

Brain and Balance: The Dual Tasking Method Presenter: Ruben P. Thickstun

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Why Dual-Tasking Matters

- Falls are the leading cause of injury for adults over 65.
 - Cognitive decline can affect memory, attention, and reaction time.
 - Dual-task exercises challenge mind + body simultaneously, improving:
 - Balance & stability
 - Memory & focus
 - Confidence & independence
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Key Principles

- 1. Safety First**
 - Use a sturdy chair, wall, or rail for support.
 - Wear supportive footwear.
 - Clear surroundings of obstacles.
 - 2. Adaptability**
 - Seated exercises for pain or mobility limitations.
 - Standing exercises for moderate challenge.
 - Walking or dynamic exercises for advanced balance.
 - 3. Progress Gradually**
 - Increase difficulty step by step: physical first, cognitive first, then both together.
 - 4. Track Progress**
 - Measure balance (e.g., single-leg stance), cognitive accuracy, and confidence.
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Dual-Task Exercise Examples

Strength + Cognition

Seated Bicep Curl + Counting Backward

- Sit with light weights.
- Curl arms while counting backward by 7s from 100.
- Goal: Arm strength + working memory.

Balance + Memory

Single-Leg Stance + Word Recall

- Stand on one leg (hold 10–20 sec).

- Name five fruits starting with a specific letter.
- Goal: Balance + memory focus.

Coordination + Reaction

Ball Toss + Days Backward

- Toss a small ball hand-to-hand.
- Say the days of the week backward.
- Goal: Hand-eye coordination + reaction speed.

Cardio + Focus

March in Place + Color/Number Cues

- March in place or mini steps forward/backward.
- Respond to instructor's visual cues (colors or numbers).
- Goal: Cardiovascular + cognitive focus.

Functional Patterns

- Step & Reach → Forward, sideways, diagonal steps while naming items.
 - Twist & Turn → Rotate torso and reach while answering questions.
 - Squat & Lift → Controlled bend + counting sequences.
 - March & Step → Dynamic stepping while solving math or memory tasks.
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Sample Weekly Routine

Day	Exercise	Duration	Level
Mon	Chair-based dual-task	15 min	Beginner
Wed	Standing dual-task	20 min	Intermediate
Fri	Walking dual-task	20 min	Advanced

Tip: Start simple, add complexity as confidence and ability grow.

Tips for Success

- Make exercises fun and social: music, partner challenges, games.
 - Use repetition for learning and memory.
 - Encourage participants to track small wins: “I balanced 10 sec longer today” or “I remembered 3 extra items.”
 - Mix physical and cognitive challenges for maximum brain-body benefit.
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Key Takeaways

1. Dual-tasking improves balance, coordination, cognition, and confidence.
 2. Safety and adaptability are essential.
 3. Start small, progress gradually, and track improvement.
 4. Make exercises fun, motivating, and repeatable.
 5. Consistency matters—5–15 min daily can make a difference.
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Practice Challenge: Choose one dual-task exercise each day this week and note: - Duration performed - Number of repetitions or items remembered - Any changes in balance or focus