New Methods of Assessing Sincerity of Effort in our FCE’s

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Advanced Physical Therapy's FCE's

- Leader in Indiana for Functional Capacity Evaluations.
- >10,000 FCE's performed over the past 25 years.
- New research and evidence based practice.
How can the BEST get even BETTER?! 

ADDING more...
- Distraction based testing
- Legally defensible
- Highly researched
- Accurately identifies insincere effort
• X-RTS: Cross-Reference Testing System
  • anatomy
  • physiology
  • logic
  • Statistics

• Use of analysis of variation within and between repeated measures.
Underlying Concepts

- Maximum voluntary efforts should be highly reproducible...BUT

- Highly reproducible efforts ≠ maximum efforts.

- Problematic cases

- Correctly identify
X-RTS Employs the Concept of Distraction-Based Testing as Defined by Waddell

- Non-emotional
- Non-surprising
- Non-hurtful
The Goals in Using Distraction-Based Testing

- Tease information from those unwilling to fully cooperate
- Ensure cooperation = maximal effort
- Ensure integrity of our recommendations
- Maximize accuracy of classifying effort
Is the client giving a sincere, maximal effort during Functional Capacity Testing?
• The Protocol

• Who do we test?
Grip Strength

Two-Point Pinch

Three-Point Pinch

Lateral Pinch
7 Validity Criteria

- Five or more COV's ≥ 15%
- Average COV's ≥ 9.75%
- ≥ Five simultaneous bilateral data sets deviate from corresponding unilateral baselines by ≥ 15%
- Averages forces during simultaneous bilateral activity differing from unilateral sets by ≥ 16%
- COV for either lateral pinch grip ≥ 13%
- Average of selected bilateral COV's ≥ 10 %
- 2 or more bilateral COV's ≥ 20%
Validity Assessment

The scale for classification of effort for the X-RTS Hand Strength Assessment is:

- Fail 0 = valid effort
- Fail 1 = gray zone or equivocal effort
- Fail 2 or more = invalid effort
The Most Accurate Protocol Yet Developed

- 99.5% accurate
- More accurate than current method

How the Study was Conducted

- Multiple unilateral and simultaneous bilateral trials (Jamar and standard pinch gauges)
- Post hoc analysis of data to determine cutoff points which clearly and statistically distinguish good from poor effort
- 100 subjects tested twice (once sincere, once feigning weakness)
PICK ME, PICK ME!
Results

- Sensitivity (proper identification of those feigning weakness). 1/100 was able to feign weakness and passed the test.

- Specificity (proper identification of those giving a sincere effort). 100% were properly classified.

- 199/200 were properly classified using this system (99.5% accuracy).
Calculating the Odds

• 1 in 10,000
• 1 in a million
• 1 in 10 billion
• Non-compliant persons typically fail 4-6 criteria
A companion piece to the X-RTS hand strength assessment

X-RTS Lever Arm

- Simple mechanical device
- Baseline lifts
- Mechanical variables (hand and foot positions)
The Difference Between Baseline and Lever Arm Lifts

Visual Appearance
X-RTS Lever Arm Test

Crate with 5 steel bars
5 lbs. on Lever Arm
X-RTS Lever Arm Test

20 lbs. on Lever Arm
X-RTS Lever Arm Test

50 lbs. on Lever Arm
X-RTS Lever Arm Test

5 lbs. on Lever Arm
X-RTS Lever Arm Test

50 lbs. on Lever Arm
Is it Possible to Guess Workloads on the X-RTS Lever Arm?

- On average, subjects in this study (including physical therapists) had an average error of 80% when comparing their estimations to actual workloads.

- Seventy-five percent (75%) of the estimations were in error by more than 25%
The Odds in Controlling the Outcome of a Multiple Trial Test

1.5% chance of estimating three workloads with no more than 25% error
X-RTS Lever Arm Test

10 lbs. on Lever Arm
Overload Technique

- Client willing to take 10 more pounds
- Total weight now equals 32.04 pounds which is 60% above what client was willing to perform on the base line lift.

Do you think the client was giving a sincere effort?
If you're looking for...

- Case closure
- Highly-trained professionals
- Determine ability to safely RTW
- Permanent restrictions
- Sincerity and consistency of effort
- Heavily researched testing that’s defensible in court
...Look no further

IS YOUR ANSWER!
Thank you for your continued support and referrals.

Thank you all for helping APT become the leader in Indiana for evaluating and treating the Worker's Compensation client.

This is our thank you dance!