



### StepLab

### HOW DO WE WALK AND MOVE?



## HUMAN GAIT IS PERSONAL AND COMPLEX



HUMAN GAIT AND MOTION CAN BE MEASURED AND USE THE MEASUREMENT RESULTS FOR ANALYSIS IN PREVENTION AND REHABILITATION





## PREVENTION AND REHABILITATION IN GAIT IS **NEEDED WORLDWIDE**



**1 million** leg injuries 2 million hip and knee replacements 640 million diabetics

Annually in Europe, 500 000 foot ulcer related amputations

numbers in: Running schools Personal trainers Marathon runners

1,6 billion people aged 65 years and older

Globally in 2020, Around 60 million people have dementia



### OBJECTIVE DATA IS THE KEY FOR GAIT AND MOTION ANALYSIS



For analysis, data and measurement results are crucial to indicate, what actually happens under a foot during gait and motion. There is no need to trust only on visual examination anymore in prevention or rehabilitation.





# PRESENT MEASUREMENT DEVICES



#### LABORATORIES

- Very expensive methods and devices
- Measuring only in a laboratory
- Measuring only a few steps
- Measuring only 'you are analyzing me' -steps

#### CLINICS

- Static measurement method
- Measuring only a standing position
- Barefoot measurements only





NEED FOR

### A GENUILY MOBILE

GAIT AND MOTION MEASUREMENT DEVICE

TO BE USED IN INDIVIDUALS' EVERYDAY LIFE SETTINGS





### **MOVESOLE STEPLAB**:

### **COMBINATION OF HIGH-END LABORATORY TOOLS**

Pressure mat: A method to measure pressure distribution in a clinic

Force plate: An installed tool to measure total ground force LABORATORY LEVEL MEASUREMENTS within individuals' normal environment:

> MOBILE AND INTEGRATED SOLUTION for total ground force and pressure distribution measurement





# MOBILE MEASUREMENTS IN DIFFERENT CASES

### **MOVESOLE STEPLAB**

#### LOWER LIMB MALFUNCTION & INJURIES

Gait measuring for lower limb malfunction analysis and motivation for the rehabilitation process.

#### **DIABETIC FOOT ULCERS**

Offloading weight from the infected area for faster healing.

#### **SPORT & EXERCISE**

Motion measuring during exercise for prevention and finalizing the optimal technique.



#### OCCUPATIONAL HEALTH

Measuring during a workday for analyzing lower limb

strain.

#### **ACTIVE AGING**

Analyzing influence of performed activites among aging population.







# **MOVESOLE STEPLAB:**

### MOBILE GAIT AND MOTION MEASUREMENT DEVICE

### FAST & EASY



MoveSole Smart Device receives the measurement data wirelessly...



... and generates a visual report to support gait and motion analysis.





# **MOVESOLE STEPLAB**

### VISUAL REPORT ON SMART DEVICE

#### ← Mikko Mitattava



MoveSole Smart Device visualizes the results for quick analysis including:

- Gait and motion symmetry
- Power distribution per each sensor
- Loading response, midstance and terminal stance in the force curve

And other detailed information for more profound analysis.





Measurement results can be transferred into a laptop for further analysis.



## GAIT TRAINING WITH MOVESOLE STEPLAB

### **BIOFEEDBACK IN GAIT TRAINING**

Objective data on gait allows to view the timing and pressure distribution and provide biofeedback while on move.

Biofeedback on the gait performance can concern on *any of the sensors* or the *total ground force of the left and/or right foot.* 

Biofeedback alert is triggered when the force threshold has been reached and can be played by sound or vibration of MoveSole Smart Device.





# **MOVESOLE STEPLAB**

### PACKAGE INCLUDES:

MoveSole Smart Insole

6 pairs of insoles (sizes 36, 38, 40, 42, 44, 46)

MoveSole Smart Device

#### Accessories:

- USB-charger and -cable
- Coin cell battery, total 12 pieces
- Ankle band, total 12 pieces
- Screwdriver
- User manual





### MOVESOLE STEPLAB: PRODUCT FEATURES

#### TECHNOLOGICAL INNOVATION

- Sensor technology implemented in a new way
- Unique sensor technology combined with printed intelligence production methods

#### MECHANICAL AND PHYSICAL DURABILITY

- Extensive process for choosing and accepting the final materials
- Endurance of the sensor material

#### PRECISE MEASUREMENT RESULTS

- Tailored testing devices verified by an external actor
- Each Smart Insole calibrated before a delivery

MoveSole devices supported by a warranty: 12 months or 500 000 steps / pair of insoles





# FURTHER INFORMATION

Prodigo Sàrl

**Michel Patteet** 

044 552 20 70

michel.patteet@prodigo.ch

www.movesole.com