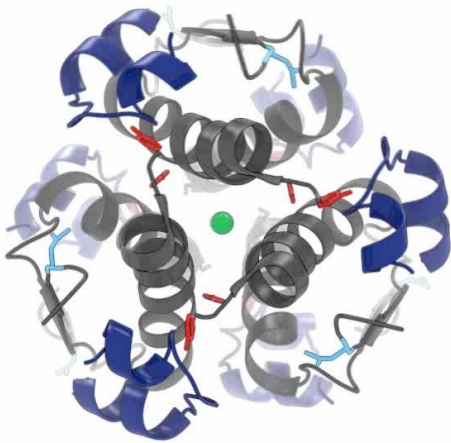




Faster Aspart Compared With Insulin Aspart

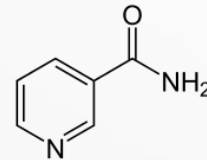
Courtesy of Juan Pablo Frias, MD

Faster Aspart is Insulin Aspart in a New Formulation



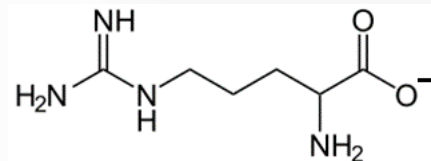
Insulin aspart

Niacinamide: absorption enhancer



Vitamin B3

L-Arginine: added for stability

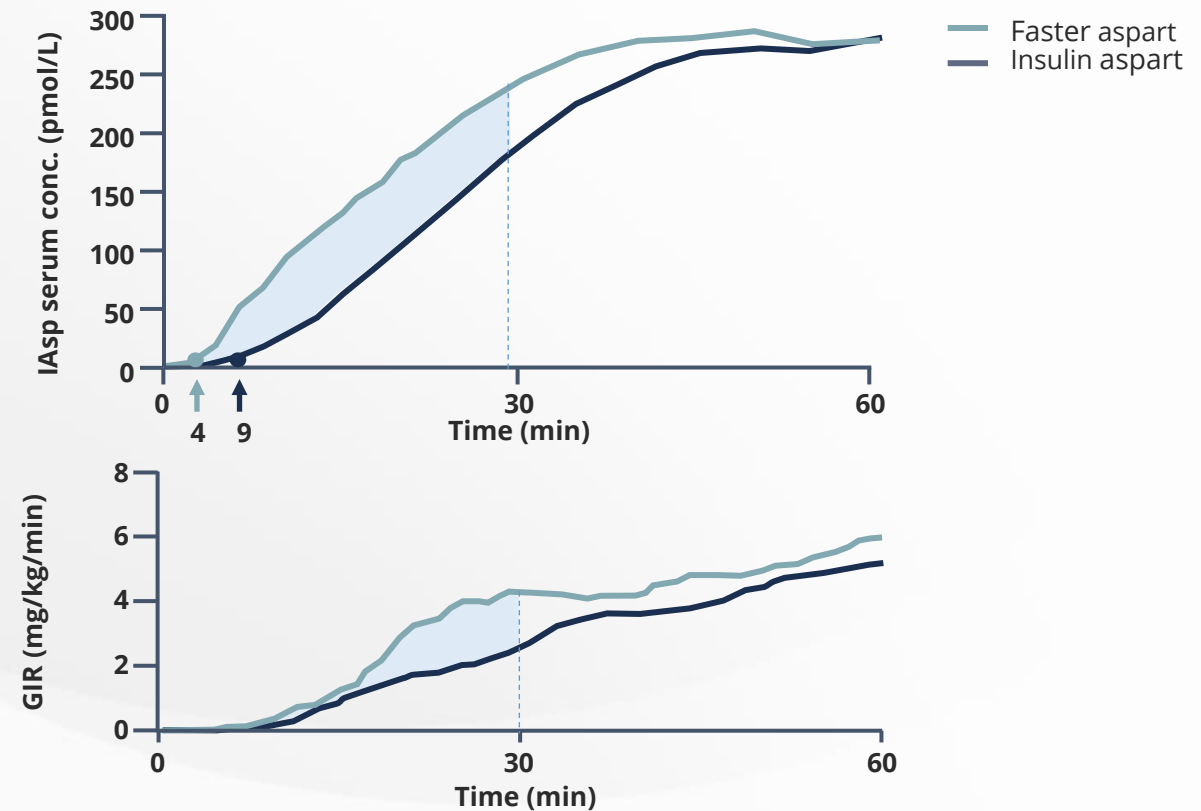


Naturally occurring amino acid

Faster Aspart vs. Insulin Aspart via SC Injection

Compared with insulin aspart, faster aspart has:

- Twice as fast onset of appearance in the bloodstream
- Two-fold higher insulin exposure within the first 30 min
- 74% greater insulin action within the first 30 min



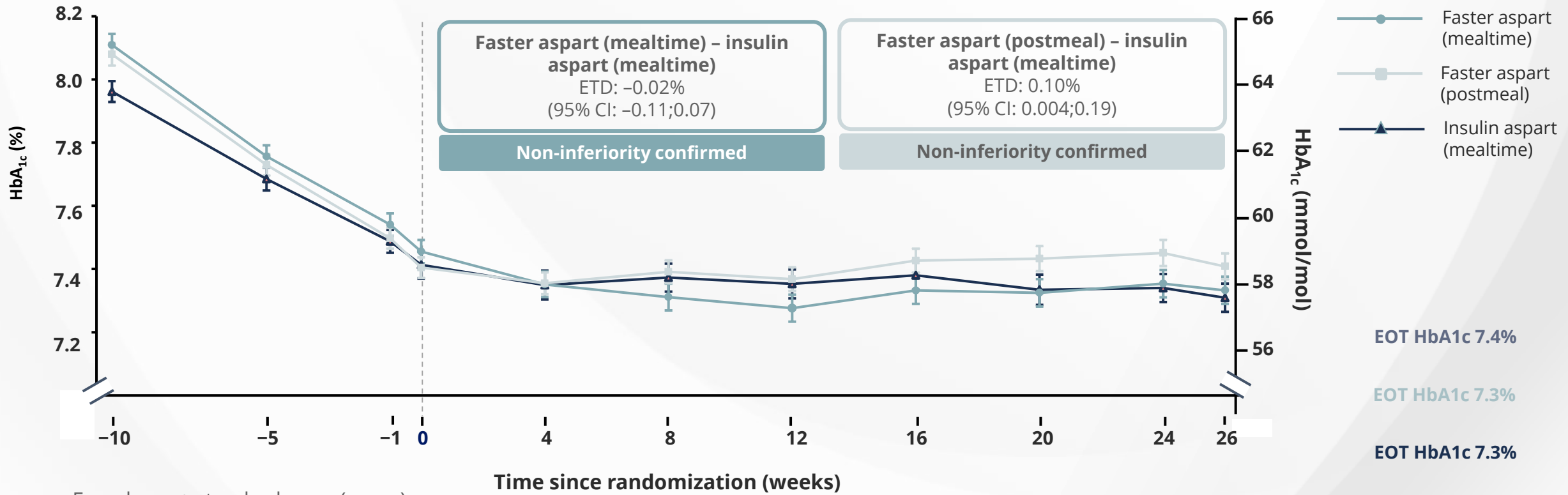
Pooled analysis of NN1218 trials 3887, 3888, 3889, 3891, 3921, 3978.

Faster aspart, fast-acting insulin aspart; GIR, glucose infusion rate; IAsp, insulin aspart; sc, subcutaneous.

Heise, et al. *Clin Pharmacokinet.* 2017;56:551–559.



Onset 8: Mean HbA1c Over Time



Error bars: \pm standard error (mean)

Primary estimand. Change from baseline in HbA1c was analysed using a multiple imputation model. Non-inferiority confirmed at 0.4% level.

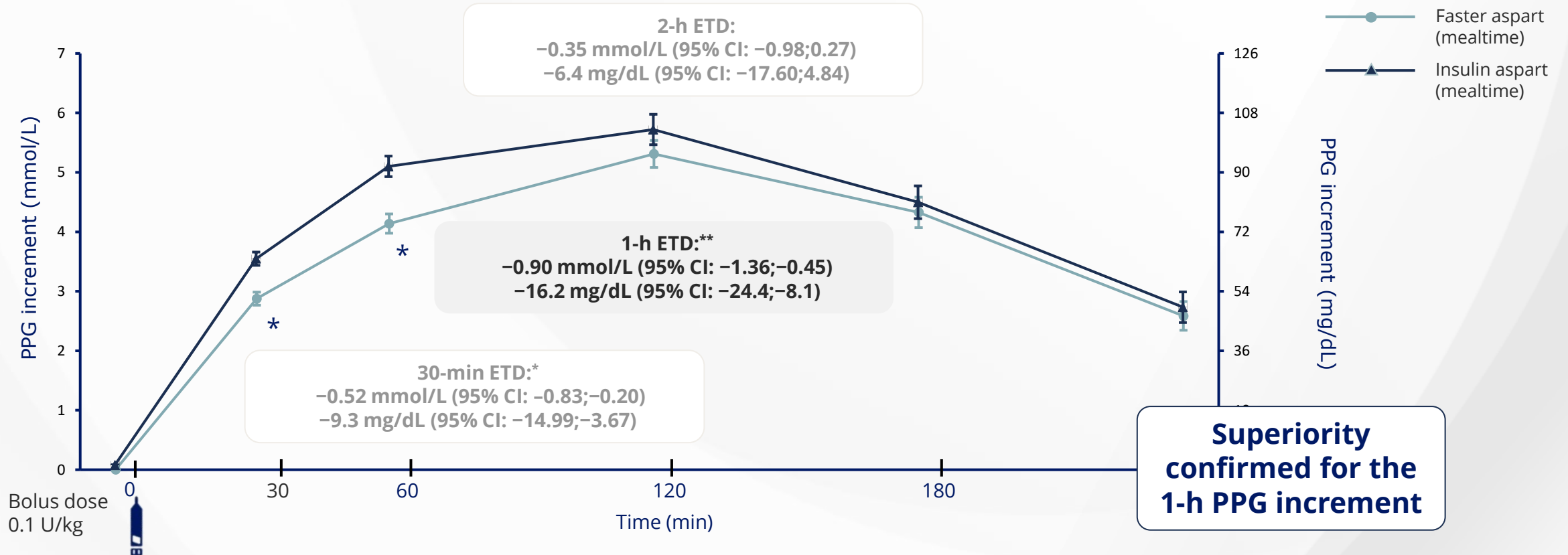
CI, confidence interval; EOT, end of treatment; ETD, estimated treatment difference; faster aspart, fast-acting insulin aspart; HbA1c, glycated hemoglobin.

Buse, et al. Presented at the 78th Scientific Sessions, American Diabetes Association, June 22-26, 2018, Orlando, FL, USA. Poster 1000-P.



Onset 8: PPG Increment at Week 26

Meal test: mealtime comparison

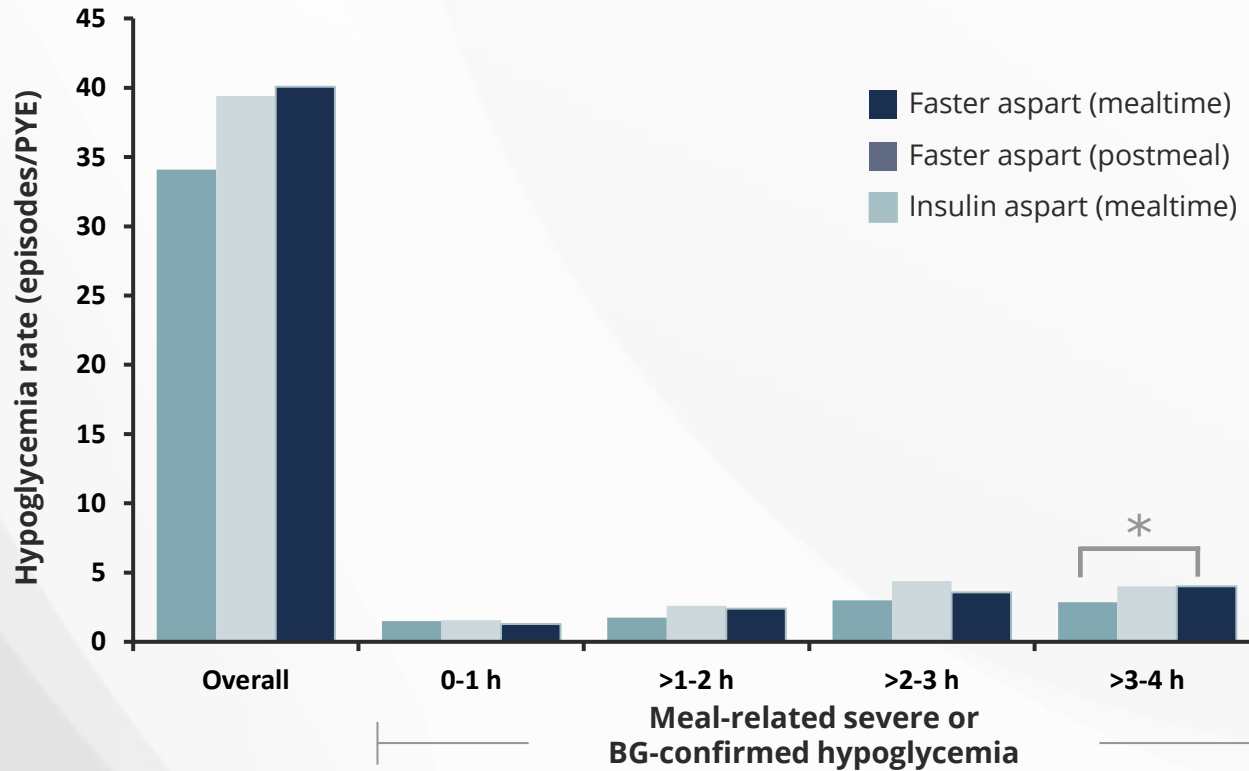


* $p=0.001$; ** $p<0.001$. Error bars: \pm standard error (mean). Primary estimand. If glucose or glucagon was administered, then the last measurement before rescue intervention was carried forward. Change from baseline in PPG increment was analysed using an analysis of variance model. CI, confidence interval; ETD, estimated treatment difference; faster aspart, fast-acting insulin aspart; PPG, postprandial plasma glucose.

Buse, et al. Presented at the 78th Scientific Sessions, American Diabetes Association, June 22-26, 2018, Orlando, FL, USA. Poster 1000-P.



Onset 8: Meal-related Severe or BG-confirmed Hypoglycemia During 26 Weeks



Rates of hypoglycemia, estimated ratio (95% CI)

Faster aspart (mealtime) / insulin aspart (mealtime)	Faster aspart (postmeal) / insulin aspart (mealtime)
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* $p=0.024$. Ratios estimated using a negative binomial model. Treatment-emergent is defined as an event that has onset up to 1 day after last day of randomized treatment and excluding the events occurring in the run-in period. BG-confirmed: PG value <3.1 mmol/L (56 mg/dL). BG, blood glucose; CI, confidence interval; faster aspart, fast-acting insulin aspart; PG, plasma glucose; PYE, patient-years of exposure. Buse, et al. Presented at the 78th Scientific Sessions, American Diabetes Association, June 22-26, 2018, Orlando, FL, USA. Poster 1000-P.



Summary

Compared with conventional insulin aspart, faster aspart demonstrated



HbA1c

Non-inferiority with both mealtime and post-meal dosing



PPG (meal test)

Superiority in 1-h PPG increment



Hypoglycaemia

Reduced late postprandial hypoglycemia



Safety

Similar overall safety profile, as expected for insulin aspart