SUPPLEMENTARY DATA

Supplementary Table S1. Adverse Events by Treatment Arm within Age Cohort

Adverse Event Group	4 to <8 years old			8 to <12 years old			12 to <17 years old	
	IM N=6	2mg IN N=12	3mg IN N=12	IM N=6	2mg IN N=11	3mg IN N=12	IM N=12	IN N=13*
One or More Events	5(83)	6(50)	5(42)	6(100)	5(46)	6(50)	7(58)	9(69)
Gastrointestinal								
Abdominal pain (upper)	1(17)	1(8)	0	0	0	1(8)	0	0
Diarrhea	0	0	0	1(17)	0	0	0	0
Nausea	4(67)	4(33)	2(17)	3(50)	1(9)	1(8)	1(8)	3(23)
Vomiting	1(17)	1(8)	3(25)	3(50)	3(27)	4(33)	5(42)	4(31)
Total (≥1 GI events)[a]	5(83)	5(42)	5(42)	5(83)	4(36)	6(50)	6(50)	6(46)
Head discomfort								
Headache	0	2(17)	1(8)	2(33)	2(18)	4(33)	1(8)	4(31)
Nasal								
Nasal congestion	0	0	0	0	0	0	0	2(15)
Nasal discomfort	0	0	2(17)	0	0	0	0	1(8)
Sneezing	0	0	0	0	0	1(8)	0	0
Rhinalgia	0	1(8)	0	0	0	0	0	0
Total (≥1 nasal events)[a]	0	1(8)	2(17)	0	0	1(8)	0	3(23)
Ocular								
Eye irritation	0	0	0	0	0	0	0	1(8)
Lacrimation increased	0	0	0	0	1(9)	0	0	0
Ocular discomfort	0	0	0	0	0	0	0	1(8)
Total (≥1 ocular events)[a]	0	0	0	0	1(9)	0	0	2(15)
Sensory/Pain								
Catheter site pain	0	1(8)	0	1(17)	0	0	0	0
Injection site discomfort	2(33)	0	0	3(50)	0	0	0	0
Total (≥1 sensory/pain events)[a]	2(33)	1(8)	0	3(50)	0	0	0	0
Hypoglycemia								
Hypoglycemia	1(17)	0	0	0	0	0	0	0
Cardiovascular								
Tachycardia	0	1(8)	0	0	0	0	0	0
Neurological								
Dizziness	0	0	0	1(17)	0	0	0	0

1 serious adverse event was reported in which a 7 year old participant (intramuscular treatment) experienced a hypoglycemic event after receiving a bolus of insulin with lunch. The participant received 90 grams of oral carbohydrates and made a full recovery.

*1 participant in the 12-<17 years old had a repeat 3 mg intranasal glucagon dosing visit due to a device malfunction leading to insufficient receipt of glucagon during the initial visit; both dosing visits were included in the safety analysis

[a] Number (%) of participants with at least 1 occurrence of the adverse event group

SUPPLEMENTARY DATA

Supplementary Figure S1. Intranasal Glucagon device

SUPPLEMENTARY DATA

List of Investigators

A listing of the T1D Exchange Clinic Network sites with participating principal investigators (PI), co-investigators (I), and coordinators (C) ordered by the number of participants recruited per site is included below:

University of Buffalo School of Medicine and Biomedical Sciences, The State University of New York, Buffalo, NY (n=14) Kathleen E. Bethin (PI); Lucy Mastrandrea (I); Michelle Ecker (C); Jessica Sickau (C); **Indiana University School of Medicine, Indianapolis, IN** (n=12) Linda A. DiMeglio (PI); Carmelle Evans-Molina (I); Stephanie Woerner (C); Jill Meier (C); Jennifer Terrell (C); Vanessa Patrick (C); **University of Pennsylvania Perelman School of Medicine, Philadelphia, PA** (n=12) Michael R. Rickels (PI); Anastasia Amaro (I); Patricia Bourne (C); Amy Pelekis (C); **Yale School of Medicine, New Haven, CT** (n=12) Jennifer Sherr (PI); William Tamborlane (I); Amy Steffen (C); Melinda Zgorski (C); Kate Weyman (C); Eileen Tichy (C); Neha Patel (C); **Barbara Davis Center for Childhood Diabetes, Aurora, CO** (n=11) R. Paul Wadwa (PI); Georgenna J. Klingensmith (I); David M. Maahs (I); Katherine Manseau (C); Nhung Nguyen (C); Laurel Messer (C); Sally Sullivan (C); **Oregon Health and Science University Harold Schnitzer Diabetes Health Center, Portland, OR** (n=10) Andrew J. Ahmann (PI); Bethany Klopfenstein (I); Bethany Wollam (C); Bradley White (C); Christopher Bogan (C); Rebecca Fitch (C); Jennifer Cox (C); **University of Florida, Gainesville, FL** (n=5) Desmond A. Schatz (PI); Michael J. Haller (I); Miriam Cintron (C); Jamie Thomas (C); **University of Minnesota, Minneapolis, MN** (n=4) Brandon M. Nathan (PI); Janice Leschyshyn (C); **Nemour's Children's Children's Speciality Care, Jacksonville, FL** (n=#) Larry Fox (PI); Kim Englert (C); Kaitlin Sikes (C)