SEVERE ADVERSE DRUG REACTIONS

- Increasing case reports of Euglycemic DKA with Tirzepatide
- EDKA can occur in non-diabetic individuals on incretin-based weight-loss therapy, especially tirzepatide.
- Risk markedly increases when combined with strict carbohydrate restriction, ketogenic diets, or intermittent fasting.
- Symptoms may be subtle (nausea, vomiting, malaise) with normal glucose levels.
- Medical supervision is essential when using GLP-1/GIP agonists for weight loss—particularly if patients are fasting, dieting, or restricting carbohydrates.
- Patients on these medications should be reviewed monthly initially, then every 3 months, including diet review, glucose/ketone monitoring, and risk counselling

Raptis D, Theodoropoulos P, Shah MK, Bloomgarden N, Kishore P. A Case of Euglycemic Diabetic Ketoacidosis With Tirzepatide Use and Severe Calorie Restriction. JCEM Case Reports. 2026 Feb;4(2):luaf324.

TIRZEPATIDE IN NEW ZEALAND

- Not Funded , but available
- Licensed for both Type 2 diabetes and weight loss

Mounjaro 12.5mg

$874.99

BUY NOW

Mounjaro 15mg

$874.99

BUY NOW

Mounjaro 2.5mg

$429.99

BUY NOW

Mounjaro 5mg

$499.99

BUY NOW

Mounjaro 7.5mg

$689.99

BUY NOW

Mounjaro 10mg

$689.99

BUY NOW

USING DULAGLUTIDE MULTIPLE TIMES A WEEK

AWARD 11 TRIAL

BACKGROUND

Since late 2025, Dulaglutide has been licensed to be used twice weekly with a maximum weekly dose of 4.5mg per week

What are the risks and benefits of added dose of Dulaglutide ?

2021 study

1842 adults

Mean Hba1c -70mmol

Mean BMI-34.2KG/M2

On Metformin alone

Frias JP, Bonora E, Nevarez Ruiz L, Li YG, Yu Z, Milicevic Z, Malik R, Bethel MA, Cox DA. Efficacy and safety of dulaglutide 3.0 mg and 4.5 mg versus dulaglutide 1.5 mg in metformin-treated patients with type 2 diabetes in a randomized controlled trial (AWARD-11). Diabetes Care. 2021 Mar 1;44(3):765-73.

Table 2—Summary of adverse events through 52 weeks

Variable	DU 1.5 mg (n = 612)	DU 3.0 mg (n = 616)	DU 4.5 mg (n = 614)
Patients with ≥1 TEAE	380 (62.1)	384 (62.3)	408 (66.4)
TEAEs occurring in ≥5% patients in any group			
Nausea	87 (14.2)	99 (16.1)	106 (17.3)
Diarrhea	47 (7.7)	74 (12.0)	71 (11.6)
Vomiting	39 (6.4)	56 (9.1)	62 (10.1)
Nasopharyngitis	28 (4.6)	32 (5.2)	38 (6.2)
Dyspepsia	17 (2.8)	31 (5.0)	17 (2.8)
Discontinuation of study drug due to any AE or death	37 (6.0)	43 (7.0)	52 (8.5)
Discontinuation of study drug due to common GI events*	9 (1.5)	21 (3.4)	24 (3.9)
Nausea	8 (1.3)	8 (1.3)	9 (1.5)
Diarrhea	1 (0.2)	6 (1.0)	6 (1.0)
Vomiting	0 (0.0)	5 (0.8)	8 (1.3)
Dyspepsia	0 (0.0)	2 (0.3)	1 (1.2)
Serious adverse events	51 (8.3)	42 (6.8)	38 (6.2)
Death	3 (0.5)	4 (0.6)	4 (0.7)
Adjudication confirmed			
Acute pancreatitis	1 (0.2)	2 (0.3)	3 (0.5)
CV events	2 (0.3)	8 (1.3)	5 (0.8)
Gallbladder-related events†	9 (1.5)	11 (1.8)	10 (1.6)
Acute renal events‡	6 (1.0)	6 (1.0)	5 (0.8)
Hypoglycemia			
Documented§ (<54 mg/dL)	8 (1.3)	2 (0.3)	7 (1.1)
Severe‖	1 (0.2)	0 (0.0)	1 (0.2)

All values presented as n (%). Deaths and adjudication-confirmed events include any events reported during the safety follow-up period. AE, adverse event; DU, dulaglutide; PG, plasma glucose; TEAE, treatment-emergent adverse event. *Any AE reported under MedDRA System Organ Class *Gastrointestinal Disorders* in ≥5% of patients in any dose group. †Defined by Standardized MedDRA Query (SMQ) *Acute Gallbladder Disease*. ‡Defined by SMQ *Acute Renal Failure*. §Any confirmed PG level <54 mg/dL (3.0 mmol/L). ‖An episode requiring the assistance of another person to actively administer carbohydrate, glucagon, or other resuscitative actions. These episodes may have been associated with sufficient neuroglycopenia to induce seizure or coma. Plasma glucose measurements may not have been available during such an event, but neurologic recovery attributable to the restoration of PG to normal was considered sufficient evidence that the event was induced by a low PG concentration.

RESULTS

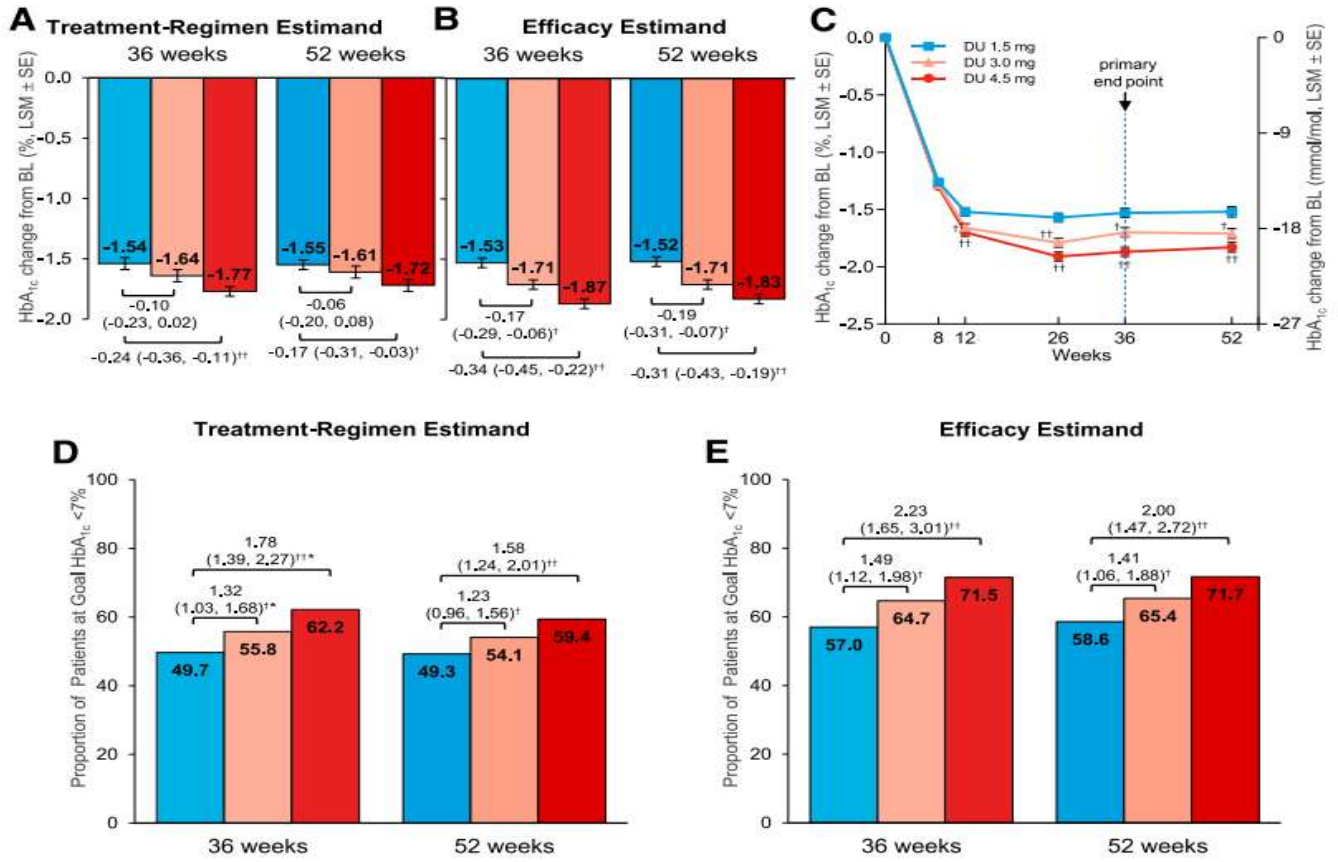
- Dulaglutide 3.0 mg was superior to 1.5 mg for reducing HbA1c, using the efficacy endpoint (ETD 20.17% [21.9 mmol/mol]; P 5 0.003)
- Dulaglutide 4.5mg was superior to 1.5mg for weight loss
- Dulaglutide 4.5mg twice as likely to achieve Hba1c <7% than those on 1.5mg
- 90% retention in study
- Rates of retinopathy and pancreatitis negligible

RESULTS

- Glycaemic Control –significantly reduced HbA1C from baseline
- Body weight , 4.5mg was superior to 1.5mg for weight loss (ETD -1.6KG)
- - 4.5MG
- - MEAN WEIGHT REDUCTION(-4.6KG)
- -> 50% ACHIEVE MORE THAN 5% WEIGHT LOSS
- -3.0MG (-3.8KG)
- -1.5MG(-3.0KG)

- 3.0KG also produced greater weight loss, although no superiority
- Safety and tolerability were similar
- *Frias JP, Bonora E, Nevarez Ruiz L, Li YG, Yu Z, Milicevic Z, Malik R, Bethel MA, Cox DA. Efficacy and safety of dulaglutide 3.0 mg and 4.5 mg versus dulaglutide 1.5 mg in metformin-treated patients with type 2 diabetes in a randomized controlled trial (AWARD-11). Diabetes Care. 2021 Mar 1;44(3):765-73.*

RESULTS


A
Treatment-Regimen Estimand
36 weeks
52 weeks
HbA1c change from BL (%, LSM ± SE)
-1.54
-1.64
-1.77
-1.55
-1.61
-1.72
-0.10 (-0.23, 0.02)
-0.06 (-0.20, 0.08)
-0.24 (-0.36, -0.11)††
-0.17 (-0.31, -0.03)†
B
Efficacy Estimand
36 weeks
52 weeks
-1.53
-1.71
-1.87
-1.52
-1.71
-1.83
-0.17 (-0.29, -0.06)†
-0.19 (-0.31, -0.07)†
-0.34 (-0.45, -0.22)††
-0.31 (-0.43, -0.19)††
C
DU 1.5 mg
DU 3.0 mg
DU 4.5 mg
primary end point
HbA1c change from BL (%, LSM ± SE)
HbA1c change from BL (mmol/mol, LSM ± SE)
Weeks
D
Treatment-Regimen Estimand
Proportion of Patients at Goal HbA1c <7%
1.78 (1.39, 2.27)††*
1.32 (1.03, 1.68)†*
1.58 (1.24, 2.01)††
1.23 (0.96, 1.56)†
49.7
55.8
62.2
49.3
54.1
59.4
36 weeks
52 weeks
E
Efficacy Estimand
Proportion of Patients at Goal HbA1c <7%
2.23 (1.65, 3.01)††
1.49 (1.12, 1.98)†
2.00 (1.47, 2.72)††
1.41 (1.06, 1.88)†
57.0
64.7
71.5
58.6
65.4
71.7
36 weeks
52 weeks

CONCLUSIONS

Higher Dulaglutide doses improve glycaemic control

Higher doses also enhance weight loss

-Both Dulaglutide 3.0 and 4.5mg doses lead to additional , meaningful weight loss

Weight reductions continued through to 52 weeks.

Safety profile remains consistent

Frias JP, Bonora E, Nevarez Ruiz L, Li YG, Yu Z, Milicevic Z, Malik R, Bethel MA, Cox DA. Efficacy and safety of dulaglutide 3.0 mg and 4.5 mg versus dulaglutide 1.5 mg in metformin-treated patients with type 2 diabetes in a randomized controlled trial (AWARD-11). Diabetes Care. 2021 Mar 1;44(3):765-73.