

# PAIN as a psychosomatic disease



강도형  
서울대병원 정신건강의학과

**PAIN**  
**as a psychosomatic**  
**disease**

Do-Hyung Kang, M.D., Ph.D.

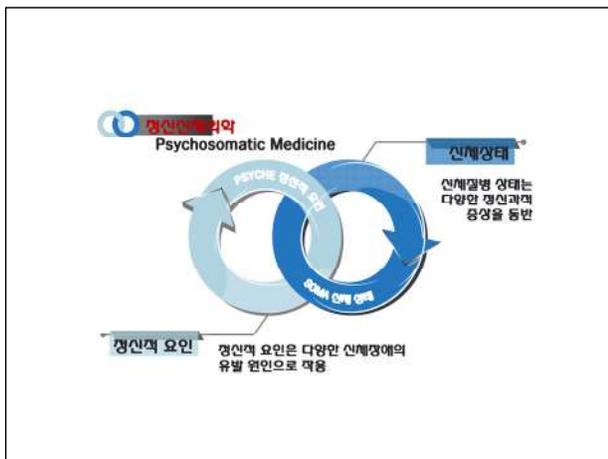
Seoul National University  
College of Medicine



**SNUH** 서울대학교병원  
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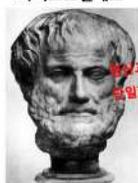
## Communication

- Doctors focus on the more familiar territory of physical symptoms stemming from organic pathology
  - ✓ “medicalization”
- Patients use somatic symptoms to communicate their distress
  - ✓ “somatization”
- When a somatizing patient meet a medicalizing doctor?!
- Stigma relating to psychiatric disorder



## 몸과 마음에 대한 견해

아리스토텔레스



플라톤



영혼과 신체는 따로 분리될 수 없는 유일한 존재

인간은 영혼과 육체로 이루어져 있으며, 몸은 마음을 담은 그릇

### Rene Descartes



데카르트(Rene Descartes) : 몸과 마음은 독립된 실체 [이원론]

- **Substance dualism:** two different things, mind and body
- **Property dualism:** Only one kind of thing, but human beings and animals have certain properties that are not physical—mental properties
- Argument for Dualism:  
I have a mind. My mind is not my body. I have a body. Therefore, I have both a mind and a body, which are distinct from one another.

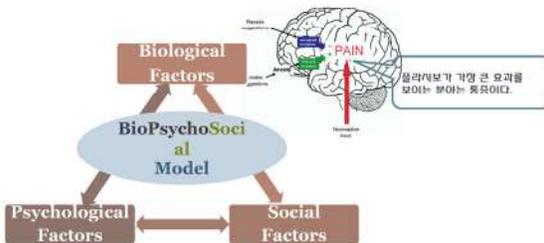
### Baruch Spinoza



스피노자(Baruch Spinoza) : 마음과 몸은 동일한 실체 [일원론]

- 마음과 몸은 서로 평행하며 서로 연관되어 있는 **절차로서**, 마치 안 물체의 양면처럼 모든 측면에서 서로를 모방한다.
  - ✓ 인간의 마음은 인간의 몸에 대한 관념 또는 인식
  - ✓ 우리는 인간의 마음이 몸과 하나로 결합되어 있다는 사실뿐 아니라 몸과 마음의 결합의 본성에 대해 이해하게 된다.
- **몸이 마음에서 비롯되었다는 전통적인 개념의 토대를 침식에 들어갔을 뿐만 아니라 그러한 개념에 반대되는 개념을 제시하게 될 발견을 위한 토대를 마련했다.**

### Biopsychosocial approach (현재)



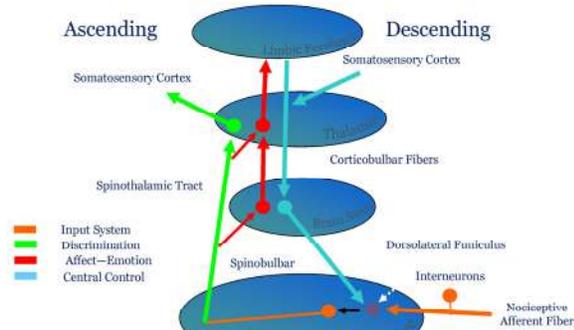
과학과 정신(뇌)의 복잡역 생물  
 뇌의 여러 부분이 상호작용하는 과정  
 어느 때는 쾌락이고 어느 때는 통증인가?

### The Definition of Pain

- Pain, according to the IASP
  - ✓ "An **unpleasant** sensory and **emotional** experience associated with actual or potential tissue damage, or described in terms of such damage"<sup>1</sup>
- Pain as disease
  - ✓ Chronic pain is not simply acute pain that lasts longer.
  - ✓ It is a disease process with different mechanisms<sup>2</sup>
  - ✓ Understanding of the mechanisms or pathophysiology of chronic pain can guide optimal treatment<sup>3</sup>

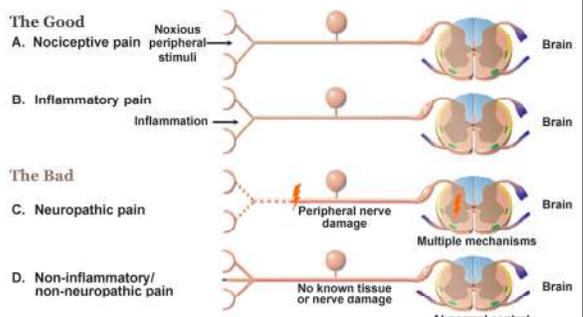
<sup>1</sup>Merskey R, et al.(1994). Classification of Chronic Pain. Descriptions of Chronic Pain Syndromes and Definitions of Pain Terms. 2nd ed.  
<sup>2</sup>Woolf CJ.(2004). Ann Intern Med.  
<sup>3</sup>Baron R.(2006). Nat Clin Pract Neurol.

### An Overview of Ascending and Descending Pain Pathways

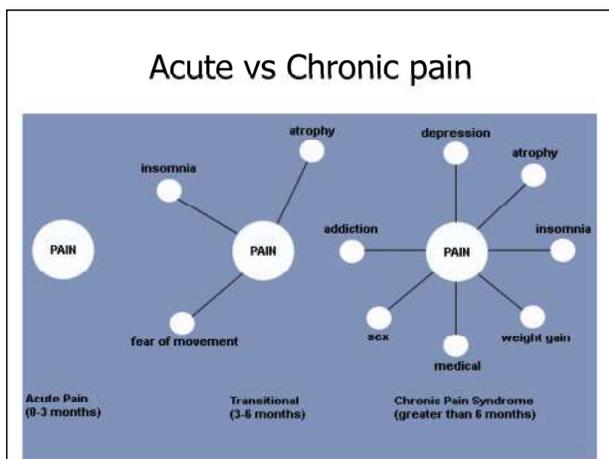
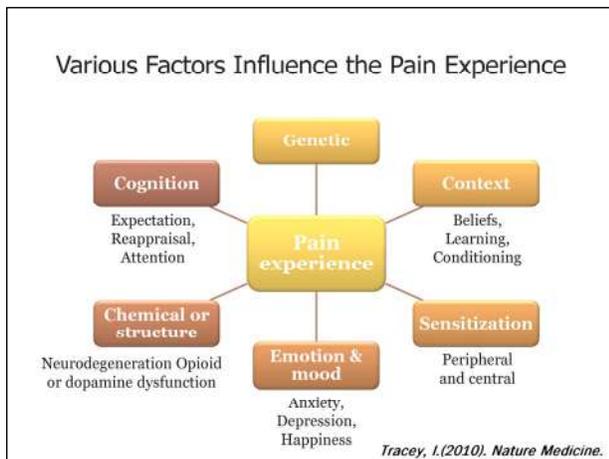
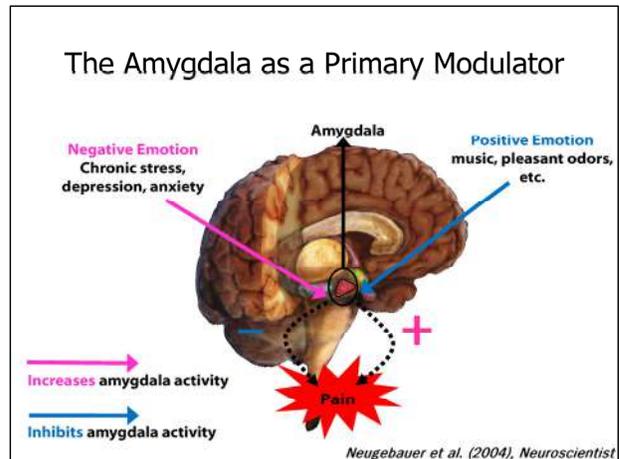
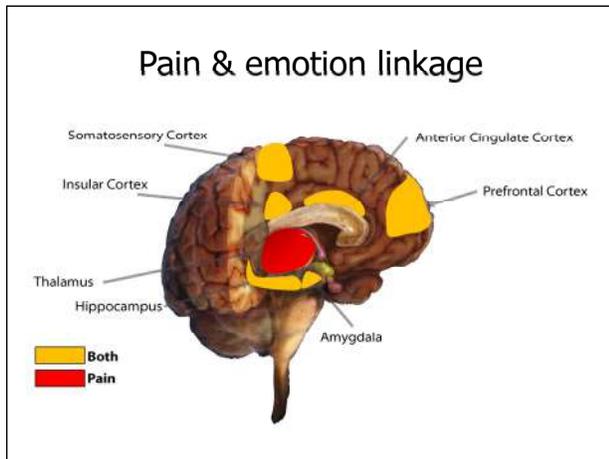


<sup>1</sup> Figure courtesy of Kenneth L. Carey, MD, 2008  
<sup>2</sup> National Pharmaceutical Council (NPC), Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Pain: Current understanding of nociception, management, and treatment [monograph]. December 2005.

### Multiple Types of Pain



Woolf CJ.(2004). Ann Intern Med.



## Chronic Pain & Suicide (1)

*Original Article*

**Pain and suicidal thoughts, plan and attempts in the United States**  
 Mark A. Lynn, PhD,<sup>1,2,3,4</sup> Kim Zava, PhD,<sup>1,2</sup>  
 Roger A. McClellan, MD,<sup>1,2,3,4</sup> Sandra Vannote, MD,<sup>1,2</sup>  
<sup>1</sup>U.S. Army Medical Research and Materiel Command, An Army of 49/0710.02  
<sup>2</sup>Department of Psychiatry, University of Michigan, An Army of 49/0710.02  
<sup>3</sup>Harvard Medical School, Harvard University  
<sup>4</sup>Harvard School of Public Health

**Pain and Risk of Completed Suicide in Japanese Men: A Population-Based Cohort Study in Japan (Osaka Cohort Study)**  
 Nobuhiko Kobuchi, MD, PhD, MS, Kazuo Ohnoori-Matsuda, MD, PhD,  
 Toshi Shimazu, MD, PhD, Toshihiro Sato, MS, Masako Kakizaki, MS,  
 Naoki Nakano, PhD, Shinichi Kawamura, MD, PhD, and Ichiro Tsuji, MD, PhD  
 Division of Epidemiology, Department of Public Health and Forensic Medicine, Tohoku University Graduate School of Medicine, Sendai, Japan

**Abstract**  
 Chronic pain is a major factor that influences suicide risk among seriously ill patients, but little is known about the relationship between pain and the risk of completed suicide in the general population. We prospectively examined the association between self-report of pain and subsequent risk of completed suicide in 26,862 men aged 40 to 79 years from the Osaka National Health Insurance Cohort study, a population-based, prospective cohort study initiated in 1996. On the basis of a baseline questionnaire on pain, individuals were classified as having no pain, very mild pain, mild pain, or moderate or severe pain. Completed suicide cases were identified from 1997 to 2010. During 10,027 person-years, 66 completed suicide cases were documented. After adjustment for covariates, the risk for completed suicide was significantly higher in the subjects with moderate or severe pain (hazard ratio [HR], 2.15; 95% confidence interval [CI], 1.10-4.23), and 2.00 (1.04-3.82) in the subjects who had very mild pain, mild pain, and moderate or severe pain, respectively (P for trend = 0.005). Stratified analysis showed that the hazard association between pain and suicide risk was higher in the subjects with good health, low stress, vigorous work, good physical activity, and no history of chronic disease. Our study suggests that pain is associated with an increased risk of completed suicide in the general population. [Full text at http://www.painmedicine.org or http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3040104/](#)

**Key Words:**  
 Pain, completed suicide, prospective cohort study, epidemiology, general population

## Chronic Pain & Suicide (2)

**Table 3. Relative risk of respondent groups for reporting recent frequent suicidal ideation (current active suicide ideation) (N = 2,204)**

Category	Total N	Percent Yes	Relative Risk	Lower 95% CI	Upper 95% CI
Healthy community, nonpatients (reference group)	1,329	3.16	1.00	—	—
Community patients	159	6.96	2.20	1.16	4.19
Patients in rehabilitation	777	6.11	2.07	1.76	3.75
Patients in rehabilitation without pain	110	10.91	3.45	1.87	6.36
Patients in rehabilitation with acute pain	326	5.83	1.84	1.09	3.13
Patients in rehabilitation with chronic pain	341	9.38	3.07	1.9	4.83
Patients in rehabilitation with worker compensation	264	8.33	2.64	1.6	4.34
Patients in rehabilitation with personal injury	82	7.32	2.32	1.01	5.29
Patients in rehabilitation with litigation	100	11.06	3.50	2.14	5.74
Patients in rehabilitation with worker compensation	86	4.65	1.47	0.54	4.01
With acute pain	154	10.30	3.29	1.9	5.71
With chronic pain	39	7.69	2.43	0.79	7.51
With acute pain	37	8.11	2.57	0.83	7.6
With chronic pain	51	13.73	4.34	2.05	9.19
With acute pain	132	10.61	3.36	1.88	5.99

Non-integer values are not presented for some subgroups.  
 CI = confidence interval.

*Fishbain et al.(2009). Pain Med.*

## 만성통증에서 자살 위험성

*Psychological medicine, 2006*

## Relationship between Chronic Pain and PTSD

**12 Steps of PTSD**  
 Randy L. Harman, Ph.D

Step	Description	PTSD symptom cluster
1. Acute Anxiety	Panic/anxiety episodes	Arousal
2. Depression	Self-esteem in a downward spiral	
3. Resentment	Distrusting others	Avoidance
4. Anger	Fight or flight developing	
5. Fear	PTSD is now forming	Pain
6. Anxiety	Mixed episodes occur	
7. Self-Worth Dissipating	Feeling worthless	Re-experiencing
8. Shame	Filled with shame; who else knows?	
9. Guilt	Feeling guilty; how responsible am I?	
10. Confusion	Trying to remember; can I trust my memory?	
11. Pain	Emotional, spiritual & physical pain	
12. Activating Event(s)	Any event that causes distress	

*Liedl, A., et al.(2009). Psychological Medicine.*

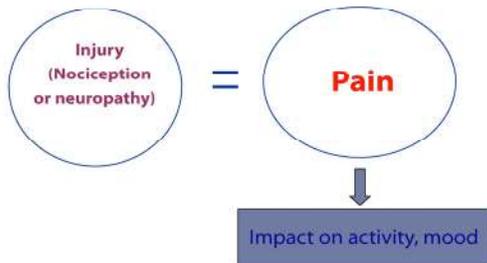
## Chronic pain over time with PTSD symptoms

*Liedl, A., et al.(2009). Psychological Medicine.*

**Box 1. Predictors of psychiatric comorbidity (especially depressive, anxiety, or somatoform disorders) in patients who have physical symptoms**

- Unexplained symptom after the clinician's initial assessment
- Multiple symptoms
  - Three or more unexplained symptoms
  - Pain symptoms in two or more regions of the body
  - Multiple functional somatic syndromes
- Chronic or recurrent symptoms
- Frequent health care use (clinic or emergency department visits; hospitalizations)
- Medication history
  - Polymedication (especially for symptoms)
  - Failure to respond to multiple medication trials for the same symptom
  - Intolerance of multiple medications ("nocebo" effect)
  - Difficult encounter (as perceived by clinician)
- Number of S4 predictors
  - Stress in past week
  - Symptom count high (>5 on the Patient Health Questionnaire 15-symptom checklist)
  - Self-rated health is low (fair to poor)
  - Severity of symptom is high (>5 on a 10-point scale where 0 is none and 10 is unbearable)

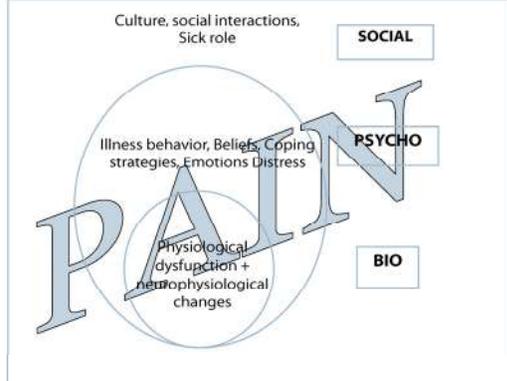
“Traditional” Biological model of pain



Treatment implications?



Bogduk (2004), Med J Aust



가장 힘들었던 것?

“나의 통증을 알아주지 않는다!”



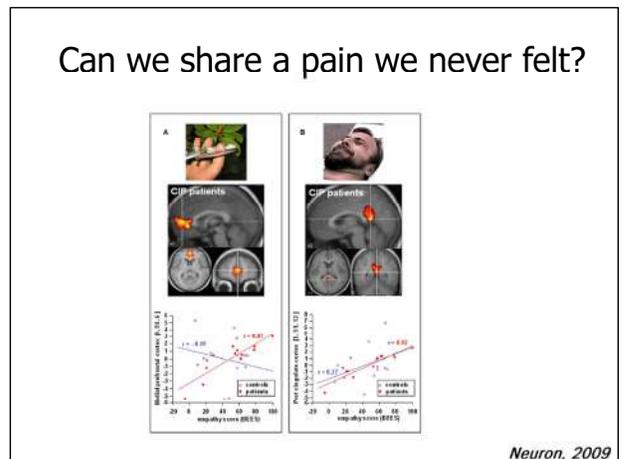
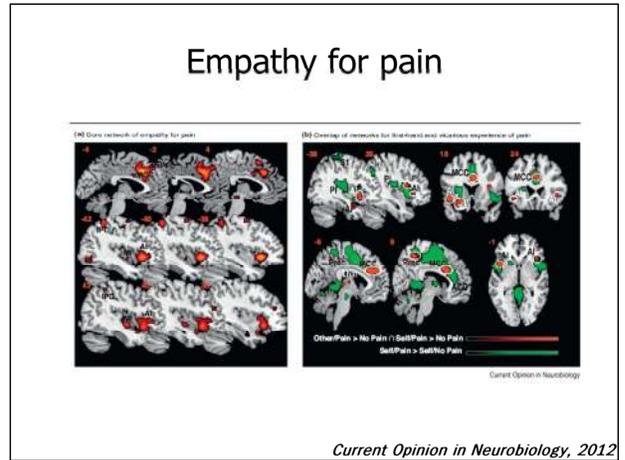
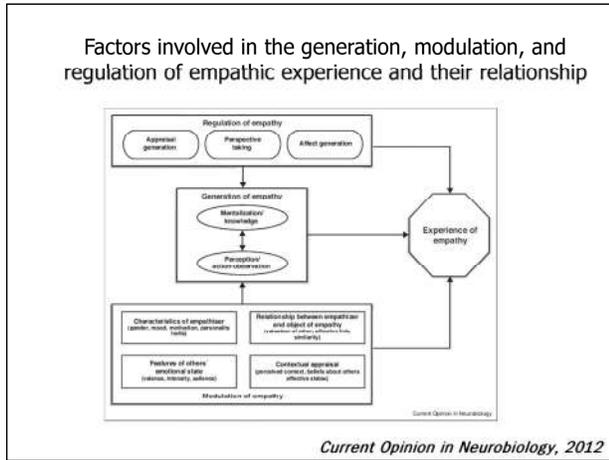
통증의 비극 1

:통증은 다른 사람과 온전히 공유할 수 없다.

“통증은 내게는 언제나 새롭지만  
지인들에게는 금세 지겹고 뻔한 일이 된다”  
(알폰스 도데)

Empathy

- From the Greek empatheia
- Feeling or expressing emotion for another and thus the ability to understand the experience of another individual via cognitive and affective processing



## 노력하면 공감할 수 있다!

Neuron  
Previews

### Emotional Pain without Sensory Pain—Dream On?

David Borsook<sup>1\*</sup> and Lino Becana<sup>1</sup>  
<sup>1</sup>Pain and Analgesia Imaging Neuroscience Group, Brain Imaging Center, McLean Hospital, Belmont, MA 02476, USA  
 \*Correspondence: dborsook@partners.org  
 DOI: 10.1016/j.neuron.2009.01.003

## 통증의 비극 2 : 통증은 주관적이다

- 통증은 지극히 개인적이다.
- 정상적인 신경 체계를 가진 사람은 누구나 통증을 느낀다.
- 그러나 누구나 통증을 느낄 수 있다는 보편성은 일반적 상황에서는 통증으로 고통 받는 이를 더욱 소외시킨다.
- “통증을 경험하는 사람이 통증이라고 말하는 것이 통증” (마고 매캐프리)

### 진단시 생기는 문제들

		Objective Findings	
		Present	Absent
Subjective complaints	Present	"Ideal" disease ☺	Undiagnosed disease/ somatoform
	Absent	Occult disease / denial/ stoicism	No disease ☺

### Heterogeneity of somatoform disorder

	Characteristics	Etiology
Somatization disorder	MUS	Descriptive
Pain disorder	MUS	Psychological
Undifferentiated somatoform disorder	MUS	Descriptive
Conversion disorder	MUS	Psychological
Hypochondriasis	Health worry	Descriptive
Body dysmorphic disorder	Rumination	Descriptive

- "The existing category of somatoform disorders may be regarded to have failed"
1. The terminology is unacceptable to patients
  2. The category is inherently dualistic
  3. Somatoform disorders do not form a coherent category
  4. Somatoform disorders are incompatible with other cultures
  5. There is ambiguity in the stated exclusion criteria
  6. The subcategories are unreliable
  7. Somatoform disorders lack clearly defined thresholds
  8. Somatoform disorders cause confusion in disputes over medical-legal and insurance entitlements
- Mayou et al. 2005, AJP

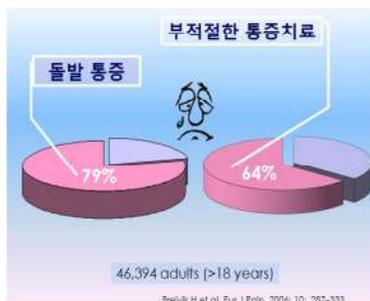
### 통증의 비극 3 : 참는 것이 미덕이다?

'참을 수 있고, 참아야 하는' 통증?

통증에 대한 은유



### 통증에 대한 조절



### 마약성 진통제?



Conclusion



### The nature of PAIN

What we do know, or think we know



What we do not know

### Pain is multifactorial phenomenon



인간의 통증 연상을 통각(nociception; 유해자극), 통증(pain), 고통(suffering), 통증행위(pain behavior)의 4가지로 구분하였다(Flor & Turk, 2011).

- Differentiation of **psychogenic** and **somatogenic** pain is neither theoretically nor clinically useful
- Chronic pain is always a **multifactorial** event both somatic and psychological contributions to varying degree

### Pain - current view

- **Pain is an end-product** of many interacting processes in the nervous system (including the brain).
- **The relationship between injury and pain** is quite variable.
- **Knowledge of cause of pain** is not sufficient to tell us how much pain a person will have or its impact.
- **Diagnosis** (eg. "Lumbar Discogenic Pain") is a poor guide to prediction of disability (Caragee et al, Spine Journal, 2005)

## 만성통증환자의 치료

# "JUST ACCEPTING"

Thank you for your attention!

