Lifestyle Interventions for Expectant Moms (LIFE-Moms)

Data Release Documentation

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Prepared by the LIFE-Moms Research Coordinating Unit

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Table of Contents

1 Introduction 1

1.1 General Information 1

1.2 Data Collection Schedule 1

1.3 Randomization 3

2 Data Release Information 4

2.1 General Information 4

2.2 Data Location 4

2.2.1 Structure of the SAS Data Files 4

2.3 De-identified Data 5

2.4 Structure of the Datasets 5

3 Statistical considerations 7

3.1 Primary Outcome 7

3.2 Secondary Outcomes 7

3.3 Primary Analysis 8

3.4 Intent-to-treat 9

4 File descriptions 10

4.1 Data Forms 10

4.1.1 General 10

4.1.2 Variable Names on Data Forms 10

4.2 Datasets for Non-Form Data 10

4.3 Variables Common to All Datasets 11

4.4 Participant Forms 11

4.4.1 LIFEMOMS.BASELINEVST: Baseline Visit [LM01] 11

4.4.2 LIFEMOMS.BASELINE: Baseline Questionnaire [LM02] 12

4.4.3 LIFEMOMS.BASELINEMEDHIS: Baseline Medical History Form [LM02A] 12

4.4.4 LIFEMOMS.BASELINEMEDS: Baseline Prenatal Medication Tracking Form [LM02B] 12

4.4.5 LIFEMOMS.PREVPREG: Previous Pregnancy Outcome Form [LM02C] 12

4.4.6 LIFEMOMS.STUDYVST: Prenatal Study Visit Form [LM03] 13

4.4.7 LIFEMOMS.DELIVERY: Maternal Delivery & Neonatal Chart Abstraction Form [LM04] 14

4.4.8 LIFEMOMS.NEONATAL: Neonatal Baseline Study Visit Form [LM05] 16

4.4.9 LIFEMOMS.STATUS: Status Form [LM06] 16

4.4.10 LIFEMOMS.MATONEYR: Status Form [LM08] 17

4.4.11 LIFEMOMS. PPMEDHIS: Postpartum Medical History Form [LM08A] 17

4.4.12 LIFEMOMS. PPMEDS: Postpartum Medication Tracking Form [LM08B] 18

4.4.13 LIFEMOMS. MATONEYRQ: Maternal Follow-up Questionnaire [LM09] 18
4.4.14 LIFEMOMS.INFONEYR: Infant Follow-up Study Visit Form [LM10] 18
4.4.15 LIFEMOMS.INFONEYRQ: Infant Follow-up Questionnaire [LM11] 19
4.4.16 LIFEMOMS.BDI: Beck Depression Inventory [LM20] 19
4.4.17 LIFEMOMS.STUDY: Study Visit Questionnaire [LM22] 19
4.4.18 LIFEMOMS.SLEEP: Sleep Questionnaire [LM23] 19
4.4.19 LIFEMOMS.PANES: Physical Activity Neighborhood Environment Survey [LM25] 20
4.4.20 LIFEMOMS.NHSPA: NHS Physical Activity Questionnaire [LM27] 20
4.4.21 LIFEMOMS.INFFEEDQ: Infant Feeding Styles Questionnaire [LM28] 21
4.4.22 LIFEMOMS.INFCONSS: Infant Consumption Questionnaire Short Version [LM29A] .. 21
4.4.23 LIFEMOMS.INFCONSL: Infant Consumption Questionnaire Long Version [LM29B] .. 21

4.5 Central Unit and Non Form Datasets 22
4.5.1 LIFEMOMS.LAB: Laboratory Data 22
4.5.2 LIFEMOMS.ASA24: Dietary Recall 23
4.5.3 LIFEMOMS.ACCELACT: Activity by Accelerometry 32
4.5.4 LIFEMOMS.ACCELSLP: Sleep by Accelerometery 34
4.5.5 LIFEMOMS.SF12: SF-12 Health Survey 34
4.5.6 LIFEMOMS.BODPOD: Body Composition Testing - Adults 35
4.5.7 LIFEMOMS.PEAPOD: Body Composition Testing - Infants 36

4.6 Created Datasets 37
4.6.1 LIFEMOMS.PRIMOUT: Randomization Assignments and Primary Outcome Status 37

1 INTRODUCTION

1.1 General Information

LIFE-Moms (Lifestyle Interventions for Expectant Moms) was a research consortium that consists of seven independent but collaborative clinical trials, a Research Coordinating Unit (RCU), and the NIH sponsoring Institutes and Centers. The overall goal of the Consortium was to identify effective behavioral and lifestyle interventions that will improve weight, glycemic control and other-pregnancy-related outcomes among pregnant women with overweight or obesity, and determine whether these interventions reduce obesity and metabolic abnormalities in their children. Eligibility criteria, specific outcome measures, and assessment procedures were standardized across trials. Measures that were collected in all seven trials were defined as 'core' data and measures collected by 4 to 6 trials were defined as 'super-shared' data. All core and super-shared measures had a standardized definition and/or detailed procedures to facilitate uniform collection, a standardized training and certification process, and were entered into a common dataset at the RCU. A description of the LIFE-Moms Consortium design is available at PMID 26708836.

Patients were randomized between 9 weeks 0 days and 15 weeks 6 days gestation, and followed through one-year postpartum. Standardized measures were collected throughout gestation: at baseline (9-15 weeks), 24-27 weeks, 35-36 weeks, delivery, and one-year postpartum. A full list of measures is detailed in section 1.2. The consortium primary outcome measure was excess gestational weight gain (GWG) per week. The primary consortium results including maternal and neonatal outcomes through delivery discharge are available at PMID 30230252 and the one-year results at PMID 31292531.

This document describes the complete public release of the LIFE-Moms dataset and is based on participant data collected during the study. The released dataset includes data from four of the seven trials. Three trials were not included due to small sample sizes.

1.2 Data Collection Schedule

The table below lists the schedule of data collection, measurements, and assessments included in the LIFE-Moms data and specimen repository (GA=gestational age). SS denotes data that was super-shared and collected at a subset of sites.

Domain	Measurement	Baseline (9,0-15,6 wks) GA	24,0-27,6 wks GA	35,0-36,6 wks GA	Delivery / Neonatal Period	48-56 wks postpartum
Demographics and medical history	Demographics (maternal and paternal)	X				X
	Maternal medical, obstetrical, and social history	X				
Maternal Assessments	Weight	X	X	X	X	X
	Blood Pressure	X	X	X		X
	Medications	X		X		X
	Activity – Actigraph	X		X		X [SS]

Domain	Measurement	Baseline (9,0-15,6 wks) GA	24,0-27,6 wks GA	35,0-36,6 wks GA	Delivery / Neonatal Period	48-56 wks postpartum
	Circumference measurements	X [SS]	X [SS]	X [SS]		X [SS]
	BOD POD					X [SS]
	Breastfeeding					X
Maternal Metabolic Testing	HbA1c	X				
	75g, 2-hr Oral Glucose Tolerance Test (OGTT)		X (24,0-31,6)			
		X [SS]		X [SS]		X [SS]
	Insulin, glucose, c-peptide	X		X		X
	Glycated serum albumin					X
Maternal Laboratory Testing - Other	Leptin, lipids, Adiponectin,	X		X		X
	IL-6, TNF-α	X		X		
Participant Completed Questionnaires	Beck Depression Inventory	X		X [SS]		X [SS]
	Sleep	X		X		X
	Frequency of self-weighing	X	X	X		X
	Maternal Sedentary Behavior	X	X	X		X
	Quality of life (SF-12)					X
	Physical Activity Neighborhood Environment Survey (PANES)	X [SS]		X [SS]		X [SS]
	Maternal Physical Activity Behavior	X [SS]		X [SS]		X [SS]
	Infant Feeding Style	X [SS]		X [SS]		X [SS]
	Infant Food Intake					X [SS]
	ASA 24-hour dietary recall	X [SS]		X [SS]		X [SS]
Maternal and Perinatal Delivery	Pregnancy complications, delivery				X	
Infant Assessments	Weight, length, height				X	X
	Skin fold measurements				X	X
	PEA POD				X [SS]	

Biospecimens	Type	Baseline (9,0-15,6 wks GA)	24,0-27,6 wks GA	35,0-36,6 wks GA	Delivery / Neonatal Period	48-56 wks postpartum
Maternal Blood	Serum Heparin EDTA Sodium Fluoride Whole blood in PAXgene DNA Whole blood in PAXgene RNA	X		X		X
Maternal Urine	Urine	X		X		X
Cord Blood	EDTA Sodium Fluoride Whole blood in PAXgene DNA Whole blood in PAXgene RNA				X	
Maternal Placenta	Chorionic Plate Villous Tissue Basal Plate				X	

1.3 Randomization

Each trial created their own randomization sequence. The randomization method varied across the trials (e.g., simple, variable block, fixed block, urn). Recruitment began in November 2012 and ended in December 2015.

2 DATA RELEASE INFORMATION

2.1 General Information

- No personal identifying information is included.
- RELEASEID uniquely identifies each participant. It consists of a 2-digit study identifier, followed by a random 4-digit identifier which uniquely identifies the participant.
- No dates or specific time points are included. The variable DAYS represents the number of days since the individual participant's date of randomization or delivery. For the DAYS variable that calculates the number of days from randomization, a negative number indicates before randomization and a positive number after randomization.
- Only data for participants who agreed to future research are included. **Three sites with a small number of participants were excluded from this release**.
- In accordance with HIPAA regulations and to protect the identification of LIFE-Moms participants, the data has been modified to ensure that no participant is identifiable. For example, data was sorted into small clearly-identifiable groups (race/ethnicity) and collapsed if the sample size was small.
- Only research data is included in the released data set, including data from all assessment visits, dietary consumption, physical activity and sedentary behavior, quality of life, depression, sleep, neighborhood survey, and laboratory values. Non-research data, including tracking forms, are not included. Adverse event and serious adverse event data were collected but are not included in the data release.
- All available data from each form and the central unit database is included. Missing data was due to the participant did not complete the form or the assessment was not performed.

2.2 Data Location

Data are released from the LIFE-Moms Research Coordinating Unit at the George Washington University Biostatistics Center to the Data Repository at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health.

2.2.1 Structure of the SAS Data Files

- Multiple datasets are available as transport files in the LIFE-Moms Release library. One transport file exists for each LIFE-Moms form or dataset.
- The files are included as SAS datasets within transport files with the same name as the embedded form or dataset name and the extension XPT. The SAS code to import each dataset is given below:

```
libname lifemoms 'directory for the destination of SAS datasets on
your host';
filename tranfile 'name of the transport files on your host';
proc cimport data=lifemoms.data infile=tranfile; run;
```

For example to import file lifemoms.baselinevst:

```
libname lifemoms 'c:\mysasfiles';
filename tranfile 'c:\myxptfiles\ baselinevst.xpt';
proc cimport data=lifemoms. baselinevst infile=tranfile; run;
```

- The contents of variables in these datasets are provided via two means:

- Form data have a companion form to the dataset which details the variable names and coding.
- For non-form data, a listing of variable names, descriptions, and coding is included in this document.

2.3 De-identified Data

The LIFE-Moms datasets were de-identified in the following manner. All personal identifiers were removed, including participant ID and other personal identifiers (date of birth, etc.) and all dates. In addition, variables that might identify a particular individual were collapsed into wider groupings. For example, race/ethnicity were coded as Hispanic (anyone indicating 'Yes' to Hispanic origin), Non-Hispanic African American, Non-Hispanic Caucasian, and Other. Maternal and Paternal age at baseline have been collapsed to truncate the upper and lower ages of the cohort at enrollment.

Anthropometric measures were also truncated to protect the participant's identity. These measures included weight and length for the participants and children. Where possible actual values were reported but those below or above a certain cut point had their actual data collapsed into a group that contained all individuals that also met that criterion. The upper and lower cut points are given below.

Measure	Lower Cut Point	Upper Cut Point
Project Weight – Enrollment (kg)	65.5	113.9
Pre-pregnancy Weight (lb)	137	246
Project Weight – Pregnancy (kg)	69.0	126.3
Weight – Admission (kg)	77.4	122.0
Birth weight (g)	2415	4145
Birth length (cm)	46.4	54.0
Neonatal weight (g)	2395	4135
Neonatal length (cm)	46.4	53.3
Project Weight – Postpartum (kg)	64.65	117.0
Infant weight (kg)	7.83	12.0
Infant length (cm)	70.4	82.15

2.4 Structure of the Datasets

At most one record exists in each file for each participant for each visit, if the data is collected at multiple occasions. Variable RELEASEID is used to identify a particular participant and variable VISIT is used to identify the visit occasion. Each dataset includes data collected at all core and super shared visits. Section 4 describes the data included in detail.

The definition for the visits codes are:

- PGC1: pre-randomization / 9 weeks 0 days to 15 weeks 6 days gestational age
- PGC2: 24 weeks 0 days to 27 weeks 6 days gestational age
- PGC3: 35 weeks 0 days to 36 weeks 6 days gestational age
- PPC1: 48 to 56 weeks postpartum (after delivery)

Of note, some visits were performed out of the specified window above.

The table below shows the number of participants at each study visit in the dataset.

Number of participants who completed study visits by treatment arm			
Visit	**Control**	**Intervention**	**Total**
Baseline / PGC1	464	469	933
PGC2	427	441	868
PGC3	406	410	816
PPC1	390	404	794

3 STATISTICAL CONSIDERATIONS

3.1 Primary Outcome

The primary outcome was excess GWG per week. GWG was defined as the difference between the study measured weight at 35-36 weeks gestation and baseline weight with GWG per week defined as GWG divided by the number of weeks (days/7) between the two visits. Women with baseline weights measured at 14 weeks had 0.45 kilograms (1 pound) subtracted and women at 15 weeks 0.91 kilograms (2 pounds) subtracted for an estimate of their first-trimester baseline weight. Excess GWG was defined as GWG per week above the 2009 Institute of Medicine upper limit of second and third trimester weight gain for pregnant women with overweight (> 0.33 kg/week) or obesity (> 0.27 kg/week). If a weight measured between 35-36 weeks gestation was not available, the last weight measurement prior to 37 weeks gestation was used.

At all assessment visits, maternal weight was assessed in duplicate to the nearest 0.1 kg using a calibrated standard digital scale with the participant in lightweight clothing without shoes. If the values differed by a specified amount (>0.5kg), a third measurement was taken. The average of the closest two measurements was used in data analyses.

3.2 Secondary Outcomes

Secondary GWG outcomes: These include second trimester GWG per week (the difference between the baseline weight and 24-27 week measured weight divided by the number of weeks between the two visits with excess defined as greater than 0.33 kg/week for overweight and 0.27 kg/week for obese); and third trimester GWG per week (the difference between the 24-27 week measured weight and 35-36 week weight divided by the number of weeks between the two visits with excess defined as greater than 0.33 kg/week for overweight and 0.27 kg/week for obese). The lower limit of the IOM guidelines for second and third trimester GWG per week for pregnant women with overweight is 0.23 kg/week and for those with obesity is 0.17 kg/week; values below these limits defined GWG per week below IOM. As some women had their baseline weight measured in the first trimester, a *modified GWG* was also calculated, with participants whose weight was assessed in the first trimester being assigned to a starting gestational age of 13 weeks 6 days with no weight gain assumed in the first trimester. For those measured at 14 and 15 weeks gestation (i.e., the second trimester), unadjusted weights were used in the calculation of modified GWG.

Obstetric outcomes: Gestational hypertension and preeclampsia were based on clinical diagnoses abstracted from the medical record unless clearly incorrect as determined by the local study obstetrician. Gestational diabetes was diagnosed based on glucose testing conducted between 24 weeks 0 days and 31 weeks 6 days. Preterm delivery < 37 weeks 0 days, < 32 weeks 0 days and < 28 weeks 0 days were reported, as were miscarriages and abortions. Shoulder dystocia was defined by the use of documented maneuvers and centrally reviewed. Birth trauma also was centrally reviewed.

Maternal one-year postpartum: Net postpartum weight retention from baseline was defined as the difference between study measured maternal weight at baseline and weight measured at the 12-month postpartum visit. To allow for comparisons with other studies, net postpartum weight retention from pre-pregnancy weight was also computed and defined as the difference between maternal self-reported pre-pregnancy weight and study-measured weight at the 12-month postpartum visit. Percent weight retention was defined as postpartum weight retention divided by the starting weight used (either the maternal weight at baseline or the pre-pregnancy weight) and multiplied by 100.

Neonatal outcomes: Birth weight was abstracted from the medical records. Small for gestational age was defined as a birth weight less than the 10th percentile and large for gestational age as a birth weight at or above the 90th percentile using the Alexander criteria specific for fetal sex and race. Birth weight for length z-score was calculated using the WHO Child Growth Standards and fetal and neonatal death included all fetal deaths and neonatal deaths within 28 days from birth. Neonatal respiratory morbidity was reported if any one of the following conditions were met: 1) cumulative use of supplemental oxygen for at least 6 hours in the first 72 hours of life; 2) continuous positive airway pressure or ventilator use within the first 72 hours of life, or; 3) extra-corporeal membrane oxygenation use. Neonatal hypoglycemia was defined as a newborn with sufficiently low blood sugar to require treatment with IV glucose therapy. Neonatal intensive care unit (NICU) or intermediate nursery admissions were defined as stays of 12 or more hours.

Neonatal and infant anthropometrics (measured): Neonatal and infant weight, length and skinfold thicknesses were measured at birth (within 14 days) and 48-56 weeks postpartum by centrally trained and certified research staff. Weight was measured using a calibrated scale and length was measured using a standardized board. All assessments were performed in duplicate and if the values differed by a specified amount (>0.1kg for weight, >0.5 cm for length, and >0.5mm for skinfold thickness), a third measurement was taken. The average of the closest two measurements was used in data analyses. For birth length, given improved accuracy using standardized boards and procedures, study-measured length was used if obtained within 3 days of birth; chart-abstracted length was used if the measured length was obtained beyond 3 days. Skinfold thickness was measured by trained staff in duplicate using the Harpenden skinfold caliper on right side of the body at the following sites: triceps, subscapular, thigh and iliac crest. Skinfolds for preterm infants (< 37 weeks 0 days) were not included in the analyses. Weight-for-length, triceps, and subscapular z-scores were calculated using the WHO Child Growth Standards for age and sex.

3.3 Primary Analysis

An individual participant data meta-analysis combining the data from the seven randomized trials was performed. All participants in the standard of care/enhanced standard of care groups were included as standard of care, and all participants in the interventions groups were included in the intervention group. Data from all women were analyzed according to the group to which they were randomly assigned, regardless of whether they adhered to the lifestyle intervention. The effect of the intervention on each outcome was analyzed by use of a generalized linear mixed model with a random effect included for trial to account for differences in the study population. The intervention was included as a fixed effect given 1) the interventions all targeted the same diet, physical activity, and behavioral strategies; 2) the estimated effect sizes reported in the trial protocols were similar; and, 3) the goal of LIFE-Moms was to estimate one common effect rather than the mean of a distribution of effects.

For outcomes related to gestational weight gain, including the primary outcome, overweight or obese status at baseline was included as a covariate in the model since the IOM guidelines differ by BMI category. In addition, we found a significant difference between groups for fetal sex and performed a sensitivity analysis that included this covariate in all models.

Pre-specified subgroups that were evaluated included baseline BMI category (overweight, obese), college education (yes, no), baseline maternal age (18-24, 25-29, ≥30 years), nulliparous (yes, no), and gestational age at randomization (< 13, ≥ 13 weeks).

3.4 Intent-to-treat

The primary analysis followed the intention to treat principle. Data from all women were analyzed according to the group to which they were randomly assigned, regardless of whether they adhered to the lifestyle intervention.

4 FILE DESCRIPTIONS

4.1 Data Forms

4.1.1 General

Multiple data collection forms were completed for each participant at each data collection period. This release includes research data for each participant data form completed at each collection period.

Each form is available as a PDF for use in approved data-release analyses only – **no form is to be used for primary data collection without the specific permission of the LIFE-Moms study group.** Instructions for completing each form are often included on each form. The LIFE-Moms form identifier can be found at the top left corner of the page along with the form name. The forms provided have been modified to match what is provided in the datasets.

Data entry included responses in both check boxes and other specify lines on the data collection forms. In general, 'other' specify fields have been removed from the form dataset in order to protect against the identification of the participant.

Over the course of LIFE-Moms some forms remained fixed while others were modified. The forms included with this release represent the final forms.

4.1.2 Variable Names on Data Forms

- Variable names for each released data set are embedded in red on the data form.
- All datasets are HIPAA compliant. Information that might identify a specific participant has been excluded from the release datasets and questions that captured this information have been removed from the forms.
- Potentially identifiable continuous variables are truncated or collapsed to ensure a minimum number of participants (e.g. at least 10) for each value within each race-sex cell.
- Coding and formats for all variables are found on the original data form except where described below.
- The numerical value for check-box style categorical variables is noted to the lower right of the check-boxes on the form.
- Text information (other specify) that was written on all forms is not included in the release datasets.

4.2 Datasets for Non-Form Data

Data not collected on forms but for which datasets are included in this release are as follows:

- Laboratory data: One record for each participant per data collection schedule.
- Dietary data: One record of analyzed nutrition data from a self-administered ASA-24 for each participant per data collection schedule.
- Activity: One record per participant per data collection schedule for accelerometery.
- BOD POD: One record per participant per data collection schedule.
- PEA POD: One record per participant per data collection schedule.
- Quality of Life: One record per participant per data collection schedule.

- Assignment and outcome: One record per participant that indicates treatment assignment and reports derived maternal, neonatal, and infant outcomes.

4.3 Variables Common to All Datasets

Several variables are used to identify a specific participant and time on all datasets. These are:

- RELEASEID: This identification number consists of a two-digit study ID number and a randomly generated four-digit identification number, separated by dashes. The final four-digit identification number will uniquely identify each participant even after the preceding numbers are removed. RELEASEID is used to link all records for an individual participant to all other records.
- VISIT: This is a four character value that that identifies the time at which the measures were taken. This combined with RELEASEID is used to match a participant's information across multiple forms completed for that time period. This variable is not present in datasets which represent data collected only once. VISIT is coded as:
    - PGC1: pre-randomization / 9 weeks 0 days to 15 weeks 6 days gestational age
    - PGC2: 24 weeks 0 days to 27 weeks 6 days gestational age
    - PGC3: 35 weeks 0 days to 36 weeks 6 days gestational age
    - PPC1: 48 to 56 weeks postpartum (after delivery)

  Of note, some visits were performed out of the specified window above.
- DAYS: Number of days a particular visit occurred before (negative numbers) or after (positive values) randomization.

4.4 Participant Forms

This section pertains to forms either completed about the participant/their family or by the participant.

4.4.1 LIFEMOMS.BASELINEVST: Baseline Visit [LM01]

This form collected eligibility and randomization visit information and establish a set of baseline measurements for weight, BMI, blood pressure, HbA1c, and maternal circumferences (partial sites). This form was only collected at baseline. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PGC1. Form completion, screening, consent, and eligibility variables were deleted as the release data is for randomized participants only. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
RANDGAD	Gestational age at randomization (days)	The projected due date was used to calculate the gestational age at randomization in days
AHTWTDAYS	Days between randomization and enrollment study height & weight measured (days)	Calculated the number of days between randomization and the date the enrollment height and weight were measured.
PROJWT	Project enrollment weight (kg)	Truncated to protect the identity of the participants
MAGE	Maternal age (years)	Truncated to protect the identity of the participants

AOGTTDAYS	Days between randomization and OGTT	Calculated the number of days between randomization and the date of the OGTT measurement.

4.4.2 LIFEMOMS.BASELINE: Baseline Questionnaire [LM02]

This form was used to obtain participant and family demographic data and medical history. Non-responses and don't know responses were reported as missing values. It was interview administered with the participant. This form was only completed at baseline. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PCG1. Form completion variables were deleted. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
PPREGWT	Pre-pregnancy weight	Truncated to protect the identity of the participants
NEWRACE	Maternal Race/Ethnicity	Race and Ethnicity collapsed into one variable
BDADAGE	Age of biological father	Truncated to protect the identity of the participants
NEWDRACE	Paternal Race/Ethnicity	Race and Ethnicity collapsed into one variable
INCSHAR	People who share family income	Upper tail collapsed due to low frequencies
INCOME	Family income past year	Family income split into three categories
COLLEGE	College degree or higher	Education collapsed into a Yes/No variable

4.4.3 LIFEMOMS.BASELINEMEDHIS: Baseline Medical History Form [LM02A]

This form was used to obtain participant medical history. It was interview administered with the participant. This form was only completed at baseline. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PCG1. Form completion variables were deleted. The following variables were deleted due to low frequency numbers: hyperthyroidism, anorexia nervosa/bulimia, eating disorder, Crohn's disease, and cholestasis.

4.4.4 LIFEMOMS.BASELINEMEDS: Baseline Prenatal Medication Tracking Form [LM02B]

This form was used to obtain participant prenatal medication history. It was interview administered with the participant. This form was completed at baseline (VISIT=PGC1) and at 35-36 weeks (VISIT=PGC3) gestation. Form completion variables were deleted. The following variables were deleted due to low frequency numbers: Systemic steroids, weight loss, lipid-lowering, antipsychotic, anti-seizure, and attention deficit disorder medications.

4.4.5 LIFEMOMS.PREVPREG: Previous Pregnancy Outcome Form [LM02C]

This form was used to obtain the participant's previous pregnancy history and outcomes. It was interview administered with the participant and confirmed by medical record review. This form was only completed at baseline. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PCG1. All variables on the data form were recoded to the variables below. The variable for prior birth weight of infant was removed.

Variable	Label	Specific de-identification notes
PARA	Parity	Number of times that a women has given birth to a fetus with a gestational age of 20 weeks or more. Upper categories were collapsed into the last category (5+) due to low frequencies.
GRAVIDA	Gravidity	Number of times that a women has been pregnant. Upper categories were collapsed into the last category (8+) due to low frequencies.
PREVGDM	Prior pregnancy with GDM	Recoded as a binary variable
PREVPE	Prior pregnancy with preeclampsia	Recoded as a binary variable
PREVCES	Number of prior cesareans	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (2+) due to low frequencies.
PREVLIVE	Number of prior live births	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (4+) due to low frequencies.
PREVSTILL	Number of prior stillbirth/fetal loss greater than 20 weeks gestation	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (1+) due to low frequencies.
PREVMISC	Number of prior miscarriages	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (2+) due to low frequencies.
PREVABORT	Number of prior elective/therapeutic abortions	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (2+) due to low frequencies.
PREVECTOP	Number of prior ectopic/molar pregnancy	Calculated number of events in the prior pregnancies. Upper categories were collapsed into the last category (1+) due to low frequencies.

4.4.6 LIFEMOMS.STUDYVST: Prenatal Study Visit Form [LM03]

This form was used to obtain participant data at two pre-defined study visits during pregnancy. This form was completed at 24-27 weeks gestation (VISIT=PGC2) and at 35-36 weeks gestation (VISIT=PGC3). Form completion variables were deleted. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
LM03DAYS	Days between randomization and LM03 Prenatal Study Visit	Calculated the number of days between randomization and the date of the study visit

STUDYWT	Measured weight at study visit (kg)	Truncated to protect the identity of the participants
FOGTTDAYS	Days between randomization and OGTT	Calculated the number of days between randomization and the date of the OGTT measurement.
CIRCDAYS	Days between randomization and maternal circumference measurements	Calculated the number of days between randomization and the date of the maternal circumference measurements.

4.4.7 LIFEMOMS.DELIVERY: Maternal Delivery & Neonatal Chart Abstraction Form [LM04]

This form was used to collect maternal delivery and neonatal chart abstraction information. This form was only collected at delivery. Of the 933 participants in the release dataset one did not have a delivery form. Form completion variables were deleted. Other variables were re-coded as described below.

Variable	Label	Specific de-identification notes
DELGAD	Gestational age at delivery (days)	Converted the date of delivery into gestational age at delivery
DELDAYS	Days between randomization and delivery	Calculated the number of days between randomization and the date of delivery
LIVE	Status at birth	Intrapartum and antepartum stillbirths combined into one category due to low frequencies
DELWTDAYS	Days between randomization and date of delivery admission weight	Calculated the number of days between randomization and the date of delivery admission weight
ADMWTKG	Admission weight (kg)	Truncated to protect the identity of the participants
GMAJMAL	Major congenital malformations	Specify fields were collapsed into a single yes/no variable. Major malformations could include: Anencephaly, Meningomyelocele / spina bifida, Cyanotic congenital heart disease, Congenital diaphragmatic hernia, Omphalocele, Gastroschisis, Limb reduction defect, Cleft lip with or without cleft palate, Cleft palate alone, Down syndrome / trisomy 21, Suspected chromosomal disorder, Hypospadias, Ambiguous genitalia male genotype, Ambiguous genitalia female genotype, Ventricular septal defect (VSD), Postaxial polydactyly, Other
GMINMAL	Minor congenital malformations	Specify fields were collapsed into a single yes/no variable. Minor malformations could include: Epicanthal folds, Hypo- or hypertelorism, Ear tag, Microstomia, Micrognathia, Branchial sinus, Supernumary nipples, Sacral dimple, Vaginal tag, Minor

		hypospadias, Cubitus valgus, Fifth finger clinodactyly, Single transverse palmar crease, Nail hypoplasia, Partial syndactly of toes, Other
LIIUGR	Induction for Intrauterine Growth Restriction (IUGR)	Indications for labor induction coded as Yes/No if frequency met the cutoff of at least 10 participants. Low frequency indications were combined with Other: IUFD/Stillbirth, congenital malformation/fetal anomaly, abruption, chronic hypertension, chorioamnionitis, macrosomia, documented fetal lung maturity
LIOligo	Induction for Oligohydramnios	
LIStatus	Induction for Non-reassuring fetal status	
LIGestHypPreE	Induction for Gestational hypertension / Preeclampsia / Eclampsia	
LIDiabetes	Induction for Diabetes	
LIPROM	Induction for PROM	
LIPostterm	Induction for Postterm (≥ 41 weeks)	
LIElective	Elective induction	
LIOther	Other induction indication	
CICPD	Cesarean for Failure to progress / CPD/ Failed induction	Indications for cesarean delivery coded as Yes/No if frequency met the cutoff of at least 10 participants. Low frequency indications were combined with Other: chorioamnionitis, cord prolapse, abruption, previa, chronic hypertension, diabetes, fetal anomaly, suspected macrosomia, oligohyramnios, herpes, HIV
CIStatus	Cesarean for Non-reassuring fetal status	
CIAbnpres	Cesarean for Abnormal presentation	
CIGestHypPreE	Cesarean for Gestational hypertension / Preeclampsia / Eclampsia	
CIPrevCes	Cesarean for Previous cesarean	
CIElective	Elective cesarean	
CIOther	Other cesarean indication	
HYPPRE	Gestational hypertension / Preeclampsia	Combined questions regarding gestational hypertension and preeclampsia
PRESEV	Severe preeclampsia	Includes severe preeclampsia, HELLP, Eclampsia
PREGCOMPOTH	Other maternal pregnancy complications	Low frequency complications were combined with Other: Severe anemia, postpartum hemorrhage requiring transfusion, premature labor/undelivered, pulmonary embolism, wound separation
MLOS	Days between delivery and maternal discharge	Length of stay in days is calculated from the delivery date to discharge date
BWEIGHT	Birth weight from medical record (grams)	Truncated to protect the identity of the participants
BLENGTH	Birth length from medical record (cm)	Truncated to protect the identity of the participants
APGAR1	APGAR at 1 minute ≤ 3	Coded Yes if score less than or equal to 3 and not missing
APGAR5	APGAR at 5 minutes ≤ 5	Coded Yes if score less than or equal to 5 and not missing

NEORESP	Neonatal respiratory morbidity	Coded Yes if the infant had CPAP, ventilator use within the first 72 hours of life, ECMO, or a cumulative use of supplemental oxygen for at least 6 hours in the first 72 hours of life
NICU_GT12	NICU greater than 12 hours	Coded Yes if NICU/Intermediate nursery stay was greater than or equal to 12 hours
FDTHCAT	Fetal death by GA category	Fetal loss was coded as occurring < 24 weeks and fetal loss ≥ 24 weeks; live birth is coded as 0.
NEOINFDTH	Neonatal or infant death	Neonatal and infant deaths were combined due to low frequencies
NICUDAYS	Days in NICU	Days in NICU were calculated from NICU admission to NICU discharge
ILOS	Days between birth and infant discharge	Length of stay in days is calculated form the birth date to discharge date

4.4.8 LIFEMOMS.NEONATAL: Neonatal Baseline Study Visit Form [LM05]

This form was used to collect neonatal baseline measures conducted by research staff. Of the 933 participants in the release dataset 114 did not have a neonatal baseline form. This form collected neonatal weight, length, head circumference, and neonatal skinfold measurements. Form completion variables were deleted. Other variables were re-coded as described below.

Variable	Label	Specific de-identification notes
NEOWTDAYS	Days between birth and neonatal weight measurement	Calculated the number of days between birth and the date of the neonatal weight measurement
NEOWEIGHT	Neonatal weight (g)	Truncated to protect the identity of the participants
NEOLNDAYS	Days between birth and neonatal length measurement	Calculated the number of days between birth and the date of the neonatal length measurement
NEOLENGTH	Neonatal length (cm)	Truncated to protect the identity of the participants
NEOHCDAYS	Days between birth and head circumference measurement	Calculated the number of days between birth and the date of the head circumference measurement
NEOSKINDAYS	Days between birth and skinfold measurement	Calculated the number of days between birth and the date of the skinfold measurement

4.4.9 LIFEMOMS.STATUS: Status Form [LM06]

This form was used to collect glucose testing during pregnancy, an alternate clinic weight late in pregnancy, and withdrawal/ lost to follow-up status. Eleven participants in the release dataset withdrew or were lost to follow-up at some point during the study. Form completion variables were deleted. Other variables were re-coded as described below.

Variable	Label	Specific de-identification notes
I50GLTDAYS	Days between randomization and date of 50 gm 1 hr GLT	Calculated the number of days between randomization and the date of the 50 gm 1 hr GLT
I100OGTTDAYS	Days between randomization and date of 100 gm 3 hr OGTT	Calculated the number of days between randomization and the date of the 100 gm 3 hr OGTT
IWTDAYS	Days between randomization and date of last clinic weight	Calculated the number of days between randomization and the date of the last clinic weight if not weighed at the 35,0 – 36,6 study visit
WDREWLOST	Withdrew or lost to follow-up	Variables combined due to low frequencies

4.4.10 LIFEMOMS.MATONEYR: Status Form [LM08]

This form was used to obtain participant data at 48-56 weeks postpartum study visit (VISIT=PPC1). Of the 933 participants in the release dataset 139 did not have a 48-56 week postpartum form. Form completion variables were deleted. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
LM08DAYS	Days between delivery and postpartum study visit	Calculated the number of days between delivery and the date of the study visit
STUDYPPWT	Measured weight at postpartum study visit (kg)	Truncated to protect the identity of the participants
PPCIRCDAYS	Days between delivery and circumference measures	Calculated the number of days between delivery and the date of the maternal circumference measurements.
KOGTTDAYS	Days between delivery and OGTT at postpartum SV	Calculated the number of days between delivery and the date of the OGTT measurement.

4.4.11 LIFEMOMS. PPMEDHIS: Postpartum Medical History Form [LM08A]

This form was used to obtain participant medical history during the study pregnancy (after randomization) and after (through the 1-year postpartum visit). It was interview administered with the participant. This form was completed at one year postpartum. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PPC1. Form completion variables were deleted. The following variables were deleted due to low frequency numbers: hyperthyroidism, anorexia nervosa/bulimia, eating disorder, Crohn's disease, and cholestasis.

Variable	Label	Specific de-identification notes
LM08ADAYS	Days from delivery to date form completed	Calculated the number of days between delivery and the date the form was completed

4.4.12 LIFEMOMS. PPMEDS: Postpartum Medication Tracking Form [LM08B]

This form was used to obtain participant postpartum medication history. It was interview administered with the participant. A similar version of this form was completed at baseline (VISIT=PGC1) and at 35-36 weeks (VISIT=PGC3) gestation. Form completion variables were deleted. The following variables were deleted due to low frequency numbers: Systemic steroids, weight loss, diabetes, lipid-lowering, antipsychotic, anti-seizure, attention deficit disorder, and metformin for non-diabetes indications medications.

Variable	Label	Specific de-identification notes
LM08BDAYS	Days from delivery to date form completed	Calculated the number of days between delivery and the date the form was completed

4.4.13 LIFEMOMS. MATONEYRQ: Maternal Follow-up Questionnaire [LM09]

This form was used to obtain participant and family demographic data and medical history. Non-responses and don't know responses were reported as missing values. It was interview administered with the participant. This form was completed at 48-56 weeks postpartum. There is no explicit VISIT value on the form but if needed VISIT can be assigned a value of PPC1. Form completion variables were deleted. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
LM09DAYS	Days between delivery and date form completed	Calculated the number of days between delivery and the date the form was completed
PPINCSHAR	People who share family income	Upper tail collapsed due to low frequencies
PPINCOME	Family income past year	Family income split into three categories
PPCOLLEGE	College degree or higher	Education collapsed into a Yes/No variable
NUMWKBRST	Number of weeks breastfeeding	Calculated the number of weeks breastfeeding based on week stopped or week of study visit if still breastfeeding
NEWPREGDAYS	Days between LIFE-Moms delivery and next pregnancy delivery	Calculated the number of days between the LIFE-Moms delivery and the date of delivery for a subsequent pregnancy (if reported at the 48-56 week postpartum form)

4.4.14 LIFEMOMS.INFONEYR: Infant Follow-up Study Visit Form [LM10]

This form was used to collect infant measures conducted by research staff. Of the 933 participants in the release dataset 134 did not have a 48-56 weeks of age form. This form collected infant weight, length, and infant skinfold measurements. Form completion variables were deleted. Other variables were re-coded as described below.

Variable	Label	Specific de-identification notes
INFWTDAYS	Days between birth and infant weight measurement	Calculated the number of days between birth and the date of the infant weight measurement

INFWEIGHT	Infant weight (kg)	Truncated to protect the identity of the participants
INFLNDAYS	Days between birth and infant length measurement	Calculated the number of days between birth and the date of the infant length measurement
INFLENGTH	Infant length (cm)	Truncated to protect the identity of the participants
INFSKINDAYS	Days between birth and infant skinfold measurement	Calculated the number of days between birth and the date of the infant skinfold measurement

4.4.15 LIFEMOMS.INFONEYRQ: Infant Follow-up Questionnaire [LM11]

This form was used to obtain infant demographic data, development data and medical history. Non-responses and don't know responses were reported as missing values. It was interview administered with the participant. Of the 933 participants in the release dataset 173 did not have a 48-56 weeks of age infant questionnaire. Form completion variables were deleted. Other variables were re-coded as described below. The questions noted as "OP" on the annotated data release form were collected by a subset of sites.

Variable	Label	Specific de-identification notes
INFQDAYS	Days between birth and date form completed	Calculated the number of days between birth and date form completed
NEWIRACE	Infant Race/Ethnicity	Race and Ethnicity collapsed into one variable

4.4.16 LIFEMOMS.BDI: Beck Depression Inventory [LM20]

This was used to collect information about depression during assessment visits. It was self-administered following the instructions in the BDI-II manual. This form was collected at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded. A total score was calculated and is provided.

4.4.17 LIFEMOMS.STUDY: Study Visit Questionnaire [LM22]

This form was used to collect information regarding the frequency of self-weighing and the Nurse's Health Study Sedentary Behavior question. This form was collected at baseline (PGC1), 24-27 weeks gestation (PGC2), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

4.4.18 LIFEMOMS.SLEEP: Sleep Questionnaire [LM23]

This form assessed questions regarding sleep schedule, quantity, quality, disorders and sleepiness. This form was collected at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum

(PPC1). The Sleep Questionnaire (LM23) was devised by NuMom2B, a cohort study of pregnant women and their infants.

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

Variable	Label	Specific de-identification notes
LM23DAYS	Days between randomization and date form completed	Calculated the number of days between randomization and date form completed

Calculated Scoring Variables:

Variable	Label	Specific de-identification notes
APNEARSK	Berlin Risk of Sleep Apnea	Berlin Sleep Questionnaire calculated risk of sleep apnea (High, Low)
EPCAT	Epworth Daytime Sleepiness	The Epworth Daytime Sleepiness scale is categorized as daytime sleepiness or no daytime sleepiness

4.4.19 LIFEMOMS.PANES: Physical Activity Neighborhood Environment Survey [LM25]

This form was used to collect the Physical Activity Neighborhood Environment Survey. The Physical Activity Neighborhood Environment Survey (PANES) assesses environmental factors for walking and bicycling in your neighborhoods. The first 7 items are core questions, items 8-11 are recommended, and 12-17 are optional environmental questions. Neighborhood was defined as a 10-15 minute walk from home. This form was collected by a subset of sites at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

4.4.20 LIFEMOMS.NHSPA: NHS Physical Activity Questionnaire [LM27]

This form was used to measure physical activity. Maternal Physical Activity Behavior will be measured with Items 37, 38, and 40 from the Nurse's Health Study II Questionnaire (http://www.channing.harvard.edu/nhs/questionnaires/pdfs/NHSII/2009.pdf). The instructions for the first item will be changed to the following, which allows participants to rate their physical activity behavior over the past year or since the last time that they completed this questionnaire: *"DURING THE PAST YEAR OR SINCE THE LAST TIME YOU COMPLETED THIS QUESTIONNAIRE…"*. This form was collected by a subset of sites at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

4.4.21 LIFEMOMS.INFFEEDQ: Infant Feeding Styles Questionnaire [LM28]

This form was used to assess infant feeding styles. This form was collected by a subset of sites at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

16-items
Assess maternal attitudes and beliefs toward feeding infants in the domains of:
1) Restrictive Feeding Style (3 items - item #: 7, 9, 15)
2) Pressuring/Overfeeding Style (7 items - item #: 1, 2, 4, 6, 10, 11, 14)
3) Responsive Feeding Style (1 item - item #: 5)
4) Beliefs in the benefits of breastfeeding (5 items - item #: 3, 8, 12, 13, 16)

22-items
Full "Infant Beliefs" portion of the questionnaire (items 1-22 on the full version OP1-OP6 on LM28) that would add data on the following:
Ethnotheories regarding child overweight [High score = beliefs that may promote overfeeding] Ethnotheories regarding child underweight [High score = beliefs that may promote restrictive feeding] Laissez faire feeding style [High score = beliefs that may promote laissez faire feeding]

Form completion variables were deleted and the date form completed was converted to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

4.4.22 LIFEMOMS.INFCONSS: Infant Consumption Questionnaire Short Version [LM29A]

This form was used to assess infant consumption. This form was collected by a subset of sites at 48-56 weeks postpartum (PPC1).

The infant Food Frequency Questionnaire (FFQ) Short-form is a dietary assessment instrument to characterize infants' food intake during the first year of life. The short FFQ was derived from the Infant Feeding Practices Survey II (IFPS II) conducted by the Center of Disease Control (CDC) and Food and Drug Administration (FDA) and includes 19 food categories (IFPS II, http://www.cdc.gov/ifps). For each category, the respondent will complete the feedings per day for foods consumed on a daily basis or feedings per week for foods consumed less than once a day, without specifying portion sizes.

Form completion variables were deleted and the date form completed was converted to the number of days from birth. The responses on this form were unchanged and are provided as recorded.

4.4.23 LIFEMOMS.INFCONSL: Infant Consumption Questionnaire Long Version [LM29B]

This form was used to assess infant consumption. This form was collected by a subset of sites at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1).

The infant Food Frequency Questionnaire Long-form is a dietary assessment instrument to characterize infants' food intake during the first year of life. It includes 54 food items with a brief description on how these were prepared and/or their source (e.g., raw, canned, etc.). For each category, the respondent will complete the feedings per day for foods consumed on a daily basis or feedings per week for foods consumed less than once a day, without specifying portion sizes, over the past week. It also includes information on supplements use. Write in specify fields were removed.

Form completion variables were deleted and the date form completed was converted to the number of days from birth. The responses on this form were unchanged and are provided as recorded.

4.5 Central Unit and Non Form Datasets

4.5.1 LIFEMOMS.LAB: Laboratory Data

LIFEMOMS.LAB includes the laboratory results from the baseline (PGC1), late pregnancy (PGC3), and 48-56 week postpartum visit (PPC1). The laboratory results are outlined in the table below and are reported as provided from the laboratory.

Methods:
PGC1, PCG3, PPC1 Analyses

- Glucose – Hexokinase UV method using Roche Diagnostics reagents for the cobas c501
- Triglycerides – Enzymatic GPO reagents from Roche Diagnostics for the cobas c501
- Total Cholesterol – Enzymatic reagents from Roche Diagnostics for the cobas c501
- HDL Cholesterol – Direct homogeneous enzymatic reagents from Roche Diagnostics for the cobas c501
- LDL Cholesterol – calculated by Friedewald equation
- Direct LDL Cholesterol (assayed when Triglycerides >400 mg/dL) – LDL Direct Liquid Select reagent from Sekisui Diagnostics run on the cobas c501
- Insulin – Electrochemiluminescence using Roche Elecsys reagents on the cobas e601
- C-peptide – Electrochemiluminescence using Roche Elecsys reagents on the cobas e601
- Leptin – RIA kit from EMD Millipore. The leptin assay has a high standard of 100, so any samples which were above the high standard had to be repeated on dilution.
- High Molecular Weight Adiponectin - ELISA using the Quantikine kits from R&D Systems

PGC1, PCG3 Analyses

- IL-6 - high-sensitive ELISA from R&D Systems
- TNF-alpha - high-sensitive ELISA from R&D systems

PPC1 Analyses

- Albumin – Bromcresol green reagents from Roche Diagnostics for the cobas c501
- Glycated serum protein – Enzymatic assay using Diazyme Glycated serum protein (GlycoGapTM) reagents
- Glycated albumin (%) – determined by the following equation (Abidin, 2013) after quantifying glycated serum protein (GSP) values measured with the GlycoGap ® kit from Diazyme (Poway, CA) on an open channel of the cobas c501:

$$\% \text{ GA} = \frac{GSP\left(\frac{umol}{L}\right)x\ 0.182+1.97}{Total\ Albumin\ (\frac{g}{dL})} + 2.9$$

Both assays showed good precision based on multiple measurements and determination of coefficient of variation (%CV) on serum samples from research subjects. For GSP, imprecision was found to be <4 %CV both within-day and between day runs with serum samples from research subjects.

Reference: Abidin, D; Liu, L; Dou, C; Datta, A; Yuan, C. An improved enzymatic assay for glycated serum protein. Analytical Methods, 2013, 5, 2461-2469.

Variable Name	Description (units)
RELEASEID	Participant ID for NIDDK Database Repository
VISIT	Visit
SAMPGA	GA at sample collection (days)
SAMPAGEW	Postpartum wks at sample coll
GLUCOSE	Glucose (mg/dL)
TRIGLY	Triglycerides (mg/dL)
TOTCHOL	Total Cholesterol (mg/dL)
HDL	HDL Chol, Direct (mg/dL)
LDLFRIED	Friedewald LDL Chol (mg/dL)
LDLDIRECT	Direct LDL Chol (mg/dL)
INSULIN	Insulin (uU/mL)
CPEPTIDE	C-Peptide (ng/mL)
LEPTIN	Leptin, Human (ug/L)
ADIPO	Adiponectin, HMW (ng/mL)
IL_6	IL-6, HS (pg/mL)
TNF_ALPHA	TNF-alpha, HS (pg/mL)
ALBUMIN	Albumin (g/dL)
GLYALBUMIN	Glycated Albumin (%)
GLYSERPROT	Glycated Serum Protein (umol/L)

4.5.2 LIFEMOMS.ASA24: Dietary Recall

LIFEMOMS.ASA24 data is nutrient analysis from the Automated Self-Administered 24-hour (ASA24) survey. The ASA-24 was collected by a subset of sites at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1). The Automated Self-Administered 24-hour (ASA24) Dietary Assessment Tool was developed by the National Cancer Institute (NCI) to enable multiple, automatically coded self-administered 24-hour recalls. The pre-2016 ASA24 version was used for LIFE-Moms.

LIFEMOMS.ASA24_TN dataset - Daily Total Nutrients Analysis File - FNDDS nutrients from all foods in a given day for each recall.

Field Name	Description	Data Type	Length	Codes
RELEASEID	Participant ID for NIDDK Database Repository			
VISIT	Visit			PGC1, PGC3, PPC1
RECALLNO	Recall number.	Numeric	2	1 -- 99
RECALLATTEMPT	Sequence number for attempt within recall	Numeric	2	1 -- 99
RECALLSTATUS	The status of this recall across attempts	Numeric	1	1=FoodCompleteSupplementComplete (FComp_Scomp); 2=FoodCompleteSupplementNotApplicable (FComp_SNotApp); 3=FoodCompleteSupplementQuit (FComp_SQuit); 4=FoodCompleteSupplementNotStarted (FComp_SNotStart); 5=FoodQuit (FQuit_SNA)
INTAKEDAY	Day of week of recall.	Numeric	1	1 = Sunday; 2 = Monday; 3 = Tuesday; 4 = Wednesday; 5 = Thursday; 6 = Friday; 7 = Saturday
LANG	Language used for recall.	Numeric	1	1=English; 2=Spanish; 3=English and Spanish
NUMFOODS	Total number of FLTs included in this recall	Numeric	3	1 -- 999
NUMCODES	Total number of Food Codes included in this recall	Numeric	3	1 -- 999
AMTUSUAL	Was the amount of food that you ate yesterday much more than usual, usual, or much less than usual?	Numeric	1	1 = Much more than usual; 2 = Usual; 3 = Much less than usual; 8 = Don't know
SALTTYPE	What type of salt do you usually add to your food at the table? Would you say it is ordinary or seasoned salt, lite salt, or a salt substitute?	Numeric	1	1 = Ordinary, sea, seasoned, or other flavored salt; 2 = Lite salt; 3 = Salt substitute; 4 = None; 5 = Other; 8 = Don't know; 9 = Not applicable
SALTFREQ	How often do you add this salt to your food at the table? Is it rarely, occasionally, or very often?	Numeric	1	1 = Rarely; 2 = Occasionally; 3 = Very often; 4 = Other; 8 = Don't know; 9 = Not applicable
SALTUSED	How often is ordinary salt or seasoned salt added in cooking or preparing foods in your household? Is it never, rarely, occasionally, or very often?	Numeric	1	1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Very often; 5 = Other; 8 = Don't know; 9 = Not applicable
KCAL	Energy (kcal)	Numeric	5	

PROT	Protein (g)	Numeric	8.3	
TFAT	Total Fat (g)	Numeric	8.3	
CARB	Carbohydrate (g)	Numeric	8.3	
MOIS	Water (g)	Numeric	8.3	
ALC	Alcohol (g)	Numeric	8.3	
CAFF	Caffeine (mg)	Numeric	5	
THEO	Theobromine (mg)	Numeric	5	
SUGR	Sugars, total (g)	Numeric	8.3	
FIBE	Fiber, total dietary (g)	Numeric	8.3	
CALC	Calcium (mg)	Numeric	5	
IRON	Iron (mg)	Numeric	8.3	
MAGN	Magnesium (mg)	Numeric	5	
PHOS	Phosphorus (mg)	Numeric	5	
POTA	Potassium (mg)	Numeric	5	
SODI	Sodium (mg)	Numeric	5	
ZINC	Zinc (mg)	Numeric	8.3	
COPP	Copper (mg)	Numeric	8.3	
SELE	Selenium (mcg)	Numeric	8.3	
VC	Vitamin C (mg)	Numeric	8.3	
VB1	Thiamin (mg)	Numeric	8.3	
VB2	Riboflavin (mg)	Numeric	8.3	
NIAC	Niacin (mg)	Numeric	8.3	
VB6	Vitamin B-6 (mg)	Numeric	8.3	
FOLA	Folate, total (mcg)	Numeric	5	
FA	Folic acid (mcg)	Numeric	5	
FF	Folate, food (mcg)	Numeric	5	
FDFE	Folate, DFE (mcg_DFE)	Numeric	5	
VB12	Vitamin B-12 (mcg)	Numeric	8.3	
VARA	Vitamin A, RAE (mcg_RAE)	Numeric	5	
RET	Retinol (mcg)	Numeric	5	
BCAR	Carotene, beta (mcg)	Numeric	5	
ACAR	Carotene, alpha (mcg)	Numeric	5	
CRYP	Cryptoxanthin, beta (mcg)	Numeric	5	
LYCO	Lycopene (mcg)	Numeric	5	
LZ	Lutein + zeaxanthin (mcg)	Numeric	5	
ATOC	Vitamin E, alpha-tocopherol (mg)	Numeric	8.3	
VK	Vitamin K, phylloquinone (mcg)	Numeric	8.3	
CHOLE	Cholesterol (mg)	Numeric	5	
SFAT	Fatty acids, total saturated (g)	Numeric	8.3	
S040	4:0 (g)	Numeric	8.3	
S060	6:0 (g)	Numeric	8.3	
S080	8:0 (g)	Numeric	8.3	
S100	10:0 (g)	Numeric	8.3	
S120	12:0 (g)	Numeric	8.3	
S140	14:0 (g)	Numeric	8.3	
S160	16:0 (g)	Numeric	8.3	

S180	18:0 (g)	Numeric	8.3	
MFAT	Fatty acids, total monounsaturated (g)	Numeric	8.3	
M161	16:1 (g)	Numeric	8.3	
M181	18:1 (g)	Numeric	8.3	
M201	20:1 (g)	Numeric	8.3	
M221	22:1 (g)	Numeric	8.3	
PFAT	Fatty acids, total polyunsaturated (g)	Numeric	8.3	
P182	18:2 (g)	Numeric	8.3	
P183	18:3 (g)	Numeric	8.3	
P184	18:4 (g)	Numeric	8.3	
P204	20:4 (g)	Numeric	8.3	
P205	20:5 n-3 (g)	Numeric	8.3	
P225	22:5 n-3 (g)	Numeric	8.3	
P226	22:6 n-3 (g)	Numeric	8.3	
VITD	Vitamin D (D2 + D3)	Numeric	8.3	
CHOLN	Choline, total	Numeric	8.3	
VITE_ADD	Vitamin E, added	Numeric	8.3	
B12_ADD	Vitamin B-12, added	Numeric	8.3	
DATACOMP	This is an overall indicator to the researcher if Portion data was missing ANYWHERE for this recall.	Numeric	1	1=Data Complete; 2=Data Missing

LIFEMOMS.ASA24_ TNMYPHEI dataset - Daily Total Nutrients MyPyramid HEI Analysis File – FNDDS MyPyramid Equivalents and HEI Whole Fruit variable from all foods in a given day

Field Name	Description	Data Type	Length	Codes
RELEASEID	Participant ID for NIDDK Database Repository			
VISIT	Visit			PGC1, PGC3, PPC1
RECALLNO	Recall number.	Numeric	2	1 -- 99
RECALLATTEMPT	Sequence number for attempt within recall	Numeric	2	1 -- 99
RECALLSTATUS	The status of this recall across attempts	Numeric	1	1=FoodCompleteSupplementComplete (FComp_Scomp); 2=FoodCompleteSupplementNotApplicable (FComp_SNotApp); 3=FoodCompleteSupplementQuit (FComp_SQuit); 4=FoodCompleteSupplementNotStarted (FComp_SNotStart); 5=FoodQuit (FQuit_SNA)
INTAKEDAY	Day of week of recall.	Numeric	1	1 = Sunday; 2 = Monday; 3 = Tuesday; 4 = Wednesday; 5 = Thursday; 6 = Friday; 7 = Saturday
LANG	Language used for recall.	Numeric	1	1=English; 2=Spanish; 3=English and Spanish

NUMFOODS	Total number of FLTs included in this recall	Numeric	3	1 -- 999
NUMCODES	Total number of Food Codes included in this recall	Numeric	3	1 -- 999
AMTUSUAL	Was the amount of food that you ate yesterday much more than usual, usual, or much less than usual?	Numeric	1	1 = Much more than usual; 2 = Usual; 3 = Much less than usual; 8 = Don't know
SALTTYPE	What type of salt do you usually add to your food at the table? Would you say it is ordinary or seasoned salt, lite salt, or a salt substitute?	Numeric	1	1 = Ordinary, sea, seasoned, or other flavored salt; 2 = Lite salt; 3 = Salt substitute; 4 = None; 5 = Other; 8 = Don't know; 9 = Not applicable
SALTFREQ	How often do you add this salt to your food at the table? Is it rarely, occasionally, or very often?	Numeric	1	1 = Rarely; 2 = Occasionally; 3 = Very often; 4 = Other; 8 = Don't know; 9 = Not applicable
SALTUSED	How often is ordinary salt or seasoned salt added in cooking or preparing foods in your household? Is it never, rarely, occasionally, or very often?	Numeric	1	1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Very often; 5 = Other; 8 = Don't know; 9 = Not applicable
KCAL	Energy (kcal)	Numeric	5	
PROT	Protein (g)	Numeric	8.3	
TFAT	Total Fat (g)	Numeric	8.3	
CARB	Carbohydrate (g)	Numeric	8.3	
MOIS	Water (g)	Numeric	8.3	
ALC	Alcohol (g)	Numeric	8.3	
CAFF	Caffeine (mg)	Numeric	5	
THEO	Theobromine (mg)	Numeric	5	
SUGR	Sugars, total (g)	Numeric	8.3	
FIBE	Fiber, total dietary (g)	Numeric	8.3	
CALC	Calcium (mg)	Numeric	5	
IRON	Iron (mg)	Numeric	8.3	
MAGN	Magnesium (mg)	Numeric	5	
PHOS	Phosphorus (mg)	Numeric	5	
POTA	Potassium (mg)	Numeric	5	
SODI	Sodium (mg)	Numeric	5	
ZINC	Zinc (mg)	Numeric	8.3	
COPP	Copper (mg)	Numeric	8.3	
SELE	Selenium (mcg)	Numeric	8.3	
VC	Vitamin C (mg)	Numeric	8.3	
VB1	Thiamin (mg)	Numeric	8.3	
VB2	Riboflavin (mg)	Numeric	8.3	
NIAC	Niacin (mg)	Numeric	8.3	
VB6	Vitamin B-6 (mg)	Numeric	8.3	
FOLA	Folate, total (mcg)	Numeric	5	
FA	Folic acid (mcg)	Numeric	5	
FF	Folate, food (mcg)	Numeric	5	
FDFE	Folate, DFE (mcg_DFE)	Numeric	5	

VB12	Vitamin B-12 (mcg)	Numeric	8.3	
VARA	Vitamin A, RAE (mcg_RAE)	Numeric	5	
RET	Retinol (mcg)	Numeric	5	
BCAR	Carotene, beta (mcg)	Numeric	5	
ACAR	Carotene, alpha (mcg)	Numeric	5	
CRYP	Cryptoxanthin, beta (mcg)	Numeric	5	
LYCO	Lycopene (mcg)	Numeric	5	
LZ	Lutein + zeaxanthin (mcg)	Numeric	5	
ATOC	Vitamin E, alpha-tocopherol (mg)	Numeric	8.3	
VK	Vitamin K, phylloquinone (mcg)	Numeric	8.3	
CHOLE	Cholesterol (mg)	Numeric	5	
SFAT	Fatty acids, total saturated (g)	Numeric	8.3	
S040	4:0 (g)	Numeric	8.3	
S060	6:0 (g)	Numeric	8.3	
S080	8:0 (g)	Numeric	8.3	
S100	10:0 (g)	Numeric	8.3	
S120	12:0 (g)	Numeric	8.3	
S140	14:0 (g)	Numeric	8.3	
S160	16:0 (g)	Numeric	8.3	
S180	18:0 (g)	Numeric	8.3	
MFAT	Fatty acids, total monounsaturated (g)	Numeric	8.3	
M161	16:1 (g)	Numeric	8.3	
M181	18:1 (g)	Numeric	8.3	
M201	20:1 (g)	Numeric	8.3	
M221	22:1 (g)	Numeric	8.3	
PFAT	Fatty acids, total polyunsaturated (g)	Numeric	8.3	
P182	18:2 (g)	Numeric	8.3	
P183	18:3 (g)	Numeric	8.3	
P184	18:4 (g)	Numeric	8.3	
P204	20:4 (g)	Numeric	8.3	
P205	20:5 n-3 (g)	Numeric	8.3	
P225	22:5 n-3 (g)	Numeric	8.3	
P226	22:6 n-3 (g)	Numeric	8.3	
VITD	Vitamin D (D2 + D3)	Numeric	8.3	
CHOLN	Choline, total	Numeric	8.3	
VITE_ADD	Vitamin E, added	Numeric	8.3	
B12_ADD	Vitamin B-12, added	Numeric	8.3	
G_TOTAL	Total number of grain ounce equivalents	Numeric	8.3	
G_WHL	Number of whole grain ounce equivalents	Numeric	8.3	
G_NWHL	Number of non-whole grain ounce equivalents	Numeric	8.3	
V_TOTAL	Total number of vegetable cup equivalents excl legumes	Numeric	8.3	

V_DRKGR	Number of dark-green vegetable cup equivalents	Numeric	8.3	
V_ORANGE	Number of orange vegetable cup equivalents	Numeric	8.3	
V_POTATO	Number of white potato cup equivalents	Numeric	8.3	
V_STARCY	Number of other starchy vegetable cup equivalents	Numeric	8.3	
V_TOMATO	Number of tomato cup equivalents	Numeric	8.3	
V_OTHER	Number of other vegetable cup equivalents	Numeric	8.3	
F_TOTAL	Total number of fruit cup equivalents	Numeric	8.3	
F_CITMLB	Number of citrus melon berry cup equivalents	Numeric	8.3	
F_OTHER	Number of other fruit cup equivalents	Numeric	8.3	
D_TOTAL	Total number of milk group (milk yogurt & cheese) cup equivalents	Numeric	8.3	
D_MILK	Number of milk cup equivalents	Numeric	8.3	
D_YOGURT	Number of yogurt cup equivalents	Numeric	8.3	
D_CHEESE	Number of cheese cup equivalents	Numeric	8.3	
M_MPF	Oz cooked lean meat from meat poultry fish	Numeric	8.3	
M_MEAT	Oz cooked lean meat from beef pork veal lamb and game	Numeric	8.3	
M_ORGAN	Oz cooked lean meat from organ meats	Numeric	8.3	
M_FRANK	Oz cooked lean meat from franks sausages luncheon meats	Numeric	8.3	
M_POULT	Oz cooked lean meat from chicken poultry and other poultry	Numeric	8.3	
M_FISH_HI	Oz cooked lean meat from fish other seafood high in Omega-3	Numeric	8.3	
M_FISH_LO	Oz cooked lean meat from fish other seafood low in Omega-3	Numeric	8.3	
M_EGG	Oz equivalents of lean meat from eggs	Numeric	8.3	
M_SOY	Oz equivalents of lean meat from soy product	Numeric	8.3	
M_NUTSD	Oz equivalents of lean meat from nuts and seeds	Numeric	8.3	

LEGUMES	Number of cooked dry beans and peas cup equivalents	Numeric	8.3	
DISCFAT_OIL	Grams of discretionary Oil	Numeric	8.3	
DISCFAT_SOL	Grams of discretionary Solid fat	Numeric	8.3	
ADD_SUG	Teaspoon equivalents of added sugars	Numeric	8.3	
A_BEV	Total drinks of alcohol ;	Numeric	8.3	
WHOLEFRT	Whole fruit - this is a derived variable to be used in the calculation of the HEI	Numeric	8.3	
DATACOMP	This is an overall indicator to the researcher if Portion data was missing ANYWHERE for this recall.	Numeric	1	1=Data Complete; 2=Data Missing

LIFEMOMS.ASA24_TNS dataset - Daily Total Nutrients from Foods and Supplements Analysis File – FNDDS nutrients from all foods and supplements reported in a given day

Field Name	Description	Data Type	Length	Codes
RELEASEID	Participant ID for NIDDK Database Repository			
VISIT	Visit			PGC1,
RECALLNO	Recall number.	Numeric	2	1 -- 99
RECALLATTEMPT	Sequence number for attempt within recall	Numeric	2	1 -- 99
RECALLSTATUS	The status of this recall across attempts	Numeric	1	1=FoodCompleteSupplementComplete (FComp_Scomp); 2=FoodCompleteSupplementNotApplicable (FComp_SNotApp); 3=FoodCompleteSupplementQuit (FComp_SQuit); 4=FoodCompleteSupplementNotStarted (FComp_SNotStart); 5=FoodQuit (FQuit_SNA)
INTAKEDAY	Day of week of recall.	Numeric	1	1 = Sunday; 2 = Monday; 3 = Tuesday; 4 = Wednesday; 5 = Thursday; 6 = Friday; 7 = Saturday
LANG	Language used for recall.	Numeric	1	1=English; 2=Spanish; 3=English and Spanish
NUMFOODS	Total number of FLTs included in this recall	Numeric	3	1 -- 999
NUMSUPPLS	Total sumber of supplements included in this recall	Numeric	3	1 -- 999
AMTUSUAL	Was the amount of food that you ate yesterday much more than usual, usual, or much less than usual?	Numeric	1	1 = Much more than usual; 2 = Usual; 3 = Much less than usual; 8 = Don't know

SALTTYPE	What type of salt do you usually add to your food at the table? Would you say it is ordinary or seasoned salt, lite salt, or a salt substitute?	Numeric	1	1 = Ordinary, sea, seasoned, or other flavored salt; 2 = Lite salt; 3 = Salt substitute; 4 = None; 5 = Other; 8 = Don't know; 9 = Not applicable
SALTFREQ	How often do you add this salt to your food at the table? Is it rarely, occasionally, or very often?	Numeric	1	1 = Rarely; 2 = Occasionally; 3 = Very often; 4 = Other; 8 = Don't know; 9 = Not applicable
SALTUSED	How often is ordinary salt or seasoned salt added in cooking or preparing foods in your household? Is it never, rarely, occasionally, or very often?	Numeric	1	1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Very often; 5 = Other; 8 = Don't know; 9 = Not applicable
KCAL	Energy (kcal)	Numeric	5	
PROT	Protein (g)	Numeric	8.3	
TFAT	Total Fat (g)	Numeric	8.3	
CARB	Carbohydrate (g)	Numeric	8.3	
MOIS	Water (g)	Numeric	8.3	
ALC	Alcohol (g)	Numeric	8.3	
CAFF	Caffeine (mg)	Numeric	5	
THEO	Theobromine (mg)	Numeric	5	
SUGR	Sugars, total (g)	Numeric	8.3	
FIBE	Fiber, total dietary (g)	Numeric	8.3	
CALC	Calcium (mg)	Numeric	5	
IRON	Iron (mg)	Numeric	8.3	
MAGN	Magnesium (mg)	Numeric	5	
PHOS	Phosphorus (mg)	Numeric	5	
POTA	Potassium (mg)	Numeric	5	
SODI	Sodium (mg)	Numeric	5	
ZINC	Zinc (mg)	Numeric	8.3	
COPP	Copper (mg)	Numeric	8.3	
SELE	Selenium (mcg)	Numeric	8.3	
VC	Vitamin C (mg)	Numeric	8.3	
VB1	Thiamin (mg)	Numeric	8.3	
VB2	Riboflavin (mg)	Numeric	8.3	
NIAC	Niacin (mg)	Numeric	8.3	
VB6	Vitamin B-6 (mg)	Numeric	8.3	
FOLA	Folate, total (mcg)	Numeric	5	
FA	Folic acid (mcg)	Numeric	5	
FF	Folate, food (mcg)	Numeric	5	
FDFE	Folate, DFE (mcg_DFE)	Numeric	5	
VB12	Vitamin B-12 (mcg)	Numeric	8.3	
VARA	Vitamin A, RAE (mcg_RAE)	Numeric	5	
RET	Retinol (mcg)	Numeric	5	
BCAR	Carotene, beta (mcg)	Numeric	5	
ACAR	Carotene, alpha (mcg)	Numeric	5	
CRYP	Cryptoxanthin, beta (mcg)	Numeric	5	
LYCO	Lycopene (mcg)	Numeric	5	
LZ	Lutein + zeaxanthin (mcg)	Numeric	5	

ATOC	Vitamin E, alpha-tocopherol (mg)	Numeric	8.3	
VK	Vitamin K, phylloquinone (mcg)	Numeric	8.3	
CHOLE	Cholesterol (mg)	Numeric	5	
SFAT	Fatty acids, total saturated (g)	Numeric	8.3	
S040	4:0 (g)	Numeric	8.3	
S060	6:0 (g)	Numeric	8.3	
S080	8:0 (g)	Numeric	8.3	
S100	10:0 (g)	Numeric	8.3	
S120	12:0 (g)	Numeric	8.3	
S140	14:0 (g)	Numeric	8.3	
S160	16:0 (g)	Numeric	8.3	
S180	18:0 (g)	Numeric	8.3	
MFAT	Fatty acids, total monounsaturated (g)	Numeric	8.3	
M161	16:1 (g)	Numeric	8.3	
M181	18:1 (g)	Numeric	8.3	
M201	20:1 (g)	Numeric	8.3	
M221	22:1 (g)	Numeric	8.3	
PFAT	Fatty acids, total polyunsaturated (g)	Numeric	8.3	
P182	18:2 (g)	Numeric	8.3	
P183	18:3 (g)	Numeric	8.3	
P184	18:4 (g)	Numeric	8.3	
P204	20:4 (g)	Numeric	8.3	
P205	20:5 n-3 (g)	Numeric	8.3	
P225	22:5 n-3 (g)	Numeric	8.3	
P226	22:6 n-3 (g)	Numeric	8.3	
VITD	Vitamin D (D2 + D3)	Numeric	8.3	
CHOLN	Choline, total	Numeric	8.3	
VITE_ADD	Vitamin E, added	Numeric	8.3	
B12_ADD	Vitamin B-12, added	Numeric	8.3	
DATACOMP	This is an overall indicator to the researcher if Portion data was missing ANYWHERE for this recall.	Numeric	1	1=Data Complete; 2=Data Missing

4.5.3 LIFEMOMS.ACCELACT: Activity by Accelerometry

Accelerometers were used in LIFE-Moms to objectively document activity. LIFE-Moms utilized the Actigraph GT3X+ accelerometer (Actigraph, LLC), which has been tested for field-based assessments of physical activity levels. Procedures for the LIFE-Moms study were designed to produce data that is directly comparable to the data collected in the NHANES study. By design, the accelerometer was worn for a period of 7 days at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1). Participants were instructed to wear the monitor during the full 7 days, all day, every day, even while bathing and sleeping.

The monitors were initialized to record at a 50hz sampling rate, the highest sampling rate possible for the seven day monitoring period. The raw files were exported on a minute-by-minute bases with the raw data filtered using the ActiLife proprietary filter. GGIR version 1.11 was used to process the energy expenditure and physical activity variables. Only days when the number of non-wear hours were determined to be less than 8 were utilized for analysis. The Euclidian Norm Minus One (ENMO) value calculated by GGIR is used as a proxy for energy expenditure and used to classify level of activity (inactive, light, moderate, vigorous) and the time spent in each activity. Variables were summarized for each participant and each occasion of wear as counts or non-weighted averages.

Variable Name	Type	Units	Description
RELEASEID	Character		Participant ID for NIDDK Database Repository
DAYS	Numeric		Days since randomization at start of observation period
VISIT	Character		Visit number
COUNT_VALIDDAY	Numeric	Days	Number of valid days measured
N_VALID_HOURS	Numeric	Hours	Average number of hours per valid day used in computations
TIME_AWAKE_MIN	Numeric	Minutes	Average number of minutes per day classified as awake
TIME_INBED_MIN	Numeric	Minutes	Average number of minutes per day classified as in bed or asleep
NONWEAR_HOURS	Numeric	Hours	Average number of hours per day classified as non-wear
ENMO_DAY_MG	Numeric	mg	Average ENMO per day when awake
ENMO_NIGHT_MG	Numeric	mg	Average ENMO per day when in bed or asleep
ENMO_TOTAL_MG	Numeric	mg	Average ENMO per day overall
DAY_INACTIVE_MIN	Numeric	Minutes	Per day average number of inactive (ENMO < 40mg) minutes within waking day
DAY_LIGHT_MIN	Numeric	Minutes	Per day average number of light activity (40mg ≤ ENMO < 100mg) minutes within waking day
DAY_MOD_MIN	Numeric	Minutes	Per day average number of moderate activity (100mg ≤ ENMO < 400mg) minutes within waking day
DAY_VIG_MIN	Numeric	Minutes	Per day average number of vigorous activity (ENMO ≥ 400mg) minutes within waking day
MVPA_1MINBOUT_MIN	Numeric	Minutes	Per day average number of minutes spent in moderate-to-vigorous activity lasting at least 1 minute for which 80% of the activity satisfied the 100mg threshold during waking day
MVPA_10MINBOUT_MIN	Numeric	Minutes	Per day average number of minutes spent in moderate-to-vigorous activity lasting at least 10 minutes for which 80% of the activity satisfied the 100mg threshold during waking day
N_MVPABOUTS_1MIN	Numeric		Per day average number of moderate-to-vigorous activity bouts each day of ≥ 1 minute
DAY_MVPA_MIN	Numeric	Minutes	Per day average number of moderate-to-vigorous activity (ENMO ≥ 100mg) minutes within waking day

4.5.4 LIFEMOMS.ACCELSLP: Sleep by Accelerometery

Accelerometers were used in LIFE-Moms to objectively document sleep. LIFE-Moms utilized the Actigraph GT3X+ accelerometer (Actigraph, LLC), which has been tested for field-based assessments of physical activity levels. Procedures for the LIFE-Moms study were designed to produce data that is directly comparable to the data collected in the NHANES study. By design, the accelerometer was worn for a period of 7 days at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1). Participants were instructed to wear the monitor during the full 7 days, all day, every day, even while bathing and sleeping.

The monitors were initialized to record at a 50hz sampling rate, the highest sampling rate possible for the seven day monitoring period. The raw files were exported on a minute-by-minute bases with the raw data filtered using the ActiLife proprietary filter. Mean amplitude deviation (MAD) was calculated based off the methods described by Vaha-Ypya et al. Sleep was then scored on a minute-by-minute basis using the Sadeh sleep algorithm. Long sleep bouts were periods of sleep lasting at least three hours. The beginning of a sleep bout was determined as 20 consecutive minutes of sleep. The end of a sleep bout was defined as the start of 20 consecutive minutes of waking.

Variable Name	Type	Units	Description
RELEASEID	Character		Participant ID for NIDDK Database Repository
VISIT	Character		Visit number
TOTALSLEEP	Numeric	Minutes/Day	Average daily minutes of sleep regardless of duration where the majority of time is sleep. A minute is scored as sleep using the Cole-Kripke sleep algorithm.
LONGSLEEP	Numeric	Minutes/Day	Average daily minutes of sleep in bouts of at least 3 hours where the majority of time is sleep. A minute is scored as sleep using the Cole-Kripke sleep algorithm.
SHORTSLEEP	Numeric	Minutes/Day	Average daily minutes of sleep in bouts of less than 3 hours (naps) where the majority of time is sleep. A minute is scored as sleep using the Cole-Kripke sleep algorithm.
WEAR	Numeric	Minutes/Day	Average daily minutes classified as worn regardless of whether awake or asleep
VALIDNIGHTS	Numeric	Days	Number of days with at least 600 minutes of awake wear time and 1200 minutes of total wear time

4.5.5 LIFEMOMS.SF12: SF-12 Health Survey

The SF-12 Health Survey (LM24 Form) is a 12-item self-report measure of quality of life. It was derived from the original 36-item measure, and taps a variety of domains including physical functioning, bodily pain, general health, vitality, social functioning, physical and emotional functioning, and mental health functioning. The SF-12 also provides two composite indices of physical health and mental health. The survey was purchased from OPTUMInsight™ and analyzed using their proprietary software.
The survey was collected at baseline (PGC1), 35-36 weeks gestation (PGC3), and 48-56 weeks postpartum (PPC1). Form completion variables were deleted and the date form completed was converted

to the number of days from randomization. A negative number indicates before randomization and a positive number after randomization. The responses on this form were unchanged and are provided as recorded.

Variable Name	Description
RELEASEID	Participant ID for NIDDK Database Repository
VISIT	Visit
SF12DAYS	Calculated the number of days between randomization and the date the SF-12 completion
PF	Physical Functioning Subscale Score
RP	Role Physical Subscale Score
BP	Bodily Pain Subscale Score
GH	General Health Subscale Score
VT	Vitality Subscale Score
SF	Social Functioning Subscale Score
RE	Role Emotional Subscale Score
MH	Mental Health Subscale Score
PF_NBS	T-score Based scoring (NBS)
RP_NBS	T-score Based scoring (NBS)
BP_NBS	T-score Based scoring (NBS)
GH_NBS	T-score Based scoring (NBS)
VT_NBS	T-score Based scoring (NBS)
SF_NBS	T-score Based scoring (NBS)
RE_NBS	T-score Based scoring (NBS)
MH_NBS	T-score Based scoring (NBS)
PCS	Physical Component Summary Score
MCS	Mental Component Summary Score

4.5.6 LIFEMOMS.BODPOD: Body Composition Testing - Adults

Maternal body composition by Air Displacement Plethysmography using the BOD POD was measured by a subset of sites. The BOD POD apparatus was created and is serviced by COSMED.

COSMED's BOD POD manual was referenced in order to ensure proper set up and quality control of the machine. Proper setup included attention to room temperature, room humidity, pressure, noise, traffic, and floor slope. The manual described the inspection and setup of the machine prior to use. Study staff performed quality control procedures per the BOD POD manual each day before participant testing was completed.

The BOD POD manual detailed the proper clothing and hair placement of the participant. A body-clinging bathing suit or tight single-layer underwear and cap were worn. In addition to proper clothing the following subject preparation guidelines were met:

- No food/drink/exercise 2 hours prior to testing.
- Void bladder before testing.
- Be relaxed, dry and at a normal body temperature prior to testing.
- Wear tight fitting two-piece underwear or swimsuit.
- Remove jewelry, watches, and eyeglasses.

Note that maternal age, height, ethnicity can be found in the LIFEMOMS.LM01 dataset.

Variable Name	Description (units)
RELEASEID	Participant ID for NIDDK Database Repository
VISIT	Visit
BODPODDAYS	Days between randomization and BODPOD assessment
XPCTFAT	% Fat
XPCTFFM	% FFM (Free Fat Mass)
XFMKG	Fat Mass (kg)
XFFMKG	Fat Free Mass (kg)
XBMKG	Body Mass (kg)

4.5.7 LIFEMOMS.PEAPOD: Body Composition Testing - Infants

Neonatal body composition by Air Displacement Plethysmography using the PEA POD was measured by a subset of sites. The PEA POD apparatus was created and is serviced by COSMED. Ideally this measurement is taken between 24-72 hours of age. Each of the sites were trained by COSMED prior to use of the machine on study participants.

COSMED's PEA POD manual was referenced in order to ensure proper set up and quality control of the machine. Proper setup included attention to room temperature, room humidity, pressure, noise, traffic, and floor slope. The manual described the inspection and setup of the machine prior to use. Study staff performed quality control procedures per the PEA POD manual each day before participant testing may be completed.

The PEA POD manual detailed the proper hair placement of the participant. The participant's hair was flattened against their head with oil or using a cap. The cap should be placed on the infant prior to starting a test. Items on the baby (e.g., cap, umbilical clamp, hospital band) should be used during the testing/set up (weight calibration) to ensure a proper measurement. The infant laid naked in the supine position on a flat tray that slides into a transparent plastic chamber. Body volume and mass are utilized to calculate body density, and predictive equations are then used to determine body composition, including fat mass.

Note that gestational age and infant gender can be found in the LIFEMOMS.LM04 dataset.
One site required additional corrections converting Fat Mass, Fat Free Mass, and Body Mass from pounds to kilograms.

Variable Name	Description	Units / Coding
RELEASEID	Participant ID for NIDDK Database Repository	
PEAPODDAYS	Days from randomization to PEAPOD assessment	Days
ZPCTFAT	% Fat	
ZPCTFFM	% Fat Free Mass	
ZFMKG	Fat Mass (kg)	kilograms
ZFFMKG	Fat Free Mass (kg)	kilograms
ZBMKG	Body Mass (kg)	kilograms

4.6 Created Datasets

4.6.1 LIFEMOMS.PRIMOUT: Randomization Assignments and Primary Outcome Status

LIFE-Moms dataset PRIMOUT includes one record for each participant indicating their randomization assignment and derived primary outcome and secondary outcomes. Information about the individual variables, their descriptions and any associated coding are provided in the table below.

Variable Name	Description	Units / Coding
RELEASEID	Participant ID for NIDDK Database Repository	
LMGROUP	Randomization assignment	X= Standard of care Y= Intervention
GWG	GWG defined as the difference between the study measured weight at 35-36 weeks gestation and baseline weight	Kg
GWGPERWK	GWG per week defined as GWG divided by the number of weeks (days/7) between the two visits.	Kg
GWGPWK_ABV	Excess GWG (primary outcome) was defined as GWG per week above the 2009 Institute of Medicine (IOM) upper limit of second and third trimester weight gain for pregnant women with overweight (> 0.33 kg/week) or obesity (> 0.27 kg/week).	1= Yes 0= No
GWGPWK_WIN	GWG per week within IOM	1= Yes 0= No
GWGPWK_BEL	GWG per week below IOM	1= Yes 0= No
T2GWGPWK	Second trimester GWG per week (the difference between the baseline weight and 24-27 week measured weight divided by the number of weeks between the two visits	Kg
EXCGWG2	Excess 2nd trimester GWG per week defined as greater than 0.33 kg/week for overweight and 0.27 kg/week for obese)	1= Yes 0= No
T3GWGPWK	Third trimester GWG per week (the difference between the 24-27 week measured weight and 35-36 week weight divided by the number of weeks between the two visits	Kg
EXCGWG3	Excess 3rd trimester GWG per week defined as greater than 0.33 kg/week for overweight and 0.27 kg/week for obese)	1= Yes 0= No
TOTGWG	Weight gain from pre-pregnancy to delivery admission	Kg
GDM	Gestational diabetes diagnosed based on glucose testing conducted between 24 weeks 0 days and 31 weeks 6 days	1= Yes 0= No
PTB37	Preterm birth < 37 weeks, 0 days	1= Yes 0= No
PTB32	Preterm birth < 32 weeks, 0 days	1= Yes 0= No

PTB28	Preterm birth < 28 weeks, 0 days	1= Yes 0= No
SGA_10TH	Small for gestational age was defined as a birth weight less than the 10th percentile using the Alexander criteria specific for fetal sex and race	1= Yes 0= No
LGA_90TH	Large for gestational age as a birth weight at or above the 90th percentile using the Alexander criteria specific for fetal sex and race	1= Yes 0= No
MACROSOMIA	Birth weight greater than 4,000 grams	1= Yes 0= No
ZBWT4LEN	Birth weight for length z-score was calculated using the WHO Child Growth Standards	z-score
ZWT4LEN1YR	Weight for length z-score at 12 months of age using the WHO Child Growth Standards	z-score
ZTRI1YR	Triceps skinfold for age z-score at 12 months of age using the WHO Child Growth Standards	z-score
ZSUB1YR	Subscapular skinfold for age z-score at 12 months of age using the WHO Child Growth Standards	z-score
PPWT_BASE	The difference between the study measured maternal weight at baseline and weight measured at the 12-month postpartum visit.	Kg
PPWT_BASEP	Postpartum weight retention divided by the baseline weight and multiplied by 100	Percent
PPWTBCAT	Postpartum weight retention from baseline categorized	0= At or below baseline wt 1= >0 or <5% of baseline wt 2= 5 to <10% of baseline wt 3= ≥10% of baseline wt
PPWT_PPRG	The difference between maternal self-reported pre-pregnancy weight and study-measured weight at the 12-month postpartum visit.	Kg
PPWT_PPRGP	Postpartum weight retention divided by the pre-pregnancy weight and multiplied by 100	Percent
PPWTPCAT	Postpartum weight retention from pre-pregnancy weight categorized	0= At or below pre-preg wt 1= >0 or <5% of pre-preg wt 2= 5 to <10% of pre-preg wt 3= ≥10% of pre-preg wt