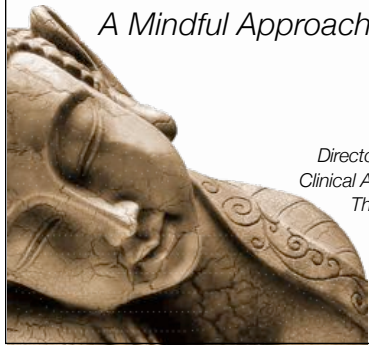


The Buddha's Bed

A Mindful Approach to Sleep



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Clinical Assistant Professor of Medicine
The University of Arizona Center
for Integrative Medicine

1

We don't get sleep
because we don't 'get' sleep

- Sleep is defined negatively: not waking, not dreaming
- Sleep is seen primarily as a servant of waking life
- Subtle aggressive and even violent attitude toward sleep
- Sleep as default consciousness: we are all always asleep
- Possible to cultivate mindful sleep: "third eye open"

"God made everything out of nothing and it shows through."

--Paul Valery

2

Pervasive wake-centrism

- A 'pre-copernican' like mindset
- The gold standard of consciousness
- Segregated from sleep and dreams
- Is served by sleep and dreams
- Becomes relentless and dysrhythmic
without sleep and dreams



3

**A Jewish mother's
health assessment ...**

- ~ Did you eat?
- ~ Did you poop?
- ~ Did you sleep?

**Mindless consumption leads to
chronic inflammation and hyperarousal.**



Hyperarousal

Insomnia is strongly associated with chronic hyperarousal:

- 1) increased body & brain metabolic rates
- 2) elevated heart rates
- 3) elevated core body temperature
- 4) increased high frequency EEG
- 5) elevated nighttime cortisol
- 6) decreased serum melatonin
- 7) nocturnal sympathetic activation
- 8) over-activation of the HPA



Hyperarousal is essentially wakefulness gone awry; it overrides both normal sleep drive and the excessive daytime sleepiness.

Naiman, R. Insomnia, in Rakel, D, ed. *Integrative Medicine*, 3rd ed. Elsevier; 2011. 5

Sleep loss, illness and inflammation

Short sleepers (=/ < 6h/night) are at increased risk for:



- viral infections
- obesity
- diabetes
- cardiovascular disease
- cancer
- depression
- pain

➔ *chronic inflammation is strongly linked to poor sleep*

Angst J, Gamma A; Ajdacic V; Eich D; Rössler W. *SLEEP* 2008;31(4):473-480.

Abad V, Sarinas P, Guilleminault C. *Sleep Medicine Reviews* (2008) 12(3), 211-228
MR, et al. *Biological Psychiatry*. 2008; 64(6)

Kryger MH, Roth T, Dement WC, eds. *Principles and Practice of Sleep Medicine*. Philadelphia, Pa: Elsevier Saunders; 2005.

Taylor DJ, Mallory LJ, Lichstein KL et al. Comorbidity of chronic insomnia with medical problems. *SLEEP* 2007;30(2):213-218

6

The sleep disorders epidemic



- insomnia – 60 million¹
- obstructive sleep apnea (OSA) – 18 million¹
- 64% report problems + few nights/week
- 50% of psych patients have sleep disorders³
- increase noted in recent years²

1. *National Institute of Neurological Disorders and Stroke, 2007*

2. *National Sleep Foundation, Sleep in America Poll, 2009*

3. https://www.health.harvard.edu/newsletters/Harvard_Mental_Health_Letter/2009/July/Sleepand-mental-health

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Psychological consequences of sleep loss

Compromised cognitive functioning

- ▶ Attention (ADD like symptoms)
- ▶ Increased cognitive distortions
- ▶ Memory loss
- ▶ Compromised judgment
- ▶ Perceptual distortions

Mood disturbances

- ▶ Irritability and agitation
- ▶ Anxiety disorders
- ▶ Clinical depression



Severity of insomnia correlates with intensity of symptoms

Consciousness is rhythmic: *the power of when*

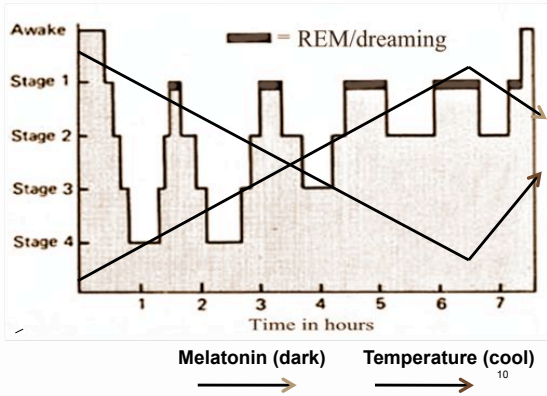
- Seasonal rhythms: nature's calendar
- Infradian rhythms: the moon and menses
- Circadian rhythms: one day at a time (tides)
- Ultradian rhythms: BRAC - basic rest & activity cycles (waves)



*For everything there is a season,
and a time for every purpose under heaven
— Ecclesiastes*

9

Darkness & coolness drive sleep & dreams



Entrainment

While the body clock is inherently capable of monitoring the passage of time, it differs from most clocks in that its period is flexible and must be set, or synchronized, before it can accurately predict the timing of periodic environmental events. Relate to respiration, meditation, pace, etc.

Entrainment is accomplished by external synchronizers called *Zeitgebers*:

1. Light, Sunrise-Sunset
2. Activity & Rest
3. Ambient Temperature
4. Meals
5. Social Cues



Sleep phase

- The period of time during which our brain and body wants to sleep
- Sleep phases may be entrained with nature or culture
- They can be regular, delayed, or advanced

Major circadian rhythm disorders include:



- Advanced sleep phase
- Delayed sleep phase
- Irregular
- Jet lag
- Shiftwork syndrome



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Shi(f)t work -- 'stationary jet lag'

- Ambulatory sleep recordings on 20 nuclear power workers found that 25% fell asleep while operating the plant - predominately in the night shift.
- 55% of night shift workers report nodding off or falling asleep at work at least once per week.
- 30% report such incidents occur more than three times



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Rhythm & Blues:

Circadian factors in illness and depression?

- ▶ Forced circadian dysrhythmias are linked to a reduced life span in animals.
- ▶ Shift-work is associated with increased risk for physical and mental illness, especially GI disorders, depression, cancer.
- ▶ There is a prominent cyclic signature to many mental disorders e.g., manic-depressive, bipolar processes, MDD recurrent, etc.
- ▶ Might depression be related to circadian dysrhythmias?



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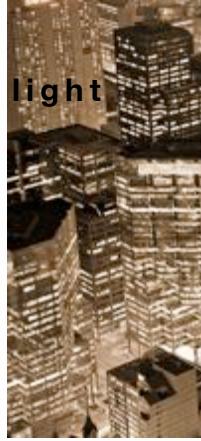


LAN - global night fever



The dark side of light

- We deify light, demonize darkness
- Underexposed to light by day
- Overexposed to light at night (LAN)
- LAN suppresses melatonin
- WHO: shiftwork is probable carcinogen
- LAN as a carcinogenic pollutant
- LAN & breast cancer: dose dependent
- LAN tethers us to waking, inhibits rest



An historical view of sleep

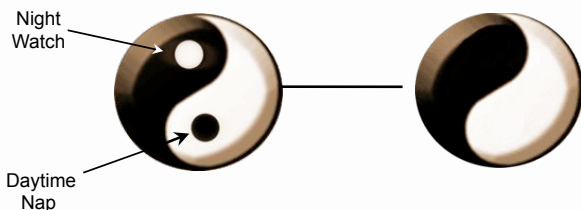
- Prior to ~1830, sleep occurred in two phases*
- First sleep, *night watch*, and second sleep *
- Napping was more common*
- Research suggests this historic pattern may be natural**
- Raises question about "normal" insomnia**

*A. Roger Ekirch, *Virginia Polytechnic Institute*

** Thomas Wehr, *National Institute of Mental Health study*



The demise of *yin-yang*-- natural rhythms



1) With increased pressure to be awake through the day, we lost our naps.

2) With increased sleepiness, we had to begin sleeping through the night, losing night watch.



The Human Energy Crisis

- ✦ an unconscious identification with machines
- ✦ we see *sleepiness* as a need for fuel, not rest
- ✦ we seek fuel in “counterfeit energies”
- ✦ we are dependent on high glycemic foods
- ✦ we are overly dependent on stimulants
- ✦ we confuse rest with stimulating recreation
- ✦ we confuse rest with inebriation
- ✦ we are literally rest-less

Nothing is so intolerable to man as being fully at rest.

-- Blaise Pascal 21

Coffee: the industrious revolution

- * 250 million cups daily
- * 2nd most traded commodity
- * The fuel of industrial culture
- * “Tea is unpatriotic”
- * Long half-life
- * Impact on sleep



Post-dramatic stress disorder

Bedtime Behavior in the US

- watching television 75%
- listening to the radio 26%
- eating 33%
- reading the paper 53%
- exercising 20%
- surfing the internet 19%
- need to sleep with lights on 20%
- down a nightcap 13%



National Sleep Foundation, Sleep in America Poll, 2005



Why is it so hard for us to rest?

When we rest, we experience the opportunistic emergence of anxiety, shadow issues.

What is genuine rest?

Rest is “waking sleep”—an essential bridge to sleep and dreaming.

Overview: screening and evaluation

- ➔ Integrative: bio-psycho-social-environmental
- ➔ Evaluate extent of EDS (Epworth sleepiness Scale)
- ➔ Evaluate fatigue
- ➔ Screen for OSA, PLMS, RLS, GERD, Nocturia
- ➔ Evaluate impact of medications on sleep
- ➔ Sleep history – have patients tell their sleep stories
- ➔ Sleep diaries, logs, rating scales
- ➔ Polysomnography
- ➔ Home based devices: actigraphy, Zeo...



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Assessing one's 'night stand'

- lighting
- telephones
- fluids
- PDAs
- medications
- reading material
- clock radio
- paraphernalia
- foods
- other things...



What do we carry with us on our overnight journey into sleep?

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Etiological factors in insomnia

1. Predisposing factors...

- drugs, medications, esp. alcohol, caffeine, nicotine
- primary sleep disorders: OSA, RLS, PLMS, GERD
- sleep phase/rhythm problems, shift work, chronic jet lag
- psych factors: type A, anxiety, PTSD, OCD, depression
- chronic pain or discomfort

2. Precipitating factors... STRESS...ANXIETY

3. Perpetuating factors...

- excessive time in bed
- irregular sleep/wake schedule, napping, dozing
- caffeine, alcohol, drugs
- anxiety about daytime consequences
- use of hypnotics and rebound effects

Kryger MH, Roth T, Dement WC, eds. *Principles and Practice of Sleep Medicine*. Philadelphia, Pa: Elsevier Saunders; 2005.

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Putative etiological pathway

ANXIETY ⇌ INSOMNIA ⇌ DEPRESSION

- Anxiety disorders preceded insomnia 73% of the time*
- Insomnia preceded depression 69% of the time*
- Insomnia (in absence of past or concurrent depression) increases risk MDD ~ 2X over large portion of lifespan
- Insomnia intensifies over the initial relapse period
- Persistence of insomnia after treatment of depression increased likelihood of relapse, recurrence, and suicide

* Longitudinal study of ~1000 adolescents

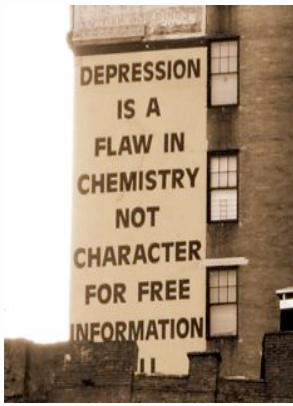
Johnson EO, Roth T, Breslau N. The association of insomnia with anxiety disorders and depression: exploration of the direction of risk. *J Psychiatr Res*. 2006 Dec;40(8):700-8. Epub 2006 Sep 15

Kryger MH, Roth T, Dement WC, eds. *Principles and Practice of Sleep Medicine*. Philadelphia, Pa: Elsevier Saunders; 2005.

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Iatrogenic factors in insomnia:

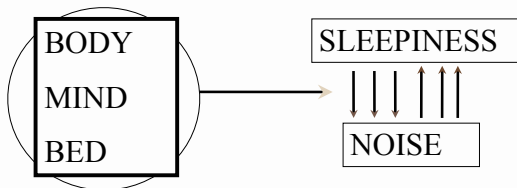
- ▶ analgesics
- ▶ other medications
- ▶ sleeping pills
- ▶ anti-anxiety agents
- ▶ antidepressants



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Noise Reduction Model of Insomnia treatment

► Provides patients with a face valid conceptual model



BODY – Biological, medical, nutritional, other physical factors

MIND – Psychological, psychosocial, behavioral factors

BED – Environmental factors, the bed & bedroom

Naiman, R. Insomnia, in Rakel, D, ed. *Integrative Medicine*. Elsevier; 2012.

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Nine arenas of insomnia management

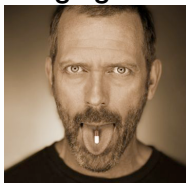
- BODY
 - 1) lifestyle: nutrition, substances, exercise and life rhythms
 - 2) medical conditions and symptoms: pain and discomfort
 - 3) medication issues: sleep side effects
- MIND
 - 4) cognitive behavioral therapy: managing thoughts
 - 5) meta-cognitive issues: understanding deeper beliefs
 - 6) shifting consciousness: addressing spiritual issues
- BED
 - 7) physical sleep environment: sleep space and timing
 - 8) subtle sleep environment: chemical and energy factors
 - 9) social sleep environment: “sleeping together”

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Two basic approaches to managing noise

- 1) Taking something to sleep--

increases sleepiness



- 2) Letting go of something to sleep--

reduces noise



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The war against insomnia



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Rx and OTC Sleeping Pills: A Wolf in Sleep's Clothing?

- dependency
- alteration sleep architecture
- residual "hangover"
- rebound insomnia with d/c
- anterograde amnesia
- impact on self-efficacy
- limited effectiveness vs placebo
- increased mortality



"If you forget how long you lay in bed tossing and turning, in some ways that's just as good as sleeping." – NY Times Oct 23, 2007

1. Buscemi N, Vandermeer B, Friesen C, Bialy L, Tubman M, Ospina M, Klassen, TP, Witmans M; J Gen Intern Med. 2007 September; 22(9): 1335-1350.

2. Kripke, D. *Sleep Medicine*, 2009, (10)3:275-276

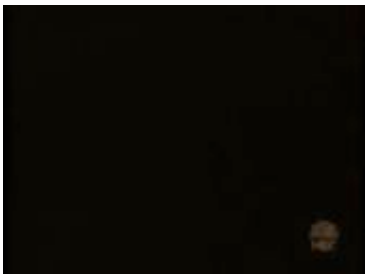
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Hypnotics



<u>Generic</u>	<u>Brand</u>	<u>Miscell.</u>	<u>Half-life</u>
Zolpidem*	Ambien	best-seller	2.5 hours
Zaleplon	Sonata	SMI	ultra short
Eszopiclone	Lunesta	long-term	6 hours
Ramelteon	Rozerem	MT agonist	1.2 hours
Indiplon		fast & potent	short
Benedryl	OTCs	suppress REM	very long
Benzodiazepines		suppress SWS	vary
TCA's		suppress REM	vary
Trazodone	Desyrel	effect/side effects	4 + hours
GHB	Xyrem	highly regulated	short

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Lunesta

Taking something to sleep...

Natural alternatives for sleep...

- tryptophan
- 5-HTP
- valerian, hops, lemon balm, skullcap...
- L-theanine
- jasmine diffusion
- proprietary blends
- melatonin



Attele AS, JT, Yuan, C, Medicine Review, 2000: 5(3) 249-259

Sánchez-Ortuño M, Bélanger L, vers H, eBlanc M, Morin C, Sleep Medicine, 2009: 10(9) 982-987 37

Taking something to sleep...

melatonin

Nyx in a molecule?

Tells the body and brain it is dark out

Good safety profile

Shown to be soporific in many studies

Dosage: 3 mg vs .3 mg. sublingual, CR

Higher levels associated with REM

Marijuana increases endogenous MT

Appears to be oncostatic

Should we consider MT replacement therapy?



Reiter, Russell and Robinson, Jo: Melatonin: Bantam; 1996

Lynch, Eileen M: Melatonin and cancer treatment: Life Extension Magazine; January 2004 38

Letting go of "body noise"

Sleep hygiene

1. Maintain a regular sleep-wake schedule
2. Evaluate sleep side effects of all medications
3. Manage caffeine, nicotine, alcohol, other drugs
4. Get exposed to natural light in the morning
5. Engage in daily cardiovascular exercise
6. Avoid vigorous exercise 3 - 4 h prior to bed
7. Avoid high glycemic foods, esp. as bedtime snacks
8. Avoid napping until sleep improves
9. Sleep in a dark room



NO SMOKING 39

Letting go of "body noise"

What really wakes us up at night?

- Nocturia (frequent urination)
- GERD (heartburn)
- Periodic limb movements
- Restless leg syndrome
- Obstructive sleep apnea
- Sleep phase disorders
- Perimenopause?
- Pain and discomfort



The princess and the pee

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Letting go of "body and mind noise"

Sleep induction practices

- Mindfulness meditation
- Muscular relaxation
- Heart rate variability
- Breathing: 4-7-8 breath
- Self-hypnosis
- Guided imagery
- Gentle yoga
- Lightheartening / laughter



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Letting go of "mind noise"

A fundamental meta- cognitive shift



- The waking mind is
 - active, productive, intentional
- The night mind is
 - restful, reflective, receptive
- We import waking into night
 - like sleeping in your clothes
- We cannot understand night by using a flashlight
- Need to cultivate a mindful approach

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What is "a good sleeper?"

"It has always been a family joke ... about our sleep patterns. Nothing seems to keep us awake. We are notorious sleepers. I hit the pillow and I am out. ... My brother Harold falls asleep while driving."

-- N. A., Chicago

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Letting go of waking to sleep...



- ▶ Cranking up sleepiness
- ▶ We cannot "go to sleep"
- ▶ We can *let go of waking*
- ▶an act of faith

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Surrendering to sleep...



If orgasm is *la petite mort*, a little death, then sleep may be *la moyenne mort*, a medium death.

Nothing puts an insomniac to sleep like knowing its time to get up.

"Hypnos and Thanatos" by J. W. Waterhouse (1849-1917)

Letting go of "mind noise" -- CBT -I

- 1. Sleep impeding thoughts
- 2. Sleep impeding beliefs
- 3. Sleep impeding behaviors
- 4. Sleep impeding over-control



CartoonStitch.com

NIH Statement Regarding the Treatment of Insomnia. *Sleep*. 2005;28:1049-1057.

Morin CM, Bootzin RR, Buysse DJ, Edinger JD, Espie CA, Lichstein KL. Psychological and behavioral treatment of insomnia: update of the recent evidence (1998-2004). *Sleep*. 2006 Nov 1;29(11):1398-414.

Smith MT, Perlis ML, Park A et al. (2002). Comparative meta-analysis of pharmacotherapy and behavior therapy for persistent insomnia. *Am J Psychiatry* 159(1):5-11.

Cursing nighttime wakefulness



Cursing daytime sleepiness..



Oh \$#!t!



A non-violent approach to sleep

1. forgive nighttime wakefulness
2. forgive daytime sleepiness
3. become mindful of sleepiness, sleep
4. fall in love with sleep...again

Where do you go when you go to sleep?

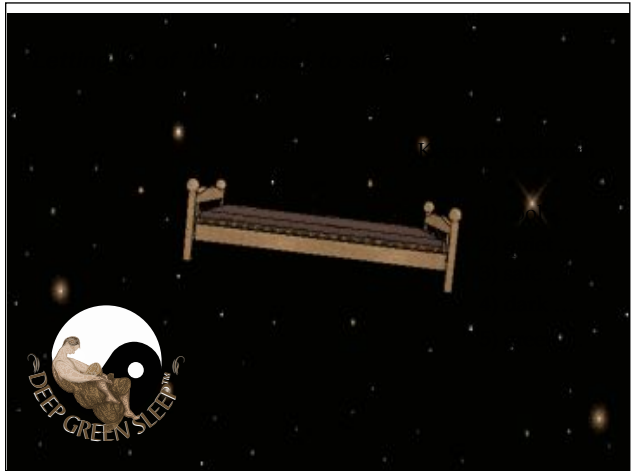
...a descent into sleep?
or
...tomorrow's waking?



"...His tail is so long,
he won't feel any pain
Til the nip makes the trip
and gets up to his brain...."
-- Dr. Sues



The Chipendale Mupp



Dusk simulation

Method

- dim the lights 2-3 h before bed
- dim/shield monitors
- use book lights for reading
- install black out drapes
- cover appliance LED lights
- use motion detector night lights

Challenges

- letting go of activity
- deep introversion
- emergence of shadow issues

Artificial Dusk



lowbluelights.com

Filters out the blue wavelength of light that suppresses melatonin

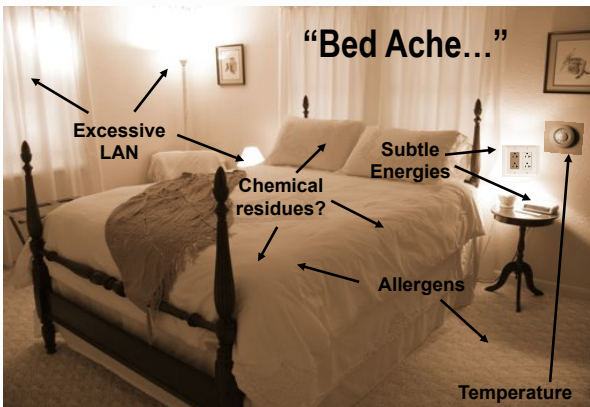
TV's & computer monitors emit significant blue light

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night

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"Bed Ache..."



Bader, W. Toxic bedrooms; Freedom Publishing: 2007.

55

Letting go of "bed noise"

Stimulus control therapy

Reinforces association of bed & bedtime with *sleep*

- ✦ Use bed for sleep & sex only
- ✦ Go to bed only when sleepy
- ✦ If sleep onset > 15 – 20 min, get out of bed until drowsy
- ✦ Avoid naps until nighttime sleep is normal



➡ Take agitation out of bed

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Evening Ritual

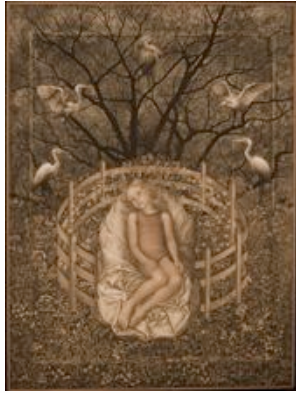
◇ bringing it all together ◇

- Practice a transitional evening ritual 1-2 h before bed in dim light
- Warm bath or spa as transition through evening cleansing
- Use gentle yoga or stretching to release muscular tension
- Journal with attention to sleep cognitions and beliefs
- Engage in meditation, prayer, other relaxation or spiritual practices
- Take time for social relaxation with family, friends or partner
- Consider lighthearted literature or 'blue-blocked' television

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What is sleep?

Once there was a way
to get back homeward.
Once there was a way
To get back home.
Sleep, pretty darling...



58

The United States of Consciousness:

A BRAID THEORY



Could it be
that we are
sleeping,
dreaming,
and awake
all at
once?

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Resources

- American Academy of Sleep Medicine
<http://www.aasmnet.org>
- AASM Preparation for the Behavioral Sleep Medicine
examination course: (708) 492-0930
- Requirements and application for BSM Course
<http://www.aasmnet.org/BSME.aspx>
- Journal: Sleep
- Journal of Clinical Sleep Medicine
- Associated Professional Sleep Societies Meetings
- Learning time at a local sleep clinic

60

Suggested Readings

- Dement, W. and Vaughan, C.. The Promise of Sleep, Delacourte Press, 1999.
- Morin, C. Espie, C. Insomnia: A Clinical Guide to Assessment and Treatment, Kluwer, 2003.
- Naiman, R. "Insomnia" in S. Rakel, Integrative Medicine, 3rd Ed. Elsevier: 2011.
- Naiman, R. Healing Night: The Science and Spirit of Sleeping, Dreaming and Awakening. Syren Books, 2006.
- Naiman, R. The Yoga of Sleep (audiobook), Sounds True, 2010.
- Weil, A. & Naiman, R. Healthy Sleep (audiobook), Sounds True, 2007.

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