Sleep and Mental Health

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When a psychiatric patient presents with a sleep symptom

- Don’t just whip out your prescription pad and prescribe a hypnotic

- What is causing the symptom?
  - psychiatric disorder
  - medication/substances/medical
  - sleep disorder
  - lifestyle

- Sleep Diary
- Sleep Questionnaire (try the Auckland Sleep Questionnaire
  www.insomniaspecialist.com)

- Sleep Specialist Referral if needed
- Polysomnography (Overnight Sleep Study) if needed
Outline

- assessing sleep symptoms
- sleep symptoms in psychiatric disorders
- effects of psychiatric medications on sleep
3 major groups of sleep symptoms

- Insomnia?
- Excessive Daytime Sleepiness?
- Parasomnias?
Insomnias

- Report of poor, unrefreshing sleep
- Initial, middle, late insomnia (delay, fragmentation of sleep)
- Daytime consequences
- More than a month (chronic)
Conditions presenting as insomnia

- Psychiatric disorders- mainly mood disorders and anxiety disorders (50%)
- Primary insomnia (30%)
- Medical problems (i.e. chronic pain, GE reflux, CFS/ME, hyperthyroidism, fibromyalgia)
- Substances (Recreational and Prescribed)
- Poor sleep hygiene
- Circadian Rhythm disorders (i.e. DSPD, jet lag, shift work)
- Other sleep disorders (i.e. sleep apnoea, RLS, parasomnias, nocturnal panic, nightmares)
Evaluation of Insomnia

- Clinical Interview
- Sleep Questionnaires
  - Auckland Sleep Questionnaire
    www.insomniaspecialist.com (forms)
- Sleep Diary
- Diagnostic Tests? Polysomnogram (Overnight Sleep Study)?
Evaluation of Insomnia

- Clinical Interview
  - Initial, middle, late?
  - Effects during the day? Safety?
  - Onset, course, duration? Triggers?
  - Sleep schedule- usual bed time, preferred bed time if on holiday, awakenings, time feel really sleepy, final waking time, preferred waking time if on holiday
  - Daytime routines- meals, exercises, relaxation times, computer use, NAPS!
  - Sleep conditions
  - Substances (caffeine, nicotine, recreational, prescribed, OTC)
  - Current and past sleep treatments
  - Other sleep symptoms
  - Psychiatric/ Medical/ Family history of sleep symptoms
Treatments for insomnias

• Find out the cause!
• Sleep hygiene
• Cognitive Behavioural Treatment for Insomnia
  – Sleep rescheduling protocol
• Mind training exercises to decrease hyper arousal at night
  – www.calm.auckland.ac.nz
• Medications:
  – Sleep promoters (benzo’s) and wake suppressants
Conditions presenting as EDS

- Sleep deprivation
- Sleep apnoea
- Narcolepsy
- Idiopathic hypersomnia
- Substances and Medications (including psychotropics)
- Circadian Rhythm disorders
- RLS, PLM’s, Parasomnias
- Depression
- Neurologic conditions
Evaluating EDS

- Clinical Interview
  - Degree of sleepiness (versus fatigue)
  - Frequency, duration, times of the day
  - Safety
  - Specific sleep symptoms (OSA, RLS, Circadian, parasomnias)
  - Substances
  - Quality of sleep at night

- Collateral Information

- Epworth Sleepiness Scale

- Overnight Sleep Study, MSLT
Treatments for EDS

• Find out the cause!

• For sleep apnoea
  - CPAP
  - Surgery?
  - Weight loss?

• Idiopathic hypersomnia
  - Modafinil
  - Traditional stimulants
Parasomnias

- Undesirable physical or experiential events that occur during sleep
Parasomnias

- **NREM parasomnias**
  - Sleep walking; sleep talking, confusional arousals
  - Sexual behaviours

- **REM parasomnias**
  - Nightmare disorder, REM behaviour disorder, sleep paralysis

- **Others**
  - Sleep related dissociative disorder, sleep enuresis, sleep related eating disorder
Evaluating Parasomnias

- Clinical Interview
  - Quality of sleep at night
  - Unusual activities/ events at night
  - Duration, severity, frequency
  - Effects the following day

- Collateral Information

- Overnight Sleep Study?
Treatments for parasomnias

- Find out cause!

- Sleep walkers, talkers
  - Decrease stress
  - Cutting back on alcohol
  - Environmental safety
  - Low dose hypnotics
Auckland Sleep Questionnaire

- Screening tool
  - Prof Bruce Arroll, Tony Fernando, Karen Falloon, Guy Warman

- Recently validated tool for diagnosing sleep disorders.
  - [www.insomniaspecialist.com](http://www.insomniaspecialist.com) (forms)
f. During the past month have you been worrying a lot about every day problems?
   - No
   - Yes

   is this something with which you would like help?
   - No
   - Yes but not today
   - Yes

   g. Do you snore very loudly at night
   - No
   - Yes
   - Don’t know

   gi. Do you find yourself falling asleep during the day i.e in waiting rooms or as a passenger in a vehicle?
   - No
   - Yes

   h. When you can choose do you go to bed late at night i.e after midnight
   - No
   - Yes

   hi. When you can choose (i.e weekends) do you sleep late in to the morning i.e after 10 am
   - No
   - Yes

   i. Do you do anything unusual when you are asleep i.e sleep walking/talking or restless legs or grinding your teeth?
   - No
   - Yes

   j. Do you have any significant health problems such as pain or breathing difficulty or acid reflux or night cough that affects your ability to sleep well?
   - No
   - Yes

   k. Do you ever feel the need to cut down on your drinking alcohol?  
   *Tick no if you do not drink alcohol OR do not feel the need to cut down*
   - No
   - Yes
Sleep Questionnaire (Screen)

12a. Do you consider yourself naturally a (tick one):

☐ Morning person or a “lark” (someone who normally wakes up early and feels sleepy before 11.00 pm?)
☐ Evening person or an “owl” (someone who normally can stay up late, around midnight or later, and prefer to sleep in late in the morning?)
☐ Neither type or in between
☐ Unsure

12b. When you can choose, (e.g. weekends or holidays) do you go to bed late at night e.g. after midnight?

☐ No ☐ Yes

12c. When you can choose do you sleep in late in the morning e.g. after 10.00 am?

☐ No ☐ Yes

12d. What time do you usually go to bed __________________________

12e. What time do you usually get up __________________________

12f. How many hours do you actually sleep _________________________ (this can be different from the hours you spend in bed)

13a. Do you sleep walk? If no go to 14a

☐ No ☐ Yes
# Sleep Diary

<table>
<thead>
<tr>
<th>Information to record</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day and date</td>
<td>Mon 30/08</td>
</tr>
<tr>
<td>Naps (in minutes)</td>
<td>90 minutes</td>
</tr>
<tr>
<td>Dinner time</td>
<td>7pm</td>
</tr>
<tr>
<td>Caffeine/alcohol (amount and time)</td>
<td>1 coffee at breakfast, 1 glass of wine with dinner</td>
</tr>
<tr>
<td>Medications</td>
<td>2 paracetamol at 10am</td>
</tr>
<tr>
<td>Cigarettes (amount and time)</td>
<td>8am, 10pm, 1pm, 6pm, 8pm</td>
</tr>
<tr>
<td>Relaxation/quiet time (amount and time)</td>
<td>30 minutes at 9am</td>
</tr>
<tr>
<td>Before bed activities</td>
<td>Watched TV</td>
</tr>
<tr>
<td>In bed activities</td>
<td>Read for 30 minutes</td>
</tr>
<tr>
<td>Average energy level during the day (1-10) *</td>
<td>5</td>
</tr>
<tr>
<td>Comments</td>
<td>Argument with partner in the evening</td>
</tr>
</tbody>
</table>

| Lights out time       | 10pm     |
| Minutes to fall asleep| 45 minutes |
| Times awoke after first falling asleep | 3 times |
| Total minutes awake after first falling asleep | 1 hour |
| Final waking time     | 6am      |
| Time got out of bed   | 7am      |
| Total hours asleep    | 6.25 hours |
| Quality of sleep (1-10) * | 4 |
| Feeling at waking (1-10) * | 4 |

* Note: For ratings, use 1=lowest/worst, 10 = best/highest

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Dr Tony Fernando Insomnia Service 2001
Sleep and Psychiatric Disorders

- Primary Insomnia
- Mood Disorders
- Anxiety Disorders
- Schizophrenia
- Substance Use
Primary Insomnia

- DSM IV diagnosis
- About 30% of chronic insomniacs
- Diagnosis of exclusion; must have ruled out psychiatric, medical, neurologic, substances

- Marker for future depression?
Primary Insomnia

- Clinical features
  - Initial/ middle or late insomnia
  - Not attributable to other sleep/ psychiatric/ medical disorders
  - Poor functioning the following day
  - Hyperarousal
Primary Insomnia

- Treatments
  - CBT for Insomnia
    - Addressing distorted cognitions about sleep/ insomnia
    - Sleep hygiene
    - Stimulus control
    - Sleep Restriction/ Sleep Rescheduling
Primary Insomnia

- **Treatments**
  - **Medications**
    - Benzo and analogues
    - Sedating antidepressants; antihistamines; antipsychotics
    - Melatonin? Valerian?
  - **Non medications**
    - Relaxation techniques- PMR
    - Meditation
    - Cardiovascular exercise
    - Light treatment
Sleep in Mood disorders

- Insomnia in 60-80% of depressions
- Hypersomnia in 15-20% of depressions
- Polysomnogram of depression
  - Sleep disruption (initial, middle and late)
  - REM sleep changes (onset is earlier)
  - Reduction of SWS (deep, refreshing) sleep
- Why bother?
  - Insomnia can be an early warning sign of depression
  - Residual insomnia in treated depressions increase risk of relapse
Sleep in Mood Disorders

• In bipolar depression
  – Hypersomnia; increased total sleep time
  – Excessive sleepiness during the day
Sleep in Mood Disorders

- Sleep reduction in mania
  - Decrease in Total Sleep Time
  - If asked “How’s your sleep?” , response is “It’s wonderful!”
- Lack of sleep as Early Warning Sign of manic relapse
- Lack of sleep as trigger for mania
Sleep in Anxiety Disorders

- Longer sleep latency (initial insomnia)
- Sleep disruption (middle insomnia)
- Decrease in total sleep time
- Nocturnal panic
  - ~50% Panic Disorder patients will report at least 1 episode
  - Stage 2/3 sleep
- Nightmares
  - In PTSD
  - REM phase
Sleep in Anxiety Disorders

- Subsyndromal anxiety
  - Perfectionists
  - Ruminatives
  - “mind chatterers”
Sleep in Schizophrenia

- More variable pattern
- In 1\textsuperscript{st} episode and medication free patients
  - Initial insomnia (longer sleep latency)
  - Sleep disruption (middle insomnia)
  - Decreased total sleep time
- Sleep apnoea
- Circadian shifts (sleep/wake reversals)
Sleep and Substances

- **ETOH**
  - Most popular sleep aid
  - Good for initial sleep; shortens sleep latency
  - After couple of hours- sleep becomes shallow, disrupted, increase in vivid dreams/nightmares, tachycardia, sweating
  - Increase snoring, apnoeic episodes, leg movements

- **Nicotine**
  - Delay sleep onset, alerting effects

- **Caffeine**
  - Adenosine (endogenous sleep substance) receptor blocker
  - T1/2 4-7 hours, effects can last up to 14 hours
Psychiatric Medications and Sleep

- Wake Suppressants
  - Antidepressants
  - Antipsychotics

- Sleep Promoters
  - Benzodiazepines
## Antidepressants and Sleep

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mechanism relevant to sleep</th>
<th>Effect on sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedating TCA’s-</td>
<td>H1 antagonist, 5HT reuptake inhibition, NE reuptake inhibition, α1 antagonist, M1 antagonist</td>
<td>Shorten sleep latency, inc TST, inc SWS, REM suppression</td>
</tr>
<tr>
<td>amitryptiline, doxepin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activating TCA’s-</td>
<td>NE reuptake inhibition</td>
<td>Increase sleep latency, inc awakenings, dec</td>
</tr>
<tr>
<td>desipramine, protryptiline</td>
<td></td>
<td>TST</td>
</tr>
<tr>
<td>trazodone</td>
<td>5HT2 antagonist, 5HT1A/C antagonist, H1 antagonist, α1 antagonist, weak 5HT reuptake inhibition</td>
<td>Inc TST, inc SWS, +/- REM suppression</td>
</tr>
<tr>
<td>SSRI’s</td>
<td>5HT reuptake inhibition</td>
<td>Increase sleep latency, dec sleep continuity, inc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>awakenings, dec TST, REM suppression</td>
</tr>
</tbody>
</table>

Please refer to the approved indication scope as per the Medsafe website at www.medsafe.govt.nz
# Antidepressants and Sleep

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<tr>
<th>Antidepressant</th>
<th>Mechanism of Action</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nefazodone</td>
<td>5HT2 antagonist, 5HT reuptake inhibition</td>
<td>Inc sleep continuity, no REM suppression, preserved sleep architecture</td>
</tr>
<tr>
<td>Bupropion</td>
<td>DA and NE reuptake inhibition</td>
<td>Inc sleep efficiency, dec REM latency, inc REM sleep time</td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>5HT and NE reuptake inhibition</td>
<td>Inc awakenings, dec stage 2 and 3, REM suppression, inc PLM’s</td>
</tr>
<tr>
<td>Mirtazapine</td>
<td>5HT2, H1,5HT3 antagonist</td>
<td>Dec sleep latency, inc TST</td>
</tr>
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## Antipsychotics and Sleep

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<th>Drug</th>
<th>Mechanism</th>
<th>Effects on sleep</th>
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</thead>
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<tr>
<td>Olanzapine</td>
<td>5HT2, H1 antagonism</td>
<td>Inc sleep continuity, inc SWS</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>5HT2, H1 antagonism</td>
<td>Inc sleep continuity, inc TST</td>
</tr>
</tbody>
</table>

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## Benzodiazepine Receptor Agonists and Sleep

<table>
<thead>
<tr>
<th>Benzo Compounds</th>
<th>Dec sleep latency</th>
<th>Inc TST</th>
<th>Dec WASO (depending on T1/2)</th>
<th>Subjectively, most users report high level of satisfaction</th>
<th>Issues:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zopiclone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tolerance</td>
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<tr>
<td>Zolpidem</td>
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<td>Physical Dependence</td>
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<tr>
<td>Zaleplon</td>
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<td></td>
<td>Abuse</td>
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<tr>
<td>Temazepam</td>
<td></td>
<td></td>
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<td></td>
<td>Psychological dependence</td>
</tr>
<tr>
<td>Triazolam</td>
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<td></td>
<td></td>
<td>Rebound insomnia in discontinuation</td>
</tr>
<tr>
<td>Estazolam</td>
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<td></td>
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<td></td>
<td>Automatism</td>
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<tr>
<td>Eszopiclone</td>
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<tr>
<td>Quazepam</td>
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<tr>
<td>Flurazepam</td>
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<tr>
<td>Lorazepam</td>
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</table>

Subjectively, most users report high level of satisfaction. Issues: Tolerance, Physical Dependence, Abuse, Psychological dependence, Rebound insomnia in discontinuation, Automatism.

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Enhancing Sleep

- Calm and focused mind
  - Learning mindfulness
    - Focusing on the present moment; full attention to your current activity
    - Not judging, just observing
    - www.calm.auckland.ac.nz
Bright Light Exposure
When a psychiatric patient presents with a sleep symptom

• Don’t just prescribe a sleep medication

• What is causing the symptom?
  – psychiatric disorder
  – medication/substances/medical
  – sleep disorder
  – lifestyle

• Sleep Diary
• Sleep Questionnaire (try the Auckland Sleep Questionnaire [www.insomniaspecialist.com](http://www.insomniaspecialist.com))

• Sleep Specialist Referral if needed
• Polysomnography (Overnight Sleep Study) if needed
You can wake up now.
Talk over...