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| Journal Name: | [**Journal of Advances in Medicine and Medical Research**](https://journaljammr.com/index.php/JAMMR) |
| Manuscript Number: | **Ms\_JAMMR\_131253** |
| Title of the Manuscript: | **The Normocaloric Diet Reduces Daytime Food Intake in Obese Mice due a High-Fat Diet and Normalizes Fat Accumulation and Metabolic Parameters** |
| Type of the Article | Original Research Article |

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| **PART 1: Comments** | | |
|  | **Reviewer’s comment**  **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | No artificial intelligence was used in writing the article |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This study provides valuable insights into diet-induced obesity and metabolic recovery in mice, with relevance for obesity and NAFLD research. It demonstrates that switching from a high-fat to a normocaloric diet can lead to metabolic recovery without caloric restriction. This suggests that diet composition, not just calorie intake, plays a crucial role in obesity management. The study’s findings can inform dietary intervention strategies, particularly in  the context of NAFLD and metabolic disorders, and consequently reinforce the need for balanced macronutrient intake over other common weight loss diets. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The current title is somewhat unclear. The phrase "due a High-Fat Diet" is grammatically incorrect and makes the sentence confusing.  Alternative titles:  "Replacement of a High-Fat Diet with a Normocaloric Diet Reduces Daytime Food Intake in Obese Mice and Normalizes Fat Accumulation and Metabolic Parameters."  "Switching from a High-Fat Diet to a Normocaloric Diet Reduces Daytime Food Intake and Normalizes Fat and Metabolic Parameters in Obese Mice."  "Dietary Transition from High-Fat to Normocaloric Diet Restores Metabolic Health and Reduces Daytime Food Intake in Obese Mice."  Any of these titles explicitly highlight the main experimental intervention: switching diets from high-fat to normocaloric, which is the study's key variable. | We changed the original text to the title: “Replacement of a High-Fat Diet with a Standard Chow Diet Reduces Daytime Food Intake in Obese Mice and Normalizes Fat Accumulation and Metabolic Parameters” |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | Generally, yes.  But the authors may consider these revisions in the abstract (there were some grammatical errors in the draft in these parts):  Introduction section: "The consumption of ultra-processed foods rich in fat has contributed to the global rise in obesity and other metabolic disorders, including excess adipose tissue accumulation and Non-Alcoholic Fatty Liver Disease (NAFLD). While physical exercise and dietary education are the first-line treatments for weight loss, restrictive diets are often used to accelerate weight reduction. However, these diets are generally unsustainable in the long term and frequently lead to weight regain."  Conclusion section: "Switching to a standard diet, even without reducing total caloric intake, decreased daytime food intake, restored body weight, normalized blood glucose and lipid profiles, and improved hepatic steatosis in mice." | We agree with the suggestions and, therefore, changed the original text. |

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| **Is the manuscript scientifically, correct? Please write here.** | Generally, yes. To improve the paper, the authors may consider the following:   1. The study objectives should explicitly state that mice were used. The last sentence in the Introduction should be revised to:   “We aimed to evaluate the effects of replacing a high-fat diet with a normocaloric diet on food intake, fat accumulation, glycemic homeostasis, and non-alcoholic fatty liver disease (NAFLD) in mice.”   1. The methodology lacks some crucial details required for reproducibility and compliance with ARRIVE reporting standards (for more details, please refer to this [https://www.equator-network.org/reporting-](https://www.equator-network.org/reporting-guidelines/improving-bioscience-research-reporting-the-arrive-guidelines-for-reporting-animal-research/) [guidelines/improving-bioscience-research-reporting-the-arrive-guidelines-for-reporting-animal-research/](https://www.equator-network.org/reporting-guidelines/improving-bioscience-research-reporting-the-arrive-guidelines-for-reporting-animal-research/)):    1. Sample Size Calculation – No justification for sample size is provided. Was a power analysis performed?    2. Inclusion/Exclusion Criteria – It is unclear if any mice were excluded due to illness, non-compliance with the diet, or significant outliers in weight gain.    3. Blinding – No mention of whether the investigators were blinded during interventions, data collection, or analysis. 2. If they want to retain "normocaloric diet" in the title, they must clearly define it in the Methodology or Discussion section, citing relevant literature. The rationale for calling it "normocaloric" is missing. They should specify:    1. The energy density (kcal/g) and how it compares to standard murine chow; or    2. The “normal” caloric requirement per day of the mice strain used in the study as well as the “normal” macronutrient composition, if any; and    3. At least a reference from previous studies defining a normocaloric diet in rodent research.   4. The limitations of the study should be discussed as a last paragraph in the Discussion part. For example, please refer to one of the articles you cited in the Discussion part (Baiges-Gaya et al.) and see the last paragraph of their Discussion as they cited the limitations of their study. One limitation that I can think of from your study is the translatability to humans. You should explicitly mention that metabolic responses in mice do not perfectly mimic human metabolism, especially in terms of circadian eating patterns and dietary adaptation. Recommendations for  further studies should also be mentioned to address the cited limitations. | 1. We agree with the suggestions and change the original text. 2. A) We did not perform sample size analyzes in the study, since this work is part of a line of research that studies the physiological mechanisms related to obesity and is associated with other projects. We also considered the minimum number of animals necessary to carry out statistical analysis.   B) The animals were monitored by a veterinarian to check their health and signs of illness. During the experimental period, no problems related to animal health were observed, and no animals were removed from the study. This procedure is standard within bioterium, following the Brazilian standards of the National Council for the Control of Animal Experimentation (Concea).  C) During collection and analysis, animals were randomized to ensure that investigators were blinded. (This information was added to the manuscript)   1. A; B; C) We understand the question and for a better understanding we have change the term “normocaloric diet” with “standard chow diet”. Our standard chow diet has a macronutrient composition similar to the AIN-93G diet, recommended by the American Institute of Nutrition as a normolipidic and normocaloric diet for rodents.( doi: [10.1016/j.crphys.2022.11.001](https://doi.org/10.1016/j.crphys.2022.11.001)) 2. This study has some limitations, as it did not evaluate other factors that may influence weight gain and, consequently, the development of non-alcoholic fatty liver disease, such as energy expenditure and spontaneous movement, which could be explored in future research. Additionally, metabolic responses in mice do not perfectly mimic human metabolism, especially in terms of circadian eating patterns and dietary adaptation. (This information was added to the manuscript).   However, we consider our results valid since the focus was on assessing the effect of the diet |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention**  **them in the review form.** | Yes. |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | Yes. |  |
| **Optional/General** comments | **N/A** |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s comment**  We *agreed with reviewer, correct the manuscript and highlight that part in the manuscript.* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* | All experiments were approved by the university’s ethics committee on animal use (Ceua – State university of western Paraná - UNIOESTE protocol no. 22-20). |