Dr. Salas: “Severe insomnia is the most common sleep complaint we see, as you look to celebrities, the biggest being Michael Jackson, Heath Ledger and what not, these patients are very desperate and people who are desperate to get some sleep and they are willing to go outside of the standard of care to find any form of treatment.”

Dale: “Dr. Rachel Salas is a neurologist at Johns Hopkins University who specializes in sleep medicine. She is trying to understand the causes of insomnia.

Today on Brain Talk: finding ways to treat insomnia without medication.

Dr. Salas and her team are evaluating the neurophysiology in the brain of someone with insomnia, and their brain's plasticity – or the brain’s ability to adapt and change. A recent study by Dr. Salas supports the fact that individuals with insomnia have greater plasticity and excitability in the brain.”

Dr. Salas: “There is a theory out there, it’s called hyperarousal, and essentially in basic terms we believe the light switch is always on. And it’s not just night-time, so insomnia disorder has now become a 24/7 disorder. These patients tend to have higher metabolism rates, even their EEG’s, their brain wave frequencies, are faster when they’re supposed to be asleep.”

Dale: “Understanding more about this could lead to treatments for insomnia (and likely other sleep disorders) that don’t involve medication. Treatments like trans-cranial magnetic stimulation.”

Dr. Salas: “It’s like a handheld magnet, similar to a magnet you would encounter when you’re getting an MRI. There’s a magnetic force that actually kind of converts into an electrical activity and actually can cause temporary changes in brain.”

Dale: “Dr. Salas says, ‘there are many steps people with and without insomnia can take to improve their sleep without medication. First of all, they should improve what she calls bad sleep hygiene.’”

Dr. Salas: “You go to bed at different bed times, wake up at different wakening times, you know most people are watching TV, on the computer, texting… all sorts of bad things that we’re doing in the hour before bedtime.”
Dale: “Our brains today no longer have natural cues for bedtime. Dr. Salas says, ‘we need to make sleep cycles consistent by going to bed and getting up at the same time every day and she says there are small ways to improve sleep environments. Remove TVs, computers and unfinished work from the room you sleep in. Use curtains that block light at night and let it in in the morning. And, Dr. Salas tells her patients’ to think about three positive things in their life before they go to sleep.’”

Dr. Salas: “Humans are naturally critical and negative especially at bed time, you’re always thinking of all the things you haven’t done, and how you don’t have enough money, how you’re are getting older, and all these other things so you kind of ruminate on negative things, well those can feed insomnia, they can feed nightmares, so I encourage happy thoughts.”

Dale: “And Dr. Salas has an unusual technique for not feeding insomnia. She tells her patients to blow soap bubbles when they’re in their pajamas right before going to bed.”

Dr. Salas: “It does three things. So one it’s having them do this heavy relaxing breathing, which essentially is yoga breathing, but two, if they have insomnia, you know those bubbles are blowing out…I try to get them to apply imagery that they are blowing out their stress, and when the brain sees the bubble go off and disappear or pop, I think it has as relaxing effect. You visually see something kind of released out of you.”

Dale: “To learn more about insomnia and the brain, log onto brainscienceinstitute.org. I’m Dale Connelly and this is Brain Talk from Johns Hopkins University.”