Dr. Wade Anunson

Presentation 1: Blood Flow Restriction (BFR) Training, Therapy, and Rehabilitation – Understanding the Benefits

Total Time: 2 Hours

I. Introduction to BFR (10 minutes)

- Brief history of BFR (origin in Japan as "KAATSU Training")
- Why BFR is gaining popularity in therapy, training, and rehab
- Overview of what BFR does physiologically

II. Science Behind BFR (20 minutes)

- Mechanisms: Hypoxia, metabolite accumulation, and muscle recruitment
- How BFR stimulates strength and hypertrophy with low loads
- Hormonal responses (e.g., growth hormone, IGF-1)
- Circulatory and metabolic benefits

III. Therapeutic Benefits (30 minutes)

- Muscle hypertrophy with minimal joint stress
- Enhanced recovery post-injury or surgery
- Faster return-to-play timelines
- Improved bone density (mechanotransduction)
- Pain reduction (mechanisms and patient outcomes)

IV. Rehabilitation Benefits (30 minutes)

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- Ideal for post-operative patients (ACL, rotator cuff, etc.)
- Prevention of disuse atrophy during immobilization
- Applications for chronic conditions (arthritis, tendinopathies)
- Elderly and frail populations – increasing strength safely

V. Athletic and Performance Benefits (20 minutes)

- Strength and endurance adaptations
- High-level athlete recovery protocols
- Muscle building with lighter loads (protecting the joints)
- Cardiovascular endurance applications

VI. Safety Considerations and Contraindications (10 minutes)

- Understanding who is a good candidate
- Who should **not** use BFR (e.g., severe cardiovascular disease, clotting disorders)
- Managing risks: proper cuff pressures, session supervision, education

VII. Q&A and Discussion (10 minutes)

- Open discussion: Real-world cases, first-hand experiences

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Presentation 2: Application of BFR Training, Therapy, and Rehabilitation

Total Time: 2 Hours

I. Proper Equipment and Set-Up (15 minutes)

- Types of cuffs (elastic vs pneumatic)
- Selecting the right size and pressure
- Calibration of occlusion pressure (LOP – Limb Occlusion Pressure)
- Safety monitoring tools

II. BFR Training Protocols (30 minutes)

- Strength training templates (sets, reps, loads)
- Endurance training with BFR
- Practical examples: squats, walking, cycling, resistance bands

III. BFR in Rehabilitation (30 minutes)

- Post-op protocols: ACL, meniscus, rotator cuff
- Chronic injury protocols: tendinitis, joint degeneration
- Passive BFR (non-exercise use cases)

IV. BFR in Therapy (15 minutes)

- Integrating BFR with manual therapy
- Recovery sessions: reducing DOMS (Delayed Onset Muscle Soreness)

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- Blood flow and lymphatic stimulation without heavy exercise

V. Special Populations and Modifications (15 minutes)

- Elderly and osteoporotic patients
- Pediatric considerations
- Cardiovascular compromised individuals (case-by-case)

VI. Hands-On Demonstration and Practice (30 minutes)

- Guided practice: proper cuff placement and tightening
- Sample session: BFR strength, endurance, and rehab training
- Troubleshooting common problems

VII. Q&A and Final Takeaways (15 minutes)

- Addressing participant question
- Key action steps for immediate integration
- How to continue advancing BFR skills post-seminar