TRAZER®

SPORTS MEDICINE SUMMIT

Performance Enhancement: From Data to Results

Wednesday, April 17, 2024

MEET THE PANEL

Dr. Randy Cohen

DPT, ATC | PT at Physio Shop | VP at Trazer Inc.

University of Arizona

Dr. Connor Norman

Director of Sports Medicine-Football

University of Georgia

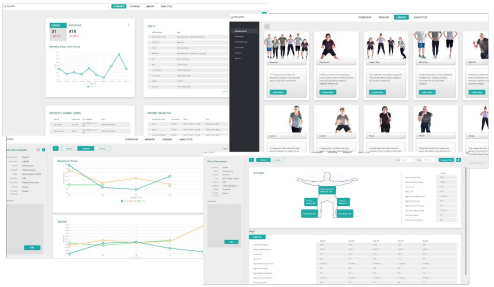
Nathan Wilder

MS, ATC, CSCS | Senior AD, Sports Med - Performance

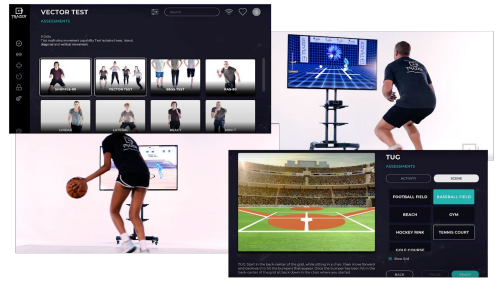
Towson University

TRAZER

Technology for injury recovery, injury prevention, and enhancing performance, TRAZER tracks, measures, and enhances physical *and* cognitive function.



HIPAA-compliant Data Analytics Portal



100+ Immersive reaction-based activities

Healthcare | Senior Care | Special Needs | Sports | Wellness | Workplace Injury Prevention

TRAZER: Objective, Comprehensive, and Data-Driven

Introducing the 4 Pillars

All 150+ Activities are built across our 4 Pillars. Each Pillar presents a different experience to the User, analyzes specific types of movement, and reports relevant metrics.

Balance

WHAT
Balance Activities are built to analyze stability and the ability to maintain and complete a required posture.

HOW
Stand in the required position and stay as still as possible for 20 seconds. The on-screen ball will move when you sway, so try to keep it on the center of the target.

WHY
TRAZER reports how stable you were during the Activity and displays how much you swayed in each direction and the number of times you moved out of position.

Dynamic Movement

WHAT
Dynamic Movement Activities are built to analyze directional movement as the body starts, stops, and changes direction in response to a single-task of moving to the requested target location.

HOW
When you see a target appear in the simulation, move your body to reach the target location, using the avatar to gauge your proximity to the target.

WHY
TRAZER reports how well you move and respond to a changing environment. We will see your reaction time, speed, acceleration, and deceleration and identify any issues in your movement patterns.

Kinematics

WHAT
Kinematics Activities are built to analyze joint angles during repetitions of a specific motion.

HOW
Follow the on-screen instructions to complete 5 repetitions of the movement while TRAZER tracks your joint angles.

WHY
TRAZER reports the angles of your joints so we can see if there are any inconsistencies or imbalances in your range of motion and form.

Neuromechanics

WHAT
Neuromechanics Activities are built to analyze directional movement as the body starts, stops, and changes directions in response to a dual-task of both a cognitive challenge and choice of 2 target locations.

HOW
When you see a prompt appear at the top of the screen, choose between the 2 targets and move to reach its location, using the avatar to gauge your proximity to the target.

WHY
TRAZER reports how well you move in response to the cognitive prompt. We will see your reaction time, speed, acceleration, and deceleration and identify any issues in your movement patterns as well as your cognitive scores.

MAXIMIZING DATA CAPTURE USING TRAZER

Activities to Assess and Monitor Essential Metrics

INTRODUCING THE 4 PILLARS

BALANCE

Direction of Sway | Errors | Different levels of Balance Challenge

DYNAMIC MOVEMENT

Reaction Time | Speed | Acceleration | Deceleration | Fatigue Measure

KINEMATICS

Trunk Lean | Pelvic Drop | Joint Angle | Valgus/Varus

NEUROMECHANICS

Reaction Time | Dynamic Reaction Time | Cognitive Assessment | Acceleration | Deceleration | Fatigue Measure

BASELINING USING TRAZER

4 PILLARS COMPREHENSIVE BASELINES

- Dynamic Movement
- Balance
- Kinematics
- Neuromechanics

IJSPT

Bel L, Mathieu N, Ducrest V, Bizzini M. Lower Limb Exercise-Based Injury Prevention Programs Are Effective in Improving Sprint Speed, Jumping, Agility and Balance: an Umbrella Review. *IJSPT*. 2021;16(6):1396-1404. doi:10.26603/001c.29860

Umbrella Review

Lower Limb Exercise-Based Injury Prevention Programs Are Effective in Improving Sprint Speed, Jumping, Agility and Balance: an Umbrella Review

Loïc Bel, PT, Bsc Msc Cand.[1] [a], Nicolas Mathieu, PT, BSc, MSc[1], Vincent Ducrest, PT, E

[1] Physiotherapy, HES-SO Valais, University of Applied Sciences Western Switzerland, [2] Research, Schulthes

Keywords: systematic review, performance, prevention programs, lower limb injury, exercise

https://doi.org/10.26603/001c.29860

International Journal of Sports Physical Therapy

Vol. 16, Issue 6, 2021

HOSTED BY ELSEVIER

Journal of Sport and Health Science

Volume 1, Issue 1, May 2012, Pages 36-42

Original article

Biomechanical risk factors of non-contact ACL injuries: A stochastic biomechanical modeling study

Cheng-Feng Lin [a], Hui Liu [b], Michael T. Gros [c], Paul Weinhold [d e], William E. Garrett [f], Bing Yu [c d e]

ORIGINAL RESEARCH article

Front. Sports Act. Living, 01 October 2021
Sec. Injury Prevention and Rehabilitation
Volume 3 - 2021 | https://doi.org/10.3389/fspor.2021.729729

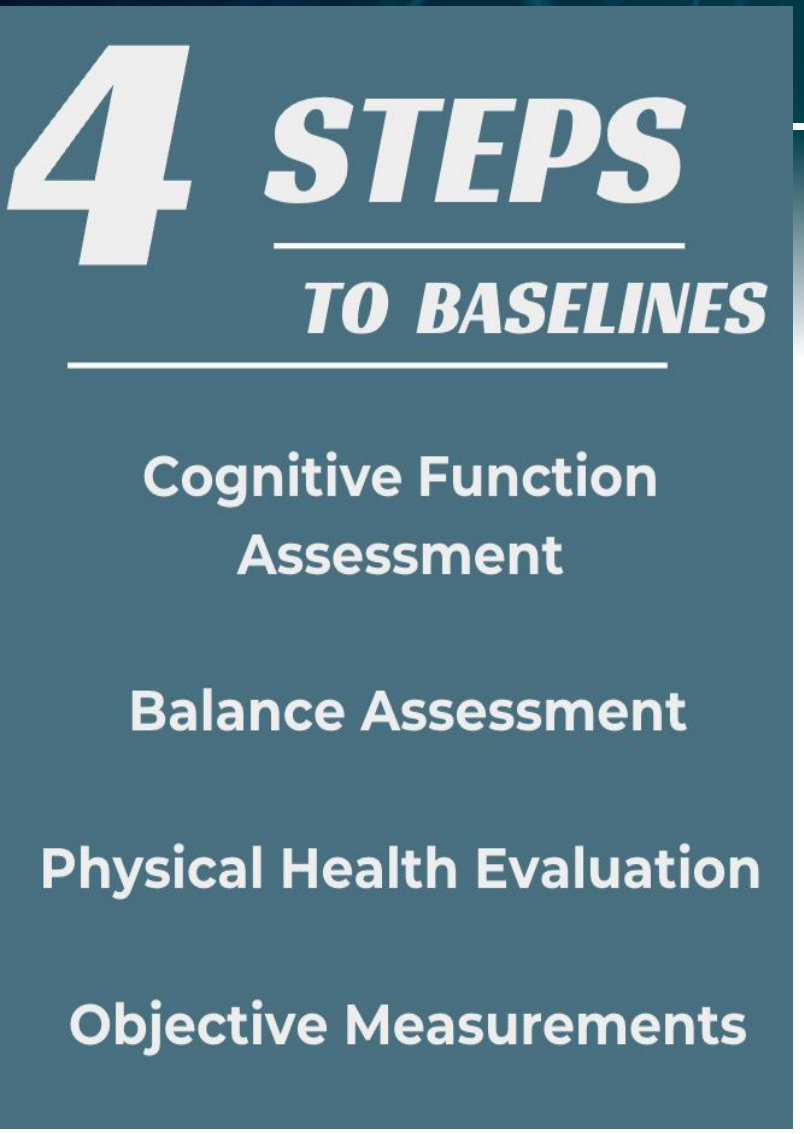
Assessment and Training of Perceptual-Motor Efficiency for Human Performance Optimization

View all 3 Articles >

A Novel Approach to Assessment of Perceptual-Motor Efficiency and Training-Induced Improvement in the Performance Capabilities of Elite Athletes

Gary B. Wilkerson[1*] Dustin C. Nabhan[2†] Tyler S. Perry[3†]

Impact of Baseline Testing on Concussion Recovery



Baseline testing: 11.7 days recovery (vs. 19.8 days without)

Improved recovery time = 8.1 days

Clinical Journal of Sport Medicine

Baseline testing: 29.3% prolonged recovery (vs. 42.9% without)

Improved recovery rate = 13.6%

Journal of Athletic Training

Nathan Wilder - Senior Athletic Director, Towson University

Nathan Wilder

MS, ATC, CSCS | Senior AD, Sports Med - Performance

Towson University

Towson Baseline

BESS Test

A multi-step balance Test of Bilateral, Unilateral and Tandem postures conducted on firm and foam surfaces.

Learn More

Linear

A single-step Test where the User moves forward to a target for 10 repetitions to measure the speed and efficiency of movement.

Learn More

Lateral

A single-step Test that measures speed, acceleration/deceleration and L/R asymmetries as the User moves as fast as possible laterally between pre-defined targets.

Learn More

Squat

A 5-rep squat Test to measure lower extremity joint angles.

Learn More

LAS 20

20 randomly appearing targets to the Left and Right of the User allow for isolated measurement of dynamic reaction time and movement symmetry.

Learn More

Stroop

A single-step dual-task Test designed to measure reaction time in relation to cognitive function. When a word in a certain color appears on screen, the User is required to select between

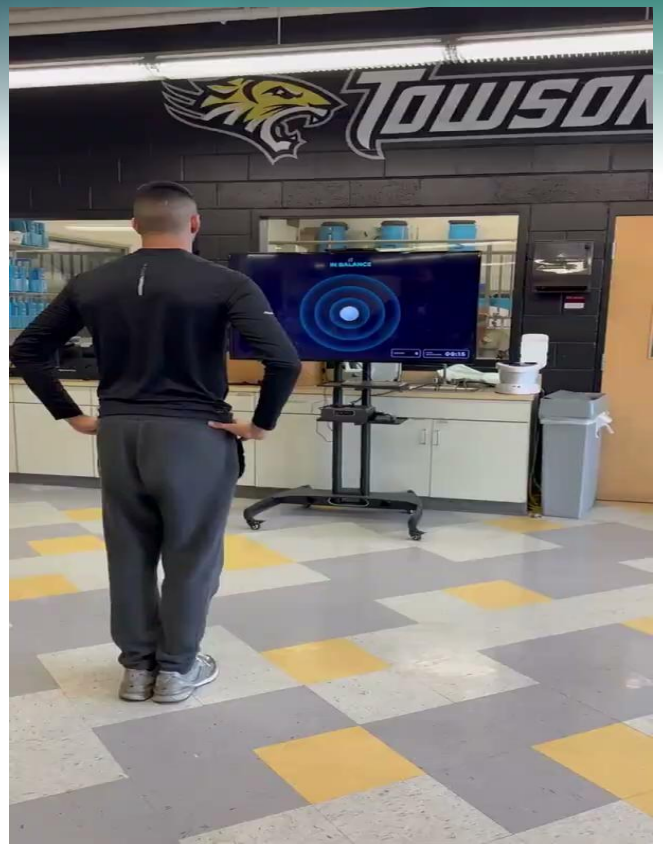
Learn More

Single Leg Squat

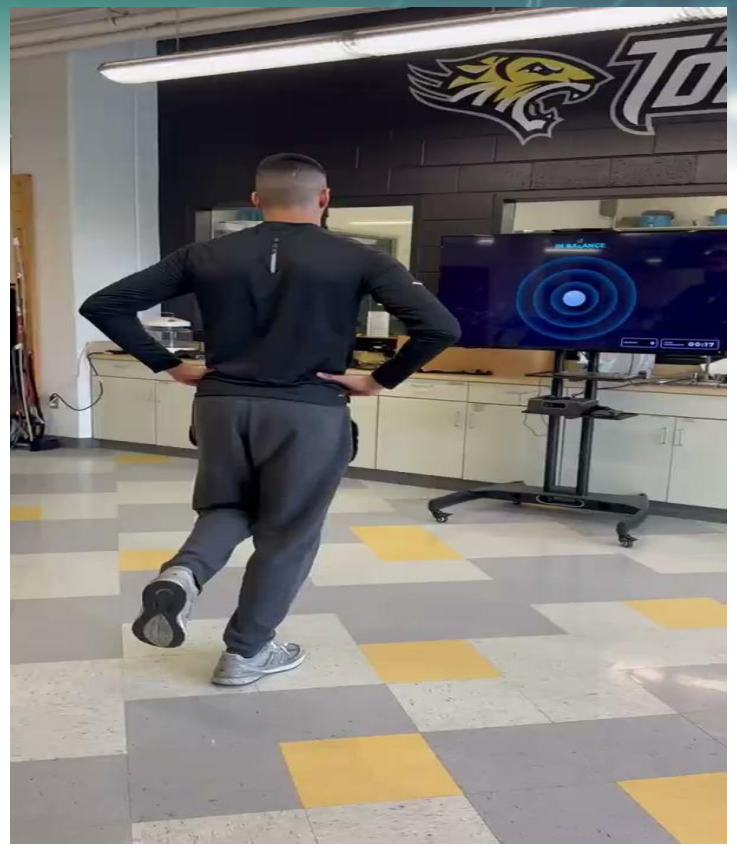
A multi-step single-leg squat Test to compare lower extremity joint angles of the left and right legs for 5 reps each.

Learn More

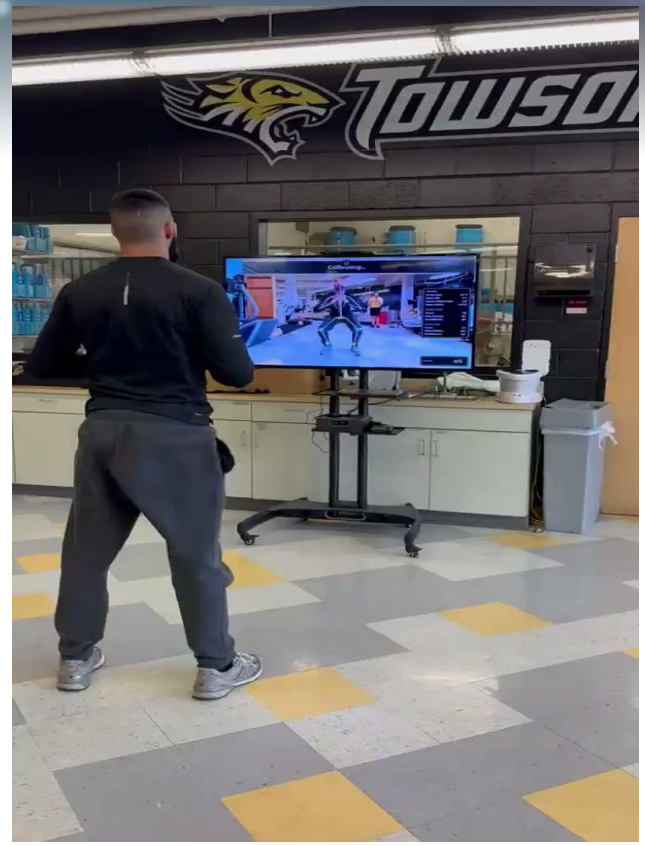
Towson: Pre-Participation Exam



Balance 1



Balance 2



Kinematics

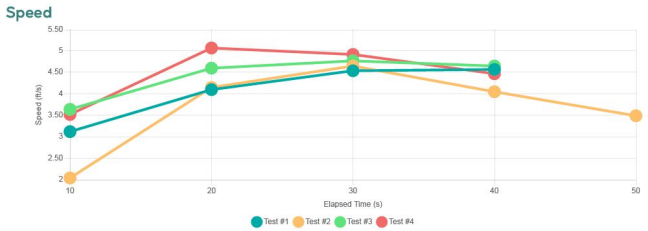
Injury to the First MTP Joint

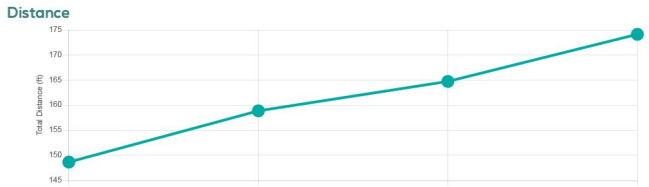
LAS-20

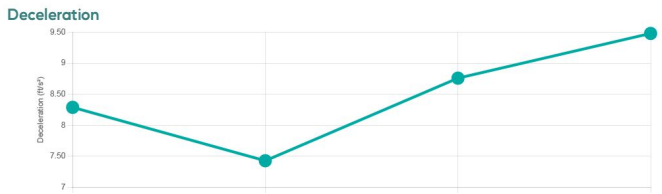
Linear

Lateral

- **Presentation:** Wide Receiver pushed off L foot while making a block and felt pain in L 1st MTP joint
- **MRI Findings:**
  - Grade 3 sprain of medial collateral ligament
  - Grade 2 sprain of distal plantar plate at 1st MTP joint
  - Grade 2 flexor hallucis muscle strain
- **X-ray Results:** X-rays did not show any sesamoid retraction so opted for conservative management
- **Treatment Plan:**
  - 8 weeks in boot
  - 4-week progression back to Activities of Daily Living (ADLs) in shoes with orthotics
  - 4-week functional progression
  - 4-week progression back to full Return to Play (RTP)





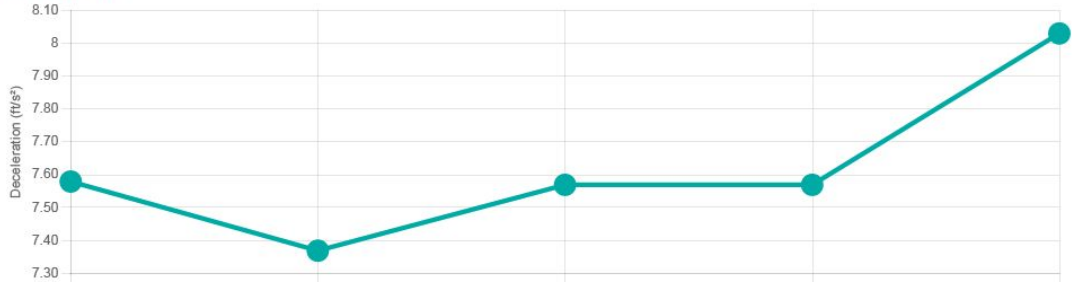


Lateral Agility Screen (LAS) Data

Ability to objectively track week to week improvement of

- Acceleration
- Deceleration
- Speed
- Distance
- Track improvements in overall speed/endurance throughout the test

Deceleration



Speed

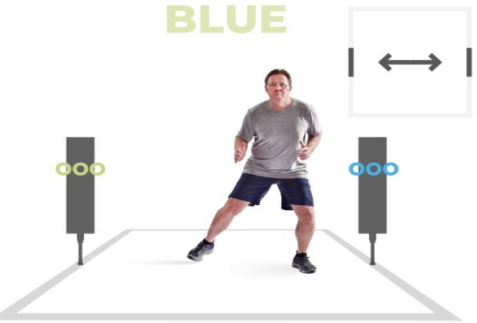
Speed

Sagittal Agility Screen Data

Acceleration

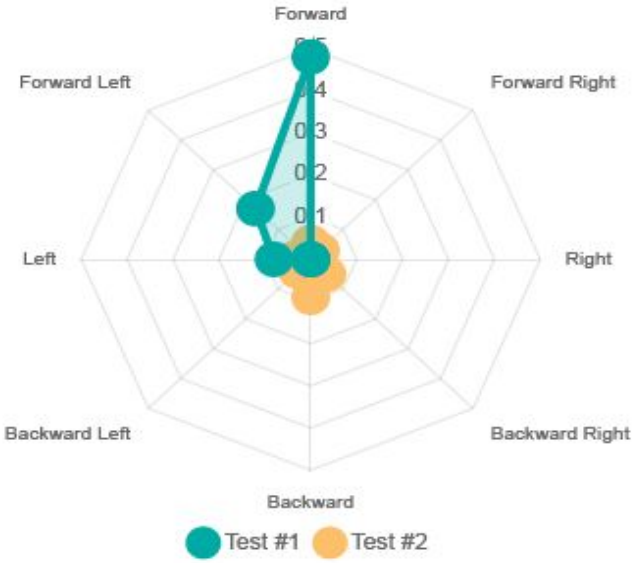
Distance

Linebacker Concussion Management



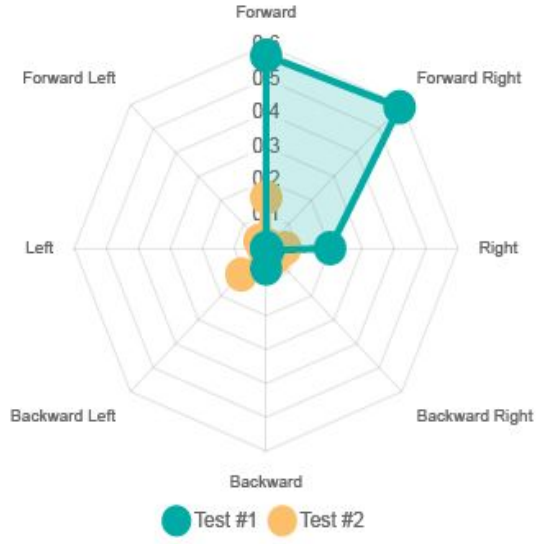
- **Incident:** Linebacker sustained a concussion in a game
- **Assessment and Evaluation:**
  - Removed from play and put through SCAT 5 evaluation by team physician
  - Initial reported 18/22 symptoms with symptom severity score of 38/132
- **Initial Treatment:**
  - Started daily Balance Error Scoring System (BESS) and Stroop tests on TRAZER
  - Added low-level cardio on bike below symptom threshold
- **Monitoring and Tracking:**
  - Tracked TRAZER data and daily symptoms until symptom-free
- **Return to Play (RTP) Protocol:**
  - Initiated concussion RTP progression once symptom-free

BESS Data

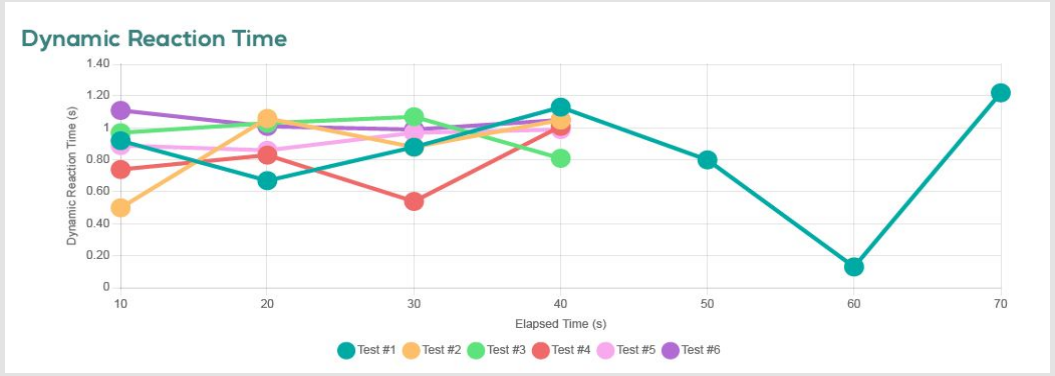


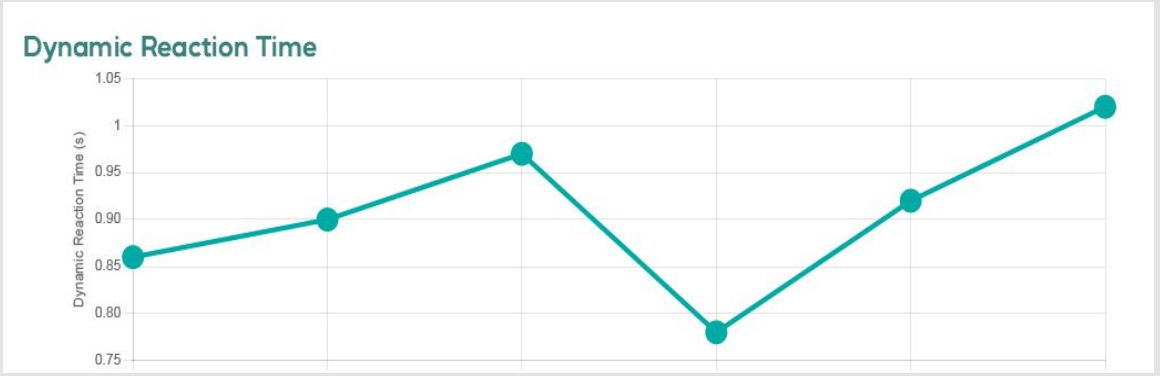
Bilateral

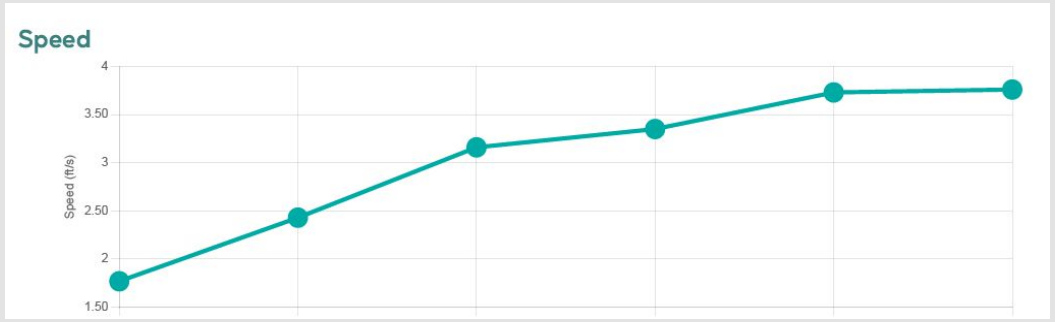
Single Leg

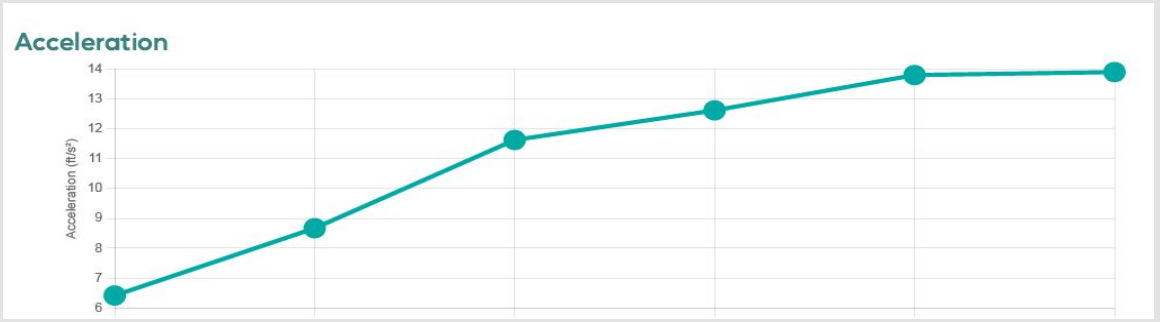


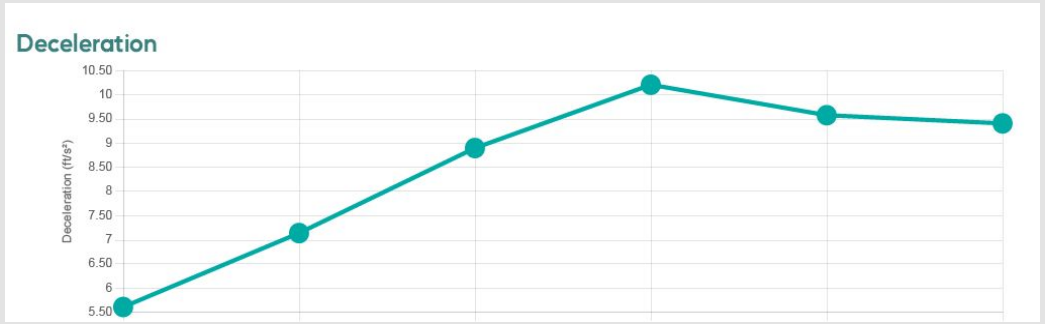
Tandem Stance

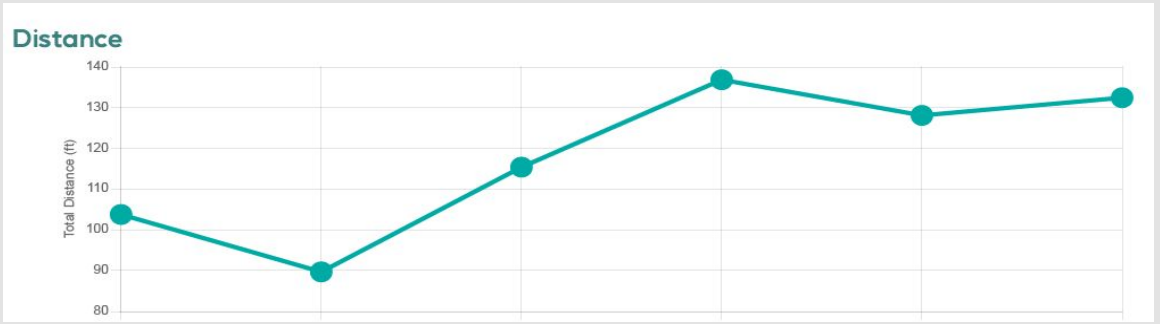

Dynamic Reaction Time
Dynamic Reaction Time (s)
1.40
1.20
1
0.80
0.60
0.40
0.20
0
10
20
30
40
50
60
70
Elapsed Time (s)
Test #1
Test #2
Test #3
Test #4
Test #5
Test #6


Dynamic Reaction Time
Dynamic Reaction Time (s)
1.05
1
0.95
0.90
0.85
0.80
0.75


Speed
Speed (ft/s)
4
3.50
3
2.50
2
1.50

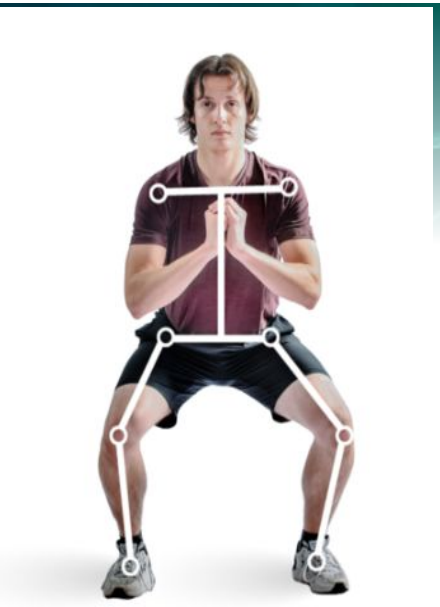

Acceleration
Acceleration (ft/s²)
14
13
12
11
10
9
8
7
6

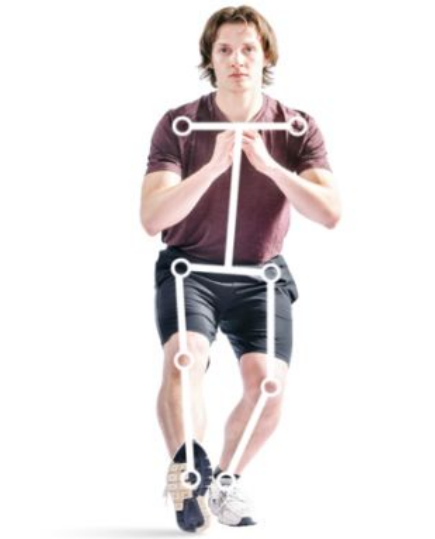

Deceleration
Deceleration (ft/s²)
10.50
10
9.50
9
8.50
8
7.50
7
6.50
6
5.50


Distance
Total Distance (ft)
140
130
120
110
100
90
80

STROOP Data

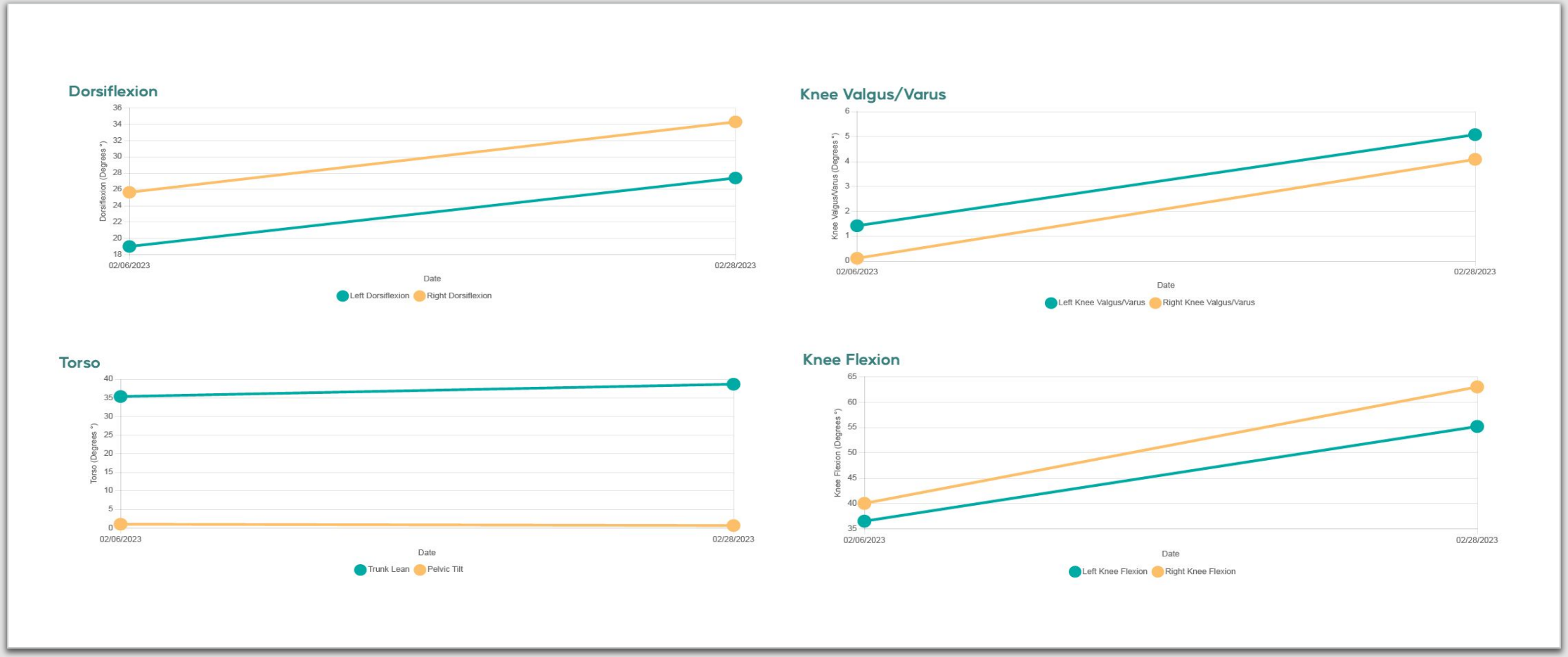
Grade 3 High Ankle Sprain





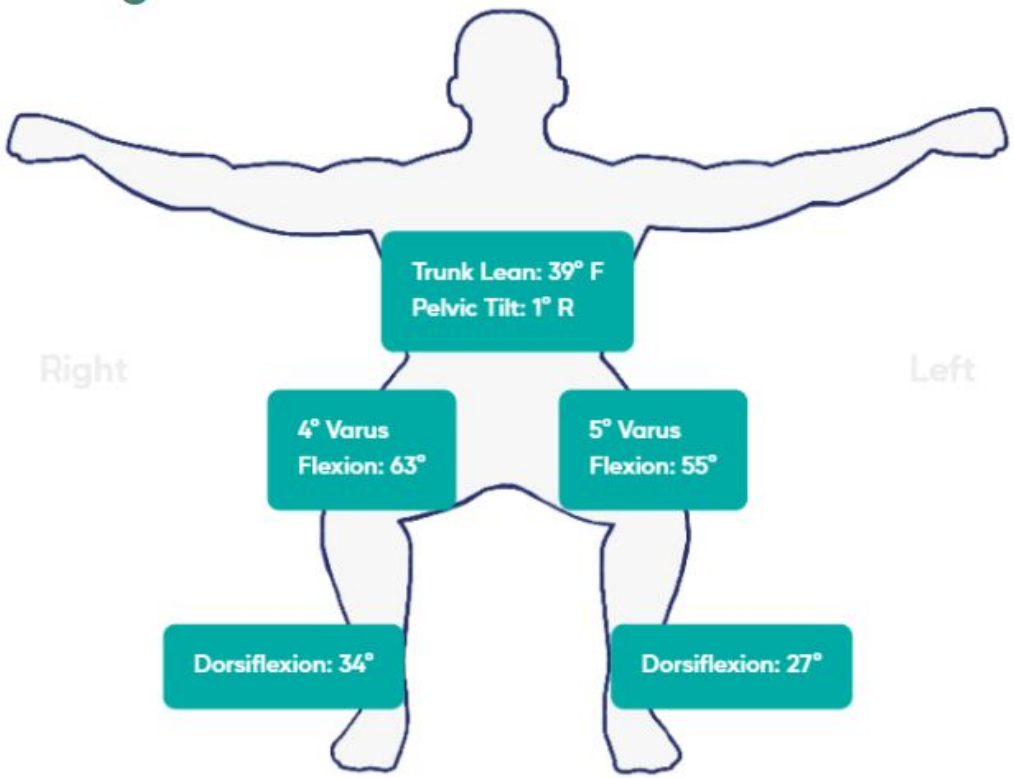
- **Incident:** Wide Receiver tackled with a hip drop tackle, resulting in linebacker landing directly onto athlete's foot, forcing dorsiflexion and eversion mechanism of injury (MOI)
- **MRI Findings:**
  - Complete tear of anterior tibiofibular ligament and posterior tibiofibular ligament
  - Distal sprain of the distal interosseous membrane
- **Treatment:**
  - Surgical repair with tightrope procedure and syndesmotic screw fixation
- **Rehabilitation Protocol:**
  - 6 weeks non-weight bearing
  - 4 weeks weight bearing in boot
  - Begin motion and progressive activities as tolerated

Single Leg Squat Kinematic Assessment



Single Leg Squat Kinematic Assessment

Averages



	Test #1
Trunk Lean	39° F
Pelvic Tilt	1° R
Right Knee Valgus/Varus	4° Varus
Right Knee Flexion	63°
Right Ankle Dorsiflexion	34°
Left Knee Valgus/Varus	5° Varus
Left Knee Flexion	55°
Left Ankle Dorsiflexion	27°

Dr. Connor Norman
UGA Sports Medicine Director

GEORGIA®
ATHLETICS

Dr. Connor Norman

Director of Sports Medicine-Football

University of Georgia

University of Georgia

Objective Measures for Intermediary Assessment

- Utilized **LAS 20** for intermediary assessment before transitioning to field work
- Included objective measures such as:
  - **Squat**
  - **Single Leg (SL) Activities**
  - **Deadlift (DL)**
  - **Jumping, with particular emphasis on Single Leg (SL) jump**
    - Objective measure focused on **trunk lean**
- Endurance metrics tracked with objective numbers
- **Linear and Lateral 2-minute drills** utilized to assess progress over time
- Integrated Catapult data with TRAZER
  - Catapult provided overall acceleration/deceleration metrics
  - TRAZER identified asymmetries in different movement directions

UGA: LAS 20 Report

TRAZER

Step Summary

LAS 20	Duration	Targets	Calories
	1:09	20.00	7.04

Distance	Deceleration Index
129.25 ft	1.53

Averages

	Reaction Time	Dynamic Reaction Time	Speed	Acceleration	Deceleration
Test #1	0.97 s	1.14 s	2.74 ft/s	8.39 ft/s²	7.92 ft/s²

Reaction Time

Seconds

	Test #1
Right	1.00
Left	0.93
L/R Difference	6.66% R

Dynamic Reaction Time

Seconds

	Test #1
Right	1.18
Left	1.10
L/R Difference	6.85% R

TRAZER

Speed

ft/s

	Test #1
Right	2.84
Left	2.65
L/R Difference	6.62% L

Acceleration

ft/s²

	Test #1
Right	8.72
Left	8.14
L/R Difference	6.60% L

Deceleration

ft/s²

	Test #1
Right	7.88
Left	7.95
L/R Difference	0.92% R

Test #1

	Rep #1	Rep #2	Rep #3	Rep #4	Rep #5	Rep #6	Rep #7	Rep #8	Rep #9	Rep #10	Rep #11	Rep #12	Rep #13	Rep #14	Rep #15	Rep #16	Rep #17	Rep #18	Rep #19	Rep #20
Avg Reaction Time	0.94 s	0.97 s	1.08 s	0.97 s	0.91 s	0.95 s	0.95 s	1.04 s	1.04 s	1.01 s	0.98 s	0.91 s	1.04 s	1.01 s	0.87 s	1.02 s	0.90 s	0.98 s	0.87 s	0.91 s
Avg Dynamic Reaction Time	0.94 s	0.97 s	1.08 s	0.97 s	0.95 s	2.71 s	0.95 s	1.04 s	1.04 s	1.01 s	0.98 s	0.91 s	1.04 s	1.01 s	0.87 s	1.02 s	0.90 s	0.98 s	2.45 s	0.91 s
Avg Speed	3.77 ft/s	2.47 ft/s	2.75 ft/s	2.33 ft/s	3.32 ft/s	3.36 ft/s	2.48 ft/s	2.33 ft/s	2.79 ft/s	2.95 ft/s	2.40 ft/s	2.44 ft/s	2.69 ft/s	2.60 ft/s	2.56 ft/s	2.88 ft/s	2.91 ft/s	2.75 ft/s	2.87 ft/s	3.42 ft/s
Avg Acceleration	9.88 ft/s²	6.98 ft/s²	7.92 ft/s²	6.44 ft/s²	9.68 ft/s²	10.01 ft/s²	6.62 ft/s²	8.23 ft/s²	13.74 ft/s²	10.23 ft/s²	6.75 ft/s²	6.55 ft/s²	9.73 ft/s²	7.16 ft/s²	6.95 ft/s²	11.03 ft/s²	8.73 ft/s²	8.49 ft/s²	8.43 ft/s²	9.14 ft/s²
Avg Deceleration	9.26 ft/s²	7.86 ft/s²	10.69 ft/s²	7.57 ft/s²	9.84 ft/s²	10.54 ft/s²	9.39 ft/s²	6.16 ft/s²	6.42 ft/s²	18.77 ft/s²	6.50 ft/s²	7.33 ft/s²	6.80 ft/s²	7.06 ft/s²	8.46 ft/s²	6.70 ft/s²	8.98 ft/s²	6.57 ft/s²	9.04 ft/s²	7.74 ft/s²
Total Distance	6.55 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	11.53 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	6.00 ft	10.04 ft	6.00 ft

UGA Athletes on the MOVE

Dr. Randy Cohen

TRAZER VP of Clinical Education and Elite Performance

Randy P. Cohen AT, PT, DPT
Retired Assoc AD Medical Services
University of Arizona

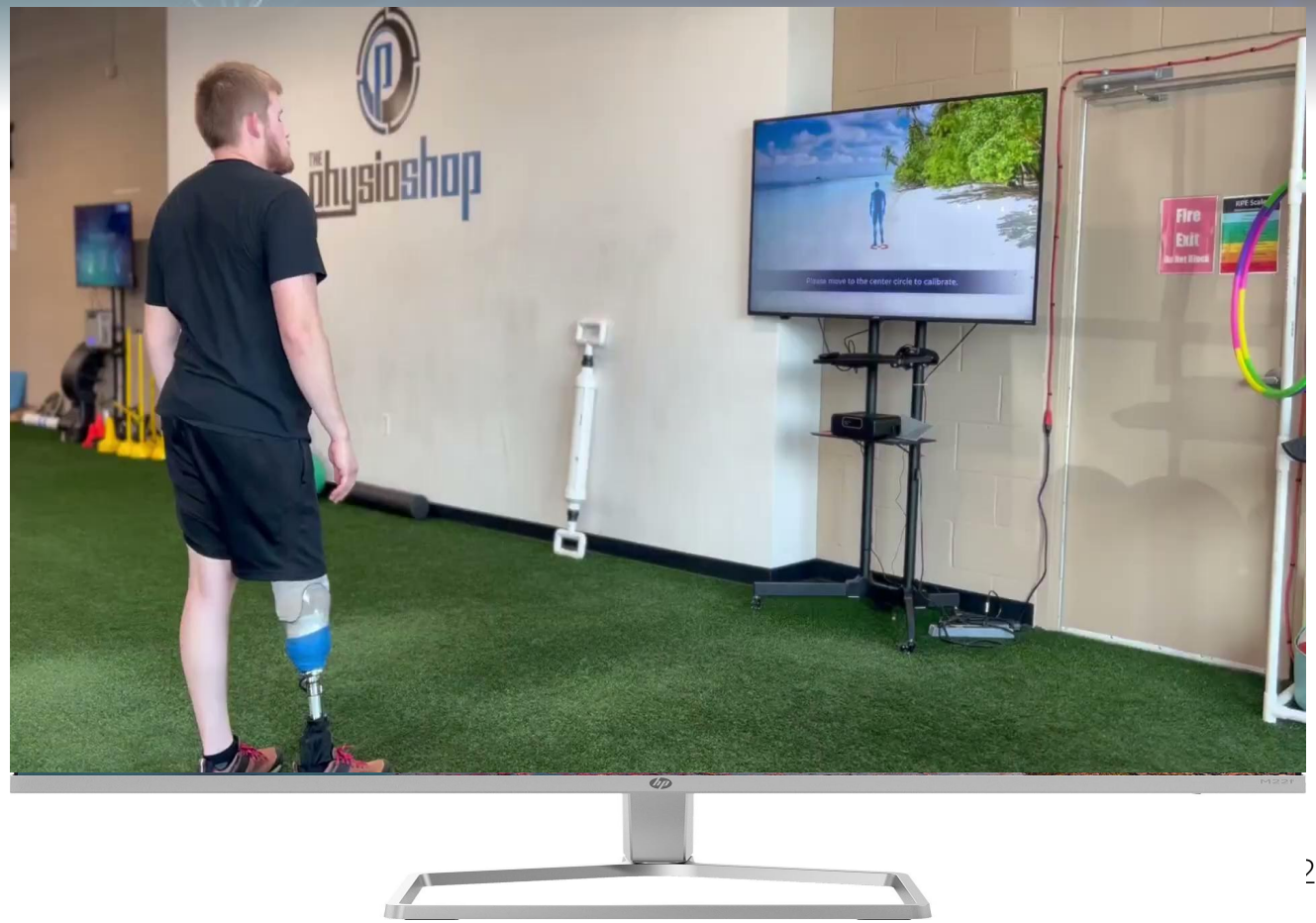
The PhysioShop AT/PT/Wellness Center

Dynamic Movement-REACT

Single-step Drill in TRAZER

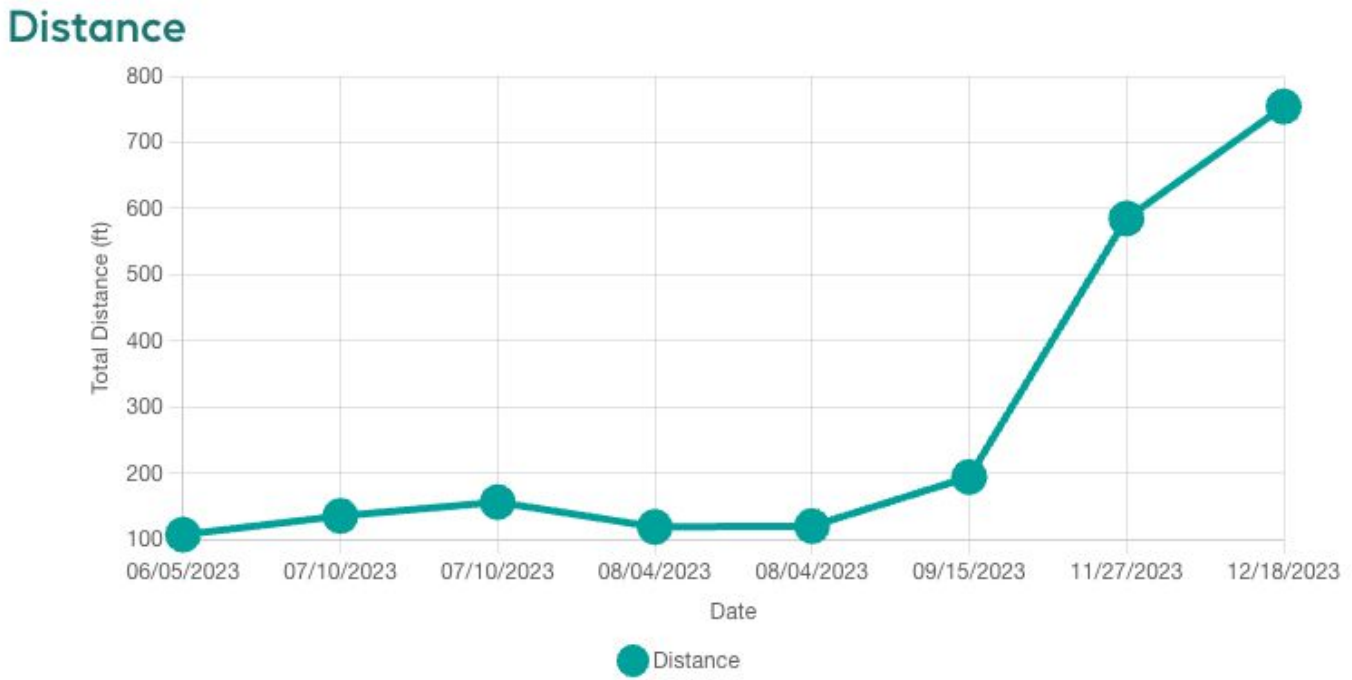
Objective: Enhance Reactive Agility

How: Test and Train in 8 Directions



REACT

Movement in 8 Directions from Center

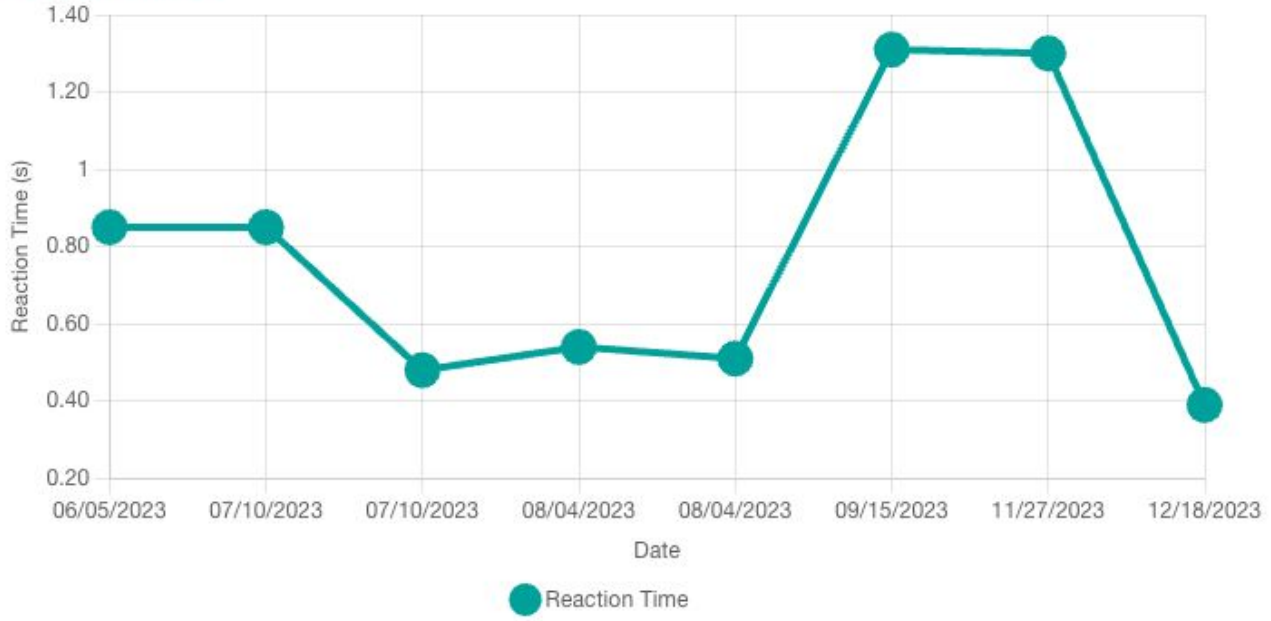


Date	Total Distance
06/05/2023	107.28
07/10/2023	135.54
07/10/2023	156.42
08/04/2023	118.91
08/04/2023	120.17
09/15/2023	194.43
11/27/2023	584.95
12/18/2023	754.12

REACT

Movement in 8 Directions from Center

Reaction Time



Date	Avg RT
06/05/2023	0.85
07/10/2023	0.85
07/10/2023	0.48
08/04/2023	0.54
08/04/2023	0.51
09/15/2023	1.31
11/27/2023	1.30
12/18/2023	0.39

REACT

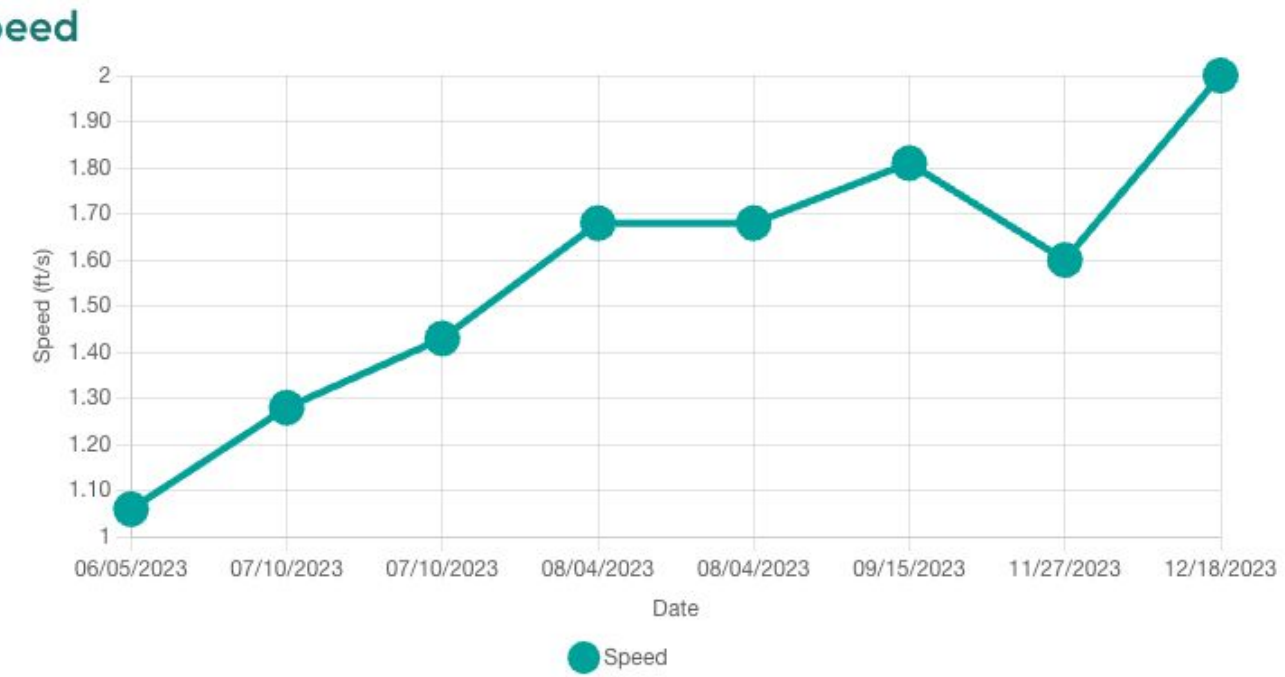
Movement in 8 Directions from Center

Dynamic Reaction Time

Date	Avg Dynamic RT
06/05/2023	0.85
07/10/2023	0.91
07/10/2023	0.51
08/04/2023	0.58
08/04/2023	0.62
09/15/2023	1.36
11/27/2023	1.31
12/18/2023	0.50

REACT

Movement in 8 Directions from Center

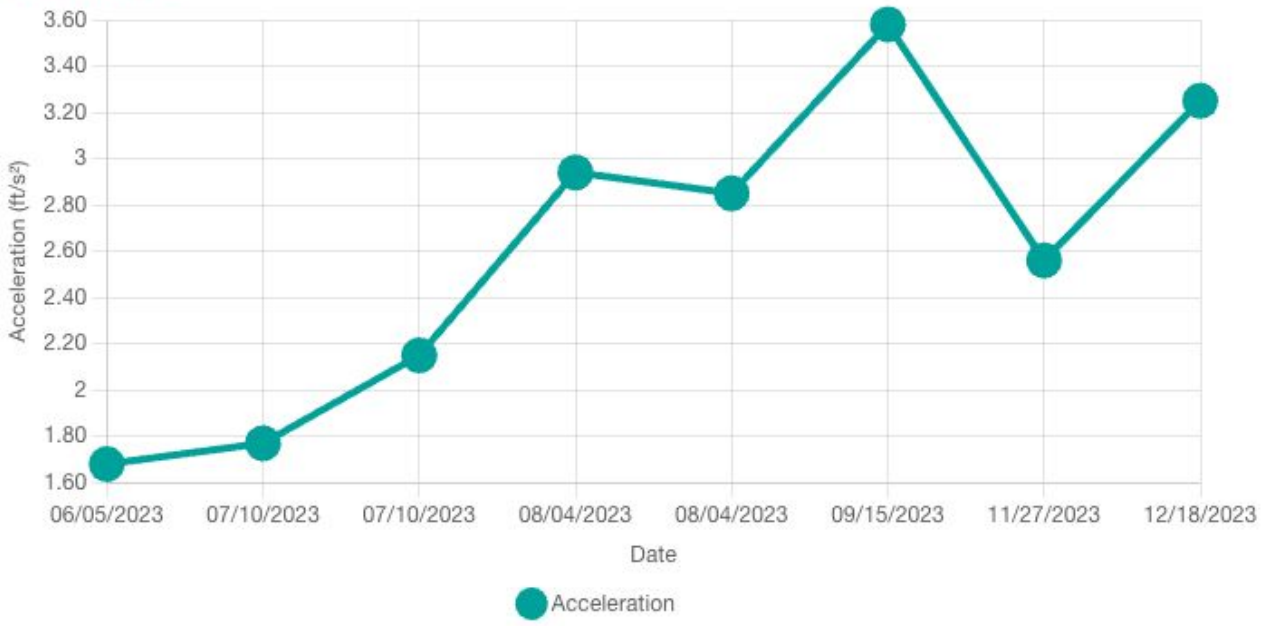


Date	Avg Speed
06/05/2023	1.06
07/10/2023	1.28
07/10/2023	1.43
08/04/2023	1.68
08/04/2023	1.68
09/15/2023	1.81
11/27/2023	1.60
12/18/2023	2.00

REACT

Movement in 8 Directions from Center

Acceleration

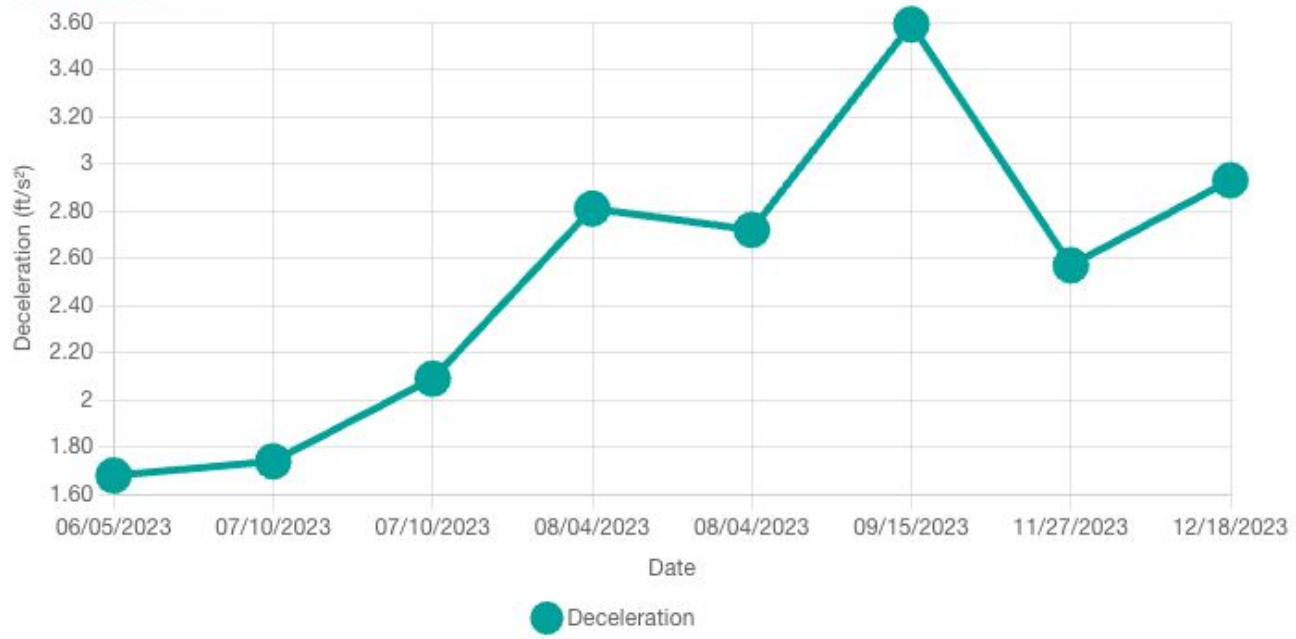


Date	Avg Acceleration
06/05/2023	1.68
07/10/2023	1.77
07/10/2023	2.15
08/04/2023	2.94
08/04/2023	2.85
09/15/2023	3.58
11/27/2023	2.56
12/18/2023	3.25

REACT

Movement in 8 Directions from Center

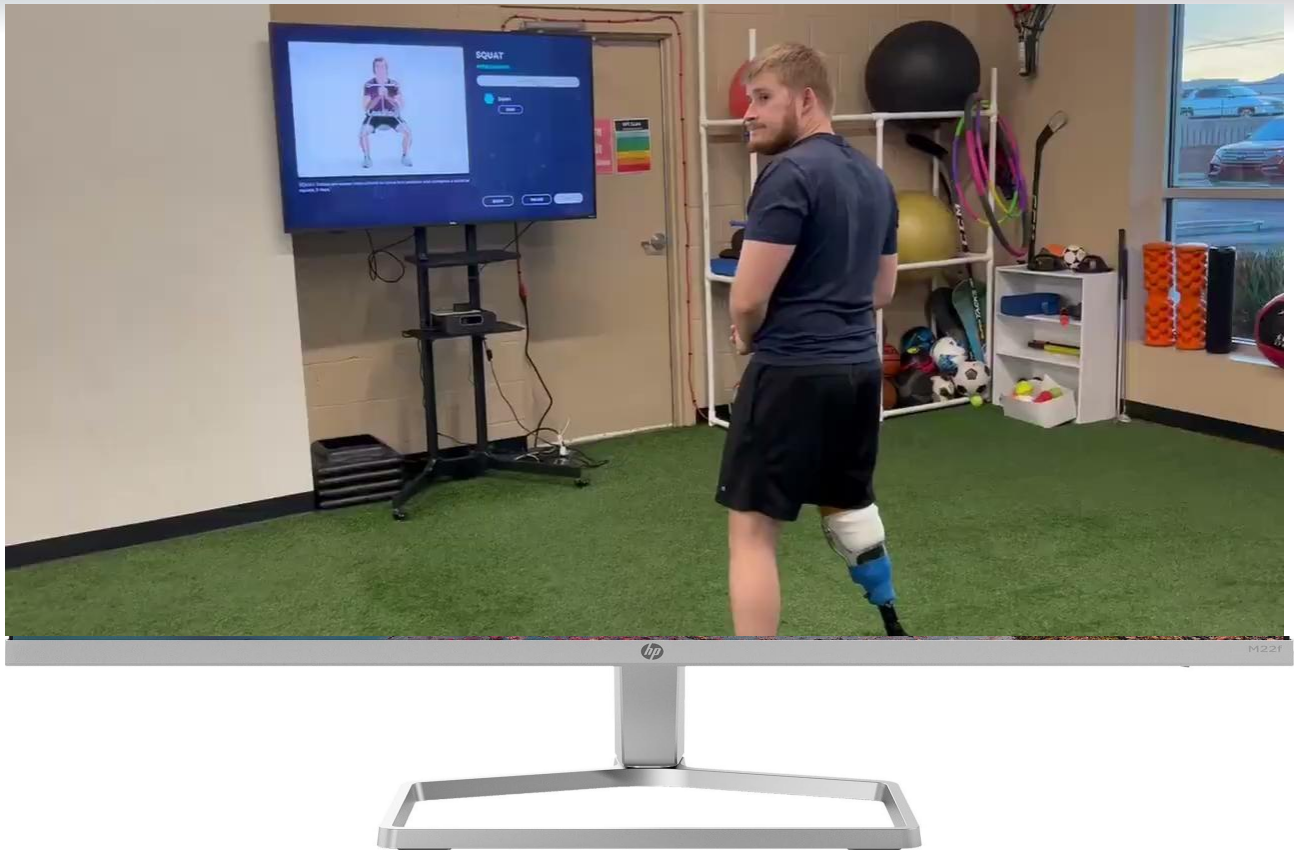
Deceleration



Date	Avg Deceleration
06/05/2023	1.68
07/10/2023	1.74
07/10/2023	2.09
08/04/2023	2.81
08/04/2023	2.72
09/15/2023	3.59
11/27/2023	2.57
12/18/2023	2.93

Kinematics- Double leg Squat

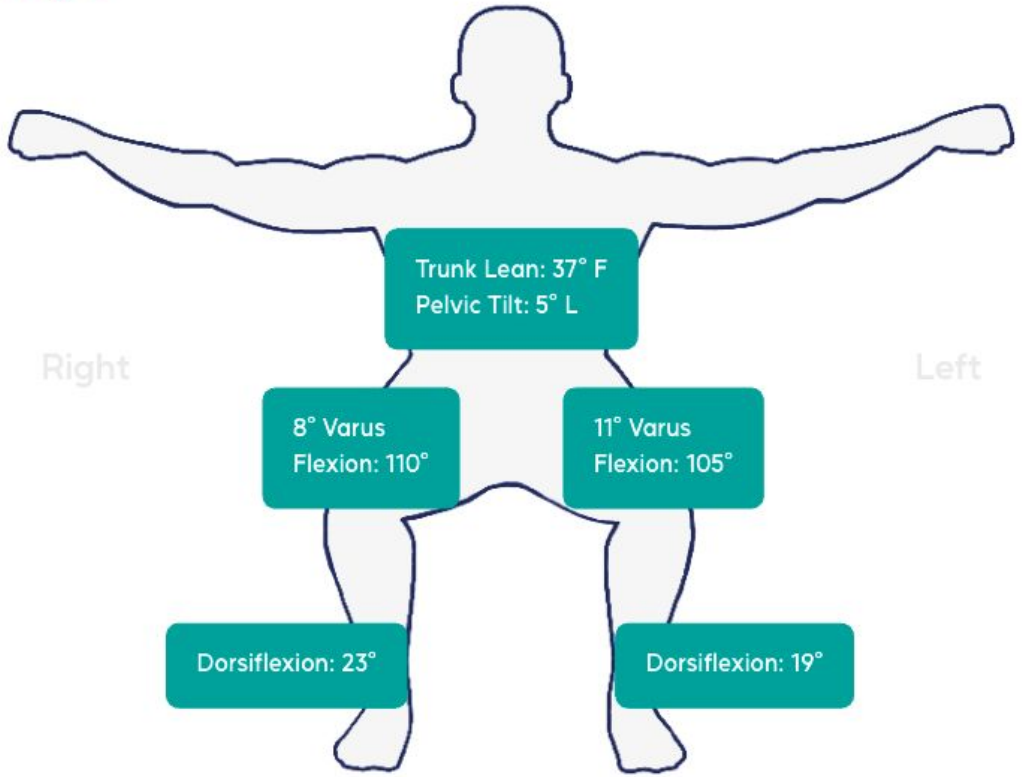
- Measure Lower Extremity Joint Angles
- 5-Rep Squat Test
- Comprehensive Lower Body Assessment



KINEMATICS

Double-leg Squat

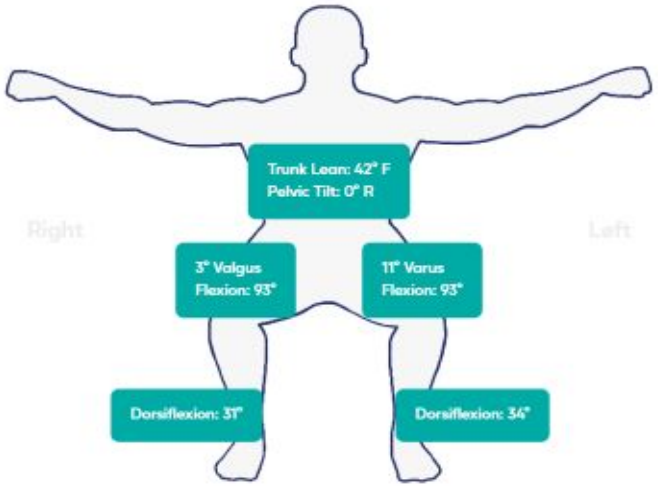
Averages



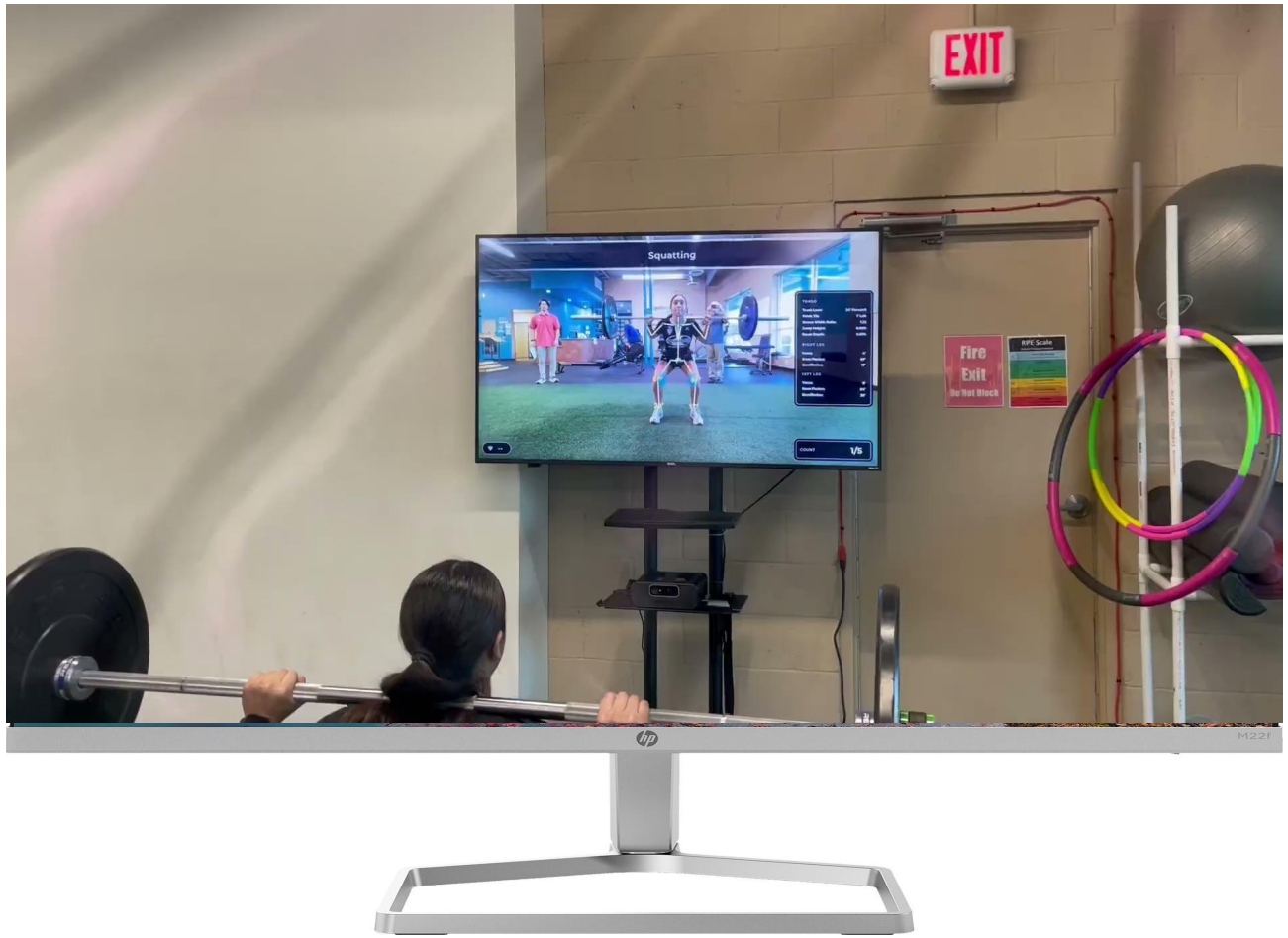
	Test #1
Stance Width Ratio	1.75
Stance Width Distance	1.66 ft
Squat Depth	15.58 in
Trunk Lean	37° F
Pelvic Tilt	5° L
Right Knee Valgus/Varus	8° Varus
Right Knee Flexion	110°
Right Ankle Dorsiflexion	23°
Left Knee Valgus/Varus	11° Varus
Left Knee Flexion	105°
Left Ankle Dorsiflexion	19°

KINEMATICS

MEASURE DOUBLE LEG SQUAT LOADED



	Test #1	Test #2
Stance Width Ratio	1.30	1.07
Stance Width Distance	1.11 ft	1.07 ft
Trunk Lean	42° F	27° F
Pelvic Tilt	0° R	0° R
Right Knee Valgus/Varus	3° Valgus	8° Valgus
Right Knee Flexion	93°	72°
Right Ankle Dorsiflexion	31°	28°
Left Knee Valgus/Varus	11° Varus	3° Varus
Left Knee Flexion	93°	72°
Left Ankle Dorsiflexion	34°	34°



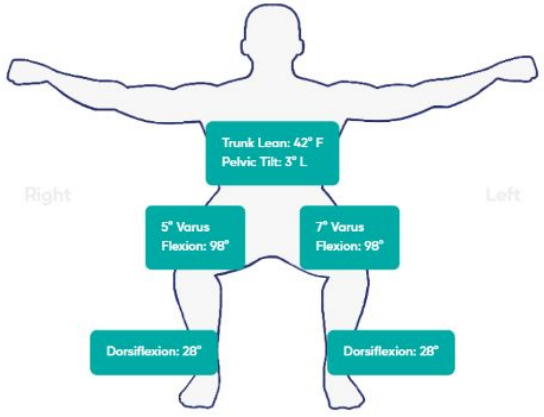
Future Releases for XP Customers

Double Leg Jump
A **5-rep jump Test** to measure lower extremity joint angles during landing.

Single Leg Jump
A **multi-step single leg jump Test** to compare lower extremity joint angles during landing of the left and right legs for 5 reps each.

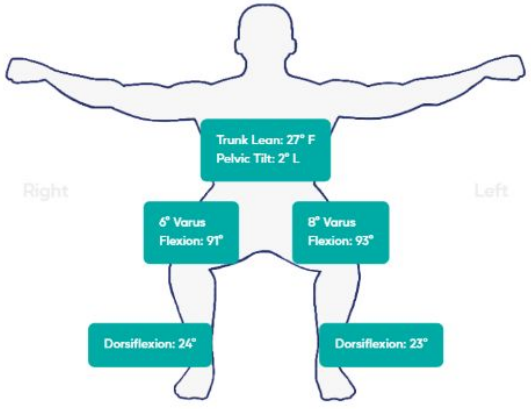
- Enhanced Biomechanical Evaluation
- Asymmetry Detection
- Comprehensive Performance Monitoring

Double Leg Jump



- [x] Pre-Jump
- [ ] Post-Jump

	Test #1
Stance Width Ratio	0.97
Stance Width Distance	0.89 ft
Squat Depth	12.58 in
Jump Height	12.55 in
Trunk Lean	42° F
Pelvic Tilt	3° L
Right Knee Valgus/Varus	5° Varus
Right Knee Flexion	98°
Right Ankle Dorsiflexion	28°
Left Knee Valgus/Varus	7° Varus
Left Knee Flexion	98°
Left Ankle Dorsiflexion	28°



- [ ] Pre-Jump
- [x] Post-Jump

	Test #1
Stance Width Ratio	0.97
Stance Width Distance	0.92 ft
Squat Depth	11.62 in
Jump Height	12.55 in
Trunk Lean	27° F
Pelvic Tilt	2° L
Right Knee Valgus/Varus	6° Varus
Right Knee Flexion	91°
Right Ankle Dorsiflexion	24°
Left Knee Valgus/Varus	8° Varus
Left Knee Flexion	93°
Left Ankle Dorsiflexion	23°

TRAZER

Reps

Test #1

	Rep #1	Rep #2	Rep #3	Rep #4	Rep #5
Stance Width Ratio	1.10	1.29	1.34	1.23	0.97
Pre Stance Width Distance	1.38 ft	1.43 ft	1.61 ft	1.93 ft	1.66 ft
Post Stance Width Distance	1.21 ft	1.41 ft	1.52 ft	1.39 ft	1.15 ft
Pre Squat Depth	14.67 in	15.08 in	15.34 in	14.17 in	11.71 in
Post Squat Depth	2.16 in	2.11 in	3.23 in	2.92 in	1.49 in
Jump Height	19.02 in	18.21 in	19.15 in	15.39 in	10.83 in
Pre Trunk Lean	43° F	46° F	48° F	53° F	46° F
Post Trunk Lean	9° F	5° F	18° F	18° F	13° F
Pre Pelvic Tilt	10° L	5° L	7° L	9° L	8° L
Post Pelvic Tilt	9° R	5° L	5° L	3° L	6° L
Pre Right Knee Valgus/Varus	4° Varus	9° Varus	8° Varus	8° Varus	8° Varus
Post Right Knee Valgus/Varus	0° Varus	0° Varus	2° Varus	1° Varus	0° Varus
Pre Right Knee Flexion	75°	111°	114°	77°	94°
Post Right Knee Flexion	50°	52°	60°	56°	46°
Pre Right Ankle Dorsiflexion	33°	30°	33°	46°	24°
Post Right Ankle Dorsiflexion	20°	18°	23°	22°	3°
Pre Left Knee Valgus/Varus	5° Varus	8° Varus	12° Varus	10° Varus	11° Varus
Post Left Knee Valgus/Varus	1° Varus	3° Varus	4° Varus	4° Varus	2° Varus
Pre Left Knee Flexion	87°	111°	111°	62°	98°
Post Left Knee Flexion	47°	55°	55°	58°	42°
Pre Left Ankle Dorsiflexion	26°	31°	31°	42°	26°
Post Left Ankle Dorsiflexion	24°	25°	24°	23°	6°

FATIGUE MEASURE?

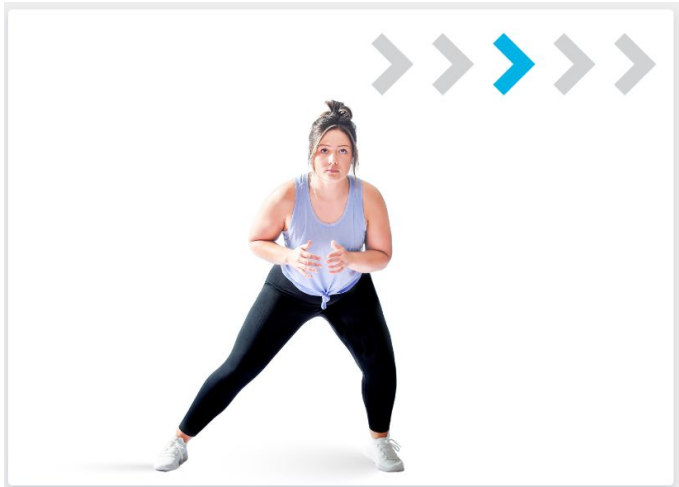
CONSISTENT LEAN AWAY

Higher Level Training & Analysis of Data

Lateral

A single-step Test that measures speed, acceleration/deceleration and L/R asymmetries as the User moves as fast as possible laterally between pre-defined targets.

Learn More



Flanker 2

Assessments

A single-step dual-task Test designed to measure reaction time in relation to cognitive function. 5 arrows appear in multiple locations on the screen pointing randomly to the left or right. The User must move to the target in the direction indicated by the center arrow.

Drop-Step

A single-step Drill Tests or Trains reactive-based change of direction capability to back diagonal targets.

Learn More

Math Add Subtract Reach

A single-step Drill designed to Test or Train dual-task reaction time where the User must solve math addition and subtraction problems by choosing between two options and

Learn More

Jump Explosion

The User engages in lateral movements and jumps to return falling balls to a moving conveyor belt. This Game challenges the User's timing and strategy with 7 levels of

Learn More

Lateral-Endurance as a Fatigue Measure

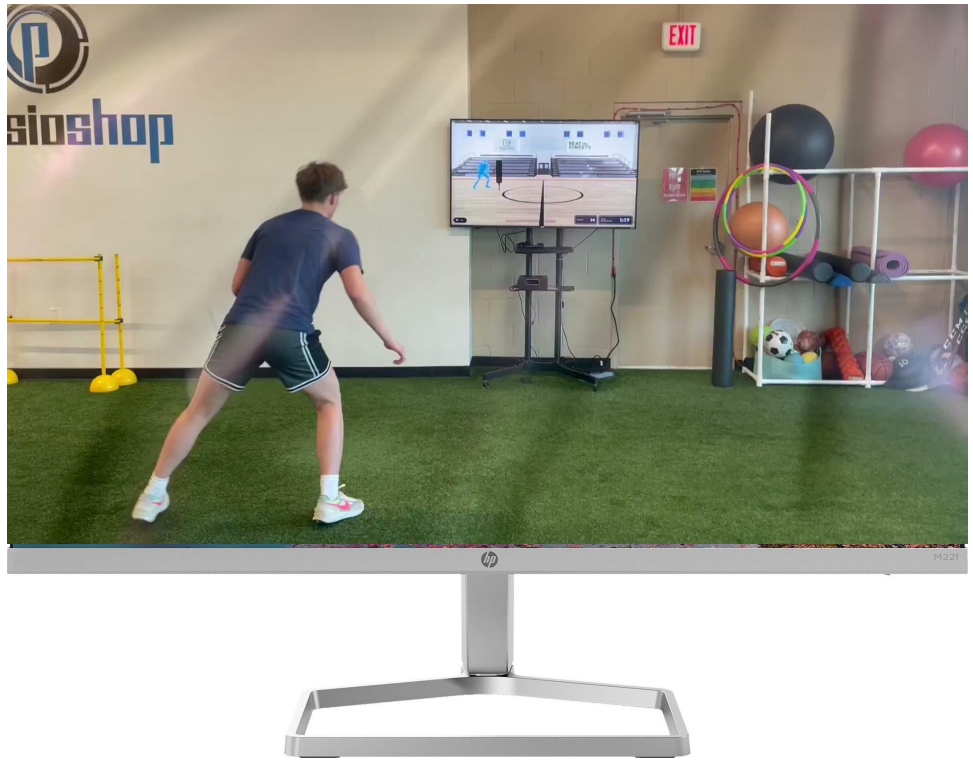
Measures:

- Speed
- Acceleration/Deceleration
- Left/Right Asymmetries

User moves laterally between pre-defined targets.

Value:

Assess and enhance lateral agility, speed, and symmetry.
Gain insights into movement patterns for improvement.



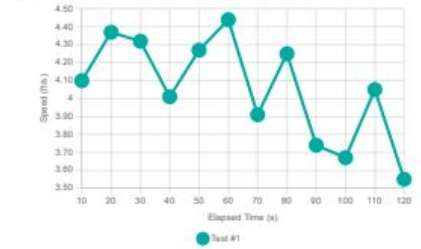
INTERPRETING THE REPORT

Date	07/31/2023, 1:14 PM
Duration	2:14
Location	The Physio Shop
Status	Complete
Scripted Activity	Lateral

Provider	Randy Cohen
Date	09/20/2023, 5:14 PM
Duration	2:14
Location	The Physio Shop
Status	Complete
Scripted Activity	Lateral

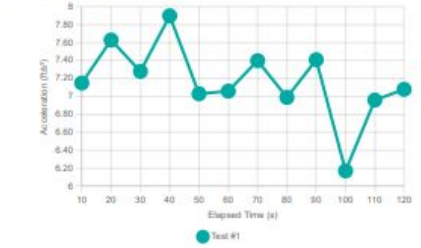
Timeline

Speed



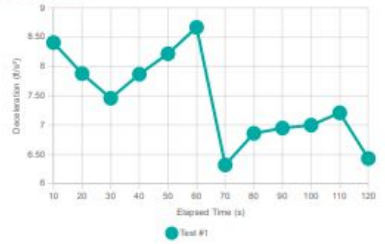
	Test #1
Start	4.10
Min	3.55
Max	4.44
Average	4.06
End	3.55

Acceleration



	Test #1
Start	7.15
Min	6.17
Max	7.90
Average	7.17
End	7.08

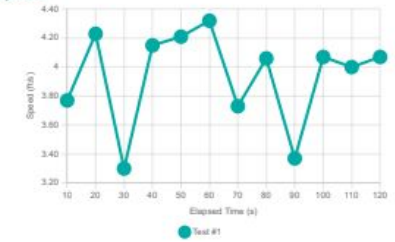
Deceleration



	Test #1
Start	8.41
Min	6.32
Max	8.67
Average	7.44
End	6.43

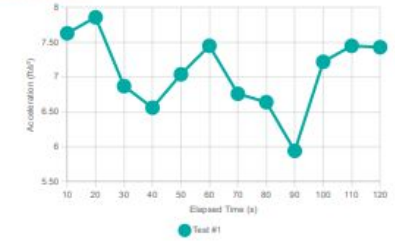
Timeline

Speed



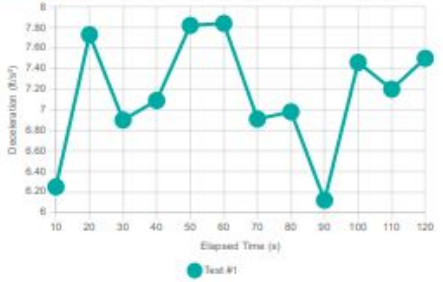
	Test #1
Start	3.77
Min	3.30
Max	4.32
Average	3.94
End	4.07

Acceleration



	Test #1
Start	7.63
Min	5.94
Max	7.86
Average	7.07
End	7.43

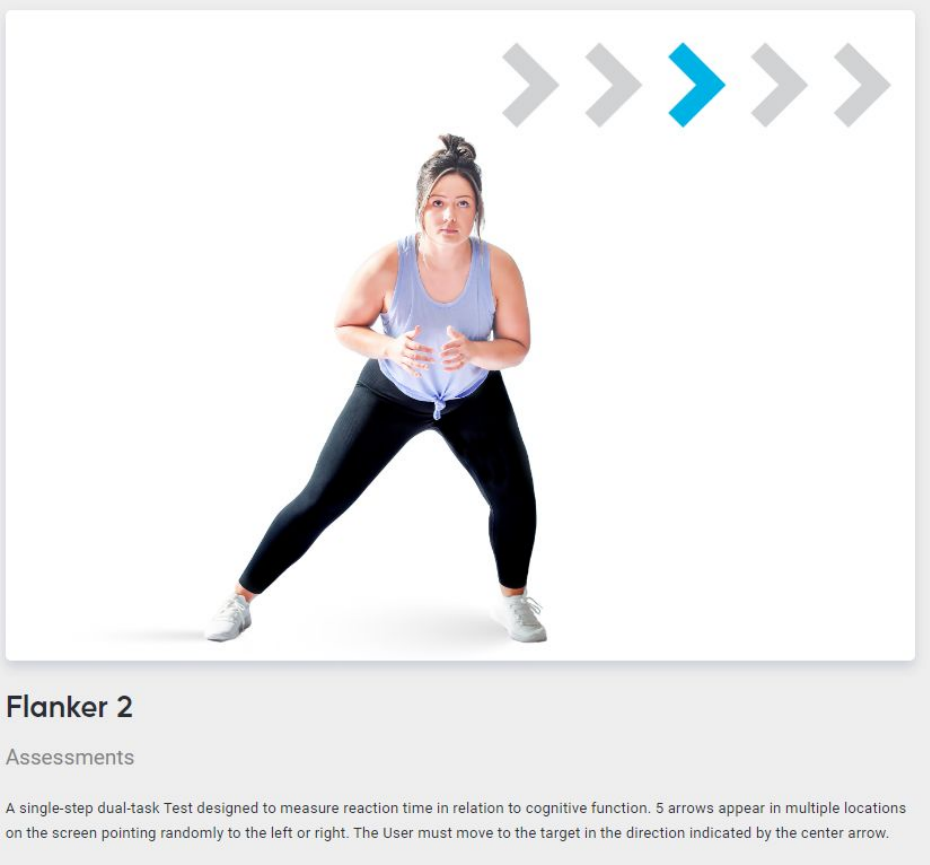
Deceleration



	Test #1
Start	6.25
Min	6.12
Max	7.84
Average	7.15
End	7.50

NEUROMECHANICS

Flanker 2



FLANKER 2

WITH EXTERNAL DEVICES

Flanker 2-Report Summary

Step Summary

Flanker 2	Duration	Targets	Calories	Distance	Deceleration Index
95.00% Cognitive	2:33	40.00	14.99	339.39 ft	1.23

Cognitive

Test #1

Prompt Time
200 ms

Response Accuracy

	Correct	Incorrect
Right Congruent	10	0
Right Incongruent	10	0
Left Congruent	9	1
Left Incongruent	9	1
Total	38	2

Response Time (s)

	Correct	Incorrect
Right Congruent	2.38	2.56
Right Incongruent	2.26	2.76
Left Congruent	2.10	--
Left Incongruent	2.58	--

Reaction Time (s)

	Correct	Incorrect
Right Congruent	0.35	0.16
Right Incongruent	0.19	0.12
Left Congruent	0.59	--
Left Incongruent	0.20	--

Dynamic Reaction Time (s)

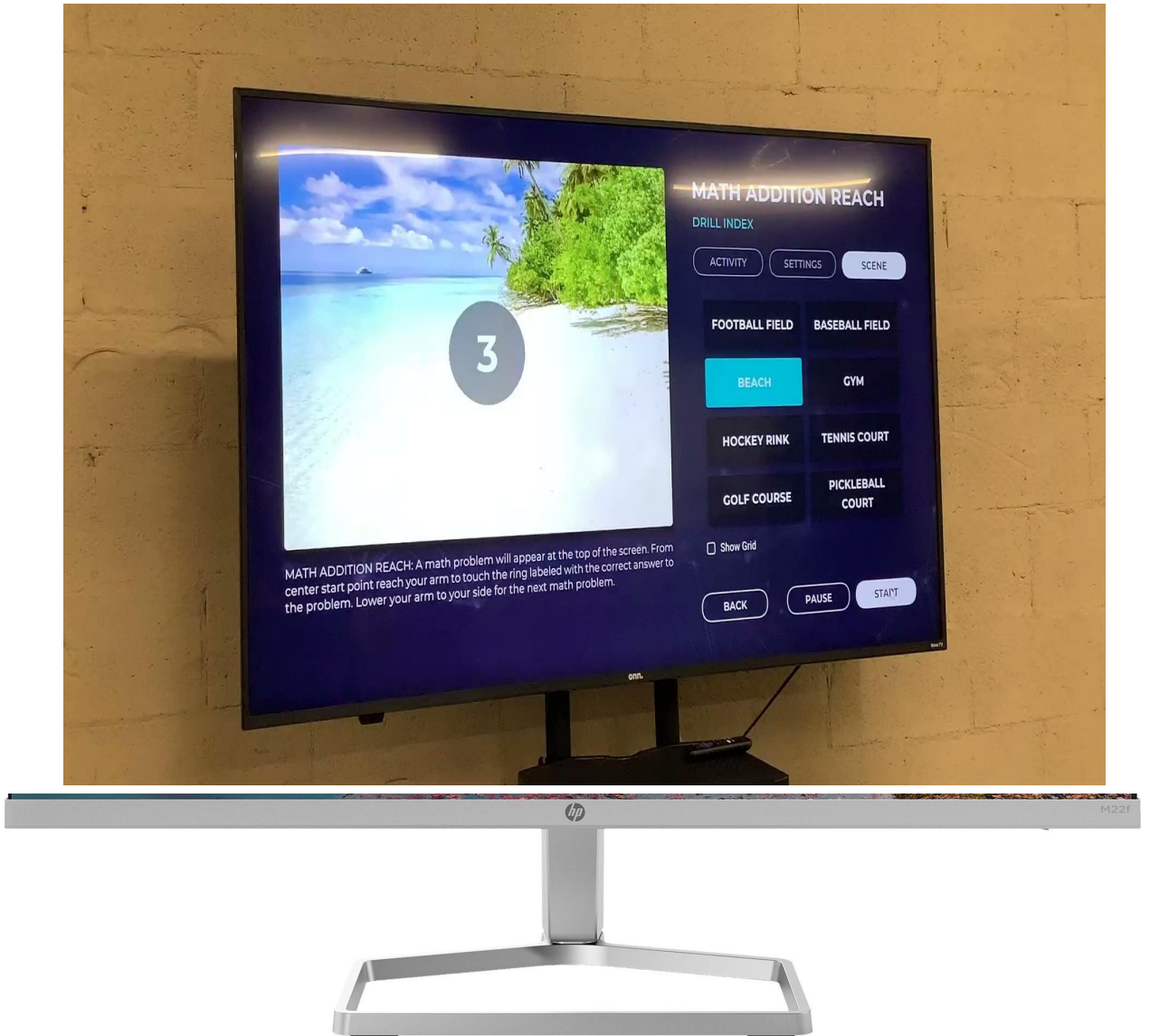
	Correct	Incorrect
Right Congruent	1.28	0.16
Right Incongruent	1.06	1.96
Left Congruent	1.25	--
Left Incongruent	1.31	--

Averages

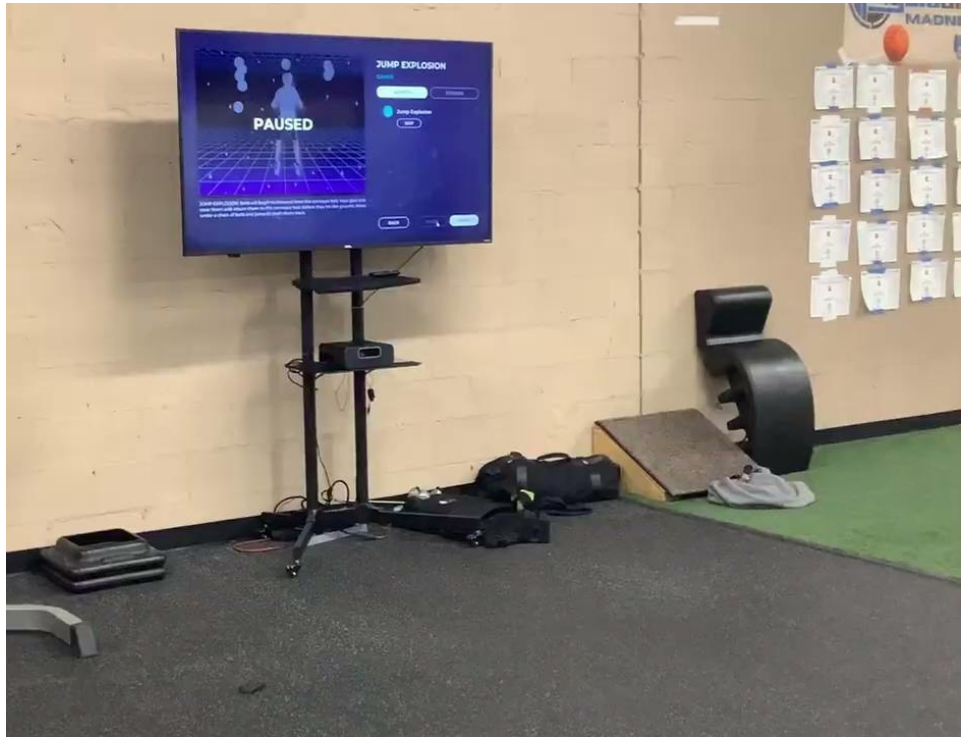
	Reaction Time	Dynamic Reaction Time	Speed	Acceleration	Deceleration
Test #1	0.32 s	1.14 s	2.76 ft/s	5.92 ft/s²	5.70 ft/s²

Advanced Balance

Math Reach



TRAZER GAME: Jump Explosion



Objective: Jump Explosion is a game designed to engage users in lateral movements and jumps.

Value: This game challenges the user's timing and strategy with 7 levels of increasing difficulty. It enhances agility, coordination, and reaction time.

How: Balls descend from a conveyor belt in a chain. The user moves under the chain of balls and jumps to push them back up to the conveyor belt before they hit the ground.

Q & A

CONTACT

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