

Proksimale hamstringtendinopatier (PHT)

A stubborn injury...

Nettavisen Sport. Direktesport Pluss Na Live Video Sportspill Annonsering Meny

Langrenn

Klæbos skade verre enn antatt – må trene alternativt i ukevis

ANNONSE



Johanne Høsflot Klæbo må belage seg på å trene alternativt i ukevis fremover. Foto: Terje Pedersen / NTB Foto: (NTB scanpix)

Johannes Høsflot Klæbo har pådratt seg en strekk eller en belastningsskade øverst i hamstringen som kan sette ham ut av spill i flere måneder.

Del

01.08.22 14:29 01.08.22 14:53

02:47:32 Sport Livesport Video Sendepan Langlesing **NRK**

Her sit Klæbo-problemet: No skal skaden testast

Det kan ta opp til eit halvt år å bli friskmeld av «Klæbo-skaden». Johannes Høsflot Klæbos frykt er at skaden hans blir kronisk.




Skaden til Klæbo sit i ei sene som festar hamstringsmuskulaturen til bekkenet.

Nils Christian Mangelrød
Journalist

Fredrik Tombra
Journalist

Vi rapporterer frå Beitostølen

Publisert 19. nov. 2022 kl. 07:43
Oppdatert 19. nov. 2022 kl. 13:13

– Mi største bekymring er at det skal bli kronisk. Det er det som er verst, seier Johannes Høsflot Klæbo til NRK.

Han snakkar om skaden som har plaga han i rundt fire månader. På spørsmål om han fryktar at denne sesongen kan ryke, svarer han bekreftande. Men fredag bestemte Klæbo seg for å starte laurdag.

f t e

... with limited evidence



»HEMMELIG HJELPER«: Sist uke avslarte Johannes Høsflot Klæbo at han fikk ekstern hjelp for å håndtere skadeproblemene. Nå avslører han at det er amerikanske Megan Stowe – som er flydd inn til Europa. Foto: PRIVAT/NTB scannet

KLÆBO FÅR KRISEHJELP FRA USA – HAR FLYDD INN EGEN FYSIOTERAPEUT

Johannes Høsflot Klæbo (26) har slitt med en lårskafe lenger enn ventet. Den siste tiden har han hentet over fysioterapeuten Megan Stowe fra USA til Italia og Norge.

Av HERMAN FOLVIK
14. november 2022

Behandler Klæbo i fire timer hver dag: – Kan ikke love at han blir klar til VM

Grytidlig tirsdag morgen testet Johannes Høsflot Klæbo sin skadde hamstring for første gang i klassisk. Hans amerikanske fysioterapeut innrømmer at problemene langt fra er borte.



INTENSIV JOBB: Fysioterapeut Megan Stowe behandler Johannes Høsflot Klæbo fire-fem timer hver dag inn mot sesongstarten.

FOTO: ANDERS SKJERDINGSTAD / NRK

Anders Skjerdingsstad
Journalist

Morten Stenberg
Journalist

Jonathan Simchali Hansen
Journalist

Vi rapporterer fra Beitostølen

Publisert 14. nov. 2022 kl. 17:50
Oppdatert 15. nov. 2022 kl. 15:20

[CLINICAL COMMENTARY]

THOMAS S.H. GOOM, BSc (Hons), MCSP¹ • PETER MALLIARAS, BPhysio (Hons), PhD^{2,3}
MICHAEL P. REIMAN, DPT, OCS, SCS, ATC, FAAOMPT, CSCS⁴ • CRAIG R. PURDAM, MSports Physio, FACP, FASMF^{5,6}

Proximal Hamstring Tendinopathy: Clinical Aspects of Assessment and Management

Rehabilitation and Prevention of Proximal Hamstring Tendinopathy

Nicholas R. Beatty, DO, MS¹; Ioanna Félix, PT, DPT, OCS, CTPS²;
Jessica Hettler, PT, DPT, ATC, Cert MDT, SCS²; Peter J. Moley, MD¹; and James F. Wyss, MD, PT¹

OVERUSE INJURIES IN ATHLETICS

MANAGING THE ATHLETE WITH A STUBBORN PROXIMAL HAMSTRING TENDINOPATHY

– Written by Gustaaf Reurink and Anne D. van der Made, The Netherlands

Tendinopati

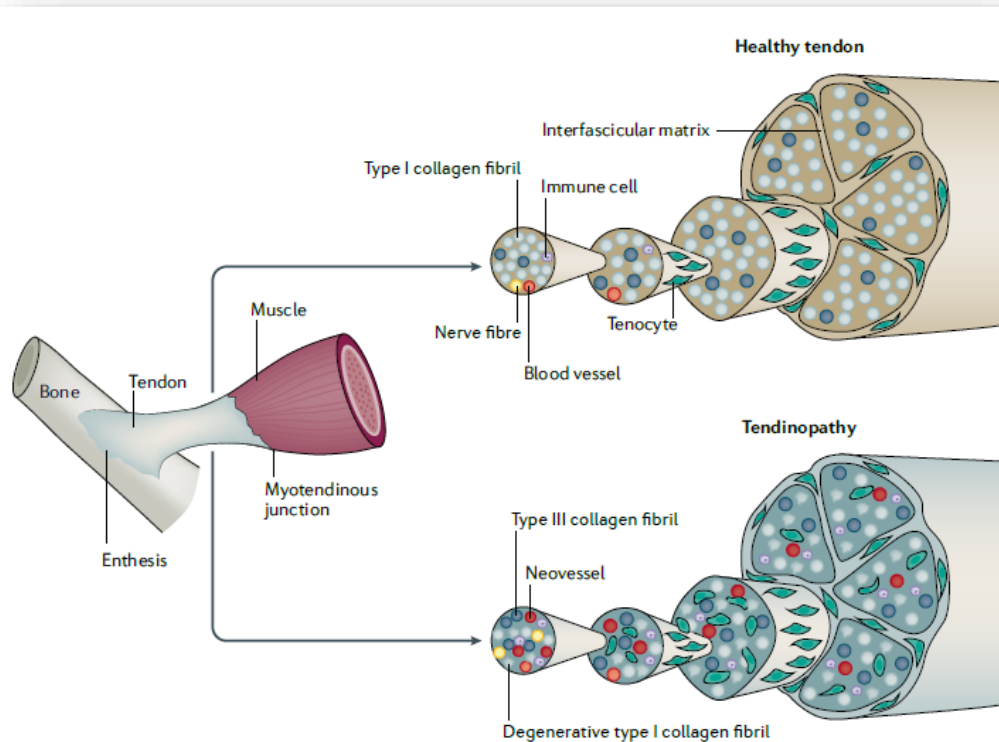


Fig. 1 | **Structural changes of tendons in tendinopathy.** Normal tendon is a well-organized network of collagen fibrils. The extracellular matrix (ECM) is dense, with a fibrillary network of predominantly parallel-aligned collagen fibres, principally consisting of type I collagen. The ECM is composed of proteoglycans, glycosaminoglycans and glycoproteins including small leucine-rich proteoglycans. In tendinopathy, tenocytes are decreased in volume, becoming longer and slender, have an increased nucleus to cytoplasm ratio and produce less ECM but with an increase in type III collagen density (mostly owing to less degradation). Histological examination of patient biopsy sample has shown intratendinous collagen degeneration with fibre disorientation and glycosaminoglycan accumulation between the thinning fibrils with inflammatory cell infiltrates. Neovascularization and neoinnervation are also frequently found in the diseased tendon.

- A pathological condition of a tendon with a complaint of pain and swelling (van Dijk et al. 2011; Khan et al. 1996; 1999; Mafulli et al. 1998)
- An umbrella term that indicates a nonrupture injury in the tendon or paratendon that is exacerbated by mechanical loading (Scott et al.2018)
- Overuse injury -> microtrauma with gradual onset
- Repetitive strain acting on a tendon, so that it can no longer endure stress and tension (Sharma et al., 2005)

Kjennetegn PHT

- Middel- og langdistanseløpere, syklister, middelaldrende mosjonister og eldre kvinner
- Gradvis innsettende smerter
- Dyp, lokalisert smerte mot sitteknuten
- Forverres under og/eller etter løping, 'utfall', 'knebøy', bevegelser med stor grad av hoftefleksjon (yoga) og ved sitting (bil)
- Kan være relatert til tidligere akutt skade; men som oftest stor grad mekanisk av belastning

Årsaker PHT...?

- Over- eller feilbelastning ?
- Økt anterior pelvic tilt ?
- Redusert hamstringstyrke ?
- Redusert lumbopelvic kontroll ?
- Redusert styrke glutealmuskulatur ?

Kliniske undersøkelser

Anamnese / treningshistorikk

Funksjonelle tester

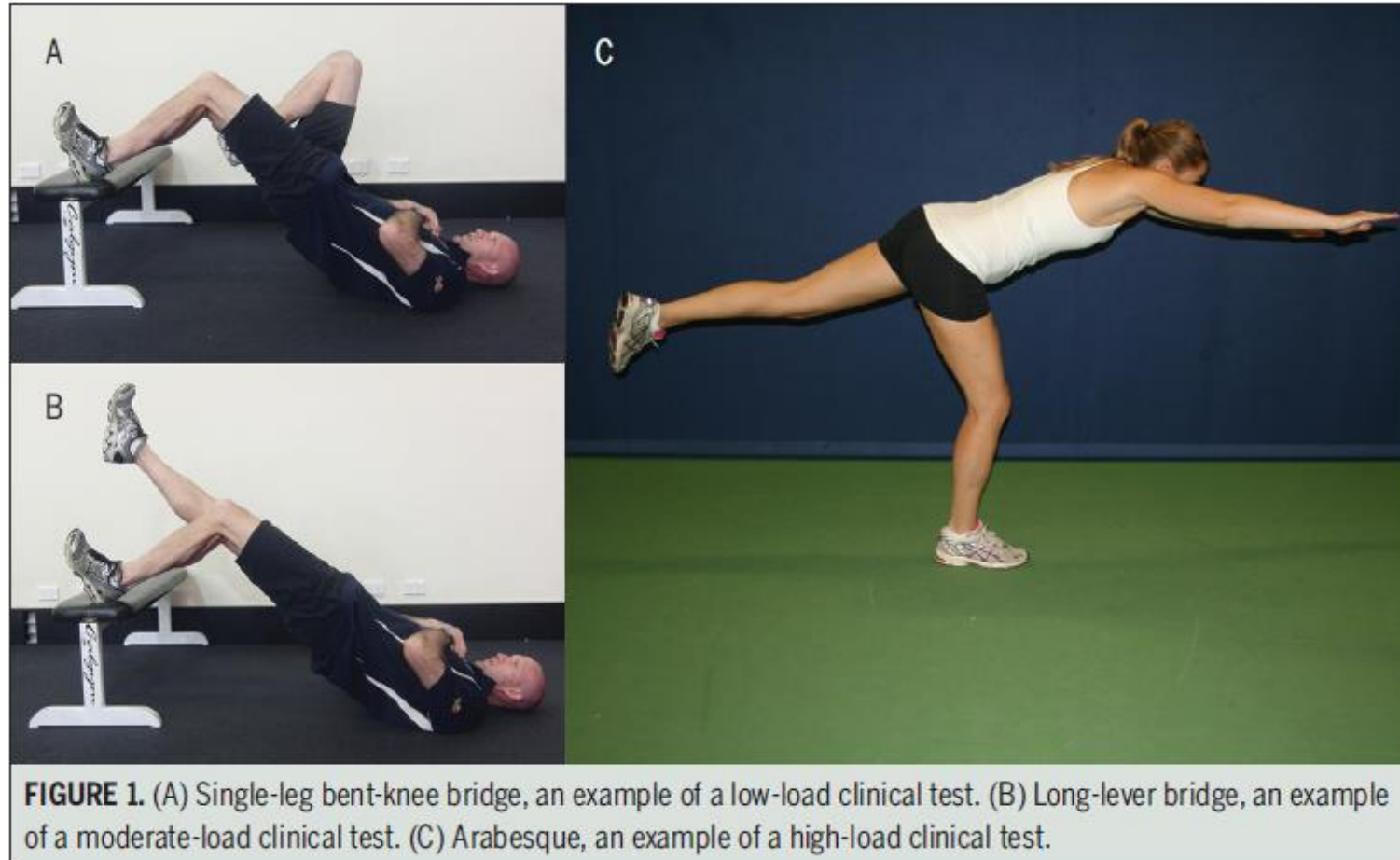
Palpasjon

Strekk / fleksibilitet

Styrke / provokasjon

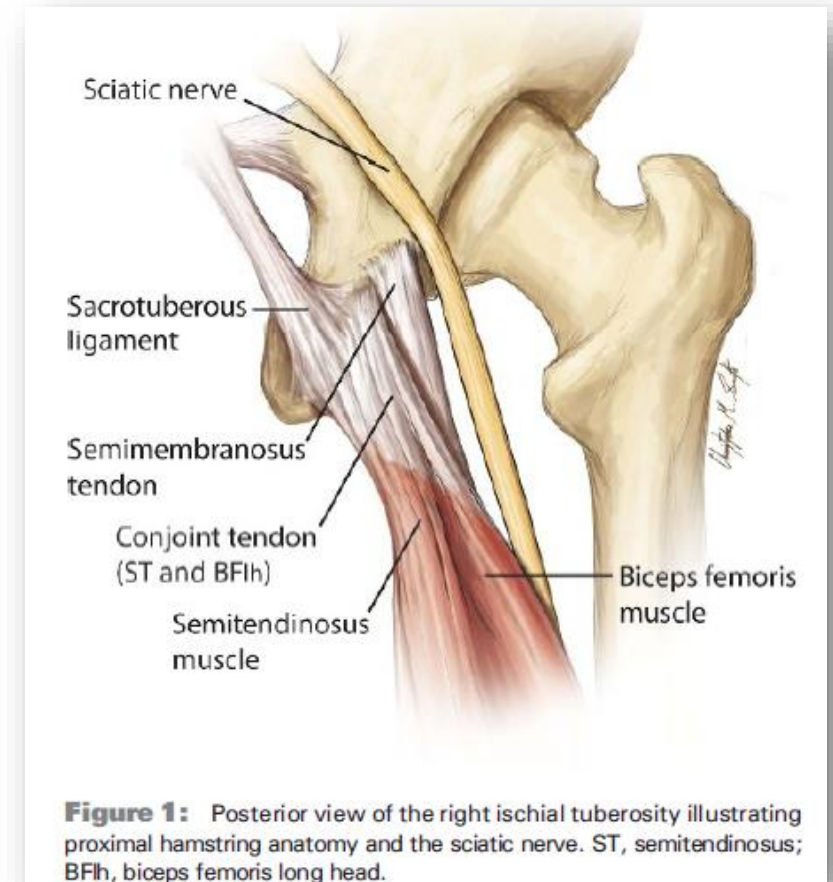
Aspetar Hamstring Study											
Initial Assessment Date: / / 20		Label									
Physio: /										Date of Injury: / / 20	
Sport/Club: /										Hours per week: /	
Phone: /										Height/Weight: H: W:	
Competition level: Nat. team / Int. athlete / Non-athlete / 1. team / 2nd team / Youth team											
Injury History:											
Side Injured:		Left		Right							
Dominant limb:		Left		Right							
Sudden Onset?		Yes / No		Yes / No		If no, How? /					
Local pain H/string?		Yes / No		Yes / No							
Where did it occur?		Game		Training							
Forced to stop playing within 5 mins?		Yes / No		Able to keep running?		Yes / No					
Walk pain free immediately?		Yes / No		How long until painless walking?		days					
Mechanism:		Sprinting		Kicking/shooting		High kick		Sliding/tackling			
Weight bearing leg?		Wt-bear		Non wt.b		Stretching		Other: /			
Max. Pain at time of injury?		VAS /10									
Average Pain Today?		VAS /10									
Previous History:		Left		Right							
Prev H/S injury:		Yes / No		Yes / No		When? /					
Low Back Pain		Yes / No		Yes / No		Dx, when: /					
Knee Injury		Yes / No		Yes / No		Dx, when: /					
Groin Pain		Yes / No		Yes / No		Dx, when: /					
Calf Injury		Yes / No		Yes / No		Dx, when: /					
Other injury/ies:		Yes / No		Yes / No		Dx, when: /					
Surgery:		Yes / No		Yes / No		Dx, when: /					
Physical Exam											
Stand Trunk Flexion:		Knee		Mid Shin		Ankles		Floor			
Walking:		Normal		Antalgic		Needs Aid		Jogging:			
2 Leg 1/2 Squat:		No Pain		Pain		Not Able		1 Leg 1/4 Squat:			
Prone		No pain		Mild		Marked		Pain / Stretching Pain (i.e.. no pain)			
Tenderness to palpate?		No pain		Mild		Marked		Normal			
Palpation Pain:		Length: cm		Width: cm		Distance from Ischium: cm		Antalgic			
Strength:		Uninjured		Injured		No Pain		Unable			
Inner						Pain		Pain			
Mid						Pain		Pain			
Outer						Pain		Pain			
ROM:		Uninjured		Injured		Stretch		Stretch			
SLR ROM						Pain		Stretch			
PKET						Pain		Stretch			
MHFAKE						Pain		Stretch			
Single Leg Bridge (Highest Pain Free number)											
1. Reach Start Pos'n		2. 2 Leg Partial Mov't		3. 2 Leg 3 rep's		4. 1 leg 3 rep's		5. 1 leg on step 3 rep's			

Funksjon og smerteprovoserende tester



Differensialdiagnoser

TABLE	DIFFERENTIAL DIAGNOSIS IN PROXIMAL HAMSTRING TENDINOPATHY
• Sciatic nerve irritation at the piriformis muscle or near the ischial tuberosity • Ischiofemoral impingement • Unfused ischial growth plate in a postadolescent athlete • Apophysitis or avulsion among adolescents • Deep gluteal muscle tear • Posterior pubic or ischial ramus stress fracture • Partial or complete rupture of the proximal hamstring tendon	



PROM: VISA-H

Development and validation of a new visa questionnaire (VISA-H) for patients with proximal hamstring tendinopathy

Angelo Cacchio,¹ Fosco De Paulis,² Nicola Maffulli³

VISA-H Score

VICTORIAN INSTITUTE OF SPORT ASSESMENT SCALE FOR PROXIMAL HAMSTRING TENDINOPATHY
VISA-H

Date / / Initial Assessment ☐ Discharge Assessment ☐

Name Surname Age Weight Height

Sport Team Physician

1. For how many minutes can you sit/can you drive a car pain free? Points ☐

0 mins ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 100 mins

2. How much pain do you have during or immediately after stretching your posterior thigh/hamstring (keeping knee straight)? Points ☐

Strong severe pain ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ No pain

3. How much pain do you have during or immediately after normal running? Points ☐

Strong severe pain ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ No pain

4. How much pain do you have during or immediately after sprinting? Points ☐

Strong severe pain ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ No pain

5. How much pain do you have during or immediately after a full weight-bearing lunge? Points ☐

Unable ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ No problem

6. How much pain do you have during or immediately after lifting an object from the floor (keeping knee straight)? Points ☐

Strong severe pain/ unable ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ No pain

7. Are you currently undertaking sport or other physical activity? Points ☐

0 ☐ Not at all
4 ☐ Modified training ± modified competition
7 ☐ Full training ± competition but not at the same level as when symptoms began
10 ☐ Competing at the same or higher level when symptoms began

Angelo Cacchio, MD, PhD
University of L'Aquila

VISA-H Score

8. Please complete EITHER A, B or C in this question.

- If you have **no pain** while undertaking sport please complete Q8a only
- If you have **pain while undertaking sport but it does not stop you** from completing the activity, please complete Q8b only.
- If you have **pain that stops you from completing sporting activities**, please complete Q8 c only

8a. If you have no pain while undertaking sport, for how long can you train/practise? Points ☐

0-20 mins ☐ 21-40 mins ☐ 41-60 mins ☐ 61-90 mins ☐ >90 mins ☐

0 7 14 21 30

or

8b. If you have some pain while undertaking sport, but it does not stop you from completing your training/practice, for how long can you train/practise? Points ☐

0-15 mins ☐ 16-30 mins ☐ 31-45 mins ☐ 46-60 mins ☐ >60 mins ☐

0 4 10 14 20

or

8c. If you have pain that stops you from completing your training/practice, for how long can you train/practise? Points ☐

NIL ☐ 1-10 mins ☐ 11-20 mins ☐ 21-30 mins ☐ >30 mins ☐

0 2 5 7 10

TOTAL SCORE /100 %

Angelo Cacchio, MD, PhD
University of L'Aquila

Intervensjonsstudier

- Systematisk oversiktsartikkel (n=12)

There is insufficient evidence to recommend any one intervention over another.

A pragmatic approach would be to initially trial approaches proven successful in other tendinopathies.

Proximal Hamstring Tendinopathy: A Systematic Review of Interventions

Anthony Michael Nasser, PT¹,³, Bill Vicenzino, PT, PhD², Alison Grimaldi, PT, PhD², Jay Anderson, PT³, Adam Ivan Semicw, PT, PhD¹

¹ Department of Rehabilitation, Nutrition and Sport, La Trobe University; Graduate School of Health, University of Technology Sydney, ² School of Health and Rehabilitation Sciences, University of Queensland, ³ Gold Coast Suns Football Club, ⁴ Department of Rehabilitation, Nutrition and Sport, La Trobe University; Northern Centre for Health Education and Research, Northern Health

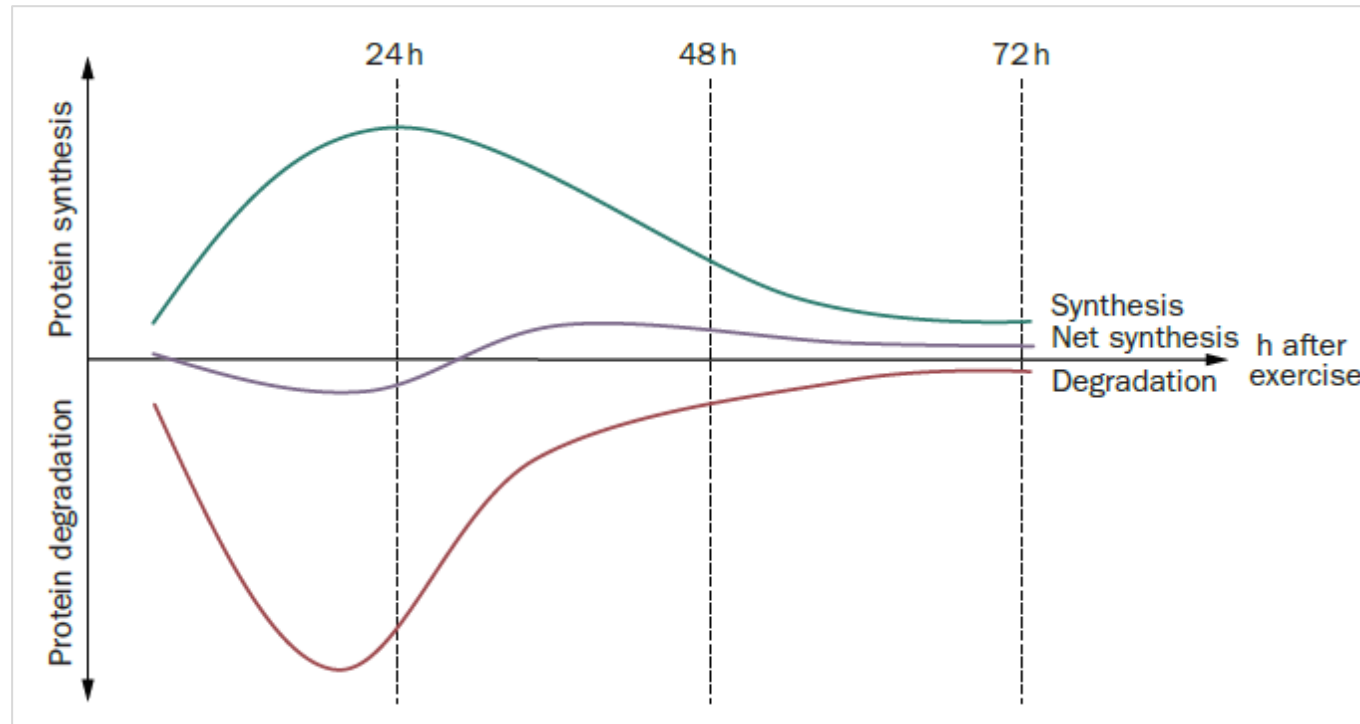
Keywords: tendinopathy, surgery, hamstring tendon, buttock pain

<https://doi.org/10.26603/001c.21250>

International Journal of Sports Physical Therapy

Vol. 16, Issue 2, 2021

Sener responderer på belastning!

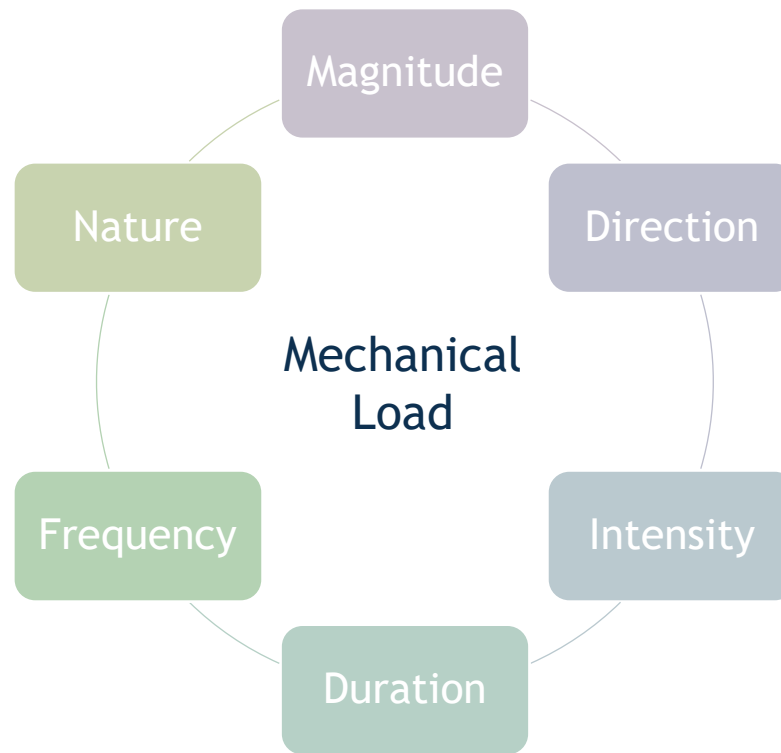


(From Magnussen et al., 2010)

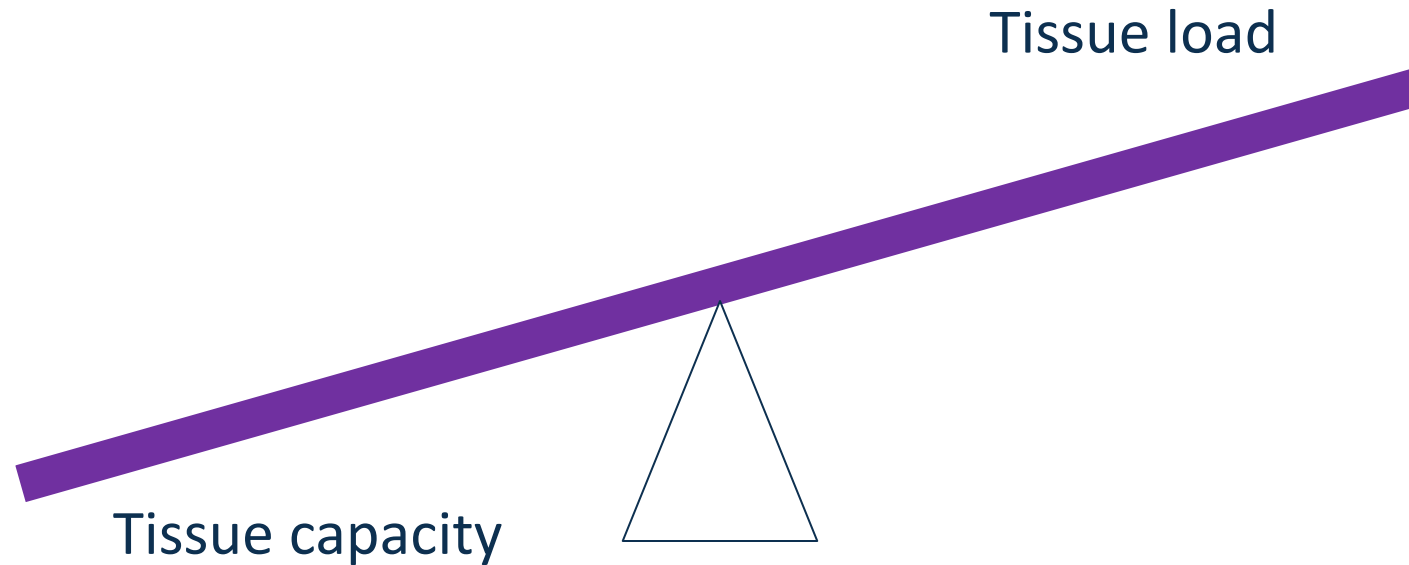
Optimal belastning...



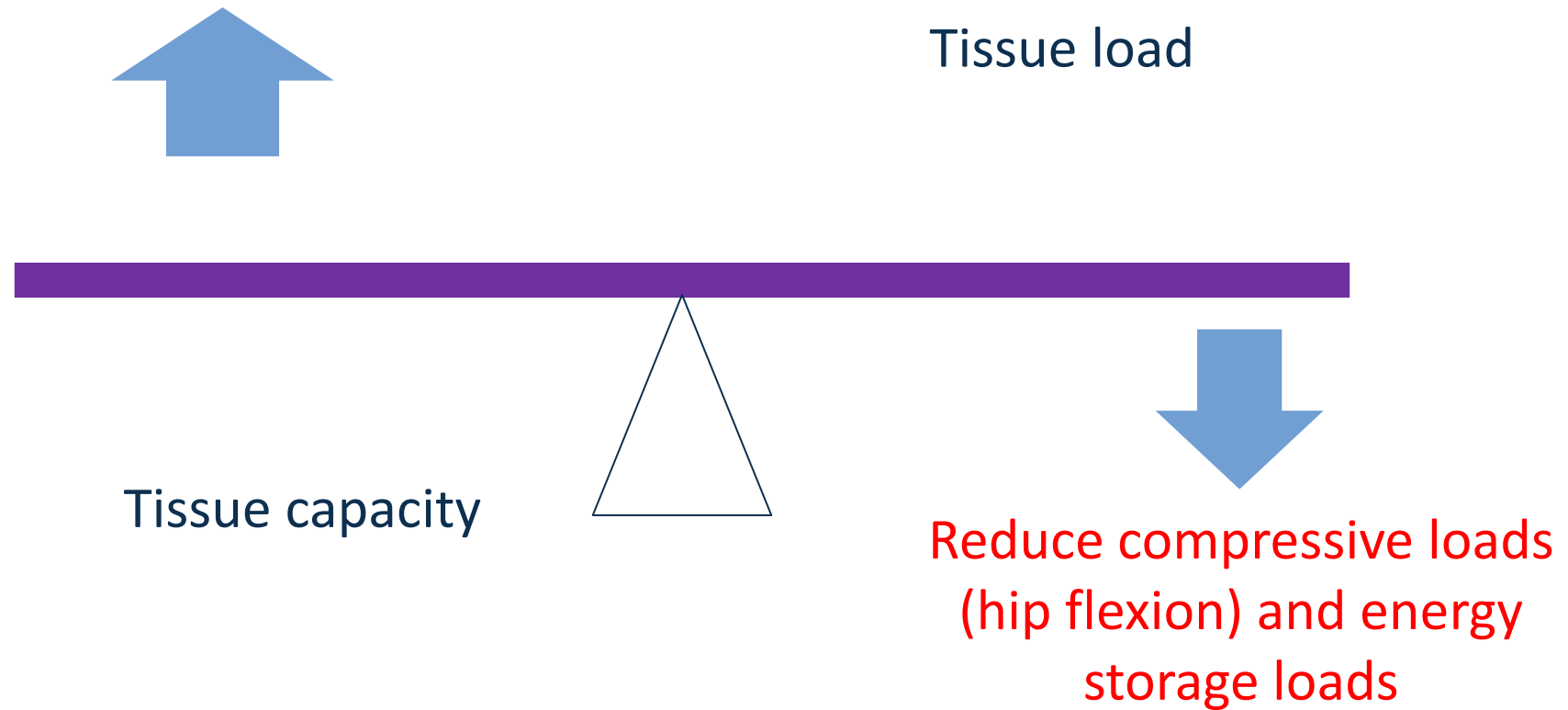
The load applied to structures that maximizes physiological adaptation and restores function (Glasgow et al., 2015)



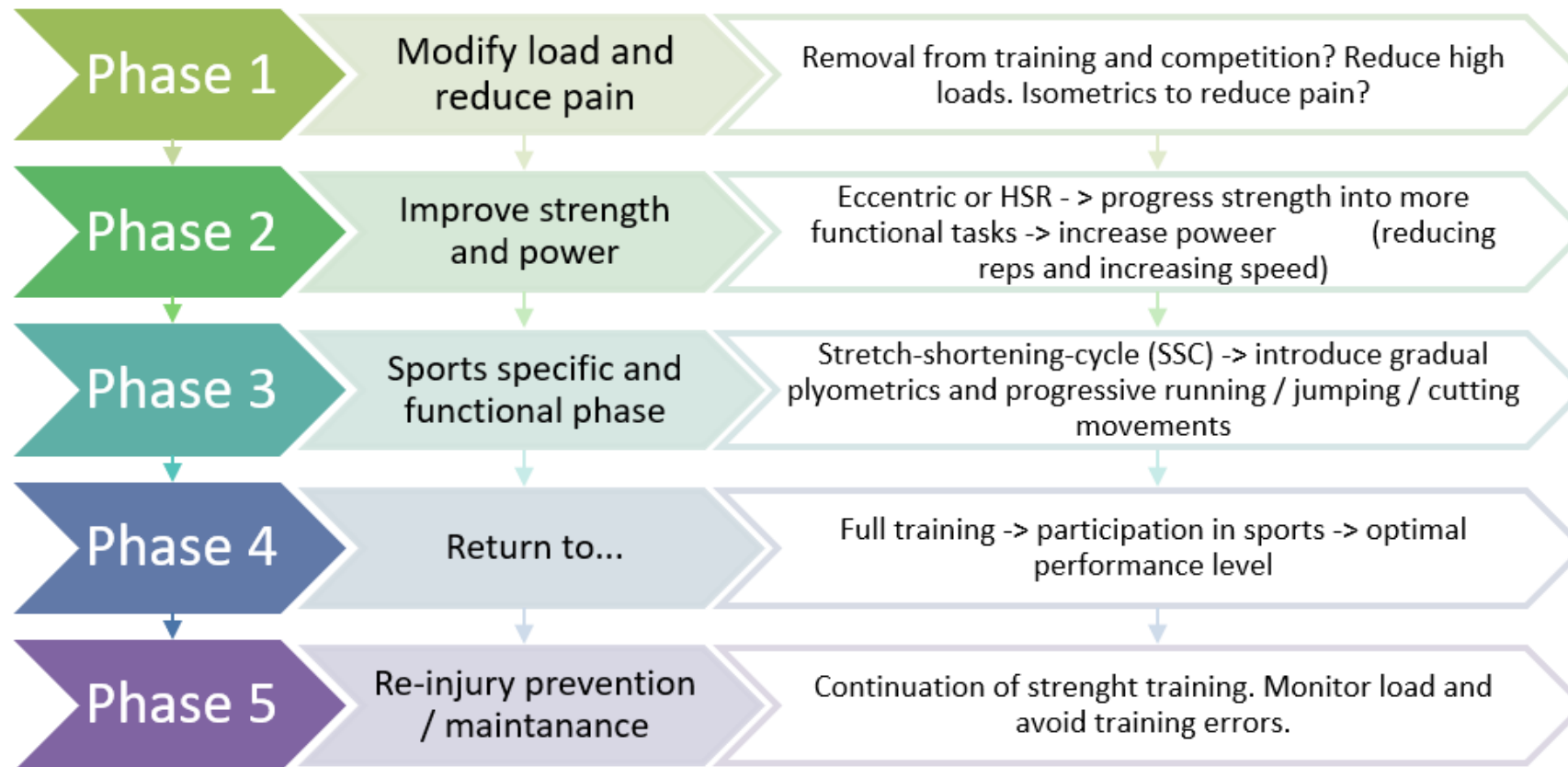
Tissue load vs. tissue capacity



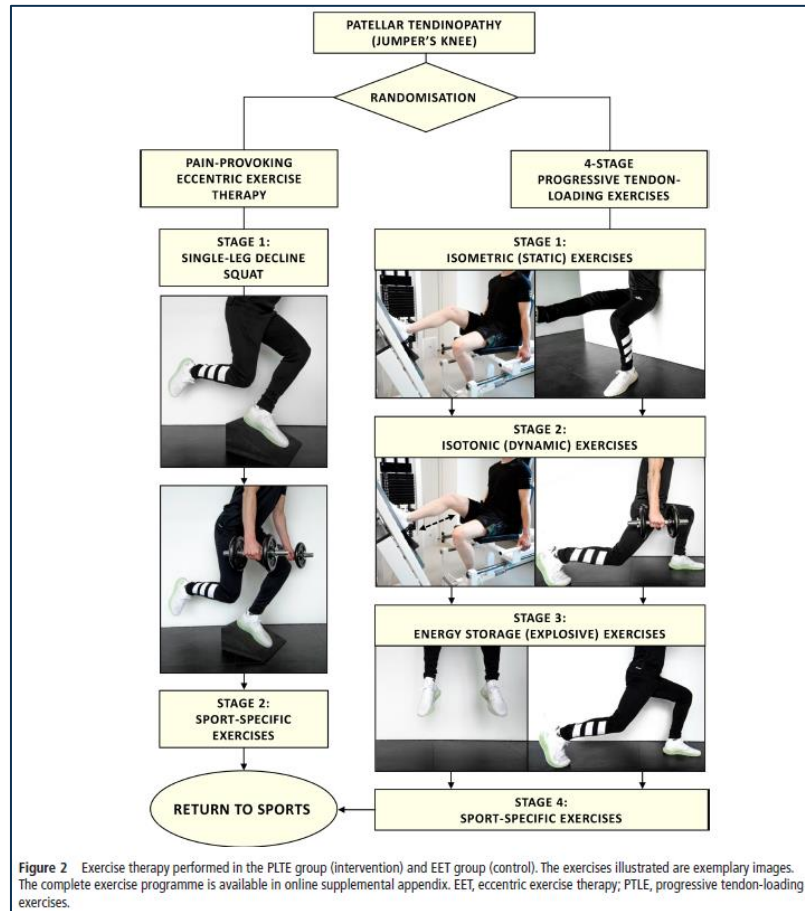
Tissue load vs. tissue capacity



Rehabilitating i faser for tendinopati

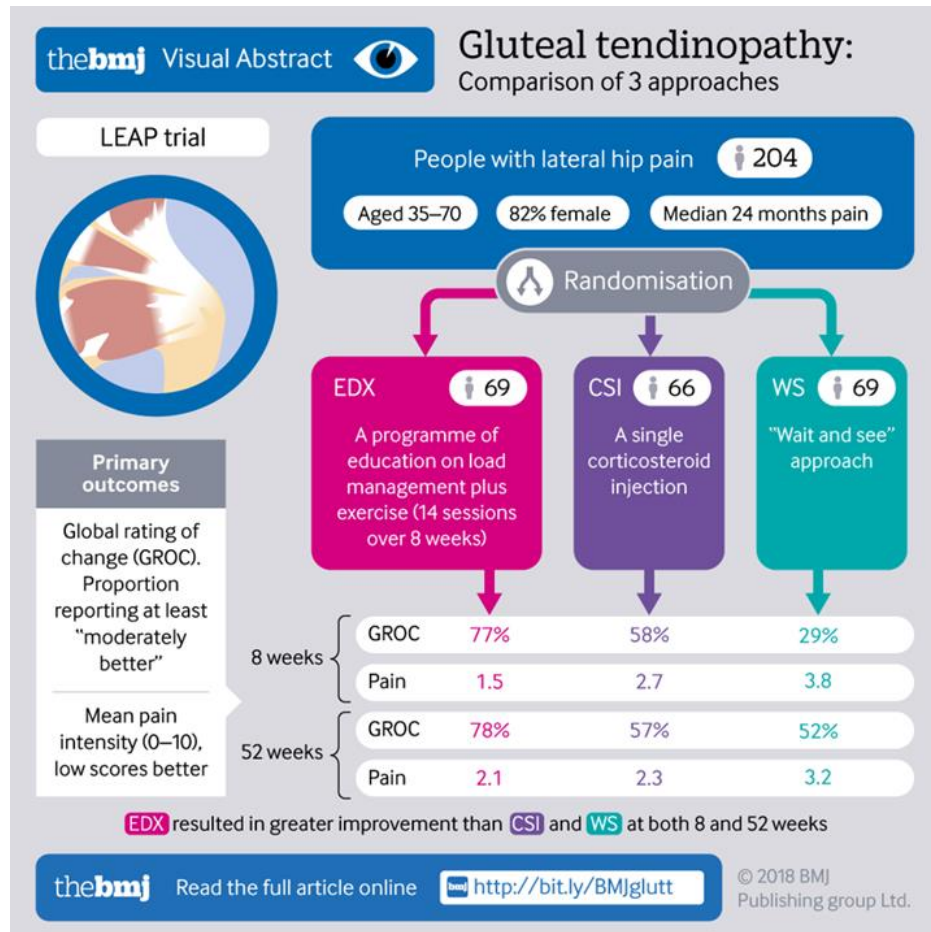


Progressive tendon-loading



- Progressive tendon-loading exercise therapy (PTLE) resulted in a significantly better clinical outcome after 24 weeks vs. pain-provoking eccentric exercise therapy (n=76)
- There was a trend towards a higher return to sports rate in the PTLE group (43% vs 27%, $p=0.13$)
- PTLE should be regarded as standard initial care for the treatment of patients with PT

Education plus exercise



- Education plus exercise leads to greater pain relief and global improvement than corticosteroid injection use or no treatment by 8 weeks
- After 52 weeks, rates of improvement remained higher for education plus exercise vs. corticosteroid injection use
- These results support the use of education plus exercise as an effective management approach for gluteal tendinopathy

Running mechanics

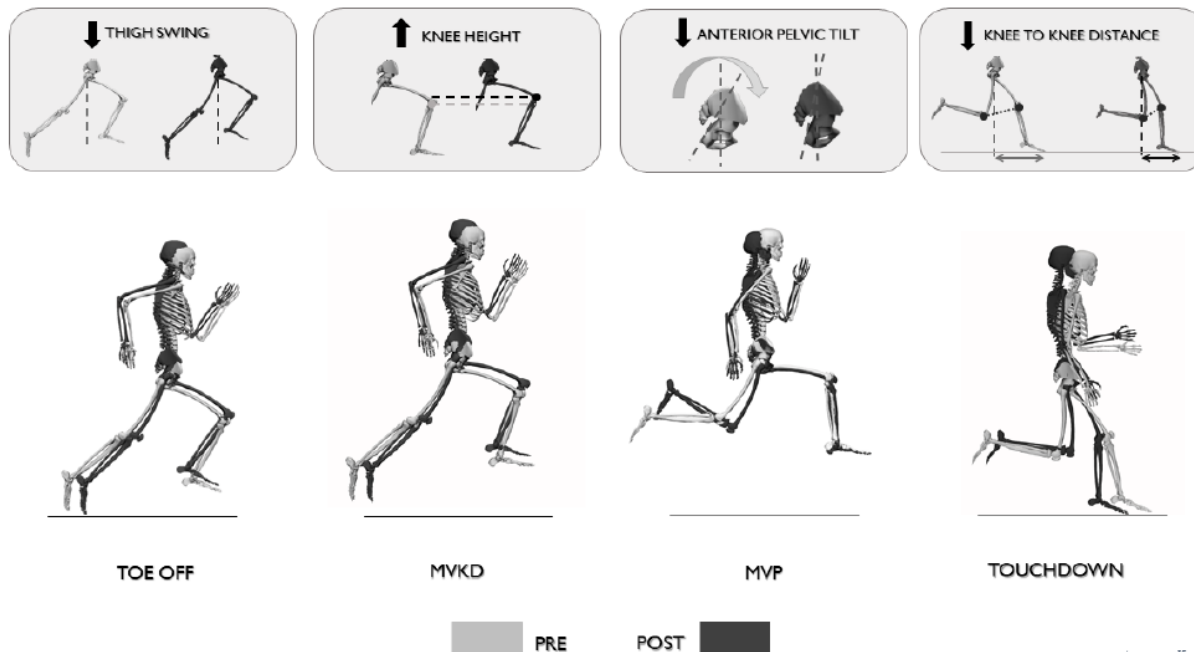


Figure 2. Visual representation of the identified changes between PRE and POST for the intervention group.
MVP: Maximal vertical; MKVD: Maximal knee vertical displacement

- ↓ Anterior pelvic tilt (APT) during the late swing phase
- ↑ Pelvic obliquity on the free-leg side during the early swing phase
- ↑ Vertical position of the front-leg knee
- ↑ Thigh angular velocity and thigh retraction velocity
- ↓ Between-knees distance at initial contact
- ↓ Shorter ground contact duration

Rehabilitering ved PHT

- Informasjon!
 - Kan ta lang tid (6-12 mnd ++)
- Justere treningsbelastning og provoserende belastning
 - Intensitet (!)
 - Volum
 - Frekvens
 - Terreng (oppoverbakker ofte mer provoserende)

Rehabilitering ved PHT

- Gradvis progredierende loadingprogram i faser
 - Unngå stor grad av hoftefleksjon i begynnelsen
 - Øvelsesutvalg basert på bevegelsesutslag
- Ta smarte valg
 - Pauser fra langvarig sitting, bruk puter, juster arbeidsstilling
 - Unngå statiske tøyninger og raske bevegelser mot ytterstillinger i perioder

Fase 1: Isometriske øvelser

- 5 x 45 sekunder hold -> 70% MVC -> 2x daglig (minst)
- Dosering basert på symptom, grad av smerte og irritabilitet med mindre grad av intensitet ved behov
- I tidlig fase -> minimal hoftefleksjon
- *A good prognostic sign for isometrics is an immediate reduction in pain with hamstring loading tests postexercise*

Fase 1: Isometriske øvelser

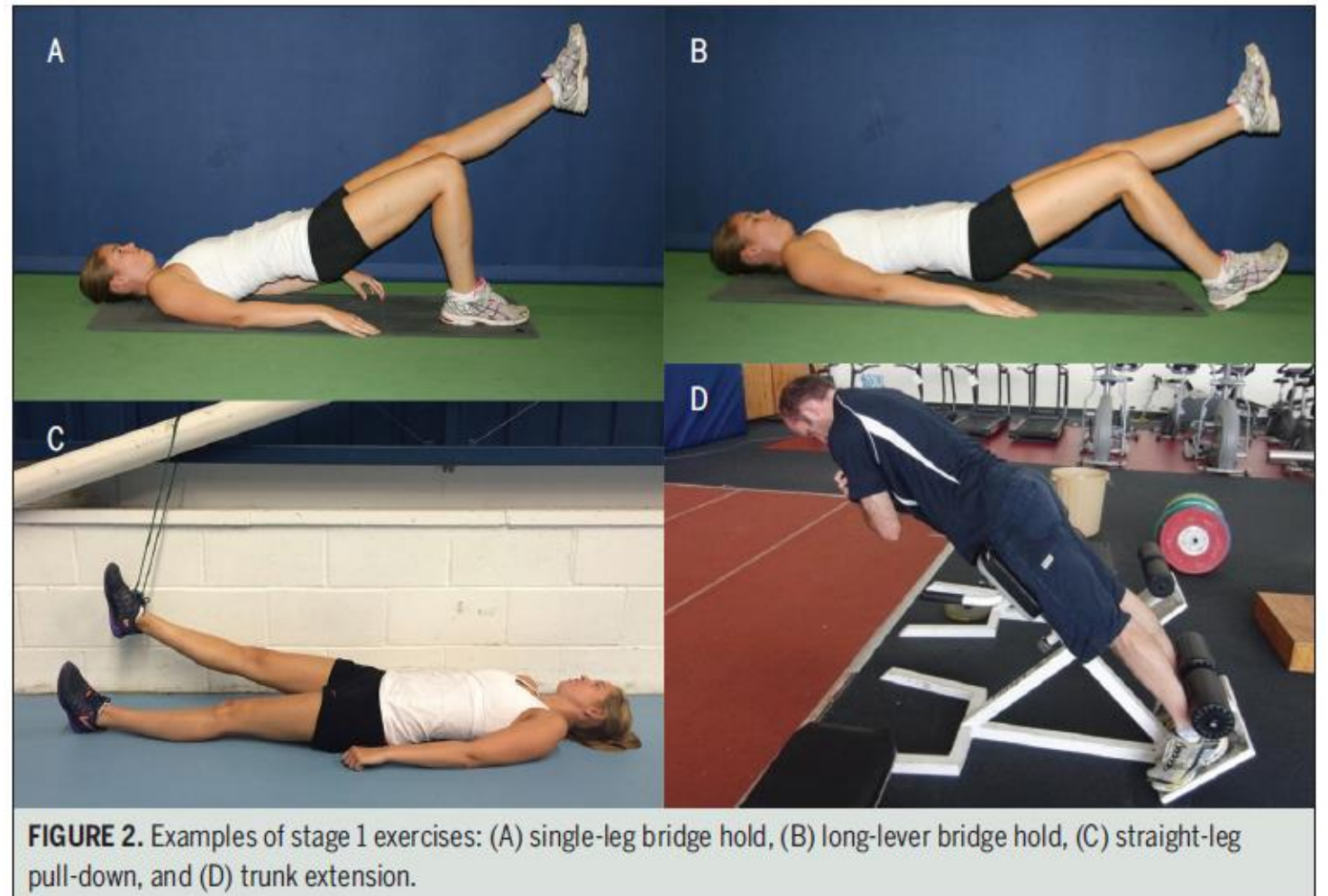


FIGURE 2. Examples of stage 1 exercises: (A) single-leg bridge hold, (B) long-lever bridge hold, (C) straight-leg pull-down, and (D) trunk extension.

Fase 1: Bekkenkontroll



Fase 2: Dynamiske øvelser

- Liten grad av hoftefleksjon
- Heavy slow resistance (HSR)
 - 15 reps -> 6 reps x 3-4 sett
 - 3 sekunder hver retning
- Eksentriske øvelser med (relativt) lav grad av hoftefleksjon
 - 6-8 reps x 3-4 sett
- 3x pr uke (evt annenhver dag)

Fase 2: Dynamiske øvelser



Seteløft – variasjoner

- Utgangsstilling
 - Tobens / ettbens
 - På step / kasse
- Grad av knefleksjon
- Type kontraksjon
 - Sliders -> eksentrisk
- Rotasjon av tibia
- Speed & power



Fase 3: Gradvis økende hoftefleksjon



Fase 4: 'Energy storage loading'

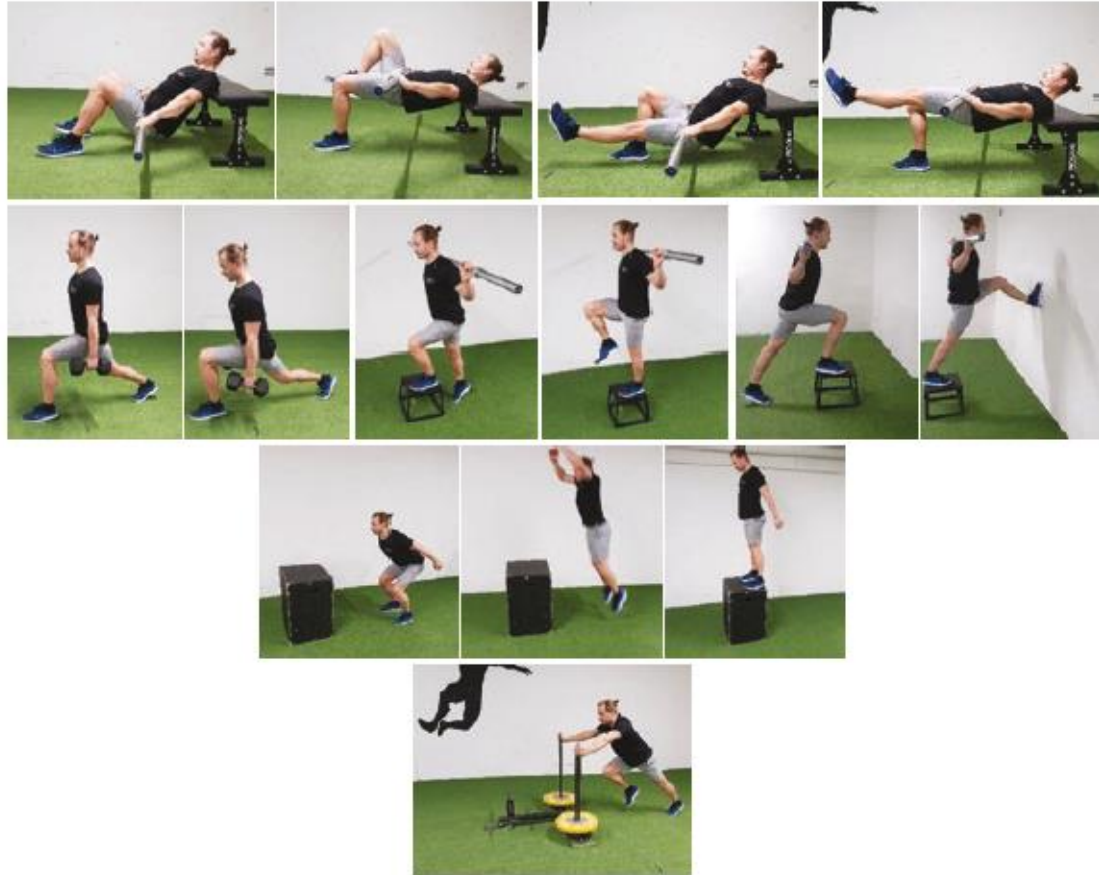
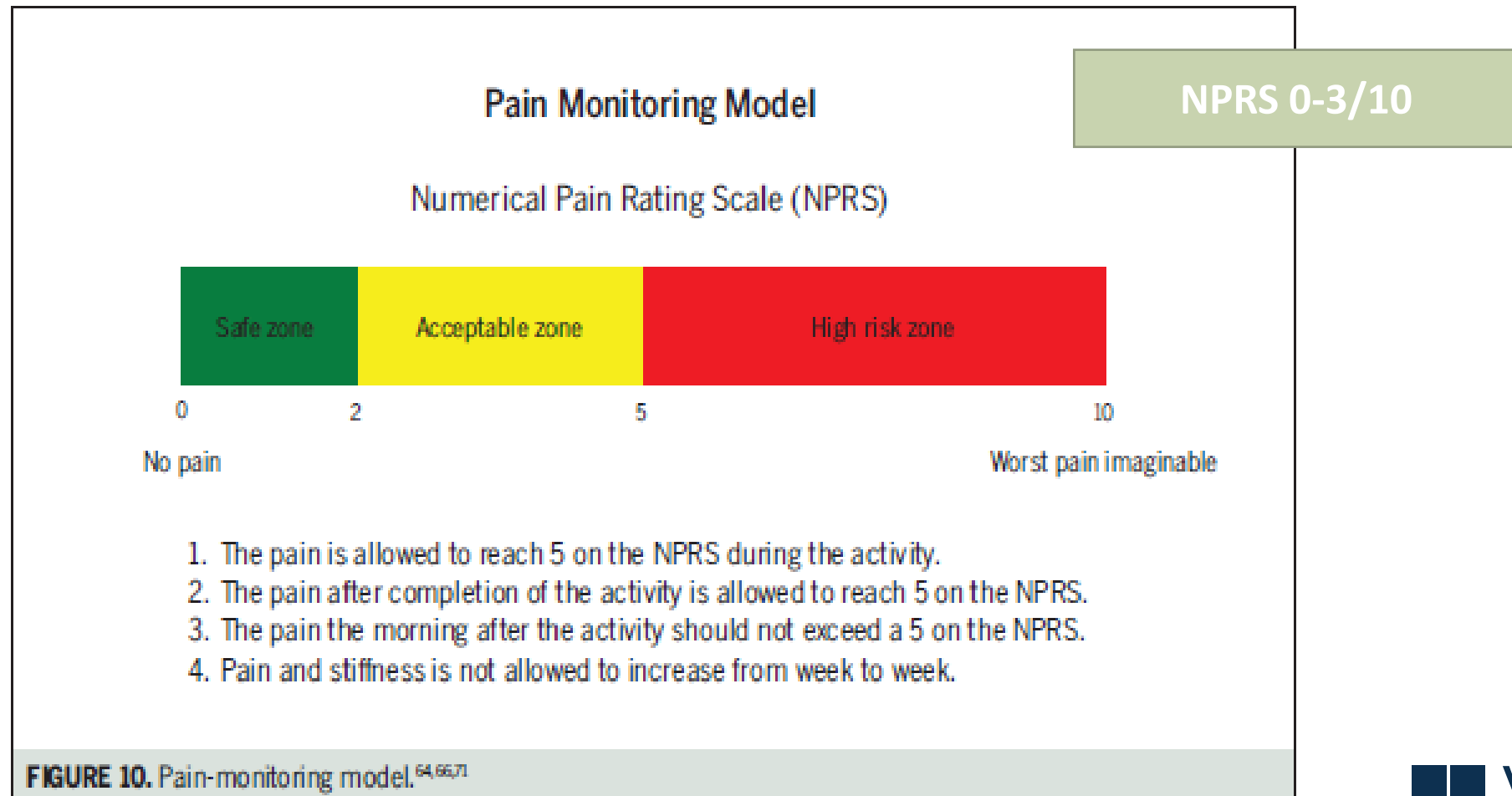


FIGURE 5. Examples of stage 4 exercises: (A) bounding, (B) alternate-leg split squats, (C) A-skips, (D) cutting, and (E) sprinter leg curl.

Progresjon



Kriterier for progresjon

Open access

Original research

BMJ Open Load progression criteria in exercise programmes in lower limb tendinopathy: a systematic review

Adrian Escriche-Escuder ^{1,2}, Jose Casaña,³ Antonio I Cuesta-Vargas ^{1,2,4}

Conclusions There is a predominant use of pain-based criteria, but the utilisation of these criteria is not supported by strong evidence. This review evidences the need for studies that compare the same exercise programme using different progression criteria. A new classification of the existing progression criteria is proposed based on the use of pain as the primary or secondary criterion.

Physical Therapy in Sport 59 (2023) 37–48



ELSEVIER

Contents lists available at ScienceDirect

Physical Therapy in Sport

journal homepage: www.elsevier.com/ptsp



The use of physical function capacity measures in the management of lower limb tendinopathy: A scoping review of expert recommendations



Joel Martin ^{a,*}, Luke Perraton ^a, Amitabh Gupta ^b, Alessandro Garofolini ^c, Peter Malliaras ^a

^a Department of Physiotherapy, Monash University, Melbourne, Victoria, Australia

^b School of Health Sciences, Western Sydney University, Sydney, New South Wales, Australia

^c Institute for Health and Sport, Victoria University, Melbourne, Victoria, Australia

ARTICLE INFO

ABSTRACT

Conclusion: Physical function capacity measures are used infrequently across expert recommended exercise rehabilitation programs. There remains a high reliance on pain as the criterion for progression of exercises during rehabilitation. There is a need to develop measures of physical function capacity to better inform and progress rehabilitation.

Progressivt løpeprogram - eksempel

Progressivt løpeprogram 6 uker – km

- 3 x pr uke, alltid 1-2 dager mellom hver økt
- Pause = aktiv, gange
- Noter ned subjektiv følelse (grad av ubehag/smerte) for hver økt, på en skala fra 0-10

Uke 1

Dag 1: Gange oppvarming + jogg 0.5 km x 5-6 (1-2 min pause) – fart: ca. 9-10 km/t

Dag 2: Gange oppvarming + jogg 1 km x 3 (2 min pause) – fart: ca. 9-11 km/t

Dag 3: Gange oppvarming + jogg 3 km x 1 (2 min pause) – fart: ca. 9-10 km/t

Uke 2

Dag 4: Gange oppvarming + jogg 2 km x 2 (2-3 min pause) – fart: ca. 9-10 km/t

Dag 5: Gange oppvarming + jogg 1 km x 4 (2-3 min pause) – fart: ca. 9-11 km/t

Dag 6: Gange oppvarming + jogg 3 km x 2 (2-3 min pause) – fart: ca. 9-10 km/t

Uke 3

Dag 7: Gange oppvarming + jogg 4 km x 2 (2-3 min pause) – fart: ca. 9-11 km/t

Dag 8: Jogg oppvarming ca. 2 km + jogg 4 min x 4 (3-4 min pause) – fart: ca. 10-12 km/t

Dag 9: Gange oppvarming + jogg 6-8 km kontinuerlig – fart: ca. 9-11 km/t

Uke 4

Dag 10: Gange oppvarming + jogg 5 km x 2 (2-3 min pause) – fart: ca. 9-11 km/t

Dag 11: Jogg oppvarming ca. 2 km + jogg 4 min x 4 (3-4 min pause) – fart: ca. 10-12 km/t

Dag 12: Gange oppvarming + jogg 7-9 km kontinuerlig – fart: ca. 9-11 km/t

Uke 5

Dag 13: Gange oppvarming + jogg 5-6 km x 2 (2-3 min pause) – fart: ca. 9-12 km/t

Dag 14: Jogg oppvarming ca. 2 km + jogg 4 min x 4 (3-4 min pause) – fart: ca. 11-14 km/t

Dag 15: Gange oppvarming + jogg 8-10km kontinuerlig – fart: ca. 9-11 km/t

Uke 6

Dag 16: Gange oppvarming + jogg 5-6 km x 2 (2-3 min pause) – fart: ca. 9-12 km/t

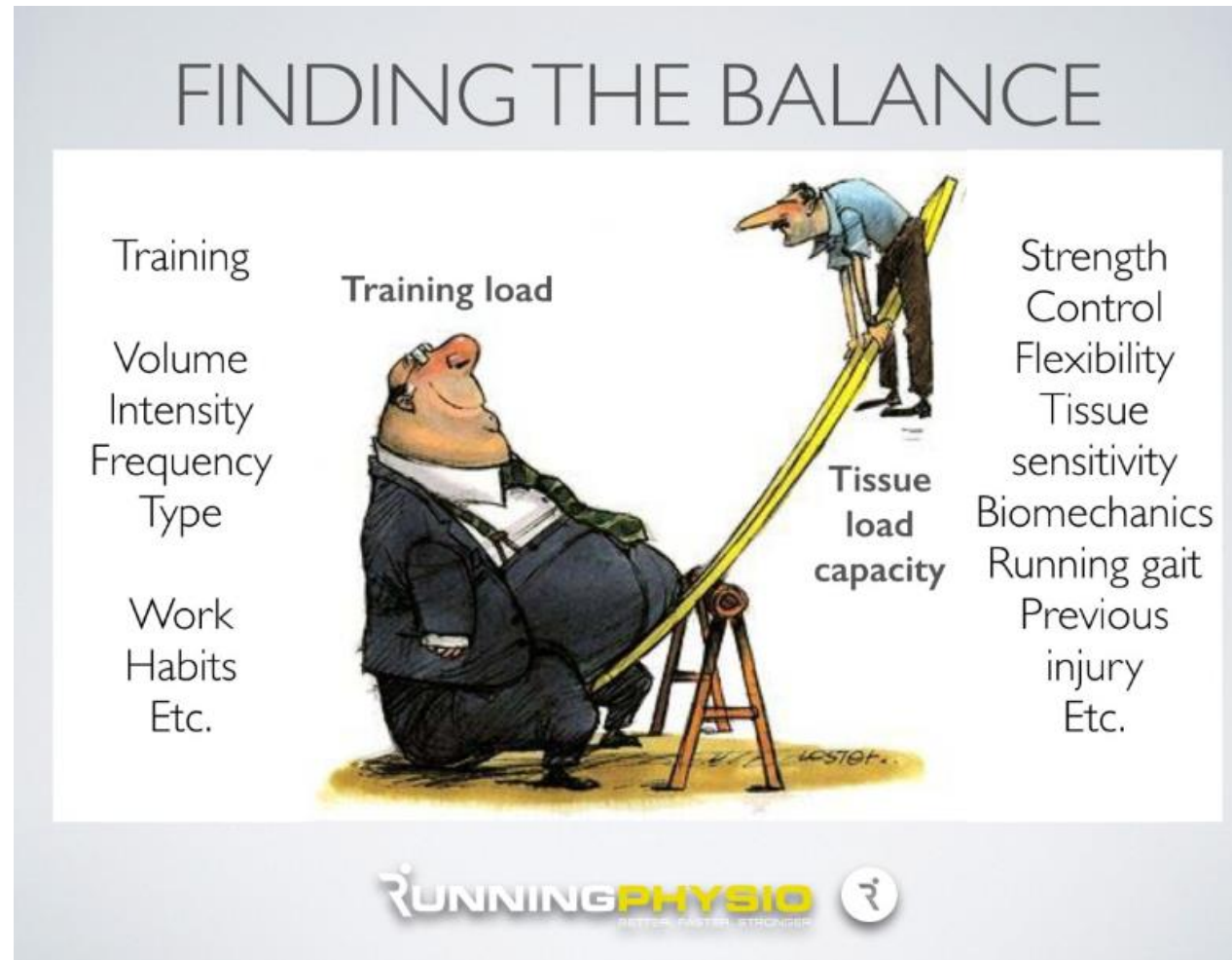
Dag 17: Jogg oppvarming ca. 2 km + jogg 5 min x 4 (3-4 min pause) – fart: ca. 12-14 km/t

Dag 18: Gange oppvarming + jogg 8-10km kontinuerlig – fart: ca. 9-11 km/t

One size does not fit all...



Obs på totalbelastning!



Obs på totalbelastning!

Min skadehistorie – vendepunktet i håndballkarrieren

Proksimal hamstring tendinopati (PHT) og tretthetsbrudd i bekkenet på venstre side var belastningsskadene som skulle ødelegge min mulighet og store drøm om å nå helt til topps i norsk eliteseriehåndball. Det var sommeren 2013. Jeg var 17 år, og hadde nylig oppfylt håndballdrømmen etter å ha fått representere Norge i et internasjonalt mesterskap. Ikke bare én, men to ganger. Trenerteamet hadde i forkant fordelt spillegruppen mellom Olympiske leker (OL) og Europamesterskap (EM), da deltagelse på to mesterskap ble antatt som for høy totalbelastning på én sommer. I utgangspunktet var min deltakelsesarena OL i Utrecht i juli. Men da ei lagvenninne ble skadet, ble jeg spurt om å være hennes erstatter under EM i Polen i august også. Tanken på at jeg skulle få være den eneste som fikk representere Norge i to mesterskap var overveldende. Jeg følte meg privilegert, samtidig som det ga en sterk indre motivasjon. Totalt fire uker med mesterskap, og en uke treningsleir i Spania på én sommer var tøft for kroppen, både mentalt og fysisk. Men viktigst av alt, det var en rå opplevelse. Jeg var proppfull av ny motivasjon og selvtillit til den kommende sesongen, klar for å ta nye steg mot å bli en bedre håndballspiller. På det tidspunktet var jeg fremdeles uvitende om at store deler av sesongen skulle tilbringes på sidelinjen, og at håndballmesterskapene sommeren 2013 skulle bli mine aller siste.

Anbefalinger for PHT

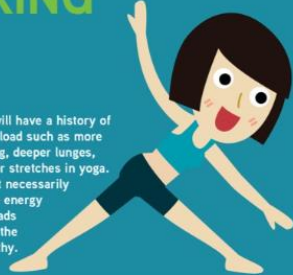
Recommendations for PROXIMAL HAMSTRING TENDINOPATHY

From Physio Edge podcast 046 with Tom Goom [@longoom](#)

1 Proximal hamstring tendinopathy (PHT) is characterised by buttock pain localised to the hamstring attachment at the origin, with an area similar to two fingertips.

2 It is aggravated by activities with compressive load on the hamstring tendon, when the hamstring is working with the hip flexed, including periods of sitting and driving, deep lunges, hamstring stretches and running at higher speeds and uphill.

3 Patients will have a history of increased load such as more hill running, deeper lunges, deadlifts or stretches in yoga. It does not necessarily need to be energy storage loads leading to the tendinopathy.





4 **24 hour behaviour**
The patient may be sore first thing in the morning, and often have a "warming up" pattern, where the pain disappears as they run. Pain may also be delayed for up to 24-48 hours after exercise.

5 **Advice**

- Stop stretching your hamstrings
- Sit as little time as possible
- Think about other positions that may load the hamstrings eg lunges, not spending long periods bent over
- Find the amount of running possible without any symptoms, and continue this 3x/week with a day in between each session.

6 **Rehabilitation Phase 1**

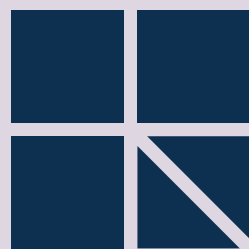
- Load modification to avoid aggravating factors
- Use isometrics to identify the movements and positions that improves their pain and objective
- Start isometric testing on the easier end of the spectrum and progress with 3 x 30 seconds to 5 x 45 secs

- Use isometrics 2-3x/day, particularly when they have pain
- Use exercises that are easy for them to perform and effective, avoiding hip flexion eg SL Bridge, hamstring curl, standing heel digs, straight leg pull down, Nordics
- Can be performed before and after a run



Brought to you by
[Clinicalede.co](#) [@davidkoope](#)

Proximal hamstring tendinopathy: Clinical aspects of assessment and management. JOSPT, Goom et al 2016



Nimi

Del av Volvat