



Infectobesity and Lifestyle Responsiveness: Infectious Modifiers of Adiposity with Implications for Nutrition and Exercise Science: An Integrated Review

Khadijeh Irandoust^{1*}, Jamshid Razmyar², Majid Janani³, Hassane Zouhal⁴

¹ Department of Sport Sciences, Imam Khomeini International University, Qazvin, Iran

² Department of Avian Health and Diseases, Faculty of Veterinary Medicine, Tehran, Iran

³ Department of Viral Diseases, SANA Institute for Avian Health and Diseases Research, Tehran, Iran

⁴ Institut International des Sciences du Sport (2I2S), Irodouër, France

* Corresponding author email address: irandoust@soc.ikiu.ac.ir

| Editor | Reviewers |
|--|---|
| Luis Felipe Reynoso-Sánchez Department of Social Sciences and Humanities, Autonomous University of Occident, Los Mochis, Sinaloa, Mexico felipe.reynoso@uadeo.mx | Reviewer 1: Yaghob Badriazarin Associate Professor of Sport Sciences, Tabriz University, Tabriz, Iran. Email: badriazarin@tbzmed.ac.ir Reviewer 2: Azade Abooei Department of Counseling, Faculty of Humanities, University of Science and Art, Yazd, Iran. Email: a.abooei@tea.sau.ac.ir |

1. Round 1

1.1 Reviewer 1

Reviewer:

In the Introduction, the paragraph starting “The concept of infectobesity—which posits that specific pathogens can contribute to adiposity...” contains repetition regarding adenovirus types (Ad-36, Ad-37, Ad-5). Consider consolidating this discussion to improve narrative flow and reduce redundancy.

The quoted sentence “Ad36 infection has been shown to increase adiposity...” contains inconsistent citation formatting and an embedded author reference. Please standardize citation style throughout this section.

The section on immunometabolism is strong conceptually, but the paragraph beginning “A growing body of research in immunometabolism highlights...” could benefit from a brief schematic narrative linking immune reprogramming directly to lifestyle responsiveness.

In “Resistance to conventional lifestyle interventions...”, COVID-19–related weight gain is discussed alongside infectobesity. Please clarify whether SARS-CoV-2 is being proposed as an adipogenic agent or as a contextual modifier of behavior and metabolism.

Authors revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

The sentence “it could be argued that a growing body of evidence...” is speculative in tone. As this is a review article, consider either tightening the language or explicitly labeling this as a hypothesis-generating interpretation.

In “A comprehensive literature search was performed...”, the databases and years are clearly stated; however, specific search strings or Boolean logic examples would improve reproducibility and methodological transparency.

The eligibility criterion “Applied studies relevant to nutrition, physical activity, immune function...” is broad. Please clarify how relevance was operationalized to minimize selection bias.

While methodological pitfalls are mentioned later, there is no explicit description of whether or how risk of bias or study quality was evaluated. Even in narrative reviews, a structured appraisal approach would strengthen rigor.

In the paragraph stating “these pathogens interact with the host microbiome, creating a metabolic environment that favors fat accumulation”, the language suggests causality. Please consider rephrasing to reflect the correlational nature of much of the evidence.

The discussion of HAdV-36 appropriately notes heterogeneity. However, the paragraph beginning “Recent meta-analyses and systematic reviews...” would benefit from explicitly stating effect sizes or confidence ranges, where available.

In “In addition to HAdV-36, other viral and microbial candidates...”, Borna disease virus and prion agents are discussed alongside adenoviruses. Consider clearly differentiating strength of evidence to avoid false equivalence.

Authors revised the manuscript and uploaded the updated document.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.