

How Well Does My Patient Walk?

Stride Analyzer VI: Affordable and Portable Gait Analysis



Developed at
Rancho Los Amigos
National
Rehabilitation
Center

Under the Direction
of
Dr. Jacquelin Perry



Stride Analyzer VI is a portable and wireless microprocessor / PC-based software system that receives foot-floor contact data from footswitches and calculates gait parameters obtainable from this data. Patient tests may be performed in any convenient walking area.

Stride Analyzer VI calculates the following walking parameters:

- Velocity
- Cadence
- Stride Length
- Gait Cycle
- Swing
- Stance
- Single Limb Support
- Normal Single Limb Support
- Initial Double Support
- Terminal Double Support
- Total Double Support

Easy to Use

As the patient walks along a measured walkway at least six meters in length, the therapist triggers Stride Analyzer VI to start and stop Footswitch data acquisition called a Trial. Footswitch data is graphically displayed in real-time and displayed as footprint patterns indicated by four contact areas (Heel, 5th Metatarsal, 1st Metatarsal, and Toe) within each Footswitch. By combining the timing of Footswitch changes with the distance walked, the walking parameters listed above are calculated and saved for analysis and reporting in both graphical and numerical formats. The gait parameters of individual patient trials can be combined into various groups for further data analysis.

B&L Engineering

Division of Pinsco, Inc.

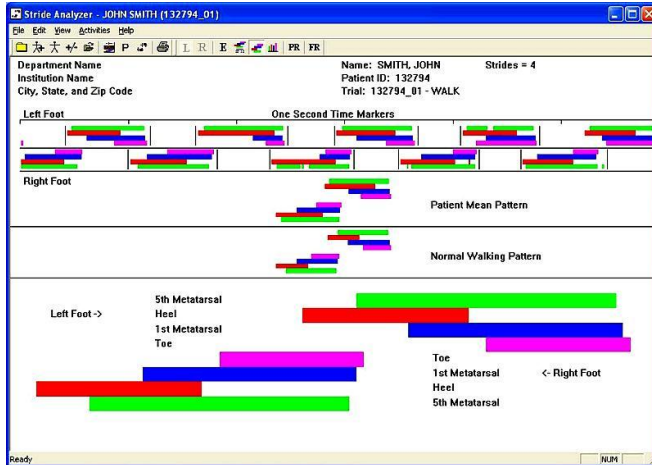
1901 Carnegie Ave., Suite Q
Santa Ana, CA 92705
www.bleng.com

Phone: 714.505.9492
Fax: 714.505.9493
Email: sales@bleng.com

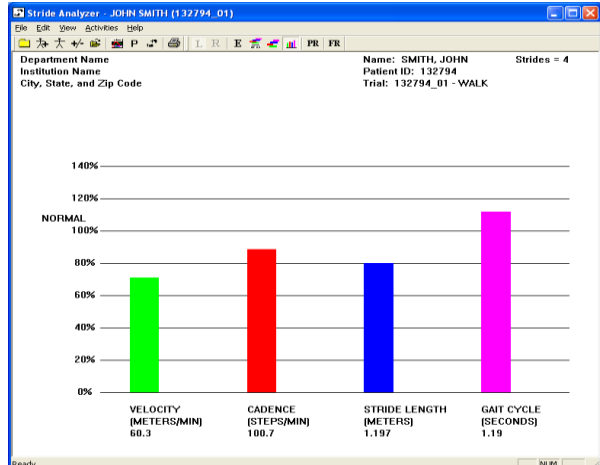
Real-time Display



Patient Pattern vs. Normal Pattern



Patient Results vs. Normal



Department Name
Institution Name
City, State, and Zip Code
Gait Analysis Report - Walking

Name: SMITH, JOHN
Number: 132794
Date: 05/15/10
Diagnosis: Sprained Right ankle
Age: 46 years 1 months
Gender: Male

Trial Name: 132794_03
Trial Length: 7.27 seconds
Conditions: WALK
Strides: 6
Trial Type: Walking Trial
Distance: 6.000 meters

Stride Characteristics	Actual	%Normal			
Velocity (M/MIN):	49.5	58.4			
Cadence (STEPS/MIN):	122.2	107.5			
Stride Length (M):	0.811	54.2			
Gait Cycle (SEC):	0.98	92.2	GC SD:	0.02	GC CV: 2.51
Single Limb Support (SEC):	0.331	0.297	GAI:	5.414	SPS: 96.8
(%NORMAL):	57.6	51.7			
(%GC):	33.9	30.1			
Swing (%GC):	30.4	33.5			
Stance (%GC):	69.6	66.5	RST SD:	1.1	LST SD: 1.0
Double Support					
Initial (%GC):	21.3	15.8	RDSI SD:	1.7	LDSI SD: 1.5
Terminal (%GC):	16.0	20.7	R DST SD:	1.8	L DST SD: 1.0
Total (%GC):	37.3	36.5			
Left Foot (stance = 66.5% GC)					
Heel	--- Normal	Contact at 0.0% GC (0.0% stance)			
	Normal	Cessation at 30.2% GC (45.4% stance)			
5th Metatarsal	--- Normal	Contact at 13.5% GC (20.3% stance)			
	Normal	Cessation at 58.7% GC (88.3% stance)			
1st Metatarsal	--- Normal	Contact at 14.1% GC (21.2% stance)			
	Normal	Cessation at 60.8% GC (91.5% stance)			
Toe	--- Normal	Contact at 29.4% GC (44.3% stance)			
	Normal	Cessation at 62.6% GC (94.1% stance)			
Right Foot (stance = 69.6% GC)					
Heel	--- Normal	Contact at 0.0% GC (0.0% stance)			
	Normal	Cessation at 35.1% GC (50.4% stance)			
5th Metatarsal	--- Normal	Contact at 14.7% GC (21.2% stance)			
	Normal	Delayed Cessation at 58.7% GC (83.0% stance)			
1st Metatarsal	--- Normal	Contact at 19.2% GC (27.5% stance)			
	Normal	Delayed Cessation at 65.2% GC (93.7% stance)			
Toe	--- Normal	Contact at 35.5% GC (51.0% stance)			
	Normal	Delayed Cessations at 64.2% GC (92.3% stance)			



Stride Analyzer Components

- Stride Analyzer VI Software CD
- Stride Analyzer Manual
- Footswitches (5 pairs) - Adult Sizes M-7, M-9, M-11, W-5, W-7
- Two Leg Belts for Attaching Wireless
- Covering Straps to hold Transmitters more securely (optional)
- Two Wireless Transmitters (uses 2 AAA batteries each side)
- Extra Batteries included
- Receiver with USB Cable
- Portable Carrying Case

System Requirements

- Microsoft® Windows® XP or Windows® 7 (32-bit)
- 8MB Available Hard Disk Space
- CD-ROM Drive
- USB Port
- Printer (optional)

B&L Engineering

Division of Pinsco, Inc.

1901 Carnegie Ave., Suite Q
Santa Ana, CA 9270
www.bleng.com

Phone: 714.505.9492
Fax: 714.505.9493
Email: sales@bleng.com