Supplementary Material

T1D Exchange β-Cell Function Study Group principal investigators (PI), co-investigators (I), statisticians (S), and coordinators (C):

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Inclusion criteria

1. Age 18.0 – 65.0 years
2. T1D, diagnosis age 6 months to < 46 years, and duration > 2 years
3. BMI < 30 kg/m^2
4. HbA1c < 9.0%
5. Females must meet one of the following criteria:
    a. Of childbearing potential and not currently pregnant or lactating, and agrees to use an accepted contraceptive regimen throughout the entire duration of the study; or
    b. Of non-childbearing potential, defined as a female who has had a hysterectomy or tubal ligation, is clinically considered infertile or is in a menopausal state (at least 1 year without menses)
6. In good general health with no conditions that could influence the outcome of the trial, and in the judgment of the investigator is a good candidate for the study based on review of available medical history, physical examination and clinical laboratory evaluations
7. Willing to adhere to the protocol requirements for the duration of the study
8. Willing to refrain from use of non-insulin agents to control hyperglycemia during the course of the study

Exclusion criteria

1. Impaired kidney function, as defined by serum potassium > 5.5 mmol/l or serum creatinine > 1.4 mg/dl in women or > 1.5 mg/dl in men
2. Impaired liver function, as defined by total bilirubin, aspartate aminotransferase, alanine aminotransferase, or alkaline phosphatase > 2 times the upper limit of normal
3. Adrenal insufficiency requiring glucocorticoid replacement
4. Active cardiovascular disease
5. History of seizure disorder not related to fever or hypoglycemia
6. Treatment with systemic glucocorticoids, systemic progestin only contraception, atypical anti-psychotic agents, beta-adrenergic blocking agents, or other medications deemed by the investigator to possibly interfere with glucose or islet hormone metabolism
7. Treatment with any anti-hyperglycemic agent other than insulin within 1 month prior to screening visit
8. Episode of severe hypoglycemia (resulting in unconsciousness or seizure) or diabetic ketoacidosis (DKA; requiring hospital treatment) in the past 3 months
9. Anemia defined as hemoglobin <12 g/dL in men or <11 g/dL in women or known coagulopathy
10. Any condition that in the judgment of the investigator will adversely affect the completion of the protocol

STROBE Statement—Checklist of items that should be included in reports of ***cross-sectional studies***

	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported
Objectives	3	State specific objectives, including any prespecified hypotheses
Methods		
Study design	4	Present key elements of study design early in the paper
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group
Bias	9	Describe any efforts to address potential sources of bias
Study size	10	Explain how the study size was arrived at
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding
		(*b*) Describe any methods used to examine subgroups and interactions
		(*c*) Explain how missing data were addressed
		(*d*) If applicable, describe analytical methods taking account of sampling strategy
		(*e*) Describe any sensitivity analyses
Results		
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed
		(b) Give reasons for non-participation at each stage
		(c) Consider use of a flow diagram
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders
		(b) Indicate number of participants with missing data for each variable of interest
Outcome data	15*	Report numbers of outcome events or summary measures
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included
		(*b*) Report category boundaries when continuous variables were categorized
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses

Discussion		
Key results	18	Summarise key results with reference to study objectives
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence
Generalisability	21	Discuss the generalisability (external validity) of the study results
Other information		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.