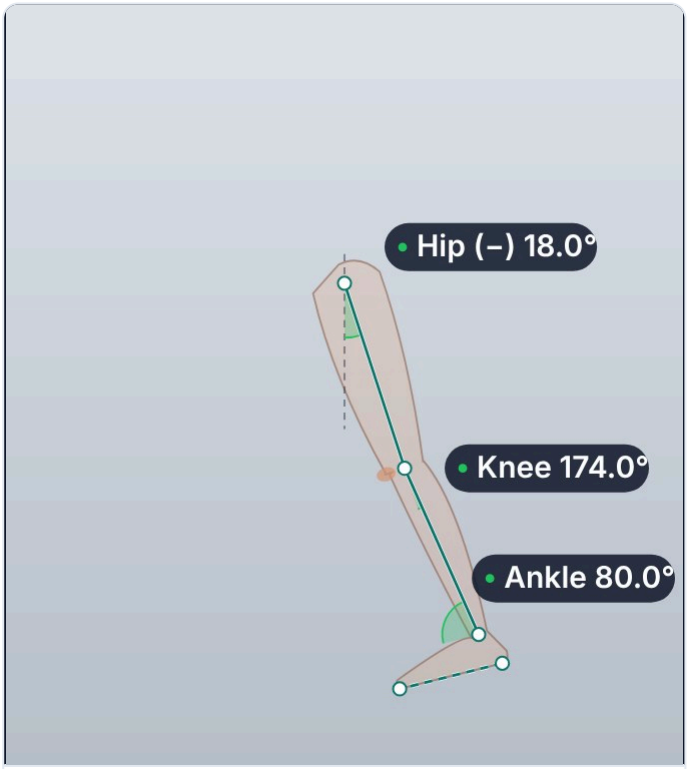
Lateral – Left · Left · Initial Contact ANNOTATED t = 0.00 s (real time)



Lateral – Left · Left · Loading Response ANNOTATED t = 0.13 s (real time)



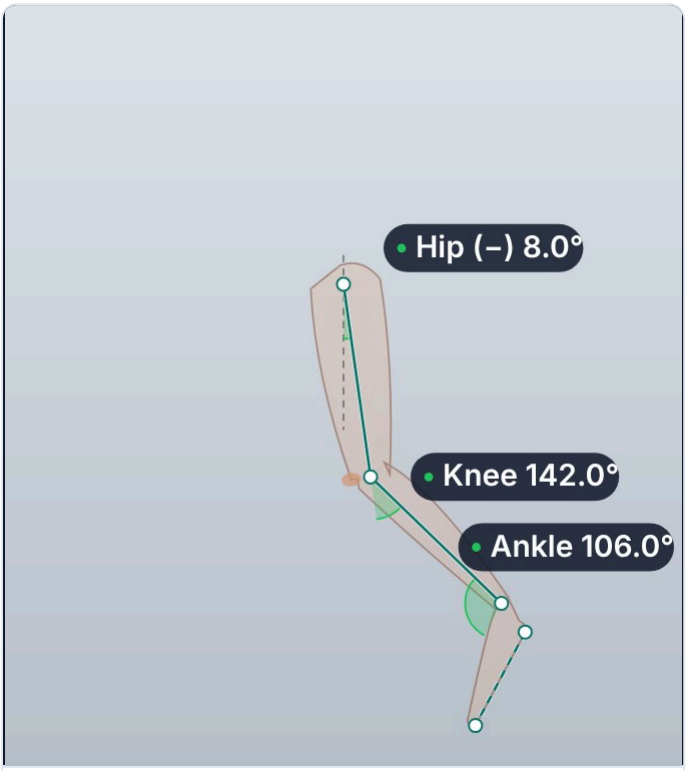
Lateral – Left · Left · Mid Stance ANNOTATED t = 0.33 s (real time)



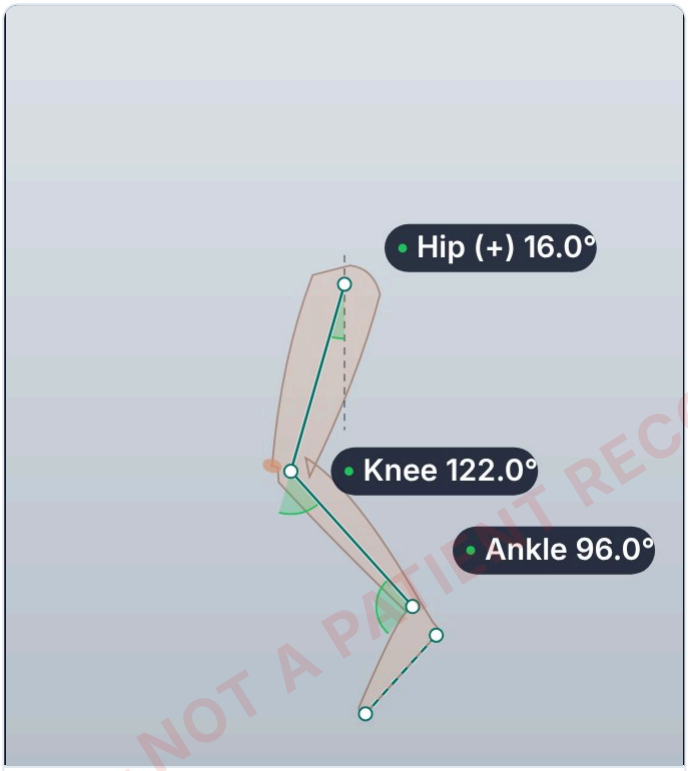
Lateral – Left · Left · Terminal Stance ANNOTATED t = 0.54 s (real time)

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

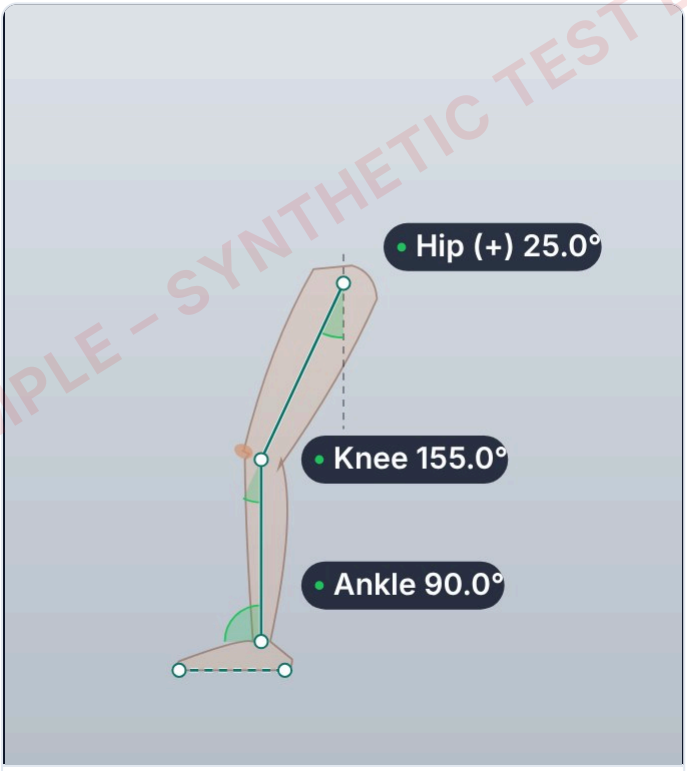
Photographs in this sample show an AI-generated human model – not a real person.



Lateral – Left · Left · Pre-Swing ANNOTATED t = 0.67 s (real time)



Lateral – Left · Left · Initial Swing ANNOTATED t = 0.81 s (real time)



Lateral – Left · Left · Mid Swing ANNOTATED t = 0.94 s (real time)



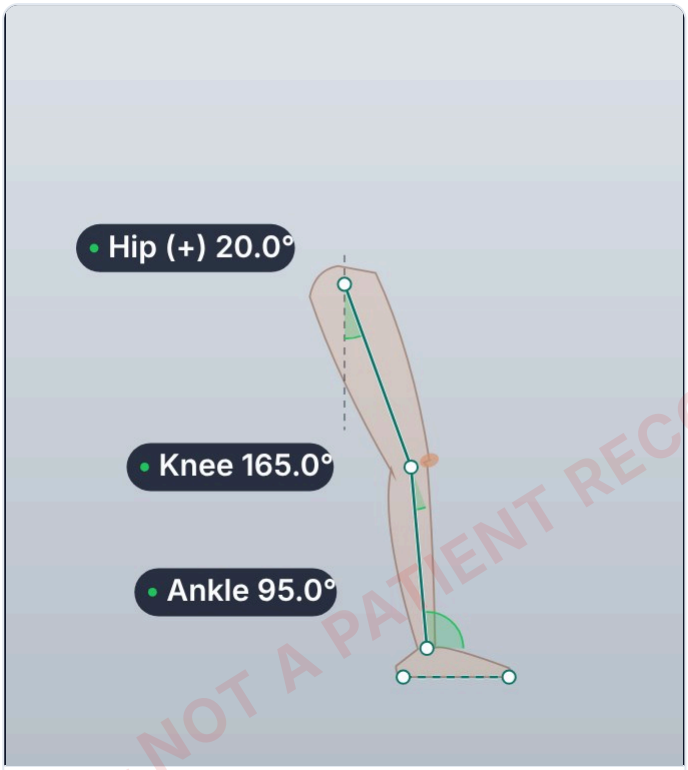
Lateral – Left · Left · Terminal Swing ANNOTATED t = 1.05 s (real time)

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.



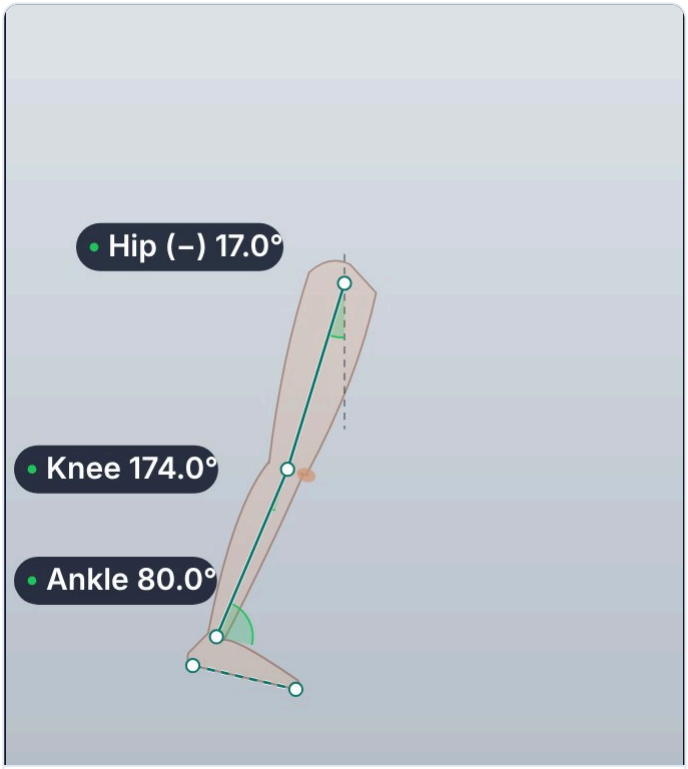
Lateral – Right · Right · Initial Contact ANNOTATED t = 0.54 s (real time)



Lateral – Right · Right · Loading Response ANNOTATED t = 0.67 s (real time)



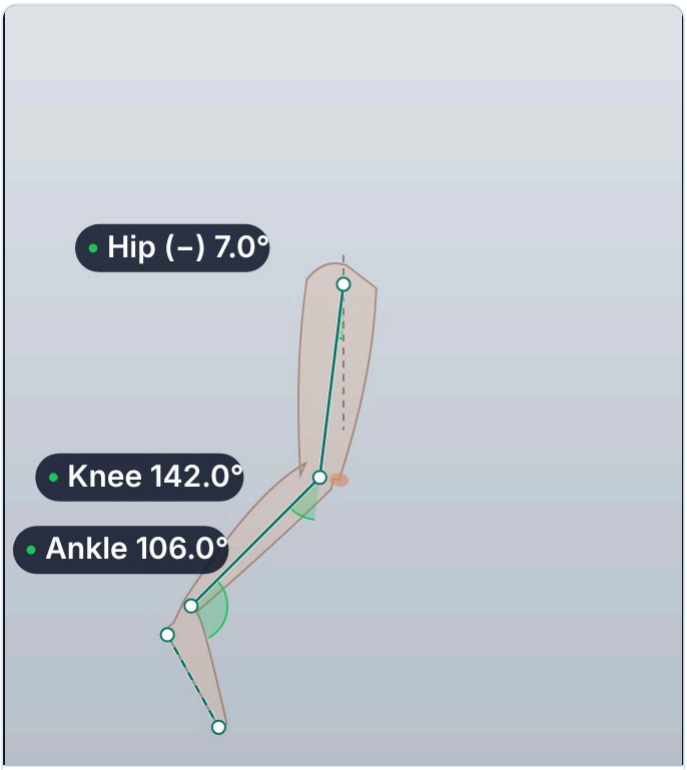
Lateral – Right · Right · Mid Stance ANNOTATED t = 0.87 s (real time)



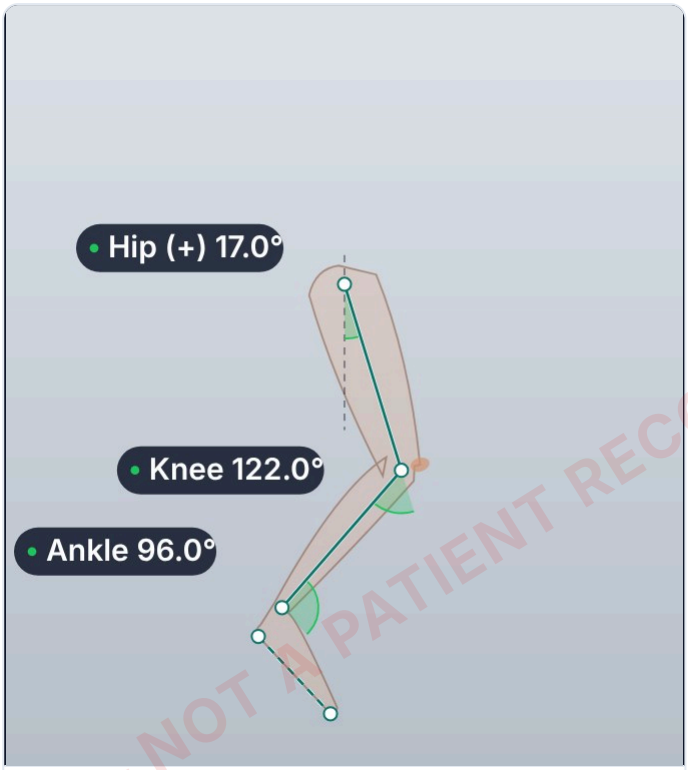
Lateral – Right · Right · Terminal Stance ANNOTATED t = 1.08 s (real time)

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

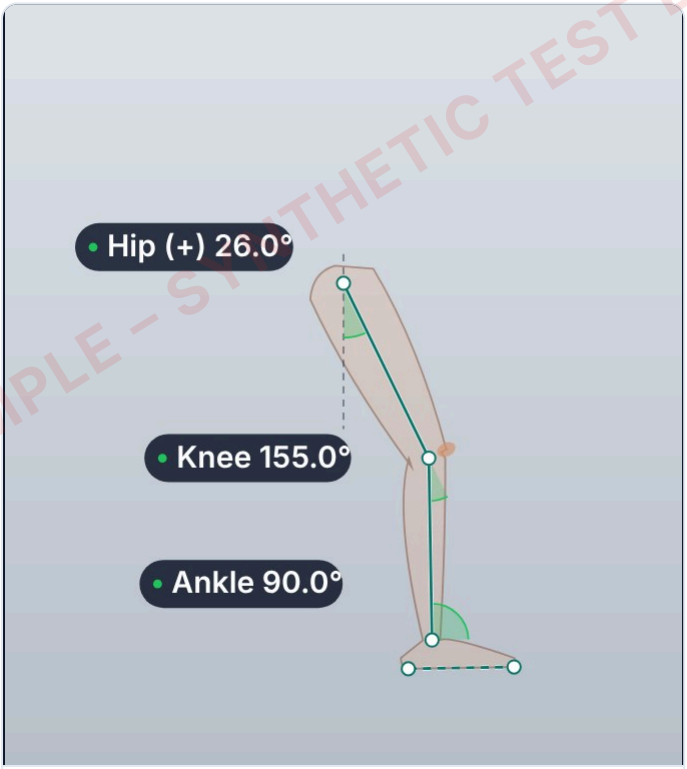
Photographs in this sample show an AI-generated human model – not a real person.



Lateral – Right · Right · Pre-Swing ANNOTATED t = 1.21 s (real time)



Lateral – Right · Right · Initial Swing ANNOTATED t = 1.35 s (real time)



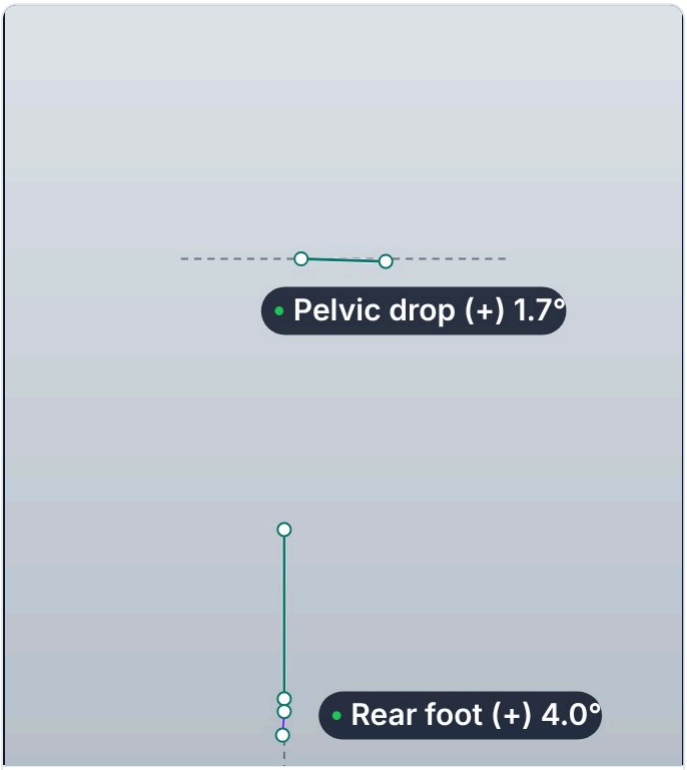
Lateral – Right · Right · Mid Swing ANNOTATED t = 1.48 s (real time)



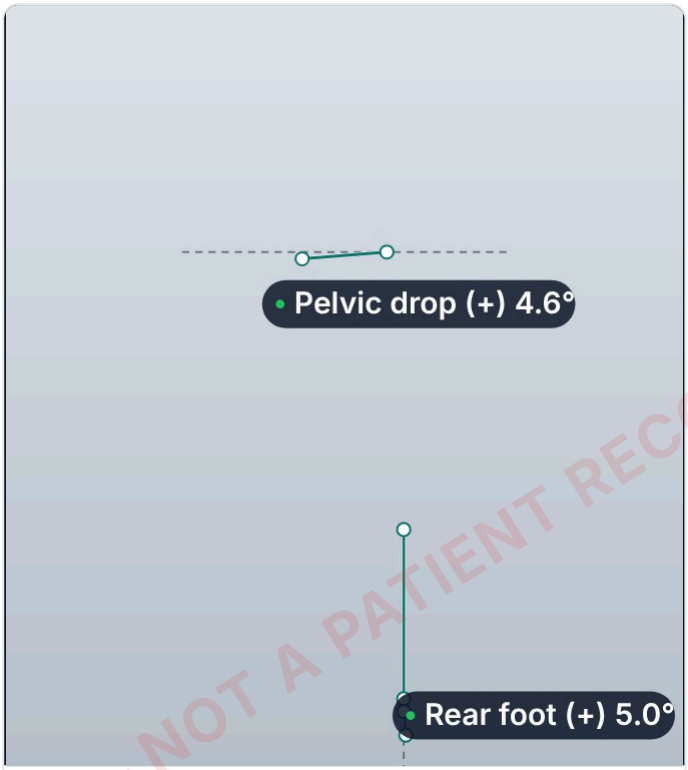
Lateral – Right · Right · Terminal Swing ANNOTATED t = 1.59 s (real time)

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

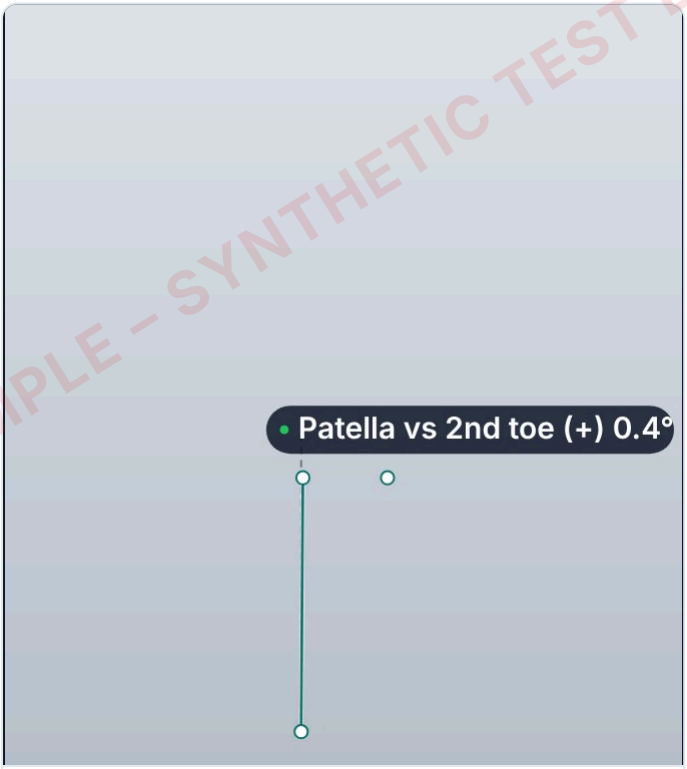
Photographs in this sample show an AI-generated human model – not a real person.



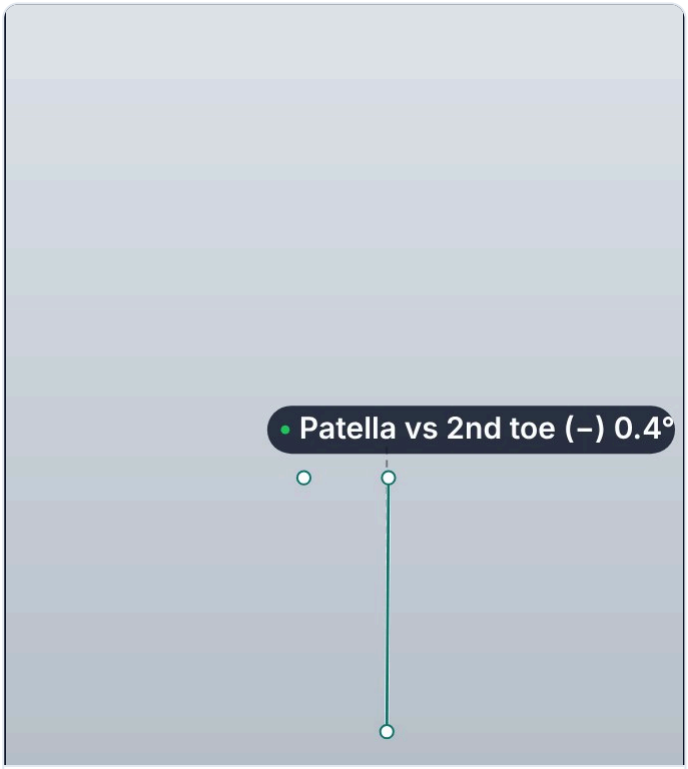
Posterior · Left Mid Stance ANNOTATED t = 0.00 s (real time)



Posterior · Right Mid Stance ANNOTATED t = 0.00 s (real time)



Anterior · Left Mid Stance ANNOTATED t = 0.00 s (real time)



Anterior · Right Mid Stance ANNOTATED t = 0.00 s (real time)

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

Photographs in this sample show an AI-generated human model – not a real person.

11 SCREENED AND NOT PRESENT

Foot drop / steppage gait · Equinus gait · Genu recurvatum · Stiff-knee gait · Crouch / flexed-knee gait · Jump gait pattern · Apparent equinus · Reduced terminal-stance hip extension · Plantarflexor (calf) insufficiency · Trendelenburg gait · Excessive rear-foot eversion · Dynamic knee valgus · Patella lateral to the 2nd toe · Waddling gait · Antalgic gait · Hypokinetic (reduced-excursion) gait

12 NOT ASSESSABLE WITH THIS PROTOCOL

Ataxic gait (step variability, base width) · scissoring · circumduction / hip hiking · trunk lurches · festination · short-limb gait (needs leg-length measurement).

13 REFERENCES

1. Perry J, Burnfield JM. Gait Analysis: Normal and Pathological Function. 2nd ed. 2010.
2. Winters TF, Gage JR, Hicks R. J Bone Joint Surg Am 1987;69:437-41 (hemiplegic types).
3. Rodda JM, Graham HK et al. J Bone Joint Surg Br 2004;86:251-8 (diplegic sagittal patterns).
4. Hicks JL et al. Crouched postures reduce the capacity of muscles to extend the hip and knee during the single-limb stance phase of gait. J Biomech 2008;41:960-7.
5. Prenton S et al. J Rehabil Med 2016;48:646-56 (FES vs AFO meta-analysis); Kluding PM et al. Stroke 2013;44:1660-9.
6. Tenniglo MJB et al. Neurorehabil Neural Repair 2023;37:640-51 (BoNT-A rectus femoris RCT).
7. Kay RM et al. J Bone Joint Surg Am 2004;86:2377-84 (casting ± BoNT-A); Cochrane CD001408 (BoNT-A in CP).
8. Rogozinski BM et al. J Bone Joint Surg Am 2009;91:2440-7 (floor-reaction AFO in crouch).
9. Lashien SA et al. J Orthop Surg Res 2024;19 (hip abductor training, pelvic drop & knee valgus RCT).
10. Kerrigan DC et al. Arch Phys Med Rehabil 2003 (hip flexor stretching RCT).
11. Yin X et al. Front Neurol 2025 (treadmill training in PD meta-analysis); cueing meta-analyses in PD.

Evidence labels: **STRONG EVIDENCE** systematic review / RCTs · **MODERATE EVIDENCE** smaller trials or consistent clinical studies · **EXPERT OPINION** clinical consensus.

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

14 SUMMARY AND CONCLUSION

Mr. Sample Walking, a 42-year-old male patient, underwent walking movement analysis on 12/10/2026 with a chief complaint of “Right hip pain after walking 20 minutes for 2 months”. Of 54 measurements, 54 (100%) were within normal limits, 0 showed minor and 0 showed major deviation from the reference values. No clearly abnormal pattern was identified.

15 REGIONAL SUMMARY

REGION	STATUS	KEY DEVIATIONS	MEASURES
Pelvis	Normal	Within normal limits	2/2 normal
Hip	Normal	Within normal limits	16/16 normal
Knee	Normal	Within normal limits	18/18 normal
Ankle & foot	Normal	Within normal limits	18/18 normal

16 KEY TAKE-HOME POINTS

- Movement / alignment is within the reference ranges for the measured parameters.

17 FURTHER ASSESSMENT & FOLLOW-UP

SUGGESTED CLINICAL EXAMINATION
No specific examination suggested from this analysis.

RE-ASSESSMENT
Repeat if symptoms change or as part of routine monitoring.

This conclusion is generated from the measured data and must be reviewed and confirmed by the treating clinician.

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

18 PHYSICAL EXAMINATION & HISTORY

19 FINAL DIAGNOSIS

20 MANAGEMENT PLAN & FOLLOW-UP

RE-ASSESSMENT DUE

REFERRAL TO

Assessed by (name, qualification)

Signature & date

Reviewed by

Signature & date

SAMPLE – SYNTHETIC TEST DATA – NOT A PATIENT RECORD

21 PATIENT CONSENT RECORD

Consent given by	Mr. Sample Walking
Date & time recorded	12/10/2026, 09:05:00
Recorded by	Dr. A. Sample (PT)
Purpose	Video / photographic recording and computer-assisted analysis of movement and posture for teaching, learning and research.
Use of anonymised data in teaching materials / publications	Not agreed

22 INTENDED USE

For research and education use only. Rollaxis is not a medical device. Its measurements, interpretations, provisional diagnoses and management options are teaching and research examples and must not be used to diagnose or treat any person.

Rollaxis Research & Education Edition is software for teaching, learning and research in human movement science. It measures two-dimensional (2D) joint and segment angles, timing and alignment from video recordings and photographs of posture, walking, running, a bodyweight squat and the Landing Error Scoring System (LESS) jump-landing task, using skin markers placed and confirmed by the user, and compares the measurements with published reference values. To support teaching, its reports also show worked examples of clinical reasoning – interpretation of the findings, provisional diagnoses and management options with their published evidence – generated by fixed rules from the literature. It is intended for students, educators and researchers in physiotherapy, sports science and medicine, in teaching laboratories, classrooms and approved research studies. It is not a medical device and is not intended for the diagnosis, prevention, monitoring, treatment or alleviation of any disease, injury or disability in an individual; its output must not be used as the basis for clinical decisions.

23 WARNINGS AND LIMITATIONS

Measurements are 2D projections of 3D movement and are affected by camera position, height, distance and tilt, lens distortion, patient rotation, clothing, frame rate and marker placement; rotations about the long axis of the limb are not measured. Check every marker, including automatic suggestions, before using a value. Differences smaller than the measurement error should not be interpreted as change. Reference values come from published adult populations and may not apply to every patient; they are not paediatric values. Stop the test if the patient reports pain, dizziness, chest discomfort or instability. Rule-based interpretations, provisional diagnoses and management options are teaching examples, not clinical advice. Use only the version supplied by the publisher on a computer protected as described in the user manual.

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Photographs in this sample show an AI-generated human model – not a real person.

24 PERSONAL DATA PROTECTION (DIGITAL PERSONAL DATA PROTECTION ACT, 2023)

Sample Physiotherapy Clinic is the **Data Fiduciary** for the personal data in this report, including images and health information. The data were collected with the consent recorded above, for the specified purpose only, and are stored on the institution's computer. Rollaxis does not transmit patient data; licence activation sends only the licence key, a computer identifier, the computer name and the software version to the publisher's licence server. The data principal (patient) may withdraw consent at any time, and may request access to, correction of or erasure of their personal data, or raise a grievance, by contacting Sample Physiotherapy Clinic. Withdrawal does not affect processing done before it. Data are kept only as long as needed for this purpose or as required by law for clinical records. For a child (under 18 years), verifiable consent of the parent or lawful guardian is required.

25 RESPONSIBILITIES

The publisher provides Rollaxis Research & Education Edition for teaching, learning and research. It is not a medical device. The user is responsible for safe conduct of the task, correct marker placement, review of every measurement, approval of the study or teaching activity where required, and for ensuring that this report is not used to diagnose or treat the participant. Anyone with symptoms should be referred to a qualified healthcare professional. Report software problems to the publisher (rollingjointsacademy@gmail.com).

26 USER DECLARATION

I confirm that the participant gave consent, that I have reviewed the measurements in this report, and that this report was produced for teaching, learning or research and will not be used as the basis for diagnosis or treatment of the participant.

Name, designation & institution

Signature & date

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