

Reproducibility of Glycemic Measures among Dysglycemic Youth and Adults in the RISE Study

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SUPPLEMENTAL MATERIALS

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Supplemental Table 1. Classification Criteria

	Classification Criteria		
	Normoglycemia	Prediabetes	Diabetes
HbA1c alone	HbA1c <39 mmol/mol (<5.7%)	HbA1c 39-46 mmol/mol (5.7 to 6.4%)	HbA1c ≥48 mmol/mol (≥6.5%)
Fasting glucose alone	FPG <5.6 mmol/l	IFG: FPG 5.6–6.9 mmol/l	FPG ≥7.0 mmol/L
2-Hour glucose alone	2-Hr <7.8 mmol/L	IGT: 2-Hr 7.8–11.0 mmol/L	2-Hr ≥11.1 mmol/L
HbA1c and Fasting glucose	HbA1c <39 mmol/mol (<5.7%) or FPG <5.6 mmol/l	Did not meet the diabetes criteria but HbA1c ≥39 mmol/mol (5.7%) + FPG ≥5.6 mmol/l	HbA1c ≥48 mmol/mol (≥6.5%) + FPG ≥7.0 mmol/L
OGTT criteria	FPG <5.6 mmol/l + 2-hr glucose <7.8 mmol/L	IFG only: FPG 5.6-6.9 mmol/L + 2-hour <7.8 mmol/L; IGT: FPG <7.0 mmol/L + 2-hour >7.8 mmol/L	FPG ≥7.0 mmol/L or 2-hr ≥11.1 mmol/L
OGTT or HbA1c	<5.6 mmol/L, 2-hour glucose <7.8 mmol/L, + HbA1c <39 mmol/mol (<5.7%)	FPG 5.6-6.9 mmol/L or 2-hr <7.8 mmol/L or HbA1c 39–47 mmol/mol (5.7-6.4%)	FPG ≥7.0 mmol/L or 2-hr ≥11.1 mmol/L or HbA1c ≥48 mmol/mol (≥6.5%)
OGTT and HbA1c	<5.6 mmol/L and 2-hour glucose <7.8 mmol/L, or HbA1c <39 mmol/mol (<5.7%)	Did not meet the diabetes criteria but (FPG≥5.6 mmol/L or 2-hour ≥7.8 mmol/L) and HbA1c ≥39 mmol/mol (≥5.7%)	(FPG≥7.0 mmol/L or 2-hour ≥11.1 mmol/L and HbA1c ≥48 mmol/mol (≥6.5%))

Supplemental Table 2. Classification Concordance

A. Glycemic Status Concordance, Requiring both Fasting Glucose *and* HbA1c for classification[§]

Concordance: All=83.8%; Youth=80.3%; Adults=84.5%

Initial Test (Screening)	Repeat Test (Baseline)			Total
	Normal	Prediabetes	Diabetes	
All Participants (N=420)				
Normoglycemic	180	24	0	204
Prediabetes	38	165	2	205
Diabetes	0	4	7	11
Total	218	193	9	420
Youth Participants (N=66)				
Normoglycemic	35	4	0	39
Prediabetes	6	14	0	20
Diabetes	0	3	4	7
Total	41	21	4	66
Adult Participants (N=354)				
Normoglycemic	145	20	0	165
Prediabetes	32	151	2	185
Diabetes	0	1	3	4
Total	177	172	5	354

Discordant cells shaded. [§]Categories of concordance are (1) Normal: fasting <5.6 mmol/L or HbA1c<5.7% (39 mmol/mol), (2) Prediabetes: fasting ≥5.6mmol/L *and* HbA1c ≥5.7% (39-47 mmol/mol), but not diabetes, (3) Diabetes: fasting ≥7.0 mmol/L *and* HbA1c ≥6.5% (48 mmol/mol).

B. Glycemic Status Concordance, OGTT Criteria Only[†]
Concordance: All=62.4%; Youth=72.7%; Adults=60.5%

Initial Test (Screening)	Repeat Test (Baseline)				Total
	NGT	IFG only	IGT	Diabetes	
All Participants (N=420)					
NGT	-	-	-	-	-
IFG only	-	-	-	-	-
IGT	19	40	182	63	304
Diabetes	3	2	31	80	116
Total	22	42	213	143	420
Youth Participants (N=66)					
NGT	-	-	-	-	-
IFG only	-	-	-	-	-
IGT	4	3	38	8	53
Diabetes	0	0	3	10	13
Total	4	3	41	18	66
Adult Participants (N=354)					
NGT	-	-	-	-	-
IFG only	-	-	-	-	-
IGT	15	37	144	55	251
Diabetes	3	2	28	70	103
Total	18	39	172	125	354

Discordant cells shaded. [†]Categories of concordance are (1) Normal: fasting <5.6 mmol/L and 2-hour glucose <7.8 mmol/L, (2) IFG only: fasting 5.6-6.9 mmol/L and 2-hour glucose <7.8 mmol/L, (3) IGT: fasting <7.0 mmol/L and 2-hour glucose ≥7.8 and <11.1 mmol/L, (4) Diabetes: fasting ≥7.0 mmol/L or 2-hour glucose ≥11.1 mmol/L.

C. Glycemic Status Concordance, OGTT and/or HbA1c Criteria Combined (ADA Criteria)^o
Concordance: All=73.3%; Youth=80.3%; Adults=72.0%

Initial Test (Screening)	Repeat Test (Baseline)			Total
	Normal	Prediabetes	Diabetes	
All Participants (N=420)				
Normoglycemic	-	-	-	-
Prediabetes	13	218	63	294
Diabetes	1	35	90	126
Total	14	253	153	420
Youth Participants (N=66)				
Normoglycemic	-	-	-	-
Prediabetes	3	40	6	49
Diabetes	0	4	13	17
Total	3	44	19	66
Adult Participants (N=354)				
Normoglycemic	-	-	-	-
Prediabetes	10	178	57	245
Diabetes	1	31	77	109
Total	11	209	134	354

Discordant cells shaded. ^oCategories of concordance are (1) Normal: fasting <5.6 mmol/L and 2-hour glucose <7.8 mmol/L and HbA1c<5.7% (39 mmol/mol), (2) Prediabetes: fasting 5.6-6.9 mmol/L or 2-hour glucose ≥7.8 and <11.1 mmol/L or HbA1c 5.7-6.4% (39-47 mmol/mol), (3) Diabetes: fasting ≥7.0 mmol/L or 2-hour glucose ≥11.1 mmol/L or HbA1c ≥6.5% (48 mmol/mol).

D. Glycemic Status Concordance, Requiring both OGTT *and* HbA1c for classification[‡]
Concordance: All=73.3%; Youth=80.3%; Adults=72.0%

Initial Test (Screening)	Repeat Test (Baseline)			Total
	Normal	Prediabetes	Diabetes	
All Participants (N=420)				
Normoglycemic	162	14	0	176
Prediabetes	30	192	3	225
Diabetes	0	6	13	19
Total	192	212	16	420
Youth Participants (N=66)				
Normoglycemic	29	3	0	32
Prediabetes	7	20	0	27
Diabetes	0	3	4	7
Total	36	26	4	66
Adult Participants (N=354)				
Normoglycemic	133	11	0	144
Prediabetes	23	172	3	198
Diabetes	0	3	9	12
Total	156	186	12	354

Discordant cells shaded. [‡]Categories of concordance are (1) Normal: fasting <5.6 mmol/L and 2-hour glucose <7.8 mmol/L, or HbA1c<5.7% (39 mmol/mol), (2) Prediabetes: fasting ≥5.6 mmol/L or 2-hour glucose ≥7.8, *and* HbA1c 5.7-6.4% (39-47 mmol/mol), but not meeting diabetes criteria, (3) Diabetes: fasting ≥7.0 mmol/L or 2-hour glucose ≥11.1 mmol/L, *and* HbA1c ≥6.5% (48 mmol/mol).

Supplemental Table 3. Characteristics of Participants at Screening, stratified by whether they continued to the baseline visit

Youth			
	Screened Only	Continued to Baseline	
	N=154	N=66	p-value
Age (years)	14.1 ± 2.2	14.1 ± 2.0	0.940
Sex			0.319
% Men	55 (35.7%)	19 (28.8%)	
% Women	99 (64.3%)	47 (71.2%)	
Race/ethnicity			0.574
% White	37 (24.0%)	19 (28.8%)	
% Black	43 (27.9%)	14 (21.2%)	
% Hispanic	50 (32.5%)	25 (37.9%)	
% Other	24 (15.6%)	8 (12.1%)	
Weight (kg)	97.1 ± 25.6	98.5 ± 22.4	0.700
Height (cm)	164.3 ± 9.7	163.6 ± 9.1	0.594
BMI (kg/m ²)	35.5 ± 6.7	36.5 ± 5.9	0.300

Adults			
	Screened Only	Continued to Baseline	
	N=715	N=354	p-value
Age (years)	51.2 ± 9.7	52.6 ± 9.3	0.021
Sex			0.060
% Men	391 (54.7%)	172 (48.6%)	
% Women	324 (45.3%)	182 (51.4%)	
Race/ethnicity			<.001
% White	267 (37.3%)	166 (46.9%)	
% Black	297 (41.5%)	97 (27.4%)	
% Hispanic	110 (15.4%)	66 (18.6%)	
% Other	41 (5.7%)	25 (7.1%)	
Weight (kg)	99.8 ± 20.7	101.0 ± 18.3	0.361
Height (cm)	170.2 ± 9.8	169.3 ± 9.7	0.147
BMI (kg/m²)	34.3 ± 5.6	35.2 ± 5.1	0.013

APPENDIX

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