

# Prevalence & burden of active chronic low back pain in the adult Portuguese population – results from a population based study (EpiReumaPt)

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## Background:

Chronic LBP (CLBP) causes enormous economic burden on individuals, families, communities, and society - is one of the greatest causes of loss of productivity through absenteeism, presenteeism and early retirement.

## Objectives:

- . To determine the prevalence of active CLBP in the adult Portuguese population
- . To compare the active CLBP population with Portuguese population with no active CLBP, in terms of health care consumption, absenteeism, early retirement, anxiety symptoms
- . To explore factors independently associated with active CLBP in the Portuguese population

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## Methods

EpiReumaPt was a **cross-sectional, population-based study** conducted in a representative sample of Portuguese population (**10,661 subjects**).

To provide data analysis, a **univariate analysis** was first performed to assess the differences between the populations of individuals with active CLBP and the population without active CLBP (fig1).

An **adjusted comparison** between both populations was also carried out to assess a set of variables. To assess factors associated with active CLBP, a **multiple logistic regression model** was used.

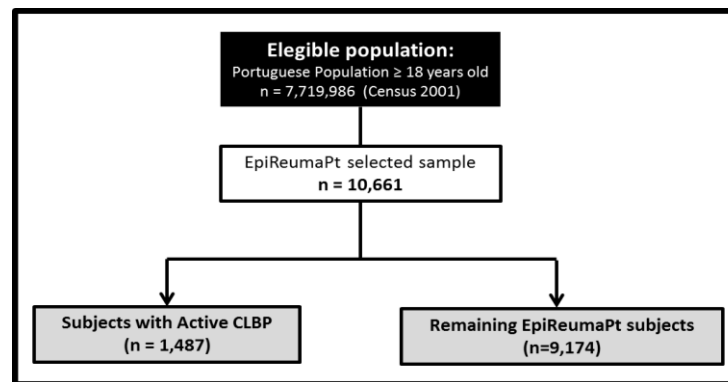


Fig.1 - Flowchart of study design

**Active CLBP was defined** as self-reported pain in the back area from the lower margin of the twelfth ribs to the lower gluteal folds, with or without pain referred to the lower limbs, present in the day of the interview and that was present in the majority of time for at least 90 days.

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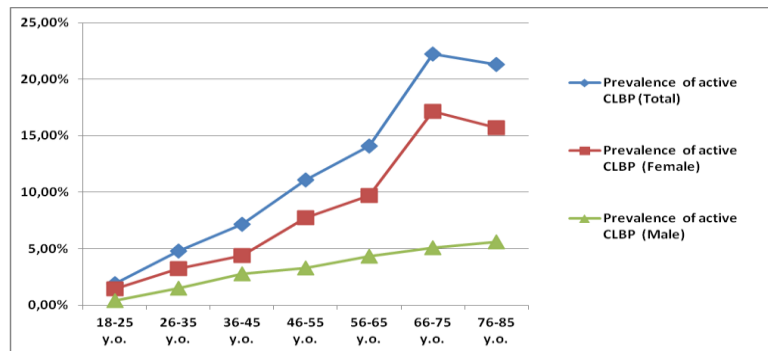
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## Results

**Table 1:** Prevalence of active CLBP in the Portuguese population

	Prevalence of active CLBP in Portuguese population	95% CI	p-value
<b>Total (n=10,661)</b>	<b>10.37%</b>	<b>(9.56%;11.87%)</b>	<b>--</b>
<b>Gender</b>			
Male (n=4,110)	6.26%	(5.44%; 7.09%)	<0.0001
Female (n=6,551)	14.08%	(12.74%; 15.25%)	
<b>NUTS II</b>			
North (n=3,122)	10.64%	(9.25%;12.03%)	0.1087
Center (n=1,997)	11.71%	(10.20%; 13.21%)	
Lisboa e Vale do Tejo (n=2,484)	8.74%	(6.85%; 10.64%)	
Alentejo (n=669)	10.89%	(8.66%; 13.11%)	
Algarve (n=352)	9.62%	(6.64%; 12.60%)	
Azores Islands (n=1,029)	10.43%	(8.63%; 12.23%)	
Madeira Islands (n=1,008)	11.65%	(9.60%; 13.70%)	

NUTS II- Nomenclature of Territorial Units for Statistics (North, Center, Alentejo, Algarve, Lisbon, Madeira and the Azores)



**Figure 2:** Prevalence of Active Chronic Low Back Pain by gender

**Table 2:** Comparison of health status, function, clinical appointments consumption and absenteeism between active CLBP population and the remaining Portuguese population

Health status and function	$\beta$ estimates	95% CI	Adjusted p-value
EQ5D	-0.19	[-0.21;-0.16]	<0.001†
HAQ	0.34	[0.27;0.40]	<0.001†
<b>Mental health</b>			
	<b>OR</b>	<b>95% CI</b>	<b>Adjusted p-value</b>
Anxiety	2.66	[2.05;3.44]	<0.001†
Depression	2.02	[1.41;2.89]	<0.001†
<b>Healthcare consumption</b>			
	$\beta$ estimates	95% CI	Adjusted p-value
Number of physician visits in the last 12 months	1.66	[-4.17;3.74]	0.117
General practitioners	0.10	[0.00;0.20]	0.043†
Rheumatology	0.30	[0.17;0.44]	<0.001†
Orthopedic Rehabilitation medicine Other	0.15	[-0.07;0.38]	0.186
	0.31	[0.00;0.61]	0.048†
<b>Healthcare consumption</b>			
	<b>OR</b>	<b>95% CI</b>	<b>Adjusted p-value</b>
Home care in the last 12 months	2.26	[1.21;4.24]	0.011†
Hospitalizations in the last 12 months	1.18	[0.83;1.69]	0.346
Early retirement due to disease	1.72	[1.17;2.54]	0.006†
Absent from work due to disease in the last 12 months	1.86	[1.33;2.61]	<0.001†
<b>Absenteeism</b>			
	$\beta$ estimates	95% CI	Adjusted p-value
Number of days absent from work due to disease in the last 12 months	3.48	[-9.98;16.94]	0.612

\* All the comparisons were adjusted for the differences found in the univariable analyses: age group, gender, NUTS II, education level, physical exercise, BMI, number of comorbidities and presence of self-reported MSK diseases.

**Table 3:** Factors associated with active CLBP

Sociodemographic characteristics	OR	OR 95% CI	p value
Gender (female)	1.31	1.05; 1.63	0.017†
Age group	1.31	1.06; 1.63	0.001†
BMI	1.16	1.02; 1.32	0.024†
Education level	1.11	0.97; 1.28	0.133
NUTS II	0.98	0.92; 1.04	0.440
Number of Comorbidities	1.11	1.05; 1.18	<0.001†
Present alcohol intake	0.80	0.62; 1.02	0.074
Physical exercise	0.77	0.61; 0.97	0.024†
Anxiety symptoms	2.60	1.98; 3.42	<0.001†
Depression symptoms	1.35	0.90; 2.03	0.148
Self-report of any RMD	2.82	2.14;3.71	<0.001†

RMD-Rheumatic and musculoskeletal diseases

## Conclusion:

Active CLBP is significantly associated with disability and to high level of health care consumption resources.

**Anxiety symptoms, other RMD and other comorbidities are significantly and independently associated with the presence of active CLBP among Portuguese population.**