

# The burden of musculoskeletal disorders in Belgium - a national population-based study

**Presenter: Vanessa Gorasso**

Co-authors: Johan Van der Heyden, Robby De Pauw, Ingrid Pelgrims, Karin De Ridder, Stefanie Vandevijvere, Stijn Vansteelandt, Bert Vaes, Delphine De Smedt, Brecht Devleeschauwer

# Background

*International data says ...*

approximately 1 in 3 people live with a chronic, painful musculoskeletal disorder.

World Health Organization

- Low back pain was the leading cause for disability
- Osteoarthritis increased steeply in prevalence and will be one of the leading future causes

Global Burden of Disease study

*... but what is the specific situation for Belgium?*



Belgian Burden of Disease study

Provides a summary of morbidity and mortality outcomes for most prevalent NCDs

# Methods

## *Belgian Burden of Disease study*

Prevalence

Years Lived with Disability

Disability-Adjusted Life Years



Low back pain

Neck pain

Osteoarthritis

Rheumatoid arthritis

**Multiplicative  
adjustment**



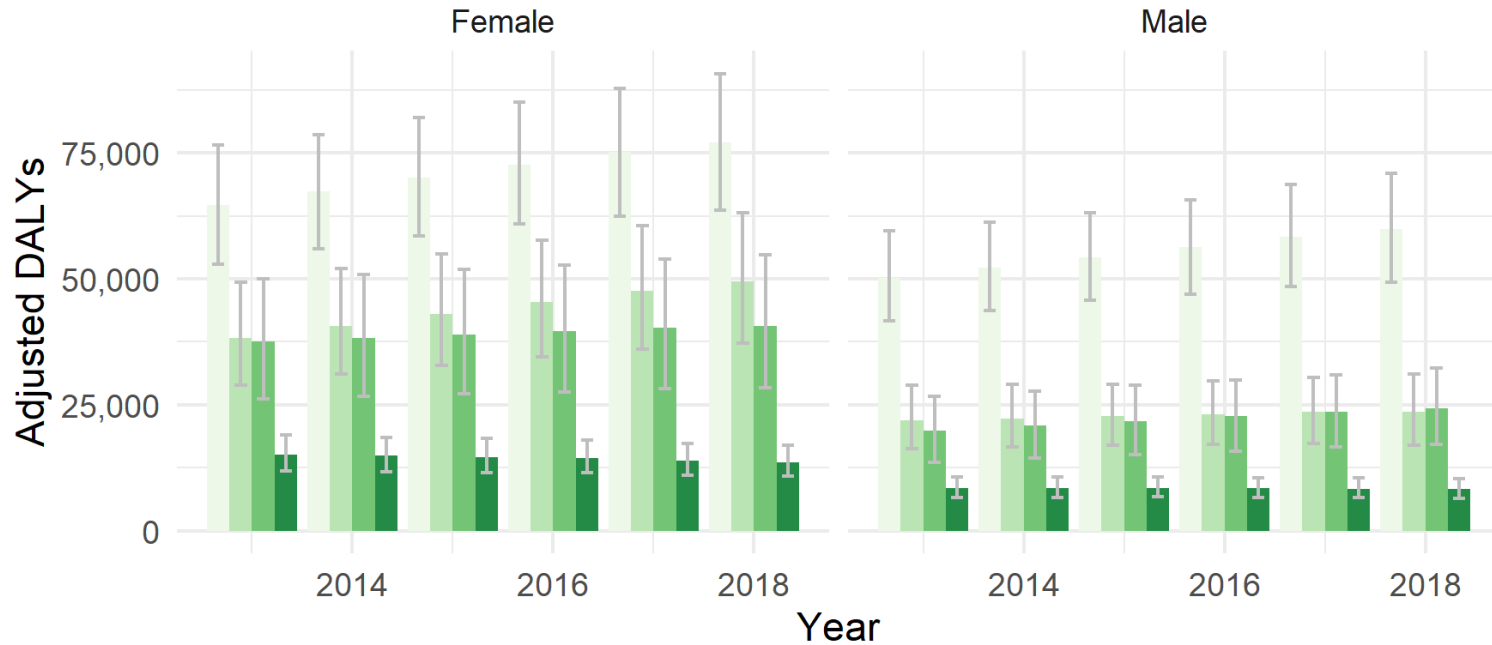
**Data  
source**

Prevalence: **Belgian Health Interview Survey** 2013 and 2018 – linear interpolation for the years in between

Disability Weights: **Global Burden of Disease** study

Cause-specific deaths: **Belgian mortality registry** – only for rheumatoid arthritis

# Musculoskeletal disorders in Belgium



Musculoskeletal disorder: LBP NKP OST RHE



Female are more affected by MSK disorders than men



LBP is the largest contributor to the health burden



All MSK disorders show a rapid increase over time

# Conclusions

## *Musculoskeletal disorders are a public health problem in Belgium*

**2.5 million Belgians** suffer from at least one musculoskeletal disorder, costing **300,000 disability-adjusted life years every year**

Need to target risk factors:

- Occupational risk factors
- Overweight and obesity



### Poster presentation on economic impact

#### Direct and indirect costs attributable to musculoskeletal disorders in Belgium

Vanessa Gorasso<sup>1</sup>, Johan Van der Heyden<sup>2</sup>, Robby De Pauw<sup>3</sup>, Ingrid Pelegrius<sup>4</sup>, Karin De Ridder<sup>5</sup>, Stefanie Vandeweyer<sup>6</sup>, Stijn Vansteelandt<sup>7</sup>, Bert Vaeys<sup>8</sup>, Delphine De Smet<sup>9</sup>, Brecht Devleeschauwer<sup>10</sup>

<sup>1</sup> Department of Epidemiology and Public Health, Sciensano, Brussels, Belgium; <sup>2</sup> Department of Public Health and Primary Care, Ghent University, Ghent, Belgium; <sup>3</sup> Department of Rehabilitation Sciences, Ghent University, Ghent, Belgium; <sup>4</sup> Department of Occupational and Physical Health, Sciensano, Brussels, Belgium; <sup>5</sup> Department of General Occupational and Physical Health, Ghent University, Ghent, Belgium; <sup>6</sup> Department of Health Economics, London School of Hygiene and Tropical Medicine, London, UK; <sup>7</sup> Department of Public Health and Primary Care, KU Leuven, Belgium; <sup>8</sup> Department of University Public Health and Food Safety, Faculty of Bioscience Engineering, Ghent University, Ghent, Belgium

#### Objectives

Musculoskeletal disorders are the major contributors to the loss of productive life years. This study aimed to summarize the average yearly economic impact of low back pain, neck pain, osteoarthritis and rheumatoid arthritis in Belgium from 2013 to 2017.

#### Key messages

- Musculoskeletal disorders have a great societal cost in Belgium
- This study can be used as an input to highlight the potential savings deriving from interventions on the working population

#### Methods

**Data sources**

Belgian Health Interview Survey 2013-2018      Individual health insurance costs (2013-2017)

← linked with →

Direct costs included ambulatory care, hospital care and reimbursed medication; Indirect costs included cost for days absent from work.

#### Statistical analysis

We computed the **direct and indirect attributable cost of excess weight**. Compare cost of the observed population with the costs of a population where we assume that everyone is normal weight – method called **g-computation**.

#### Results

25% of Belgian adults were affected by at least one musculoskeletal disorder in 2018

	Cost ratio (95%CI)	Mean attributable cost (95%CI)
Low back pain	1.43** (1.15; 1.79)	2,405€ (817€; 4,059€)
Neck pain	1.36* (1.03; 1.8)	2,212€ (75€; 4,419€)
Osteoarthritis	1.05 (0.87; 1.27)	299€ (24€; 739€)
Rheumatoid arthritis	1.07 (0.86; 1.32)	288€ (-31€; 789€)

**Adjusted direct costs** - \*\*p<0.05, \*p<0.10

15% of the working population had at least one musculoskeletal disorder. **People with low back pain** were the only showing a significantly higher indirect cost with an **adjusted cost of 5,875€ per capita**.

**Total costs**  
Every year the total adjusted healthcare cost amounted to more than € 3 billion  
On average every year Belgium spends around € 2 billion for work absenteeism