### ATHLETIC LOW BACK PAIN

A SAMPLE WORKOUT PROGRESSION



### **DISCLAIMER**

This resource contains sample rehabilitation programs tailored to various stages of rehabilitation and the training age of the individual. These programs are designed to serve as guides and offer ideas for programming strategies.

It is important to note that the information provided in this e-book is not intended to replace clinical judgment based on individual patient presentations. While the programs outlined in this e-book are formulated based on general principles and best practices, they may not be suitable for every individual or every circumstance.

Rehabilitation is a highly personalized process, and the effectiveness of any program depends on various factors, including but not limited to, the specific needs and capabilities of the individual, and the nature and severity of the injury or condition.

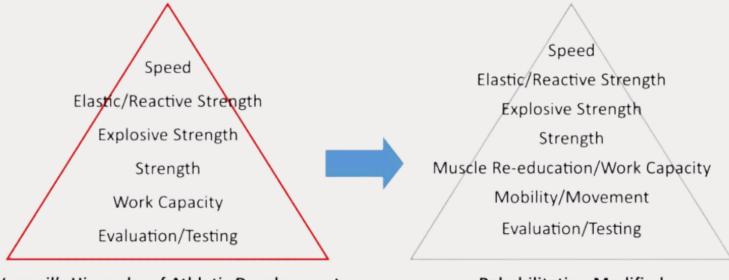
By accessing and using the information provided in this e-book, readers acknowledge and understand that they do so at their own risk. The authors and publishers of this e-book shall not be held liable for any damages or injuries resulting from the use or misuse of the information contained herein.

It is the responsibility of the reader to exercise caution and discretion when applying the principles and recommendations presented in this e-book, and to seek professional guidance as needed.



## HIERARCHY OF ATHLETIC DEVELOPMENT

Hall of Fame S&C Coach Al Vermeil's Hierarchy of Athletic Development



Vermeil's Hierarchy of Athletic Development

Each physical quality is dependent upon it's predecessor

#### Rehabilitation Modified

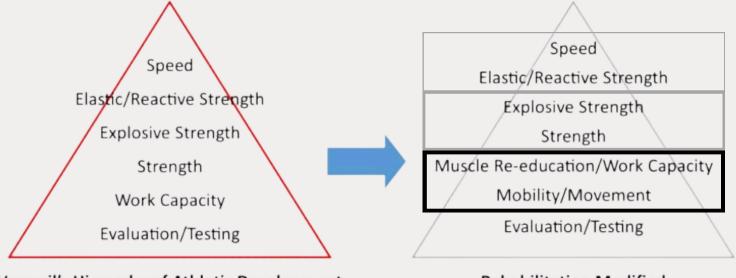
Panariello et al *Oper Tech Sports Med* 2016 Panariello et al *Oper Tech Sports Med* 2017

Coach Al Vermeil's Hierarchy of Athletic Development serves as a comprehensive roadmap not only for optimizing athletic performance but also for aiding in sports rehabilitation. By systematically addressing foundational elements such as movement mechanics, flexibility, and basic strength, athletes undergoing rehabilitation can rebuild their physical capabilities in a structured and progressive manner. By integrating Vermeil's hierarchical approach into sports rehabilitation programs, coaches and therapists can effectively guide athletes on the path to recovery and eventual return to peak performance.



# HIERARCHY OF ATHLETIC DEVELOPMENT: EARLY STAGE

Hall of Fame S&C Coach Al Vermeil's Hierarchy of Athletic Development



Vermeil's Hierarchy of Athletic Development

Each physical quality is dependent upon it's predecessor

#### Rehabilitation Modified

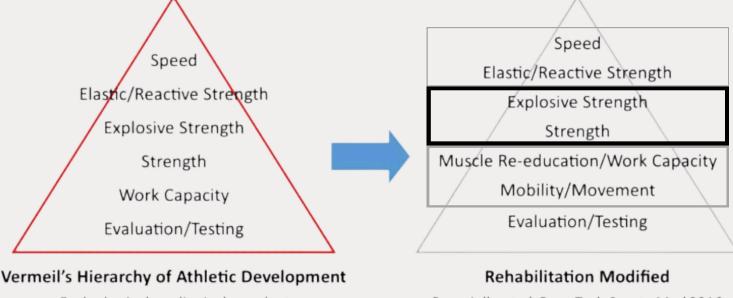
Panariello et al *Oper Tech Sports Med* 2016 Panariello et al *Oper Tech Sports Med* 2017

In the early phase of rehabilitation, the emphasis lies on enhancing mobility, movement quality, and work capacity. With this concurrent training model, there remains some focus on strength and even less emphasis on speed. Concentrating on refining movement patterns and bolstering work capacity enables athletes to gradually increase training intensity and establish a sturdy foundation. This phase of rehabilitation not only sets the stage for further training but also ensures athletes are prepared for the rigors of higher-level performance by promoting improved movement kinematics and readiness for varied demands.



### HIERARCHY OF ATHLETIC **DEVELOPMENT:** MID STAGE

Hall of Fame S&C Coach Al Vermeil's Hierarchy of Athletic Development



Each physical quality is dependent upon it's predecessor

Panariello et al Oper Tech Sports Med 2016

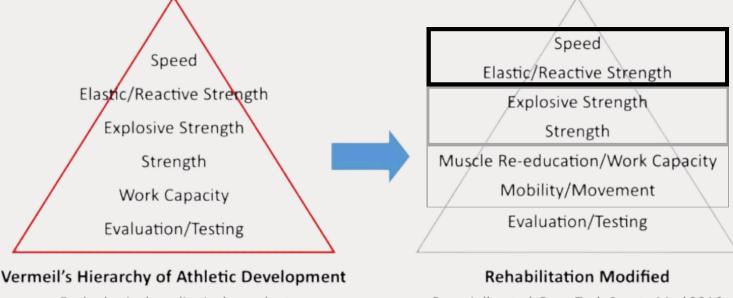
Panariello et al Oper Tech Sports Med 2017

In the mid stages of rehabilitation, the primary focus shifts towards improving strength and explosive power. Despite the predominant emphasis on strength, there remains a fair consideration for work capacity. This phase represents a pivotal juncture in rehabilitation, where athletes concentrate on cultivating the foundational strength essential for progressing to advanced training methodologies. By prioritizing strength, this phase serves as the cornerstone for the subsequent incorporation of plyometric exercises, as athletes establish a robust strength foundation conducive to safely integrating more dynamic movements into their rehabilitation routine.



### HIERARCHY OF ATHLETIC **DEVELOPMENT:** LATE STAGE

Hall of Fame S&C Coach Al Vermeil's Hierarchy of Athletic Development



Each physical quality is dependent upon it's predecessor

Panariello et al Oper Tech Sports Med 2016 Panariello et al Oper Tech Sports Med 2017

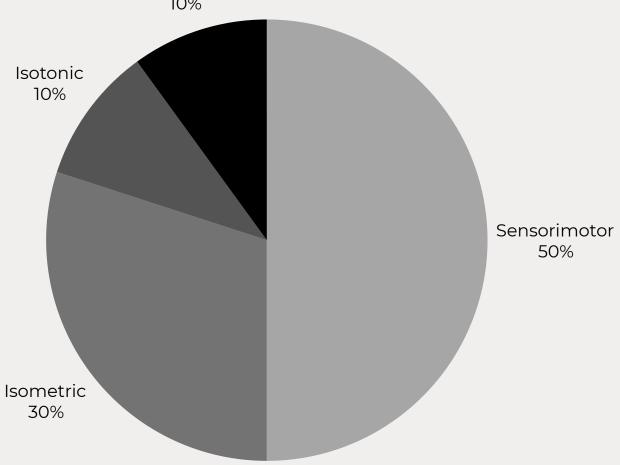
In the late stages of rehabilitation, the primary focus shifts towards enhancing reactive/elastic strength and speed. Despite the predominant emphasis on reactive strength and speed, there remains a fair consideration for maintaining and enhancing overall strength. This phase represents a critical point aimed at bridging the gap between training and sportspecific demands. Rehabilitation incorporates plyometrics, sprint drills, and high-force/high-velocity exercises, all executed with near-maximal intent. This comprehensive approach ensures that athletes can safely and effectively navigate the multifaceted challenges presented by their sport.

### LOW TRAINING AGE



### LOW TRAINING AGE: EARLY STAGE

Low Impulse, Short Coupled 10%

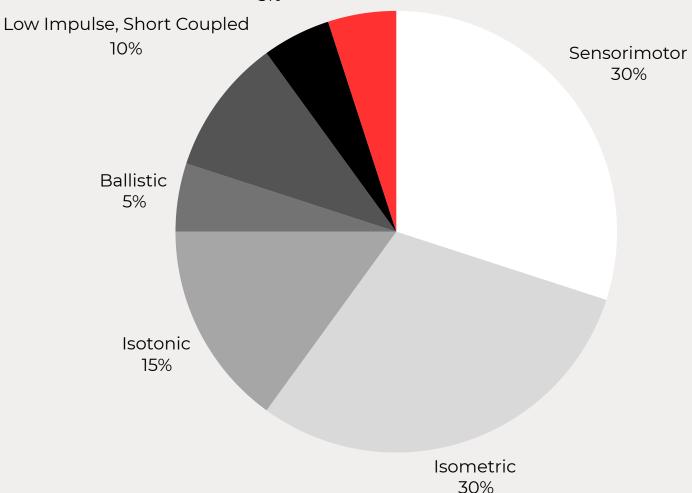


- A1) Wall-Referenced Bear Plank 2x20 sec A2) A March w/ FWD MB Reach 2x15 yards
- B) ½ Kneeling MB Extensive Scoop Toss 3x15 (ea.)
- C1) Goblet Squat 3x8
- C2) McGill Crunch 3x8 (3 sec hold)
- D1) Glute Bridge March 3x10 (ea.)
- D2) Tall-Kneeling Pallof Press 3x12 (ea.)
- E1) ½ Deadug w/OH Wall Push 2x10 (ea.)
- E2) Short Lever Side Plank 2x15 sec (ea.)
- F) Airdyne x10 min (30 sec on, 30 sec off @RPE 7)



## LOW TRAINING AGE: MID-STAGE

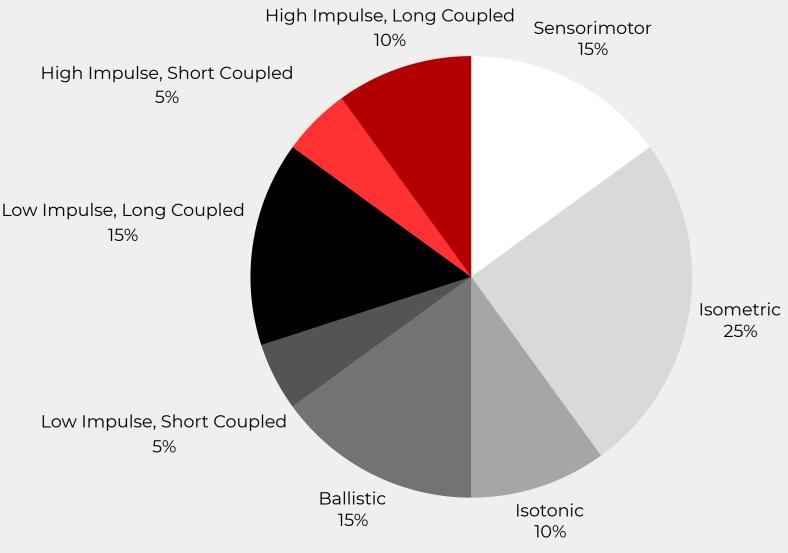
Low Impulse, Long Coupled High Impulse, Short Coupled 5% 5%



- A1) Wall-Referenced Bear KB Pull Through 2x8 (ea.)
- A2) A Skip w/ FWD MB Reach 2x15 yards
- A3) Tall-Kneeling Extensive OH MB Slam 2x25
- B) Tall-Kneeling Intensive OH MB Slam 3x6
- C1) Front Squat 4x6
- C2) Explosive Goblet Squat 4x6
- C3) Box Jumps 4x5
- D1) Single Leg Glute Bridge 3x10 (ea.)
- D2) ½ Kneeling Pallof Press 3x12 (ea.)
- E1) ½ Deadug w/OH KB Pullover 2x10 (ea.)
- E2) Tall-Kneeling Cable Crunch 2x15



### LOW TRAINING AGE: LATE STAGE

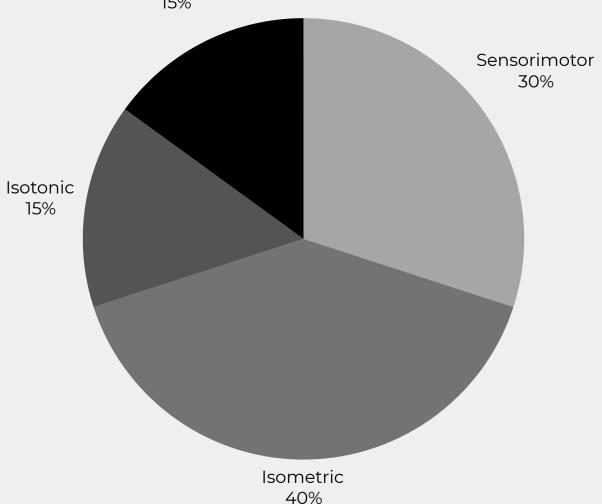


- A1) Forward Bear Crawl 2x10 yards
- A2) A Run w/OH Dowel 2x15 yards
- A3) Wall Facing Extensive MB Scoop Toss 2x20 (ea.)
- B) Standing Intensive OH Windmill MB Slam 3x6
- C1) Trap Bar RDL 4x4
- C2) MB Keg Toss 4x6
- C3) Broad Jumps 4x4
- D1) Split Squat (Contralateral Load) 3x8 (ea.)
- D2) Split Stance Cable Push-Pull 3x6 (ea.)
- E1) Reverse Crunch 2x12
- E2) Prone GHD Lumbar Extension 2x12

### MODERATE TRAING AGE

### MODERATE TRAINING AGE: EARLY STAGE

Low Impulse, Short Coupled 15%

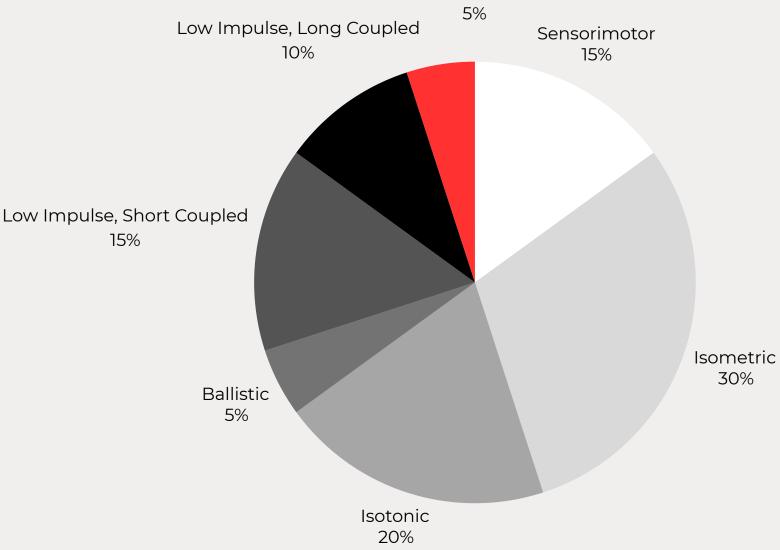


- A1) Wall-Referenced Front Plank 2x20 sec
- A2) A March w/OH Dowel 2x15 yards
- A3) ½ Kneeling MB Extensive Scoop Toss 2x15 (ea.)
- B) Tall-Kneeling Extensive OH MB Slam 3x20
- C1) Zercher Squat 3x8
- C2) Hollow Body Hold 3x20 sec
- D1) Kickstand Wall RDL 3x10 (ea.)
- D2) Sled Pallof Drag 3x20 yards (ea.)
- E1) ½ Kneeling Cable Crunch 2x8 (ea.)
- E2) Side Plank Row 2x15 (ea.)



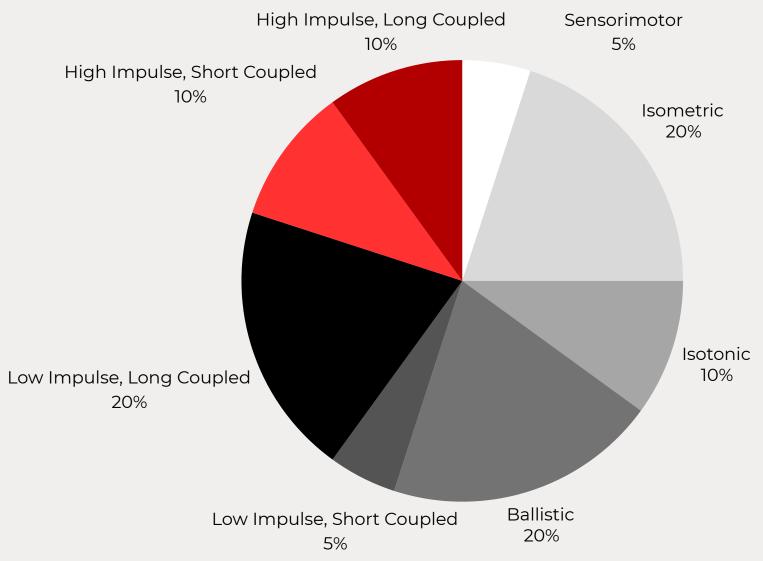
### MODERATE TRAINING AGE: MID-STAGE

High Impulse, Short Coupled



- A1) Wall-Referenced Front Plank w/ Reach 2x10 (ea.)
- A2) A Single Exchange w/ OH Dowel 2x8 (ea.)
- A3) Wall Facing MB Extensive Scoop Toss 2x20 (ea.)
- B) Tall-Kneeling Extensive OH MB Slam 3x20
- C1) SSB Squat 3x8
- C2) Hollow Body Rocker 3x20 sec
- D1) UE Supported Single Leg RDL 3x10 (ea.)
- D2) UE Supported Single Leg DB Swing 3x8 (ea.)
- E1) ½ Kneeling Cable Chop w/ Rotation 2x10 (ea.)
- E2) Prone GHD ISO w/ DB Y 2x15

### MODERATE TRAINING AGE: LATE STAGE

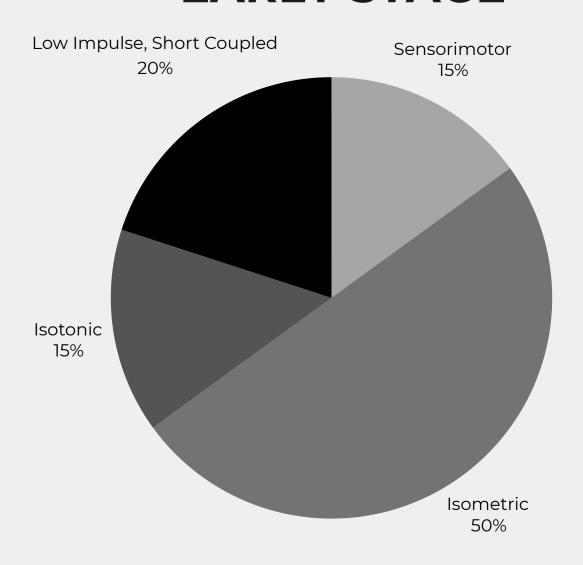


- A1) Side Plank w/ Banded Hip Flexion ISO 2x20 sec (ea.)
- A2) FWD A Double Exchange w/ OH Dowel 2x6 (ea.)
- A3) Rotational MB Extensive Scoop Toss 2x20 (ea.)
- B1) Standing Extensive OH MB Slam 3x20
- B2) Standing Intensive OH Windmill MB Slam 3x5 (ea.)
- C1) Heels Elevated Back Squat 5x4
- C2) Ascending Crescendo Leaps 5x12 (6 L, 4 M, 2 P)
- C3) Mid Tier 2:1 Deep Leaps 5x6
- D1) Single Leg Landmine RDL (contralateral) 3x8 (ea.)
- D2) Off-Bench Anti-Extension ISO 3x30 sec
- E) Split Stance DB Side Bends 2x15 (ea.)

## HIGH TRAINING AGE



### HIGH TRAINING AGE: EARLY STAGE

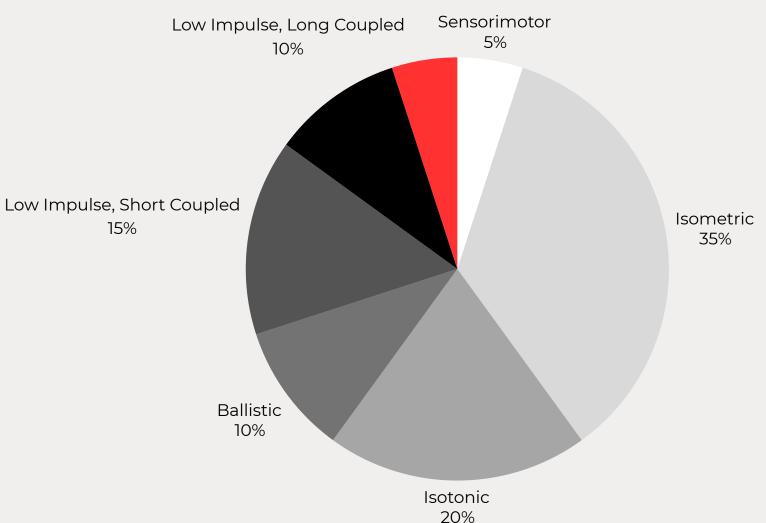


- A1) High Front Plank w/ Hip Flexion ISO 2x20 sec (ea.)
- A2) A Power March w/ OH Dowel 2x15 yards
- A3) ½ Kneeling MB Extensive Scoop Toss 2x15 (ea.)
- B) Tall-Kneeling Extensive OH MB Slam 3x20
- C1) Heels Elevated Front Squat 3x8
- C2) Hollow Body Rocker 3x20 sec
- D1) Kickstand Landmine RDL 3x10 (ea.)
- D2) Quadruped DB Row 3x15 (ea.)
- E1) Tall Kneeling Cable Crunch 2x15
- E2) Suitcase ISO 2x60 sec (ea.)



## HIGH TRAINING AGE: MID-STAGE

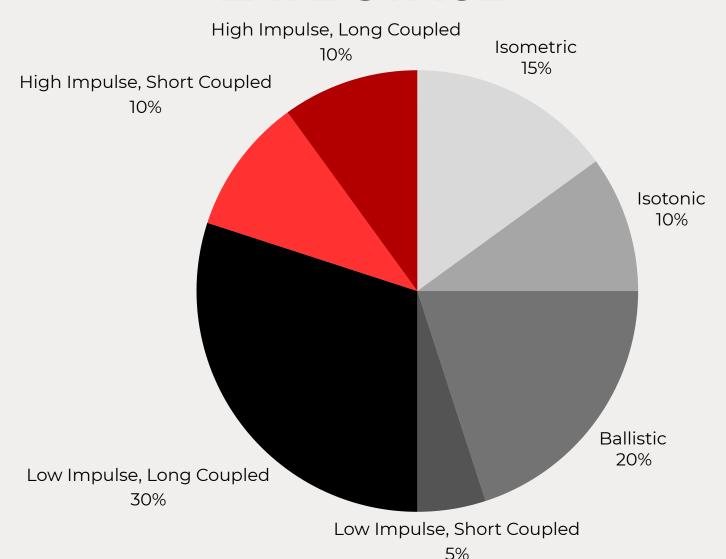
High Impulse, Short Coupled 5%



- A1) Wall A ISO 2x20 sec (ea.)
- A2) FWD A Single Exchange w/OH Dowel 2x8 (ea.)
- A3) FWD B Skip w/ OH Dowel 2x8 (ea.)
- B1) Standing Extensive OH Windmill MB Slam 3x10 (ea.)
- B2) Wall-Facing Intensive MB Scoop Toss 3x6 (ea.)
- C1) Box Back Squat 4x5
- C2) Seated Box Jump 4x5
- D1) Single Leg Landmine RDL 3x8 (ea.)
- D2) RR-LL Mid Tier Bounds 3x6 (ea.)
- E1) Off-Bench Anti-Extension ISO 3x30 sec
- E2) MB V-Ups 3x15



### HIGH TRAINING AGE: LATE STAGE



- A1) Side Plank w/ Banded Hip Flexion ISO 2x20 sec (ea.)
- A2) FWD A Run w/ OH Dowel 2x6 (ea.)
- A3) Extensive Lateral MB Heiden 2x6 (ea.)
- B1) Extensive Figure 8 Windmill MB Stomp 3x6 (ea.)
- B2) Double Clutch OH MB Slam 3x4
- C1) Back Squat 5x4
- C2) Ascending Crescendo Leaps 5x12 (6 L, 4 M, 2 P)
- C3) Mid Tier Tuck Leaps 5x8
- D1) Single Leg Barbell RDL (0-3-X-0) 3x6 (ea.)
- D2) Forward Hop to OH MB Keg Toss 3x6
- E) Split Stance Trap Bar Side Bends 2x10 (ea.)



#### **CLOSING REMARKS**

We hope that the sample rehabilitation programs provided in this e-book have served as a valuable resource. By tailoring programs to specific stages of rehabilitation and considering the training age of the individual, we aim to empower readers with effective strategies for enhancing rehabilitation outcomes.

Your feedback and success stories are incredibly important to us. If you found this resource helpful, we encourage you to connect with us on social media. You'll stay up to date on new products, releases, and additional resources designed to support your clinical skillset.

Thank you for choosing Rehab Renaissance. We wish you continued progress on your path toward clinical excellence.

Follow us on social media!

- @rehabrenaissance
- @joeyscambia.dpt
- @rayce\_rokke
- @santana\_dpt
- @taylor\_z.dpt

Stay tuned for exciting updates, and feel free to reach out to us with any questions!

Joey Scambia, PT, DPT, SCS, CSCS Rayce Houser, PT, DPT, OCS, CSCS Robert Santana, PT, DPT, SCS, CSCS Taylor Zelitsky, PT, DPT, OCS, CSCS

# IF YOU ARE LOOKING FOR MORE IN DEPTH INFORMATION REGARDING ATHLETIC LOW BACK PAIN, OUR CEU COURSE IS NOW AVAILABLE!

- ✓ Cutting-edge diagnosis and treatment strategies for athletic low back pain
- Symptom-based modifications for early care to reduce pain and improve function
- ✓ Step-by-step initial examination and differential diagnosis techniques
- ✓ A deep dive into recurrence and return-to-sport literature
- The most comprehensive phased-based return-to-sport test battery available
- ✓ Evidence-based foundational exercise principles to guide your programming
- ✓ Plyometric principles and classifications for effective rehab planning
- ✓ Practical sample progressions for every stage of recovery
- Strategies to prevent recurrence and optimize long-term outcomes
- Expert insights on managing unique cases in athletic populations

<u>Click Here for more information</u> <u>on the Low Back Course!</u>

AS A THANK YOU FOR DOWNLOADING, WE WANTED TO OFFER 10% OFF OUR ONLINE LOW BACK COURSE. ENTER 'LBP10' AT CHECKOUT TO CLAIM YOUR DISCOUNT!