

Differences in body weight post-induction sleep deprivation and sleep recovery in white male rats (*Rattus norvegicus*)

Title	Differences in body weight post-induction sleep deprivation and sleep recovery in white male rats (<i>Rattus norvegicus</i>)
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Abstract	<p>Sleep Deprivation (SD) reduced leptin levels, increased ghrelin levels, and it caused were multifactorial, so research was conducted on experimental animals to prove whether SD was the single factor causing changes in body weight (BW). The study's objectives were to know the difference in BW after induction of paradoxical and total SD and to observe the improvement in sleep recovery (SR). This study was true experimental with posttest only, and a control group design used 25 male albino rats randomly shared into five groups; control, PSD, TSD, PSD+SR, dan TSD+SR on 15 August – 15 September 2021. The weight is measured by OHAUS 100g balance. Statistical analysis used by One-way ANOVA and paired t-test denoted no significant difference after SD ($p=0,277$) and SR ($p=0,297$), a significant difference in the TSD+SR and TSD between before ($p=0,014$), after SD ($p=0,008$), and after SR ($p=0,034$). Sleep deprivation increases BW through raised ghrelin, and SR reverses the effects by increasing the antioxidant. Results must be confirmed by measuring ghrelin levels and leptin orexin type 1 and 2 receptors. In conclusion, that was a significant difference in the TSD+SR and TSD between pre and post-sleep deprivation and the TSD+SR between pre and post-SR.</p>
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