Article ID: WMC005531 ISSN 2046-1690

RUSH HOUR DRIVING NUTS: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series

Peer review status:
No

Corresponding Author:
Dr. Deepak Gupta,
Anesthesiologist, Wayne State University, 48201 - United States of America

Submitting Author:
Dr. Deepak Gupta,
Anesthesiologist, Wayne State University, 48201 - United States of America

Other Authors:
Dr. Divya Gupta,
Associate Professor, Department of Anaesthesiology and Pain Management, Swami Rama Himalayan University - India

Article ID: WMC005531

Article Type: My opinion

Submitted on:03-Feb-2019, 11:59:39 PM GMT **Published on:** 05-Feb-2019, 09:19:29 AM GMT

Article URL: http://www.webmedcentral.com/article_view/5531

Subject Categories:SLEEP MEDICINE

Keywords: America, India, Rush Hour, Driving, Circadian, Circaseptan

How to cite the article: Gupta D, Gupta D. RUSH HOUR DRIVING NUTS: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series. WebmedCentral SLEEP MEDICINE 2019;10(2):WMC005531

Copyright: This is an open-access article distributed under the terms of the Creative Commons Attribution License(CC-BY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Source(s) of Funding:

None

Competing Interests:

None

RUSH HOUR DRIVING NUTS: India-Based Anesthesiologist and America-Based Anesthesiologist Siblings' Dialogue Series

Author(s): Gupta D, Gupta D

Abstract

Question: Why Do Our Rush Hours Drive Us Nuts? Answer: May Be Our Millenniumsâ€™ Old Circadian Rhythm Is Fighting A Losing Battle.

Dialogue

DiG: Hey Bro, did I wake you up?

Â

DeG: No, Sis. I was already awake.

Â

DiG: Are you on overnight call? Sorry I forgot the time difference between over here and up there.

Â

DeG: I am not on-call today, Sis. This has become my routine since I moved up here: Waking up close to 0400 hours [1-2].

Â

DiG: Itâ€™s good to hear as I do NOT have to worry when calling you because itâ€™s good time in the afternoon over here when I am calling you up there. Is it your routine for all days or just for the workdays?

Â

DeG: It started as a routine for my workdays and now it has evolved as a routine for all days because it is easier to follow one routine across all days especially when more than 70% days are workdays now-a-days irrespective of whether itâ€™s up here or over there. How about you?

Â

DiG: Oh, me, I am sound asleep at 0400 hours unless the children are trying to keep me awake and that can sometimes be too often considering that we are over here often going to bed too late in the night. It looks, Bro, that the daily cycles of workaholics are quite different over here and up there. Does your current routine help you against your jet-lags considering your frequency of travels across the time zones between up there and over here?Â Â

Â

DeG: I would say, yes and no, because it all depends on the amount of sleep one is able to garner or may be able to steal from oneâ€™s ever-changing time routines with constantly demanding work-lives which are always keeping one on oneâ€™s toes. Bottom line is that it all depends on our daily resetting of our daily body-brain-mind clocks with good doses of daily-and-timely sound sleeps.

Â

DiG: Mom will be happy to know that you are waking up around 0400 hours daily. Remember she always tells that pre-dawn hours are divine and, thus is always advocating and following rising up way early in the morning.

Â

DeG: I know but I am NOT sure if the explicitly-and-implicitly experienced stress when rushing to reach the jobs even before the time when the sun is planning to rise was one of the intended goals of â€œDharmicâ€• faithsâ€™ teachings advocating rising up in the pre-dawn hours. Although, pre-modern times too may have the same intention to use the pre-dawn darkness/privacy for finishing activities of daily living before moving towards reaching or starting daily jobs, the modern times seem to push human limits when pre-dawn phases are falling more and more deep inside the dark wee hours of daily human cycles wherein â€œsedative/sleepyâ€•melatonin may be at their peaks irrespective of the artificial lighting inside the houses, mimicking natural sunlight, falsely hoping that we are ready to wake up at such odd hours [3-5].

Â

DiG: What can be the stress, Bro, when you are driving to work on empty roads and reaching to work way-ahead of others? Am I correct in assuming that at such early hours, there is no traffic on the roads? And am I correct in assuming that you, because of your profession being a physician and moreover being an anesthesiologist, may be among the fewest lots of people driving to work at such early hours?

Â

DeG: Sorry to say, Sis. You are incorrect on both accounts.

Â

DiG: What do you mean? Is there rush-hour on the roads at such early hours up there? Who else are driving to their work at such early hours?

Â

DeG: I may be able to tell you about who all they are [6-12]. But I may NOT be able to explain why all they are.

Â

DiG: Try, Bro.

Â

DeG: I will try to explain based on healthcare business populationâ€™s example.

Â

DiG: Go ahead.

Â

DeG: It is legendarily known that physicians as a community are by default on call 24x7x365. So it is NOT unprecedented when you see physicians rushing to work at odd hours and at all hours.

Â

DiG: Agree.

Â

DeG: Now when the physicians are rushing to work at odd hours and at all hours, they all must be rushing to work on someone. That means patients and their families are rushing to be worked on at odd hours and at all hours. Sometimes for emergent healthcare needs to contain their sufferings and sometimes for elective healthcare needs to accommodate their-and-their caregiversâ€™ schedules.

Â

DiG: Right.

Â

DeG: As modern healthcare evolved into team-based management and rightly so secondary to enormously sophisticated patient care expecting, warranting and mandating the replacement of loner-leader with team-leader, all the members of the team caring for the patients are rushing to the work at odd hours and at all hours. These members in the team include but are NOT limited to nurses, technologists, assistants, pharmacists and therapists [13].

Â

DiG: You talked about the â€œsuprastructureâ€• workers who all may be roughly defined as those all who are serving the society through knowledge-based skills; But what about the â€œinfrastructureâ€• workers [14]?

Â

DeG: Good, Sis, very good. You seem like getting the gist finally. And you are right that even the â€œinfrastructureâ€• workers have to rush at odd hours and at all hours because they need to ensure that (a) the roads are good so that one-and-all can reach wherever they are rushing to reach, (b) the food services are open 24x7x365 to serve one-and-all who all no longer have the time to prepare food for themselves at the odd hours and at all hours, (c) the houses and their occupants remain safe and sound so as to allow their bread-earning kin populations rushing at odd hours and at all hours, and (d) the non-essential commoditiesâ€™ essential availabilities-and-services are accessible to one-and-all at odd hours and at all hours.

Â

DiG: Does that mean one-and-all are rushing at odd hours and at all hours to serve one-anotherâ€™s changing milieu of needs which all just keep growing and turning into â€œseeminglyâ€• essential needs over the time as the time passes on?

Â

DeG: Thatâ€™s correct, Sis.

Â

DiG: Is millenniumsâ€™ old circadian rhythm of human body-brain-mind ok with these changes?

Â

DeG: It must be or it may be planning to change over the next few millenniums assuming that we have that much time to allow our circadian rhythms to slowly adjust-and-adapt so as to eventually evolve into new age human body-brain-mind which may not be directly or even indirectly dependent on the cycles of sunrises-and-sunsets.

Â

DiG: Are you kidding, Bro?

Â

DeG: May be, Sis, or may be NOT. But anyways it is better to sit back and enjoy the times we are going through so as to see the times when we are through with whatever times we are going through at present.

Â

DiG: What do you mean, Bro? Are we able to fight off our circadian rhythmsâ€™ urges adequately and

appropriately? Or should we even try to fight off our circadian rhythmsâ€™ urges to accommodate our evolving professional-and-personal lives?

Â

DeG: Seemingly caffeine helps, Sis [15-21]. At least I think so.

Â

DiG: What are you saying, Bro? Can caffeine be a substrate for brain metabolism? Can caffeine replace glucose for brain metabolism? Can caffeine complement or supplement glucose for brain metabolism?

Â

DeG: No Sis. Caffeine cannot replace glucose so it can ONLY be recognized as a supplement, and a very good supplement for that so called â€œre-energizationâ€• or â€œrevitalizationâ€• of human body-brain-mind [22-30]. At least I can be devilâ€™s advocate and may say that people are NOT â€œaddictedâ€• to caffeine. Instead, without the caffeine, modern living systems, which keep encroaching onto the millenniumsâ€™ old circadian rhythms, may crumble, and thus it may be safely said that it is actually the modern living systems which may be truly â€œdependentâ€• on caffeine-â€œaddictedâ€• populations.

Â

DiG: Doesnâ€™t catching up happens on the weekends or non-work days?

Â

DeG: It may to certain extent but as you know, Sis, physiological circaseptan (weekly) rhythm is NOT so strong or as disruptive as physiological circadian (daily) rhythm in human body-brain-mind [31-33]. However, you never know if evolution of modern living systems will guide our circaseptan (weekly) rhythms just like they are changing our circadian (daily) rhythms. But the question is that whether we may be able to take a few millenniums time to slowly adjust-and-adapt and eventually evolve with the incorporation of new-age circaseptan and circadian rhythms?

Â

DiG: But, Bro, if current timesâ€™ projections are to be believed then future may belong to computers and robots which may be immune to any such physiological rhythm that defines human life or any other so called â€œlivingâ€• thing.

Â

DeG: But, Sis, even computers need to be shut off from time to time for maintenance cycles and rebooting requirements. Therefore, I am NOT sure if â€œmatterâ€• will ever be able to get out of the shackles of existing with and within rhythms.Â Â

Â

DiG: True, Bro. And the way you are describing, it seems like whatever time during which humans will continue to coexist with computers and robots, it is going to be straining the millenniumsâ€™ old physiological phenomena which all very slowly evolved over the past times and for whose future slow evolutions over the time, we do NOT have enough time and we may NOT be able to give them their due-essential time.

Â

DeG: Well said, Sis, very well said. See how our works were supposed to be easier with the computers and robots but our times and our rhythms have all become rattled by the changing modern times. Otherwise, why would we all be rushing so early in the pre-dawn hours to reach our places of works overlooking our own circadian rhythms even when our modern lives have been eased and facilitated by the use of computers and robots to unbelievably vast extents?Â

Â

DiG: Bro, it seems like stress during existence will always be there; only the color of the stress and its form will keep changing. See, to understand human rhythms and their essentialities for humans, computers and robots will have to become emotionally intelligent. And then they will feel and may be better understand what all limitations human existence have and how the awareness about those limitations make humans feel for themselves and their existence.

Â

DeG: Ok, Sis. Catch you later. I have to drive now to my work before the pre-dawn rush hour driving catches me and drives me nuts.

Â

DiG: Drive safely, Bro, truly very safely.

Â

DeG: Will do, Sis, will do.

References

1. Melatonin And Sleep. Accessed on December 17, 2018 from: https://www.sleepfoundation.org/sleep-topics/melatonin-and-sleep
2. 5 Reasons You Wake Up Too Early â€“ And What You Can Do About It. Accessed on December 17,

2018 from: https://www.thesleepdoctor.com/2018/08/14/5-reasons-you-wake-up-too-early-and-what-you-can-do-about-it/
3. Brahmamuhurtha. Accessed on December 17, 2018 from: https://en.wikipedia.org/wiki/Brahmamuhurtha
4. Is the brahma-muhurta (early hours around dawn) the best time for meditation? Why? Accessed on December 17, 2018 from: https://www.quora.com/Is-the-brahma-muhurta-early-hours-around-dawn-the-best-time-for-meditation-Why
5. The Secret Potential Of Brahmamuhurta. Accessed on December 17, 2018 from: https://drclaudiawelch.com/the-secret-potential-of-brahmamuhurta/
6. 23 Commute Statistics to Know Before You Go to Work. Accessed on December 17, 2018 from: https://www.creditdonkey.com/commute-statistics.html
7. Poll: Traffic in the United States. Accessed on December 17, 2018 from: https://abcnews.go.com/Technology/Traffic/story?id=485098&page=1
8. The Most Dangerous Times on the Road. Accessed on December 17, 2018 from: https://www.bactrack.com/blogs/expert-center/35042821-the-most-dangerous-times-on-the-road
9. Todayâ€™s Cars Are Parked 95% of the Time. Accessed on December 17, 2018 from: http://fortune.com/2016/03/13/cars-parked-95-percent-of-time/
10. The astonishing human potential wasted on commutes. Accessed on December 17, 2018 from: https://www.washingtonpost.com/news/wonk/wp/2016/02/25/how-much-of-your-life-youre-wasting-on-your-commute/?utm_term=.1066d4207bee
11. Rush hour starts sooner as more drivers hit road before sunrise. Accessed on December 17, 2018 from: https://www.dailynews.com/2007/12/31/rush-hour-starts-sooner-as-more-drivers-hit-road-before-sunrise/
12. Early to rise? Pittsburgh commuters leaving home earlier these days to beat the rush. Accessed on December 17, 2018 from: https://www.post-gazette.com/news/transportation/2016/03/14/Commuters-are-leaving-home-earlier-to-beat-the-rush-and-get-things-done/stories/201602280060
13. Types of Hospital Jobs Available: Hospital Career Opportunities to Explore. Accessed on December 17, 2018 from: https://www.verywellhealth.com/types-of-hospital-jobs-1736336
14. Nijkamp P. (2000) Infrastructure and Suprastructure in Regional Competition: A Deus ex Machina?. In: Batey P.W.J., Friedrich P. (eds) Regional Competition. Advances in Spatial Science. Springer, Berlin, Heidelberg. Accessed on December 17, 2018 from: https://doi.org/10.1007/978-3-662-04234-2_4
15. Burke TM, Markwald RR, McHill AW, Chinoy ED, Snider JA, Bessman SC, Jung CM, O'Neill JS, Wright KP Jr. Effects of caffeine on the human circadian clock in vivo and in vitro. Sci Transl Med. 2015 Sep 16;7(305):305ra146. Accessed on December 17, 2018 from:Â http://dx.doi.org/10.1126/scitranslmed.aac5125
16. Three Things Caffeine Does In Your Brain. Accessed on December 17, 2018 from: https://www.forbes.com/sites/daviddisalvo/2018/06/29/three-things-caffeine-does-in-your-brain/#6bbbd5c91876
17. Caffeine In Coffee May Throw Off Circadian Rhythm, And All It Takes Is One Double Espresso. Accessed on December 17, 2018 from: https://www.medicaldaily.com/caffeine-coffee-may-throw-circadian-rhythm-and-all-it-takes-one-double-espresso-353110
18. The Best Time of Day to Drink Coffee, According to Science. Accessed on December 17, 2018 from: https://www.inc.com/geoffrey-james/scientists-just-discovered-best-time-of-day-to-drink-your-first-cup-of-coffee.html
19. How Caffeine Affects the Body Clock. Accessed on December 17, 2018 from: https://www.the-scientist.com/news-opinion/how-caffeine-affects-the-body-clock-34819
20. Coffee stops jet lag by rewinding the body clock â€“ but thereâ€™s a catch. Accessed on December 17, 2018 from: https://www.telegraph.co.uk/news/science/science-news/11869030/Coffee-stops-jet-lag-by-rewinding-the-body-clock-but-theres-a-catch.html
21. Why the worst time to drink coffee is actually in the morning. Accessed on December 17, 2018 from: https://www.washingtonpost.com/news/wonk/wp/2015/06/01/when-to-drink-coffee-so-you-get-the-most-out-of-the-caffeine/?utm_term=.5c4557338c05
22. Why Bacteria, But Not Humans, Can Live on Caffeine. Accessed on December 17, 2018 from: http://discovermagazine.com/2011/jun/13-why-bacteria-but-not-humans-can-live-on-caffeine
23. Scholey A, Savage K, O'Neill BV, Owen L, Stough C, Priestley C, Wetherell M. Effects of two doses of glucose and a caffeine-glucose combination on cognitive performance and mood during multi-tasking. Hum Psychopharmacol. 2014 Sep;29(5):434-45. Accessed on December 17, 2018 from: http://dx.doi.org/10.1002/hup.2417
24. Could coffee replace insulin injections for diabetics? Accessed on December 17, 2018 from: https://www.theguardian.com/science/2018/jun/19/could-coffee-replace-insulin-injections-for-diabetics
25. Clarke DD, Sokoloff L. Substrates of Cerebral Metabolism. In: Siegel GJ, Agranoff BW, Albers RW, et al., editors. Basic Neurochemistry: Molecular, Cellular and Medical Aspects. 6th edition. Philadelphia: Lippincott-Raven; 1999. Accessed on December 17, 2018 from: https://www.ncbi.nlm.nih.gov/books/NBK28048/
26. Bernard BN, Louise LC, Louise D. The Effects of Carbohydrates, in Isolation and Combined with Caffeine, on Cognitive Performance and Mood-Current Evidence and Future Directions. Nutrients. 2018 Feb 9;10(2). pii: E192. Accessed on December 17, 2018 from: http://dx.doi.org/10.3390/nu10020192
27. Meeusen R, Decroix L. Nutritional Supplements

and the Brain. Int J Sport Nutr Exerc Metab. 2018 Mar 1;28(2):200-211. Accessed on December 17, 2018 from: http://dx.doi.org/10.1123/ijsnem.2017-0314
28. Coffee and a sweet treat to think better? Caffeine and glucose combined improves the efficiency of brain activity. Accessed on December 17, 2018 from:Â https://www.sciencedaily.com/releases/2010/11/101123101751.htm
29. De Pauw K, Roelands B, Van Cutsem J, Marusic U, Torbeyns T, Meeusen R. Electro-physiological changes in the brain induced by caffeine or glucose nasal spray. Psychopharmacology (Berl). 2017 Jan;234(1):53-62. Accessed on December 17, 2018 from:Â http://dx.doi.org/10.1007/s00213-016-4435-2
30. Naftalin RJ. Definitively, my cup of tea. Focus on "Caffeine inhibits glucose transport by binding at the GLUT1 nucleotide-binding site". Am J Physiol Cell Physiol. 2015 May 15;308(10):C825-6. Accessed on December 17, 2018 from: http://dx.doi.org/10.1152/ajpcell.00083.2015
31. Karoly PJ, Goldenholz DM, Freestone DR, Moss RE, Grayden DB, Theodore WH, Cook MJ. Circadian and circaseptan rhythms in human epilepsy: a retrospective cohort study. Lancet Neurol. 2018 Nov;17(11):977-985. Accessed on December 17, 2018 from: http://dx.doi.org/10.1016/S1474-4422(18)30274-6
32. Uezono K, Haus E, Swoyer J, Kawasaki T. 45 Circaseptan Rhythms in Clinically Healthy Subjects. Haus E, Kabat HF (eds): Chronobiology 1982-1983. 15th International Conference of the International Society for Chronobiology, Minneapolis, Minn., September 1981. Basel, Karger, 1984, pp 257-262. Accessed on December 17, 2018 from: http://dx.doi.org/10.1159/000410985
33. Reinberg AE, Dejardin L, Smolensky MH, Touitou Y. Seven-day human biological rhythms: An expedition in search of their origin, synchronization, functional advantage, adaptive value and clinical relevance. Chronobiol Int. 2017;34(2):162-191. Accessed on December 17, 2018 from:Â http://dx.doi.org/10.1080/07420528.2016.1236807