BFR in Elderly & Impaired Populations: Student Handout

Key Concept

Sarcopenia (age-related muscle loss) and physical limitations from surgery or chronic disease make traditional high-load resistance training challenging. Blood Flow Restriction Training (BFRT) provides a safe and effective low-load alternative to build muscle, improve function, and support recovery in these populations.

Research Highlights

- BFRT prevents sarcopenia by increasing muscle hypertrophy and strength at low intensities.
- In post-surgery rehab, BFRT achieved similar gains as high-load RT, with reduced pain, joint swelling, and improved mobility and quality of life.
- Elastic band BFRT (6–12 weeks) in older men and women improved muscle size and strength, with no negative vascular effects. No changes in non-BFR groups.
- Traditional RT with BFR (leg extension, curl, press, 12 weeks) produced similar muscle and strength gains as high-load RT.
- BFRT (3x/week, 4 weeks) improved endothelial function and blood circulation in elderly individuals.
- In coronary artery disease patients, BFRT (2x/week, 8 weeks) improved systolic blood pressure and strength.

Practical Implications

- Safe: Provides hypertrophy and strength gains without heavy mechanical load.
- Dual benefits: Improves both muscle health and vascular function.
- Broad use: Prevents sarcopenia, aids rehab, and supports cardiac patients safely.

Student Takeaway

BFR = safe strength for seniors and rehab patients.
It builds muscle and circulation benefits without heavy strain.
An important clinical tool to prevent sarcopenia, improve recovery, and enhance quality of life.