Exercise Therapy

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Resistance Training Guidelines for 60 years above older adults

- Obtain medical clearance before starting resistance training to identify cardiovascular, metabolic, or musculoskeletal risks and ensure safe participation.
  Example: A 65-year-old with hypertension gets physician clearance and BP limits before exercise (American College of Sports Medicine, 2018).
- Ensure close supervision during early training phases to improve technique, confidence, and reduce injury risk.
  Example: First 2–4 weeks supervised while learning exercises like leg press and chest press (Liu Chiung-ju & Latham Nancy K., 2009).
- Monitor vital signs (HR, BP) especially during progression to detect abnormal responses.
  Example: Check BP before/after sessions; stop if systolic BP exceeds safe limits (American College of Sports Medicine, 2018).
- Include a 5–10 minute warm-up to prepare muscles and reduce injury risk.
  Example: 5 min brisk walking + mobility exercises (shoulder rolls, ankle pumps) (American College of Sports Medicine, 2018).
- Start with low resistance and low repetitions, especially for eccentric work, to allow gradual adaptation of muscles and connective tissues.
  Protocol: 40–50% 1RM, 8–10 reps, 1 set.
  Example: Sit-to-stand with slow lowering (3–4 sec) (Frontera Walter R. et al., 1988).
- Use low–moderate intensity (10–12 reps) for 6–8 weeks, progressing first by repetitions, then by small resistance increments (~5%).
  Protocol: 50–60% 1RM → 2 sets of 10–12 reps → increase load gradually.
  Example: Resistance band rows progressing reps before increasing band tension (National Strength and Conditioning Association, 2019).
- Avoid high-resistance exercises, as they increase joint stress and injury risk, especially in degenerative conditions.
  Example: Replace heavy squats (>80% 1RM) with supported leg press or partial squats (American College of Sports Medicine, 2018).
- Train 2–3 times per week with at least 48 hours rest, allowing adequate recovery and preventing fatigue.
  Protocol: Monday–Wednesday–Friday schedule with full-body training (American College of Sports Medicine, 2018).
- Modify exercises for age-related postural changes (e.g., kyphosis) to maintain proper biomechanics and reduce spinal stress.
  Example: Use chest-supported row instead of bent-over row; include thoracic extension exercises (Katzman Wendy B. et al., 2010).
- Avoid flexion-dominant exercises, as repeated spinal flexion may worsen posture and increase fracture risk.
  Example: Avoid sit-ups; use planks or abdominal bracing instead (National Osteoporosis Foundation, 2014).

- Use seated or supported machines when possible to improve stability and reduce fall risk.
  Example: Seated leg press, chest press, and cable row instead of unsupported free-weight exercises (Cadore Eduardo L. et al., 2014).
- After a 1–2 week break, reduce intensity and volume by ~50%, then gradually rebuild to previous levels to avoid injury.
  Protocol: If training at 10 kg × 12 reps → restart at ~5 kg × 8–10 reps and progress over 2–3 weeks (American College of Sports Medicine, 2018).

Reference: Kisner, Carolyn Therapeutic exercise: foundations and techniques / Carolyn Kisner, Lynn Allen Colby. — 5th ed.