

Jay Bilimoria (Proofreader/Researcher)

KEY MESSAGE

The combination of dapagliflozin and metformin significantly reduces perirenal fat, a key visceral fat depot, which is associated with improvements in cardiovascular risk markers. This highlights the added benefit of dapagliflozin in targeting specific fat layers that are not as effectively reduced by metformin alone.

OBJECTIVE

To evaluate the impact of dapagliflozin plus metformin on reducing perirenal fat.

METHOD

Open label, randomised controlled trial with 29 patients comparing metformin alone and metformin with dapagliflozin.

KEY RESULTS

•**Weight Loss:** Metformin + dapagliflozin experienced greater weight loss compared to metformin only.

•**Fat Reduction:** Significant reductions in DS, PP,† O, RP fat were observed in the combination therapy group compared to baseline, whereas the metformin-only group saw significant reductions in DS and RP fat only compared to baseline.

•**Metabolic Correlations:** Only the combination therapy group showed significant correlations between fat depot reductions and improvements in metabolic syndrome markers and insulin resistance.



Interesting fact...

From our work creating [HTAngel](#) we have a database of up-to-date HTA submissions globally. Here is a table showing the progress of dapagliflozin usage around the world in the last year. It will be interesting to see whether dapagliflozin will appear in future HTA submissions for the use of fat loss.

The study shows that dapagliflozin with metformin reduces abdominal fat in obese diabetics. Limitations include small sample size and short duration. Future work should involve larger, longer studies. While the findings are quite promising, further research is required to confirm results and fully understand the clinical implications.

Location	Indication	Approval
Germany (A23-11)	Heart failure except for patients with type 2 diabetes who do not have chronic kidney disease.	Approved (Aug 2023)
England (TA902)	Chronic heart failure with preserved or mildly reduced ejection fraction	Approved (Jun 2023)
Scotland (SMC2577)	Chronic heart failure with left ventricular ejection fraction (LVEF) >40%	Approved (Aug 2023)

†SS: superficial subcutaneous, DS: deep subcutaneous, PP: pre-peritoneal, O: omental, RP: right perirenal

Cuatrecasas G, De Cabo F, Covas MJ, et al. Dapagliflozin added to metformin reduces perirenal fat layer in type 2 diabetic patients with obesity. *Sci Rep.* 2024;14(1):10832.