Insomnia Information Sheet for MobileSleepDoc Users:

Definitions:

- Insomnia is defined as difficulty falling and/or staying asleep, or experiencing sleep that is not refreshing. A doctor's diagnosis of insomnia is made when there is associated daytime symptom, such as fatigue, mental fogginess, or sleepiness.
- Insomnia is the most common sleep disorder. 30% of the general population experiences insomnia at some time in their lives. For 9% of the population, insomnia is a persistent problem.
- Chronic insomnia is defined as occurring on a regular basis for more than 1 month.

Diagnostic tests:

- Sleep studies, where EEG (electroencephalogram) signals, snoring, airflow, etc. are measured, are NOT routinely needed in people suffering from insomnia.
- The BEST diagnostic "test" is a thorough history, which includes descriptions of the onset of symptoms, your current sleep schedule, and factors which may keep the insomnia pattern going.
- An initial period of sleep log recording is very useful for getting a picture of your sleep-wake patterns.
- A sleep study IS needed when you show signs or symptoms of a separate sleep problem, such as obstructive sleep apnea or a movement disorder (e.g., periodic limb movements). Sleep problems often co-exist in the same person, so it is not unusual to treat multiple disorders at the same time to get the best results.

Treatments:

- The cornerstone of management of insomnia is behavioral therapy. When there is a cognitive component added to the treatment program, which involves helping you alter the way you think and feel about your insomnia, the program is called cognitive behavioral therapy (CBT).
- Some people confuse sleep hygiene advice, such as turning off technology well in advance of bed time and keeping the bed room cool and dark, with stimulus control therapy (SCT). Both kinds of advice are useful, but SCT is a specific set of 5 principles to follow. The rules of SCT may be found on your user profile.

  1. Go to bed when you feel sleepy, not when you think you should go to bed.
  2. Get out of the bed if lying awake more than 15-20 minutes.
  3. Use the bed and bed room for sleep (or intimacy) only.
  4. Eliminate daytime naps.
  5. Most importantly, KEEP A REGULAR WAKE-UP TIME, AND GET OUT OF BED PROMPTLY WHEN YOU WAKE UP.

- We recommend an initial trial of SCT using the Sleep Logs. First, pick a desired wake up time and set your alarm clock to this time. It does not matter what time you choose, but stick with it and do not linger in the bed after the alarm goes off. The wake up time is emphasized over the bed time, since you may control when you wake up and get of bed, but cannot control when you fall asleep at night.

- Try keeping a regular bedtime and wake up time, following the principles of SCT.

  MobileSleepDoc will track your sleep logs, sleep efficiency, and number of awakenings per night. Sleep efficiency is the amount of time in bed *spent sleeping* versus the amount of time lying in the bed. Adults should have an 85-95% sleep efficiency. Sleep quality is not something we can directly affect, so we focus on sleep efficiency instead, and then sleep quality follows.

- If SCT alone is not sufficient for improving your insomnia and sleep efficiency, you may need to go on to Sleep Restriction Therapy (SRT), one of the best-studied

and validated techniques used to treat insomnia. SRT is a program of controlled sleep deprivation. Here, we recommend starting with a 7-hour restriction. Again, you start by picking your desired wake-up time, setting your alarm to this time, and not attempting to get into bed until 7 hours before your wake-up time. So, if you picked 8 AM as your wakeup time, you would not go to bed until 1 AM. You continue to follow SCT principles and continue keeping sleep logs. You build up sleep deprivation to increase the pressure to sleep, thus driving up your sleep efficiency.

- Sleep Restriction Therapy can be difficult to follow, so we encourage you to check in with your provider about your progress. Also, the restrictive part of the program is just a STARTING point, not an ending point. Once your sleep efficiency improves, you may begin increasing your total sleep time little by little. Changes are slow, so be patient with yourself and the program. Lasting changes are our ultimate goal, and may take time to achieve.

What if I need more help with behavioral therapy?

- MobileSleepDoc offers soundscapes and meditations to help you relax before bed and to decrease the natural anxiety you may feel changing your sleep schedule.

- There are many sleep aids, both prescribed and over-the-counter (OTC), that are tried in conjunction with behavioral therapy. Although combination treatments are not well-studied (as opposed to studies comparing one treatment with another), in practicality such “multi-modality” treatment strategies are commonly used. We encourage you to talk to your doctor about the pros and cons of different insomnia medications on the market. Some general comments about medications are as follows:

  *The over-the-counter sleep medications approved by the FDA are anti-histaminic (histamine is a wakefulness chemical in the brain, so blocking it makes some people feel sleepy).

  *Common prescription sleeping pills such as zolpidem (aka Ambien) and eszopiclone (aka Lunesta) target the same receptor as the benzodiazepine (e.g.,

temazepam, aka Restoril) class of drugs but at different sites. Other FDA-approved prescribed medications target the melatonin receptor (ramelteon, aka Rozerem) or histamine receptor (doxepin).

*Whether one uses an OTC or prescribed sleeping pill, the *same words of caution apply*:

- longterm (i.e. years, not months) safety when used daily is unknown
- they may be psychologically addictive, if not physically
- their benefit seems inconsistent
- their side effects may be intolerable
- they may be dangerous in large quantities
- once you start them, you wonder when and how to stop them

Keep in mind—even if you use a sleep aid—that behavioral therapy may take time and patience, but is safer and the benefits longer lasting than medications.

A note about naps: Although naps are not recommended in people who suffer from insomnia or poor sleep habits, they are not harmful per se. Eliminating naps in the behavioral treatment program for people with insomnia is done to help push the opportunity to sleep into the night time. Naps themselves may be extremely refreshing, especially when taken on a regular basis and kept to one hour or less. There is a natural low in our circadian (24-hour) clock in the afternoon, so this is a perfect time to nap.

For additional information please refer to the following paper and references therein:

Schutte-Rodin S; Broch L; Buysse D; Dorsey C; Sateia M. Clinical guideline for the evaluation and management of chronic insomnia in adults. *J Clin Sleep Med 2008*;4(5): 487-504.
