Printed on Nov 7 2026

Exercise screening

Who should be screened

Exercise screening should be completed for all individuals eligible for prehabilitation.

Why exercise screening is important

The aim of exercise screening is to identify the individual's level of functional exercise capacity. Poor function is a risk factor for developing complications and poor postoperative recovery.

Which screening tool(s) to use

Whilst there is no strong consensus for a specific exercise screening tool in prehabilitation, examples of relevant tools to help stratify patients between universal or needing further assessment to determine targeted or specialist intervention are detailed below[1,2,12].

It is important to note the difference between exercise and physical activity for purposes of screening and assessment. In current literature physical activity (PA) and exercise are often used interchangeably.

Physical activity is defined as:

> "any bodily movement produced by skeletal muscles that results in energy expenditure"[3]

Exercise is a subcategory of PA and is defined as:

> "planned structured, repetitive, and purposive in the sense that improvement or maintenance of one or more components of physical fitness is an objective"[3]

Measurment and prescription of both PA and exercise are important in prehabilitation and are considered separately below.

Duke Activity Status Index (DASI) or modified-DASI (m-DASI)

The DASI is a patient self-reported 12 item questionnaire that estimates functional capacity. It is based on the patient's ability to perform a set of common activities of daily living. The DASI of ≤34 is moderately correlated with CPET (peak VO_2 < 16 ml/kg/min and Anaerobic threshold (AT) >11 ml/kg/min) in patients prior to cancer surgery. However, in a recent comparative paper, DASI is reported to be significantly different to VO_2peak so care should be taken in using DASI as a surrogate fitness measure[4].

Modified-DASI (m-DASI) is a simplified recalibrated 4 item screening tool of the DASI. Its clinometrics compare favourably with the 12 item DASI[5] however this is not yet used as widely internationally.

Visit website.

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Is patient reported	Can be completed remotely?	Freely available?
12	10mins	≤34 have elevated risks for adverse postoperative outcomes[6] m-DASI – low risk 4 moderate risk 3 High risk 0-2[5]	Yes	Yes	Yes	Yes

Clinical Frailty Score (CFS)

The CFS is a judgement-based tool scored form 1-9 to screen for frailty and to broadly stratify degrees of physical function and frailty. Higher CFS score is significantly associated with prolonged postoperative stay, readmission, morbidity and mortality[7].

Visit website

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Is patient reported	Can be completed remotely?	Freely available?
9	5mins	Low risk 1-3 Moderate risk 4-5 High risk ≥6	Yes	No	Yes	Yes

Edmonton Frail Scale (EFS)

Multidimensional assessment tool utilising 11 item questionairre to analyse 9 domains of frailty, including: cognition, general health status, functional independence, social support, medication use, nutrition, mood, continence and functional performance via a timed up and go test.
Higher EFS scores are associated with greater risk of postoperative complications[8].

Visit website

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Can be completed by patient?	Can be completed remotely?	Freely available^?
9	5-10mins	≥5 identifies those who may benefit from prehabilitation in people aged ≥ 70	Yes	No	No	Yes for single clinician and small scale research. For larger organisations and research, licensing fee may be required

^correct at time of publication

Australia-modified Karnofsky Performance Status (AKPS)

The Australia-modified Karnofsky Performance Status can be used during screening to measure the patients overall performance status prior to prehabilitation assessment and intervention. The test is easy to administer and valid. Patients are scored between 10 and 100 by the screening clinician. The score is based on the patients' ability to perform regular tasks relating to activity, work and self-care. Normal physical ability with nil evidence of disease is scored as 100. Decreasing scores indicate reduced performance status[9].

Visit website

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Is patient reported	Can be completed remotely?	Freely available^?
1	2mins	≤70	Yes	No	Yes	Yes

The International Physical Activity Questionnaire-Short Form (IPAQ-SF)

The International Physical Activity Questionnaire-Short Form is a self-report questionnaire that requires the patient to recall their physical activity levels during the preceding week. Responses are categorised as high/moderate (meeting PA guidelines) or low (not meeting PA guidelines) and

as a continuous energy expenditure score. Higher scores indicate higher levels of physical activity[10].

Visit website

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Is patient reported	Can be completed remotely?	Freely available^?
7	5-10mins	Low	Yes	Yes	Yes	Yes

Godin Leisure Time Exercise Questionnaire (GLTEQ)

The Godin Leisure Time Exercise Questionnaire is a self-report measure of usual physical activity. It consists of 2 items: the first measures frequency and intensity of exercise during free time in a typical week. The second question asks about the frequency of engaging in any regular activity long enough to work up a sweat with three response options provided (often, sometimes, never/rarely)[11].

Visit website

Number of items	Time to complete	Cut offs for risk stratification	Can be completed by any clinician?	Is patient reported	Can be completed remotely?	Freely available^?
2	2-5mins	<14	Yes	Yes	Yes	Yes

^Correct at time of publication

Note this is not an exhaustive list and acts as a guide; existing prehabilitation services have utilised the DASI, CFS, six minute walk test and IPAQ-short form questionnaire. Some measures included in the Exercise assessment section (e.g. 6MWT, CPET) may also be used for screening purposes depending on service needs and resourcing.

References

1. Macmillan Cancer Support. Prehabilitation for people with cancer: clinical and implementation guidelines. 2025
2. Davis JF, van Rooijen SJ, Grimmett C, West MA, Campbell AM, Awasthi R, et al. From Theory to Practice: An International Approach to Establishing Prehabilitation Programmes. Curr Anesthesiol Rep. 2022;12(1):129-137.
3. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise, and physical fitness:

definitions and distinctions for health-related research. Public Health Rep. 1985;100(2):126–131.
4. Dewar A, et al. “The Duke Activity Status Index Compared with Cardiopulmonary Exercise Testing in Patients Undergoing Pre□operative Assessment for Cancer Surgery.” Anaesthesia. 2023.
5. Riedel B, Li MH, Lee CHA, Ismail H, Cuthbertson BH, Wijeysundera DN, Ho KM; METS Study Investigators. A simplified (modified) Duke Activity Status Index (M-DASI) to characterise functional capacity: a secondary analysis of the Measurement of Exercise Tolerance before Surgery (METS) study. Br J Anaesth. 202;Jan;126(1):181-190.
6. El-Kefraoui C, Rajabiyazdi F, Pecorelli N, Carli F, Lee L, Feldman LS, et al. Prognostic value of the Duke Activity Status Index (DASI) in patients undergoing colorectal surgery. World J Surg. 2021;45(12):3677-3685.
7. Philip FA, Jagathnath Krishna KM, Bhargavan RV, Augustine P, Thomas S. Comparison of preoperative assessment tools in older patients undergoing cancer surgery: A prospective study. J Geriatric Oncology. 2022;May;13(4):420-425.
8. He Y, Li LW, Hao Y et al. Assessment of predictive validity and feasibility of Edmonton Frail Scale in identifying postoperative complications among elderly patients: a prospective observational study. Sci Rep. 2020:10, 14682.
9. Abernethy AP, Shelby-James T, Fazekas BS, Woods D, Currow DC. The Australia-modified Karnofsky Performance Status (AKPS) scale: a revised scale for contemporary palliative care clinical practice [ISRCTN81117481]. BMC Palliat Care. 2005; Nov 12;4:7.
10. Craig CL, Marshall AL, Sjöström M, Bauman AE, Booth ML, Ainsworth BE, Pratt M, Ekelund U, Yngve A, Sallis JF, Oja P. International physical activity questionnaire: 12-country reliability and validity. Med Sci Sports Exerc. 2003; Aug,35(8):1381-95.
11. Amireault S, Godin G. The Godin-Shephard leisure-time physical activity questionnaire: validity evidence supporting its use for classifying healthy adults into active and insufficiently active categories. Perceptual and motor skills. 2015;120(2):604-22.
12. Reeves, J., Karunaratne, S., Alexander, K. *et al.* Expert Consensus on Self-Reported Physical, Nutritional, and Psychological Screening Tools for Prehabilitation in Gastrointestinal Cancer Surgery: An International Delphi Study. *Ann Surg Oncol* **33**, 5751–5761 (2026). https://doi.org/10.1245/s10434-026-19356-z

Disclaimer

© Peter MacCallum Cancer Centre, 2024
The information on this website is for information purposes only. Always seek the advice of your health care provider.