

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Diabetes*

**Manuscript NO:** 83847

**Title:** Impact of inhaled and intranasal corticosteroids on glucose metabolism and diabetes mellitus: A mini review

**Provenance and peer review:** Invited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 03259512

**Position:** Peer Reviewer

**Academic degree:** MSc, PhD

**Professional title:** Assistant Professor, Senior Researcher

**Reviewer's Country/Territory:** Australia

**Author's Country/Territory:** Singapore

**Manuscript submission date:** 2023-02-11

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-03-19 21:49

**Reviewer performed review:** 2023-03-20 23:50

**Review time:** 1 Day and 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

The submitted manuscript evaluated the association between application of inhaled corticosteroids (ICS) and/or intranasal corticosteroids (INS) ( such as Beclomethasone; Budesonide; Fluticasone)and the incidence of diabetes mellitus (DM). Authors used clinical data from human studies. The review is important and well-designed. However, there are several issues to address: 1. Introduction requires more substantial citation. For instance, the 1st paragraph in the section “EFFECT OF ICS AND INS ON GLUCOSE METABOLISM AND DM” ( top of page 4) – has got only one citation ( [5]) which is not acceptable. I suggest using some recent references-: Li JX, Cummins CL. Fresh insights into glucocorticoid-induced diabetes mellitus and new therapeutic directions. Nat Rev Endocrinol. 2022 Sep;18(9):540-557. doi: 10.1038/s41574-022-00683-6. Epub 2022 May 18. PMID: 35585199; PMCID: PMC9116713. Cui A, Fan H, Zhang Y, Zhang Y, Niu D, Liu S, Liu Q, Ma W, Shen Z, Shen L, Liu Y, Zhang H, Xue Y, Cui Y, Wang Q, Xiao X, Fang F, Yang J, Cui Q, Chang Y. Dexamethasone-induced Krüppel-like factor 9 expression promotes hepatic gluconeogenesis and hyperglycemia. J Clin Invest. 2019 Apr 29;129(6):2266-2278. doi: 10.1172/JCI66062. PMID: 31033478; PMCID:

PMC6546458. Kuo T, McQueen A, Chen TC, Wang JC. Regulation of Glucose Homeostasis by Glucocorticoids. *Adv Exp Med Biol.* 2015;872:99-126. doi: 10.1007/978-1-4939-2895-8\_5. PMID: 26215992; PMCID: PMC6185996. 2. It would be good to draw a diagram to indicate how glucocorticoids are linked to hyperglycaemia ( molecular signaling pathway). It would increase visual effect and attractiveness of this review. 3. Authors do not discuss application of natural compounds that can be used as glucocorticoids... here is an example : Wang Y, Gao J, Yu Y, Zhou L, Wang M, Xue W, Liu B, Wu X, Wu X, Gao H, Shen Y, Xu Q. A plant-derived glucocorticoid receptor modulator with potency to attenuate the side effects of glucocorticoid therapy. *Br J Pharmacol.* 2023 Jan;180(2):194-213. doi: 10.1111/bph.15957. Epub 2022 Oct 13. PMID: 36165414. 4. The indicated Conclusion ( in the Abstract and at the end of the manuscript) “The following strategies for ICS/INS dose minimization can be considered: use of non-pharmacological measures (trigger avoidance, smoking cessation, vaccination to avoid infection), control of comorbid conditions, use of non-ICS-containing medications, intermittent rather than regular ICS dosing, and appropriate de-escalation of high ICS doses.” – is relevant, although it can be specified and include application of natural compounds.

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**Peer-review model:** Single blind

**Reviewer's code:** 05792223

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Doctor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** Singapore

**Manuscript submission date:** 2023-02-11

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-05-08 06:05

**Reviewer performed review:** 2023-05-08 06:17

**Review time:** 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

This review of the association between ICS/INS and DM Several large observational studies showing dose response are presented and the risk of DM is presented. The authors agree with the argument that we should avoid underestimating the adverse events associated with DM. I think this is a good paper for a correct assessment of the risks of ICS/INS since they are important drugs for the control of chronic respiratory diseases.

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**Provenance and peer review:** Invited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05452652

**Position:** Peer Reviewer

**Academic degree:** N/A

**Professional title:** N/A

**Reviewer's Country/Territory:** India

**Author's Country/Territory:** Singapore

**Manuscript submission date:** 2023-02-11

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-05-09 09:20

**Reviewer performed review:** 2023-05-11 23:35

**Review time:** 2 Days and 14 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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**E-mail:** bpgoffice@wjgnet.com  
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<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

#### SPECIFIC COMMENTS TO AUTHORS

Congratulations to the authors, your efforts are highly appreciated.

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**Title:** Impact of inhaled and intranasal corticosteroids on glucose metabolism and diabetes mellitus: A mini review

**Provenance and peer review:** Invited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05376168

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Singapore

**Manuscript submission date:** 2023-02-11

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-05-08 12:42

**Reviewer performed review:** 2023-05-16 05:44

**Review time:** 7 Days and 17 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

The authors conducted a comprehensive and systematic review on impact of inhaled and intranasal corticosteroids on glucose metabolism/diabetes mellitus. Overall, this is an informative and comprehensive review. There are several minor revisions that need to be made by the authors. 1. Since the manuscript not only elaborated on the impacts of ICS/INS on DM, but aslo on glucose metabolism with great length. Therefore, the title should be changed to “impact of inhaled and intranasal corticosteroids on glucose metabolism/diabetes mellitus”. 2. The authors should add references in Table 3 to support the methods reducing the impacts of ICS and INS on glucose metabolism and DM.