

best practices

metodi di riabilitazione



evidenze
scientifiche

consigli degli esperti
del movimento

esperienza
clinica





ortopedico

ortopedico

protesi totale d'anca



valutazioni motorie

- r.o.m. anca passivo/attivo*
- equilibrio statico*
- analisi del passo*
- f.r.p.

in combinazione con Harris Hip Score or Oxford Hip Score*



*le **valutazioni motorie** possono essere effettuate anche durante la **fase pre-operatoria** per settare gli obiettivi degli esercizi di **preabilitazione**

outcomes

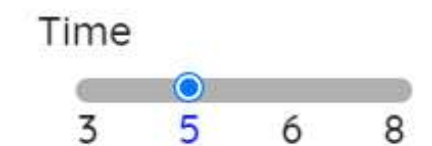
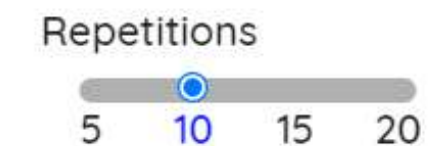
- gradi di flesso/estensione, intra/extra rotazione, ad/adduzione del ginocchio
- c.o.p., c.o.m.
- velocità del passo, durata di stride e stance
- parametri spaziali del passo, asimmetria temporale e spaziale
- indici di predizione del rischio di caduta
- dolore, emozioni, funzionalità nelle attività quotidiane

obiettivi dell'esercizio-terapia in preabilitazione

- incremento soglia di dolore/riduzione percezione dolore
- incremento forza arti inferiori
- miglioramento abilità neuromotorie & anomalie posturali, kinesiophobia



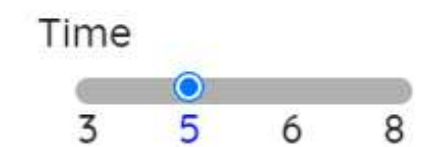
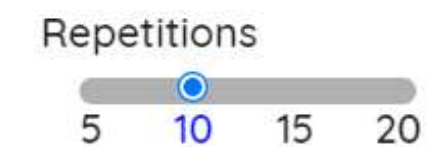
Lowering Leg
REPETITIONS



Quad Pillow Press
ISOMETRIC



Seated knee flexion with elastic
REPETITIONS



obiettivi dell'esercizio-terapia in preabilitazione

- incremento soglia di dolore/riduzione percezione dolore
- incremento forza arti inferiori
- miglioramento abilità neuromotorie & anomalie posturali, kinesiophobia



Bridging
ISOMETRIC

Repetitions



Isometric work



Supported standing hip abduction with ela...
REPETITIONS

Repetitions



Time



Supported standing hip adduction with ela...
REPETITIONS

Repetitions



Time



Fire Hydrant
REPETITIONS

Repetitions



Time



Dog Kick
REPETITIONS

Repetitions



Time



obiettivi dell'esercizio-terapia in riabilitazione

- incremento r.o.m. anca passivo e attivo
- incremento forza arti inferiori
- miglioramento parametri passo, equilibrio statico e dinamico



Lie Down Hip Flexion
ISOMETRIC

Repetitions



Isometric work



One-sided weight transfer
REPETITIONS

Time



Repetitions



Start walking
REPETITIONS

Repetitions



Time



Weight Lat-Transfer
SHIFT

Duration



obiettivi dell'esercizio-terapia in riabilitazione

- incremento r.o.m. anca passivo e attivo
- incremento forza arti inferiori
- miglioramento parametri passo, equilibrio statico e dinamico



Bridging
ISOMETRIC

Repetitions



Isometric work



Squat
REPETITIONS

Repetitions



Time

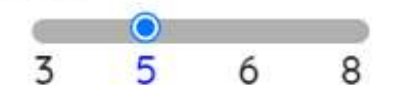


Supported standing hip abduction with ela...
REPETITIONS

Repetitions



Time



Supported standing hip adduction with ela...
REPETITIONS

Repetitions



Time



Bent-Knee Dog Kick
REPETITIONS

Repetitions



Time



riferimenti

- Domínguez-Navarro F, Igual-Camacho C, Silvestre-Muñoz A, Roig-Casasús S, Blasco JM. [Effects of balance and proprioceptive training on total hip and knee replacement rehabilitation: A systematic review and meta-analysis](#). *Gait Posture*. 2018 May;62:68–74. doi: 10.1016/j.gaitpost.2018.03.003.
- Coulter CL, Scarvell JM, Neeman TM, Smith PN. [Physiotherapist-directed rehabilitation exercises in the outpatient or home setting improve strength, gait speed and cadence after elective total hip replacement: a systematic review](#). *J Physiother*. 2013 Dec;59(4):219–26. doi: 10.1016/S1836-9553(13)70198-X. .
- Colgan G, Walsh M, Bennett D, Rice J, O'Brien T. [Gait analysis and hip extensor function early post total hip replacement](#). *J Orthop*. 2016 Apr 6;13(3):171–6. doi: 10.1016/j.jor.2016.03.005. PMID: 27408491; PMCID: PMC4919282.
- Foucher KC. [Preoperative gait mechanics predict clinical response to total hip arthroplasty](#). *J Orthop Res*. 2017 Feb;35(2):366–376. doi: 10.1002/jor.23282.
- Artz N, Elvers KT, Lowe CM, Sackley C, Jepson P, Beswick AD. [Effectiveness of physiotherapy exercise following total knee replacement: systematic review and meta-analysis](#). *BMC Musculoskelet Disord*. 2015 Feb 7;16:15. doi: 10.1186/s12891-015-0469-6.
- Nilsson A, Breman A. Measures of hip function and symptoms: Harris Hip Score (HHS), Hip Disability and Osteoarthritis Outcome Score (HOOS), Oxford Hip Score (OHS), Lequesne Index of Severity for Osteoarthritis of the Hip (LISOH), and American Academy of Orthopedic Surgeons (AAOS) Hip and Knee Questionnaire. *Arthritis Care Res (Hoboken)*. 2011 Nov;63 Suppl 11:S200–7. doi: 10.1002/acr.20549.

ortopedico

protesi totale di ginocchio



valutazioni motorie

- r.o.m. ginocchio passivo/attivo*
- equilibrio statico*
- analisi del passo*
- f.r.p.

In combinazione con: WOMAC scale o OKS: Oxford Knee Score *



*le **valutazioni motorie** possono essere effettuate anche durante la **fase pre-operatoria** per settare gli obiettivi degli esercizi di **preabilitazione**

outcomes

- gradi di flessione/estensione, intra/extra rotazione, ad/adduzione del ginocchio
- c.o.p., c.o.m
- velocità del passo, durata di stride e stance
- parametri spaziali del passo, asimmetria temporale e spaziale
- indici di predizione del rischio di caduta
- dolore, emozioni, funzionalità nelle attività quotidiane

obiettivi dell'esercizio-terapia in preabilitazione

- incremento soglia di dolore/riduzione percezione dolore
- incremento forza arti inferiori
- miglioramento abilità neuromotorie & anomalie posturali, kinesiophobia

	Seated knee extension with instability REPETITIONS	Repetitions 5 10 15 20	Time 3 5 6 8
	Supported standing hip abduction with ela... REPETITIONS	Repetitions 5 10 15 20	Time 3 5 6 8
	Supported standing hip adduction with ela... REPETITIONS	Repetitions 5 10 15 20	Time 3 5 6 8

obiettivi dell'esercizio-terapia in preabilitazione

- incremento soglia di dolore/riduzione percezione dolore
- incremento forza arti inferiori
- miglioramento abilità neuromotorie & anomalie posturali, kinesiophobia



Quad Pillow Press
ISOMETRIC

Repetitions



Isometric work



Seated knee flexion with elastic
REPETITIONS

Repetitions



Time



Seated Knee Extension
ISOMETRIC

Repetitions



Isometric work



Bridging
REPETITIONS

Repetitions



Time



Chair calf
ISOMETRIC

Repetitions



Isometric work

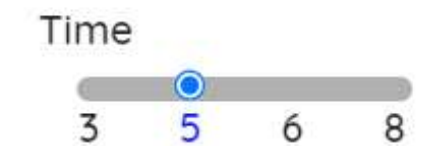
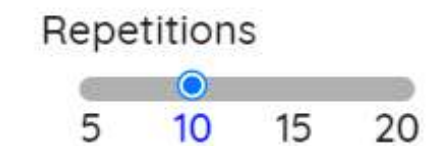


obiettivi dell'esercizio-terapia in riabilitazione

- incremento r.o.m. ginocchio passivo e attivo
- incremento forza arti inferiori
- miglioramento parametri passo, equilibrio statico e dinamico



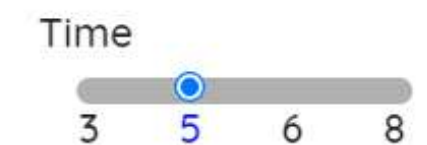
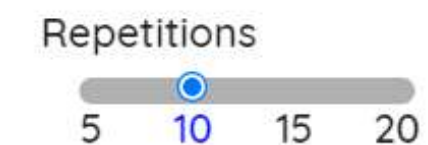
Romanian Dead Lift
REPETITIONS



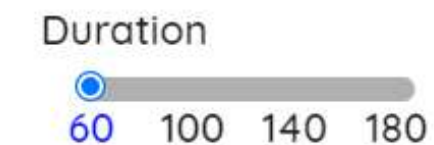
Seated Resitive Knee Extension with insta...
ISOMETRIC



Start walking
REPETITIONS



Weight Lat-Transfer
SHIFT

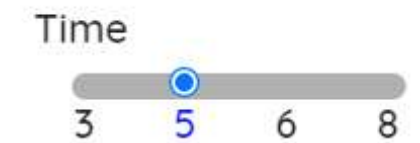
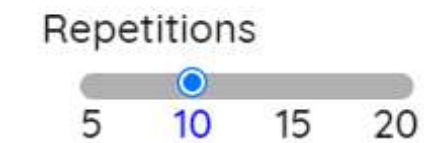


obiettivi dell'esercizio-terapia in riabilitazione

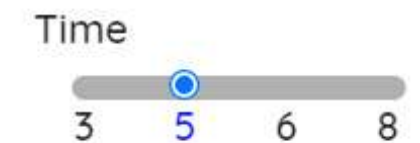
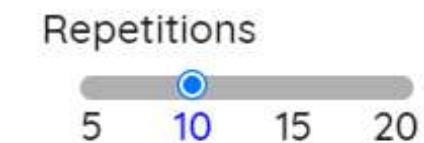
- incremento r.o.m. ginocchio passivo e attivo
- incremento forza arti inferiori
- miglioramento parametri passo, equilibrio statico e dinamico



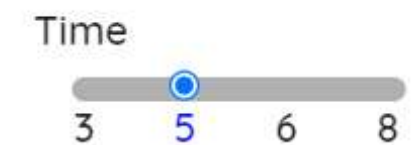
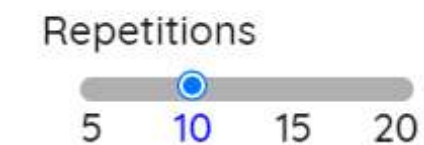
Lateral Lunge
REPETITIONS



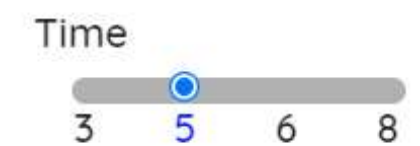
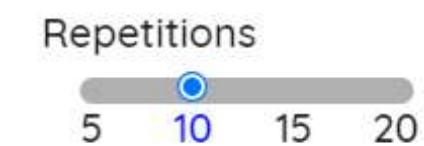
Lunge
REPETITIONS



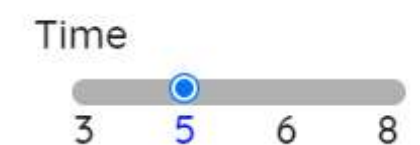
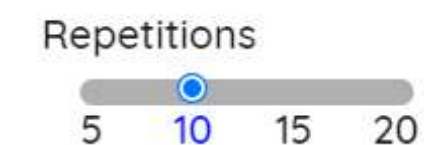
Squat
REPETITIONS



Stand Knee Flexion
REPETITIONS



Stand and sit
REPETITIONS

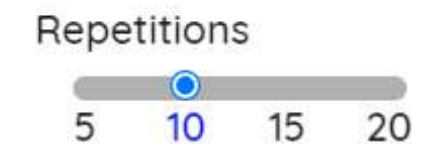


obiettivi dell'esercizio-terapia in riabilitazione

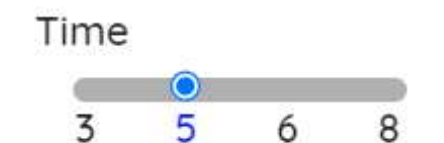
- incremento r.o.m. ginocchio passivo e attivo
- incremento forza arti inferiori
- miglioramento parametri passo, equilibrio statico e dinamico



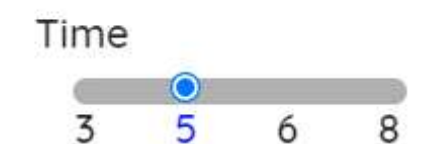
Static Lunge
REPETITIONS



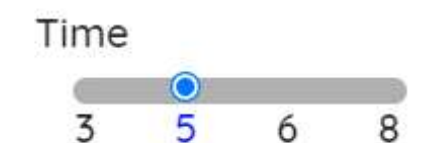
Unloaded Knee Extension
REPETITIONS



Bridging
REPETITIONS



Lying Knee Extension
REPETITIONS



One-sided weight transfer
REPETITIONS



riferimenti

- Medical Advisory Secretariat. [Physiotherapy rehabilitation after total knee or hip replacement: an evidence-based analysis](#). Ont Health Technol Assess Ser. 2005;5(8):1-91.
- Levinger P, Wee E, Margelis S, Menz HB, Bartlett JR, Bergman NR, McMahon S, Hill KD. [Pre-operative predictors of post-operative falls in people undergoing total hip and knee replacement surgery: a prospective study](#). Arch Orthop Trauma Surg. 2017 Aug;137(8):1025-1033. doi: 10.1007/s00402-017-2727-6.
- Bade MJ, Struessel T, Dayton M, Foran J, Kim RH, Miner T, Wolfe P, Kohrt WM, Dennis D, Stevens-Lapsley JE. [Early High-Intensity Versus Low-Intensity Rehabilitation After Total Knee Arthroplasty: A Randomized Controlled Trial](#). Arthritis Care Res (Hoboken). 2017 Sep;69(9):1360-1368. doi: 10.1002/acr.23139. Epub 2017 Aug 13.
- Domínguez-Navarro F, Igual-Camacho C, Silvestre-Muñoz A, Roig-Casasús S, Blasco JM. [Effects of balance and proprioceptive training on total hip and knee replacement rehabilitation: A systematic review and meta-analysis](#). Gait Posture. 2018 May;62:68-74. doi: 10.1016/j.gaitpost.2018.03.003. Epub 2018 Mar 5.
- Artz N, Elvers KT, Lowe CM, Sackley C, Jepson P, Beswick AD. [Effectiveness of physiotherapy exercise following total knee replacement: systematic review and meta-analysis](#). BMC Musculoskelet Disord. 2015 Feb 7;16:15. doi: 10.1186/s12891-015-0469-6.
- Nilsson A, Bremander A. [Measures of hip function and symptoms: Harris Hip Score \(HHS\), Hip Disability and Osteoarthritis Outcome Score \(HOOS\), Oxford Hip Score \(OHS\), Lequesne Index of Severity for Osteoarthritis of the Hip \(LISOH\), and American Academy of Orthopedic Surgeons \(AAOS\) Hip and Knee Questionnaire](#). Arthritis Care Res (Hoboken). 2011 Nov;63 Suppl 11:S200-7. doi: 10.1002/acr.20549.

ortopedico

lombalgia



valutazioni motorie

- r.o.m. zona lombare attivo
- equilibrio statico/postura dinamica
- esercizi funzionali valutativi (es. squat, ponte, abduzione anca)
- analisi del passo

in combinazione con: Oswestry LBP Disability Index (ODI) o McGill LBP Questionnaire Index (MPQ)

outcomes

- gradi di flesso/estensione lombare, rotazione, flessione laterale
- c.o.p., c.o.m.
- stabilità del core & inclinazione del tronco, asimmetrie temporale e spaziale del passo
- intensità dolore, autonomia nelle attività quotidiane, sollevamento, camminata, seduta/alzata, vita sociale

obiettivi dell'esercizio-terapia

- incremento della mobilità/r.o.m. lombare senza dolore
- incremento della forza degli stabilizzatori della zona lombare
- miglioramento di anomalie/asimmetrie posturali, equilibrio statico e dinamico



Seated bi-shoulder abduction (90°)

REPETITIONS

Repetitions



Time



Shoulder abduction

ISOMETRIC

Repetitions



Isometric work



Bi-shoulder flexion (90°)

REPETITIONS

Repetitions



Time



Flying bird

REPETITIONS

Repetitions



Time



Bi-scapular retraction

REPETITIONS

Time



Repetitions

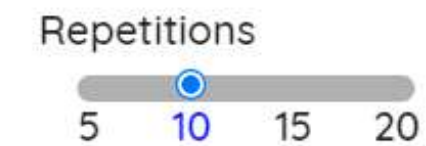


obiettivi dell'esercizio-terapia

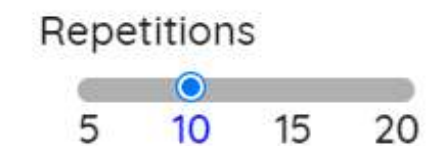
- incremento della mobilità/r.o.m. lombare senza dolore
- incremento della forza degli stabilizzatori della zona lombare
- miglioramento di anomalie/asimmetrie posturali, equilibrio statico e dinamico



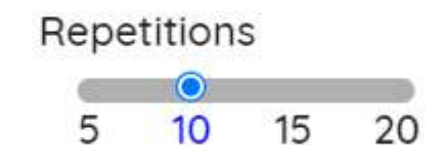
Bridging
REPETITIONS



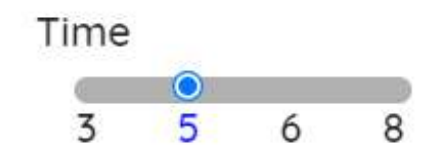
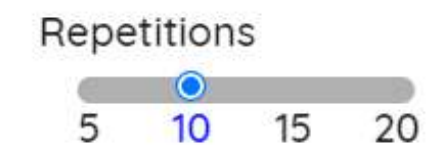
Squat
REPETITIONS



Trunk Flexion
REPETITIONS



Bird Dog
REPETITIONS



Sitting lateral flexion
ISOMETRIC



riferimenti

- Kim B, Yim J. [Core Stability and Hip Exercises Improve Physical Function and Activity in Patients with Non-Specific Low Back Pain: A Randomized Controlled Trial](#). Tohoku J Exp Med. 2020 Jul;251(3):193-206. doi: 10.1620/tjem.251.193.
- Matheve T, Brumagne S, Timmermans AAA. The [Effectiveness of Technology-Supported Exercise Therapy for Low Back Pain: A Systematic Review](#). Am J Phys Med Rehabil. 2017 May;96(5):347-356. doi: 10.1097/PHM.0000000000000615. PMID: 27584143.
- Garg A, Pathak H, Churyukanov MV, Uppin RB, Slobodin TM. [Low back pain: critical assessment of various scales](#). Eur Spine J. 2020 Mar;29(3):503-518. doi: 10.1007/s00586-019-06279-5. Epub 2020 Jan 8. PMID: 31916001.
- Farasyn A, Meeusen R. [Validity of the new Backache Index \(BAI\) in patients with low back pain](#). Spine J. 2006 Sep-Oct;6(5):565-71. doi: 10.1016/j.spinee.2006.01.021. PMID: 16934729.
- Bonab M, Colak TK, Toktas ZO, Konya D. [Assessment of Spatiotemporal Gait Parameters in Patients with Lumbar Disc Herniation and Patients with Chronic Mechanical Low Back Pain](#). Turk Neurosurg. 2020;30(2):277-284. doi: 10.5137/1019-5149.JTN.27499-19.2. PMID: 32091127.

ortopedico

legamento crociato anteriore (LCA)



valutazioni motorie

- r.o.m. ginocchio passivo/attivo*
- equilibrio statico*
- analisi del passo*
- return2sport



*le **valutazioni motorie** possono essere effettuate anche durante la **fase pre-operatoria** per settare gli obiettivi degli esercizi di **preabilitazione**

in combinazione con: KOOS: Knee Injury and Osteoarthritis Outcome Score*
TSK: Tampa Scale of Kinesiophobia*

outcomes

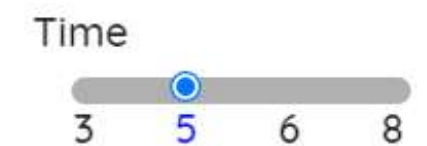
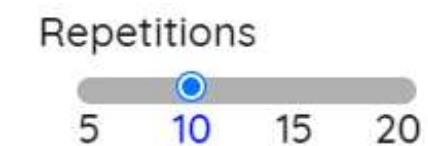
- gradi di flessione/estensione ginocchio
- c.o.p., c.o.m.
- velocità del passo, durata di stride e stance, parametri spaziali del passo, asimmetria temporale e spaziale;
- equilibrio, agilità, forza, velocità
- dolore, rigidità, funzionalità nelle attività quotidiane, assistenza

obiettivi dell'esercizio-terapia in preabilitazione

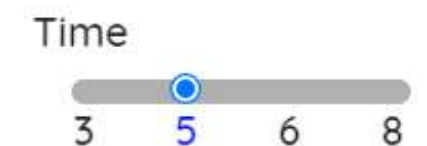
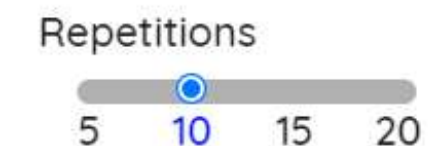
- incremento forza arto inferiore
- adattamenti neuromuscolari (perturbazioni, equilibrio, stabilità, propriocezione)
- controllo muscolare e co-contrazione dei muscoli del ginocchio
- incremento r.o.m. e mobilizzazione della patella



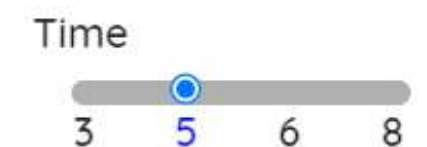
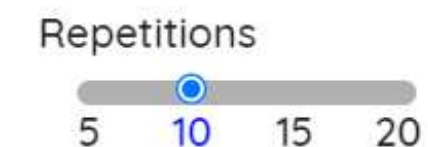
Knee Flexion on Sag-Wobble
REPETITIONS



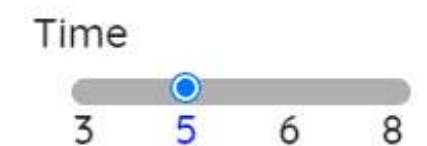
Lowering Leg
REPETITIONS



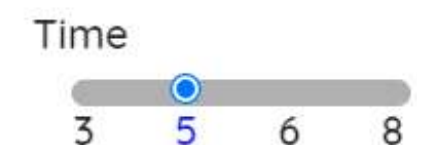
Lunge
REPETITIONS



Mono Squat
REPETITIONS



Romanian Dead Lift
REPETITIONS

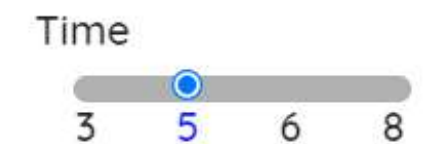
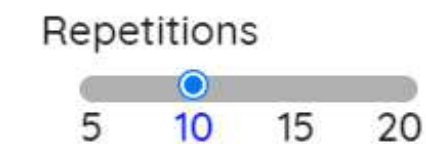


obiettivi dell'esercizio-terapia in preabilitazione

- incremento forza arto inferiore
- adattamenti neuromuscolari (perturbazioni, equilibrio, stabilità, propriocezione)
- controllo muscolare e co-contrazione dei muscoli del ginocchio
- incremento r.o.m. e mobilizzazione della patella



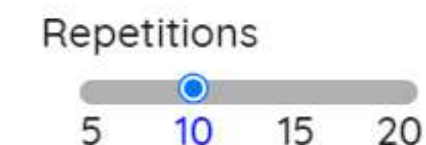
Seated knee flexion with elastic
REPETITIONS



Seated Knee Extension
ISOMETRIC



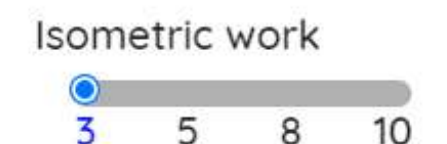
Squat
REPETITIONS



Lateral Lunge
ISOMETRIC



Squat on Lat-Wobble
ISOMETRIC

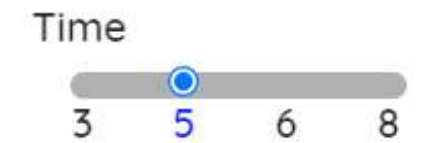
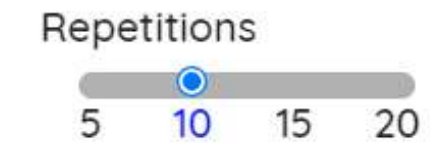


obiettivi dell'esercizio-terapia in post-operatoria

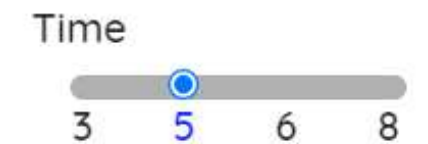
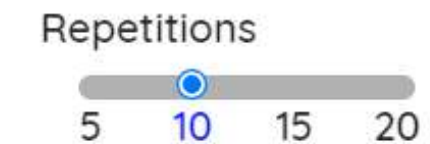
- incremento r.o.m. passivo/attivo del ginocchio
- forza arto inferiore
- adattamenti neuromuscolari (perturbazioni, equilibrio, stabilità, propiocezione)
- controllo muscolare e co-contrazione dei muscoli di ginocchio
- funzionalità ginocchio in assetto monopodalico
- controllo posturale



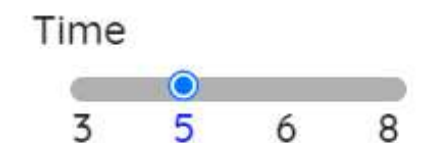
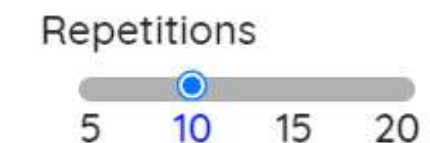
Start walking
REPETITIONS



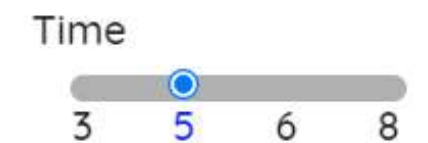
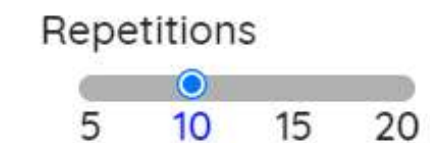
Lying Knee Extension
REPETITIONS



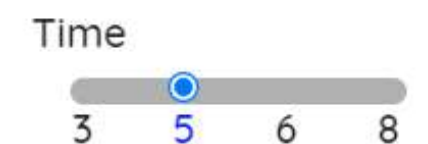
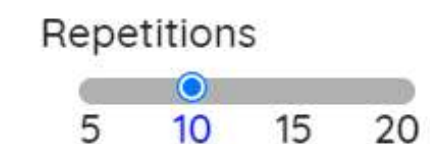
Load Control Knee Flexion
REPETITIONS



Lie Down Foot Sweep
REPETITIONS



Boost Walking
REPETITIONS

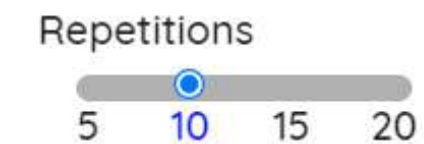


obiettivi dell'esercizio-terapia in post-operatoria

- incremento r.o.m. passivo/attivo del ginocchio
- forza arto inferiore
- adattamenti neuromuscolari (perturbazioni, equilibrio, stabilità, propriocezione)
- controllo muscolare e co-contrazione dei muscoli di ginocchio
- funzionalità ginocchio in assetto monopodalico
- controllo posturale



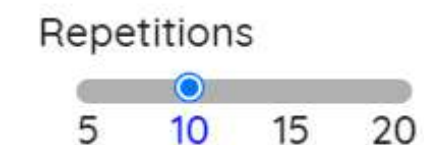
Seated knee flexion with elastic
REPETITIONS



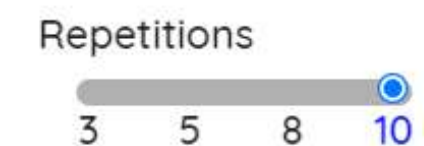
Seated Knee Extension
ISOMETRIC



Squat
REPETITIONS



Lateral Lunge
ISOMETRIC



Squat on Lat-Wobble
ISOMETRIC



riferimenti

- Failla MJ, Logerstedt DS, Grindem H, Axe MJ, Risberg MA, Engebretsen L, Huston LJ, Spindler KP, Snyder-Mackler L. [Does Extended Preoperative Rehabilitation Influence Outcomes 2 Years After ACL Reconstruction? A Comparative Effectiveness Study Between the MOON and Delaware-Oslo ACL Cohorts](#). Am J Sports Med. 2016 Oct;44(10):2608–2614. doi: 10.1177/0363546516652594. Epub 2016 Jul 14. Erratum in: Am J Sports Med. 2017 Apr;45(5):NP9.
- Paterno MV, Flynn K, Thomas S, Schmitt LC. [Self-Reported Fear Predicts Functional Performance and Second ACL Injury After ACL Reconstruction and Return to Sport: A Pilot Study](#). Sports Health. 2018 May/Jun;10(3):228–233. doi: 10.1177/1941738117745806. Epub 2017 Dec 22.
- Csapo R, Pointner H, Hoser C, Gföller P, Raschner C, Fink C. [Physical Fitness after Anterior Cruciate Ligament Reconstruction: Influence of Graft, Age, and Sex](#). Sports (Basel). 2020 Mar 6;8(3):30. doi: 10.3390/sports8030030.
- Carter HM, Littlewood C, Webster KE, Smith BE. [The effectiveness of preoperative rehabilitation programmes on postoperative outcomes following anterior cruciate ligament \(ACL\) reconstruction: a systematic review](#). BMC Musculoskelet Disord. 2020 Oct 3;21(1):647. doi: 10.1186/s12891-020-03676-6.
- van Melick N, van Cingel RE, Brooijmans F, Neeter C, van Tienen T, Hullegie W, Nijhuis-van der Sanden MW. [Evidence-based clinical practice update: practice guidelines for anterior cruciate ligament rehabilitation based on a systematic review and multidisciplinary consensus](#). Br J Sports Med. 2016 Dec;50(24):1506–1515. doi: 10.1136/bjsports-2015-095898. 27539507.
- Meierbachtol A, Yungtum W, Paur E, Bottoms J, Chmielewski TL. [Psychological and Functional Readiness for Sport Following Advanced Group Training in Patients With Anterior Cruciate Ligament Reconstruction](#). J Orthop Sports Phys Ther. 2018 Nov;48(11):864–872. doi: 10.2519/jospt.2018.8041.
- Herbst E, Hoser C, Hildebrandt C, Raschner C, Hepperger C, Pointner H, Fink C. [Functional assessments for decision-making regarding return to sports following ACL reconstruction. Part II: clinical application of a new test battery](#). Knee Surg Sports Traumatol Arthrosc. 2015 May;23(5):1283–91. doi: 10.1007/s00167-015-3546-3.

ortopedico

spalla congelata (capsulite adesiva)



valutazioni motorie

- r.o.m. di spalla passivo/attivo
- esercizi per la spalla finalizzati a una valutazione funzionale e a sondare eventuale presenza di rigidità durante il movimento

in combinazione con: (DASH): Shoulder and Hand questionnaire
(SF-36): Medical Outcomes Study 36-Item Short-Form Health Survey

outcomes

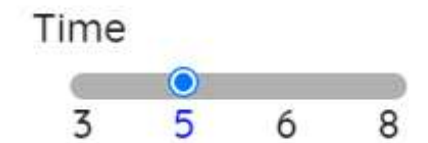
- gradi di flesso/estensione, intra/extra rotazione di spalla
- funzionalità spalla con/senza presenza di dolore
- dolore, rigidità, funzionalità e limitazioni nelle attività quotidiane, stato di salute, emozioni e vita sociale

obiettivi dell'esercizio-terapia

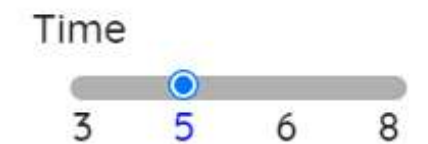
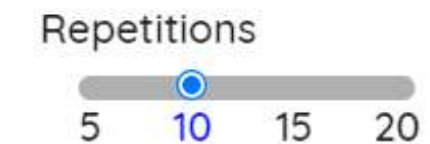
- incremento mobilità/r.o.m. spalla senza dolore
- ripristino delle funzioni di spalla
- miglioramento del punteggio di dolore su scala analogica visiva
- decremento rigidità



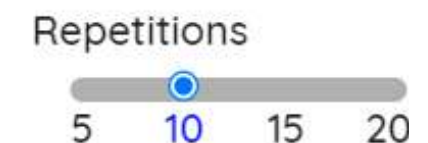
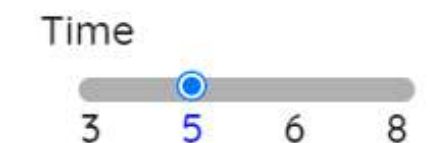
Flying bird
REPETITIONS



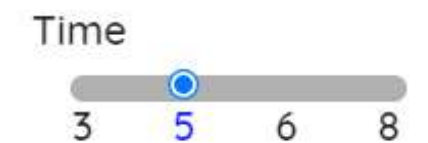
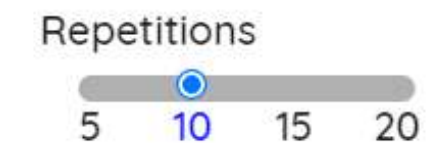
Overhead lat shift
REPETITIONS



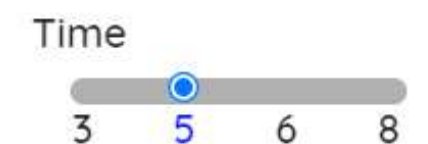
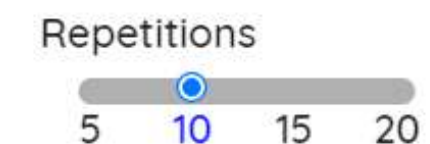
Seated external shoulder rotation
REPETITIONS



Shoulder rotation
REPETITIONS



Wall slide
REPETITIONS



riferimenti

- Page MJ, Green S, Kramer S, Johnston RV, McBain B, Chau M, Buchbinder R. [Manual therapy and exercise for adhesive capsulitis \(frozen shoulder\)](#). Cochrane Database Syst Rev. 2014 Aug 26;(8):CD011275. doi: 10.1002/14651858.CD011275.
- Bron C, Wensing M, Franssen JL, Oostendorp RA. [Treatment of myofascial trigger points in common shoulder disorders by physical therapy: a randomized controlled trial](#) [ISRCTN75722066]. BMC Musculoskelet Disord. 2007 Nov 5;8:107. doi: 10.1186/1471-2474-8-107.
- Mertens MG, Meert L, Struyf F, Schwank A, Meeus M. [Exercise Therapy Is Effective for Improvement in Range of Motion, Function, and Pain in Patients With Frozen Shoulder: A Systematic Review and Meta-analysis](#). Arch Phys Med Rehabil. 2022 May;103(5):998-1012.e14. doi: 10.1016/j.apmr.2021.07.806.
- Mohamed AA, Jan YK, El Sayed WH, Wanis MEA, Yamany AA. [Dynamic scapular recognition exercise improves scapular upward rotation and shoulder pain and disability in patients with adhesive capsulitis: a randomized controlled trial](#). J Man Manip Ther. 2020 Jul;28(3):146-158. doi: 10.1080/10669817.2019.1622896. Epub 2019 Jun 14. Erratum in: J Man Manip Ther. 2020 Jun 10;:1.



silver age

silver age

osteoporosi/sarcopenia/cadute



valutazioni motorie

- equilibrio Statico/Postura dinamica
- analisi del passo
- f.r.p.

in combinazione con: (ECOS-16): Health-Related Quality of Life in Osteoporosis
Sarcopenia quality-of-life questionnaire (SarQoL)
STRATIFY scale

outcomes

- c.o.p., c.o.m.
- velocità del passo, durata di stride e stance
- parametri spaziali del passo, asimmetria temporale e spaziale
- indici di predizione del rischio di caduta
- funzionalità fisica, paura legata alla malattia, status psicosociale, dolore

obiettivi dell'esercizio-terapia

- miglioramento dell'equilibrio statico & dinamico
- incremento della forza
- miglioramento delle anomalie posturali



Squat
ISOMETRIC

Repetitions



Isometric work



Seated knee flexion with elastic
ISOMETRIC

Repetitions



Isometric work

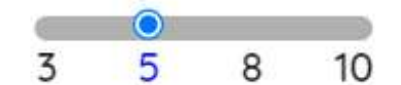


Seated Knee Extension
ISOMETRIC

Repetitions



Isometric work



Bridging
REPETITIONS

Repetitions



Time



obiettivi dell'esercizio-terapia

- miglioramento dell'equilibrio statico & dinamico
- incremento della forza
- miglioramento delle anomalie posturali



Supported standing hip abduction with ela...

REPETITIONS

Repetitions



Time



Fire Hydrant

REPETITIONS

Repetitions



Time



Stand and sit

REPETITIONS

Repetitions



Time



riferimenti

- Beaudart C, Reginster JY, Geerinck A, Locquet M, Bruyère O. [Current review of the SarQoL®: a health-related quality of life questionnaire specific to sarcopenia](#). Expert Rev Pharmacoecon Outcomes Res. 2017 Aug;17(4):335–341. doi: 10.1080/14737167.2017.1360768.
- Badia X, Díez-Pérez A, Lahoz R, Lizán L, Nogués X, Iborra J. [The ECOS-16 questionnaire for the evaluation of health related quality of life in post-menopausal women with osteoporosis](#). Health Qual Life Outcomes. 2004 Aug 3;2:41. doi: 10.1186/1477-7525-2-41.
- Billington J, Fahey T, Galvin R. [Diagnostic accuracy of the STRATIFY clinical prediction rule for falls: a systematic review and meta-analysis](#). BMC Fam Pract. 2012 Aug 7;13:76. doi: 10.1186/1471-2296-13-76.
- Beckwée D, Delaere A, Aelbrecht S, Baert V, Beaudart C, Bruyere O, de Saint-Hubert M, Bautmans I. [Exercise Interventions for the Prevention and Treatment of Sarcopenia](#). A Systematic Umbrella Review. J Nutr Health Aging. 2019;23(6):494–502. doi: 10.1007/s12603-019-1196-8.
- Howe TE, Shea B, Dawson LJ, Downie F, Murray A, Ross C, Harbour RT, Caldwell LM, Creed G. [Exercise for preventing and treating osteoporosis in postmenopausal women](#). Cochrane Database Syst Rev. 2011 Jul 6;(7):CD000333. doi: 10.1002/14651858.CD000333.pub2.
- Sherrington C, Michaleff ZA, Fairhall N, Paul SS, Tiedemann A, Whitney J, Cumming RG, Herbert RD, Close JCT, Lord SR. [Exercise to prevent falls in older adults: an updated systematic review and meta-analysis](#). Br J Sports Med. 2017 Dec;51(24):1750–1758. doi: 10.1136/bjsports-2016-096547.



neurologico

neurologico

sclerosi multipla



valutazioni motorie

- r.o.m. articolazioni interessate
- equilibrio Statico/Postura dinamica
- analisi del passo
- f.r.p.

in combinazione con: SF-36: Health Status Questionnaire
MSQOL-54: Multiple Sclerosis Quality of Life-54

outcomes

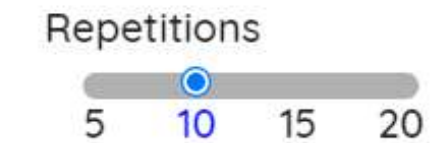
- r.o.m.
- c.o.p., c.o.m.
- velocità del passo, durata di stride e stance
- parametri spaziali del passo, asimmetria temporale e spaziale
- indici di predizione del rischio di caduta
- funzionalità e limitazioni fisiche ed emotive, dolore, benessere emotivo, funzioni sociali e cognitive, disagio per la salute, qualità di vita complessiva

obiettivi dell'esercizio-terapia

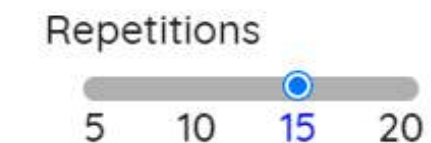
- miglioramento equilibrio statico & dinamico
- incremento forza, mobilità, parametri del passo
- miglioramento anomalie posturali
- tempo di reazione a stimoli esterni (biofeedback)



Hammer curl
REPETITIONS



Overhead lat shift
REPETITIONS



Seated bi-shoulder abduction (90°)
ISOMETRIC



Seated flying bird
ISOMETRIC



Seated wrist rotation
REPETITIONS

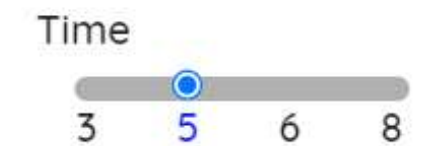
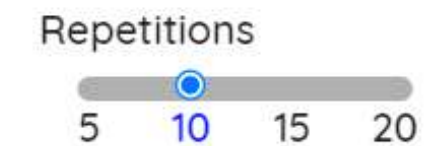


obiettivi dell'esercizio-terapia

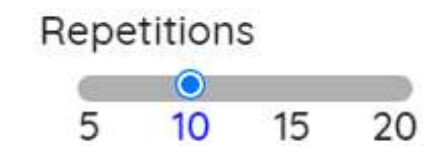
- miglioramento equilibrio statico & dinamico
- incremento forza, mobilità, parametri del passo
- miglioramento anomalie posturali
- tempo di reazione a stimoli esterni (biofeedback)



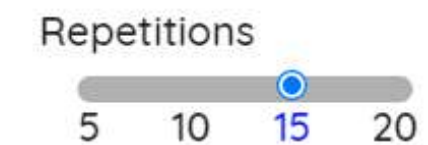
Lat Hip Abduction
REPETITIONS



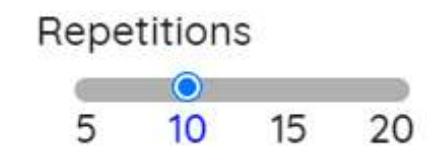
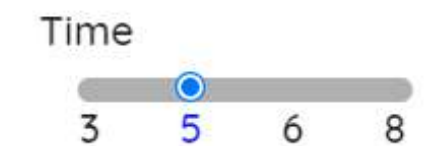
Standing hip flexion with extended knee
REPETITIONS



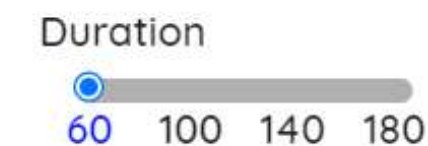
Lying Knee Extension
REPETITIONS



One-sided weight transfer
REPETITIONS



Weight Sag-Transfer
SHIFT



riferimenti

- Drulovic J, Bursac LO, Milojkovic D, Tepavcevic DK, Gazibara T, Pekmezovic T. [MSQoL-54 predicts change in fatigue after inpatient rehabilitation for people with multiple sclerosis](#). Disabil Rehabil. 2013 Mar;35(5):362-6. doi:10.3109/09638288.2012.704122.
- Kim Y, Lai B, Mehta T, Thirumalai M, Padalabalanarayanan S, Rimmer JH, Motl RW. [Exercise Training Guidelines for Multiple Sclerosis, Stroke, and Parkinson Disease: Rapid Review and Synthesis](#). Am J Phys Med Rehabil. 2019 Jul;98(7):613-621. doi: 10.1097/PHM.0000000000001174.
- Salari N, Hayati A, Kazeminia M, Rahmani A, Mohammadi M, Fatahian R, Shohaimi S. [The effect of exercise on balance in patients with stroke, Parkinson, and multiple sclerosis: a systematic review and meta-analysis of clinical trials](#). Neurol Sci. 2022 Jan;43(1):167-185. doi: 10.1007/s10072-021-05689-y.
- Taul-Madsen L, Connolly L, Dennett R, Freeman J, Dalgas U, Hvid LG. [Is Aerobic or Resistance Training the Most Effective Exercise Modality for Improving Lower Extremity Physical Function and Perceived Fatigue in People With Multiple Sclerosis? A Systematic Review and Meta-analysis](#). Arch Phys Med Rehabil. 2021 Oct;102(10):2032-2048. doi: 10.1016/j.apmr.2021.03.026.
- Gordt K, Gerhardy T, Najafi B, Schwenk M. [Effects of Wearable Sensor-Based Balance and Gait Training on Balance, Gait, and Functional Performance in Healthy and Patient Populations: A Systematic Review and Meta-Analysis of Randomized Controlled Trials](#). Gerontology. 2018;64(1):74-89. doi: 10.1159/000481454.



the right to **move**

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