KNEEKG SYSTEM RESULTS COUPLED
WITH THE EMOVI PORTAL SOLUTION KNEEKG APP+*

KneeKG®

KNEE KINESIOGRAPHY

Case example: ACL & ANTERIOR KNEE PAIN

Patient: **Female Soccer Player**
Knee(s): **Left Knee**

Established diagnosis on file: ACL injury and reconstruction
Reason of consultation: Persistent anterior knee pain

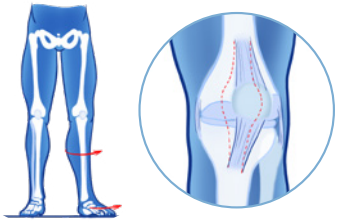
BIOMECHANICAL MARKERS: Results

Patellofemoral compartment

Dynamic knee contracture in flexion at heel strike	**Positive (14.6° of flexion)**
External tibial rotation -rotational instability at push-off through loading	**Positive + (8.7° at initial contact)**

General

Internal tibial rotation movement during loading	**Positive + (8.0°)**
Tibia internally rotated in relation to the femur during loading	Negative
Valgus collapse during single limb stance/push-off	**Positive (Valgus -4.7° at stance)**



IMPRESSION

Deficient loading and push-off mechanics

- Co-contraction of the quadriceps/hamstrings at heel strike limits absorption
  - Overloads the patellofemoral mechanism
- Combined valgus at push-off with external tibial rotation
  - Lateralizes the patella and negatively impacts patellar tracking

THERAPEUTIC PROGRAM

Patient was educated on her biomechanical dysfunctions

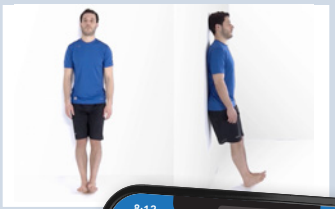
- Patient was given a home program with TARGETED neuromuscular gait retraining exercises
- **Additional recommendation:** Hinged knee sleeve for proprioception and cueing for a more neutral dynamic alignment

Therapeutic corrective: Dynamic Flexion Contracture
⇢ Flexum Control-Initial Contact

Therapeutic corrective: External Tibial Rotation
⇢ Push off, swing, and heel strike correction

Therapeutic corrective: Valgus movement
⇢ Valgus control-Push-off/ Swing

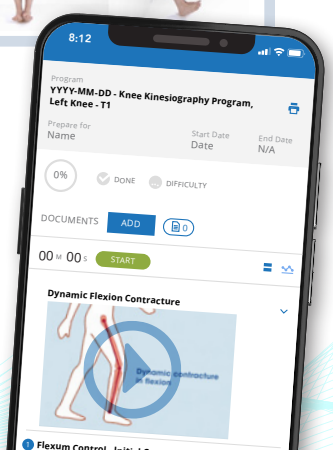
Therapeutic corrective: Internal Tibial Rotation
⇢ Dorsiflexion, against a wall



PATIENT SPECIFIC INFORMATION LEADS TO BETTER FUNCTIONAL OUTCOMES!

- **Objective information on functional movement patterns**
  - Quantifiable data used to improve patella tracking
  - Neuromuscular gait retraining to mitigate anterior knee pain
- **Prevention of long-term OA**

Personalized program available for your patient via an online platform with detailed explanations and videos to educate the patient on how to restore their function



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KNEE KINESIOGRAPHY

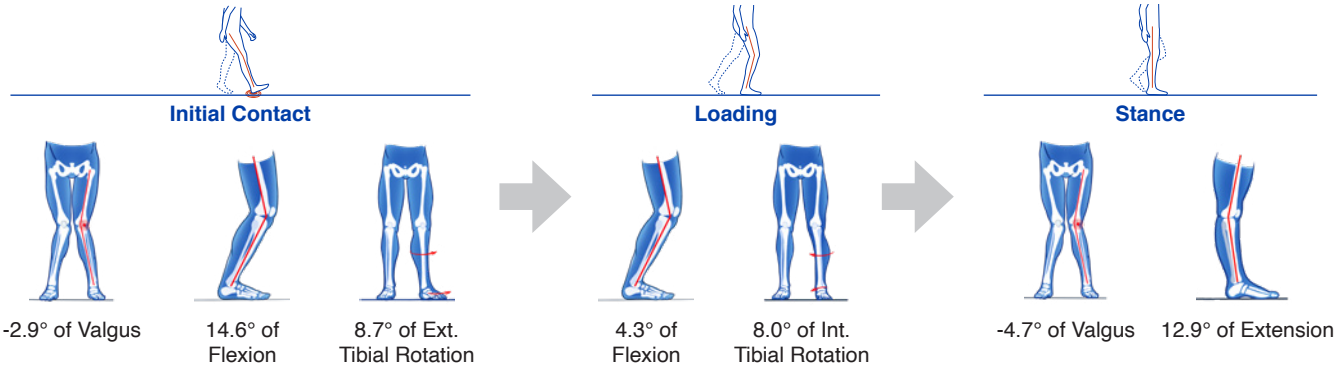
Patient name:
KneeKG Patient ID: 00123
Left knee - Comfortable walking (3.2 km/h)

KneeKG® Biomechanical Markers Report

Date: YYYY-MM-DD
KneeKG evaluator
Diagnostic information on file: **No Diagnostic**

Biomechanical markers	**Results** YYYY-MM-DD
Medial compartment and femoparatellar compartment	
Varus thrust during loading	Negative (1.6°)
Varus static functional lower limb alignment	N/A
Varus alignment at initial contact	Negative (Valgus -2.9°)
Varus alignment during stance	Negative (Valgus -4.7°)
Lateral compartment and femoropatellar compartment	
Valgus thrust during loading	Negative (0.2°)
Valgus functional lower limb alignment	N/A
Valgus alignment at initial contact	**Positive** (Valgus -2.9°)
Valgus alignment during stance	**Positive** (Valgus -4.7°)
Femoropatellar compartment	
Dynamic knee contracture in flexion at heel strike	**Positive** (14.6° of flexion)
External tibial rotation at initial contact	**Positive +** (8.7°)
General	
Knee in extension at initial contact	Negative (flexion 14.6°)
Limited flexion excursion during loading	**Positive +** (4.3° of flexion)
Limited extension movement during stance	**Positive** (12.9° of extension)
Internal tibial rotation movement during loading	**Positive +** (8.0°)
Tibia internally rotated in relation to the femur during loading	Negative

PATIENT SPECIFIC DYNAMIC ALIGNMENT



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