Coronavirus, Stress and Acute Insomnia: How to avoid chronic sleep problems before they get started

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Insomnia Disorder

- Difficulty initiating sleep, maintaining sleep, or waking up too early
  - One or more present at least 3 nights/week, for at least 3 months
- Poor sleep occurs despite adequate opportunity
- Associated with daytime impairment or distress

Definition

Next Day Consequences

At least one of the following
  - Fatigue or malaise
  - Daytime sleepiness
  - Attention, concentration, memory impairment
  - Social, vocational dysfunction or poor school performance
  - Mood disturbance or irritability
  - Motivation and energy or initiative reduction
  - Prone to errors or accidents at work or when driving
  - Tension headaches or G.I. symptoms

Population prevalence estimates

30-35%  Acute Insomnia (Brief Insomnia Disorder)
6-15%  Chronic Insomnia (Insomnia Disorder)
Conceptualizing Acute Insomnia

The proposed dia

Trigger

Minimum freq.
Duration Course

Which results in an
individuals ideal

Chronicity

1. If “chronic” means that recovery/remission does not occur spontaneously … then when does this occur for insomnia?

2. Does the definition of acute and chronic bear on treatment?

What’s chronic?

PREVALENCE OF INSOMNIA BY ITS DURATION

- 7%
- 6%
- 4%
- 2%
- 1%
- 0%

1 month | 3 months | 6 months | 1 year | 2 years | 5 years

Cohort Information

Phase 1: Screened (n = 5,247)

Phase 1: Excluded: Non-consent (n = 481)

Phase 2: Excluded* (n = 1,194)

Final Sample (n = 1,429)

*Excluded if (1) did not meet the 70% adherence threshold to the sleep diaries and/or (2) met criteria for insomnia during the first 12 weeks of the study.

Incidence data

Prevalence of insomnia by its duration

~25\%
**Is chronic insomnia a problem?**

"No matter how important sleep may be, it was adaptively deferred when the mountain lion entered the cave." - Spielman et al. 1991

**Clinical correlates of insomnia**

Associated with ↑ Med morbidity
- Hypertension
- Obesity
- Diabetes
- Cardiovascular disease
- Alzheimer's Disease/Dementia

Associated with ↑ Psych morbidity
- 2-4 x increased risk for 1st onset depression

**Is this the same for Acute Insomnia?**

"No matter how important sleep may be, it was adaptively deferred when the mountain lion entered the cave." - Spielman et al. 1991

**What is the model for this?**
The Evolution of Insomnia

**Precipitating Factors**
- Premorbid
- Acute Insomnia
- Chronic Insomnia

**Predisposing Factors**

**Perpetuating Factors**

Borbely’s 2 Process Model

Sleep/Wake Regulation

*Process W: The Arousal System*

Arousal system can override the sleep-promoting system in order to allow us to respond to danger

BUT -- over-active arousal system can interfere with the two processes regulating sleep (Sleep Drive and Circadian Clock)

Good sleep

- Strong sleep drive
- Correct circadian placement
- Low arousal
How might individuals with acute insomnia begin to alter their behavior in ways that will affect sleep drive and circadian timing?

Factors that Weaken the Sleep Drive

- Excess time in bed
- Napping (especially long naps)
- Dozing (particularly close to bedtime)
- Sleeping in on weekends

Circadian Clock: Signal Strength

The signal of the circadian clock strengthened by:

- Timing and amount of light exposure
- Waking up and getting out of bed at a regular time
- Regularity of other activities (eating, exercising, etc.)
Classical conditioning

Normal situation
Bedroom/bedtime → Sleepiness and sleep

Acute insomnia situation
Bedroom/bedtime + LIFE STRESS → induced somatic arousal
Bedroom/bedtime + LIFE STRESS → induced cortical arousal

Chronic insomnia situation
Bedroom/bedtime → Somatic Arousal
Bedroom/bedtime → Cognitive/cortical arousal

Conditioned Insomnia

Bed
Sleeplessness (tossing, turning, upset)
Conditioned Insomnia

Implications for Tx?

MED Tx?
Prevent PF!

MED Tx?
CBT-I!

The Evolution of Insomnia

Insomnia
Insomnia Threshold
No Insomnia

Premorbid
Acute
Insomnia
Chronic
Insomnia

Predisposing Factors
Precipitating Factors
Perpetuating Factors
Perpetuating Factors

- Disturbances to circadian rhythm
- Disturbances to sleep drive
- Conditioned insomnia
- Sleep related worry
- Sleep effort

The perfect storm

How can we prevent the epidemic of chronic insomnia after the pandemic?

Life style tips for a good nights sleep

Maintain good circadian health

- Wake and get up at the same time most days
- Get light exposure first thing in the morning
- Eat meals the same time each day
- Get exercise at the same time each day

Keep daytime and night time separate

- Day is for activity and should be full of light
- The nighttime is marked by decreased light and quieter activities
- Keep electronic device use to minimum in last 2 hours before bed
  - Use blue light filters
- Keep your bedroom cool and as dark as possible

What to do when sleeping poorly

Do not compensate for a bad night’s sleep

- Get up at the same time each day regardless of how you slept
- Do not sleep in, or retire to bed early.
- Do not nap
  - If you must nap make it short (10-20 min.) and early in the afternoon
  - Carry out all the same work and activities as if you had slept well

Do not spend excessive amounts of time awake in bed

- Best to leave the bed for only sleep and sex
- Do not dwell on sleep or “try” to sleep
- Do not worry, think, plan, or worry about sleep in bed
- When awake get out of bed and engage in relaxing activity (reading, TV, puzzles, games, etc.)
What to do when sleeping poorly

Don't overdo substances:
- Caffeine OK in moderation, but avoid within 6hrs of bedtime
- Reduce alcohol - It can make you more drowsy before you want to go to bed and it will wake you during night
- Do not use alcohol to make yourself sleep
- Avoid nicotine within 2hrs of bedtime and try not to smoke when awake at night

If you can't sleep do not try to force it!
- Remember that acute insomnia is a normal response to stress
- When left to run its course, stress related insomnia is not likely to last more than 2-3 days
- If things haven’t improved after 1-2 weeks, seek professional help

How can you help?

1. Ask about sleep
2. Prevent perpetuating factors
3. Possible use of medication (Short term)
4. Refer to specialist for chronic insomnia

Where to go?

Find a sleep center
- American Academy of Sleep Medicine (AASM)
  - http://sleepeducation.org/find-a-facility

Find a Behavioral Sleep Medicine (BSM) specialist
- Society of Behavioral Sleep Medicine (SBSM)
  - https://www.behavioralsleep.org/index.php/united-states-sbsm-members

QUESTIONS