Fact Sheet: Sleep during the Menopausal Transition*

What kinds of sleep changes do women experience during the menopausal transition?

- For many women, especially those with good sleep before perimenopause, sleep doesn't get worse during this time. [1]
- But, about half of women report sleep problems during perimenopause, compared to 30% in premenopause.
- Sleep problems start to get worse in early perimenopause, are highest in late perimenopause, then become stable or get better in postmenopause. [1]
- Difficulty staying asleep is the most common problem in perimenopause and can last into postmenopause. Waking up too early also gets worse in perimenopause, but then often gets better in postmenopause. [1]
- Changes in hormones during perimenopause can cause sleep problems. Hot flashes/flushes and night sweats cause wake ups during the night. But, even women who don't have hot flashes say their sleep is worse during perimenopause. One potential reason is that the brain becomes more active during sleep during this time, which makes sleep lighter and leads to worse sleep quality.[1-4]
- Seasons also play a role: perimenopausal women have more problems sleeping in the summer than winter, when they also have more hot flashes and night sweats. [5]

What else should you know about sleep during the menopausal transition?

- Women are at higher risk for sleep apnea once they begin the menopausal transition, which maybe related to hormonal changes and weight gain. Tell your doctor if you experience snoring or wake up gasping for air, which can be symptoms of sleep apnea. [6]
- Sleep differs among women with different racial/ethnic heritage. For instance, in SWAN:
    - Black, Chinese, Japanese, and Hispanic/Latinx women had shorter sleep relative to White women.
    - Black and Hispanic/Latinx women had more interrupted sleep relative to White women.
    - Black, Chinese, and Japanese women had poorer sleep quality relative to White women.
    - Race/ethnic differences in sleep may be related to race/ethnic differences in healthproblems, hot flashes/night sweats, waist size, physical inactivity, stress, financial strain,and emotional health.
- Staying active by playing sports or exercising may help with staying asleep during the night,improve sleep quality and insomnia, and make sleep deeper. [8]
- Sleep often will get better! As women get into their 60's and are further into postmenopause, theysleep longer and spend less time awake during the night than they did during perimenopause. [9]

For more information, please see:

1. Kravitz HM, Janssen I, Bromberger JT, Matthews KA, Hall MH, Ruppert K, Joffe H. Sleep Trajectories Before and After the Final Menstrual Period in The Study of Women's Health Across the Nation (SWAN).Curr Sleep Med Rep. 2017;3(3):235-50. Epub 2017/09/26. doi: 10.1007/s40675-017-0084-1. PubMedPMID: 28944165; PMCID: PMC5604858.
2. Campbell IG, Bromberger JT, Buysse DJ, Hall MH, Hardin KA, Kravitz HM, Matthews KA, Rasor MO, Utts J,Gold E. Evaluation of the association of menopausal status with delta and beta EEG activity during sleep.Sleep. 2011;34(11):1561-8. Epub 2011/11/02. doi: 10.5665/sleep.1398. PubMed PMID: 22043127; PMCID:PMC3198211.
3. Sowers MF, Zheng H, Kravitz HM, Matthews K, Bromberger JT, Gold EB, Owens J, Consens F, Hall M. Sexsteroid hormone profiles are related to sleep measures from polysomnography and the Pittsburgh Sleep Quality Index. Sleep. 2008;31(10):1339-49. PubMed PMID: 18853931.
4. Kravitz HM, Janssen I, Santoro N, Bromberger JT, Schocken M, Everson-Rose SA, Karavolos K, Powell LH. Relationship of day-to-day reproductive hormone levels to sleep in midlife women. Arch Intern Med.2005;165(20):2370-6. Epub 2005/11/17. doi: 10.1001/archinte.165.20.2370. PubMed PMID: 16287766.
5. Harlow SD, Elliott MR, Bondarenko I, Thurston RC, Jackson EA. Monthly variation of hot flashes, night sweats, and trouble sleeping: effect of season and proximity to the final menstrual period (FMP) in the SWAN Menstrual Calendar substudy. Menopause. 2020;27(1):5-13. Epub 2019/10/01. doi:10.1097/gme.0000000000001420. PubMed PMID: 31567864; PMCID: PMC6934911.
6. Hall MH, Matthews KA, Kravitz HM, Gold EB, Buysse DJ, Bromberger JT, Owens JF, Sowers M. Race and financial strain are independent correlates of sleep in midlife women: the SWAN sleep study. Sleep.2009;32(1):73-82. Epub 2009/02/05. PubMed PMID: 19189781; PMCID: PMC2625326.
7. Matthews KA, Hall MH, Lee L, Kravitz HM, Chang Y, Appelhans BM, Swanson LM, Neal-Perry GS, Joffe H.Racial/ethnic disparities in women's sleep duration, continuity, and quality, and their statistical mediators: Study of Women's Health Across the Nation. Sleep. 2019;42(5). Epub 2019/02/20. doi:10.1093/sleep/zsz042. PubMed PMID: 30778560; PMCID: PMC6519910.
8. Kline CE, Irish LA, Krafty RT, Sternfeld B, Kravitz HM, Buysse DJ, Bromberger JT, Dugan SA, Hall MH. Consistently high sports/exercise activity is associated with better sleep quality, continuity and depth in midlife women: the SWAN sleep study. Sleep. 2013;36(9):1279-88. Epub 2013/09/03. doi:10.5665/sleep.2946. PubMed PMID: 23997360; PMCID: PMC3738036.
9. Matthews KA, Kravitz HM, Lee L, Harlow SD, Bromberger JT, Joffe H, Hall MH. Does midlife aging impact women's sleep duration, continuity, and timing?: A longitudinal analysis from the Study of Women's Health Across the Nation. Sleep. 2020;43(4). Epub 2019/10/22. doi: 10.1093/sleep/zsz259. PubMed PMID:31633180; PMCID: PMC7157190.

*SWAN recognizes that race is a social construct and that including race/ethnicity in describing our findings is complicated, with there being reasons for and against doing such. We and others are actively reviewing the best approach to ensure that we provide patients with the best information about their health.