



REVIEWER'S REPORT

Manuscript No.: 50044

Date: 26/1/2025

Title:

A Meta-analysis for analyzing changes in serum-free T4 levels with Metformin treatment in patients with or without thyroid disease and/or diabetes

Recommendation:

- Accept as it is
- Accept after minor revision.....
- Accept after major revision
- Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality				
Techn. Quality				
Clarity	Excellent			
Significance	Excellent			

Reviewer Name: Dr.Sumathi

Date: 26/1/2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

Metformin is a medicine used to treat type 2 diabetes and gestational diabetes. It is also used to help prevent type 2 diabetes if we are at high risk of developing it. Type 2 diabetes is a condition where the body does not make enough insulin or insulin that it makes does not work properly.

This research findings are significant and medical genetics and endocrinology basis work.

Detailed Reviewer's Report

- 1. A meta analysis is a statistical process that combines data from multiple studies to draw conclusions about a common research question. The results of a meta analysis are usually more robust than the results of any individual study.**

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- 2. A normal Serum free T4 level for adults typically ranges between 0.8 to 1.8 nanograms per deciliter.**
- 3. This means that a free T4 level within this range indicates normal thyroid function. While levels above this range could suggest hyperthyroidism and levels below could indicate hypothyroidism.**
- 4. Metformin hydrochloride decreases the amount of glucose releases into the bloodstream from the liver and increases the bodys use of the glucose.**
- 5. It is a type of antidiabetic agent. Metformin is the active ingredient of metformin hydrochloride. Also called Glucophage.**
- 6. A free T4 test measures the amount of free thyroxine in our blood. T4 is a hormone produced by the thyroid gland that helps regulate our metabolism.**
- 7. A free T4 test can help determine if our thyroid is functioning properly.**
- 8. Levothyroxine is a medicine used to treat an underactive thyroid gland. The thyroid gland makes thyroid hormones which help to control energy levels and growth.**
- 9. Levothyroxine is taken to replace the missing thyroid hormone thyroxine.**
- 10. Results has come well and tables are neat.**
- 11. Flow charts and pictures graphs are meaningful.**
- 12. References should be in alphabetical order.**
- 13. This research findings are value to publish in your journal.**