

Physical therapist management of total knee arthroplasty

APTA clinical practice guideline, revision 2026. Bove AM, Carroll LA, Cone S, Dibblee P, Hensley CP, Lenington K, Manner PA, Scalzitti DA, Tompkins J, Bade MJ. *Physical Therapy* 2026;106(7):pzag058. doi:10.1093/ptj/pzag058

20 recommendations	11,141 / 227 abstracts screened / articles included	1995 to 2024 search window, databases closed 2 Jan 2025	3 strong the rest moderate, weak or consensus	Replaces 2020 Jette et al, <i>Phys Ther</i> 2020;100:1603
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Who and what it covers

IN SCOPE Adults with knee osteoarthritis undergoing primary TKA. Pre-operative and post-operative physical therapist management. Written for physical therapists; also intended as a resource for surgeons, occupational therapists, nurse practitioners, physician assistants, physiatrists and primary care.	OUT OF SCOPE Revision TKA. Partial or unicompartmental knee arthroplasty. Paediatric patients. TKA performed for any indication other than osteoarthritis. Non-operative management of knee osteoarthritis. Not intended for use as a benefits determination document.
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How to read the strength grades

GRADE	LANGUAGE	WHAT SITS BEHIND IT
Strong	Must or should	Two or more high-quality studies with consistent findings
Moderate	Should	One high-quality study, or two or more consistent moderate-quality studies, or high-quality evidence downgraded through the Evidence to Decision framework
Weak	May	One moderate-quality study, or two or more consistent low-quality studies, or moderate-quality evidence downgraded through the Evidence to Decision framework
Consensus	May or should	A single low-quality study or no supporting evidence. This is the work group's opinion

Methodology change worth knowing: to align with GRADE, every observational study now receives a base appraisal of low-quality evidence. Some grades therefore look softer than in 2020 without the underlying evidence having weakened.

The 20 recommendations

Colour on the number marks the direction of the recommendation: **green** do this, **red** do not do this, **amber** optional.

#	DOMAIN	RECOMMENDATION	EVIDENCE	STRENGTH
1	Pre-operative PT	Design and implement pre-operative exercise programs to improve pre- and post-operative strength, flexibility and endurance. Pre-operative education may incorporate pain neuroscience strategies to manage pain and reduce procedure-related anxiety. 12 high, 32 moderate	High	Moderate
2	ROM: CPM	Do not use continuous passive motion after primary, uncomplicated TKA. 4 high, 12 moderate	High	Strong
3	ROM: bracing	Do not routinely use bracing or splinting in the early post-operative period to increase knee ROM after primary, uncomplicated TKA. 1 high, 4 moderate	Moderate	Moderate
4	ROM: exercise	Include passive, active-assistive and active ROM exercise to optimize recovery and functional outcomes of the affected knee. No single method is superior. 2 moderate, 2 low	Moderate	Moderate
5	ROM: adjuncts	May use manual therapy with exercise and/or devices to augment active-assistive exercise for ROM in the early post-operative period. 3 high, 2 moderate	Moderate	Weak
6	Pain: cryotherapy	Teach and encourage cryotherapy for early post-operative pain management. 18 moderate	Moderate	Moderate
7	Pain: adjuncts	May use TENS (acute and subacute), Kinesio Taping (acute), manual therapy , and/or psychologically informed techniques to decrease pain after TKA. 3 high, 24 moderate	Moderate	Weak
8	Swelling: core	Prescribe cryotherapy and teach elevated positioning of the surgical limb at 30 to 90 degrees of knee flexion in the early post-operative period. 2 high, 15 moderate	High	Moderate

#	DOMAIN	RECOMMENDATION	EVIDENCE	STRENGTH
9	Swelling: taping	May consider Kinesio taping after uncomplicated TKA to reduce swelling. Evidence is mixed on whether it helps. 3 moderate	Moderate	Weak
10	Swelling: low value	Should not routinely use manual lymphatic drainage, compression dressings or CPM to reduce post-operative swelling. Work group opinion; these have not been proven effective. 4 moderate	Low	Consensus
11	Physical activity	Encourage early physical activity and build a plan to progressively increase it, based on safety, functional tolerance, physiological response and collaborative goal setting. 1 high, 9 moderate	Moderate	Moderate
12	Movement retraining	Include motor function training : dynamic balance training, computer or app-assisted gait retraining, and movement training with feedback. 9 high, 12 moderate	High	Strong
13	NMES	Apply NMES to the quadriceps at least daily , initiated in the early post-operative period at the highest tolerable intensity , to improve quadriceps strength, gait performance and performance-based outcomes. 6 moderate, 2 low	Moderate	Moderate
14	Strength training	Design, implement and teach progressive strength training beginning in the early post-acute period to improve function, strength and ROM. 7 high, 17 moderate	High	Strong
15	Delivery: supervision	Provide supervised physical therapist management . The optimal setting is determined by patient safety, mobility, and environmental and personal factors. 2 high, 17 moderate	Moderate	Moderate
16	Delivery: format	May use group-based or individual physical therapy sessions. 1 high, 5 moderate	Moderate	Weak
17	Delivery: digital	Consider digital health tools after TKA, either in addition to in-clinic care or as an alternative to it. 3 high, 25 moderate	High	Moderate
18	Early mobilization	Physical therapy, including early mobilization, should start within 24 hours of surgery . 3 moderate, 9 low	Moderate	Moderate
19	Care setting	When possible, post-operative physical therapy may take place in an outpatient setting rather than inpatient rehabilitation or at home. 5 low	Low	Weak
20	Care coordination	Collaborate in pre- and post-operative care coordination within an interdisciplinary team . Work group opinion; no study directly evaluates PT-led coordination protocols. indirect evidence only	Insufficient	Consensus

The de-implementation list

STOP OR DO NOT START	PROTECT OR BUILD IN
Continuous passive motion. Strong recommendation against. No meaningful short- or long-term benefit across 4 high-quality studies, and it displaces active rehabilitation time.	Progressive strength training from the early post-acute period. One of only three strong recommendations.
Routine bracing or splinting for ROM. No clinically meaningful ROM difference, flexion versus extension splinting included. Adds cost, donning and doffing coordination, and durable medical equipment administration.	Motor function training with balance, gait retraining and feedback. The second strong recommendation.
Manual lymphatic drainage for swelling. Conflicting moderate-quality evidence, no sustained benefit.	Mobilization inside 24 hours of surgery.
Compression dressings for swelling in the first 24 hours, and CPM for edema control .	Daily quadriceps NMES at the highest tolerable intensity, targeted at patients with activation deficits.
	Cryotherapy plus elevated limb positioning at 30 to 90 degrees of flexion in the first days.
	Pre-operative exercise , offered before the surgical date.

Parameters the guideline actually specifies

Most recommendations stop short of a dose. These are the ones that give you something to write into a protocol.

TOPIC	WHAT IS SPECIFIED	CAUTIONS AND CANDIDATE SELECTION
NMES	Start as early as post-operative day 2. Once or twice daily. Highest tolerable intensity, maximising cumulative intensity. Apply regularly for a minimum of 3 weeks. Improves quadriceps and hamstring maximum voluntary isometric contraction from 2 to 52 weeks, plus walking and stair-climbing performance. ROM did not differ between NMES and no NMES.	Best candidates are patients with quadriceps activation deficits , identified by extensor lag or a quadriceps activation battery. Contraindicated with demand-type pacemakers, active cancer, or DVT. Cost, device access and patient tolerance are the practical limits.
Limb positioning	Elevated, with the knee at 30 to 90 degrees of flexion. Benefits are seen within the first 72 hours: less swelling, less total and hidden blood loss, better early ROM, no increase in complications.	Flexion positioning may risk loss of knee extension . Current evidence does not show increased fixed flexion contracture, but the supporting studies used delayed mobilization and long inpatient stays. Pair positioning with targeted extension ROM exercise. Optimal duration, frequency and flexion angle are not established.
Early mobilization	Within 24 hours of surgery. Compared with starting on or after post-operative day 1: less pain, better ROM, shorter length of stay. One study also found better function and fewer adverse events at 4 weeks and 3 months.	Low-quality evidence suggests lower incidence of DVT, pulmonary embolism and pulmonary infection, but higher incidence of haematoma and nausea . Home support is a real gating factor, since accelerated pathways shorten or remove the inpatient stay.
Strength training	Begin in the early post-acute period. Benefit shown for closed and open chain, eccentric and concentric, isotonic and isokinetic, and elastic band programs. High-intensity and low-intensity programs both produced benefit, with no significant difference between them.	High-intensity effectiveness may be limited early by arthrogenic inhibition of the quadriceps . No study has compared progression criteria. Bade et al progressed on soreness, pain, ROM, swelling and self-reported function; that is the closest thing to a published rule. Aggressive progression without criteria worsens pain and swelling.
Physical activity	Progressive, with collaborative goal setting and self-monitoring. 6000 steps per day is the threshold shown to be protective against incident functional limitation in knee osteoarthritis. Stationary cycling, aquatic exercise and Tai chi are safe in the early post-operative period. Hiking at 1 year improved stair climbing and self-reported function.	Telehealth-delivered behaviour change increased daily steps at end of intervention, with no difference at 6 months. Sustainment is the weak point. Monthly follow-up calls after outpatient discharge were used in the trial that held gains at 6 months. No head-to-head comparison of activity types exists.
Psychologically informed care	The high-quality CBT trial enrolled only patients with high kinesiophobia, defined as a Tampa Scale for Kinesiophobia score above 37 . It improved kinesiophobia, pain perception and quality of life at 1 and 6 months.	Patients scoring below 37 on the TSK are less likely to benefit. That inclusion criterion limits generalizability to the whole TKA population, and it also gives you a usable screening threshold. May require additional training or interprofessional collaboration.
Discharge planning	The AM-PAC 6-Clicks Basic Mobility score, taken at acute care physical therapy evaluation, has strong predictive value for discharge disposition, validated across populations including TKA.	Pre-operatively administered tools, including RAPT, produced predictions aligned with AM-PAC. Patients were more likely to be readmitted when therapist discharge recommendations were not implemented or recommended follow-up was not provided.

Clinical relevance: what to do with this

Pre-habilitation is now a should, and the assessment visit is where it fits.

Evidence quality is high; the grade was downgraded only because of thin data on the educational components and generally small to moderate effect sizes. No study found pre-operative exercise inferior to an alternative or to nothing. Critically, no modality, setting or supervision level was shown superior, in-person versus home-based and individual versus group included. That gives permission to build the cheapest deliverable version rather than the most elaborate one. Set expectations honestly: benefit concentrates at 0 to 1.5 months and diminishes over time, with limited evidence for sustained long-term effect.

Four interventions can come out of a local pathway today.

CPM, routine bracing or splinting for ROM, manual lymphatic drainage, and compression dressings for swelling. CPM carries the only strong recommendation against anything in the document. Removing these frees equipment budget, storage, staff time and vendor coordination, and the guideline gives you the citation to defend the change.

The economics section does not transfer to a Canadian setting.

Cost discussion is built on Medicare bundled payment, 90-day episodes, and the observation that pre-habilitation sits outside the bundle and is billed fee-for-service. The clinical recommendations transfer without modification. The payment reasoning behind them does not, so strip it out before quoting the guideline in a local business case.

NMES is the most protocol-ready recommendation in the document.

It specifies timing, frequency, intensity, minimum duration, the target patient and the contraindications. If one thing gets standardized out of this revision, this is the candidate. The screening step is a quadriceps extensor lag or activation battery, not a blanket application.

Digital health moved from an aside to a graded recommendation, and it is permitted as a substitute.

Three high-quality and 25 moderate-quality studies now sit behind it, and the wording explicitly allows digital tools as an alternative to in-clinic care, not only as an add-on. Most trials found telerehabilitation outcomes similar to in-person. That is directly usable for capacity and wait-list

pressure. The guideline declines to say which tool, how, or when, because the interventions were too heterogeneous, so the selection stays a local decision.

The supervised versus unsupervised position has softened since 2020.

The 2020 CPG found supervised physical therapy superior to unsupervised. Newer moderate-quality studies mostly found equivocal outcomes, with the exception that standard outpatient rehabilitation was associated with stronger functional outcomes at 3 months than home-based. One study found a home program with more visits equivalent to outpatient with fewer visits at 5 months, though the role of the rehabilitation assistant in that study reduces certainty. Useful context if visit counts are under review.

Watch the extension trade-off in the positioning recommendation.

Elevated flexion positioning at 30 to 90 degrees is well supported for swelling and blood loss, and the work group specifically recommends adding targeted extension ROM exercise alongside it. The reassurance about fixed flexion contracture comes from studies with delayed mobilization and long inpatient stays, which is not the contemporary pathway. Write the extension work into the protocol rather than leaving it to individual judgement.

Care coordination remains consensus with no direct evidence, which is an opportunity as much as a gap.

No study was found that evaluates the effectiveness of a care coordination protocol implemented or driven primarily by a physical therapist. The work group had to reason from adjacent literature. Any advanced practice model that measures its own coordination outcomes is filling a gap the guideline names explicitly.

Check scope before citing it.

Revision TKA, unicompartmental knee arthroplasty, and TKA for any indication other than osteoarthritis are all outside this guideline. For an inflammatory arthritis patient going to TKA, these recommendations are extrapolation, not guideline-supported care. Patients with severe stiffness, arthrofibrosis, or prior manipulation under anesthesia are named as atypical cases needing individualised approaches.

Next review is scheduled at 5 years, and evaluation content is flagged for addition.

Future versions may add recommendations on the best tests and measures for evaluating impairments after TKA, and on which patient-reported and performance-based outcome measures to select. The current document is intervention-focused and does not tell you what to measure.

Source

Bove AM, Carroll LA, Cone S, Dibblee P, Hensley CP, Lenington K, Manner PA, Scalzitti DA, Tompkins J, Bade MJ. Clinical practice guideline for physical therapist management of total knee arthroplasty: revision 2026. *Phys Ther.* 2026;106(7):pzag058. doi:10.1093/ptj/pzag058. Open access under CC BY-NC 4.0. Funded exclusively by the American Physical Therapy Association. Supersedes Jette DU, Hunter SJ, Burkett L, et al. *Phys Ther.* 2020;100:1603-1631.