

SUPPLEMENT

Figure 1. Participant flow diagram

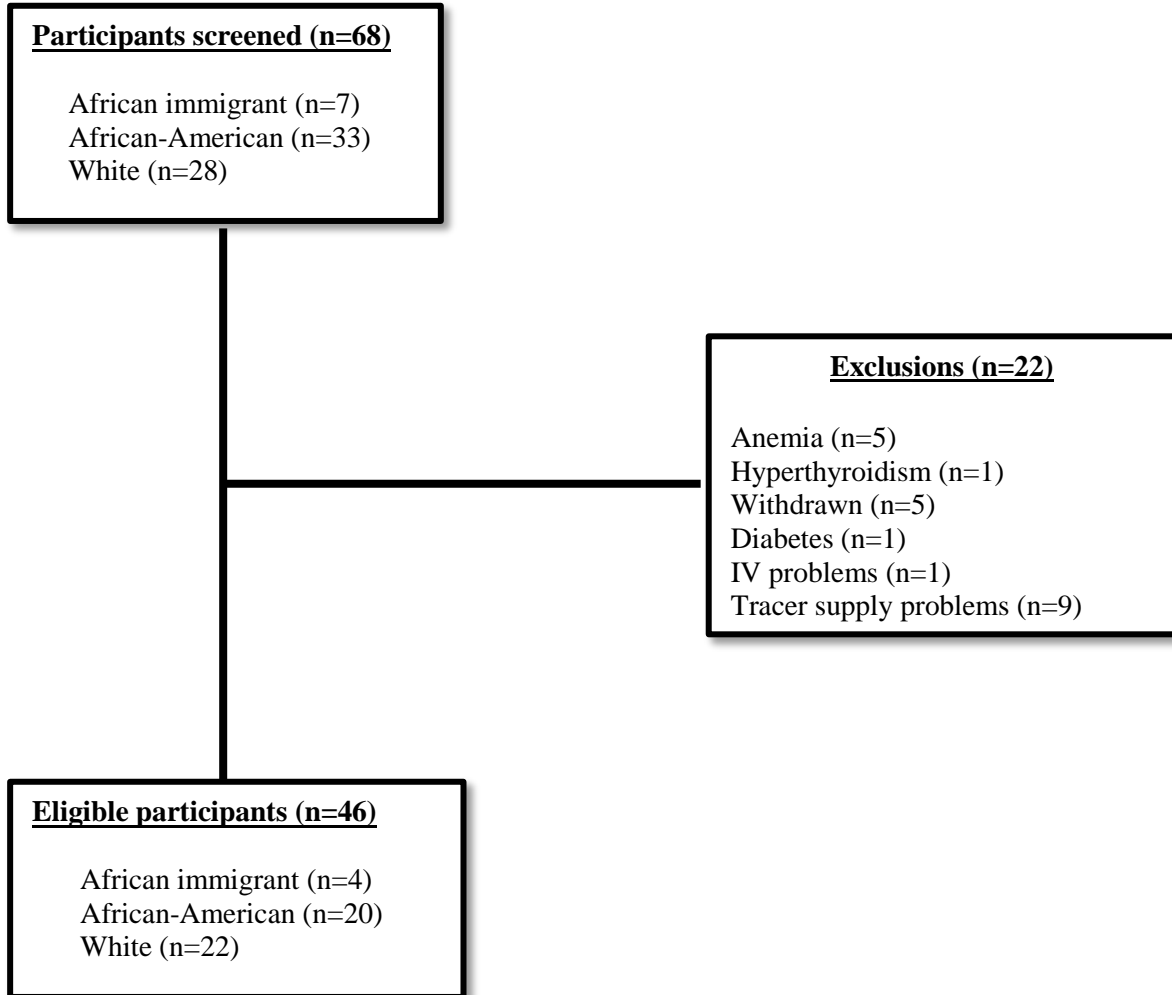


Table 1. Characteristics of women with prediabetes by race

Variable	Black (n=4)	White (n=4)	P-value
Age (years)	38±5	39±5	0.83
BMI (kg/m ²)	29.6±3.2	31.7±2.6	0.62
Waist circumference (cm)	84.05±5.9	102.4±9.0	0.14
Body Composition and Fat Distribution			
Total Fat mass (kg)	39.9±9.4	38.3±5.9	0.89
Total Lean body mass (kg)	49.5±2.1	49.5±3.8	0.99
Visceral Fat (cm ³)	36 (25-50)	131 (78-220)	0.05*
Hepatic Fat (%)	0.5 (0.3-0.7)	7.0 (2.5-9.7)	0.03*
Metabolic Characteristics			
Fasting glucose (mg/dL)	97.3±5.3	95.6±4.1	0.81
2-hour glucose (mg/dL)	153.5±5.7	155±7.4	0.88
Fasting insulin (mU/L)	4 (3.9-4.4)	13.3 (6.3-20.1)	0.65
Fasting triglyceride (mg/dL)	43 (41-57)	126 (68-159)	0.10
S _I x 10 ⁻⁴ min ⁻¹ (uU•ml ⁻¹)	3.26 (2.38-4.34)	1.54 (1.48-2.98)	0.20*
AIRg (mU•L ⁻¹ •ml ⁻¹)	523 (382-636)	473 (319-824)	0.97*
Disposition index	1482 (1209-1986)	963 (709-1380)	0.15*
Basal energy expenditure			
REE (kcal•day ⁻¹)	1340±117	1434±102	0.57
REE (kcal•kg ⁻¹ LBM•day ⁻¹)	28.9±2.6	31.4±2.9	0.55
RQ	0.86±0.02	0.82±0.03	0.24
Steady-state kinetic measurements			
Glucose production rate (mg•kg _{LBM} ⁻¹ •min ⁻¹)	2.52±0.10	2.67±0.02	0.19
Fractional Gluconeogenesis (%)	0.56±0.07	0.72±0.03	0.14
Gluconeogenesis (mg•kg _{LBM} ⁻¹ •min ⁻¹)	1.46±0.20	1.98±0.08	0.08
Glycogenolysis (mg•kg _{LBM} ⁻¹ •min ⁻¹)	1.06±0.21	0.69±0.08	0.21
Glycerol Ra (mg•kg _{LBM} ⁻¹ •min ⁻¹)	0.49±0.07	0.45±0.04	0.62

Data are presented as mean±SEM or median (25th-75th percentile). *Natural log-transformed for analysis with unpaired student t-tests. BMI: body mass index, S_I: whole-body insulin sensitivity, AIRg: acute insulin response to glucose, REE: resting energy expenditure, RQ: respiratory quotient, Ra (turnover).

Table 2. Daily dietary energy intake and macronutrient composition by race

	Black (n=23)	Whites (n=22)	<i>P</i>-value
Energy (kcal)	2087±70	2141±132	0.71
Fiber (g/1000 kcal)	19±1	22±2	0.20
Carbohydrate (g/day)	246±10	238±18	0.70
Protein (g/day)	81±4	89±6	0.31
Fat (g/day)	87±4	89±6	0.76
Alcohol (g/day)	5±2	11±3	0.09

Data collected from 3-7-day food records and presented as mean±SEM. Between group comparisons made with unpaired student's t-tests.

Table 3. Daily physical activity levels by race

Activity (min/day)	Black (n=24)	White (n=21)	P-value
Light	261±14	282±17	0.33
Moderate-vigorous	25±4	30±3	0.32
Total	288±15	313±417	0.28

Data obtained by 5-7-day accelerometry and presented as mean±SEM. Between group comparisons made with unpaired student's t-tests. Activity measured in counts per minute (cpm): light (100-2019 cpm) and moderate-vigorous (≥ 2020 cpm).

Table 4. Isotopic enrichment under fasting and steady-state conditions.

Tracer	Enrichment (%)		P-value
	Black (n=24)	White (n=22)	
[6,6- ² H ₂]glucose	3.47±0.08	3.16±0.08	0.01
² H in body water [#]	0.31±0.00	0.30±0.01	0.15
Average ² H per glucose carbon [#]	0.18±0.01	0.20±0.01	0.03
[² H ₅]glycerol	3.94±0.22	3.34±0.16	0.04

Data are presented as mean±SEM and groups compared by unpaired student's t-tests,
[#] n=44