BFR and Inflammation: Student Handout

Key Concept

Blood Flow Restriction Training (BFRT) may positively influence inflammatory pathways, promoting an anti-inflammatory environment in muscle and circulation. Evidence is limited but promising.

Research Highlights

- 3 weeks of BFRT increased anti-inflammatory macrophages by 163% compared with low- or high-intensity RT.
- After training, pro-inflammatory macrophages were higher in the low-intensity RT group but not in BFRT.
- BFRT reduced plasma IL-6 by 18% within 180 minutes post-session, while high-intensity RT showed no change.
- 8 weeks of BFRT (2x/week) tended to decrease inflammatory biomarkers (e.g., CD40 ligand).

Implications

- May support recovery and reduce systemic inflammation.
- Could be particularly beneficial for older adults, chronic disease patients, and in rehabilitation.
- Suggests BFRT has systemic health benefits beyond strength and hypertrophy.

Student Takeaway

BFRT isn’t just about muscle — it can help shift the immune response toward healing.
By increasing anti-inflammatory macrophages and reducing IL-6, BFRT may reduce inflammation and promote recovery.
More research is needed, but early results are very promising.