Sleep: Healthy Sleep, Healthy Living

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Disclosure

• I have no financial relationships with a commercial entity that is relevant to the content of this presentation.

• I will not reference unlabeled or unapproved uses of drugs or other products.
Objectives

By the end of this talk, you will be able to:

• Recognize when to seek evaluation for a potential sleep disorder

• Recognize the importance of sleep
You Snooze
You Lose

well

win
• Average human need: 8.3 hrs
• Normal sleep latency: 10 min
• Normal sleep structure
  – N1: 1-5%
  – N2: 45-50%
  – N3: 15-20%
  – REM: 20-25%
Who has time for sleep?

8

80

80

80

60

36

50

18
• Hormonal Changes, Physiological Conditions, Environment (i.e., Light, Noise, Temperature)
The Sleep Drive is Strong

Micro sleep

Local sleep
Diagnosed sleep disorder

Adequate Sleep

Good sleep practices

Good sleep room

Sleep is a priority

Stress minimized

Medical treatment

Diagnosed sleep disorder
Effects of Poor Sleep

- Scapegoating
- Risky behavior
- Decreased libido
- Forgetful
- Reduced performance
- Decreased pain tolerance
- Mood issues
- Decreased attention/concentration
- Decreased vigilance/reaction time
- Look older
- Weight gain
Chronic Insufficient Sleep

Insomnia

Circadian Sleep Wake Disorder

Sleep Apnea

Restless Legs Syndrome
**NREM Parasomnias**
*(Disorders of Arousal)*

- Confusional Arousals
- Sleepwalking
- Night Terrors

**REM Parasomnias**

- Why can't I move?
- Nightmare Disorders
- Recurrent Isolated Sleep Paralysis
- REM Behavioral Sleep Disorder

**Narcolepsy**
**Idiopathic hypersonmia**
Take longer than 30 mins to get to sleep?

- Mood issues/disorders
- Reduced QOL
- Cardiovascular risk
- Absenteeism
- Poorer Health
- Memory and concentration issues
- Sleepiness
- Headaches
Acute vs Chronic

present for at least 3 nights a week for at least 3 months

and

Have difficulty falling asleep or returning back to sleep within 30 minutes
Treatment

Change Behaviors
Circadian Rhythm Disorders

- Delayed Sleep Phase Type
- Advanced Sleep Phase Type
- Irregular Sleep-Wake Type
- Non-entrained Type (Free Running)
- Jet Lag Type
- Shift Work Type
- Due to Medical Condition
- Due to Drug or Substance (Alcohol)
Sleep Apnea

- Family history
- Snore
- Overweight
- Small chin
- Large tongue
- Short, thick neck
- Neurological disorder
- Small airway

- Man
- Postmenopausal
- Smoke
- Asthma
- Diabetes
- Hypertension
- Heart disease
- Heart arrhythmia
Sleep Apnea

**Normal Airway**
- Clear, open airway to lungs
- Normal, steady breathing

**Blocked Airway**
- Collapsed muscle in back of throat
- Paused breathing
• GERD/Reflux
• Hypertension
• Arrhythmias
• Diabetes
• Hypercoagulability
• Atherosclerosis
• Obesity
• Erectile Dysfunction
• Congestive Heart Failure
• Pulmonary Hypertension
• Accidents
• Changes in Mood
• Memory and Concentration Problems
• Insomnia
OSA – Risk Factor: Gender

- men more commonly have OSA

- women are less likely to be evaluated and diagnosed

- postmenopausal women

- women have poorer survival
Get Sleep Study **AND** See a Sleep Specialist
Sleep Apnea: Treatment

- Conservative Therapy
  - weight loss
  - positional therapy

- Dental Device

- Surgery

- CPAP
RLS Diagnostic Criteria

• uncomfortable sensations in legs
• motor restlessness (urge to move)
• ↑ at rest, ↓ with activity
• ↑ at night/evening
• Excluded mimics
Treatment

- Anti-epileptic medications
- Dopaminergic agents
- Opioids
- Iron
- Benzodiazepines

RLS
Deep Breaths...
Cyberchondria and/or Cybertherapy

Treat yo' self.

8 in 10

65%
<table>
<thead>
<tr>
<th>“Treatments”</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber bands around legs</td>
<td>L-carnitine</td>
</tr>
<tr>
<td>Bar of ivory soap</td>
<td>Horse chestnut</td>
</tr>
<tr>
<td>Listen to radio</td>
<td>Vitamin E</td>
</tr>
<tr>
<td>Chiropractor</td>
<td>Tumeric</td>
</tr>
<tr>
<td>Orgasm</td>
<td>Gatorade</td>
</tr>
<tr>
<td>Pickle juice</td>
<td>Marijuana</td>
</tr>
<tr>
<td>French’s mustard</td>
<td>Tonic water</td>
</tr>
<tr>
<td>Salt water bath</td>
<td>No fortified orange juice</td>
</tr>
<tr>
<td>Vibrating massager</td>
<td>Drink Water</td>
</tr>
<tr>
<td>Vicks vapor rub on feet</td>
<td>Menthol gel</td>
</tr>
<tr>
<td>Avoid MSG</td>
<td>Peppermint tea</td>
</tr>
<tr>
<td>Wearing socks to bed</td>
<td>Eat a stalk or two of raw celery</td>
</tr>
<tr>
<td>Having a dog sleep by your feet</td>
<td>Stop eating all dairy products</td>
</tr>
<tr>
<td>Dry skin brushing</td>
<td>Heavy blanket</td>
</tr>
<tr>
<td>Do figure-eights</td>
<td>Stand barefoot on concrete floor for 5 min before going to bed</td>
</tr>
<tr>
<td>Dead-arm yourself</td>
<td>Urine on the legs</td>
</tr>
</tbody>
</table>
No.
Seek Medical Evaluation.....

Headaches

GERD
Burning the candle at both ends...

• 24/7
• we don’t take time for sleep optimization
Common sleep behaviors

- Variable bed times
- Plugged in
- Stress/anxiety
- Not sleeping enough
- Light activation
- Late meals
- Limited exercise
- Negativity
- Failure to see sleep as important
“You’re not sleeping tonight...I’m thinking about lots of random stuff all night long...”

Behavioral Treatments

Unplug

Happy Thoughts
### What Do You Wear to Bed?

<table>
<thead>
<tr>
<th>What Slept With On</th>
<th>USA (B)</th>
<th>Canada (C)</th>
<th>Mexico (D)</th>
<th>United Kingdom (E)</th>
<th>Germany (F)</th>
<th>Japan (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = (251)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
</tr>
<tr>
<td>With pajamas or something else</td>
<td>73%(_E)</td>
<td>77%(_E)</td>
<td>76%(_E)</td>
<td>56%</td>
<td>84%(_{BCDE})</td>
<td>91%(_{BCDEF})</td>
</tr>
<tr>
<td>Without socks on</td>
<td>55(_{CDE})</td>
<td>43(_{DE})</td>
<td>27</td>
<td>32</td>
<td>63(_{CDE})</td>
<td>61(_{CDE})</td>
</tr>
<tr>
<td>With socks on</td>
<td>16(_{DEFG})</td>
<td>19(_{DEFG})</td>
<td>10</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>With nothing on</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>30(_{BCDFG})</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Don’t know/Refused</td>
<td>1</td>
<td>-</td>
<td>&lt;1</td>
<td>4(_{BDF})</td>
<td>&lt;1</td>
<td>-</td>
</tr>
</tbody>
</table>

Base= Total sample  
Letters indicate significant differences at the 95% confidence level.  
Multiple responses accepted.
# The Bed Buddy

<table>
<thead>
<tr>
<th>Who Slept With</th>
<th>USA (B)</th>
<th>Canada (C)</th>
<th>Mexico (D)</th>
<th>United Kingdom (E)</th>
<th>Germany (F)</th>
<th>Japan (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n =</td>
<td>(251)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
<td>(250)</td>
</tr>
<tr>
<td>Significant other</td>
<td>60%&lt;sub&gt;G&lt;/sub&gt;</td>
<td>75%&lt;sub&gt;BCDEFG&lt;/sub&gt;</td>
<td>56%&lt;sub&gt;G&lt;/sub&gt;</td>
<td>64%&lt;sub&gt;G&lt;/sub&gt;</td>
<td>56%&lt;sub&gt;G&lt;/sub&gt;</td>
<td>38%</td>
</tr>
<tr>
<td>Alone</td>
<td>30&lt;sub&gt;C&lt;/sub&gt;</td>
<td>14</td>
<td>32&lt;sub&gt;C&lt;/sub&gt;</td>
<td>30&lt;sub&gt;C&lt;/sub&gt;</td>
<td>36&lt;sub&gt;C&lt;/sub&gt;</td>
<td>54&lt;sub&gt;BCDEF&lt;/sub&gt;</td>
</tr>
<tr>
<td>With a pet</td>
<td>21&lt;sub&gt;DEFG&lt;/sub&gt;</td>
<td>14&lt;sub&gt;DG&lt;/sub&gt;</td>
<td>4</td>
<td>11&lt;sub&gt;D&lt;/sub&gt;</td>
<td>12&lt;sub&gt;D&lt;/sub&gt;</td>
<td>8</td>
</tr>
<tr>
<td>With children&lt;sup&gt;1&lt;/sup&gt;</td>
<td>10</td>
<td>14</td>
<td>17</td>
<td>11</td>
<td>9</td>
<td>33&lt;sub&gt;BCDEF&lt;/sub&gt;</td>
</tr>
<tr>
<td>Don’t know/Refused</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

<sup>1</sup> Children include those under 18 years of age.
# Should I have a Sleep Buddy

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>Noise</td>
</tr>
<tr>
<td>Humans are social</td>
<td>Movement</td>
</tr>
<tr>
<td>Cold intolerant</td>
<td>Hot intolerant</td>
</tr>
<tr>
<td>Sleep witness</td>
<td>Sleep witness</td>
</tr>
</tbody>
</table>
The Sleep Environment is important!
Environmental Sleep Disorder

NOISE

LIGHT

TEMPERATURE
# The JH Sleep Environment Survey

## Sleep Environment Questionnaire

Indicate all that apply based on your sleep environment over the past month. If choosing “other”, please explain your answer.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your living arrangement?</td>
<td>House, Apartment Complex, Group home, Dormitory, Other</td>
</tr>
<tr>
<td>Room do you sleep in?</td>
<td>Bedroom, Other</td>
</tr>
<tr>
<td>How many adults 14-19 sleep in your room?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>How many children 0-14 sleep in your room?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>How many total people adults &amp; children sleep in your room?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>How many adults 14-19 sleep in your bed or sleep surface?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>How many children 0-14 sleep in your bed or sleep surface?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>How many total people sleep in your bed or sleep surface?</td>
<td>0, 1, 2, 3, 4, 5, 6, 7+</td>
</tr>
<tr>
<td>Do you have security concerns that affect your sleep?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Is what сосед does concern about your personal safety in your house or in your neighborhood interfere with your sleep quality?</td>
<td>Not at all, Very Little, Somewhat, A lot</td>
</tr>
<tr>
<td>Do you have any of the following objects in your room while you sleep?</td>
<td>Gun, Knife, Musical instrument, Phone, Music player, Other</td>
</tr>
<tr>
<td>Do you have any of the following objects in your sleeping area?</td>
<td>Gun, Knife, Musical instrument, Phone, Music player, Other</td>
</tr>
<tr>
<td>Do any of these objects affect your sleep in a negative way?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>What do you sleep on?</td>
<td>Mattress, Sleeper, Other</td>
</tr>
<tr>
<td>Is your sleeping surface discomfort to your sleep?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Do you know how old your sleep surface is?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>If yes, how old is your sleep surface?</td>
<td>1-5, 6-11, 12-17, 18-22, Older</td>
</tr>
<tr>
<td>How often do you clean your bed sheets?</td>
<td>Never, Less than monthly, Monthly, Twice a month</td>
</tr>
<tr>
<td>Is your sleeping room or paint?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Do you do any of the following activities 1 hour before going to bed?</td>
<td>Eat, Drink, Read, Phone, Music, TV, Other</td>
</tr>
<tr>
<td>What activities do you do in bed other than sleep?</td>
<td>Eat, Drink, Read, Phone, Music, TV, Other</td>
</tr>
<tr>
<td>What is your sleep position?</td>
<td>Supine, Prone, Other</td>
</tr>
<tr>
<td>Do you use a pillow?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>If yes, how many pillows do you use?</td>
<td>1, 2, 3, 4, Other</td>
</tr>
<tr>
<td>How old is your pillow(s)?</td>
<td>1-5, 6-11, 12-17, 18-22, Older</td>
</tr>
<tr>
<td>How often do you change your pillow(s)?</td>
<td>Never, Less than monthly, Monthly, Twice a month</td>
</tr>
<tr>
<td>Is your sleeping area close to others?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Do you see any of the following activities 1 hour before going to bed?</td>
<td>Eat, Drink, Read, Phone, Music, TV, Other</td>
</tr>
<tr>
<td>What activities do you do in bed other than sleep?</td>
<td>Eat, Drink, Read, Phone, Music, TV, Other</td>
</tr>
<tr>
<td>What is your sleep position?</td>
<td>Supine, Prone, Other</td>
</tr>
</tbody>
</table>
We Are Going Live...

Welcome to MySleepScript, the educational and clinical iPad application tool developed by the Center for Behavior and Health at the Johns Hopkins School of Medicine.

MySleepScript will provide medical practitioners and trainees a tool to improve their overall sleep knowledge and proficiency in identifying, managing and triaging common sleep disorders in their clinical population.
In the mean time...
KEEP CALM MOM IS ALWAYS RIGHT
Sleep Trivia

• On average, men’s pillows have 2X as much bacteria as women’s

• After 2 yrs of use, 1/3 of a pillow’s weight is made up of dead skin cells, dead dust mites, and droppings

• A mattress can double in weight after 10 yrs
Change your sheets

Change the Sheets

USA (B)
10% 
52% 
26% 
5% 
6% 
62%

Canada (C)
15% 
46% 
30% 
8% 
1%

Mexico (D)
23% 
58% 
14% 
3% 
81%

United Kingdom (E)
13% 
55% 
22% 
6% 
3%

Germany (F)
4% 
18% 
36% 
28% 
12%

Japan (G)
11% 
28% 
22% 
9% 
28%

More than once a week
Once a week
Every other week
Every three weeks
Less often

Base: Total sample (USA n=251; Canada n=250; Mexico n=250; United Kingdom n=250; Germany n=250; Japan n=250)
Letters indicate significant differences at the 95% confidence level.

Q29
Feng Shui the bedroom

1. Reposition your bed
2. Clear clutter and clean
3. Encourage equality/balance
4. Use appropriate colors
5. Depersonalize
My Secrets...
What Americans Think it is Important for Sleep

- Comfortable mattress  
  Get a new GREAT mattress every 10 years
- Comfortable pillows  
  Replace pillows every year
- Comfortable feel of sheets and bedding  
  Cotton
- Cool room temperature
- Fresh air, free of allergens  
  Get an air filter
- Dark room  
  No nightlights; Yes flashlights
- Quiet room  
  White noise device
- Clean bedroom
- Sheets with a fresh scent
- A relaxing bath or shower just before bed  
  earlier
Sleep.

Be consistent

Improve sleep practices
Snooze Well!

If you love someone...
Let them sleep...

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