

SUPPLEMENTARY DATA

Supplementary Table 1. Descriptive characteristics in the CF participants, categorized by glycemic group

	CF NGT N=24	CF AGT N=41	CFRD N=28	p-value
Age (years)	13±3	14±3	14±2	0.14
Male, n (%)	11 (46)	22 (54)	11 (39)	0.49
BMI z-score	-0.25±0.8	0.11±0.9	-0.22±0.7	0.12
Weight (kg)	44.5±11.3	51.6±15.1	50.3±11.2	0.11
Height (cm)	154.6±13.1	158.1±14.8	160.2±10.6	0.31
Genotype, n (%)				0.20
Class I-III	20 (83.3)	35 (89.7)	27 (96.4)	
Class IV-V	3 (12.5)	1 (2.6)	0 (0.0)	
Unidentified	1 (4.2)	3 (7.7)	1 (3.6)	
Pancreatic insufficient, n (%)	22 (92)	40 (98)	28 (100)	0.34
G-Tube feedings, n (%)	5 (21)	6 (15)	7 (25)	0.55
CFTR modulator use, n (%)	9 (38)	16 (39)	3 (11)	0.03*
Insulin use, n (%)	2 (9)	4 (10)	17 (61)	<0.0001*
FVC%	98±10	98±15	98±14	0.99
FEV1%	92±10	89±16	90±15	0.73
Fasting plasma glucose (mg/dl)	89±5	98±9	103±37	0.07
1hr plasma glucose	152±26	207±55	256±59	<0.0001†
2hr plasma glucose	111±16	141±31	227±39	<0.0001†
HbA1c % (mmol/mol)	5.4±0.3 (36±3)	5.6±0.3 (38±3)	6.0±1.3 (42±14)	0.02*
Fructosamine (mmol/L)	240±18	235±20	257±52	0.02‡
Total albumin (g/dL)	4.4±0.4	4.2±0.3	4.2±0.4	0.15
Glycated albumin (%)	12.5±0.7	12.4±1.1	14.3±4.4	0.01*
1,5-anhydroglucitol (mcg/ml)	20.7±7.0	18.7±6.8	17.6±8.3	0.32
Continuous Glucose Monitoring Measures				
Average glucose (mg/dl)	108±12	113±15	126±47	0.06
Average day glucose (mg/dl)	110±11	115±14	129±51	0.06
Average night glucose (mg/dl)	104±16	110±18	121±40	0.07
Maximum day glucose (mg/dl)	196±30	218±61	232±69	0.09
Maximum night glucose (mg/dl)	159±37	173±52	174±63	0.52
Minimum glucose (mg/dl)	61±14	65±13	61±13	0.49
Average AUC/day (mg/min/dl)	1.6x10 ⁵ ±1.7x10 ⁴	1.6x10 ⁵ ±2.1x10 ⁴	1.8x10 ⁵ ±6.8x10 ⁴	0.06
# Excursions >140/day	2.8±1.7	2.8±1.5	2.6±1.4	0.81
# Excursions >200/day	0.3±0.4	0.5±0.8	0.6±0.8	0.16
% time >140 mg/dl	8.4±6.3	12.7±13.8	18.9±23.7	0.07
% time >200 mg/dl	0.3±0.6	1.4±2.9	7.4±22	0.08
% time <70 mg/dl	3.5±6.1	2.1±3.1	2.1±3.4	0.39
% time <60 mg/dl	1.9±4.6	0.8±1.9	0.7±1.5	0.21
Standard deviation (mg/dl)	21±5	24±9	29±19	0.07
Coefficient of variation	0.19±0.05	0.21±0.07	0.22±0.06	0.49
MAGE (mg/dl)	50±16	57±26	67±36	0.08

Data presented as Mean (SD) unless otherwise indicated

NGT = normal glycemic tolerance; AGT = abnormal glycemic tolerance; CFRD = cystic fibrosis related diabetes; HbA1c=hemoglobin A1c; BMI=body mass index; FEV1=forced expiratory volume in 1 sec; FVC=forced vital capacity; AUC=area under the curve; MAGE=mean amplitude of glycemic excursions

*CFRD significantly different from both NGT and AGT

†All groups significantly different from each other

‡AGT significantly different from CFRD