

SERIOUS PROBLEMS Require **QUANTITATIVE** SOLUTIONS

SUPPORT PROPER TRAINING AND
RECOVERY OBJECTIVELY

REDOAK INSTRUMENTS, LLC

A grayscale photograph of a football player in mid-air, having just kicked a football, with another player on the ground in the foreground. The text "CONCUSSIONS HAPPEN" is overlaid in large, bold, red capital letters.

CONCUSSIONS HAPPEN

A black and white photograph of a baseball player sliding into a base. The player is in the foreground, wearing a helmet and sliding on their back. Another player's legs are visible in the background, also sliding. The word "EVERYDAY" is overlaid in the center in a bold, red, sans-serif font.

EVERYDAY

A grayscale photograph of two female soccer players in action. They are both wearing dark jerseys with light-colored stripes on the sleeves and light-colored shorts. A soccer ball is positioned between their heads, and they are both reaching up towards it with intense expressions. The background is a blurred grass field.

IN VARIOUS WAYS



SOME ARE OBVIOUS



SOME ARE NOT

WHAT IS A CONCUSSION?

...

**A CLOSED HEAD INJURY WITHOUT
VISIBLE BLOOD, APPARENT
SYMPTOMS OR INJURY**

LIKE A BROKEN LEG OR A BROKEN ARM

...

**A CONCUSSION IS A SERIOUS
INJURY**

CAUSING 2,000,000 ER VISITS A YEAR

...

**BUT 15% TO 20% ARE
RELEASED **WITHOUT** DIAGNOSIS**

AND THAT LEADS TO

...

**CHRONIC LIFELONG DISABILITY
FOR 5.8M+ SURVIVORS IN THE
US ALONE (80 – 90K added/yr)**

What Do We Need?

...

OBJECTIVE DETECTION OF CONCUSSIVE INJURIES

WE HAVE A SOLUTION

- Portable – test anywhere with your computer
- Rapid tests ~ 7 minutes
- Objective (quantitative) measurements
- Repeatable and reproducible results
- 3000 biomechanical measurements/second
- Results cannot be hidden or deleted
- HIPAA compliant data storage
- FDA approved
- Cost effective



OBJECTIVE, QUANTITATIVE MEASUREMENTS

01 BASELINE ATHLETES

- WHAT IS 'NORMAL' ?
- OPTIMIZE TRAINING
- MONITOR AFTER GAMES

02 TEST

- RESULTS STORED REMOTELY – CANNOT BE "LOST"
- VIEWABLE REMOTELY
- HIPAA COMPLIANT

03 DETECT INJURY

- SIT OUT!
- PROPER MEDICAL ATTENTION
- MONITOR RETURN TO PLAY RECOVERY

TEST REPORTS EASY TO READ & UNDERSTAND

Screening Report:

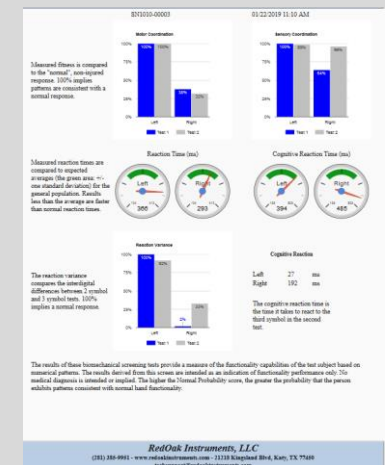
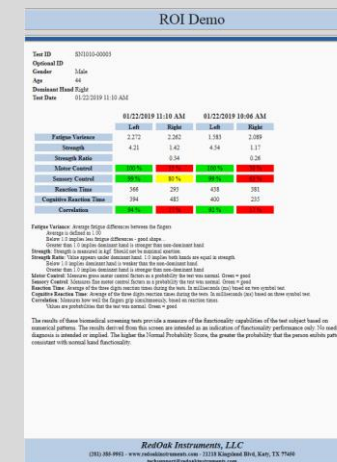
Used for rapid screening when a quick check is warranted



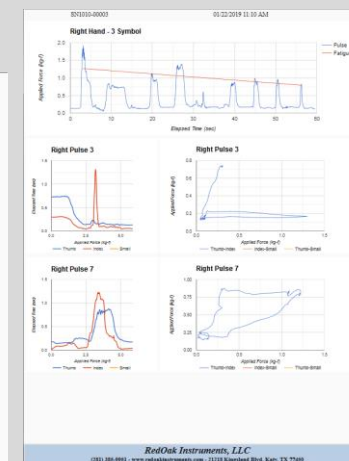
RedOak Instruments, LLC

Augmented Report:

Suggested for coaches, trainers and parents looking for an easy to digest snapshot



Suggested for physicians, nurses and medical staff looking
for underlying data and analysis



SPORTS APPLICATIONS



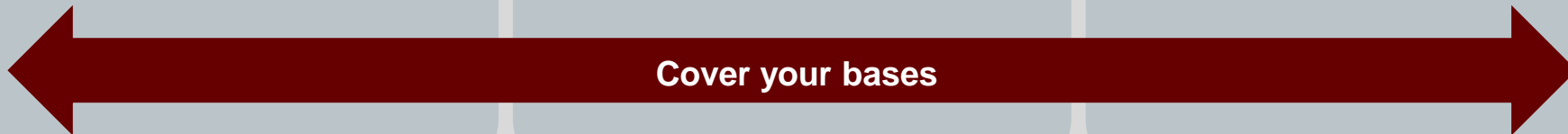
Training



Injury
Detection



Rehab



MEDICAL APPLICATIONS & BETA STUDIES



MDs

- Stroke evaluation
- Hyper-bariatric mTBI treatments
- CTS and fibromyalgia documentation
- Geriatric evaluation (Potentially Alzheimer's)



DCs & LAC

- Demonstrate efficacy of treatments
- Document new Spinal realignment methods
- Document wellness treatments



PTs & OTs

- Stroke rehabilitation
- Support post surgery evaluation – training – rehab
- Document sports training and rehab

CAN WE COMPETE?

Test/Assessment		Cognitive / Behavioral	Physiological	Uses Questionnaire	Repeatable / Reproducible	Time (min)
RU-Fit™	Red Oak Instruments, LLC	X	X	X	X	7
SAC	Standardized Assessment of Concussion	X		X		30-60
BESS	Balance Error Scoring System		X	X		30-60
GSC	Glasgow Coma Scale	X		X		30-60
MACE	Military Acute Concussion Evaluation	X		X		20
ImPACT	Immediate Post-Concussion Assessment and Cognitive Testing	X		X		20
PET	Positron Emission Tomography		X		X	90

ABSOLUTELY!

ROI DEVELOPMENT

CONCEPT	DEVELOPMENT	MARKET STUDIES	REIMBURSEMENT
<ul style="list-style-type: none">• Prototype built• Basic research to ensure valid measurements• Patents• Publications in technical journals (peer reviewed) 	<ul style="list-style-type: none">• Multiple discipline studies• Develop usable test reports• Improve software and user manuals• Packaging 	<ul style="list-style-type: none">• Sports Trainers• Physical Therapists• Orthopedics• Acupuncturists• Chiropractors• Psychologists 	<ul style="list-style-type: none">• Low per test \$63 (99242, 97750, 99091-26)• Pay per test or unlimited tests• Report levels depending on need or cost 

READY FOR COMMERCIAL GO TO MARKET

HARDWARE



- 96 Systems built
- Two hand sizes built
- Modified report systems developed for different users
- Redundant HIPAA compliant server system in place

REGULATORY



- Registered as a medical device manufacturer
- GUGID* complete – bar codes on equipment
- FDA 510-K
- IP established
- Peer published

*Global Unique Device Identification Database

OPTIMIZATION

- Developing marketing videos
- Established Social Media Presence on Facebook and LinkedIn
- Updated website
- Training sales force

Concussions are a
SERIOUS PROBLEM...

ROI has a
QUANTITATIVE SOLUTION...

REDOAK INSTRUMENTS, LLC