

GaitON[®]



Standing Posture Analysis



Walking Gait analysis



Running Gait Analysis



Sitting Posture Analysis



Bike Fitting Analysis



Golf Swing Analysis

GaitON[®] is trusted by **500+ clinicians** globally for gait & posture analysis

Is your center GaitON[®] ready?

WORKFLOW

A 3 step process to complete a biomechanical assessment

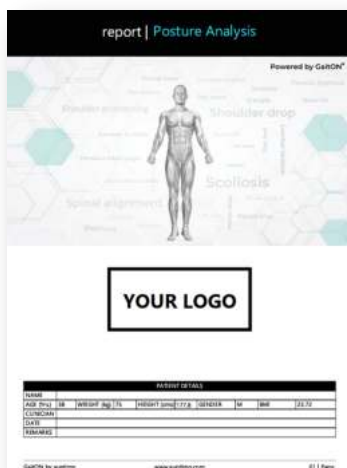


1. CAPTURE

Capture the patient's motion from multiple views using cameras.

2. ANALYZE

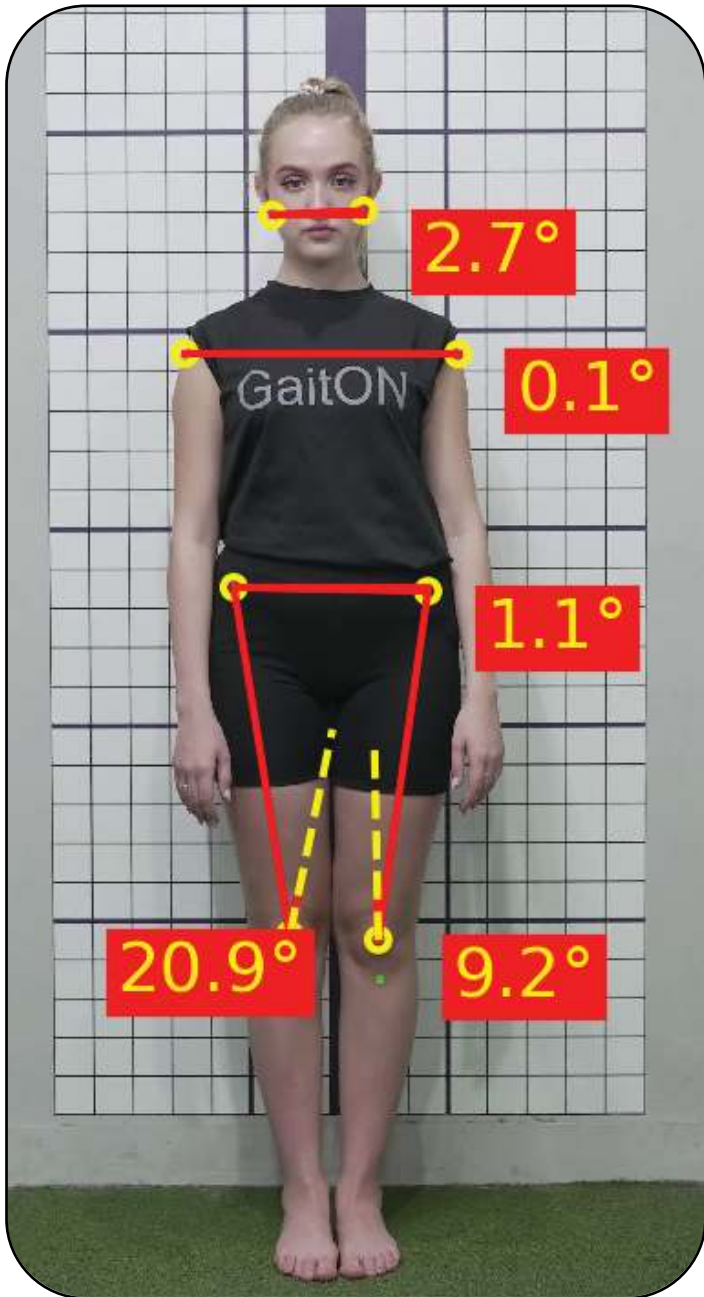
Analyse the motion using GaitON's inbuilt protocols.



3. REPORT

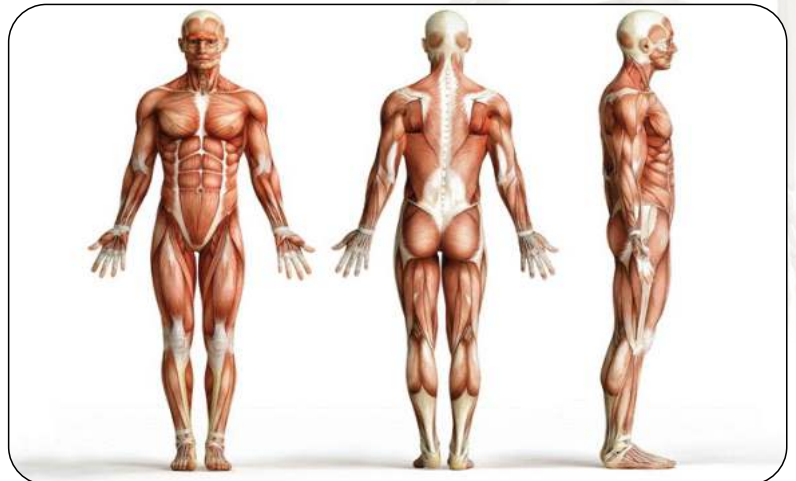
Export the analysis results to well organised and print ready reports.

STANDING POSTURE ANALYSIS



GaitON's posture analysis protocol identifies key postural deviations from multiple views & exports all data to a report.

VIEWS ANALYZED

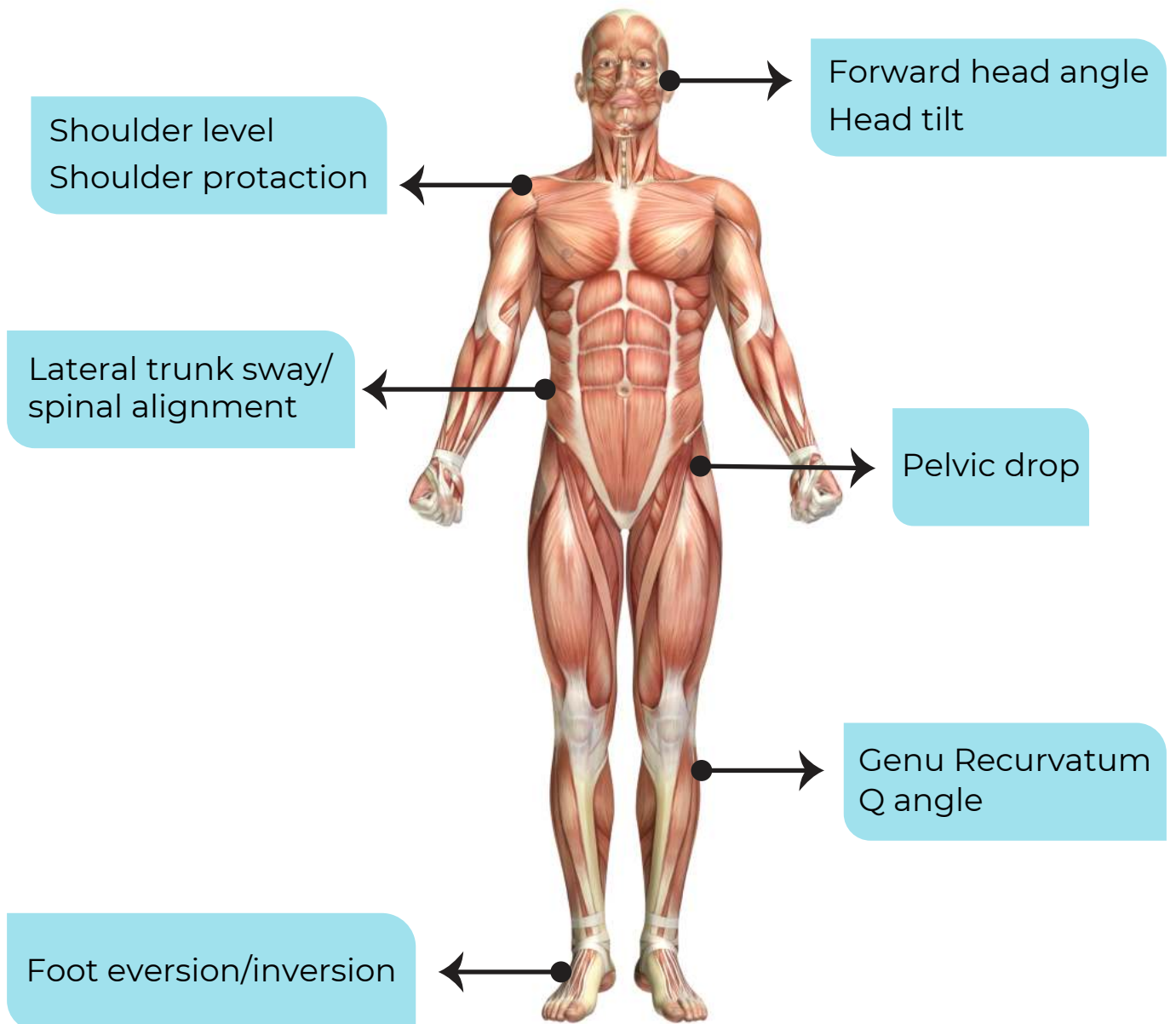


ANTERIOR . POSTERIOR . LATERAL

TIME PER ANALYSIS
5 MINUTES

KEY DATA MEASURED

GaitON's posture analysis protocol analyses the upper & lower body posture of the patient from anterior, posterior & lateral views.

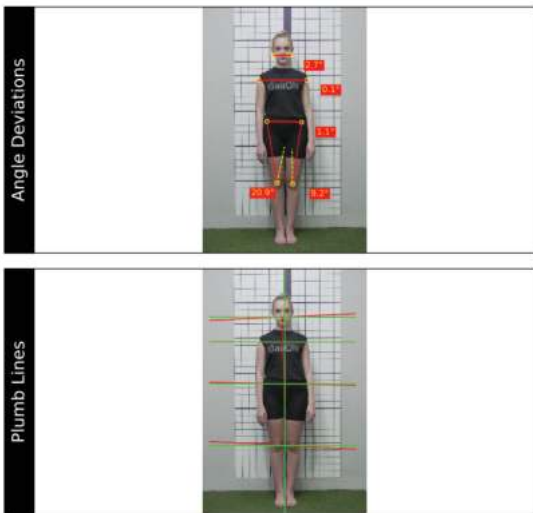


POSTURE REPORTS : KEY FEATURES

Inbuilt reference values for an **accurate diagnosis**.

Comparison of left & right extremity posture.

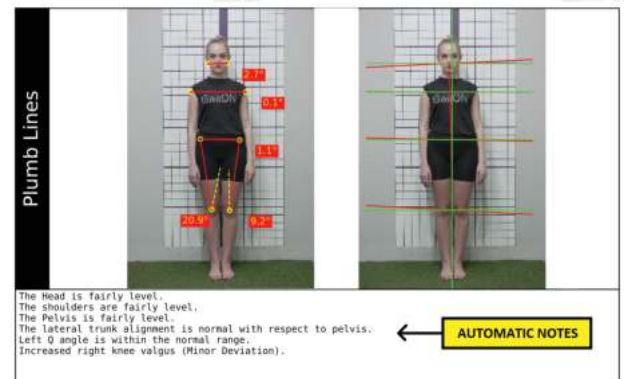
KINEMATIC DATA				
Anterior View				
Parameter	Assessment Value	Reference Value		
Horizontal alignment of the Head ^a	(+) 0.9°	0°		
Horizontal alignment of the Acromions ^a	(+) 0.0°	0°		
Horizontal alignment of the ASIS's ^a	(+) 2.3°	0°		
Lateral Trunk Alignment ^b	(-) 2.3°	0°		
Anterior View				
Parameter	Left	Reference Value	Right	Reference Value
Q Angle ^c	(+) 13.5°	< (+) 15° for Men < (+) 20° for Women	(+) 22.0°	< (+) 15° for Men < (+) 20° for Women
Posterior View				
Parameter	Left	Reference Value	Right	Reference Value
Rear Foot Angle ^d	(+) 1.0°	(-) 5° to (+) 5°	(-) 0.5°	(-) 5° to (+) 5°
Lateral View				
Parameter	Left	Reference Value	Right	Reference Value
Forward Head Angle	58.9°	> 50°	60.9°	> 50°
Shoulder Angle	87.2°	> 52°	63.1°	> 52°



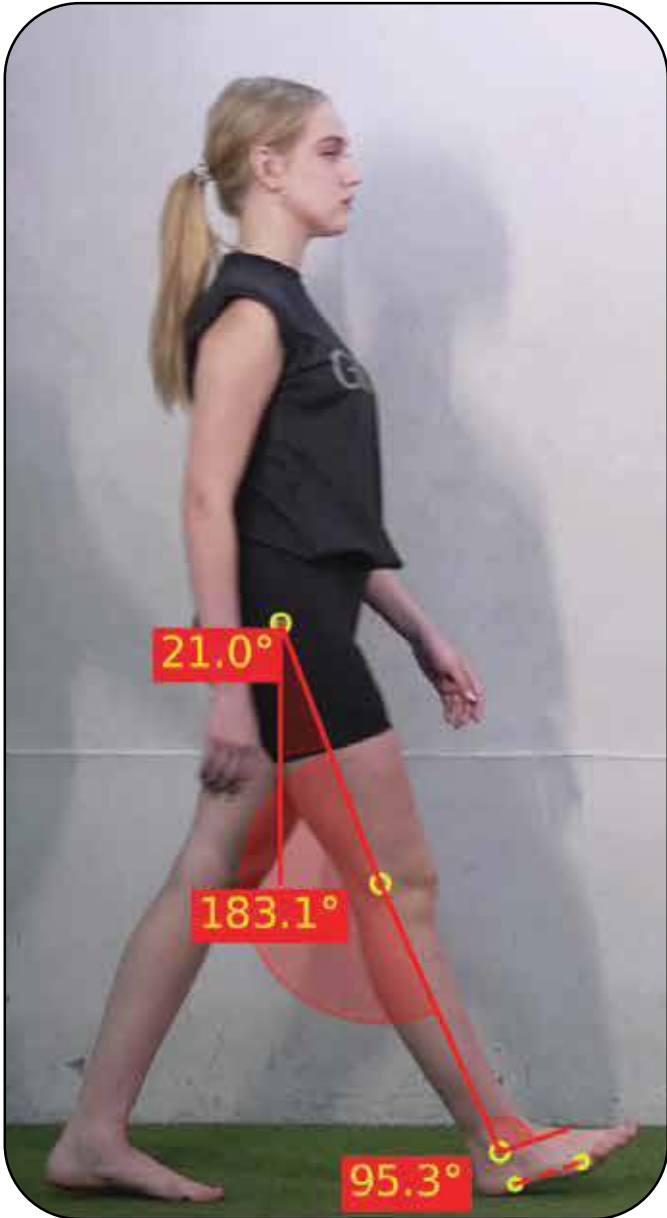
Representation of **postural deviations** through angles & plumb lines.

Automatic **documentation** of all postural deviations.

Pre & Post Assessment of posture after any surgical/ rehab intervention.

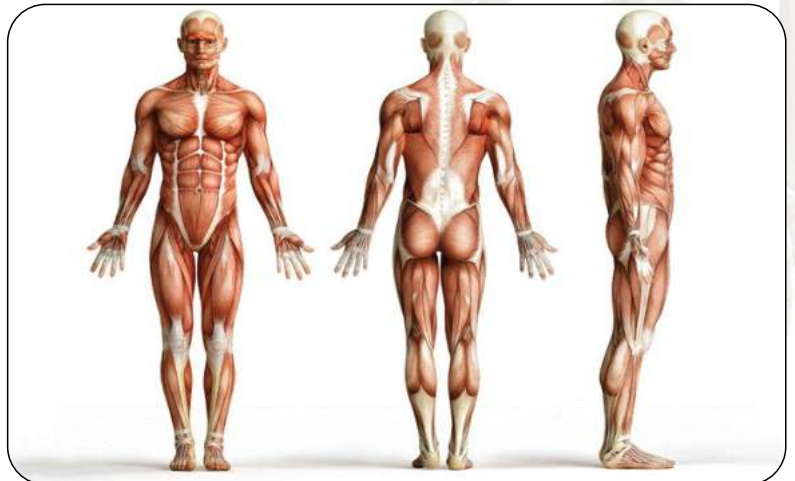


WALKING GAIT ANALYSIS



GaitON's gait analysis protocol identifies key walking deviations from multiple views & exports all data to a report.

VIEWS ANALYZED

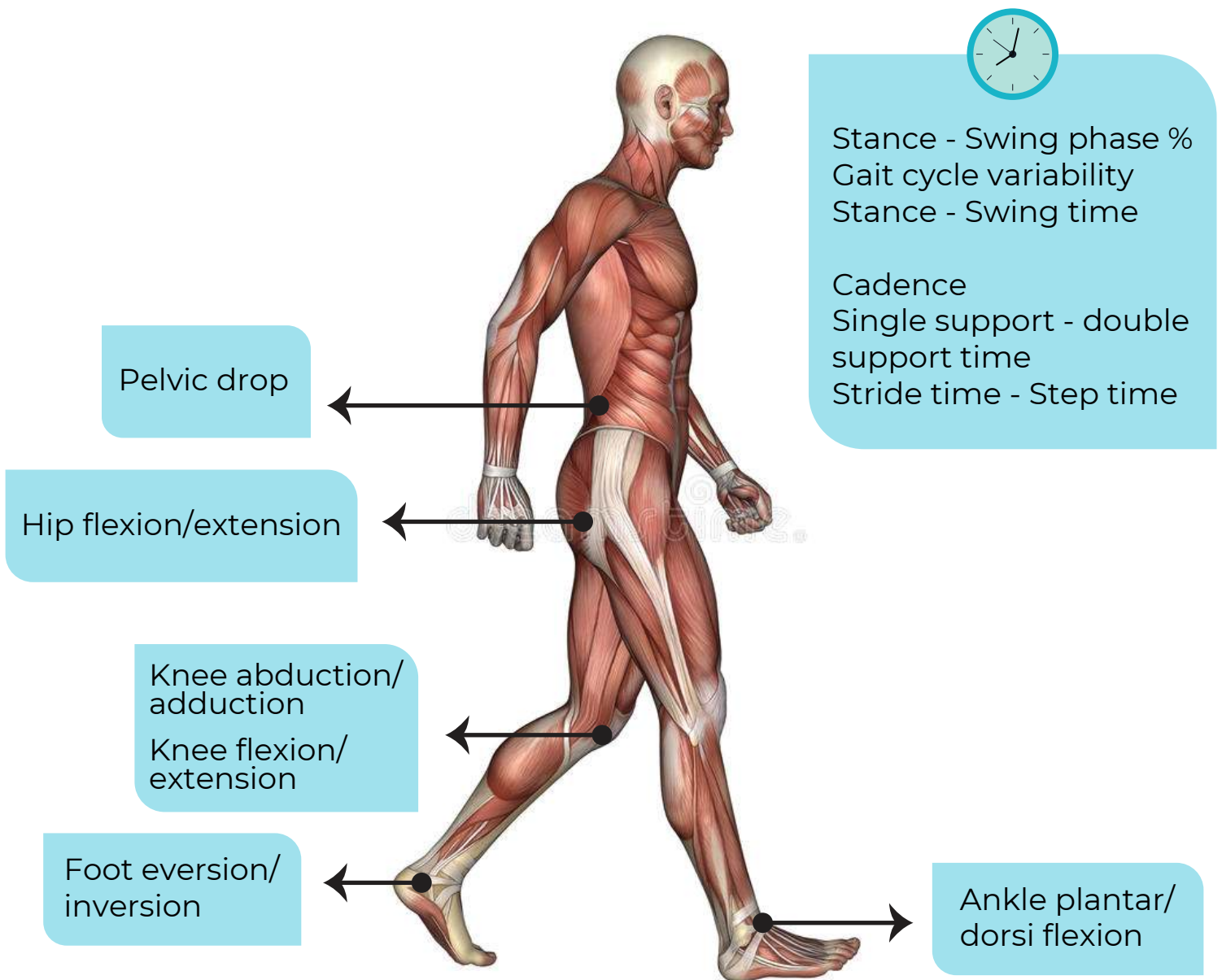


ANTERIOR . POSTERIOR . LATERAL

SURFACE
TREADMILL | WALKWAY

KEY DATA MEASURED

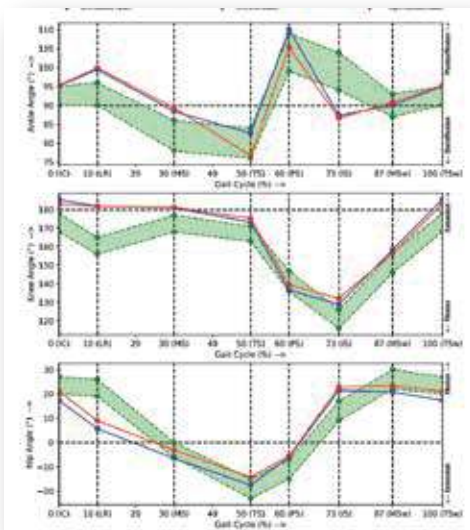
GaitON's gait analysis protocol analyses the pelvis, hip, knee, foot & ankle motion during the entire gait cycle



GAIT REPORTS : KEY FEATURES

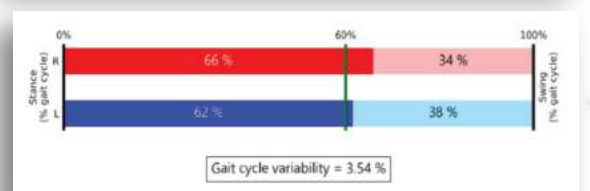
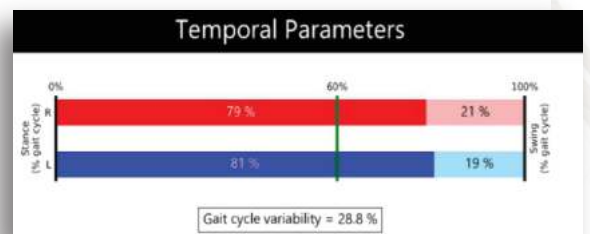
A detailed report with reference values, highlighting all **abnormal gait patterns**.

Comparison between **left & right** extremity gait.

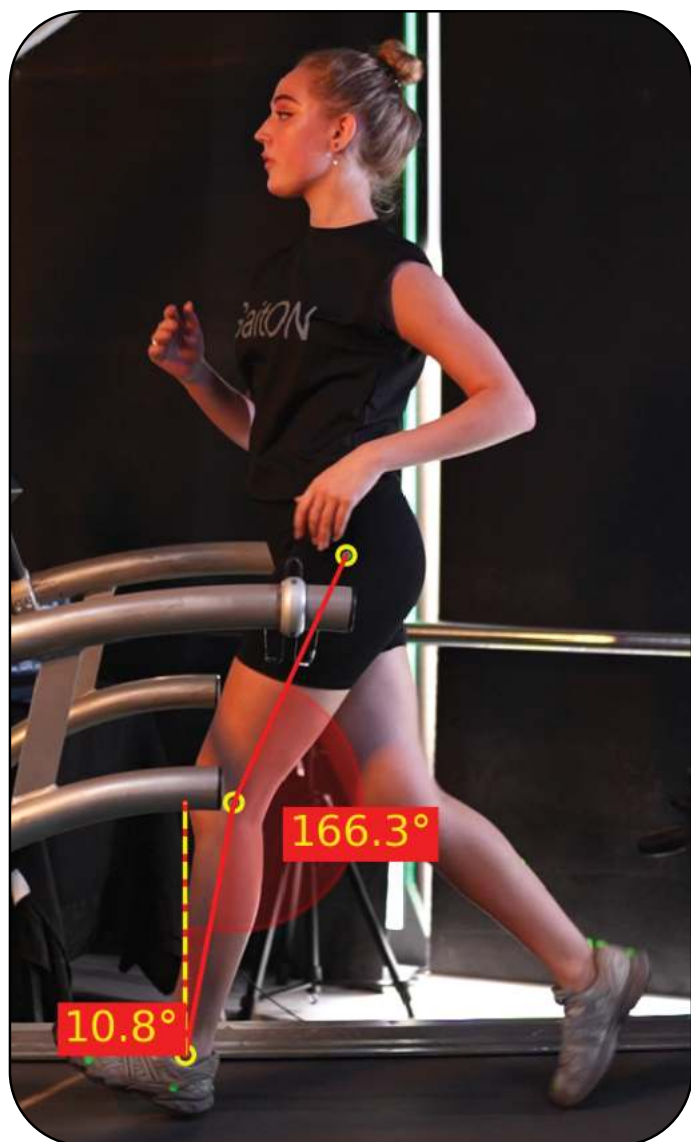


Accurate identification of **muscle imbalances** using kinematic graphs.

Monitor gait changes through **pre-post comparisons**.

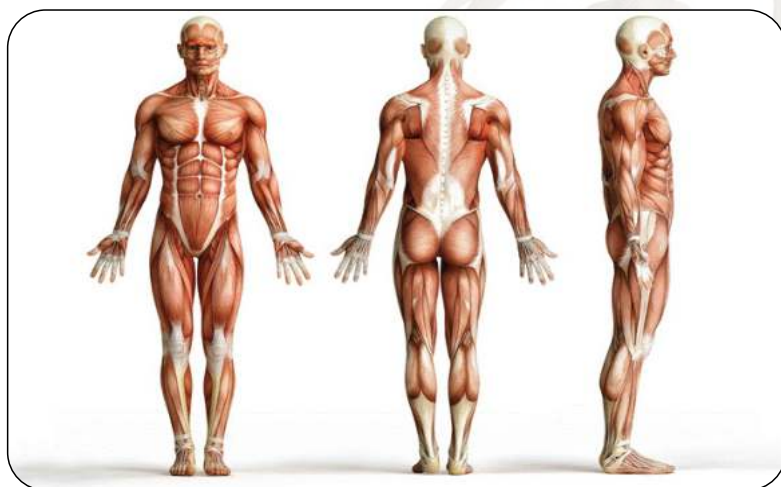


RUNNING ANALYSIS



GaitON's running analysis protocol is based on the directives of UW Health Sports Medicine Clinic, USA & detects any abnormal running gait patterns.

VIEWS ANALYZED

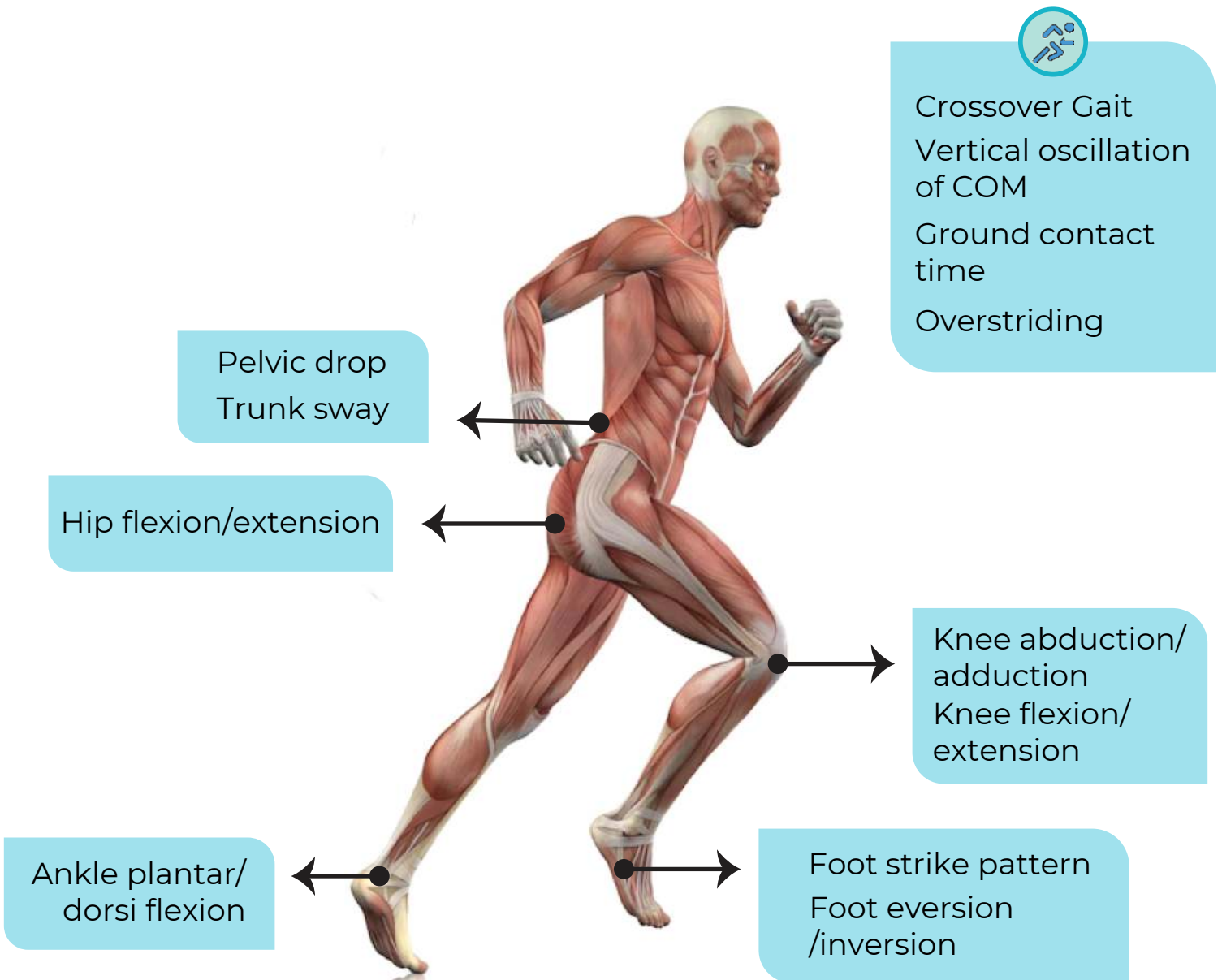


ANTERIOR . POSTERIOR . LATERAL

SURFACE
TREADMILL | RUNNING TRACK

KEY DATA MEASURED

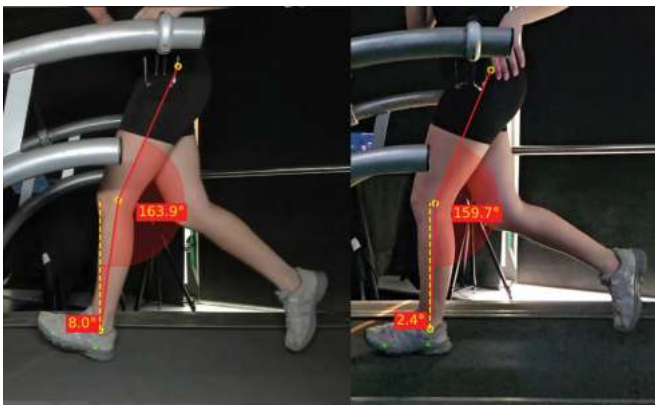
GaitON's running analysis protocol analyses the pelvis, hip, knee, foot & ankle motion during the entire gait cycle



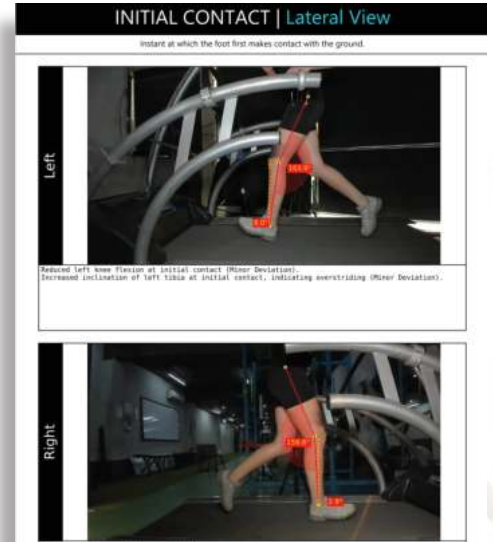
RUNNING REPORTS : KEY FEATURES

A detailed report with reference values, highlighting all **abnormal gait patterns**.

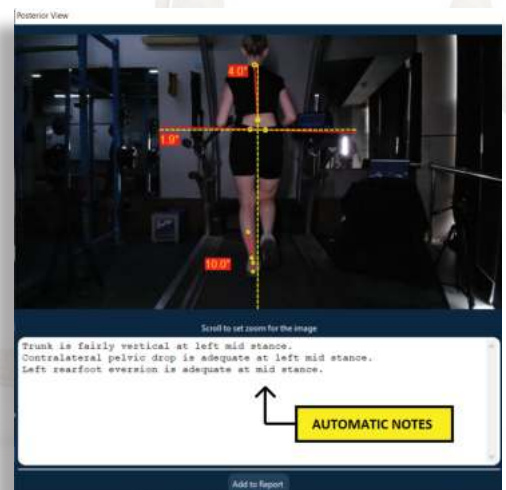
Comparison between **left & right** extremity gait.



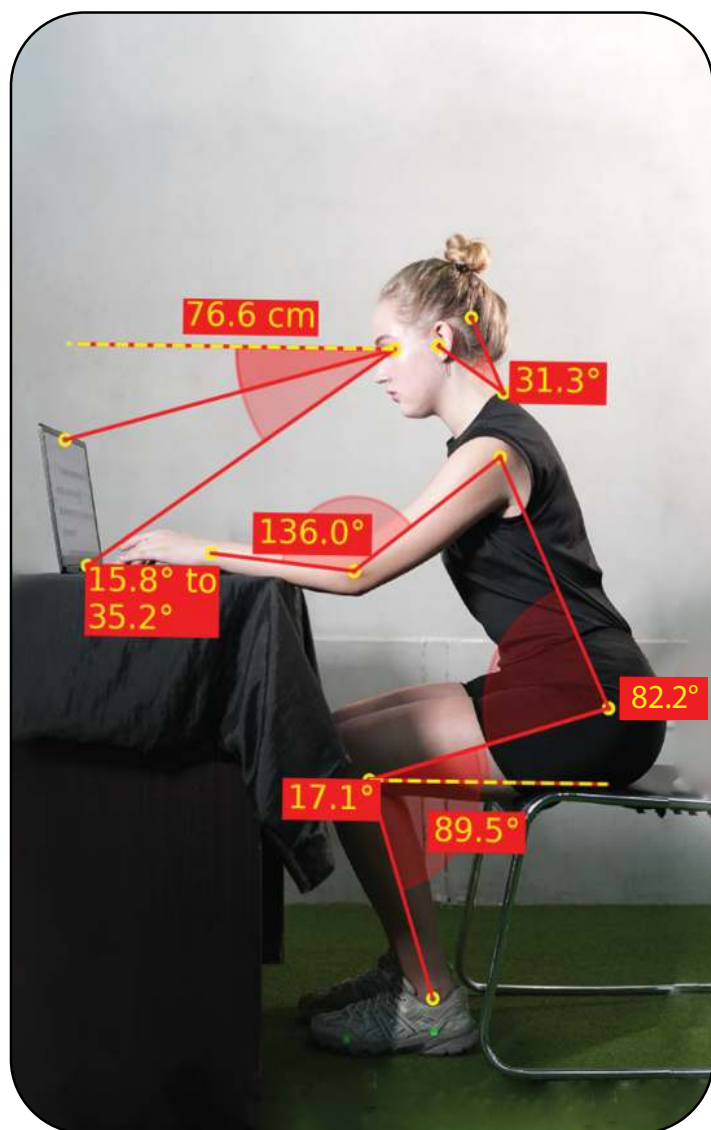
Automatic documentation of all observations.



Monitor gait changes through **pre-post comparisons**.

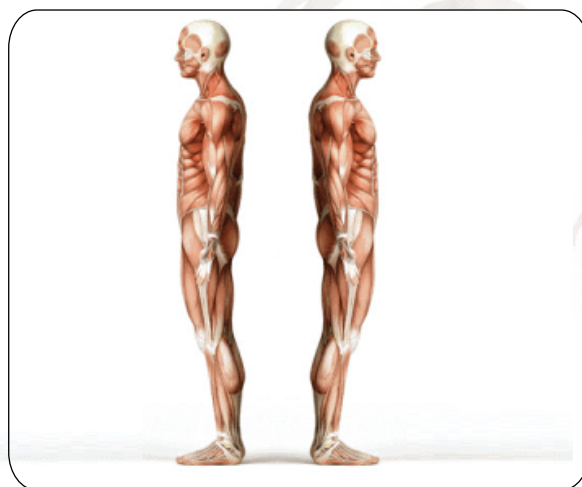


SITTING POSTURE ANALYSIS



GaitON's sitting posture analysis markerless protocol identifies key postural deviations in a few clicks & exports all data to a report.

VIEWS ANALYZED

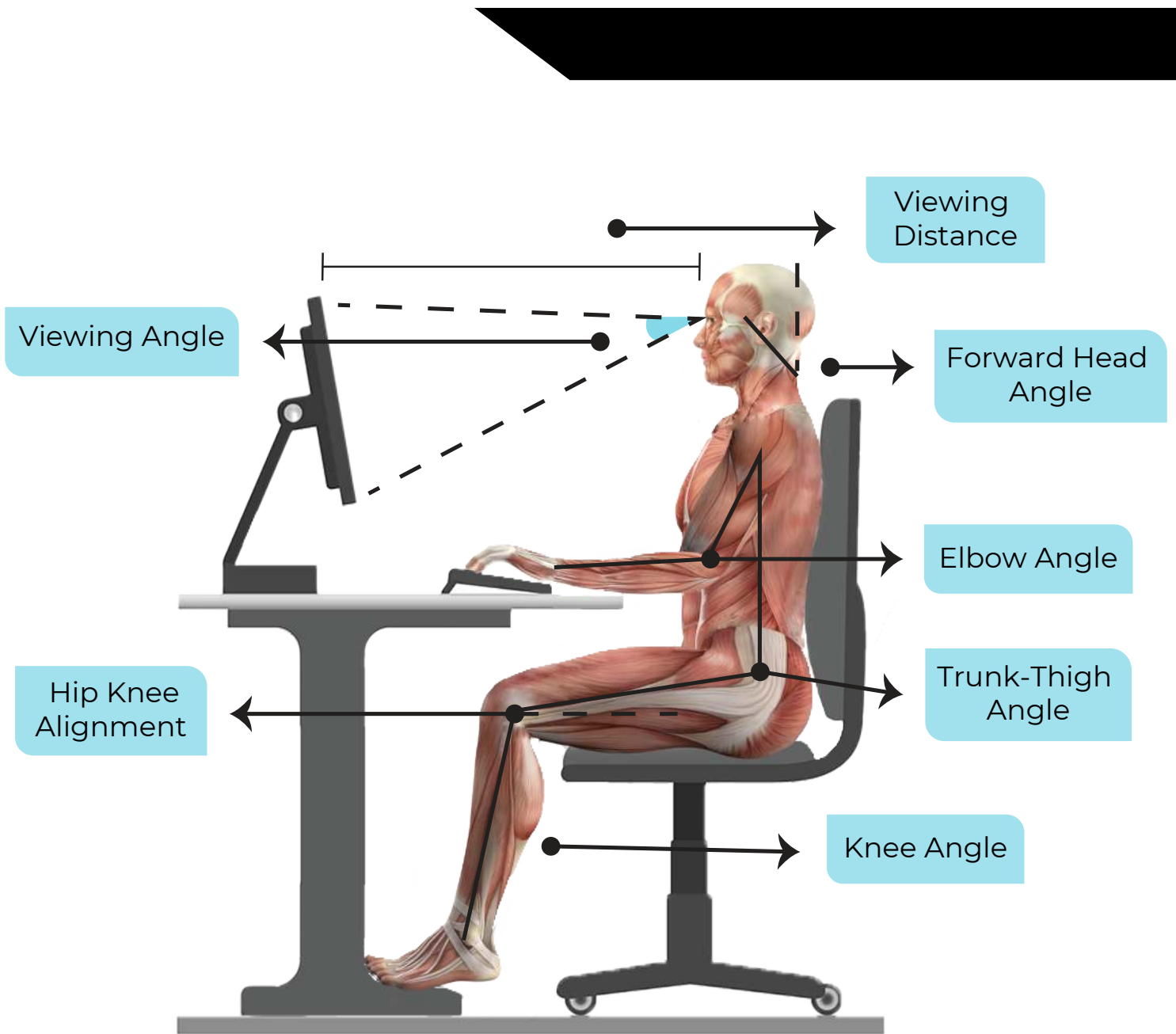


ANTERIOR . POSTERIOR . LATERAL

TIME PER ANALYSIS
5 MINUTES

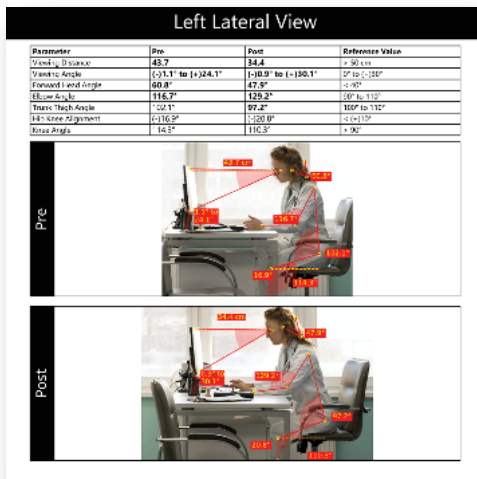
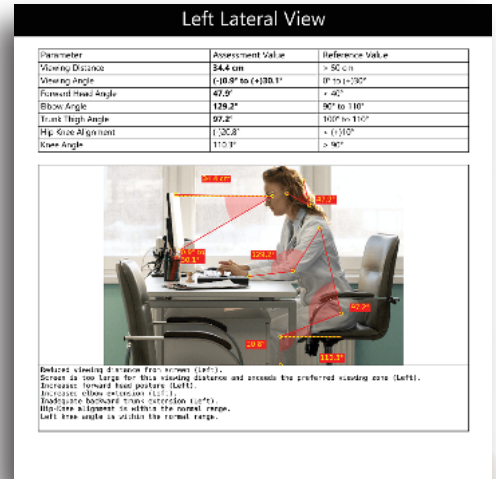
KEY DATA MEASURED

GaitON's sitting module analyses the complete sitting posture from left and right lateral views.



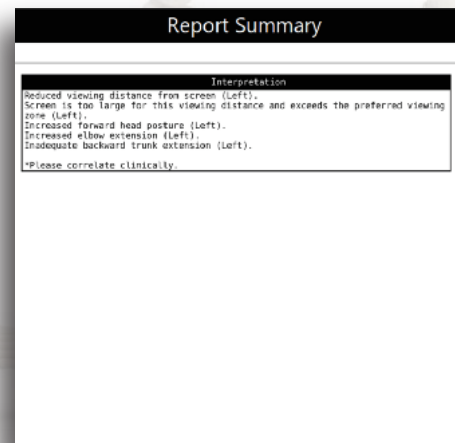
SITTING POSTURE REPORTS : KEY FEATURES

A detailed report highlighting **abnormal postural deviation** in table and angular form.



Pre-Post comparison of posture.

Automatic documentation of all observations in the report.



BIKE FITTING ANALYSIS

GaitON[®] bike fitting software is used by 500+ clinicians globally for a detailed bike fit assessment. It helps in adjusting the bike as per the rider's body measurements, flexibility, riding goals, and any existing injuries.



VIEWS ANALYZED



LATERAL AND ANTERIOR VIEW

POSITIONS

ROAD, MTB, TT, TRIATHLETE

BIKE FITTING REPORTS : KEY FEATURES

A detailed report with reference values and with different fit positions (Road, MTB, TT, Triathlete).

KINEMATIC DATA			
LATERAL VIEW			
	Right	Left	Reference Value
Arms			
Arm Angle (Min)	84.2°	81.8°	72° to 80°
Arm Angle (Max)	109.8°	106.2°	95° to 103°
Arm ROM	23.7°	22.9°	15° to 20°
Knee			
Knee Angle (Min)	22.3°	20.7°	20° to 22°
Knee Angle (Max)	143.0°	141.7°	140° to 145°
Knee ROM	-4.7°	-5.4°	-1° to 0°
Hip			
Hip Angle (Min)	43.7°	46.3°	51° to 65°
Hip Vertical Offset	6.6 cm	2.8 cm	-4.0 cm to 3.0 cm
Trunk & Ankle			
Back Angle (Average)	41.8°	41.8°	45° to 55°
Ankle Angle (Average)	27.7°	31.9°	20° to 30°
Elbow Angle (Average)	109.2°	106.9°	100° to 120°


ANTERIOR VIEW		
	Right	Left
Feet Style	Knock Out	Stiletto

A: Full range = 40° flexion, 20° to knee side & 40° angle = 40° flexion over flexion.
B: knee angle = 140° flexion, 140° to knee side & 40° angle = 140° flexion over flexion.

TOP DEAD CENTRE | Lateral View


Instant when the pedal is at the 12 o'clock position.

Left



Increased left elbow extension.
Reduced left arm angle.
Increased back angle, indicating a relaxed position (reduced trunk flexion, left).
Increased left hip angle at top dead center, indicating a more open hip riding position than normal.
Reduced left knee flexion at top dead center.
Left ankle angle is within the normal range at top dead center.

Right



Adequate right elbow angle.
Reduced right arm angle.
Increased back angle, indicating a relaxed position (reduced trunk flexion, right).
Increased right hip angle at top dead center, indicating a more open hip riding position than normal.
Increased right knee flexion at top dead center.
Right ankle angle is within the normal range at top dead center.

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Comparison between left and right extremity riding positions.

BIKE FITTING REPORTS : KEY FEATURES

BOTTOM DEAD CENTRE | Lateral View

Instant when the pedal is at the 6 o'clock position

Left (LowSaddle)

Increased left elbow extension.
Reduced left armpit angle.
Increased back angle, indicating a relaxed position (reduced trunk flexion, left).
Reduced vertical hip travel between top & bottom dead center (left).
Reduced left knee extension at bottom dead centre.
Left ankle angle is within the normal range at bottom dead centre.

Left (HighSaddle)

Increased left elbow extension.
Reduced left armpit angle.
Increased back angle, indicating a relaxed position (reduced trunk flexion, left).
Increased vertical hip travel between top & bottom dead center (left).
Increased left knee extension at bottom dead centre.
Increased left ankle plantarflexion at bottom dead centre.

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Easy comparison between different fit positions.

Automatic documentation of notes.

Right Lateral View

Scroll to set zoom for the image

Adequate right elbow angle.
Reduced right armpit angle.
Increased back angle, indicating a relaxed position (reduced trunk flexion, right).
Increased right hip angle at top dead center, indicating a more open hip riding position than normal.
Increased right knee flexion at top dead center.
Right ankle angle is within the normal range at top dead center.

Add to Report

SPORTS SPECIFIC PROTOCOLS

TENNIS SERVE ANALYSIS



Assessment of serve biomechanics

OVERVIEW

The following table gives an overview of the various biomechanical faults present during the tennis serve along with the list of the probable causes.

POSTEROLATERAL VIEW				ANTERIOR VIEW			
Knee bend	Yes	✓	No	Foot position	Yes		No
Posterior Hip tilt	Yes		No	✓			
Counter hip rotation	Yes		No	✓			
Trunk hip Separation	Yes	✓	No				
Shoulder Alignment	Yes	✓	No				

OBSERVATIONS		
Fault name	Common injuries	Common causes
1. Foot position	Increased load on trunk or shoulder	Hip and/or trunk flexibility and strength
2. Posterior hip tilt	Increased load on shoulder and trunk; inability to push through increasing load on abdominals.	Hip and trunk flexion flexibility and strength
3. Counter hip	Increased load on	Hip and trunk flexion flexibility and

Identification of musculoskeletal problems behind biomechanical faults

GOLF SWING ANALYSIS



Assessment of serve biomechanics

OVERVIEW

The following table gives an overview of the various biomechanical faults present during the golf swing along with the list of the probable causes.

DOWN THE LINE / LATERAL VIEW				FACE ON / ANTERIOR VIEW			
Posture	Neutral	✓		Reverse Spine Angle	Yes		No
	S Posture			Slide	Yes	✓	No
	C Posture			Sway	Yes		No
Loss of Posture	Yes		No	✓	Scooping	Yes	No
Early Extension	Yes	✓	No	✓	Chicken Wing	Yes	No
Over the Top	Yes		No	✓			

OBSERVATIONS		
Fault name	Common injuries	Common causes
1. Early Extension	Low Back Pain	Poor squat mechanics Decreased lead hip internal rotation Poor thoracic rotation Inability to separate torso from hips Weak gluteals and abdominals
2. Slide	Hip pain Medial knee pain Lateral ankle pain	Decreased lead hip internal rotation Difficulty separating upper body

Identification of musculoskeletal problems behind biomechanical faults

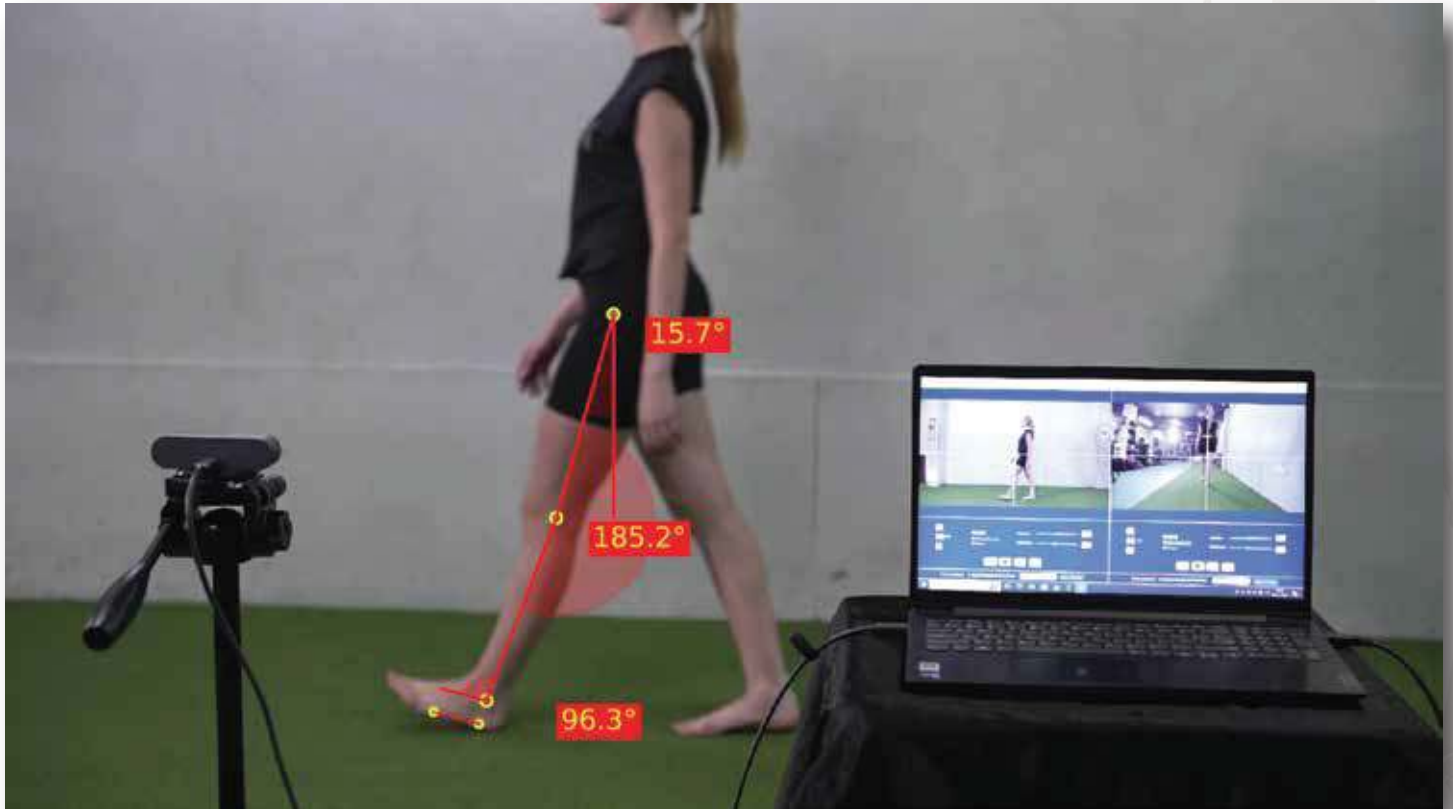
GaitON[®] is used by 500+ clinicians globally for:

- 1 Diagnosis of posture & gait disorders
- 2 Pre-post surgical/rehabilitation comparison
- 3 Monitoring effects of Orthotics/External supporting gear
- 4 Screening camps at schools/corporates.



TOP REFERENCES

GAIT ANALYSIS



Embrace Good Health

Amrita hospital, Kochi/
Faridabad (India)

SETUP



2 Digital Cameras



Walkway



GaitON[®] Software

TOP REFERENCES

GAIT ANALYSIS



Triton Hospital, Delhi (India)

SETUP



4 Digital Cameras



Treadmill



GaitON[®] Software

REFERENCES



Adidas



Indian Navy



BSF



Safdarjung hospital



Hawai'i Pacific University



SRM University



Amrita Hospital



Belle Vue Clinic



Col(Dr) Rana K Chengappa
Sports Medicine & Ortho Rehab



Perfect Bounce



Delhi Foot



Sporting Ethos

GaitON[®]

For a free demo of GaitON,
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