Movement as Medicine: An Action Guide for Cancer Related Fatigue

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Purpose:
This guide helps nursing and clinical staff develop a personalized exercise plan to help patients with cancer related fatigue, acknowledging that exercise may be the last thing on their mind currently.

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1. Why Exercise Matters

Cancer-related fatigue (CRF) is not ordinary tiredness. It's a full-body, sleep-resistant exhaustion that can persist for months- even years. You're not imagining it - and you're not alone. But it *can* be managed.

Exercise is part of treatment - not an add-on. Exercise has measurable biological impact on fatigue, function, and mood. It helps regulate inflammation, preserve strength, and improve recovery outcomes – and is one of the most effective ways to manage fatigue.

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2. Redefining Success: Micro-Movements as Therapeutic Dose

You don't need to "exercise." You need to "move".

Even short, simple movements recalibrate fatigue, prevent deconditioning, and support functional independence. But exercise does not need to be strenuous.

Today's Wins Could Be:

- Sitting upright in bed for 10 minutes
- Walking to the kitchen and back
- 5 ankle circles or shoulder rolls
- Stretching arms overhead while seated
- Pacing during a phone call
- Standing during a commercial break

✔ Movement doesn't have to be perfect. It just has to happen.
✔ Good days or bad—movement helps both.

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3. Core Principles for Movement Integration

✅ **Safety-First Screening and Precautions:**

- **Absolute contraindications:** Platelets <20K, Hb <8 g/dL, active DVT, uncontrolled pain
- **Relative precautions:**
  - Lymph node dissection → compression + modified upper body load
  - Bone metastases → aquatic or seated non-weight bearing options
  - Neuropathy → seated, stable surface movement

🎯 **Personalized Movement Prescription**

- **During treatment:**
  - 2–5 min "movement snacks" hourly
  - Isometric holds: wall leans, seated leg presses
- **Post-treatment:**
  - 20-min blocks: tai chi, resistance bands
  - Virtual walking for cognitive/energy recovery

🌀 **Dynamic Adjustment Framework**

- Fatigue ≤4/10 → Introduce one new movement variation daily
- Fatigue ≥7/10 → Prioritize breathwork, 90/90 hip shifts, positional rotation
- Post-infusion days → Use low-load chair yoga sequences; avoid upright load

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4. Functional Movement Tiers

Capacity Level	Suggest Movements	Duration/ Frequency
Bed-bound	Ankle pumps, diaphragmatic breathing	2 minutes hourly, while awake
Assisted ambulation	Seated marching, light resistance band rows	5 minutes, 3x daily
Independent	Wall push-ups, hallway pacing	10 minutes, 2x daily

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5. Track What Matters: Movement as a Vital Sign

Metric	Target	Why it Matters
Daily Vertical Time	90–120 min upright/day	Correlates with 41% lower hospitalization risk
Joint Excursions	Full ROM x major joints daily	Reduces stiffness, preserves ADL function
Movement Diversity	≥3 distinct patterns/day	Associated with improved energy regulation & mood

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6. Intensity Definitions (Borg RPE scale):

- Low (RPE 2–3): Can talk easily, not winded
- Moderate (RPE 4–6): Breathing heavier, can speak short sentences
- High (RPE 7+): Can't talk comfortably – not recommended unless cleared

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7. Custom Plan Builder

Let's build your movement plan—together.

I will try to move...

☐ ___ minutes in the morning

☐ ___ times a day

My preferred formats:

☐ Short walks

☐ Chair stretches

☐ Bed mobility movements

☐ Breathing / meditation app

☐ Tai Chi or yoga

☐ Other: _____

Interested in referral for:

☐ Physical therapy

☐ Psycho-oncology (CBT)

☐ Mindfulness or movement app based support

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8. Sample Weekly Plan - Modify based on current phase of treatment or recovery

Day	Activity
Monday	20 min walk + 15 min full-body resistance (bands/bodyweight)
Tuesday	15 min yoga (stretch focus) + balance drills
Wednesday	25 min brisk walk or cycle
Thursday	Resistance training + posture/stretching
Friday	30 min aerobic + 5 min balance work
Saturday	Active rest: gardening, light hike, yoga
Sunday	Rest or light flexibility movement (foam rolling, breathing)

9. Notes and Recommendations

10. Phase-Based Sample Movement Protocols

DURING ACTIVE TREATMENT

Goal: Preserve function, reduce fatigue/anxiety, and prevent deconditioning

Type	Frequency	Duration	Intensity	Sample Activities	Notes / Modifications
Aerobic	3–5 days/week	10–30 min/day*	Low	Short walks, slow stationary bike, step counts	Break into 5–10 min bouts. Okay to skip when severely fatigued.
Resistance	1–2 days/week	10–15 min	Very Low	Sit-to-stand, wall push-ups, resistance bands, grip exercises	Avoid high loads. Focus on large muscle groups.
Flexibility	5–7 days/week	5–10 min	Gentle	Neck rolls, shoulder circles, seated stretches	Do in morning and evening to ease stiffness.
Balance	Optional (2x/week)	5 min	Gentle	Heel-to-toe walk, stand-on-one-leg (near support)	Especially helpful if neuropathy is present.

Cautions:

- Fatigue: prioritize movement windows when energy peaks
- Neuropathy: seated exercise or supported standing
- Neutropenia: avoid public gyms
- Lymphedema: light resistance okay with gradual progression

POST-TREATMENT RECOVERY

Goal: Rebuild strength, function, endurance, and emotional confidence

Type	Frequency	Duration	Intensity	Sample Activities	Notes / Modifications
Aerobic	3–5 days/week	20–40 min/day	Low to Moderate	Brisk walking, low-impact aerobics, cycling	Start with lower duration; increase ~10% weekly
Resistance	2–3 days/week	20–30 min	Low	Resistance bands, light weights, core activation exercises	Monitor swelling if risk of lymphedema
Flexibility	5–7 days/week	10–15 min	Gentle	Yoga, postural stretches	Focus on surgery/radiation-affected areas
Balance	2–3 days/week	5–10 min	Gentle	Tai chi, single-leg stands, BOSU or foam pad work	Particularly important for those with lingering neuropathy or weakness

Progression: Gradual. Avoid muscle soreness >48h. Use RPE (Rate of Perceived Exertion): stay between 2–4/10 for most patients.

LONG-TERM SURVIVORSHIP

Goal: Maintain strength, reduce recurrence risk, support long-term health

Type	Frequency	Duration	Intensity	Sample Activities	Notes / Modifications
Aerobic	4–5 days/week	30–45 min/day	Moderate	Brisk walking, swimming, biking, dance classes	Goal: ≥150 min/week of moderate activity (or 75 min vigorous)
Resistance	2–3 days/week	30–40 min	Moderate	Circuit training, weights, resistance bands	Progress loads slowly; full-body sessions preferred
Flexibility	3–5 days/week	10–15 min	Gentle	Dynamic & static stretches, yoga	Emphasize postural work and full joint ROM
Balance	2–3 days/week	5–10 min	Gentle	Tai chi, unstable surface exercises, agility drills (if safe)	Adapt based on mobility/stability level

Enhancements:

- Add **intervals** (e.g., 1 min brisk / 2 min easy) to cardio after 3+ months
- Integrate **group classes** or apps for motivation
- Consider **fitness tracking** to reinforce consistency
