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Dietary Adherence During Weight Loss and Attendance to Weight Management Support are Independently Related to Weight Gain

Emily Pounds
University Of Alabama At Birmingham

DIETARY ADHERENCE DURING WEIGHT LOSS AND ATTENDANCE TO WEIGHT MANAGEMENT SUPPORT ARE INDEPENDENTLY RELATED TO WEIGHT GAIN

by

EMILY POUNDS

GARY R. HUNTER, COMMITTEE CHAIR
KRISTI MENEAR
DOROTHY PEKMEZI
SCOTT SNYDER

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EXERCISE PHYSIOLOGY

ABSTRACT

Although people can lose weight by restricting calories and increasing energy expenditure, only a small percentage are successful at maintaining the loss. PURPOSE: Therefore, the purpose of this study is to identify factors that may predict who is more likely to gain weight and visceral fat back after weight loss, and to evaluate the efficacy of a weight maintenance support group (EatRight) during 12 months of weight maintenance. METHODS: Subjects (n=85) were healthy, overweight [body mass index (BMI) 27–30 kg/m2, mean weight 77.6 kg] premenopausal women (age 34). Data were collected at baseline, immediately after weight loss, and 1-year post-weight loss. Women lost an average of 12 kilograms during the intervention. Visceral fat was determined by computed tomography. Energy expenditure was evaluated using doubly labeled water (DLW). Adherence to the diet (resulting in faster weight loss) was calculated by subtracting daily energy lost (baseline minus post-weight loss/days on diet) from daily energy expenditure (minus 800 kcal). The Weight Efficacy Lifestyle Questionnaire (WEL) was administered at baseline and follow-up to determine self-efficacy for control of eating. Overall WEL score was used to assess confidence in abstaining from eating. After weight loss was achieved, subjects were expected to attend free weight management support group classes (EatRight) monthly throughout one-year post weight loss. The focus of

the sessions was to develop lifestyle strategies that included good nutrition and physical activity. Subjects were expected to attend a total of six sessions. RESULTS: After 1 year of weight maintenance, the average weight regain was 5.3±3.8 kg, visceral fat gain was 7.9± 22.1 cm^2, and attendance to EatRight was 56±32%. Greater dietary non-adherence ($r = 0.40$, $p < 0.01$), WEL ($r = - 0.21$, $p < 0.06$), and lower attendance with EatRight ($r = - 0.24$, $p < 0.05$) were related to increased weight gain. Regression analysis indicates that dietary non-adherence and attendance to EatRight were independently related to weight and visceral fat gain, but WEL was not. CONCLUSION: These results suggest that non-adherence to diet and low confidence in the ability to restrain from eating contribute to weight and visceral fat gain. However, adherence to a weight maintenance support group slows weight and visceral fat gain.

Keywords: Self-efficacy, weight regain, visceral fat gain, adherence to diet, EatRight

DEDICATION

For my children - my tenacity, vigor, forbearance, grace, and compassion were born in you. You are my greatest teachers.

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INTRODUCTION

Obesity is a severe problem. Despite our knowledge and the research dollars that go into the problem of obesity, people are not getting less obese, but more. The estimated annual medical cost of obesity in the United States was nearly $173 billion dollars in 2019 (Ward et al., 2021). Obesity-related conditions including heart disease, stroke, type 2 diabetes, and certain types of cancer, are among the leading causes of preventable, premature death. The problem of obesity is worse today than it has ever been with the US obesity prevalence rate increasing from 30.5% to 41.9% from 1999 to March 2020 ("National Health and Nutrition Examination Survey 2017–March 2020 Prepandemic Data Files Development of Files and Prevalence Estimates for Selected Health Outcomes," 2021). A 2013 systematic review of healthy strategies for successful weight loss and weight maintenance found that for weight loss to be significant and safe, an energy deficit was required, and the most common way to achieve this was by reducing fat intake (Ramage et al., 2014). Physical activity was included in 88% of successful interventions, and behavior training such as self-monitoring was part of 92% of successful interventions (Ramage et al., 2014). It has been well established that with some effort, weight loss can be achieved through diet and exercise (Foster-Schubert et al., 2012). However, losing weight is only the first step to solving obesity. According to Weight Management: State of the Science and Opportunities for Military Programs, the

most important component of an effective weight-management program must be the prevention of unwanted weight gain from excess body fat (Institute of Medicine Subcommittee on Military Weight, 2004). The percentage of individuals who lose weight and successfully maintain the loss has been estimated to be as small as 1 to 3 percent (Andersen et al., 1988; Wadden et al., 1998). Weight regain appears to be the norm, with up to two-thirds of the lost weight being regained within the first year, and almost all of the weight regained by year five (Dulloo & Montani, 2015). Identification of factors that might enhance weight management may increase the success of weight management (Gibson & Sainsbury, 2017).

Some individuals do better with adhering to a weight loss plan than others. Those individuals who adhere better to weight loss diets may be able to better restrain eating following weight loss. If this is the case, individuals who are more susceptible to weight regain can be identified.

Control of eating may be another factor that could influence weight regain. Self-efficacy is a person's belief in his or her ability to follow through with certain behaviors to produce specific performance outcomes, and eating self-efficacy is the belief in one's capacity to self-regulate eating (Bandura, 1977; Bandura, 1986, 1997). The Weight Efficacy Lifestyle Questionnaire (WEL) was developed to determine a measurement for self-efficacy of eating control and these scores may predict an individual's ability to withstand eating in various situations, including positive and negative circumstances and different frames of mind (Clark et al., 1991). Understanding potential predictors for sticking to a weight maintenance program (such as the ability to abstain from eating in

particular (or all) situations) may provide insight into predictors of one's ability to consequently maintain weight loss.

Understanding the impact of a balanced diet and the importance of physical activity may be important for weight management. EatRight is a weight management program established by Roland Weinsier at the University of Alabama at Birmingham (UAB) Nutrition Clinic in 1976 to treat nutrition-related disorders. Weinsier based the program on the concept of his Time-Calorie Displacement Approach to Weight Control used to treat obesity in his clinic (Weinsier et al., 1983). The approach is based on the spectrum of energy densities: taking in substantial amounts of low-energy-dense foods requires more time and produces satiety at a low energy intake, which leads to weight loss. In the program, low-calorie, low-fat, high-bulk, and slow-eating food groups are emphasized, and patients are instructed to eat a prescribed number of servings of each food group depending on their weight category (moderately overweight, etc.). Calories are not counted and there is no upper limit to fruit and vegetable consumption. Satiety and nutritional adequacy are attained by encouraging liberal amounts of complex carbohydrates in the form of vegetables, fruit, and unrefined starch, moderate amounts of low-fat meat and dairy products, and only lesser amounts of fat (Weinsier et al., 1997). The purpose of the EatRight sessions in this study was weight maintenance with an emphasis on developing strategies to develop a lifestyle that included good nutrition and physical activity. Participants in this weight loss study were offered to attend free EatRight classes monthly throughout one-year participation. Subjects were expected to attend a total of six sessions. Not all the women in the study attended all the EatRight sessions with attendance varying from 0 to 6 sessions.

Previous research on the EatRight program has shown it to be a successful tool for weight loss during the treatment phase (Ard et al., 2010; Fitzwater et al., 1991; Greene et al., 2006). In a retrospective study done by Fitzwater (1991), EatRight subjects lost, on average, 6.3 kg during the treatment phase (7 months and fifteen recommended EatRight sessions), and more than half of the patients maintained or were below post-treatment weight after a 2-year follow-up period. Similarly, Greene et al. (2006) looked at data from 74 former EatRight Weight Management participants 1 year after completing the program and found that Seventy-eight percent of participants gained <5% of their body weight, and 46% had no weight regain or continued weight loss. It is unclear from the article how many declined to participate in this follow-up visit and the reasons why. To our knowledge, there have not been any studies done utilizing EatRight as a tool post-weight loss during the weight maintenance phase.

Visceral fat is considered to be the most harmful fat depot for metabolic health. In fact, it can be argued that fat stored in the legs and arms offers no additional risk of metabolic disease (Hunter et al., 1997; Williams et al., 1997). Although most studies that have evaluated long term weight management have only been concerned with weight or fat gain, visceral fat is included because of its importance in metabolic health.

Therefore, the purpose of this paper is to determine if self-efficacy, adherence to diet during weight loss, and participation to the EatRight program are independently related to body weight, and visceral fat regain following a diet-induced weight loss in overweight pre-menopausal women. It is hypothesized that self-efficacy, adherence to diet during weight loss, and participation to the EatRight program will all be related to weight and visceral fat gain independent of each other.

METHODS

Subjects

This is a secondary analysis of a study that was designed to evaluate metabolic factors that predispose individuals to weight gain. Thirty-five African American and 50 European-American over-weight women were included in the present analysis (34.8 ± 6.3y). Full descriptive characteristics of the study population are presented in Table 1. Data were collected at baseline, immediately after weight loss, and 1-year post-weight loss. The methods in the section were implemented in the original study (the Effects of Exercise Training on Weight Maintenance in Black and White Women [JULET] study, R01DK049779).

Study Design

Subjects were evaluated during an inpatient stay at the General Clinical Research Center (GCRC) at the University of Alabama at Birmingham (UAB). The study was approved by UAB's institutional review board for human use, and all patients were consented before any testing was performed. We confirm that all relevant institutional and governmental regulations concerning the ethical use of human volunteers were followed during this research. Initially, subjects were maintained in weight stabilization for 4 weeks through dietary control. During this time their body weights were measured

3–5 times weekly at the GCRC, and at the end of week 4, they were admitted to the GCRC for a 4-d baseline evaluation. A macronutrient-controlled diet was provided during the final 2 weeks of weight maintenance. The energy content was appropriately adjusted to ensure a stable body weight (<1% variation from the subjects' weight at the beginning of the 4 weeks), and the diet consisted of 20–23% of energy from fat, 20–23% from protein, and 56–59% from carbohydrate. After baseline evaluation, all meals (800 kcal/day, designed to meet all nutrient requirements excluding energy requirements) were provided by the GCRC research kitchen until subjects reached a BMI less than 25 kg/m^2. Women lost an average of twelve kilograms during the intervention.

Total Energy Expenditure

Total Energy Expenditure (TEE) was measured prior to and post weight loss using the doubly labeled water technique as previously described (Walsh et al., 2004). Four timed urine samples were collected after oral dosing of the doubly labeled water: two urine samples were taken in the morning after dosing and two more urine samples were taken 14 days later with a loading dose of 1 gram of pre-mixture (10% H218O and 8% 2H2O) per kilogram of body weight. The isotopic dilution spaces were calculated from the H218O and 2H2O enrichments in the body by the extrapolation of the log enrichments back to zero time using the following equation: Dilution space (liters) = d/20.02 • 18.02 • 1/R • E where: d is grams of H218O and 2H2O given, R is the standard ratio for 18O:16O (0.002005) and 2H:1H (0.00015576), E is the enrichment of the H218O and 2H2O at the extrapolated zero time (the % above background). The rate of carbon dioxide production (rCO2) was calculated from the equation by Schoeller

(Schoeller, 1988): rCO2 = 0.4554 • N (1.01 K0 − 1.04 Kh) where rCO2 is the amount of CO2 produced (mol/day) corrected for fractionation, N is total body water (mol) K0 and Kh are the turnover rates of H218O and 2H2O (days −1) respectively. TEE was then calculated from CO2 production using the equation from de Weir (2): TEE (kcal/day) = 3.9 (rCO2/ FQ) + 1.1 rCO2, where TEE is total energy expenditure (kcal/day), rCO2 is the rate of carbon dioxide production (l/day where 1 mol of CO2 is equivalent to 22.4 l) and FQ is the food quotient. Samples were analyzed in triplicate for H218O and 2H2O by isotope ratio mass spectrometry at the University of Alabama at Birmingham as previously described (5). Samples for H218O and 2H2O were re-analyzed in seven subjects, and the values of TEE between days were in close agreement (coefficient of variation = 4.3%) thus, demonstrating a high level of reproducibility (Hunter et al., 2015).

DXA

Total and regional body fat composition was assessed using dual-energy x-ray absorptiometry (GE Medical Systems Lunar, Madison, WI), and the scans were analyzed with the use of ADULT software, LUNAR DPX-L version 1.35 (GE Medical Systems Lunar).

Non-Adherence to Diet

Dietary adherence was determined by first averaging the TEE assessed by DLW during energy balance immediately before and after the interventions. The averaged TEE was used along with the provided energy intake (800 kcal/day) to calculate the expected

daily kilocalorie loss: expected daily kilocalorie loss = average TEE − 800 kcal (diet). Then losses of fat mass and fat-free mass were converted to energy lost (*i.e*. kilocalories lost). We used energy coefficients of 9.3 for FM and 1.1 kcal/g for FFM, respectively. For subjects gaining fat-free mass, a coefficient of 1.8 kcal/g was used for FFM: total kilocalorie lost = [fat mass lost (g) × 9.3 kcal/g] + [Δ fat-free mass (kg) × 1.1 or 1.8 kcal/g]. Next, the total kilocalories lost during the intervention and days to goal was used to calculate the rate of energy loss per day: actual daily kilocalorie loss = total kilocalorie loss/d to goal = kilocalorie loss/d. The daily kilocalorie discrepancy, an index of dietary adherence, was calculated: daily kilocalorie discrepancy = actual daily kilocalorie loss − expected daily kilocalorie loss. A daily kilocalorie difference of zero represents 100% adherence. A positive number indicates a greater than expected daily kilocalorie loss, whereas a negative number suggests less than expected daily kilocalorie loss. Lastly, dietary adherence in relative terms was calculated: percent daily kilocalorie adherence = (actual daily kilocalorie loss/expected daily kilocalorie loss) 100. Non-adherence (N-AD) to the diet was calculated by subtracting daily energy lost (baseline minus post-weight loss/days on diet) from daily energy expenditure (minus 800 kcal).

Visceral fat

Cross-sectional area of visceral fat was determined by computed tomography with using a HiLight/HTD Advantage scanner (General Electric, Milwaukee, WI) set at 120 kVp (peak kilovoltage) and 40 mA, while the patients were in the supine position with their arms stretched above their heads. Five-mm scans were taken for 2 seconds at approximately the level of the fourth and fifth vertebrae. With the use of procedures

established by Kvist and associates,13 the attenuation range for adipose tissue was −30 to −190 Hounsfield units. A computerized fat tissue–highlighting technique was used to determine cross-sections of adipose tissue, and those between −30 and −190 Hounsfield units were considered to be visceral fat (Sriram et al., 2014).

EatRight

After weight loss was achieved, subjects were expected to attend free weight management support group classes (EatRight) monthly throughout one-year post weight loss. The multidisciplinary focus of the sessions was to develop lifestyle strategies that included good nutrition and physical activity. Subjects were expected to attend a total of six sessions across the 1-year weight maintenance phase.

WEL Questionnaire

The Weight Efficacy Lifestyle (WEL) questionnaire was administered 4 weeks after weight loss, while the subjects were in energy balance. The WEL questionnaire contains twenty items that address dietary self-efficacy (i.e., confidence to resist food), yielding an overall mean and 5 subscales. Higher scores reflect greater confidence to resist food. Given that we were interested in dietary control as a weight maintenance behavior, we considered only the overall mean of this survey.

Statistical Analysis

Descriptive characteristics are reported as means and standard deviations. Four outliers were removed from the data set because they were more than 2.5 standard deviations above the mean for dietary non-adherence. Differences in body weight, BMI, fat mass, and visceral fat were assessed by a paired samples t-test. Simple Pearson correlations were used to identify potential predictors of weight gain (WG) and visceral fat gain (VG). The inability to adhere to the diet (N-AD), attendance to EatRight sessions (A-ER), and eating self-efficacy at the time of weight loss (ESE) were selected as independent variables for the multiple linear regression analysis for estimation of weight and visceral fat gain. Although eating self-efficacy was not significantly related to our main outcomes (weight gain and visceral fat gain), we chose to include it in the regression models for two reasons. First, a negative near-significant correlation is observed between weight gain and eating self-efficacy ($r = -0.19$ $p = 0.08$), and second, previous research has consistently demonstrated that eating self-efficacy improves when weight is lost and remains high when weight is maintained (Batsis et al., 2009; Clark et al., 1991; Clark et al., 1996; DePue et al., 1995). All analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 27 (SPSS, Chicago, IL).

RESULTS

Means and standard deviations of descriptive variables are contained in Table 1.

Table 1

Characteristics of the Study Population. N=85

Variable	Mean ± SD
Age (y)	34.80 ± 6.35
Height (cm)	165.66 ± 6.95
Attendance to EatRight (%)	55.04 ± 32.57
Non-adherence to diet (kcals/day)	49.29 ± 451.68
Eating Self-efficacy	6.78 ± 1.42

Paired t-test comparisons (from immediately after weight loss to 1 year after weight loss) of variables of interest are contained in Table 2. There were significant increases in weight (5.26 ± 3.88 kg, P=0.00); BMI (1.65 ± 2.91 kg/m2, P=0.00); fat mass (5.30 ± 3.55 kg, P=0.00); and visceral fat (7.99 ± 22.14 cm2, P=0.00).

Table 2

Paired t-test Comparisons between Immediately after Weight Loss and 1 year after Weight Loss.

Variable	Immediately After Weight Loss	1 Year After Weight Loss	Differences	*p*-value
Weight (kg)	65.44 ± 6.42	70.70 ± 7.90	5.26 ± 3.88	<0.01
BMI (kg/m^2)	23.85 ± 0.94	25.51 ± 3.21	1.65 ± 2.91	<0.01
Fat Mass (kg)	21.78 ± 4.40	27.08 ± 6.00	5.30 ± 3.55	<0.01
Visceral fat (cm^2)	48.24 ± 21.29	56.24 ± 30.92	7.99 ± 22.14	<0.01

Table 3 contains the results of the correlation analysis. Positive correlations were observed between non-adherence to the diet and weight gain (r =0.39, p = <0.01), and visceral fat gain (r =0.36, p = <0.01), while negative correlations were observed between non-adherence to the diet and eating self-efficacy (r =-0.25, p = <0.05). Attendance to EatRight was inversely associated with weight gain (r =-0.22, p = <0.05), visceral fat gain (r =-0.26, p = <0.05), and eating self-efficacy immediately after weight loss (r =-0.25, p = <0.05).

Table 3

Correlations

Variable	Visceral fat gain	Non-adherence to diet	Attendance to EatRight	Eating Self-Efficacy
Weight gain (kg)	0.42**	0.39**	-0.22*	-0.19
Visceral fat gain (cm^2)		0.36**	-0.26*	-0.19
Non-adherence to diet			-0.16	-0.25*
Attendance to EatRight				-0.25*

*=<0.05; **=<0.01

Multiple linear regression analysis for the estimation of weight gain showed that, after controlling for all other predictors in the equation (Table 4), both attendance to EatRight (β = -0.218, P = <0.05), and non-adherence to the diet (β = 0.320, P =< 0.01) were significantly and independently related to weight gain. However, eating self-efficacy (β = -0.149, P = 0.182) was not independently related in this model.

Table 4

Multiple Regression Model for Estimating Weight Gain.

R^2 =0.202, p = <0.001, Constant 9.48

Variable	Unstd. B	Std. B	Partial	*p*-value
Attendance to EatRight	-0.026	-0.218	-0.227	0.044
Non-adherence to Diet	0.003	0.320	0.319	0.004
Eating Self-Efficacy	-0.415	-0.149	-0.152	0.182

Similarly, after controlling for all other predictors in the equation, attendance to EatRight (β = -0.273, P = <0.05) and non-adherence to the diet (β = 0.276, P = <0.05) were significant predictors of visceral fat gain, independent of each other and eating self-efficacy (Table 5).

Table 5

Multiple Regression Model for Estimating Visceral Fat Gain.

R^2 =0.206, p = <0.01, Constant 38.37

Variable	Unstd. B	Std. B	Partial	*p*-value
Attendance to EatRight	-0.187	-0.273	-0.279	0.022
Non-adherence to Diet	0.013	0.276	0.276	0.024
Eating Self-Efficacy	-2.804	-0.175	-0.176	0.155

Table 6 shows a model for estimating attendance to EatRight. Non-adherence to the diet (β = -0.244, P = <0.05), and eating self-efficacy (β = -0.310, P = <0.01) were significant predictors of attendance to EatRight after controlling for all other variables in the equation.

Table 6

Multiple Regression Model for Estimating Attendance to the EatRight Program.

R^2 =0.118, p = <0.01, Constant 104.05

Variable	Unstd. B	Std. B	Partial	*p*-value
Non-adherence to diet	-0.018	-0.244	-0.244	0.025
Eating Self-Efficacy	-7.096	-0.310	-0.305	0.005

DISCUSSION

The purpose of this study was to identify factors that may predict who is more likely to gain weight and visceral fat after weight loss and to evaluate the efficacy of a weight maintenance support group (EatRight) during 12 months of weight maintenance. Our primary findings are that attendance to EatRight sessions during the weight maintenance phase predicted less weight and visceral fat regain. In addition, like Del Corral (2011), individuals who did a better job of following an 800 kcal/day diet during weight loss regained less weight and visceral fat one year following the weight loss.

It is important to note that it is probable that fat mass in the arms and legs are not harmful for metabolic health (i.e., blood pressure and blood lipid profile) (Després et al., 1989; Hunter et al., 1997; Terry et al., 1991; Williams et al., 1997). However, visceral fat is consistently related to increased metabolic health. Therefore, visceral fat regain was also modeled in this investigation. As with weight gain, adherence to diet and attendance to EatRight sessions were both independently related to visceral fat gain after adjusting for each other and eating self-efficacy.

Although there is evidence in the literature suggesting EatRight during the weight maintenance phase enhances weight loss (Ard et al., 2010), little can be found concerning weight maintenance. There have been several studies showing that ongoing interaction with healthcare providers or in group settings significantly improves weight maintenance, compared with short-term treatments (Perri et al., 1988; Ross Middleton et al., 2012). It

is well known that social support can enhance the effectiveness of structured weight loss programs. Individuals that maintain weight loss have approaches, such as increased support from their social network (Elfhag & Rössner, 2005), and participating in a weight maintenance group (DePue et al., 1995), in common. Obesity treatment guidelines state that weight loss interventions should include long-term comprehensive weight loss maintenance programs that continue for at least 1 year (Jensen et al., 2014). However, we are not aware of any other studies utilizing a multidisciplinary program, such as EatRight, with relatively few sessions (six) spread over the course of 1 year. Many health behavior change theories integrate social support as an active change factor. Social cognitive theory (Bandura, 2014) is a behavior change theory often used in the context of socially supported weight loss. Interventions guided by this model teach behavioral modification techniques such as goal setting and self-monitoring. The peer support format allows members to provide positive reinforcement for success, helping them to build self-efficacy. The improvement in knowledge through education, as well as group social support, provided through such programs as EatRight could give people the confidence to reach their weight stability goals by providing positive reinforcement, thus keeping them from regaining the weight.

The finding that eating self-efficacy was not independently related to weight gain, but non-adherence to diet during weight loss was, is surprising, and appears to be contrary to the literature (Hays et al., 2014; Nezami et al., 2016). However, in our study we controlled for important predictors of weight and visceral fat gain (including dietary adherence and attendance to weight management support), whereas other studies may have found self-efficacy to be a predictor of weight regain without controlling for other

important independent variables. One might surmise that the reason non-adherence to diet during weight loss is related to weight gain is because the non-adherence to diet was at least in part due to poor eating self-efficacy. This has previously been reported (Del Corral et al., 2009), so it is possible that the adherence to diet during weight loss relationship with weight gain is caused by eating self-efficacy at both time points (during weight loss and during long-term follow-up and subsequent weight gain). The significant negative correlation between non-adherence to diet and eating self-efficacy found in this study supports this possibility. Therefore, it could be hypothesized that non-adherence to diet during weight loss may be a surrogate of eating self-efficacy. Since adherence to diet took place over a 4–6-month time period, it may be a more stable measure of eating self-efficacy than a questionnaire derived measure that assesses how an individual feels at one time point. Obviously, the above argument is pure conjecture. However, it does suggest that it is not appropriate to discard eating self-efficacy as a factor that can influence weight regain, even though it is not a significant correlate after adjusting for non-adherence to diet. Future studies should test the hypothesis that self-efficacy may be driving dietary adherence during weight loss.

In conclusion, both non-adherence to diet during weight loss and participation in EatRight sessions are both independently related to weight gain and visceral fat gain. In addition, although eating self-efficacy was not a significant correlate in the multiple regression model, it is possible this is due to the contribution of a more stable surrogate measure of eating self-efficacy, i.e., non-adherence to diet.

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APPENDIX

IRB APPROVAL LETTER

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM
Office of the Institutional Review Board for Human Use

470 Administration Building
701 20th Street South
Birmingham, AL 35294-0104
205.934.3789 | Fax 205.934.1301 |
irb@uab.edu

APPROVAL LETTER

TO: Hunter, Gary R

FROM: University of Alabama at Birmingham Institutional Review Board
Federalwide Assurance # FWA00005960
IORG Registration # IRB00000196 (IRB 01)
IORG Registration # IRB00000726 (IRB 02)
IORG Registration # IRB00012550 (IRB 03)

DATE: 09-Aug-2022

RE: IRB-990728001
Exercise Training in Obesity-Prone Black and White Women

The IRB reviewed and approved the Personnel Amendment submitted on 08-Oct-2021 for the above referenced project. The review was conducted in accordance with UAB's Assurance of Compliance approved by the Department of Health and Human Services.

Type of Review:	Expedited
Expedited Categories:	8c,
Determination:	Approved
Approval Date:	11-Oct-2021
Expiration Date:	11-Oct-2022

Although annual continuing review is not required for this project, the principal investigator is still responsible for (1) obtaining IRB approval for any modifications before implementing those changes except when necessary to eliminate apparent immediate hazards to the subject, and (2) submitting reportable problems to the IRB. Please see the IRB Guidebook for more information on these topics.

Capstone Project, Thesis, or Dissertation Title:

Evaluating the efficacy of the EatRight Program in weight regain after a 12kg loss in premenopausal women

Student Name:

Emily Pounds

Please note:

Ms. Pounds has been listed as Key Personnel for the above-mentioned protocol since November, 2016.

Documents Included in Review:

- IRB PERSONNEL EFORM

To access stamped consent/assent forms (full and expedited protocols only) and/or other approved documents:
1. Open your protocol in IRAP.
2. On the Submissions page, open the submission corresponding to this approval letter. NOTE: The Determination for the submission will be "Approved."
3. In the list of documents, select and download the desired approved documents. The stamped consent/assent form(s) will be listed with a category of Consent/Assent Document (CF, AF, Info Sheet, Phone Script, etc.)