

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Meta-Analysis

**Manuscript NO:** 63269

**Title:** Effect of Resistance Exercise on Insulin Sensitivity of Skeletal Muscle

**Reviewer's code:** 00863327

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Full Professor

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

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

**Manuscript submission date:** 2021-01-30

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-01-30 09:52

**Reviewer performed review:** 2021-01-31 10:05

**Review time:** 1 Day

<b>Scientific quality</b>	<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 Grade E: Do not publish
<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 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**

It is an interesting opinion review article exploring the effect of resistance exercise (RE) on insulin resistance (IR) of the skeletal muscle. This article emphasized that glucose uptake by the skeletal muscle is a complex process, controlling mainly by the PI3K/Akt/GSK-1 signaling pathway. RT can not only reduce IR in the skeletal muscle but also effectively improve blood glucose and glycosylated hemoglobin levels in patients with type 2 diabetes mellitus (T2DM). This article elucidates the correlation between RT and skeletal muscle IR to provide evidences on applying exercise therapy in improving insulin sensitivity. The authors concluded that RT improves IR in the skeletal muscle by increasing muscle mass, microvascular blood flow and glucose transporter-4 expression as well as by reducing lipid accumulation and inflammation, leading to a potential in the prevention and treatment of T2DM patients. The manuscript is well-written in English and directly relevant to the clinical application. There are two suggestions as follows. 1.As comparing with other articles in this journal, the length of content in this review is short with only around 6 pages. The author can consider to add an illustrated figure to elucidate the detailed mechanisms related to improved IR by RT. 2.The cited references need confirmation for their correctness. For example, the publication year/volume/page of reference 1.

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Full Professor

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

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

**Manuscript submission date:** 2021-01-30

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-03-15 11:49

**Reviewer performed review:** 2021-03-15 12:00

**Review time:** 1 Hour

<b>Scientific quality</b>	<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
<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>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 have revised their manuscript according to the reviewer's suggestions, and

all of the raised issues have been clarified. There is no further comments on the revised manuscript except a minor typographical error in the revised illustrated figure, insulin resistance rather than insulin resistanc.