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Synopsis of the original article ***'Semaglutide versus dulaglutide once weekly in patients with type 2 diabetes (SUSTAIN 7): A randomised, open-label, phase 3b trial'***

Pratley RE, et al. Lancet Diabetes Endocrinol. 2018;6(4):275-286

Synopsis created and reviewed by Novo Nordisk

Introduction

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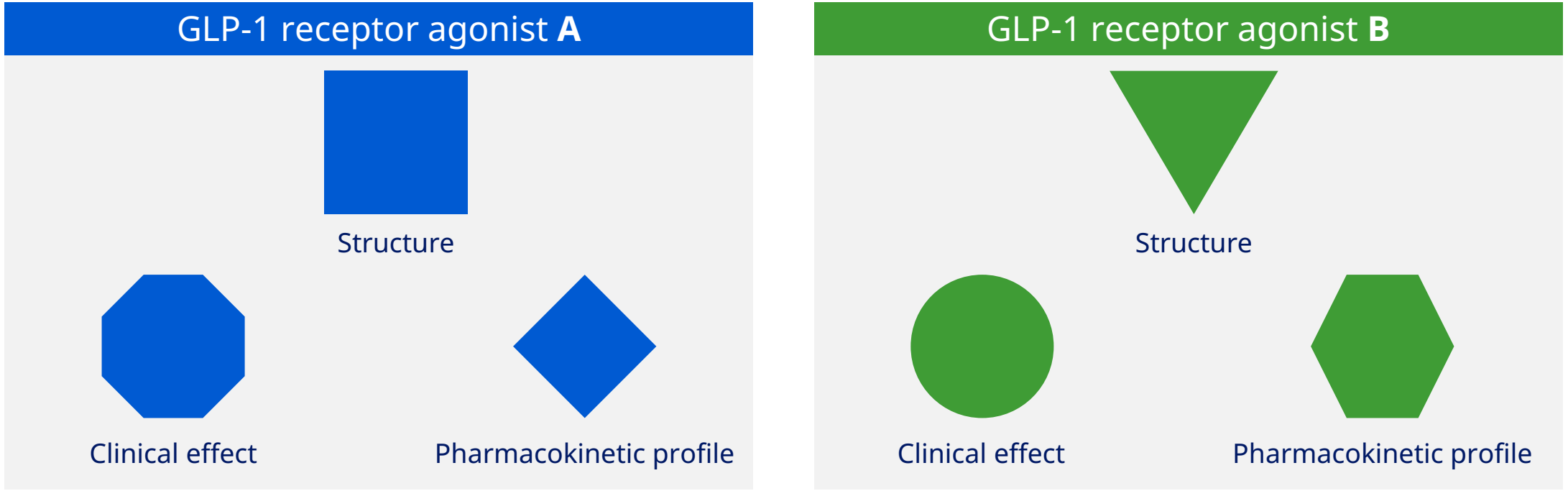
Despite common mechanisms of actions, GLP-1 receptor agonists differ in structure, pharmacokinetic profile, and clinical effects



GLP-1, glucagon-like peptide-1.

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Introduction

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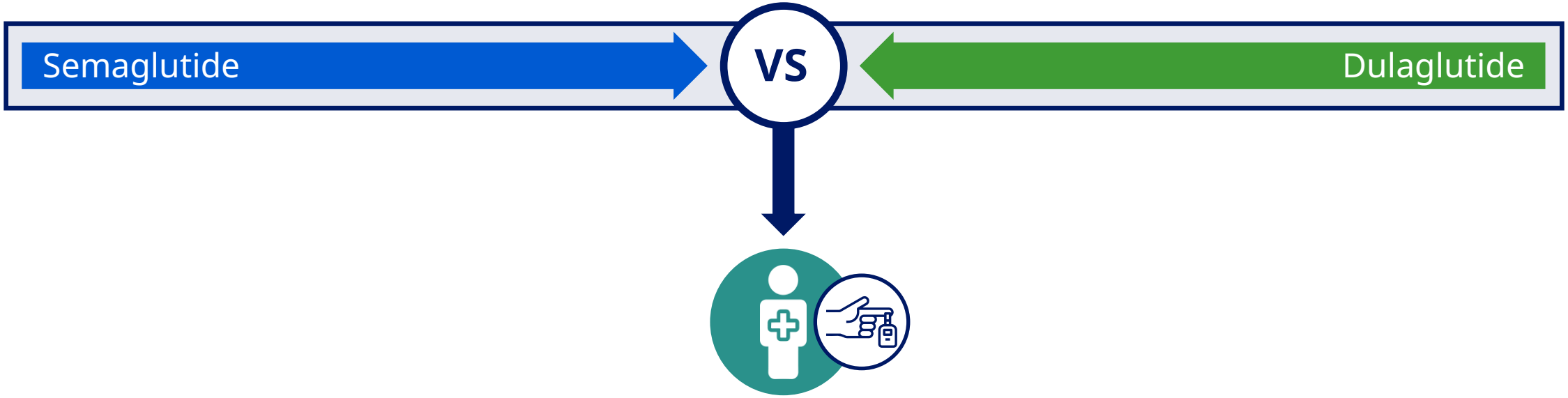
This head-to-head trial compared:



In patients with inadequately controlled type 2 diabetes

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Methods

Open-label, parallel-group, phase 3b trial carried out at 194 hospitals, clinical institutions or private practices in 16 countries

Eligible patients
- Adults (≥18 years)
- Type 2 diabetes
- HbA_{1c} 7.0–10.5% (53.0–91.0 mmol/mol)
- Metformin monotherapy

Withdrawals
- 72 (6%)* patients withdrew

R

1:1:1:1†

- Semaglutide 0.5 mg once weekly (n=301)
- Dulaglutide 0.75 mg once weekly (n=299)
- Semaglutide 1.0 mg once weekly (n=300)
- Dulaglutide 1.5 mg once weekly (n=299)

0 — 40 weeks of treatment — 40

Trial powered for HbA_{1c} non-inferiority (margin 0.4%) and bodyweight superiority

Primary endpoint:‡ Change from baseline in percentage HbA_{1c} at week 40

Confirmatory secondary endpoint: Change in bodyweight at week 40

**Withdrawals: 22 patients receiving semaglutide 0.5 mg, 13 receiving dulaglutide 0.75 mg, 21 receiving semaglutide 1.0 mg, and 16 receiving dulaglutide 1.5 mg. †Patients were randomly assigned by use of an interactive web-response system. ‡The primary analysis population included all randomly assigned patients exposed to at least one dose of trial product obtained while on treatment and before the onset of rescue medication. HbA_{1c}, glycated haemoglobin.*

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Results: Efficacy

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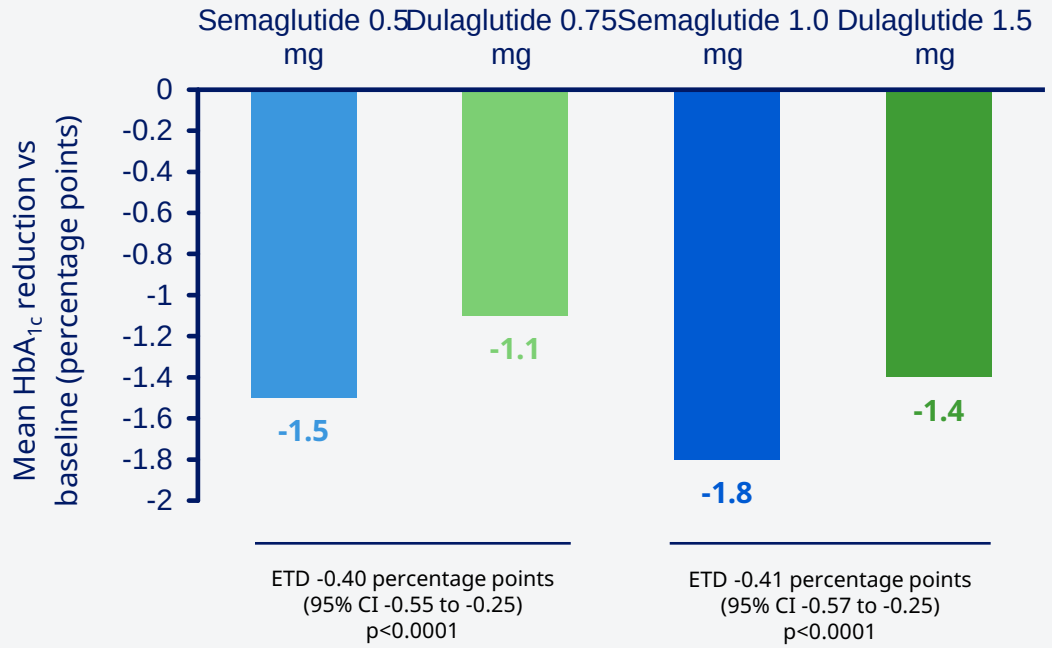
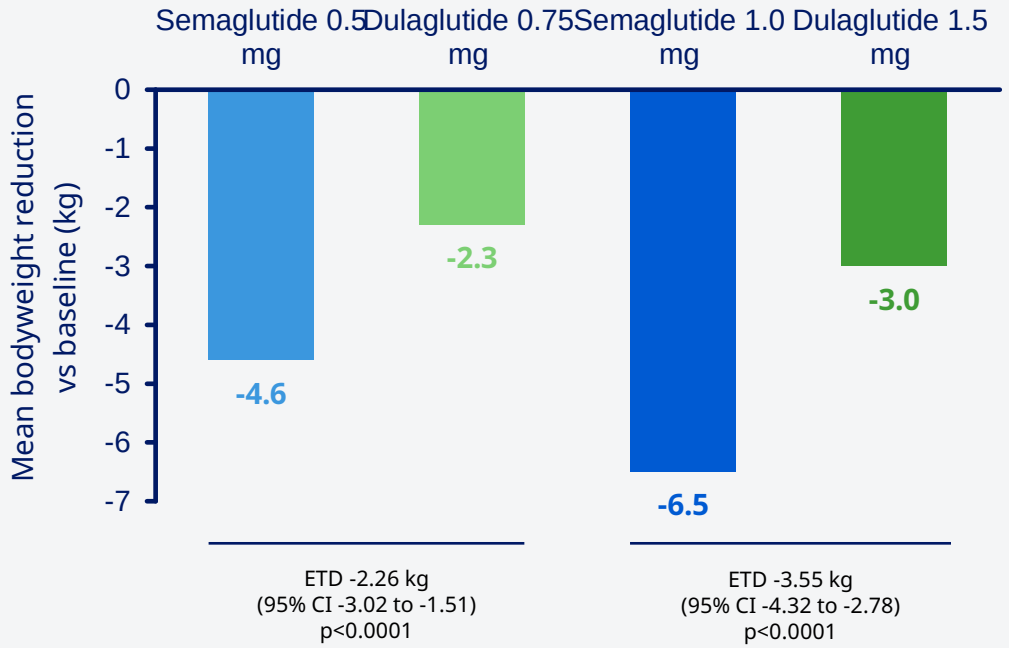
HbA_{1c}



At low and high doses, semaglutide was superior to dulaglutide in improving glycaemic control

Bodyweight



At low and high doses, semaglutide was superior to dulaglutide in reducing bodyweight

CI, confidence interval; ETD, estimated treatment difference; HbA_{1c}, glycated haemoglobin.

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Results: Safety

Gastrointestinal disorders were the most frequently reported AE, and the most common reason for discontinuing treatment with semaglutide and dulaglutide

	Semaglutide 0.5 mg (n=301)	Semaglutide 1.0 mg (n=300)	Dulaglutide 0.75 mg (n=299)	Dulaglutide 1.5 mg (n=299)
Gastrointestinal AE, n (%)	129 (43)	133 (44)	100 (33)	143 (48)
Fatality, n	1	1	2	2

AE, adverse event.

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Conclusions

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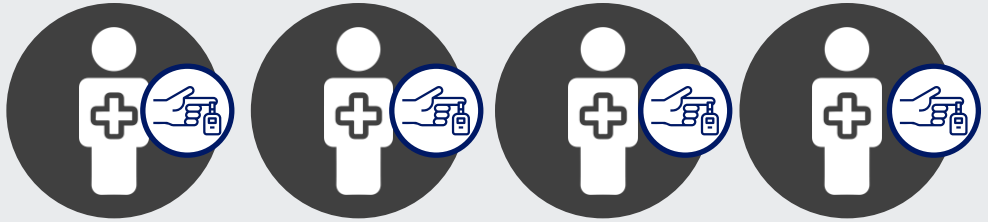
Semaglutide was superior to dulaglutide at low and high doses:

- In improving glycaemic control
- And reducing bodyweight

Enabling a significantly greater number of patients with type 2 diabetes to achieve clinically meaningful glycaemic targets and weight loss



Semaglutide and dulaglutide had a similar safety profile

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