

# Evaluating the immeasurable

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Work ability and chronic pain

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- Significance of the certificate of fitness for work
- Application of the ICF framework
- Tools for assessing work ability
- Assessing incapacity for work in cases of chronic pain

# Introduction

Musculoskeletal disorders: 15–25% of all sick leave and 40% of cost in industrialised countries

Melhorn 2001

1.7 to 3.8% of GNP

OSHA 1989, Coyte 1998, SECO 2009

Direct medical costs 7%, work absenteeism 63%, retirement 30%

Van Tulder 1999/ SUVA 2004/12

Average cost per day of absence in Switzerland: CHF 600

SECO 2012/ SUVA 2006

Fewer short-term absences and high job satisfaction, long working life, but more long-term absences compared to other European countries

OSHA/ SECO 2008

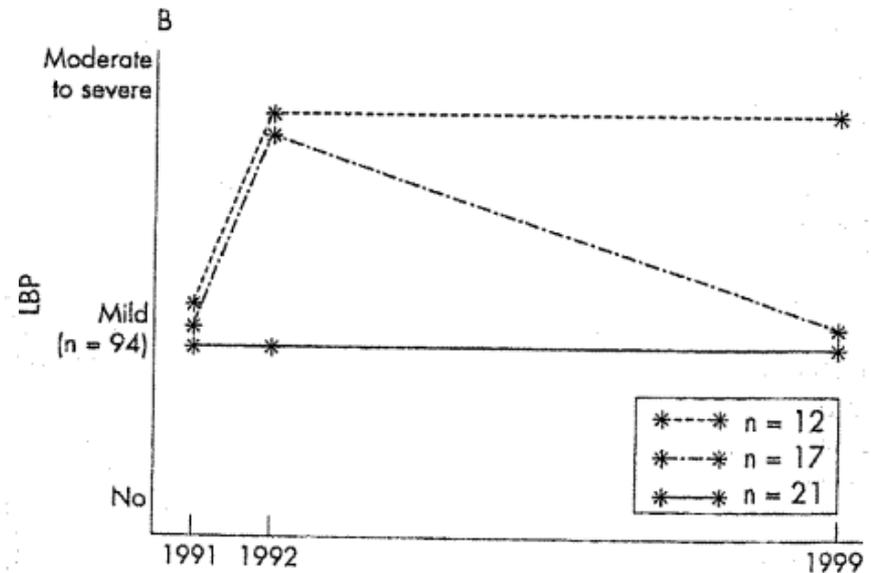
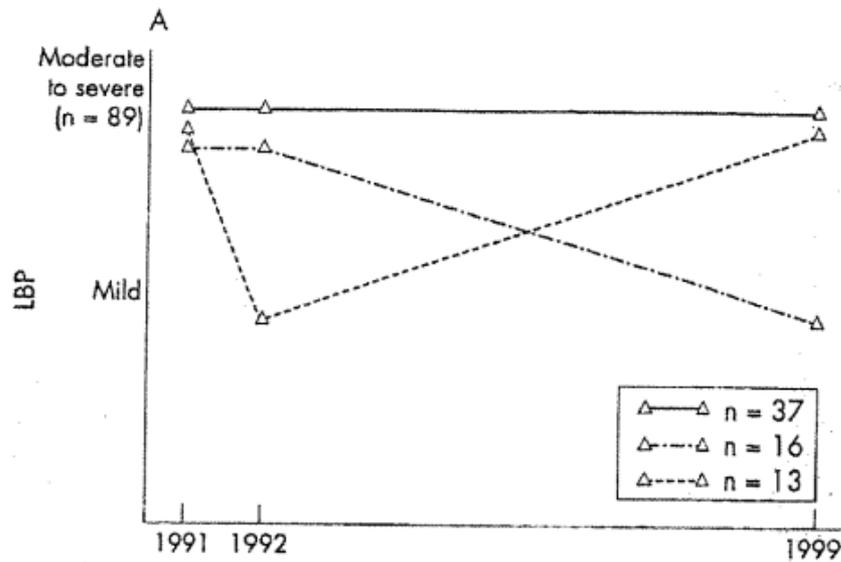


# Imagine...



... you are the helmsman, facing the decisive race, and your crew is incomplete

# Does chronic pain make people unable to work? Longitudinal study over 8 years USZ



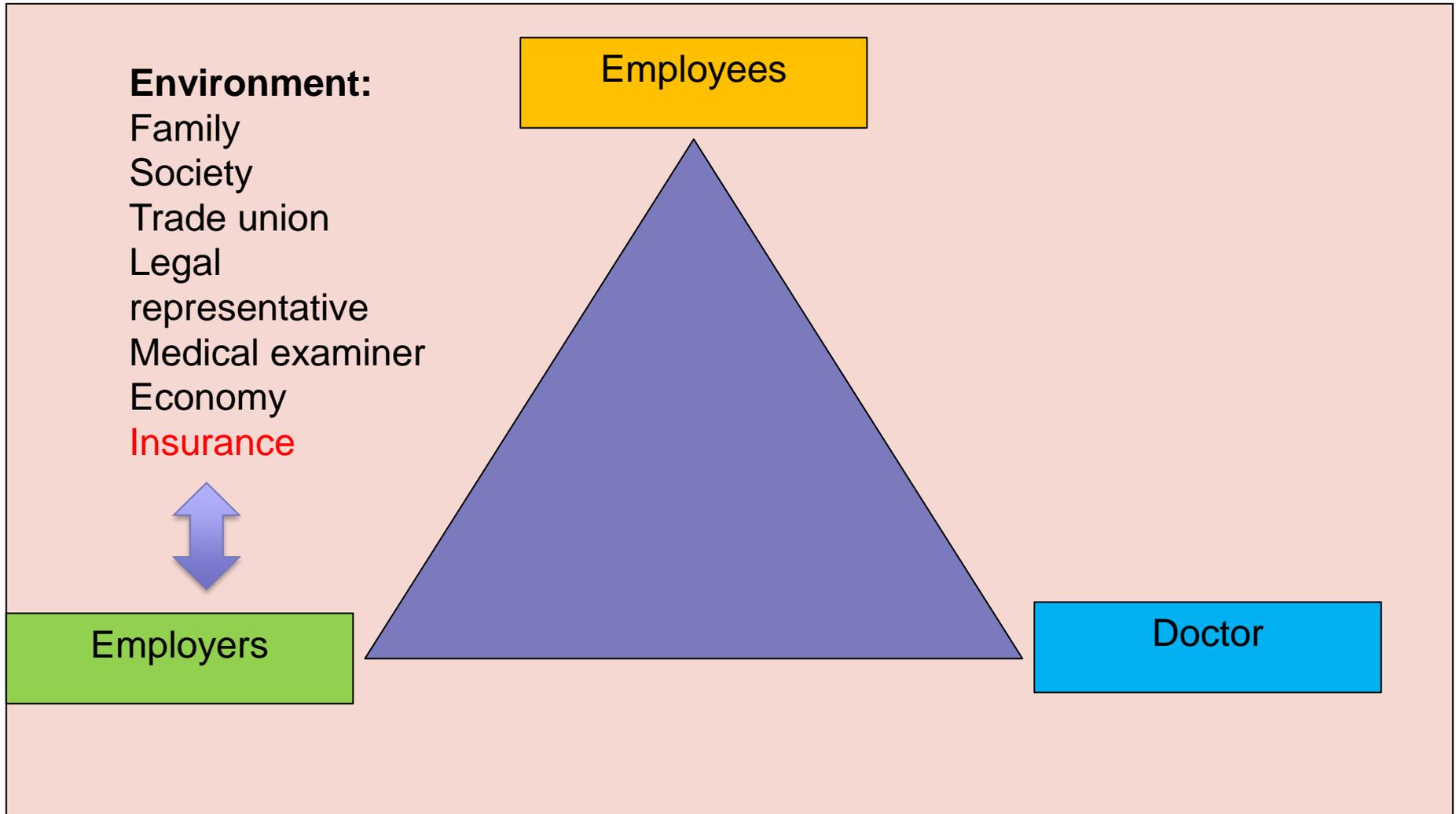
Chronic pain is common, "stable" over years and employees continue to work (Maul et al. 2003)

# Case study



- 43-year-old floor layer foreman, unskilled, has been experiencing elbow pain for 6 months, visits GP – NSAIDs and 2 weeks 100% of work
- Returns after 4 weeks, worked after temporary improvement, complaints increasing
- Referral to rheumatologist, confirmation of "golfer's elbow" – physiotherapy initiated, work reduced to 50% (attendance ½ day)
- 5 months after initial consultation, significantly better, working 70%, complaints stable, improving after PT – employer wants to know how to proceed

# Roles



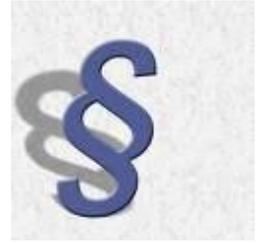
# Incapacity for work (Art. 6 ATSG)



Incapacity for work (AUF) is the **impairment** of physical, mental or psychological **health**, resulting in a complete or partial **inability** to perform work in one's **previous occupation or area of responsibility**.

In the case of long-term incapacity, reasonable work in **another occupation** or area of responsibility is also taken into account.

# AUF: psychosocial factors not usually covered by insurance



- Age
- Economic situation
- Situation on the labour market
- Unemployment
- Sociocultural factors
- Family circumstances
- Labour disputes
- Level of education
- Language
- Ethnicity
- Religion
- Motivation
- Aggravation

These factors may be the cause of misjudgements in the AUF—as sub-factors in the assessment, they may be significant

# Reasons for restriction

- Safety
  - Increased risk of accidents:  
Reduced concentration and errors
- Health
  - Imminent damage or deterioration of the condition
- Work performance
  - Functional deficits in comparison to work requirements
- Quality of life
  - Psychological decompensation as a result of excessive strain on pain tolerance or exhaustion, anxiety, depression

# Elements of the description of a person's ability to work

- **Level of resilience, stress tolerance**
- **Frequency**
- **Special circumstances**
- **Appropriate measures for implementation**

- **Working hours (attendance time/breaks)**

- **Additional work-related performance losses**  
within the scope of working hours

- *Reference: Regular or adjusted work!*

# Assessment of work capacity in chronic pain disorders – what does the Federal Court say?

## **Before 2015:**

### **Principle of surmountability:**

Exceptions rare, based on the application of the "Förster criteria"

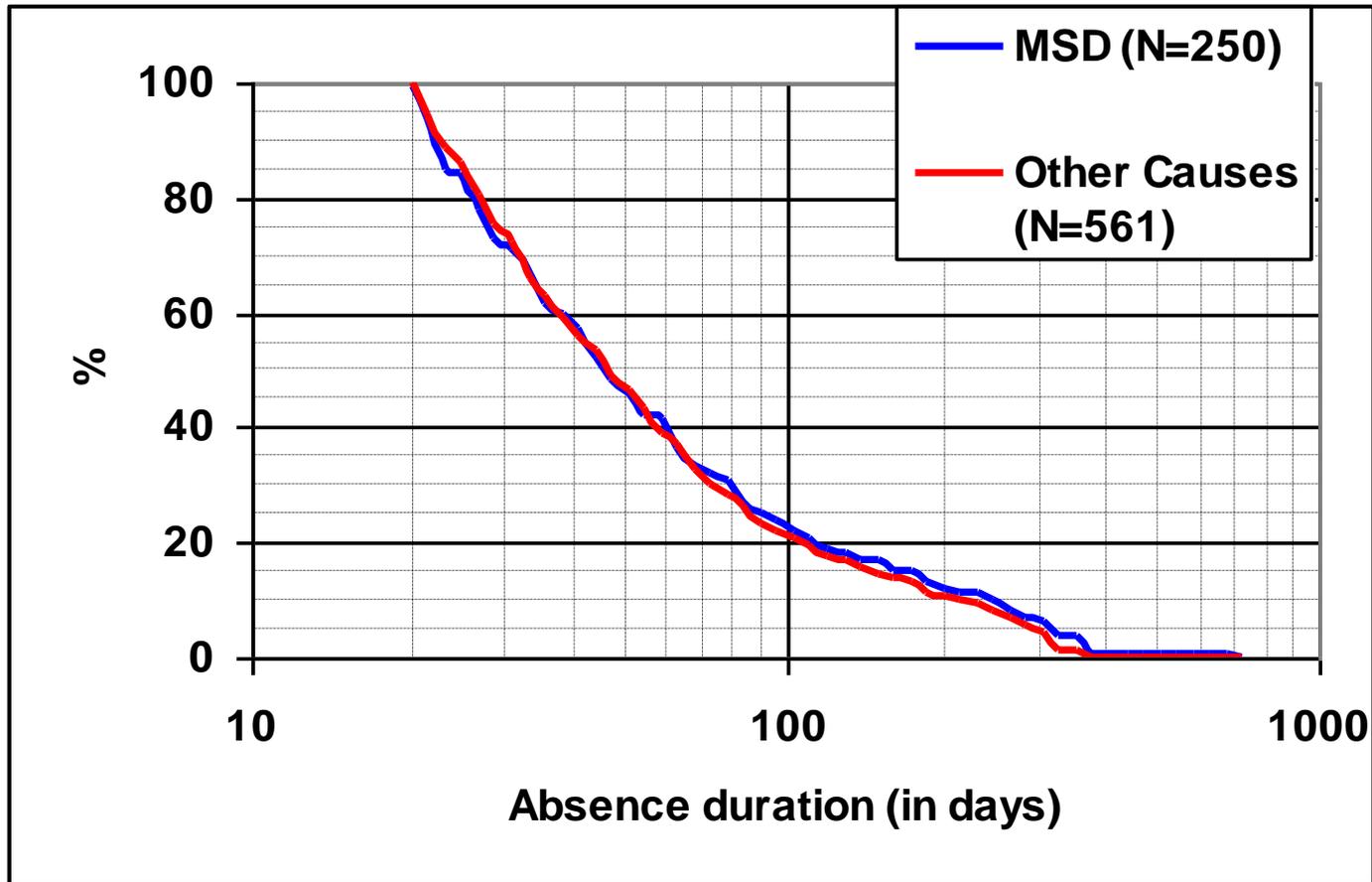
## **From 2015 (BGE 141 V 281) Assessment of functional capacity:**

The focus is not solely on the diagnoses, but primarily on the resulting functional limitations (analogous to ICF). The disability should be (indirectly) demonstrated using indicators.

# Indicators according to BGE 141 V 281 E

- Category "functional severity"
  - Complex "health impairment"
    - Severity of diagnosis-relevant findings
    - Success or resistance to treatment and integration
    - Comorbidities
  - "Personality" complex (personality diagnostics, personal resources)
  - Complex "Social context"
- Category "Consistency" (aspects of behaviour)
  - Consistent restriction of activity levels in all comparable areas of life
  - Treatment and integration history showing proven psychological distress

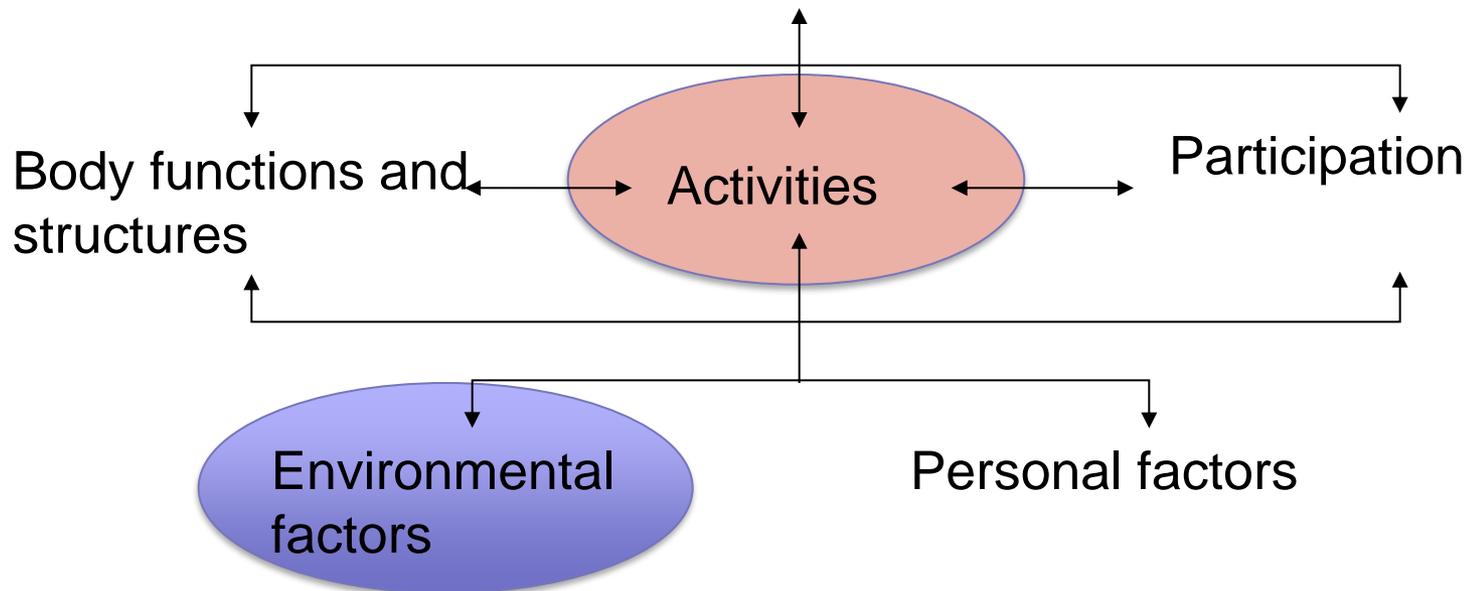
# Does the diagnosis help?



Danuser et al. (2010)

# ICF Framework as the basis of estimating work capacity

**Health problem (health disorder or illness)**



# Case study: Floor layer foreman

## Requirement

- Levelling with a lath, 8 hours/day
- Repetitive pulling with simultaneous exertion of force and stabilisation



## Stress

- Repetitive pulling with simultaneous exertion of force and stabilisation All day, sometimes to often
- Performance approx. 70% ( in accordance with information by employer)

**70% P= 70% WC all day**

# Roles and pitfalls of WC testimony

- Medical history – Delayed investigations – Focus on diagnoses
- Lack of knowledge or assessment of job requirements
- Uncertainties in assessing resilience
- Insufficient knowledge of legal requirements
- Unclear communication, lack of agreements, lack of goals
- Role conflicts
- Time frame for reintegration
- Reference slipped under the door
  
- No go: different assessments sent to different addresses!

# Patients without non-organic physical signs (n=132)

Test	20–45		45-60 years	
	F/23	M/46	F/18	M/45
Lifting FW	15.4+/-7.2	25.3 +/-10.7	13.1+/-4.2	23.0+/-9.7
Lift H	17.9+/-5	30.9+/-11.5	17.6+/-5.0	26.7+/-9.6
Lifting WH	11.1+/-5	18.7+/-6.1	10.7+/-1.9	16.7+/-6.1
Hand force r	22.7+/-9	45.3+/-9.4	22.1+/-8.4	39.1+/-11.6

# Instruments and aids

## Main instruments:

- reWork profile and SIM AF certificate
- Self-assessment of own performance (**SELF**)

## Additional instruments:

- Evaluation of work-related functional performance (**EFL** IG Ergonomics SAR)
- Neuropsychological assessments
- Ergonomic workplace assessment (**APA** IG Ergonomics SAR)



## 2. reWork Profile – a digital dialogue tool for employers

### Promoting partial work capacity through a SIM work capacity certificate







## 2. reWork Profile – a digital dialogue tool for employers

### Role of the doctor





# Design "Form"

## The SIM certificate of fitness for work:

### Integrated process

1. Personal data from the reWork profile is transferred to the SIM form

2. Doctor's assessment: Partial work capacity / reintegration

3. Signature

### Arbeitsfähigkeitszeugnis

Erläuterungen siehe Rückseite / Folgeseite  
 Weitere Information: Einsatz des SIM-Arbeitsfähigkeitszeugnisses unter  
<https://www.swiss-insurance-medicine.ch>

**Arbeitnehmer:in:**

Vorname / Name

Strasse / PLZ / Ort

Geb.-Datum:

Geschlecht:

AHV-Nr.:

Telefon:

E-Mail:

**Arbeitgeber:in:**

Firma

Strasse / PLZ / Ort

Kontaktperson:

Telefon:

E-Mail:

**Anstellung:**

Funktion / ausgeübter Beruf

Arbeitszeit:

Pensum: %

Wochenarbeitszeit in Stunden: Std.

Einsatztage:

**Von Arzt/Ärztin auszufüllen**

Krankheit    Unfall    Berufskrankheit

**Volle Arbeitsunfähigkeit**                      basierend auf:    reWork Profil vom

Konsultationsdatum		von	bis	nächste Konsultation	Visum
	100%				
	100%				
	100%				

Es liegt eine arbeitsplatzbezogene Arbeitsunfähigkeit vor     ja     nein

**Teilarbeitsfähigkeit / Reintegration**                      basierend auf:     reWork Profil vom

Konsultationsdatum	mögliche Präsenzzeit Std. pro Tag	% des vertraglichen Pensums	Einschätzung der Leistungsfähigkeit in der Präsenzzeit in 25%, 50%, 75%, 100%	Einschätzung der Arbeitsfähigkeit gesamt in %	von	bis	nächste Konsultation	Visum
Berechnungsbeispiel	4	50%	75%	50% x 0.75 = 37.5%				
Berechnungsbeispiel	4	50%	100%	50% x 1.00 = 50%				

Wiederaufnahme der Arbeit zu 100% ab:

**Kontakt mit Arbeitgeber:in erwünscht:**

Ja, bitte Kontaktnahme     Nein, keine Kontaktnahme

Datum, Ortschaft

Bemerkungen

Unterschrift

Swiss Insurance Medicine  
 Versicherungsmedizin Schweiz  
 Médicine d'Assurance Santé  
 Medicina assicurativa Svizzera

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reWork Profil mit dem SIM-Arbeitsfähigkeitszeugnis  
<https://rework.compasso.ch>

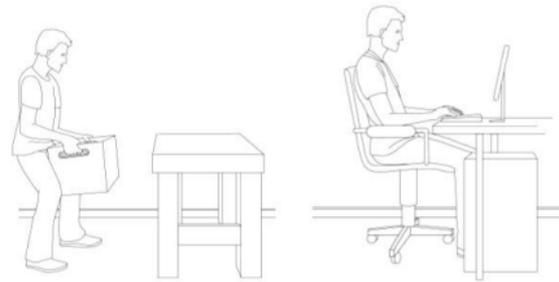
# SELF (Self-evaluation of one's own performance ©BERE SIM)

- Max. score 80
- Reliable
- Good predictability of rehabilitation success, motivation for EFL and RTW\*
- For EFL: before/after testing – flexibility?

[self.questionnaire@gmail.com](mailto:self.questionnaire@gmail.com)

Swiss-insurance-  
medicine/en/about-us/specialist-  
group-bereself

Abbildungen aus dem SELF



Bewertungsskala

Möglich		eingeschränkt			Unmöglich	
		leicht	mittel	stark		
1	2	3	4	5		

## Vorteile des SELF-Fragebogens auf einen Blick:

- Arbeits- und alltagsbezogenen Aktivitäten
- Fragen mit Bildern und wenig Text
- Kompakter Umfang
- Zahlreiche Sprachversionen
- Wissenschaftliche Validierung

# Evaluation of work-related performance (IG Ergonomics SAR)



# Lifting from the floor and carrying

# Validation of PBA in patients with chronic back pain

The screenshot shows a web browser window displaying a PubMed article. The address bar shows the URL [www.ncbi.nlm.nih.gov/pubmed/26149617](http://www.ncbi.nlm.nih.gov/pubmed/26149617). The page header includes the NCBI logo and navigation links. The article title is "Development and Validation of a Pain Behavior Assessment in Patients with Chronic Low Back Pain" by Meyer K<sup>1</sup>, Klipstein A, Oesch P, Jansen B, Kool J, Niedermann K. The abstract text is as follows:

**Abstract**  
Purpose High levels of pain behavior adversely affect the success of multidisciplinary rehabilitation of patients with chronic nonspecific low back pain (CNSLBP). Functional capacity evaluation (FCE) assessment should detect high levels of pain behavior to prevent the inclusion of unsuitable patients to functional rehabilitation programs. The aim of this study was to develop a Pain Behavior Assessment (PBA) and to evaluate its construct validity. Methods The PBA was developed by experts in the field and is literature-based. Inclusion criteria for participants of the validation study were: CNSLBP, age 20-60 years, referral for fitness-for-work evaluation. The PBA was applied by physiotherapists during FCE. Rasch analysis was performed to evaluate the construct validity of the PBA. Internal consistency was indicated by the person separation index (PSI), which corresponds to Cronbach's alpha. Results 145 male (72.6%) and 55 female patients were included. Rasch analysis removed 11 items due to misfit and redundancy, resulting in a final PBA of 41 items. Item mean fit residual was -0.33 (SD: 1.06) and total item Chi square 100.39 ( $df = 82$ ,  $p = 0.08$ ). The PSI value was 0.83. DIF analysis for age and gender revealed no bias. Conclusions The PBA is a valid assessment tool to describe pain behavior in CNSLBP patients. The high PSI-value justifies the use of the PBA in individuals. The PBA may help to screen patients for high levels of pain behavior.

PMID: 26149617 [PubMed - as supplied by publisher]

The right sidebar contains several sections: "Full text links" with a SpringerLink logo, "Save items" with an "Add to Favorites" button, "Similar articles" with a list of related papers, "Related information" with a MedGen link, and "Recent Activity" with a list of recent searches and publications.

# Patients with (Wpos) and without (Wneg) non-organic physical signs

Test	Wneg	Wpos	Wneg	Wpos
	M	M	F	F
Lifting floor to waste	25	11	15	8
Carry re	22+/-4	12+/-4	14	7.5

# Case study 1

- 45-year-old male, computer scientist.
- Since the age of 24, pain initially in the left shoulder, spreading over several months to the entire musculoskeletal system, changing location, "jumping", drilling and stabbing in nature.
- Performs well when feeling good, long-term regular endurance sports (cycling). Two years ago, deterioration with persistent pain, even at night, giving up sport, prolonged sick leave. For eight months, gradually increasing work at the same job, less project work, more home office, up to 70%, after eight weeks reduced again to 50% due to increased pain, sleep disorders and diarrhoea (accompanied by job coach IV).
- Application for pension, bi-disciplinary IV assessment (rheumatological-psychiatric).

# Case study 1

- Rheumatological: Confirmation of WSPS, fibromyalgia type, primary. AF to be determined by two disciplines.
- Psychiatric: Chronic pain with somatic and psychological factors F45.41, anankastic personality disorder F60.5.
- AF of 50% based on indicators, confirmed by two disciplines. Activity already optimally adapted.

# Case study 2

- 22-year-old female, chronic lumbosacral pain, partly sciatic in nature, on the left side since landing on a high jump bar at the age of 13. Persistent. Sleep disturbances accentuated since no regular professional activity.
- At age 18, diagnosis of "pre-radiological" ankylosing spondylitis and over 3 years various basic therapeutics including biologics with discontinuation due to side effects and insufficient effect. At age 22 (6 months ago), DH surgery on L5 left with temporary moderate improvement in sciatica, similar to 8 previous infiltrations. MRI: No recurrence of hernia, postoperative scarring.
- Exemption from teaching in 3rd year due to bullying and fulfilment of graduation criteria. Termination of apprenticeship as graphic designer in 1st year. Initial training through IV with business school, successfully completed. Since then, only short-term jobs, most recently 80% for 4 months, reduced to 50% after only 2 weeks. Re-registration with IV, which (for the time being?) initiated an assessment of the situation by means of a rheumatological consultation and EFL ("function-oriented medical assessment").

# Case study 2

- Chronic rheumatological lumbospondylogenic S., possible SpA, postural insufficiency. Incipient discopathy. No hyperlaxity. Not radicular!
- EFL: good, moderately heavy work (rarely lifting up to 25 kg), slightly restricted work in a forward-leaning position while standing and when working overhead. SELF 37/80 before testing, 71/80 after testing. Slept well between test days.
- Objectively not restricted in her work as an administrative employee, but support with job applications/starting work should be considered (for non-rheumatological reasons).

# Case study 3

- 30-year-old female logistics employee, not dismissed.
- For about a year, sudden onset of whole-body pain, despite sometimes heavy work (frequent handling of medium-heavy loads), hardly any work-related complaints. On sick leave for 3 months due to fibromyalgia (rheumatologist) and excessive stress.
- During SB (KTG), high VAS scores, little modulation, ACR criteria WSPS 2010 fulfilled (WPI and SSS maximum), sleep disorders, concentration disorders, lack of energy, joylessness; no tender points, unremarkable movement behaviour, unremarkable clinical examination. Hand strength 18 kgF bds. SELF 37/80.
- Same employer (logistics company) for 6 years, current job since maternity leave 3 years ago: night shift 60%, usually from 7 p.m. to 3 a.m., sometimes until 6 a.m. due to excessive workload. Childcare during the day, husband looks after children at night. Increasing excessive demands.
- Bi-disciplinary assessment on behalf of KTG Insurance

# Case study 3

- No relevant rheumatological findings, consistent reduction in hand strength, but without organic structural correlation.
- From a rheumatological point of view, fit for work in logistics, reservation regarding night shifts, to be confirmed by a psychiatrist.
- Psychiatric assessment confirmed severe depressive episode, appropriate treatment according to guidelines (not yet taken place), currently 100% AUF.

# Conclusion: Chronic pain and ability to work

- Chronic pain is heterogeneous, as is the approach to assessing work ability
- Bio-psycho-social model as a basis, distinction between "soma" and "psyche" (and responsibility) does not correspond to medical thinking – partly coincidental
- Transparency is crucial
- Considering legal context
- Long-term and complete incapacity for work should be avoided and usually leads to unemployment – a lack of prospects makes people ill!

- [www.rework.compasso.ch](http://www.rework.compasso.ch)
- [www.swiss-insurance-medicine.ch](http://www.swiss-insurance-medicine.ch)
- [www.admin.ch](http://www.admin.ch)
- [www.aeh.ch](http://www.aeh.ch)

Thank you for your attention!