

# Scite Assistant vs. Elicit vs. Consensus vs. Scopus AI – Summary Generation

Prompt: “does sleeping less lead to weight gain?” (testing period: mid-Mar 2024)

Scite Assistant	Elicit
<p><i>Setting: Publication year &gt; 2014</i></p> <p>Insufficient sleep has been consistently linked to weight gain in various studies. Experimental evidence in humans has shown that inadequate sleep leads to a positive energy balance, resulting in weight gain due to increased energy intake surpassing the additional energy expenditure during wakefulness (Duan et al., 2022). Sleep deprivation has been associated with increased energy intake and eating behavior, contributing to weight gain (Parrish &amp; Teske, 2016). Controlled studies have demonstrated that even slight sleep restriction can induce weight gain (Broussard &amp; Klein, 2022). Additionally, sleep deprivation has been shown to reduce the efficacy of stimulating physical activity and energy expenditure, further promoting weight gain (Deporter et al., 2017).</p> <p>The relationship between sleep and weight gain is complex, involving factors such as energy balance, appetite regulation, and metabolic dysfunction. Sleep restriction can lead to an increase in basal energy expenditure, followed by overcompensation in energy intake, ultimately resulting in a positive energy balance and weight gain (Broussard &amp; Cauter, 2016). Poor sleep habits can impact eating behaviors and physical activity, influencing body weight control, especially in adolescents (Chaput &amp; Dutil, 2016). Studies have also highlighted the impact of insufficient sleep on overweight and obesity in children and adolescents (Gong et al., 2018).</p> <p>Furthermore, sleep disturbances interfere with endocrine pathways regulating energy balance, promoting weight gain and obesity (Reyes et al., 2023). Chronic sleep deprivation can lead to fatigue, daytime sleepiness, and weight changes (Sawant &amp; Thakurdesai, 2018). Research has shown a strong positive relationship between weight status and sleep deprivation, emphasizing the need for further investigation into this association (Morrissey et al., 2016). In adults with overweight, insufficient sleep during weight loss interventions can lead to a loss of muscle mass instead of adipose tissue mass compared to adequate sleep conditions (Chaput et al., 2022).</p> <p>In conclusion, the evidence from various studies supports the notion that insufficient sleep is a significant risk factor for weight gain and obesity. The impact of sleep on energy balance, appetite regulation, and metabolic processes underscores the importance of adequate and quality sleep in weight management and overall health.</p> <p><b>References (11)</b></p> <p><b>Broussard &amp; Cauter (2016).</b> Disturbances of Sleep and Circadian Rhythms: Novel Risk Factors for Obesity. <i>Current Opinion in Endocrinology Diabetes and Obesity</i>. <a href="https://doi.org/10.1097/med.0000000000000276">https://doi.org/10.1097/med.0000000000000276</a></p> <p><b>Broussard &amp; Klein (2022).</b> Insufficient Sleep and Obesity: Cause or Consequence. <i>Obesity</i>. <a href="https://doi.org/10.1002/oby.23539">https://doi.org/10.1002/oby.23539</a></p> <p><b>Chaput &amp; Dutil (2016).</b> Lack of Sleep as a Contributor to Obesity in Adolescents: Impacts on Eating and Activity Behaviors. <i>International Journal of Behavioral Nutrition and Physical Activity</i>. <a href="https://doi.org/10.1186/s12966-016-0428-0">https://doi.org/10.1186/s12966-016-0428-0</a></p> <p><b>Chaput, et al. (2022).</b> The Role of Insufficient Sleep and Circadian Misalignment in Obesity. <i>Nature Reviews Endocrinology</i>. <a href="https://doi.org/10.1038/s41574-022-00747-7">https://doi.org/10.1038/s41574-022-00747-7</a></p> <p><b>Deporter, et al. (2017).</b> Partial Sleep Deprivation Reduces the Efficacy of Orexin-A to Stimulate Physical Activity and Energy Expenditure. <i>Obesity</i>. <a href="https://doi.org/10.1002/oby.21944">https://doi.org/10.1002/oby.21944</a></p> <p><b>Duan, et al. (2022).</b> Connecting Insufficient Sleep and Insomnia With Metabolic Dysfunction. <i>Annals of the New York Academy of Sciences</i>. <a href="https://doi.org/10.1111/nyas.14926">https://doi.org/10.1111/nyas.14926</a></p> <p><b>Gong, et al. (2018).</b> Insufficient Sleep Duration and Overweight/Obesity Among Adolescents in a Chinese Population. <i>International Journal of Environmental Research and Public Health</i>. <a href="https://doi.org/10.3390/ijerph15050997">https://doi.org/10.3390/ijerph15050997</a></p> <p><b>Morrissey, et al. (2016).</b> Sleep Duration and Risk of Obesity Among a Sample of Victorian School Children. <i>BMC Public Health</i>. <a href="https://doi.org/10.1186/s12889-016-2913-4">https://doi.org/10.1186/s12889-016-2913-4</a></p> <p><b>Parrish &amp; Teske (2016).</b> Acute Partial Sleep Deprivation Due to Environmental Noise Increases Weight Gain by Reducing Energy Expenditure in Rodents. <i>Obesity</i>. <a href="https://doi.org/10.1002/oby.21703">https://doi.org/10.1002/oby.21703</a></p> <p><b>Reyes, et al. (2023).</b> The Relationship Between Body Mass Index and Sleep in Women With Risk Factors for Gestational Diabetes Mellitus. <i>Obesity Science &amp; Practice</i>. <a href="https://doi.org/10.1002/osp4.689">https://doi.org/10.1002/osp4.689</a></p> <p><b>Sawant &amp; Thakurdesai (2018).</b> Case Report: Sleep Deprivation Presenting as Acute Psychosis. <i>Indian Journal of Case Reports</i>. <a href="https://doi.org/10.32677/ijcr.2018.v04.i02.020">https://doi.org/10.32677/ijcr.2018.v04.i02.020</a></p>	<p><i>Filter: Publication year &gt; 2014</i></p> <p><u>Free plan (4 papers)</u></p> <p>A body of research consistently supports the link between sleep deprivation and weight gain. <b>Benson (2018)</b> and <b>Bayon (2014)</b> both highlight the role of sleep loss in reprogramming fat tissue to increase fat storage, as well as its association with elevated BMI. <b>Häusler (2019)</b> further underscores this, finding that poor subjective sleep quality and certain objective sleep characteristics are related to weight gain. This relationship is particularly concerning in children, as <b>Chaput (2015)</b> notes that insufficient sleep can lead to increased food intake and weight gain. Therefore, it is clear that sleeping less can indeed lead to weight gain.</p> <p><u>Plus plan (up to 8 papers)</u></p> <p>A body of research suggests a link between sleep deprivation and weight gain. <b>Benson (2018)</b> and <b>Bayon (2014)</b> both highlight the potential mechanisms, including changes in metabolic pathways and increased food intake. <b>Häusler (2019)</b> and <b>Chaput (2015)</b> further support this, with Häusler finding a robust association between poor sleep quality and weight gain, and Chaput emphasizing the role of sleep duration in obesity in children. However, <b>Yu (2019)</b> presents conflicting evidence, with a meta-analysis finding no significant effect of experimental sleep restriction on adult body weight. <b>Ogilvie (2017)</b> and <b>Chaput (2015)</b> both call for further research to clarify the relationship between sleep and obesity, and to explore the potential for healthy sleep interventions to combat weight gain.</p> <p><b>References (6)</b></p> <p><b>Bayon, et al. (2014).</b> Sleep debt and obesity. <i>Annals of Medicine</i>. <a href="https://doi.org/10.3109/07853890.2014.931103">https://doi.org/10.3109/07853890.2014.931103</a></p> <p><b>Benson (2018).</b> How sleep loss leads to weight gain. <i>Science</i>. <a href="https://doi.org/10.1126/science.2018.361.6404.twis">https://doi.org/10.1126/science.2018.361.6404.twis</a></p> <p><b>Chaput (2015).</b> Is sleep deprivation a contributor to obesity in children? <i>Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity</i>. <a href="https://doi.org/10.1007/s40519-015-0233-9">https://doi.org/10.1007/s40519-015-0233-9</a></p> <p><b>Häusler, et al. (2019).</b> Does sleep affect weight gain? Assessing subjective sleep and polysomnography measures in a population-based cohort study (CoLaus/HypnoLaus). <i>Sleep</i>. <a href="https://doi.org/10.1093/sleep/zsz077">https://doi.org/10.1093/sleep/zsz077</a></p> <p><b>Ogilvie &amp; Patel (2017).</b> The epidemiology of sleep and obesity. <i>Sleep Health</i>. <a href="https://doi.org/10.1016/j.slehd.2017.07.013">https://doi.org/10.1016/j.slehd.2017.07.013</a></p> <p><b>Yu, et al. (2019).</b> Experimental sleep restriction effect on adult body weight: A meta-analysis. <i>Sleep and Breathing</i>. <a href="https://doi.org/10.1007/s11325-019-01828-0">https://doi.org/10.1007/s11325-019-01828-0</a></p>

Consensus	Scopus AI
<p>Filter: Publication year &gt; 2015</p> <p><b>Introduction</b> The relationship between sleep duration and weight gain has been a subject of scientific inquiry, with various studies exploring how sleep patterns may influence energy balance and consequently affect body weight.</p> <p><b>Key Insights from Research Papers</b></p> <ul style="list-style-type: none"> <li>Partial sleep deprivation (PSD) is associated with an increase in energy intake without a significant change in energy expenditure, potentially leading to weight gain over time 1.</li> <li>Variability in sleep duration, particularly in males, has been linked to weight gain during the first semester of university, suggesting that inconsistent sleep patterns may contribute to weight gain 2.</li> <li>Sleep disturbances and obesity have a bidirectional relationship, with sleep loss affecting energy balance and obesity increasing the risk of sleep disorders 3.</li> <li>In children treated for obesity, longer sleep duration at baseline is associated with greater weight loss, indicating that adequate sleep may support obesity treatment outcomes 4.</li> <li>Clinical intervention studies suggest that sleep restriction hinders weight management, with sleep extension potentially aiding in appetite control and weight loss 5.</li> <li>Molecular changes in fat and muscle tissues due to sleep loss may reprogram fat tissue to increase fat storage, providing a physiological explanation for weight gain associated with sleep deprivation 6.</li> <li>Poor subjective sleep quality has been robustly associated with weight gain, with some evidence pointing to oxygen desaturation during sleep as a contributing factor 7.</li> <li>Increased sleep duration is correlated with modest weight loss, and sleeping more than six hours per night is linked to better success with weight loss compared to less than six hours 8.</li> <li>Insufficient sleep in children is consistently associated with weight gain and obesity, with increased food intake being a primary mechanism 9.</li> <li>Stress and poor sleep may enhance appetite and cravings, decrease motivation for physical activity, and reduce the efficacy of weight loss interventions, suggesting a complex interplay between stress, sleep, and weight 10.</li> </ul> <p><b>Conclusion</b> The synthesis of research findings indicates that insufficient sleep is consistently associated with weight gain across different age groups. The mechanisms include increased energy intake, changes in appetite-regulating hormones, and physiological alterations in metabolic tissues. Variability in sleep patterns and poor sleep quality are also significant contributors to weight gain. Adequate sleep appears to be an important factor in weight management and obesity treatment, with longer sleep duration showing potential benefits for weight loss. The interconnection between stress, sleep, and eating behaviors further complicates the relationship between sleep and weight gain, highlighting the need for a holistic approach to weight management that includes stress and sleep management.</p> <p><b>References (10)</b></p> <ol style="list-style-type: none"> <li>Al Khatib et al. (2017). The effects of partial sleep deprivation on energy balance: A systematic review and meta-analysis. <i>European Journal of Clinical Nutrition</i>. <a href="https://doi.org/10.1038/ejcn.2016.201">https://doi.org/10.1038/ejcn.2016.201</a></li> <li>Roane et al. (2015). What Role Does Sleep Play in Weight Gain in the First Semester of University? <i>Behavioral Sleep Medicine</i>. <a href="https://doi.org/10.1080/15402002.2014.940109">https://doi.org/10.1080/15402002.2014.940109</a></li> <li>Rodrigues, et al. (2021). Obesity and sleep disturbances: The "chicken or the egg" question. <i>European Journal of Internal Medicine</i>. <a href="https://doi.org/https://doi.org/10.1016/j.ejim.2021.04.017">https://doi.org/https://doi.org/10.1016/j.ejim.2021.04.017</a></li> <li>Janson (2022). Sleeping it off? The value of sleep in children treated for obesity. <i>Acta Paediatrica</i>. <a href="https://doi.org/10.1111/apa.16366">https://doi.org/10.1111/apa.16366</a></li> <li>St-Onge (2017). Sleep–obesity relation: Underlying mechanisms and consequences for treatment. <i>Obesity Reviews</i>. <a href="https://doi.org/10.1111/obr.12499">https://doi.org/10.1111/obr.12499</a></li> <li>Benson (2018). How sleep loss leads to weight gain. <i>Science</i>. <a href="https://doi.org/10.1126/science.2018.361.6404.tw18">https://doi.org/10.1126/science.2018.361.6404.tw18</a></li> <li>Häusler et al. (2019). Does sleep affect weight gain? Assessing subjective sleep and polysomnography measures in a population-based cohort study (CoLaus/HypnoLaus). <i>Sleep</i>. <a href="https://doi.org/10.1093/sleep/zsz077">https://doi.org/10.1093/sleep/zsz077</a></li> <li>Thacker &amp; Daly (2020). Is increased sleep duration effective for weight loss? <i>Evidence-Based Practice</i>. <a href="https://doi.org/10.1097/ebp.0000000000001122">https://doi.org/10.1097/ebp.0000000000001122</a></li> <li>Chaput (2016). Is sleep deprivation a contributor to obesity in children? <i>Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity</i>. <a href="https://doi.org/10.1007/s40519-015-0233-9">https://doi.org/10.1007/s40519-015-0233-9</a></li> <li>Geiker et al. (2018). Does stress influence sleep patterns, food intake, weight gain, abdominal obesity and weight loss interventions and vice versa? <i>Obesity Reviews</i>. <a href="https://doi.org/10.1111/obr.12603">https://doi.org/10.1111/obr.12603</a></li> </ol>	<p>(By default: Publication year &gt; 2013)</p> <p>Based on the available abstracts, the relationship between sleep duration and weight gain is well-documented, with several studies providing evidence to support the claim that sleeping less can lead to weight gain.</p> <ul style="list-style-type: none"> <li><b>Sleep duration and weight gain:</b> Multiple studies have shown an association between short sleep duration and weight gain 12345.</li> <li><b>Mechanisms:</b> The impact of sleep on weight gain is attributed to hormonal changes affecting energy balance, leading to increased food intake, decreased energy expenditure, and alterations in appetite-regulating hormones 1235.</li> <li><b>Experimental evidence:</b> Experimental studies have demonstrated that sleep restriction leads to weight gain, increased caloric intake, and greater consumption of unhealthy food and drink 4.</li> <li><b>Risk of obesity:</b> Individuals reporting less than 5 hours of sleep per night had a higher risk of developing obesity compared to those reporting 7-8 hours of sleep 2.</li> <li><b>Gender and race differences:</b> Subgroup analysis revealed differences in weight gain between genders and races 6.</li> </ul> <p>However, it's important to note that not all studies have found a significant association between sleep restriction and weight gain 6. While the evidence is largely supportive of the link between sleeping less and weight gain, further research is needed to fully understand the mechanisms and potential variations based on demographic factors.</p> <p>Unfortunately, none of the abstracts directly address the query about the impact of sleep duration on weight gain in children. Therefore, a comprehensive answer to this specific aspect cannot be provided based solely on the available abstracts.</p> <p><b>6 References</b> (usually 5-8 References)</p> <ol style="list-style-type: none"> <li>Atar, et al. (2019). Sleep Disorders and Obesity in Childhood: A New Component in Solving Obesity. <i>Pediatric Endocrinology Reviews: PER</i>. <a href="https://doi.org/10.17458/per.vol16.2019.apb.sleepdisordersobesitychildhood">https://doi.org/10.17458/per.vol16.2019.apb.sleepdisordersobesitychildhood</a></li> <li>Xiao, et al. (2013). A large prospective investigation of sleep duration, weight change, and obesity in the NIH-AARP diet and health study cohort. <i>American Journal of Epidemiology</i>. <a href="https://doi.org/10.1093/aje/kwt180">https://doi.org/10.1093/aje/kwt180</a></li> <li>Papatriantafyllou, et al. (2022). Sleep Deprivation: Effects on Weight Loss and Weight Loss Maintenance. <i>Nutrients</i>. <a href="https://doi.org/10.3390/nu14081549">https://doi.org/10.3390/nu14081549</a></li> <li>Spaeth (2019). Insufficient sleep and obesity. In <i>Sleep and Health</i> (pp. 189-201). <a href="https://doi.org/10.1016/B978-0-12-815373-4.00015-0">https://doi.org/10.1016/B978-0-12-815373-4.00015-0</a></li> <li>Bayon, et al. (2014). Sleep debt and obesity. <i>Annals of Medicine</i>. <a href="https://doi.org/10.3109/07853890.2014.931103">https://doi.org/10.3109/07853890.2014.931103</a></li> <li>Yu, et al. (2019). Experimental sleep restriction effect on adult body weight: a meta-analysis. <i>Sleep and Breathing</i>. <a href="https://doi.org/10.1007/s11325-019-01828-0">https://doi.org/10.1007/s11325-019-01828-0</a></li> </ol>