[심포지움]

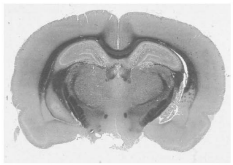
적정 수면이란?

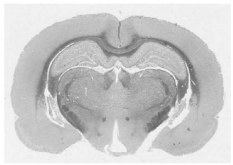
윤 창 호

인하대학교 신경과

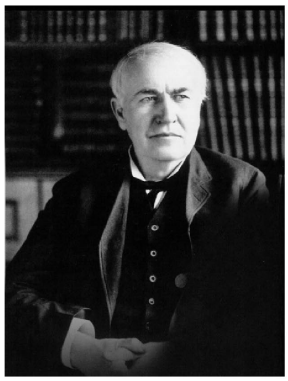
Proposed Function of Sleep

- Restoration and recovery





- Energy Conservation
- Memory

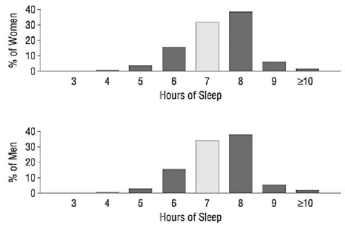


적정 수면

- 양적인 측면: 수면 시간
- 질적인 측면

Sleep Duration and Mortality

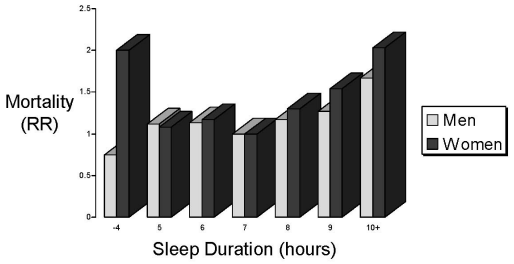
Sleep Duration in General Adult Population (CPSII)



- 6 – 8 hours
  : about 80%

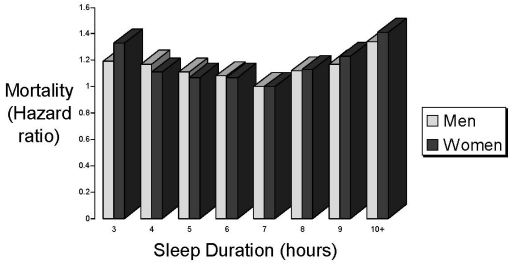
Kripke DF, et al. Arch Gen Psychiatry 2002; 59: 131-136.

JACC Study
(Japanese Callaborative Cohort Study)



Sleep 2004;27:51-54.

CPS II Study
(Cancer Prevention Study II)



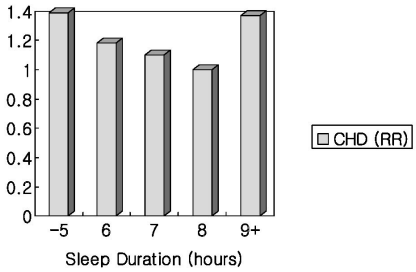
Arch Gen Psychiatry 2002;59:131-136.

Sleep Duration and Mortality

- Best survival: 6.5 – 7.5 hours
- Mortality risk Vs. Sleep duration
  - U-shaped relationship
  - Long sleep > short sleep

Sleep Duration and Morbidities

Coronary Heart Disease
(NHS: Nurses Health Study)



Arch Intern Med 2003;163:205-209

Stroke

(NHANES I: First National Health and Nutritional Examination Survey)

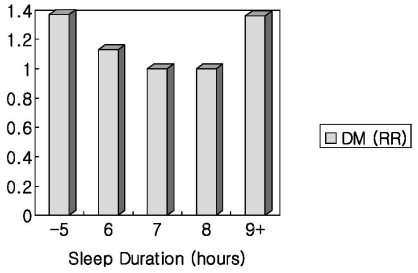
- Relative risk for stroke

Group	RR	CI
SD > 8 hours	1.5	1.1 – 2.0
Daytime sleepiness	1.4	1.1 – 1.8
Both	1.9	1.2 – 3.1

(Ref. group: SD, 6-8 hours) Neurology 1997;48:904-911

Diabetes Mellitus

(NHS: Nurses Health Study)



Diabetes Care 26:380–384, 2003

Sleep Deprivation

Vs. Short sleep

Sleep Deprivation

- Voluntary

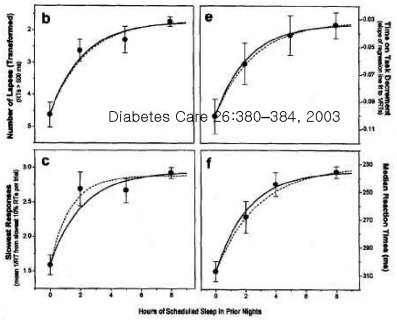
Ex. Voluntary sleep restriction

- Involuntary

Ex. Insomnia

Ex. Shift worker

Psychomotor Vigilance



Diabetes Care 26:380–384, 2003

Sleep 1999;22:171-179

Shift Work and TA

Table 1. **Risk of Motor Vehicle Crashes and Near-Miss Incidents after Extended Shifts.***

Variable	Extended Work Shifts (≥24 hr)	Nonextended Work Shifts (<24 hr)
Crashes		
No. reported	58	73
No. of commutes	54,121	180,289
Rate (per 1000 commutes)	1.07	0.40
Odds ratio (95% CI)	2.3 (1.6–3.3)	1.0
Near-miss incidents		
No. reported	1,971	1,156
No. of commutes	54,121	180,289
Rate (per 1000 commutes)	36.42	6.41
Odds ratio (95% CI)	5.9 (5.4–6.3)	1.0

NEJM, 2005

Suggested Ideal Sleep Duration in Adult

- Hippocrates:

"Both sleep and insomnolency, when immoderate, are bad."

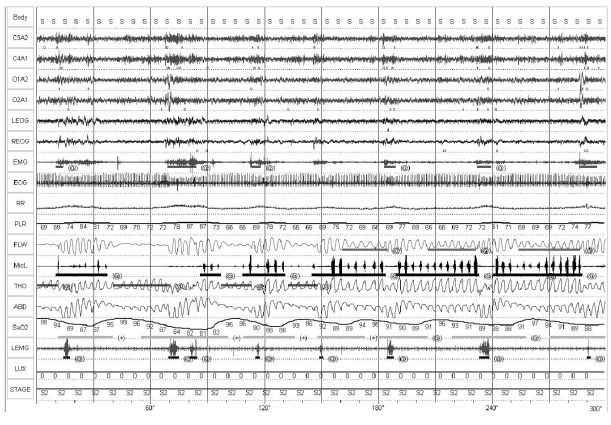
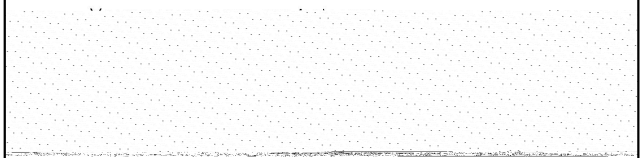
- Environmental isolation suggest that the physiologically "normal" sleep fraction in humans is between 29% and 33% of the sleep-wake cycle or 7 to 7.9 hours.

Quality of Sleep

Factor Affecting Sleep Quality

- Environment
  - Temperature
  - Humidity
  - Light
- Behavioral
  - Caffeine/alcohol/smoking/diet, etc
- Pathologic conditions

Obstructive Sleep Apnea Syndromes



Prevalence of Sleep Apnea