

# Smerter i knæ/skulder

Baggrundsviden og evidens

PFA - 13/09/2023

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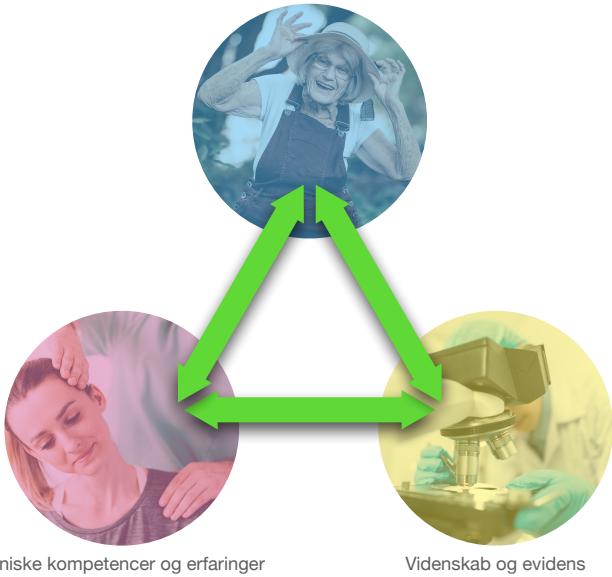
## Jeg skal fortælle jer, at

- Årsagen** til mange smerter er **ukendt**, men vi skal altid udelukke alvorlig patologi
- Selvom vi ikke kender årsagen, eller forstår helt hvordan **behandling** virker, så **kan** det godt **være effektiv**
- Fokuser på **behandlingseffekten**; ikke på behandlingsvalg/behandler-type (evidensbaseret)
- Tidlig **fokus på at finde løsninger** på funktionelle problemer (især **fastholde arbejde**) er bedre end at jagte årsagen til dem
- Fysisk aktivitet** er et "grundelement" i et sundt liv, og bør derfor indgå i alle forløb
- Behandlingen **starter hos dig!**

# Evidens-baseret praksis

Udvikling bygget ind i daglig praksis

Patienternes præferencer og erfaringer



Pedersen, SK., Platzer, OJ., Rathleff, MS., Hoegh M (2023)  
'What scientific evidence supports this?', European Journal of  
Physiotherapy, DOI: 10.1080/21679169.2023.2234404

**Træning til mennesker  
med osteoartrose i  
knaæt virker...**

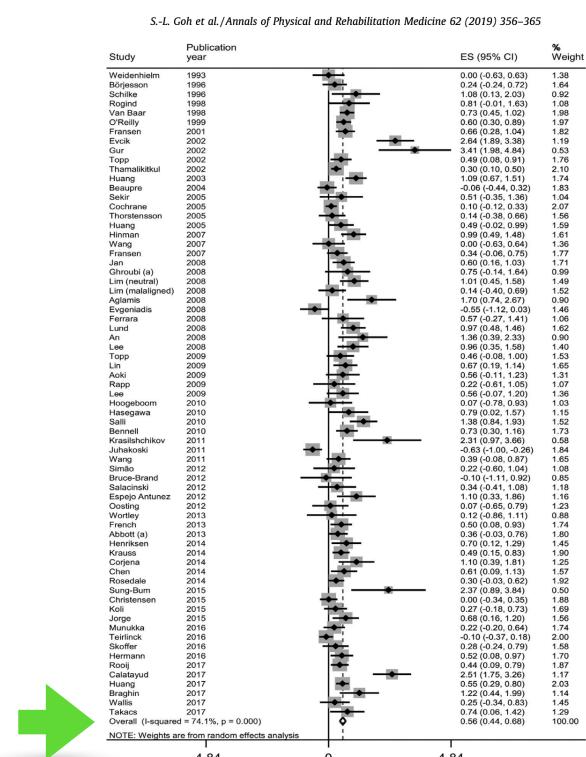


Fig. 2. Forest plot of exercise versus usual care for pain.

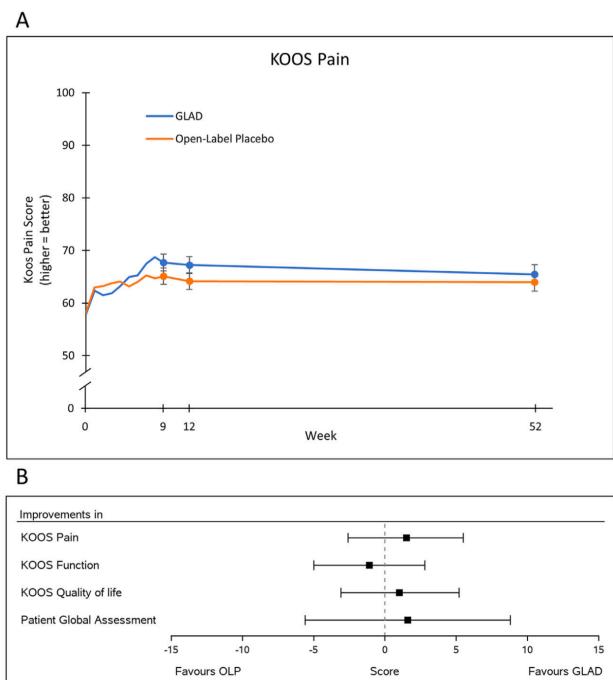
## Styrke forklarer kun 2% af effekten ved træning af knæ-OA

“As **98% of the effectiveness** of therapeutic exercise compared with non-exercise controls **remains unexplained**, more needs to be done to understand the underlying mechanisms of actions.”

Runhaar J, et al. Mechanisms of action of therapeutic exercise for knee and hip OA remain a black box phenomenon: an individual patient data mediation study with the OA Trial Bank. RMD Open 2023;9:e003220. doi:10.1136/rmdopen-2023-003220

## Træning eller saltvand?

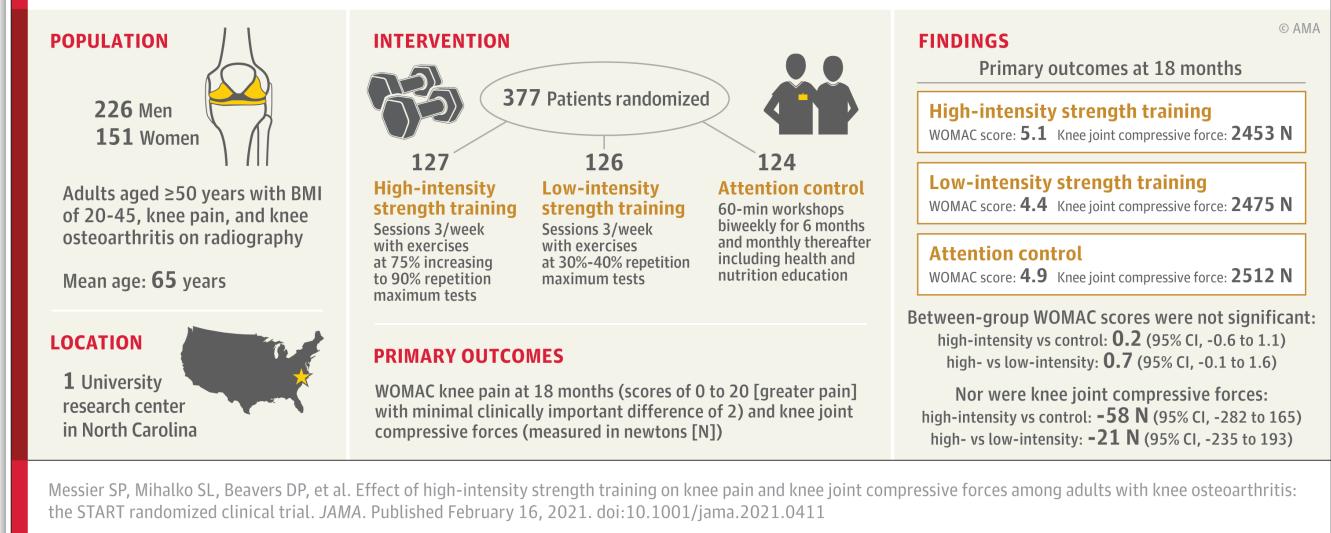
- Patients with **symptomatic and radiographically confirmed knee OA** were monitored after being randomized to either the **8-week GLAD program or OLP given as 4 intra-articular saline injections** over 8 weeks.
- 8-week GLAD program and OLP both provided minor longer-term benefits with **no group difference**. These results require confirmation given the **significant loss to follow-up**.



Kristensen LE, Bliddal H, Bartholdy C, Boesen M, Ellegaard K, Guldberg-Møller J, Hunter DJ, Altman R, Bandak E. Exercise and education vs intra-articular saline for knee osteoarthritis: a 1-year follow-up of a randomized trial. Osteoarthritis Cartilage. 2023 May;31(5):627-635. doi: 10.1016/j.joca.2022.12.011. Epub 2023 Jan

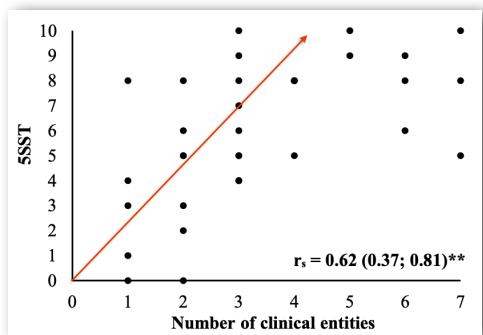
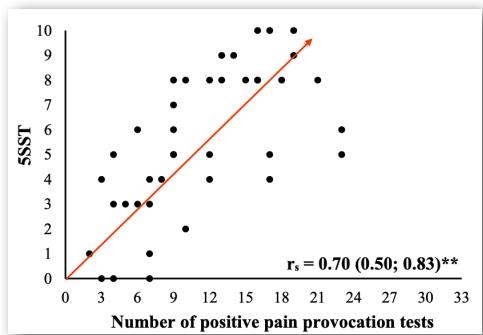
**QUESTION** Is high-intensity strength training more effective than low-intensity strength training or an attention control group for the outcomes of knee pain and knee joint compressive forces in participants with knee osteoarthritis?

**CONCLUSION** The findings from this clinical trial do not support the use of high-intensity strength training over low-intensity strength training or an attention control in adults with knee osteoarthritis.



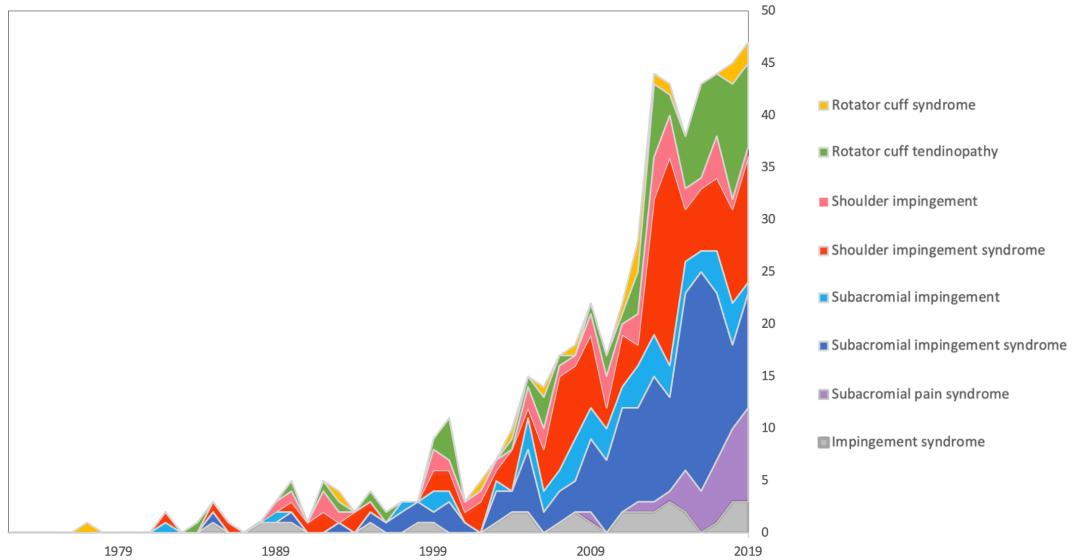
## Diagnostisk usikkerhed

**F**lere diagnoser og positive, kliniske test korrelerer kun svagt med smertens intensitet og fodboldspillerens funktion!



Nielsen MF, Ishøi L, Juhl C, Hölmich P, Thorborg K. Pain provocation tests and clinical entities in male football players with longstanding groin pain are associated with pain intensity and disability. *Musculoskelet Sci Pract*. 2023 Feb;63:102719

# “Afklemningssyndrom” (subacromial impingement) - eller hvad?



**Figure 2** Terminology used in the period 1972–2019 to describe patients with subacromial pain syndrome. 587 terms were registered across 519 studies as some studies used more than one term.

Witten A, et al. Br J Sports Med 2023;57:864–871. doi:10.1136/bjsports-2022-106340

867

## Hvad undersøger vi?

S kader/sygdom kanøre ondt, men ikke alt, der gør ondt, er tegn på sygdom/skade!

[VIEWPOINT]

PAUL SALAMH, PT, DPT, PhD<sup>1</sup> • JEREMY LEWIS, PhD, FCSP<sup>2,3</sup>

It Is Time to Put Special Tests for Rotator Cuff–Related Shoulder Pain out to Pasture

Clinicians use orthopaedic physical examination tests to inform diagnosis and support decision making. Each region of the body has a unique set of orthopaedic physical examination tests (“special tests”). In this Viewpoint, we focus on tests used to assess rotator cuff–related shoulder pain (RCRSP) (an umbrella term that includes subacromial impingement syndrome, rotator cuff tendinopathy, bursitis, pathology, and traumatic partial- and full-thickness rotator cuff tears).<sup>1</sup> Patients with RCRSP typically present with a painful and weak shoulder, most commonly in external rotation and/or abduction.

There are more than 70 shoulder “special tests” in clinical use that have been developed to identify labral, rotator cuff, and associated tendon pathology, instability, subacromial impingement, and scapular dyskinesis. It is unclear why the tests are afforded “special test” status and if this is the best way to outline the current state and validity of shoulder orthopaedic tests used in the diagnosis of RCRSP. We provide recommendations for how clinicians might consider using shoulder orthopaedic tests for RCRSP in practice.

In this Viewpoint, we outline fundamental flaws in the validity of these tests and their potential to mislead and harm patients by causing unnecessary source of pain. The potential harm of these special tests comes in conjunction with imaging findings that are often used to support a diagnosis or recommend invasive procedures. We offer recommendations for performing a clinical interview and physical examination for people with RCRSP that does not include shoulder orthopaedic tests. *J Orthop Sports Phys Ther* 2020;50(5):222–226 doi:10.2349/jospt.2020.0066

**KEY WORDS:** diagnostic accuracy, orthopaedic tests, rotator cuff, shoulder pain, shoulder special tests

certain they are operating on the tissues causing the symptoms?

**Convergent Validity**  
A valid test is one that claims what it claims to do. The most common way to investigate the validity of shoulder orthopaedic tests is to compare the results of the orthopaedic test to a method (often called the gold standard or reference standard) that is known to detect the pathology associated with or cause the symptoms. Common reference standards for the shoulder are radiographs, magnetic resonance imaging, diagnostic ultrasound, and direct observation during physical examination. If the test identifies a specific shoulder structure, then the test should be positive when the reference test demonstrates the pathology, and negative when the reference test is reported as normal.

**Reference Standards: All That Glitters Is Not Gold**  
Validating shoulder orthopaedic tests to identify shoulder pain as the primary diagnosis is difficult, because imaging regularly detects abnormalities of the rotator cuff and bursa, acromial shape, the glenoid labrum, and other shoulder structures in people without shoulder symptoms. In a sample with bilateral shoulder pain who had bilateral magnetic resonance imaging, there were as many abnormalities in the symptomatic shoulder as there were in the pain-free shoulder. Only

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# MR-skanning er ikke løsningen...

(med mindre der er traume eller mistanke om alvorlig sygdom)

**Table 1** Expected age or activity related epidemiological findings in musculoskeletal MRI

Body part	Prevalence
Shoulder	60% of asymptomatic older adults show subacromial bursitis on MRI and around half have rotator cuff tears, <sup>109 110</sup> whilst up to 72% of middle-aged individuals have asymptomatic superior labral tears. <sup>111</sup> In younger, asymptomatic athletes, 65% can have rotator cuff tears and 88% rotator cuff tendinosis. <sup>112</sup> 52% of pre-teen athletes demonstrate asymptomatic activity-related 'abnormal' shoulder MRIs. <sup>113</sup> With the exception of large rotator cuff tears, systematic review suggests little-to-no correlation between shoulder imaging findings and shoulder symptoms. <sup>28 114</sup>
Knee	The majority of people with meniscal tears have no recent symptoms. <sup>126</sup> Meniscal tears are seen in around a third of middle-aged asymptomatic individuals, where 97% of knees will show incidental 'abnormalities', including bucket-handle tears. <sup>127</sup> Above the age of 40, MRI shows osteoarthritis features in up to 43% of asymptomatic individuals <sup>128</sup>

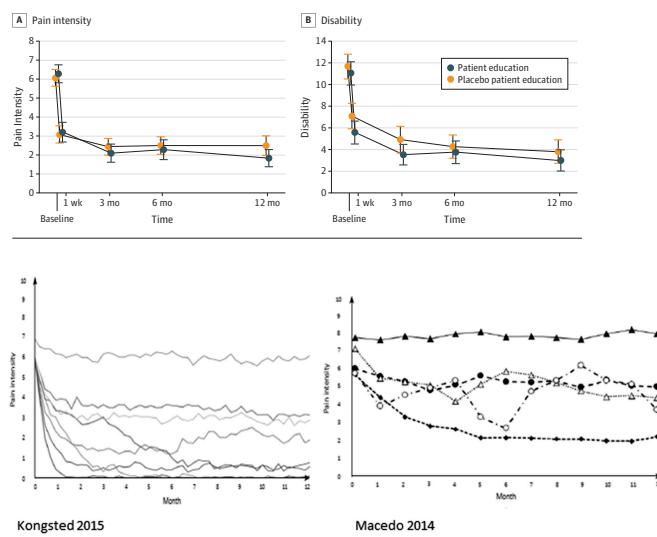
Saji IM, et al. Unintended consequences: quantifying the benefits, iatrogenic harms and downstream cascade costs of musculoskeletal MRI in UK primary care. BMJ Open Quality 2021;10:e001287.

## ...behandling virker

Men effekten afhænger aftimingen!

# Behandling af USPECIFIKKE LÆNDERYGSMERTER

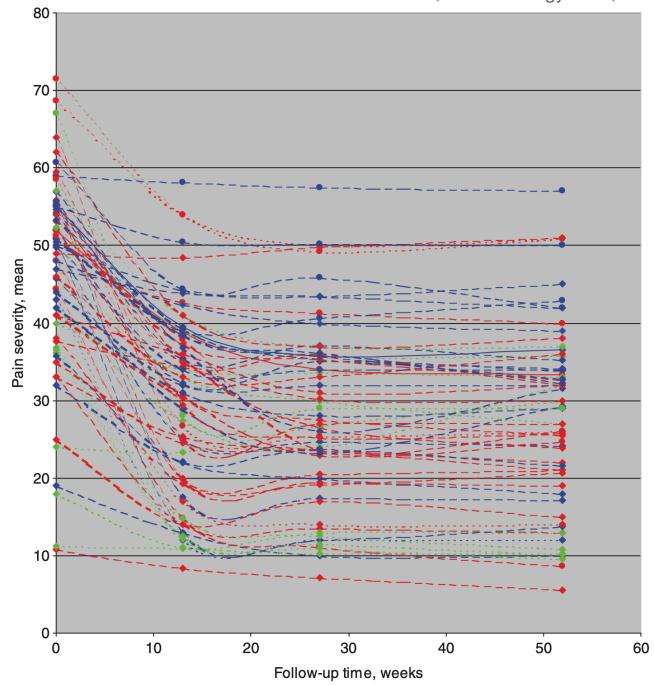
Figure 2. Treatment Effects of Intensive Patient Education on Pain and Disability



Kongsted 2015

Macedo 2014

Kongsted et al. BMC Musculoskeletal Disorders (2016) 17:220  
Traeger AC, et al. JAMA Neurol. 2019 Feb 1;76(2)  
Artus et al., Rheumatology 2010;49



## Smerter (flere typer) i mere end 6 måneder

8 follow-ups over 4 years

N = 1.905

Pain > 6/10 months at baseline

- “fluctuating” (n = 586 [31%]),
- “persistent mild” (n = 449 [24%]),
- “persistent moderate” (n = 414 [22%]),
- “persistent severe” (n = 251 [13%]),
- “gradual improvement” (n = 205 [11%]).

Glette M, Stiles TC, Borchgrevink PC, Landmark T. The Natural Course of Chronic Pain in a General Population: Stability and Change in an Eight-Wave Longitudinal Study Over Four Years (the HUNT Pain Study). J Pain. 2020 May-Jun;21(5-6):689-699

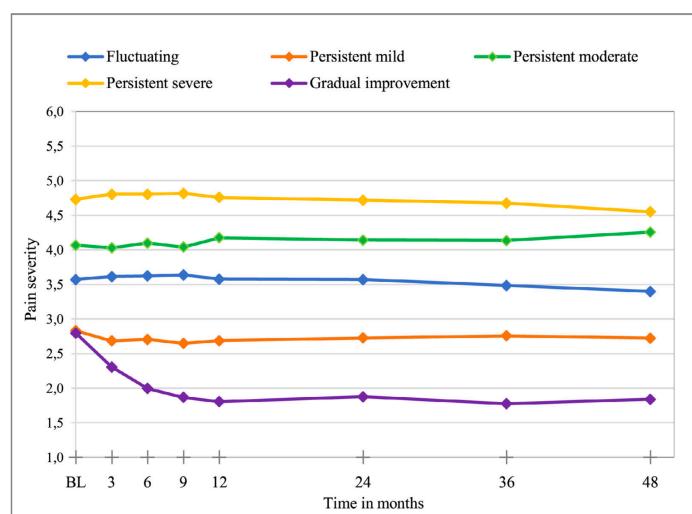
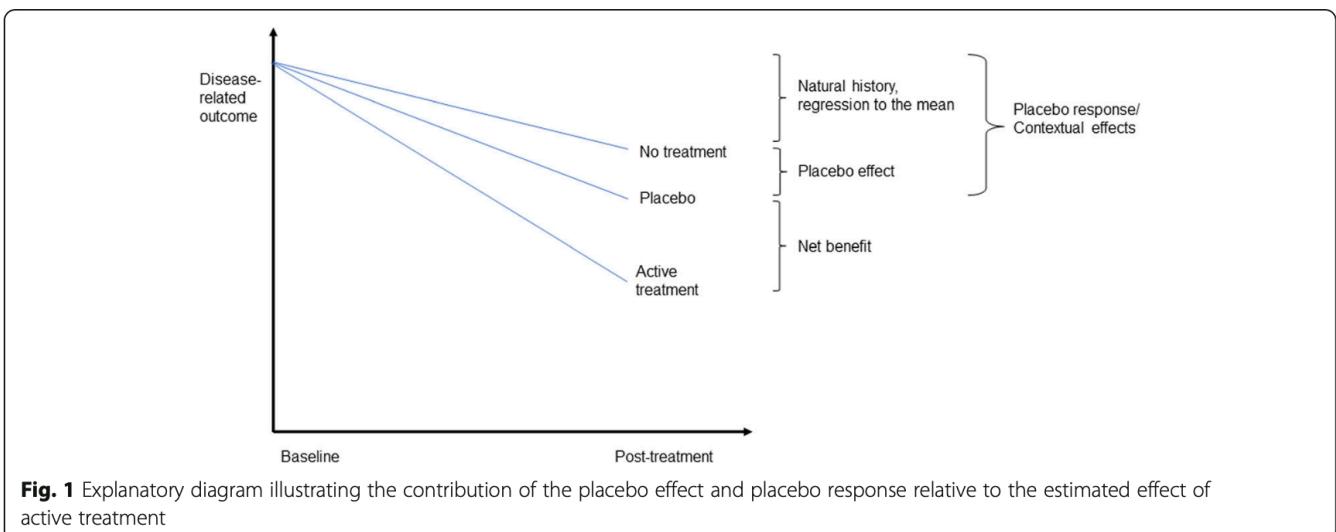


Figure 2. Average pain intensity values for all the 5 trajectory groups identified over all 8 follow-up time points.

"This study suggests that **at least half of the overall treatment effect** observed in clinical trials across conditions **is attributable to contextual effects rather than to the specific experimental intervention** on trial."

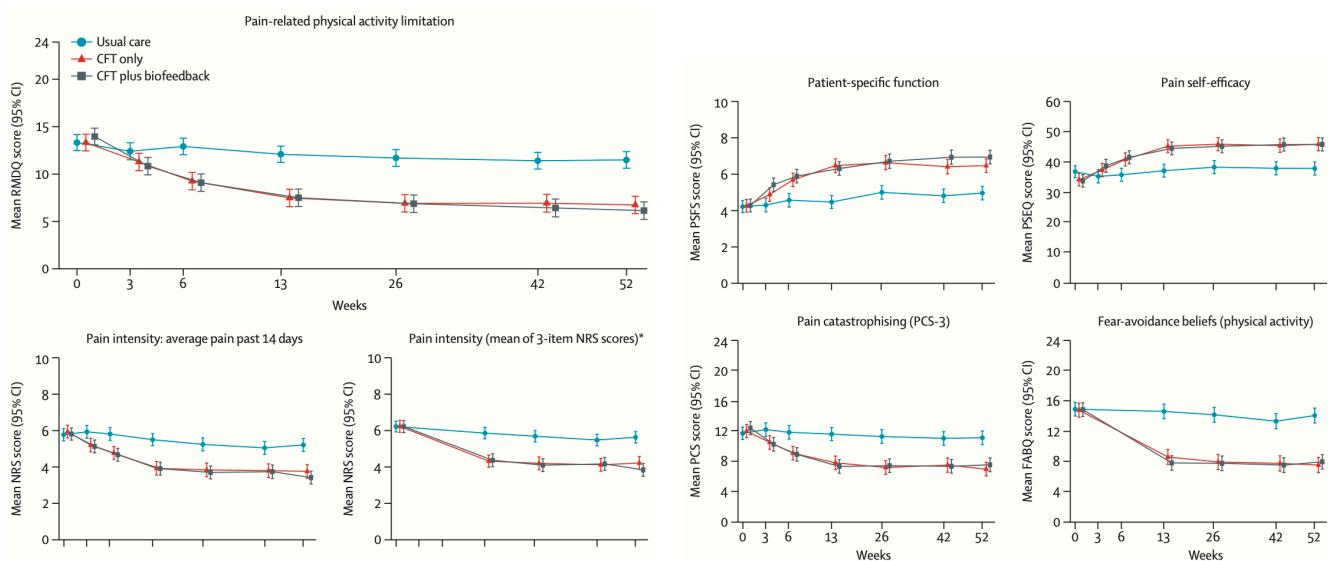


Hafliðadóttir, S.H., Juhl, C.B., Nielsen, S.M. et al. Placebo response and effect in randomized clinical trials: meta-research with focus on contextual effects. Trials 22, 493 (2021).

## Måske nyt fokus?

Peter Kent et al., The Lancet May 2023

- \* Patient-centered communication
- \* Making sense of pain from the patients own story
- \* Experiential learning
- \* Life-style changes



# Du kan gøre en forskel!

Research Paper

PAIN®

PAIN 164 (2023) 2104–2111

## Prognostic factors for high societal costs: a register-based study on 561,665 patients with shoulder disorders

Lotte Sørensen<sup>a,\*</sup>, Johanna Maria van Dongen<sup>b</sup>, Maurits van Tulder<sup>c</sup>, Lisa Gregersen Oestergaard<sup>a,d,e</sup>

**Abstract**  
Shoulder disorders are common and associated with high societal costs, especially for a small group of patients. Prognostic factors can help identify high-cost patients, which is crucial to optimize early identification and develop tailored interventions. We aimed to identify prognostic factors for high societal costs, to examine whether the prognostic factors were similar for high healthcare costs and high costs of sick leave, and to investigate the model's robustness across 4 diagnostic categories. Using national Danish registers, potential prognostic factors (age, sex, educational level, long-term sick leave, admission, visits to general practitioner and physiotherapist, comorbidity, diabetes, low back pain, and neck pain) were included in a logistic regression model with high societal costs, defined by the top 10th percentile, as the main outcome. The model's prognostic accuracy was assessed using the Nagelkerke  $R^2$  and its discriminative ability using area under the receiver operating curve (AUC). Data on 80% of the patients ( $n = 449,302$ ) were used to develop the model and 20% ( $n = 112,363$ ) to validate the model. By far the strongest prognostic factor for high societal costs and high costs of sick leave was sick leave at the time of diagnosis (OR: 20.2, 95% CI: 19.5–20.9). Prognostic factors for high healthcare costs were high age, comorbidity, and hospital admission the year before diagnosis. The model was robust across diagnostic categories and sensitivity analyses. In the validation sample, the primary model's discriminative ability was good (AUC = 0.80) and the model explained 28% of the variation in the outcome (Nagelkerke  $R^2$ ).  
**Keywords:** Shoulder disorders, Prognostic factors, High-cost patients, Societal costs, Healthcare costs, Costs of sick leave



## Arbejdsevne er guld værd!

2021: 58.272 patienter en hospitalskontakt pga. non-inflammatoriske rygsmerten.

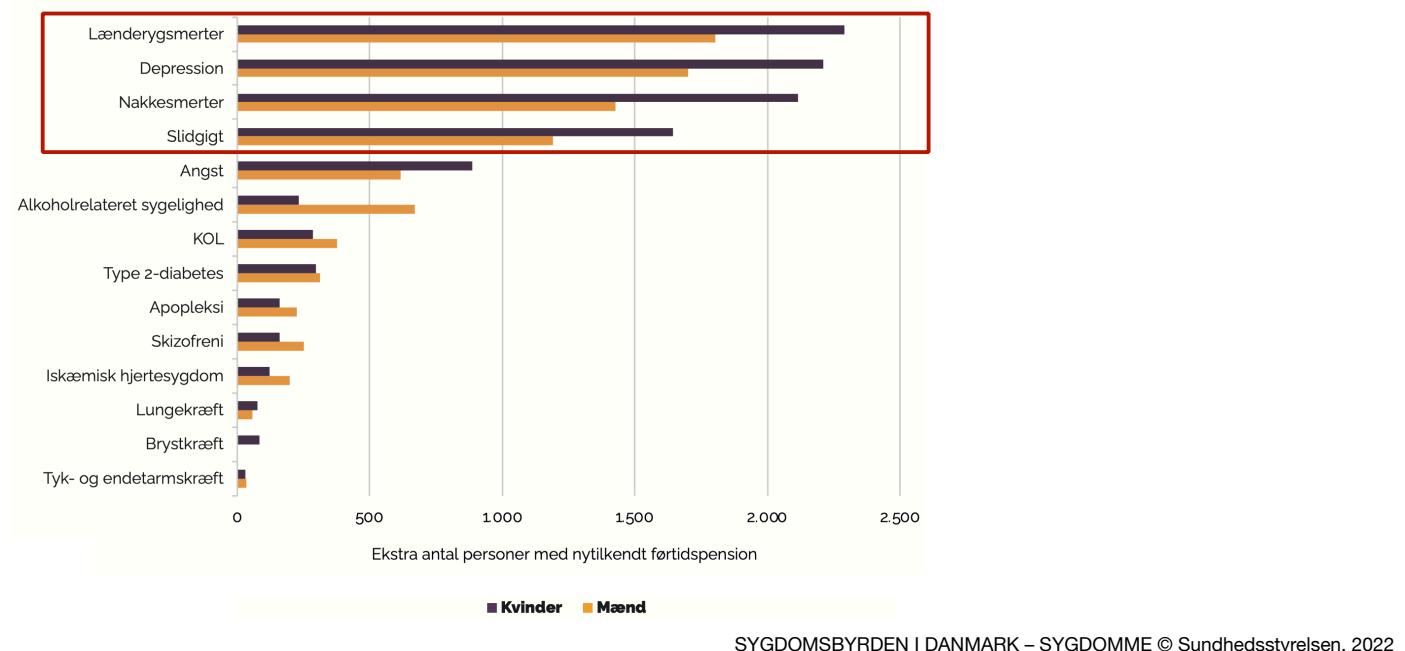
"Det konkluderes, at det **ikke er tilfredsstillende, at omkring 20 %** blandt gruppen af 30 til 60årige i fuld beskæftigelse et år før diagnose, **ikke fastholder deres beskæftigelsesgrad** efter hospitalskontakten."

**Dansk Rygdatabase - DaRD**

Årsrapport 2020  
- opgørelsesperiode fra 1. juli 2019 til 30. juni 2020



**Figur 1.1.8** Ekstra antal personer med nytilkendt førtidspension blandt mænd og kvinder i alderen 16-64 år i Danmark med udvalgte sygdomme i forhold til en referencepopulation matchet på køn, alder, uddannelse og CCI. Årligt gennemsnit for perioden 2017-2018.



## Tid-vs-prognose for “wait-and-see” for uspecifikke smerter i bevægeapparatet



Livsstil, herunder især regelmæssig fysisk aktivitet, bør indgå på alle tidspunkter/i alle forløb!

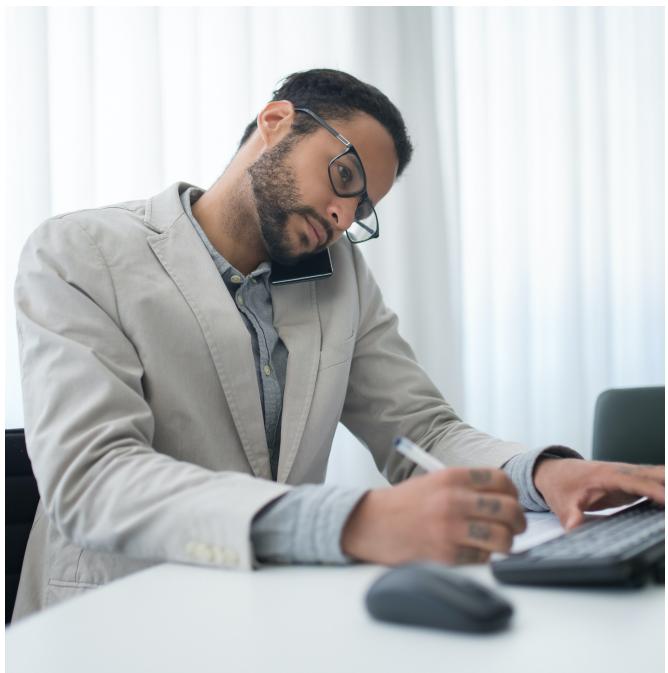
# Stil krav til jeres samarbejdspartnere

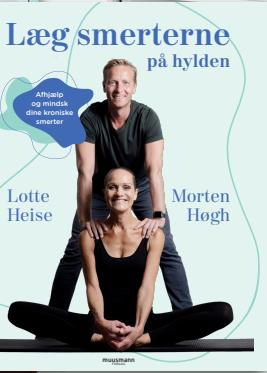
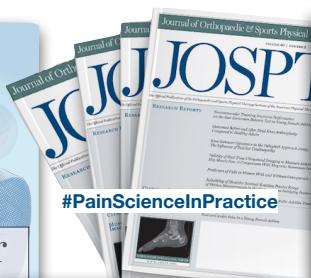
- **Objektive, tidsbestemte mål** for ændring (prognose)
- Bevidst **afslutning af forløb** når effekten udebliver
- **Viderehenvisning** til kirurgi og psykolog skal ske **på INDIKATION ikke FRUSTRATION** og samarbejdspartneren skal indikere hvilke mål, der søges indfriet (ikke metoden)



# Start behandlingen på den bedste måde:

- **Lyt til kunden**s problem og bekræft det ("tell back")
- Fortæl hvorfor du sender dem til x-behandler (skab en **relevante og positive forventninger**)
- **Forebyg utilfredshed** (fx hvad kunden skal gøre, hvis de ikke bliver mødt som I har aftalt)
- Forklar kunden, at den **bedste hjælp** altid **er, at bevare/genskabe så normale funktioner** som muligt





EFIC TV  
LIVE FROM  
#EFIC2023

STAY TUNED!  
WE WILL BE BACK SHORTLY.



@mh\_dk

mhd़\_drmortenhoegh

@VidenOmSmerter

msh@hst.aau.dk

Find links to interviews on [linktr.ee](https://linktr.ee/mhd़_drmortenhoegh)  
([https://linktr.ee/mhd़\\_drmortenhoegh](https://linktr.ee/mhd़_drmortenhoegh))

# KLINISK FYSIOTERAPI

*Træning der understøtter patientens vej tilbage til fuld funktion.*

MIKKEL HJULER 2023

Den fysioterapeutiske arbejdsdiagnose har mange faktorer

Overordnet  
diagnose/  
"Alvorlighed"



Struktur



Smerte-  
mekanism  
e



Biomekanik



Ekstern  
påvirkning



Psyko  
-  
socialt



Sundhed  
KRAM



## Klinisk Undersøgelse

- Find ud af hvad patienten fejler... eller hvad patienten ikke fejler

Find eller udeluk alvorlig vævspotologi

Samspil med læger i forhold til operation eller anden lægebehandling

Giv vævet mulighed for heling

Hvis ikke der er skade men smertefuld væv find sammenhæng mellem smerten/vævet og

Fysisk belastning (mit speciale)

Mental belastning (stress, Angst, depression, identificering med smerter)

Livsstil (søvn, motion, kost)



Ref:

## Biomekanisk undersøgelse

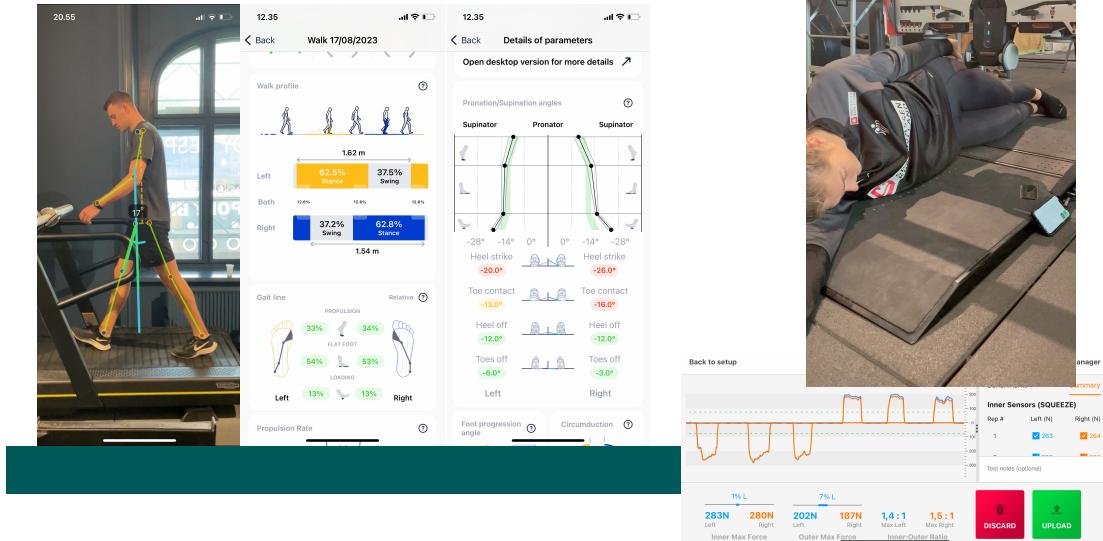
Volleyball spiller m Ve. springerknæ  
og Hø. sidig achillesenesmerter. smerter i landinger  
Stået på i mere end 12 mdr.

-Bevægestrategier  
-Asymmetri i  
ROM  
muskelaktivivering  
styrke  
RFD  
RSI  
balance



Ref:

# Objektivt måleudstyr



## Biomekanisk undersøgelse

	Hø	Ve	SLI	Normativ
<b>ROM ankel DF</b>	25gr	24gr	96 %	>25gr
<b>Soleus Styrke</b>	15	10	66 %	>25reps >1,8BW
<b>Triceps styrke</b>	15	12	80 %	>25reps 2,0BW
<b>Quadriceps Styrke</b>	475N	435N	92 %	3,5N/Kg (300N)
<b>Peak landing force</b>	2127	1420	66 %	100 %

Ref:

A person standing on a force plate in a gym setting, used for biomechanical testing.

## Biomekanisk undersøgelse

Skøjter frem i knæene

Løfter hælene

=

Stærk i forside lår / Svag/dårlig kontrol excentrisk i M. Soleus

Absorberer yderligere i hofteerne ved > hofte flexion

Stor peak force i landing “dårlig motoriks program for landing/absorbering



Ref:

## Forløbs process

Patient Styring af proces

\*Stjernetegn\*

Morgensmerter achillessener

Palpations smerter Achilles og Apex patella

Styrketest Soleus & Quadriceps

Kontrol af trænings load

Integrationsstrategier & RSI

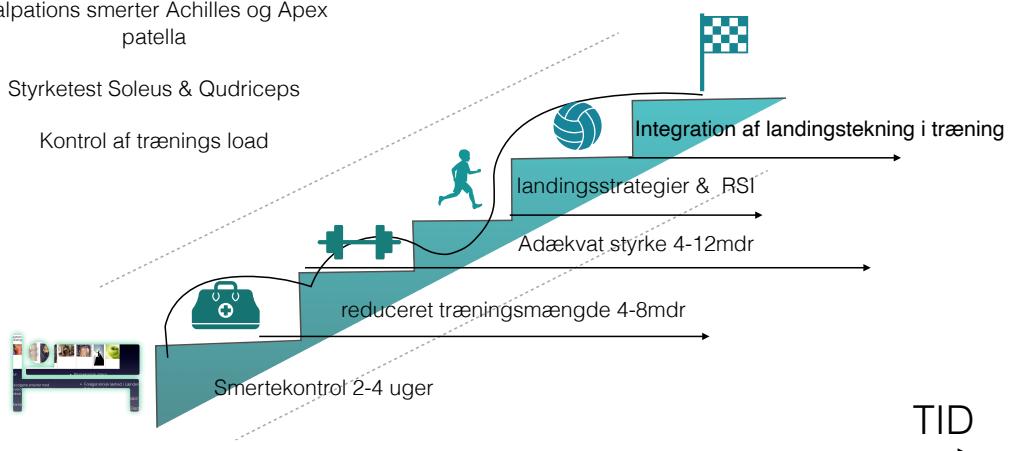
Integration af landingstekning i træning

Adækvat styrke 4-12mdr

reduceret træningsmængde 4-8mdr

Smertekontrol 2-4 uger

TID



# Manglende progression

Er det mig som fys der har vurderet forkert?

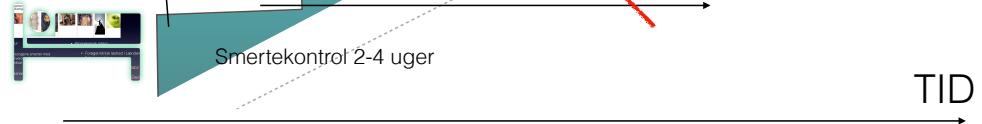
- anden fysisk forklaring
- mentalt/central smerte
- livsstil

Har patienten gjort de de skulle?

- træning
- adfærdskorrektion

Er det alligevel mere læge end fysioterapi?

- Operation?
- Blokade?



## Fys &/eller læge?

- Langt de fleste forløb kræver ikke lægelig behandling.
- Derfor er det oplagt at fys som minimum er sideløbende i forløbet og måske endda før lægelig konsultation
- Kræver dog en dygtig kliniker!



# Ændring af tale over for jeres kunder

## Forståelse for processen

Når I til en start tilbyder 6 behandlinger og kunden siger hvorfor 6 behandlinger?

Når fysioterapeuten anmoder om flere behandlinger end de første 6 behandlinger?

~~"Når du har brugt de 6 behandlinger, så kan du bare ringe ind, hvis du har brug for mere"~~

"Hvis du efter 6 behandlinger føler at der er styr på processen frem mod dit ønskede mål og du allerede kan se din fremgang så kan du altid ringe ind og få 6 behandlinger mere. Hvis situation er anderledes tager vi en snak om hvad der er bedst for dig."

Ref: