Dr. Martin O'Reilly
Optimizing S&C for Power and Strength-Endurance

Julian Eberle
Former VP of Data, Citigroup
CTO, Output Sports

PERFORMANCE TESTING

POWER // STRENGTH-ENDURANCE DEVELOPMENT

S&C PROGRAMME

PERFORMANCE TESTING

COUNTERMOVEMENT JUMPS
- bilateral
- unilateral

STRENGTH VELOCITY CURVE
- squat
- deadlift
- bench press
- shoulder press
- bent-over row

REACTIVE STRENGTH INDEX
- drop jumps
- repeated jumps
- bilateral
- unilateral

CALF PUMP TESTS
- bilateral
- unilateral

PUSH-UPS
- bilateral

PULL-UPS
- bilateral

SHOULDER ROTATIONS
- unilateral

REPEATED JUMPING
- fatigue curve

*Standardized warm-up & rest essential
**Reliable and valid testing technology essential

Dr. Martin O'Reilly
Biomechanics Lecturer, UCD, Output Sports, UCD
TESTING TECHNOLOGY
survey of 100 Performance coaches

STRENGTHS
• Valid
• Reliable

LIMITATIONS
• Cost
• Single-purpose
• Data - Management
• Efficiency

HANDBALL S&C PROGRAMMING RECOMMENDATIONS
1. PERSONALISE: To each athletes' individual testing results
2. FUNDAMENTAL MOVEMENTS: squatting, pushing, pulling, throwing

OPTIMISATION // READINESS

WELLNESS

CMJ

RSI

Start

Build

Grow

Elite

- BW
- TECHNIQUE
- STRENGTH FOCUS - BASIC RSI
- STRENGTH FOCUS - RSI
- POWER FOCUS - RSI++

https://youtu.be/81AxJ7NLnjY
OPTIMISATION // TRACKING

VELOCITY BASED TRAINING
Mean velocity scores to moderate load and progression
Strength-velocity curve adjusted to individuals’ progress

TECHNIQUE ANALYSIS
Use range of motion & power to moderate load and progression

TAKE HOME MESSAGES

TESTING
- VALIDITY
- RELIABILITY
- PERIODIC

PERSONALISE S&C
- TESTING SCORES
- EXPERIENCE
- FUNDAMENTAL MOVEMENTS

OPTIMISE
- READINESS
- VBT
- TECHNIQUE

6+ years of research:

40+ co-development partners:
- Premier League
- Major League Soccer
- Championship
- International

- International Athletics
- Universities EU & USA
- FAI, Ice Hockey
- Intercounty GAA

- Photo clinics
- S&C centres
- Gyms
- Secondary Schools

TESTING: VALID, RELIABLE, HANDBALL-SPECIFIC
TRACKING: READINESS, VBT, TECHNIQUE

DEMO SESSION @6.30ish PM IN SPORTS HALL

hello@outputsports.com