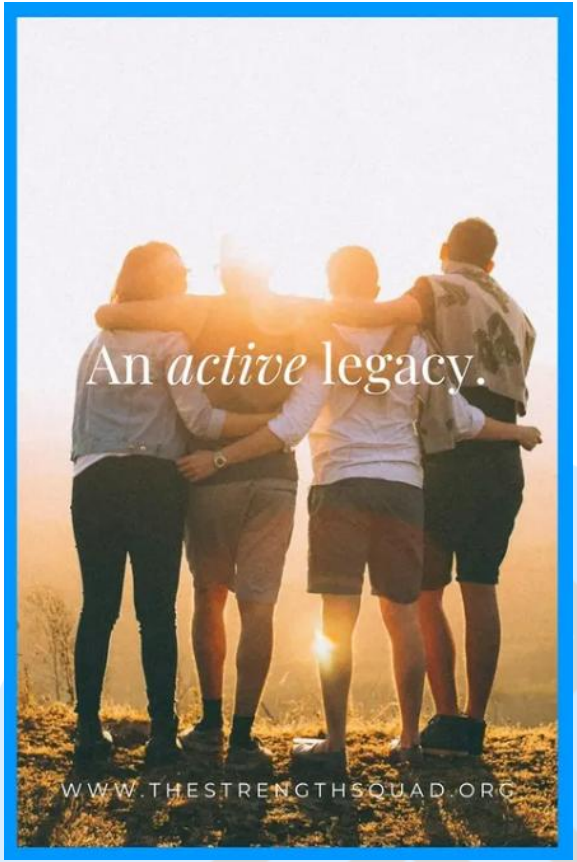
Exercise is Medicine

Strength Squad: Stronger Together

Exercise is Medicine

"**Exercise** should be considered a **standard component of cancer care** — patients should be assessed, referred, and supported to engage in structured physical activity during and after treatment."

(ACSM Consensus / Moving Through Cancer Initiative)



The Rising Burden

2×

Cases under 50 have more than doubled since 2000

+35%

Deaths in under-50s 2000–2024

#1

Australia has the highest early-onset CRC rates globally

2,045

Estimated new cases under 50 in 2024

AIHW Cancer Data 2024; Cancer Australia Early-Onset Cancer Statistics 2026; Young et al. 2025 Lancet Regional Health

The Rising Burden

Young onset colorectal cancer in Australia

- **Diagnosis** in younger people is often **delayed** — symptoms attributed to other causes
- Rates in people aged 30–39 have risen from 6.3 → 19 per 100,000 since 2000 (Cancer Australia, 2026)
- Young patients face unique challenges: **active careers, young families, long survivorship ahead**
- More **aggressive treatment** approaches — greater need for supportive care & exercise oncology

AIHW Cancer Data 2024; Cancer Australia Early-Onset Cancer Statistics 2026; Young et al. 2025 Lancet Regional Health

Why Exercise Matters

The evidence base — moving from 'nice to have' to 'need to have'

- ↓ Cancer-related fatigue
- ↓ Surgical complications
- ↑ Survival outcomes
- ↑ Treatment completion
- ↑ Quality of life
- ↑ Mental health

Mustian et al. 2017 JAMA Oncol; Bourke et al. 2014; Courneya et al. NEJM 2025

Exercise Benefits: Surgery

Prehabilitation & enhanced recovery

↓ 50%

Reduction in post-op complications reported in prehab programs

↓ 2.7 days

Average reduction in hospital length of stay

↑ Faster

Return to functional independence post-surgery

Gillis et al. 2014 Anesthesiology; Carli et al. 2020 BJSA; Barberan-Garcia et al. 2018

Exercise Evidence: Surgery

Prehabilitation

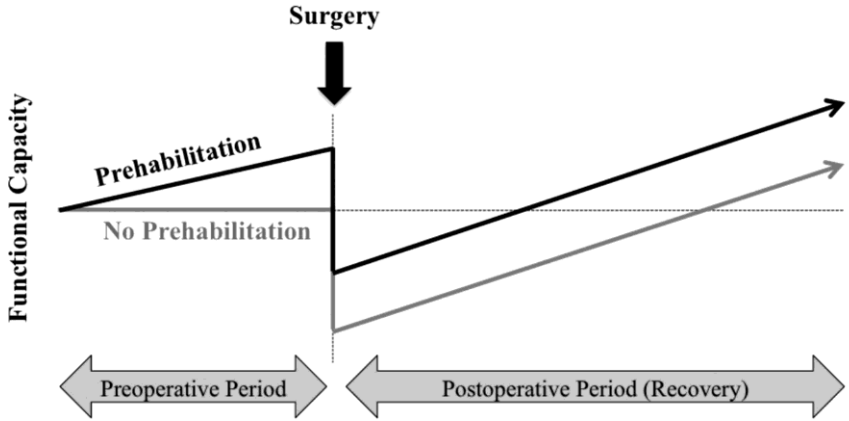
4–6 weeks pre-op aerobic + resistance exercise improves cardiorespiratory fitness and reduces post-operative complications

Cardiorespiratory fitness

Higher pre-op VO_2 max associated with fewer complications & shorter LOS — Gillis et al., 2014 Anesthesiology

Trimodal prehabilitation

Exercise + nutrition + anxiety reduction shown to improve recovery beyond surgery alone — Carli et al., 2020



Gillis et al. 2014 Anesthesiology; Carli et al. 2020 BJSA; Barberan-Garcia et al. 2018

Exercise Benefits: Chemotherapy

Maintaining function, managing toxicity & supporting dose delivery

40%

of mCRC patients require dose modifications

↓ Fatigue

Exercise reduces CRF better than any drug

↓ CIPN

Resistance training reduces peripheral neuropathy symptoms

↓ Anxiety

Supervised exercise reduces anxiety & depression scores

Sigloch et al. 2022 Support Care Cancer; Blasco et al. 2024 Cancers (RCT protocol); PMC7954871 FORCE Trial

Exercise Evidence: Chemotherapy

Maintaining function, managing toxicity & supporting dose delivery

Aerobic exercise during chemo

Significant improvements in cardiorespiratory fitness & reduced mental fatigue in CRC patients on adjuvant chemo
— Sigloch et al., 2022 Support Care Cancer

Resistance exercise & CIPN

RCT protocol: supervised resistance training twice weekly reduces oxaliplatin-induced peripheral neuropathy scores (EORTC QLQ-CIPN20)
— Blasco et al., 2024 Cancers

Dose intensity preservation

Sarcopenia present in up to 45% of early-stage CRC patients at diagnosis; those with sarcopenia face higher risk of dose delays/reductions
— FORCE Trial, PMC7954871

What nurses can do

Screen for fatigue & reduced function at each visit · Refer to accredited exercise physiologist · Reassure patients: exercise is SAFE during treatment

Sigloch et al. 2022 Support Care Cancer; Blasco et al. 2024 Cancers (RCT protocol); PMC7954871 FORCE Trial

Exercise Benefits: Radiation

Managing fatigue, bowel function & pelvic floor recovery

↓ Fatigue

↑ Pelvic floor & bowel recovery

↑ Improves and maintains function

Prehabilitation opportunity

Bower et al. 2014 J Clin Oncol; Ramage et al. 2015 Cochrane; Demark-Wahnefried et al. 2018

Exercise Evidence: Radiation

Managing fatigue, bowel function & pelvic floor recovery

↓ Radiation-induced fatigue

Moderate aerobic exercise (150 min/week) demonstrably reduces fatigue severity.

Bower et al., 2014 J Clin Oncol

↑ Pelvic floor & bowel recovery

Pelvic floor muscle training (PFMT) is first-line intervention for bowel dysfunction post-pelvic radiation.

Ramage et al., 2015 — Cochrane

↑ Improves and maintains function

Low-intensity walking during radiotherapy maintains function and reduces fatigue without exacerbating radiation toxicity.

Demark-Wahnefried et al., 2018

Prehabilitation opportunity

Neoadjuvant chemoradiation window offers a prehab opportunity — exercise may enhance tumour response.

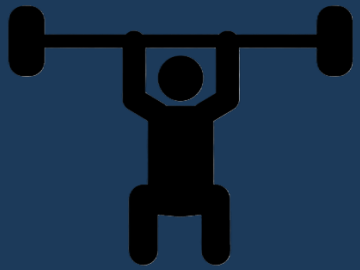
PMC12484414 — Implications of CHALLENGE

Exercise Guidelines

Aerobic

150-300 mins moderate intensity aerobic exercise per week

Resistance



2-3x strength training per week, targeting all major muscle groups, 8-12 reps per group

ACSM Exercise Oncology Guidelines 2019; Santa Mina et al. 2014; Winters-Stone et al. 2021

Landmark Study: The CHALLENGE Trial

CCTG CO.21 — New England Journal of Medicine, June 2025 · Courneya et al.

Study Design

· Phase III Randomised Controlled Trial

· n = 889 patients

· Stage II (high-risk) or Stage III colon cancer

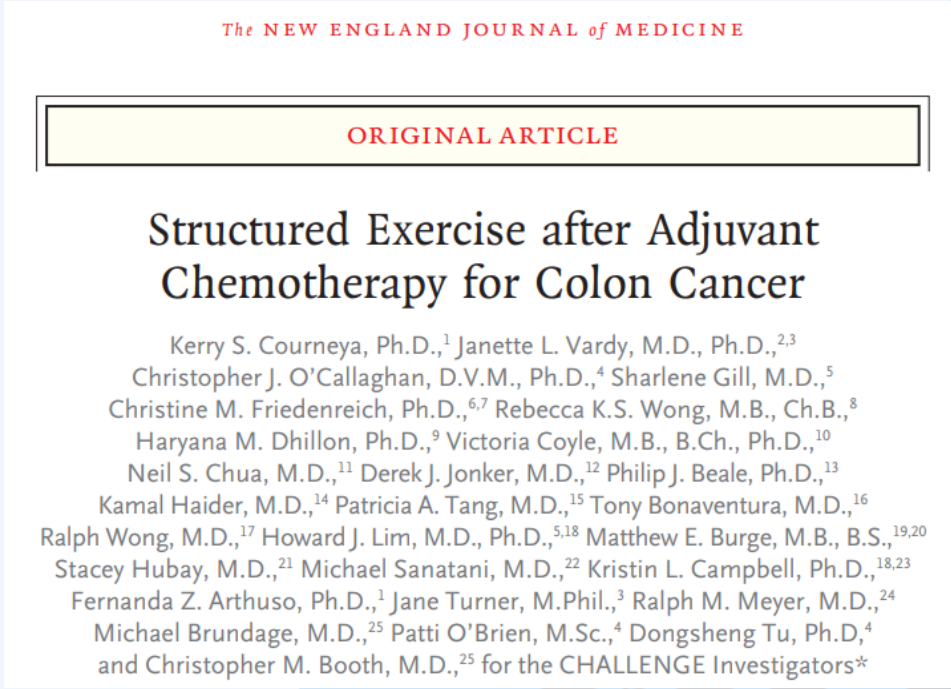
· Post-surgery + adjuvant chemotherapy

Intervention:

· 3-year structured exercise vs. health education

· Structured group aiming to reach 150-300 mins PA

· 30% of participants from Australian centres



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Structured Exercise after Adjuvant Chemotherapy for Colon Cancer

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The CHALLENGE Trial: Results

CCTG CO.21 — New England Journal of Medicine, June 2025 · Courneya et al.

28%
Lower risk of cancer recurrence or second cancer

37%
Lower risk of death vs. usual care

80.3%
5-year DFS vs 73.9% in health education group

90.3%
8-year OS vs 83.2% in health education group

Courneya KS et al. NEJM 2025; JCO 2025 (LBA3510); PMC12484414; WCRF 2025; Science Media Centre 2025

Resistance Training

Specific evidence for strength training in colorectal cancer

Resistance exercise: 95.7% for improving lean mass in cancer patients

Supervised resistance training reduced fatigue and constipation

Resistance training protocol reduces chemotherapy dose-limiting toxicities in CRC

Resistance training produces +0.85kg net lean body mass compared to controls

PMC11083843 (NMA 2024); PMC12731986 (RCT 2025); PMC7954871 (FORCE Trial); PMC12484414

- **Fully Funded**

- Targeted programs run by our Oncology Specialist EPs

- Access to peer support, shared experience and resources

THE STRENGTH SQUAD

Eligibility

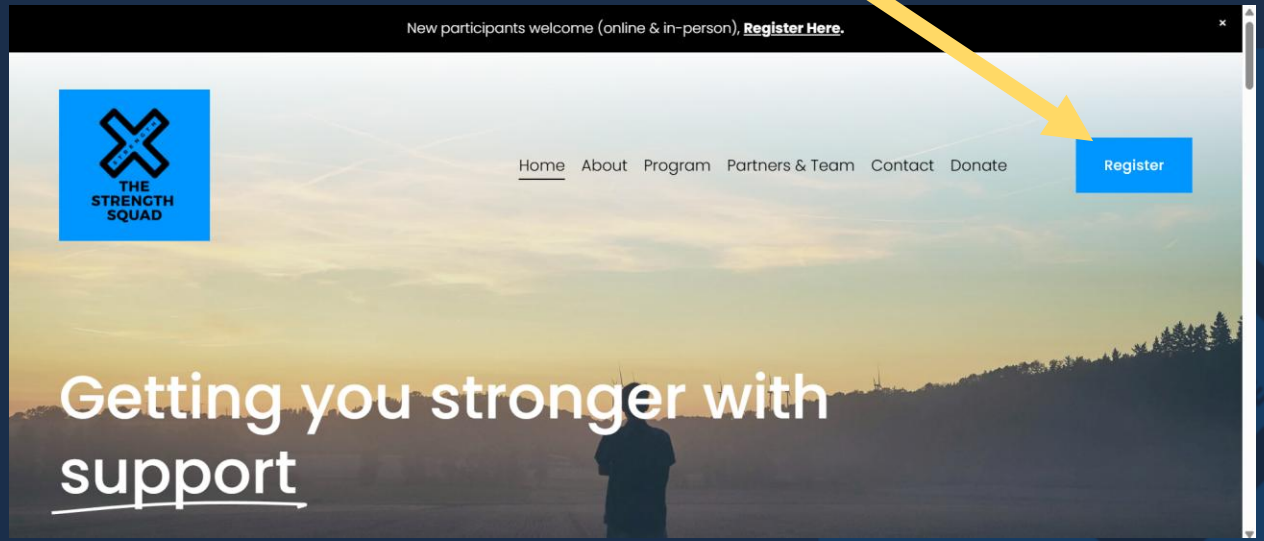
- Young onset, <50 years old
- Any stage of CRC diagnosis, treatment or survivorship

The Program

- Initial Assessment
- 24 x 1hr Supervised Exercise Groups
  In person (South Yarra) or Online
- Re-Assessment

How to Refer

Visit www.thestrengthsquad.org and register your patients' details!



Key Takeaways

What every colorectal cancer health practitioner should know

1. **Exercise is medicine — not optional**
2. **Safety: exercise is safe through treatment**
3. **Resistance training is under-prescribed**
4. **Young patients have specific needs**
5. **Screen → Encourage → Refer**

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