

# **Health-related Quality of Life of Patients with GERD**

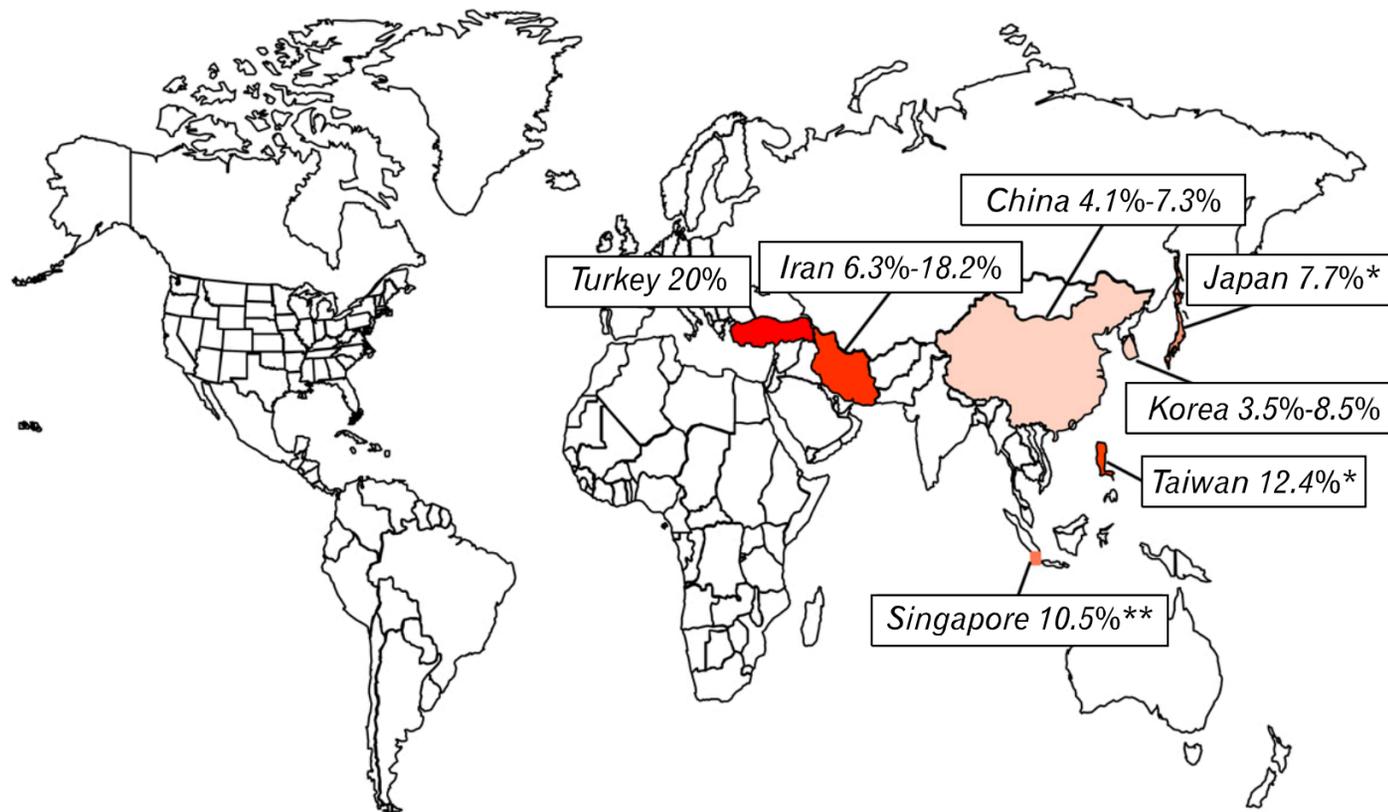
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# GERD IN ASIA (KOREA)

# Prevalence of GERD in Asian population-based study



Jung HK et al., 2011



Spicy



Hot



Spicy +  
Hot



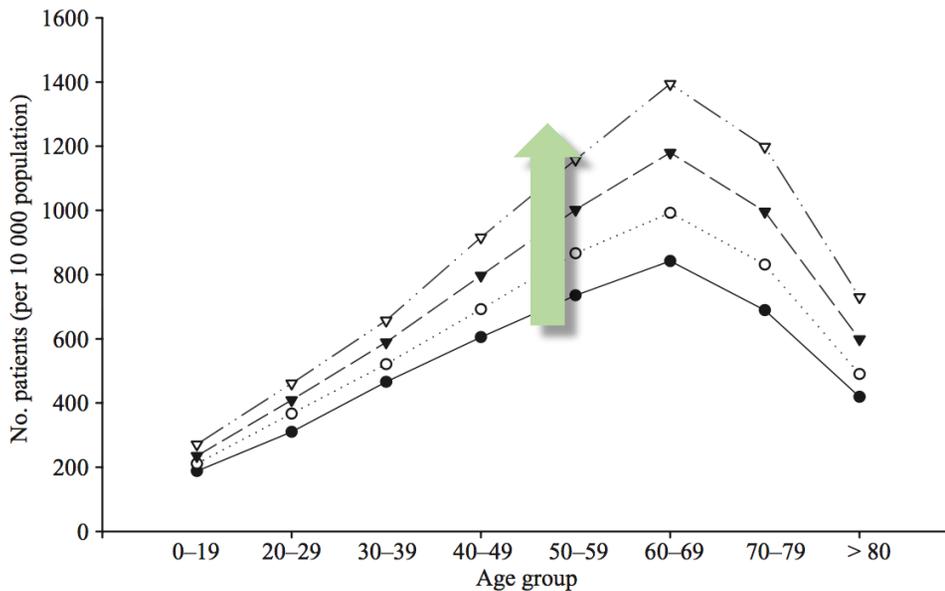
# Probable explanations for the low prevalence of GERD in Asia?

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- Low prevalence and severity of obesity?
- Low prevalence of hiatus hernia?
- Low prevalence of esophageal motor dysfunction?
- Low dietary fat intake?
- Low awareness?
- Low consultation rate?
- Lack of words for accurate description of reflux symptoms ('heartburn')?

# Prevalence of GERD in Asia is Rising Trend ?



## Prevalence of GERD in *Korea*

Dr.-diagnosed GERD increased rapidly from 2005 to 2008. (4.6 %->7.3%)

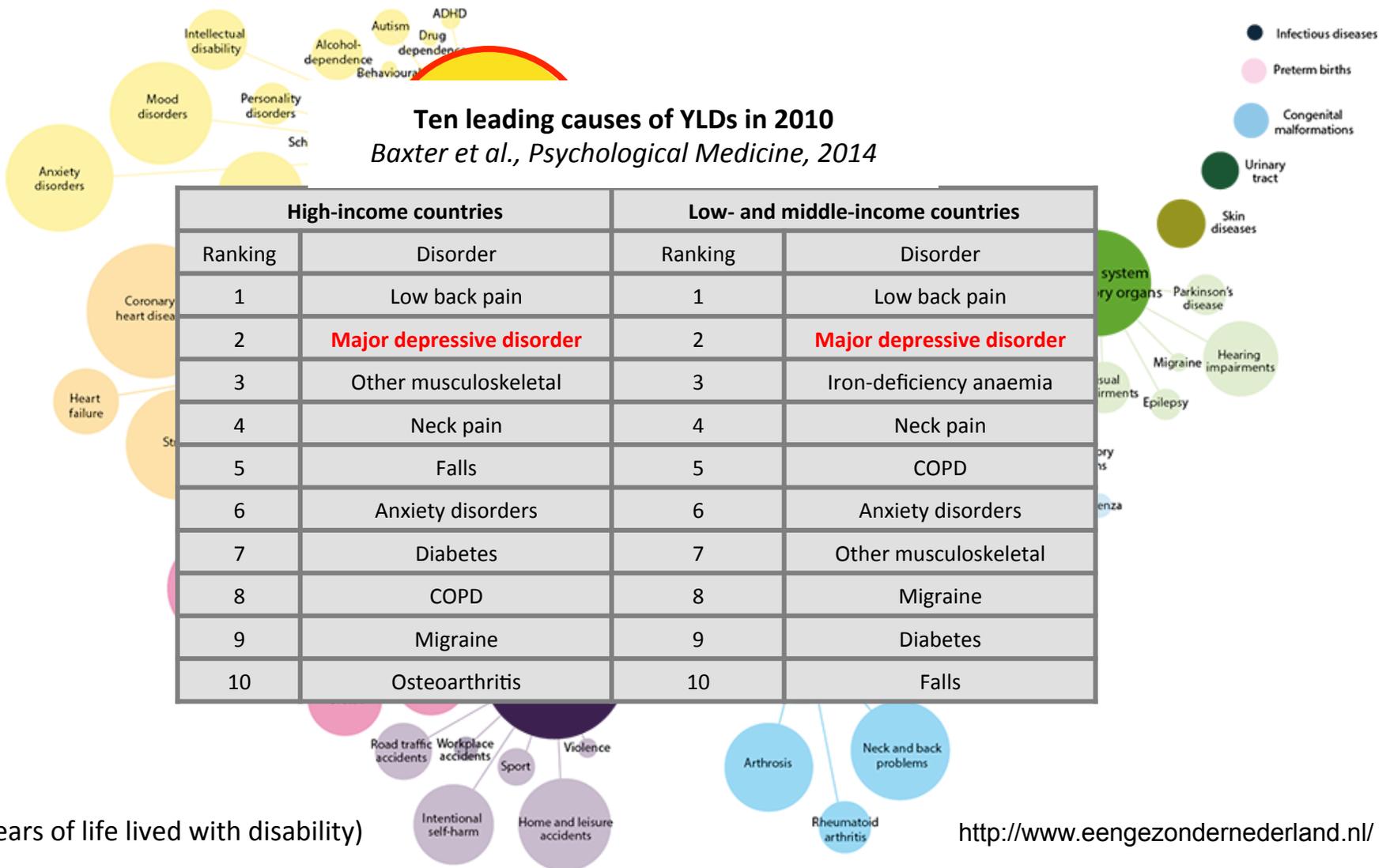
**Figure 1** Age-specific prevalence rates (per 10 000 population) of patients with gastroesophageal reflux disease in Korea. ●, 2005; ○, 2006; ▼, 2007; ▽, 2008.

*Kim KM et al., 2012*



# DEPRESSION IN ASIA (KOREA)

# Global Burden of Depressive disorder



YLD (years of life lived with disability)

<http://www.eengezondernederland.nl/>

# Future Burden of Depressive disorder

2004 Disease or injury	As % of total DALYs	Rank	Rank	As % of total DALYs	2030 Disease or injury
Lower respiratory infections	6.2	1	1	6.2	<u>Unipolar depressive disorders</u>
Diarrhoeal diseases	4.8	2	2	5.5	Ischaemic heart disease
Unipolar depressive disorders	4.3	3	3	4.9	Road traffic accidents
Ischaemic heart disease	4.1	4	4	4.3	Cerebrovascular disease
HIV/AIDS	3.8	5	5	3.8	COPD
Cerebrovascular disease	3.1	6	6	3.2	Lower respiratory infections
Prematurity and low birth weight	2.9	7	7	2.9	Hearing loss, adult onset
Birth asphyxia and birth trauma	2.7	8	8	2.7	Refractive errors
Road traffic accidents	2.7	9	9	2.5	HIV/AIDS
Neonatal infections and other <sup>a</sup>	2.7	10	10	2.3	Diabetes mellitus
COPD	2.0	13	11	1.9	Neonatal infections and other <sup>a</sup>
Refractive errors	1.8	14	12	1.9	Prematurity and low birth weight
Hearing loss, adult onset	1.8	15	15	1.9	Birth asphyxia and birth trauma
Diabetes mellitus	1.3	19	18	1.6	Diarrhoeal diseases

([WHO | Metrics: Disability-Adjusted Life Year \(DALY\)](#))

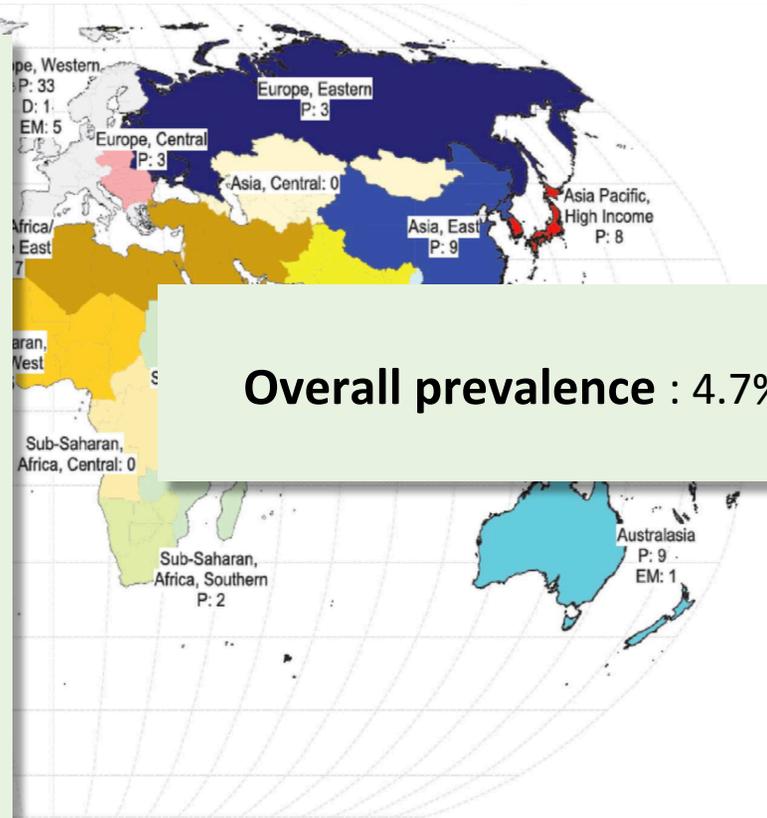
WHO, *The global burden of disease: 2004 update*

# Prevalence of Major Depressive Disorder (MDD)

## Point prevalence by region

- North America : 3.7%
- South America : 4.1%
- Western Europe : 4.7%
- Eastern/Central Europe : 5.1%
- Australasia : 4.1%
- Africa/Middle East : 6.6%
- East/Southeast Asia : 3.96%
- Asia South : 8.6%
- Asia Pacific : 5.6%

**Overall prevalence : 4.7%**



*Ferrari AJ et al., 2013.*

# Prevalence of MDD in *South Korea*



- Point prevalence : 3.6 %
- 1 year prevalence : 1.7 - 2.5%
- Life time prevalence : 4.3 - 5.6%

*Ohayon & Hong, 2006.*

*Cho et al. 2004, 2009*



# QUALITY OF LIFE IN GERD

# Focus of Clinical Interventions

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Biochemical & histological endpoints



Patient-oriented outcomes

Health related quality of life (HQ  
OL)

## Health

- 'not only the absence of disease and infirmity but also the presence of physical, mental, and social well-being'

*World Health Organization*

## Quality of Life (QoL)

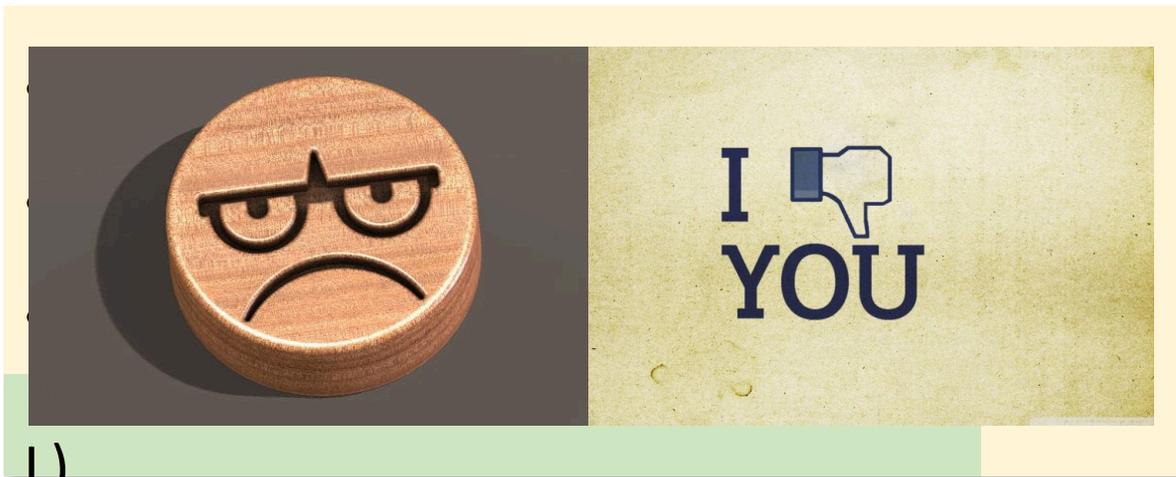
- 'individual's overall satisfaction with life, and one's general sense of personal well-being'

*Shumaker SA et al., 1990*

## Health-Related Quality of Life (HRQL)

- 'Quality of life that encompasses the areas of physical function, somatic sensation, psychological state, and social interactions that are affected by one's health status'

*Kirshner B et al., 1988*



L)

## Assessment of HRQL can help clinical decision-making in the following situations:

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1. When choosing between therapies for which there is only a small difference in survival between treatments.
2. When there is a choice among multiple, clinically effective strategies.
3. When one is considering treating patients with asymptomatic or mildly symptomatic disease.
4. When there are therapeutic tradeoffs between toxicity, survival, and cost.
5. To involve patients in their medical care decision-making.
6. To improve detection of psychosocial impairments in patients with medical disease.

*Eisen GM et al., 1999*



## Quality of Life

- Studies of HRQL have consistently revealed the impact of chronic diseases on several aspects of a patient's physical, emotional, economic and social life.
- GERD QOL instruments have revealed the true impact of GERD on several domains of life quality

# Health Related QoL Instruments Used in GERD -1

GERD-specific					
	Domain addressed	No. items	description	Recall period	validation
GERD-HRQL	Severity of heartburn, conditions of heartburn, dysphagia, dysphagia, effects of medication, flatulence	10	6-point Likert scale , 45(worst)-0(best)	-	Validated (english and portuguese [brazil])
HBQOL	Role physical, pain, sleep, diet, social, mental health	15	0(worst)-100(best)	Previous week, past 30 days	Validated (portuguese [brazil])
WPAI-GERD	Absence from work, reduction in productivity and activity	-	Given in hours per day, and in percent reduction	-	Validated (swedish and english)

# Health Related QoL Instruments Used in GERD -2

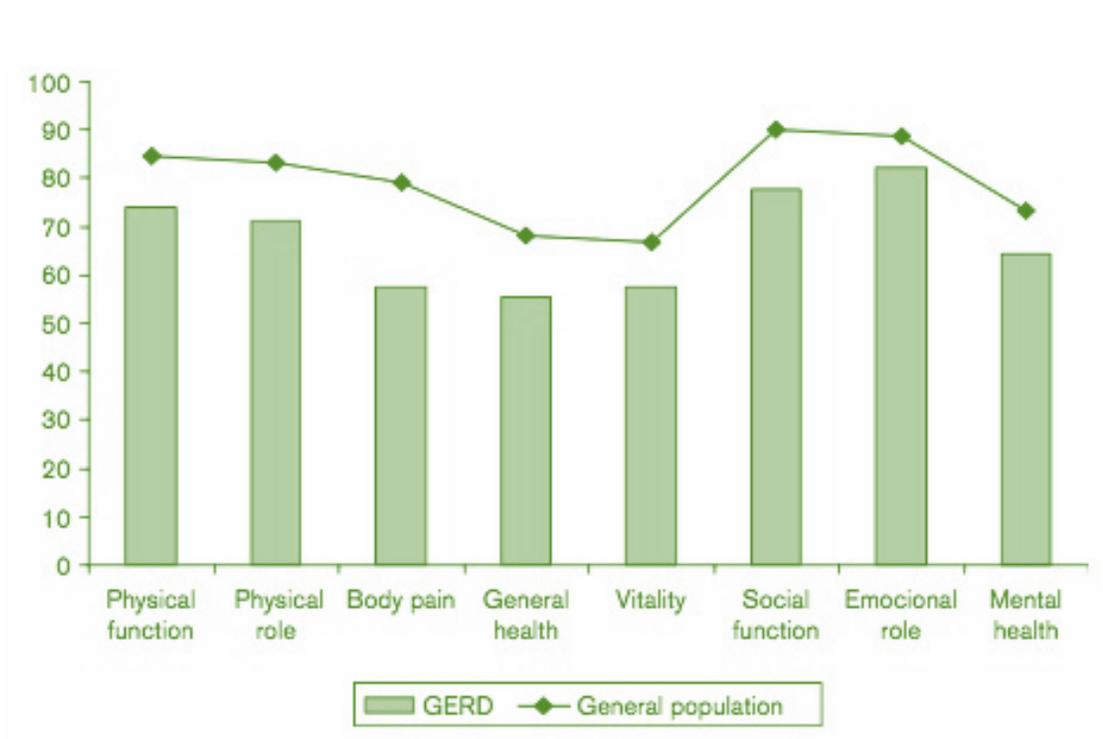
GI-specific					
	Domain addressed	No. items	description	Recall period	validation
QOLRAD	Emotional, sleep, eating problems, physical/social, vitality	25	7-point Likert scale , 1(worst)-7(best)	Previous week	Validated (English, Dutch, Hungarian, Polish, Spanish, German, Italian , Afrikaans, Swedish, Norwegian, Japanese, and ManP olish)
PAGI-QOL	Daily activities, clothing, diet and food habits, relationship, psychological well-being and distress	30	6-point Likert scale	Last 2 weeks	Validated (American English, Dutch, French, German, Italian, and Polish)
GIQLI	Symptoms, physical, emotional and social dysfunction related to GI diseases or treatments	36	5-point Likert scale , 0(worst)-144(best)	Previous 2 weeks	Validated (German and French)

# Health Related QoL Instruments Used in GERD -3

Generic					
	Domain addressed	No. items	description	Recall period	validation
SF-36	Physical functioning, role limitations-physical, bodily pain, vitality, general health perceptions, social functioning, role limitations-emotional, mental health	36	Score 0(worst)-100(best)	Last 4weeks (standard version), last week(acute version)	Validated (English, afrikaans, bengali, bulgarian, chinese, croatian, czech, danish, dutch, estonian, finnish, french, greek, german, hebrew, hungarian, icelandic, indonesian, italian, japanese, kiswahili, korean, norwegian, polish, portuguese, romanian, russian, slovak, spanish, swedish, turkish, welsh, yugoslavian Dutch, Hungarian, Polish, Spanish, swedish, turkish, welsh, yugoslavian)
PGWB	Anxiety, depressed mood, positive well-being, self control, general health, vitality	22	Score 22-132 (higher score better)	Last 4 weeks	Validated (Afrikaans, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hindi, Hungarian, Italian, Japanese, Korean, Latvian, Lithuanian, Mandarin, Norwegian, Polish, Portuguese, Romanian, Russian, Slovak, Slovenian, Spanish, Swedish, Tamil, Telugu, Thai, Turkish, Ukrainian)
EQ-5D	Mobility, self-care, usual activities, pain/discomfort and anxiety/depression	5	Score 0-100(best)	Last 12 months	Validated (English, Afrikaans, Danish, Dutch, Finnish, French, German, Greek, Italian, Mandarin, Norwegian, Polish, Slovenian, Spanish, Swedish)
WHOQOL-BREF	Physical health, psychological, social relationships, environment	26	5 response categories, score 26-130(best)	Last 2 weeks	Validated (Arabic, Bulgarian, Mandarin, Croatian, Czech, Danish, Dutch, English, Estonian, French, German, Greek, Hebrew, Hindi, Hungarian, Italian, Japanese, Kannada, Korean, Lithuanian, Malay, Norwegian, Polish, Portuguese, Russian, Shona, Slovak, Spanish, Swedish, Tamil, Thai, Turkish, Urdu, Zambian)

# General Impact of GERD on HRQL

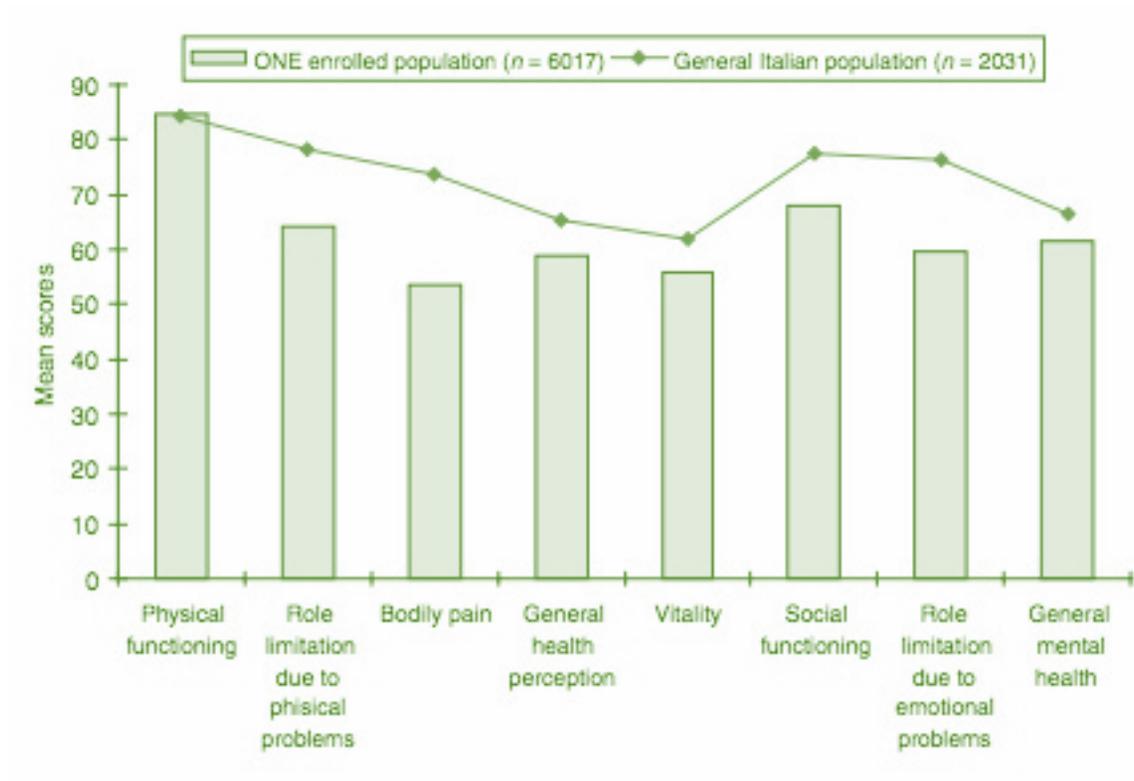
SF-36  
health  
survey



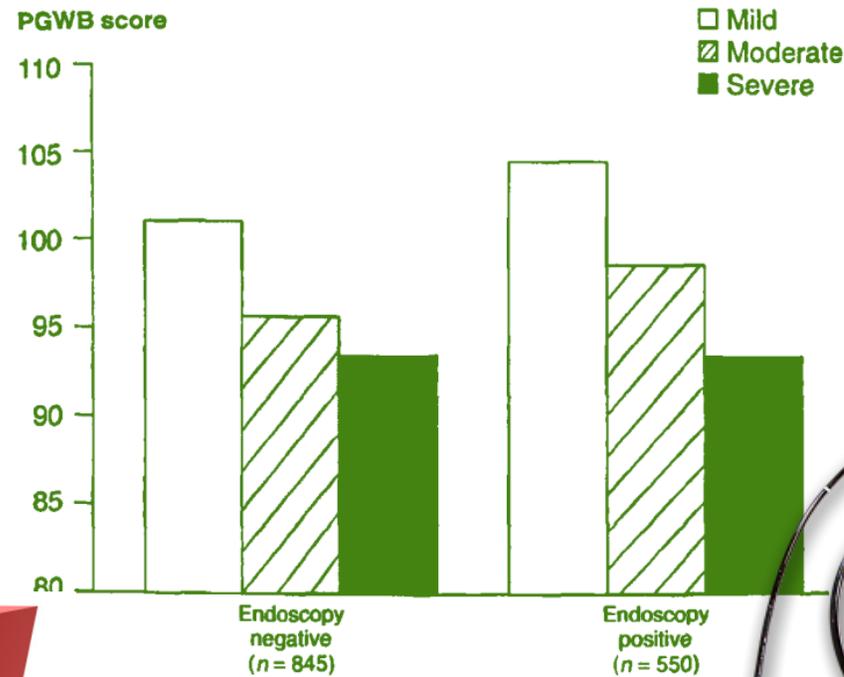
*Ponce J et al., 2009*

# Quality of life in Non-erosive and Mild Erosive GERD

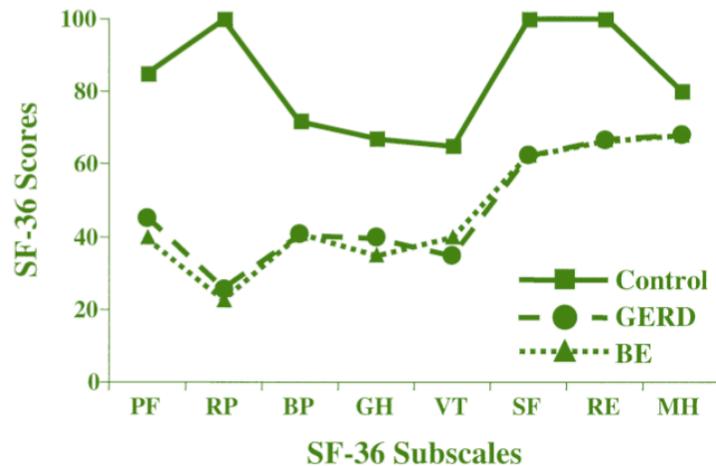
SF-36 health survey



# Influence of Symptom Severity on General Well-being according to the Endoscopic Finding



# HRQL for Controls, GERD patients, and BE patients

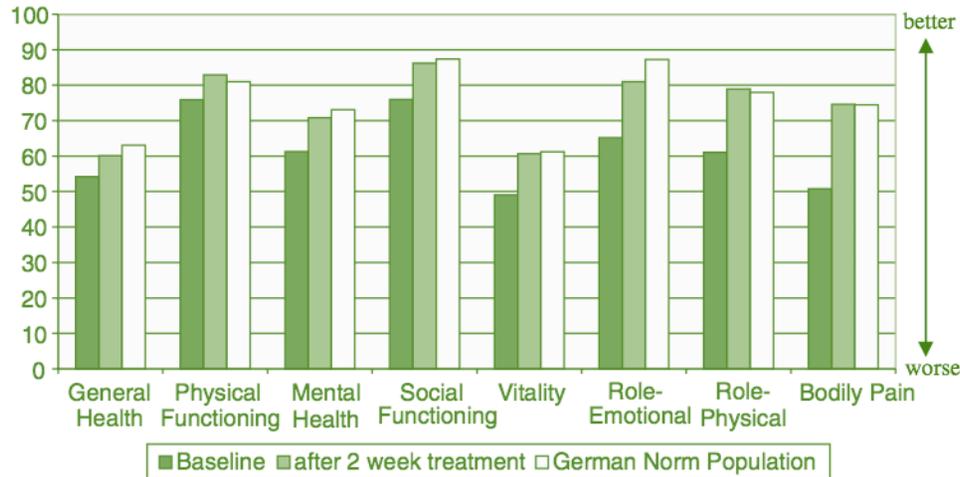


**Figure 3.** Median scores for the MOS SF-36 (eight subscales) for controls, GERD patients, and BE patients. Abbreviations: BE = Barrett's esophagus; BP = bodily pain; GERD = gastroesophageal reflux disease; GH = general health; MH = mental health; MOS SF-36 = Medical Outcomes Study, short form; PF = physical functioning; RE = role emotional; RP = role physical; SF = social functioning; VT = vitality. Higher scores are associated with a better quality of life.

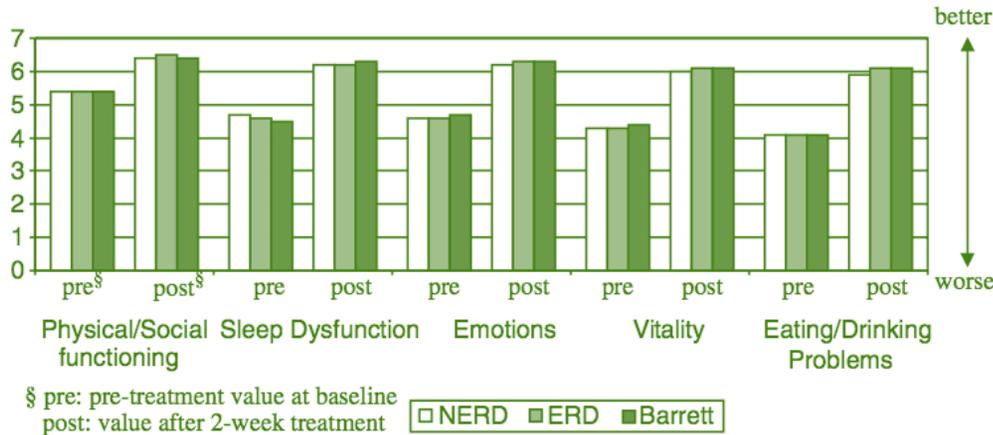


*Eloubeidi et al, 2000*

# QoL in relation to Symptoms in Patients with GERD



Short Form-36 health survey subscales

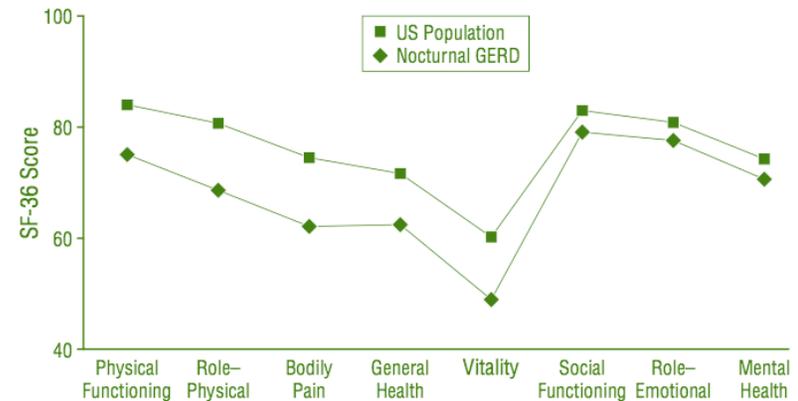


Quality of Life in Reflux and Dyspepsia Patients questionnaire subscales

Kulig M et al., 2003

# Impact of Nocturnal Symptoms associated with GERD on HRQL

Scale	Mean (SE) Score		
	Nocturnal GERD (n = 945)	Nonnocturnal GERD (n = 339)	Controls (n = 268)
Physical functioning	63.28 (1.52)†	68.46 (1.90)†	68.60 (2.03)
Role limitations–physical	52.69 (2.40)†§	63.67 (3.00)†	66.75 (3.21)§
Bodily pain	53.90 (1.61)†§	62.81 (2.02)†	68.60 (2.16)§
General health	47.66 (1.38)†§	52.56 (1.73)†‡	58.50 (1.85)‡§
Vitality	41.06 (1.44)†§	46.88 (1.81)†‡	53.76 (1.94)‡§
Social functioning	70.16 (1.62)†§	75.81 (2.02)†	77.94 (2.16)§
Role limitations–emotional	69.47 (2.16)†§	80.11 (2.70)†	80.64 (2.87)§
Mental health	66.02 (1.27)†§	71.42 (1.60)†	74.28 (1.70)§
Physical component summary	38.94 (0.70)†§	41.52 (0.86)†	43.16 (0.92)§
Mental component summary	46.78 (0.72)†	49.51 (0.89)†	51.07 (0.95)§



Farup et al., 2001



Thank you for your attention