COMPOUND AUTHORIZATION AND CONSENT FOR PARTICIPATION IN A RESEARCH STUDY

YALE UNIVERSITY SCHOOL OF MEDICINE

Study Title: Targeting the gut-brain axis to facilitate weight loss in high fat diet consumers
Principal Investigator (the person who is responsible for this research): Dr. Dana M Small, Ph.D., the Modern Diet and Physiology Research Center (MDPRC) at Yale, 1 Church Street, New Haven, CT 06510
Phone Number: (203) 390-7707

Research Study Summary

- We are asking you to join a research study.
- The purpose of this research study is to see if dietary fat intake affects weight loss maintenance while taking oleoylethanolamide (OEA) after a weight loss program.
- Study procedures may include:
    - Participating in a weight loss intervention program
    - Consuming a dietary supplement or placebo daily
    - Questionnaires about physical activity, eating, emotions, and diet
    - Tasting different foods
    - Using rating scales to record perceptions such as sweetness and intensity
    - Providing urine samples
    - Providing blood samples
    - Recording what you eat in a food diary
    - Brain scans
    - Measurements of your metabolism
    - Body fat measures such as weight, height, and body fat %
    - Cognitive tests

- **Nine** in-person visits are required. **Twelve** additional required sessions can be online or in-person, depending on your preference. These visits and sessions will occur over the course of 16 months.
- The 9 in-person visits will take **27** hours total. The 12 additional required sessions will take **9** hours total.
- There are some risks from participating in this study. These risks and the measures we take to mitigate them will be described in further detail. Risks include:
    - Distress or concern during interview and/or questionnaires
    - Discomfort during brain scans
    - Allergic reaction to food stimuli
    - Gastrointestinal discomfort from the dietary supplement
    - Potential complications from blood draws including lightheadedness or nausea
    - Discomfort during metabolic assessment
    - Slight risk that research records (surveys, interview notes) might be obtained by persons not authorized to do so

- This study is not designed to benefit you directly but what we learn may help to help persons manage weight and practice good nutrition in the future.

There are other choices available to you outside of this research. You could choose to participate in a weight loss program and hire a professional counselor on your own. You could choose to purchase and take a dietary supplement on your own.

- Taking part in this study is your choice. You can choose to take part, or you can choose not to take part in this study. You can also change your mind at any time. Whatever choice you make, you will not lose access to your medical care or give up any legal rights or benefits.
- If you are interested in learning more about the study, please continue reading, or have someone read to you, the rest of this document. Take as much time as you need before you make your decision. Ask the study staff questions about anything you do not understand. Once you understand the study, we will ask you if you wish to participate; If so, you will have to sign this form.

Why is this study being offered to me?

We are asking you to take part in a research study because you have overweight or obesity. We are looking for 120 participants to be a part of this study.

Who is paying for the study?

This study is funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), an institute within the National Institutes of Health (NIH).

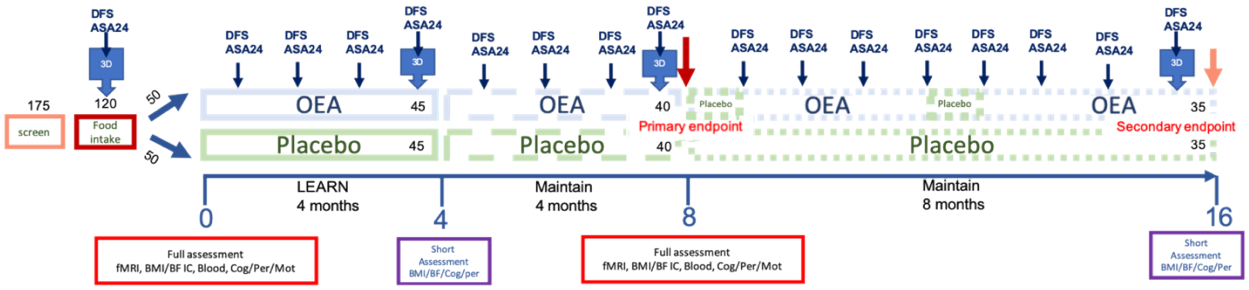
Who is providing other support for the study?

NutriForward, LLC will provide RiduZone, the dietary supplement that contains oleoylethanolamide (OEA).

What is the study about?

The long term clinical relevance of this study is to determine if fat intake moderates the ability of Oleoylethanolamide (OEA) which may have clinical implications to improve weight loss maintenance after the (LEARN®) weight loss program. The purpose of this study, however, is to study the effect of OEA on the gut-brain pathway in the presence of a high fat diet

What are you asking me to do and how long will it take?



In total, this study is 16 months long and requires 9 in-person sessions.

1. Month 0: Screening session
2. Month 0: Baseline full assessment session 1
3. Month 0: Baseline full assessment session 2
4. Month 0: Baseline full assessment session 3
5. Month 4: Short assessment
6. Month 8: Follow-up full assessment session 1
7. Month 8: Follow-up full assessment session 2
8. Month 8: Follow-up full assessment session 3
9. Month 16: Short assessment

You will be asked to not eat or drink anything for at least 1 hour prior to all sessions. However, we may ask you to restrict your food intake prior to some sessions. For example, we may request that you eat at a certain time before an appointment so that you arrive hungry, full, or neither hungry nor full. We may also request that you skip a meal prior to the session. You will receive more detailed instructions regarding limiting your food intake during the screening session.

During a session you may be asked to sample tastes, smells, drinks, and/or foods. You may also be asked to record your perceptions of these stimuli on a rating scale. For instance, you may be asked to rate the intensity of a taste. Everything you may be asked to sample consists of, or is made from, commercially available products. You may also be asked to participate in blood draws or fill out questionnaires that assess your use of cigarettes, alcohol or drugs; eating behaviors; physical activity level; dieting behaviors; personality; and craving. You may also be asked to rate and consume foods and drinks at home.

Screening

Questionnaires, Neuropsychological and Psychiatric Assessments:

We will ask you for demographic information and to fill out questionnaires that assess your use of cigarettes, alcohol or drugs; eating behaviors; physical activity level; dieting behaviors; personality; and craving. Questionnaires will be administered either in-person or online. You will be familiarized with the computer and tablet programs used in this study.

Drug Screening:

In addition to questionnaires about your drug and alcohol use, we ask that you refrain from using drugs and alcohol for 1 day before all sessions. We will verify this by administering a urine drug test. If you test positive for drug use, the session will be cancelled and you will be excluded from further participation.

Body Measures:
Body measures include body composition, height, weight, waist circumference, hip circumference, and thigh circumference. We measure body composition with a bioelectrical impedance measurement (BIA) device that consists of a scale with electrodes for the feet and fingers. The device will send very low electrical currents through your body to estimate your body composition. A complete measurement takes about 1 minute. If your body measures do not match our inclusion criteria, you will be excluded from further participation.

Functional Magnetic Resonance Imaging (fMRI) Training:
The fMRI training will take place at either The Anlyan Center or the MDPRC. You will be asked to lie on the table of a mock MR scanner and your head will be placed in a specially-designed holder. You will be fitted with specialized equipment used to deliver taste or smell stimuli (e.g. nasal mask or mouthpiece). The table will then slide into the enclosed space of the mock scanner, which is a long tube. You will be inside the mock scanner for up to 30 minutes. The goal of the training is to familiarize you with being inside a scanner and to ensure that you are comfortable with the mouthpiece, swallowing small amounts of liquids while lying on your back, and/or wearing the nasal mask. If you become tired, uncomfortable or claustrophobic (uncomfortable in the small space) inside the scanner, or if you are unable to hold your head very still, you will be excluded from further participation.

Food Diary:
You will be asked to keep a 3-day food diary. The diary will cover 2 weekdays and 1 weekend day. A study team member will review this record with you.

Saliva Sample:
You will also be asked to provide a DNA sample by delivering some saliva in a cup. The purpose of collecting this sample is to understand the genetic factors that may influence your reactivity to tastes, odors, and food items.

Baseline Full Assessment
The full assessment takes place over 3 separate sessions, which may occur in any order.

Full Assessment: fMRI scan session
fMRI Scan:
The fMRI session will take place at The Anlyan Center at Yale University and will take approximately 2 hours. fMRI is a type of scan that uses magnetic fields and radio waves to record your brain while you perform certain tasks.

In order to make sure the MRI procedure will be safe, you will be asked to fill out a screening form prior to participating in this study. It is important that you tell the experimenters in this study if you have any history of:

1. Metalworking
2. Metal fragments in your eyes or face.
3. Implantation of any electronic devices, such as (but not limited to) cardiac pacemakers, cardiac defibrillators, cochlear implants or nerve stimulators.
4. Surgery on the blood vessels of your brain.
5. Claustrophobia (fear of enclosed places).

Answering "yes" to a history of any of the preceding questions will exclude you from the study. It is important that you bring no metal objects into the scanning room, therefore you will be instructed to wear clothing without metallic elements on the day of the scan. You will also be asked to walk through a metal detector. In the event that you are unsure whether your clothing contains metal, or that you set off the metal detector, you will be asked to change into hospital scrubs in a private changing room. Your clothes and personal belongings will be brought with you to the scanner and will remain under the watch of study personnel at all times.

You will be asked to lie still on the MR patient table and your head will be placed on a specially-designed holder that allows us to record the imaging signal. Your head will be cushioned by a firm foam pillow. If applicable, the mouthpiece and/or nasal mask will be placed into position. In addition, we may place some sensors to measure physiological signals in the scanner. To measure breathing we may wrap an elastic Velcro band around your chest, which will not interfere with breathing. We may also tape three sensors onto your thumb, index, and middle finger of one hand to measure pulse and skin responses. Finally we may place loosely tied respiratory bellows around your thyroid cartilage to measure swallowing. This will not interfere with breathing or swallowing. If any of these sensors cause you discomfort, we will remove them before proceeding with the scan. The table will then slide into the enclosed space of the MR scanner, which is a long tube. The MR scanner makes loud banging noises while recording the fMRI images, so you will wear ear plugs and/or headphones to reduce the noise. The experimenters will be able to talk with you through an intercom system at all times. The earplugs or headphones will not interfere with your ability to talk with the experimenters or your performance in the study. The stimuli (e.g. tastes or smells) will then be delivered (e.g. via nasal mask or mouthpiece) while the MR scanner is running.

Some people become tired, uncomfortable or claustrophobic inside the MR scanner. The information obtained from the MR scanner is only usable if you are able to complete the entire fMRI session and hold your head very still the entire time (up to 60 minutes). Therefore, please let the investigators know if you are uncomfortable in any way as soon as possible during the imaging session.

The images obtained in this study will not be in a form readable by either you or your physician. Therefore, we will not give you or your doctor a copy of the MRI images or the results of your individual study. While the MRI images in this study are not formally reviewed by a radiologist, if in the course of processing the images we notice any abnormality that would be potentially relevant to your health, we will inform you for you to follow-up with your primary care physician.

If you are female: We do not wish to study females who are or may be pregnant. Therefore, as part of our MRI safety screening protocol, all females of childbearing potential will be given a urine pregnancy test. Results of the pregnancy test will be given to you only and will remain confidential. If the results indicate you are pregnant, you will not participate in the fMRI scan and will be excluded from further participation.

Full Assessment: Indirect Calorimetry and Blood Collection Session

Indirect Calorimetry (IC):

You will be asked to participate in an indirect calorimetry measurement, which is a method used to analyze energy expenditure. Indirect calorimetry measures oxygen consumption and carbon dioxide release to determine the minimum number of calories a body needs to consume each day in order for it to keep everything functioning. This is also known as your resting metabolic rate. You will be asked to not eat or drink for at least 4 hours before your session, and to abstain from rigorous exercise for at least 24 hours before your session. During the measurement you will lie down in a comfortable position. A clear, hard plastic hood will be placed over your head, which will then be sealed over your shoulders to prevent any gas from escaping. On the hood there are two holes; one allows the flow of room air into the hood and the other allows for the extraction of gas into the calorimeter via a vacuum tube. The calorimeter then analyzes your oxygen consumption and gives us an estimate of your resting metabolic rate. During the measurement the experimenter can always see and hear you, so should you feel anxious or want to terminate the measure you will be to do so at all times. You may be asked to consume a drink provided by the researcher during this measurement.

Blood Collection:

You will have blood samples drawn through an intravenous (I.V.) catheter. The purpose of this sample is to analyze naturally occurring chemicals your body produces. A certified phlebotomist will place a thin plastic catheter in a vein in your arm or hand. Using the catheter, we will obtain a maximum of ten blood samples during the experiment. Each sample will contain a maximum of 15 ml of blood, and a maximum of 500 ml of blood will be collected over the duration of the experiment.

Full Assessment: Cognitive, Perceptual and Food Reinforcement Assessment session:

You will use a computer/tablet to complete different tasks guided by the experimenter. You may be given food to consume and rate during these assessments. Questionnaires on eating habits will be given.

Dietary Supplementation

You will be asked to take 4 capsules of RiduZone, an over-the-counter commercially available OEA supplement, or a placebo every day for 16 months. You should take two (2) servings daily (two (2) capsules per serving) 15-30 minutes before a meal, at least 8 hours apart. You will be given the capsules at each scheduled study visit. OEA is a type of fat that is naturally produced by the body. It can also be found in some foods like cocoa. Studies using OEA have shown changes in habits related to food consumption. Whether you receive the supplement or the placebo will be determined randomly, like a flip of a coin. Neither you nor the experimenter running your sessions will be aware of whether you are taking OEA or placebo. We will send you reminders to take the supplement. During this time, you will fill out a weekly online

questionnaire to record dietary supplement consumption, exercise and possible side effects. If you miss filling out the questionnaire, indicate that you forget to take the supplement, or experience side effects, we will follow up with a phone call, email or text. If you are assigned to the OEA condition, your supplement will be periodically switched to placebo for a short period of time in order to prevent your body from adapting to the supplement.

Please initial here to indicate that you_____ (initials) understand that we, the investigators, are not responsible if you get charged by your mobile services provider for receiving text messages to remind you to take your dietary supplement.

The LEARN® Program
You will enroll in a 4 month-long behavioral weight loss trial. This trial focuses on making gradual changes in eating (moderate caloric restriction) and nutrition (improved nutritional balance/eating heart-healthy), as well as more structured eating (3 meals each day) and gradually increasing physical activity with the goal of adopting these changes as part of your overall lifestyle. You will be instructed in food choices and food quantities (portion sizes, etc.) to aim for goals of 1200 kcal/day for women and 1500 kcal/day for men that consist of less than 30% fat (other goals: roughly 50% carbohydrate and 20% protein). You will also be taught to complete daily records of food intake (food diaries) and exercise frequency duration. During the weight loss trial you will meet with the same member of the research staff every week for the first 2 months, and then every 2 weeks for the second 2 months, for a total of 12 individual sessions of 45 minutes each. During this time, you will continue taking the dietary supplement or placebo twice daily.

Monthly Body Weight Reporting
You will report your body weight once a month throughout the duration of the study. If you do not have a scale to weigh yourself at home, please let the researcher know and we will provide one for you. If you were provided with an electronic scale (Fitbit), you will download the Fitbit application to your mobile device and create an account using your email address. You will share the account information with the research team to allow access to your body weight data. Some information will be required to create an account on Fitbit app such as name, email address, password, date of birth, gender, height, and weight.

Short Assessment - Post-LEARN® Program
After the weight loss program, we will collect body composition measures and conduct cognitive and perceptual testing as described above. There will be no fMRI scan, indirect calorimetry, or blood draws for this assessment.

First Maintenance Phase
During this phase (4 months) you will continue to take the supplement or placebo and complete dietary questionnaires, visiting the MDPRC monthly to pick up pills and maintain contact.

Follow-up Full Assessment
The entire 3-session full assessment as described above will be repeated after the first maintenance phase. However, you may or may not be asked to undergo an fMRI scan at the follow-up full assessment.

Second Maintenance Phase
During this phase (8 months) you will continue to take the supplement or placebo and complete dietary questionnaires, visiting the MDPRC monthly to pick up pills and maintain contact.

Short Assessment - Final
After the second maintenance phase, we will collect body composition measures and conduct cognitive and perceptual testing as described above. There will be no fMRI scan, indirect calorimetry, or blood draws for this assessment.

What are potential risks to me if I participate?
OEA dietary supplement
The active ingredient of the dietary supplement, OEA, is naturally found in the small intestine of humans and other mammals. There may also be rice bran present as a filler. No studies using the dietary supplement at this dosage have reported side effects. Doses of up to 4 capsules per day have been reported with minimal side effects (gastrointestinal discomfort). If you experience moderate to severe gastrointestinal (GI) discomfort, please contact the principal investigator. If you find the GI discomfort bothersome, you should stop taking the dietary supplement. You should seek medical assistance if GI discomfort continues 48 hours after the taking last supplement.

Behavioral weight loss trial and weight regain
Foreseeable risks include changes in hunger and fullness associated with dietary changes, and discomfort or anxiety when thinking about or discussing nutrition or food intake. Previous experience suggests that these risks are minimal. To reduce the risk of losing weight too quickly, we set the goal of 1 lb of weight loss per week. This rate of weight loss is consistent with recommendations from the CDC. The risk of unforeseen medical problems are minimal since only healthy adults are eligible for this study. For this reason, it is essential that you are honest about your medical history. Risks like weight regain can be minimized by following the dietary instructions carefully. Following a gradual increase in calories after weight loss is essential. To encourage this, we will provide weekly instructions in person and/or over the phone to you. The diaries that will be administered during the weight loss trial will be evaluated on a weekly basis by the team.

MRI
Magnetic resonance (MR) is a technique that uses magnetism and radio waves, not xrays, to take pictures and measure chemicals of different parts of the body. The United States Food and Drug Administration (FDA) has set guidelines for magnet strength and exposure to radio waves, and we carefully observe those guidelines.
You will be watched closely throughout the MR study. Some people may feel uncomfortable or anxious. If this happens to you, you may ask to stop the study at any time and we will take you out of the MR scanner. On rare occasions, some people might feel dizzy, get an upset stomach, have a metallic taste or feel tingling sensations or muscle twitches. These sensations usually go away quickly but please tell the research staff if you have them.
There are some risks with an MR study for certain people. If you have a pacemaker or some metal objects inside your body, you may not be in this study because the strong magnets in the

MR scanner might harm you. Another risk is the possibility of metal objects being pulled into the magnet and hitting you. To lower this risk, all people involved with the study must remove all metal from their clothing and all metal objects from their pockets. We also ask all people involved with the study to walk through a detector designed to detect metal objects. It is important to know that no metal can be brought into the magnet room at any time. Also, once you are in the magnet, the door to the room will be closed so that no one from outside accidentally goes near the magnet.
We want you to read and answer very carefully the questions on the MR Safety Questionnaire related to your personal safety. Take a moment now to be sure that you have read the MR Safety Questionnaire and be sure to tell us any information you think might be important.
This MR study is for research purposes only and is not in any way a complete health care imaging examination. The scans performed in this study are not designed to find abnormalities. The principal investigator, the lab, the MR technologist, and the Magnetic Resonance Research Center are not qualified to interpret the MR scans and are not responsible for providing a health care evaluation of the images. If a worrisome finding is seen on your scan, a radiologist or another physician will be asked to review the relevant images. Based on his or her recommendation (if any), the principal investigator or consulting physician will contact you, inform you of the finding, and recommend that you seek medical advice as a precautionary measure. The decision for additional examination or treatment would lie only with you and your physician. The investigators, the consulting physician, the Magnetic Resonance Research Center, and Yale University are not responsible for any examination or treatment that you receive based on these findings. The images collected in this study are not a health care MR exam and for that reason, they will not be routinely made available for health care purposes.

Pregnancy
MR scans and a restricted diet could be damaging for a developing fetus. If you should become pregnant, you should report this to us, your health care professional and physician immediately. If you get pregnant during dietary supplementation, you must stop taking the supplement immediately. In addition, if you get pregnant during the weight loss program, your diet must be changed promptly to avoid further weight loss. During the entire duration of this study you will need to have a reliable method of birth control, and we perform pregnancy tests for all female subjects along with toxicology tests at each assessment.

Drug screening
You may be worried about hygiene and disclosing test results. Bottles containing urine specimens will be not be labeled and will be immediately discarded after testing. The results from these tests will remain confidential.

Blood draw
You will be asked to fast overnight for the blood draw, which may cause hunger and feeling faintness. If such things happen, the researcher will stop the procedure and provide food/water as needed. The procedure will only recommence if you feel well to continue. Potential risks associated with blood sampling include infection from failure to observe proper sterile conditions and hematoma. The latter may be associated with some discomfort, but presents very little danger to your welfare. All blood draws will be performed by a skilled phlebotomist. Rarely, a blood clot will form or infection, inflammation, or bleeding can occur at the site. If

inflammation of the vein does occur, we will apply a warm soak to the site and elevate the arm to reduce it. Very rarely, when the catheter is put in, some people become lightheaded, nauseated, or shaky. In extremely rare cases, it is possible that the person could faint. You will be provided with pain medication if needed. All catheters will be placed and removed while you are sitting to reduce the occurrence any of those symptoms of discomfort. If you donate more than 550 cc of blood over a 8-week period of time, you risk anemia. Before participating in this study you should not have donated more than 175 cc over the past 4 weeks. You should avoid additional blood draws for the 4 weeks after this study.

Bioelectrical impedance (BIA)
BIA measurement is non-invasive and safe except for people with pacemakers or other implanted electrical devices, for whom the electrical currents may interfere with implanted device operation. Please inform us if you have a pacemaker or implanted electrical device. The BIA device complies with FCC rules of radiofrequency radiation exposure limits.

Food samples
There are no known risks associated with drinking any of the liquids and beverages or eating any of the foods that are used in this research study. All consist of, or are made from, commercially available products. Subjects with food allergies or sensitivities are excluded from our studies and you should inform us immediately if you have any food allergies.

Questionnaires, computer tasks, neuropsychological and other assessments
It is possible that the interviews may cause you distress or concern. For example, it may be distressing to disclose information about psychiatric difficulties in the structured interviews. It is also possible that you may become frustrated with some of the impulsivity or cognitive assessments. If you become distressed or fatigued during assessments, the assessor will halt the procedure and take a break. The session will only recommence when and if you feel capable of continuing. You are free to terminate the session and/or your participation in the study at any time.
If your scores on depression indices are in the clinical range of depression, we will refer you to co-investigator and clinical psychologist, Dr. Grilo. Dr. Grilo will assess you for safety and will activate a plan for immediate transport to the ED if harm to self or others is identified.

Saliva samples
If you provided a saliva sample for genotyping, we will be getting personal information from you. There is always the possibility that someone who is not authorized might see it, though this has not happened previously. To see the precautions we take to prevent any unauthorized persons from accessing to the information you give us, please refer to the "**How will you keep my data safe and private?**" section of this consent form.

All DNA samples will be prepared and stored at the Modern Diet and Physiology Research Center using standard DNA extraction procedures. The genotyping analysis will be performed by a third-party genotyping service, Transnetyx Inc., that will not have access to any identifying information, not even your initials or subject ID number, and does not keep your sample after they analyze it. Once your remaining saliva sample stored at our lab is determined to have no

benefit for additional research, it will be destroyed by soaking it in bleach. This will remove all DNA.

You may be worried about the potential risk for detection of any carriers of a disease or condition gene. However, we are not looking for disease or condition genes. We will only gather data about commonly occurring DNA variations. Consequently, a medical interpretation of your DNA sample cannot be made.

Under some circumstances, it can be a risk for genetic information to be known by the subject or others. Variation in some genes is known to be directly related to risk of certain illnesses. In some cases, knowledge of genetic information could have negative psychological consequences or could affect access to or retention of certain benefits or entitlements. For example, the information could potentially be used against you if it were revealed to insurance companies or potential employers. However, you will not get the results of the DNA portion of the study nor will the results be made available in your medical record. Additionally, we will take precautions to ensure that confidentiality is maintained and that genetic information is not unintentionally disclosed to inappropriate third parties. There is a federal law called the Genetic Information Nondiscrimination Act (GINA). In general, this law makes it illegal for health insurance companies, group health plans, and most employers, except those with less than 15 employees, to discriminate against you based on your genetic information. However, it does not protect you against discrimination by companies that sell life insurance, disability insurance, or long-term care insurance.

At any time you may withdraw your saliva sample from the study by contacting the PI (contact information can be found on the last page of this form), after which we will destroy the biological material.

How will I know about new risks or important information about the study?

We will contact you by phone and/or email if we learn any new information that could change your mind about taking part in this study. Importantly, all of the procedures in this study (including brain scans) are for research purposes only. They are not designed to find abnormalities and are not medical examinations in any way. Our research staff are not qualified to detect or evaluate your individual research results for their clinical relevance. If a worrisome finding is noticed, it will be reviewed by a consulting physician and based on their recommendation, if any, a member of the research team will contact you, inform you of the finding, and recommend that you seek medical advice as a precautionary measure. The decision for additional examination or treatment would lie solely with you and your physician. The investigators, consulting physician, Magnetic Resonance Research Center, and Yale University are not responsible for any examination or treatment that you receive based on these findings.

How can the study possibly benefit me?

This study is not designed to benefit you directly but what we learn may help to help persons manage weight and practice good nutrition in the future.

How can the study possibly benefit other people?

The benefits to science and other people may include a better understanding of obesity, which has reached epidemic proportions in the United States. The increasing prevalence of obesity and its relation to a number of chronic conditions such as cancer, heart disease, and diabetes escalates its public health significance. If our predictions are born out, we will have identified a novel target for treating behavioral alterations associated with obesity that are associated with risk for lifestyle decisions that enhance risk for obesity and cancer (e.g. smoking/drinking/high fat food consumption. Furthermore, this characterization can have implications not only to our study, but also for a range of clinical applications including central effects of gastrointestinal pathologies such as ulcerative gastritis/colitis and Crohn's disease.

Are there any costs to participation?

If you take part in this study, you will not have to pay for any services, supplies, procedures, or care that are provided for this research. They are NOT part of your routine medical care. However, there may be additional costs to you. These can include the cost of transportation and your time to come to the study visits. In special cases, compensation for transportation may be available for $10 per visits (up to $90 total) over the course of the study. You or your health insurance must pay for services, supplies, procedures, and care that are part of your routine medical care. You will be responsible for any co-payments required by your insurance.

Will I be paid for participation?

You will be paid for taking part in this study. You will be compensated with $20 at the screening session, $50 at each of the 3 full assessment sessions (totaling $150 at Baseline Full Assessment and $150 at Follow-up Full Assessment), $50 for each short assessment ($50 at the Post-LEARN® Program Short Assessment and $50 at the Post-Second Maintenance Phase Short Assessment). For the LEARN® program, you will receive $10 Amazon e-gift card/session if you attend the individual session (totaling $120). You will receive $20 for each 3-day weighed food diary you turn in ($60). You will also receive completion bonuses if you finish all the parts of the study. The first completion bonus will be given at the Post-LEARN® Short Assessment at month 4 and will consist of $0-80, depending on how many monthly online dietary surveys you completed ($20 per set of ASA24 and DFS surveys). The second completion bonus will be given at the Follow-Up Full Assessment at month 8 and will consist of $120, plus $0-40 depending on how many monthly dietary surveys you completed ($10 per set of ASA24 and DFS surveys). The third and final completion bonus will be given at the Short Assessment at month 16 and will consist of $30, plus $0-80 depending on how many monthly dietary surveys you completed ($10 per set of ASA24 and DFS surveys). Total potential earnings from this study are $950.

Type of Session	*Payment*	*Frequency*	*Total*
Screening	$20	1	$20
Full Assessment: fMRI	$50	2	$100
Full Assessment: Blood Collection & Indirect Calorimetry	$50	2	$100
Full Assessment: Cognitive & Perceptual Testing	$50	2	$100

Attending LEARN® Sessions	$0-10 (Amazon gift cards)	12	$0-120 (Amazon gift cards)
Short Assessment: Body Composition, Cognitive & Perceptual Testing	$50	2	$100
Weighed Food Diaries	$20	3	$0-60 (cash or Amazon gift cards)
First Short Assessment Completion Bonus	$0-80	1	$0-80
Final Full Assessment Completion Bonus	$120-$160	1	$120-160
Final Short Assessment Completion Bonus	$30-$110	1	$30-110
		Total Payment =	$570-950

You are responsible for paying state, federal, or other taxes for the payments you receive for being in this study. Taxes are not withheld from your payments.

What are my choices if I decide not to take part in this study?

Instead of participating in this study, you have other choices. For example, you could:

- Get weight loss treatment without being in a study.
- Participate in a weight loss program on your own and hire a professional for guidance.
- Purchase and take a dietary supplement on your own.
- Take part in a different study

How will you keep my data safe and private?

Any identifiable information that is obtained in connection with this study will remain strictly confidential and will be disclosed only with your permission or as required by U.S. or State law. Participant data containing identifying information is maintained in locked files or computer files requiring a password. Only the primary investigator and research staff have access to these files. Outside of these files, your data are assigned a code number/letter combination that does not contain any information that someone could use to identify you. This de-identified data will be stored until it does not provide benefit for additional research, at which point it will be destroyed.

This research is covered by a Certificate of Confidentiality from the NIH. The researchers with this Certificate may not disclose or use information, documents, or biospecimens that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other action, suit, or proceeding, or be used as evidence, for example, if there is a court subpoena, unless you have consented for this use. Information, documents, or biospecimens protected by this Certificate cannot be disclosed to anyone else who is not connected with the research EXCEPT if there is a federal, state, or local law that requires disclosure (such as to report child abuse or communicable diseases but not for federal, state, or local civil, criminal, administrative, legislative, or other proceedings, see below); if you have consented to the disclosure, including for your medical treatment; or if it is used for other scientific research, as allowed by federal regulations protecting research subjects.

The Certificate cannot be used to refuse a request for information from personnel of the United States federal or state government agency sponsoring the project that is needed for auditing or program evaluation by the NIH which is funding this project.

You should understand that a Certificate of Confidentiality does not prevent you from voluntarily releasing information about yourself or your involvement in this research. If you want your research information released to an insurer, medical care provider, or any other person not connected with the research, you must provide consent to allow the researchers to release it.

What information will you collect about me in this study?

The information we will collect about you is called "Protected Health Information." It is protected by a federal law called the Privacy Rule of the Health Insurance Portability and Accountability Act (HIPAA). The specific information about you and your health that we will collect, use, and share includes:

- Research study records
- Medical and laboratory records of only those services provided in connection with this study
- The entire research record and any medical records held by ***Yale University School of Medicine*** created from: ***January 2021*** to: ***January 2033***
- Records about phone calls made as part of this research
- Records about your study visits
- Information obtained during this research regarding
    - HIV/AIDS test results
    - Hepatitis infection
    - Sexually transmitted diseases
    - Other reportable infectious diseases
    - Physical exams
    - Laboratory, x-ray, and other test results
    - Diaries and questionnaires
    - The diagnosis and treatment of a mental health condition
    - Use of illegal drugs or the study of illegal behavior
    - Records about any study drug you received

How will you use and share my information?

We will use your information to conduct the study described in this consent form.

Information about you and your health **which might identify you** may be used by or given to:

- The U.S. Department of Health and Human Services (DHHS) agencies
- Representatives from Yale University, the Yale Human Research Protection Program and the Institutional Review Board (the committee that reviews, approves, and monitors research on human participants), who are responsible for ensuring research compliance. These individuals are required to keep all information confidential.
- The study sponsor or manufacturer of study drug/device
- Drug regulatory agencies in other countries

- Governmental agencies to whom certain diseases (reportable diseases) must be reported
- Health care providers who provide services to you in connection with this study
- Laboratories and other individuals and organizations that analyze your health information in connection with this study, according to the study plan
- The principal investigator of the study
- Co-investigators and other investigators
- Study coordinator and members of the research team
- Data and Safety Monitoring Boards and others authorized to monitor the conduct of the study

The research staff at the Yale School of Medicine are required to comply with HIPAA and to ensure the confidentiality of your information. Some of the individuals or agencies listed above may not be subject to HIPAA and therefore may not be required to provide the same type of confidentiality protection. They could use or disclose your information in ways not mentioned in this form. However, to better protect your health information, agreements are in place with these individuals and/or companies that require that they keep your information confidential.

De-identified data, both behavioral and fMRI, may be shared with other investigators or online data repositories (e.g. openneuro.org) for research purposes. This data may contain information about you, such as your age, answers on a questionnaire, or brain images, but will not contain any information that someone could use to identify you such as your name, initials or birthdate.

If biospecimens are collected, we will not use them for commercial profit nor for whole genome sequencing even if they are de-identified.
A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

By signing this form, you authorize the use and/or disclosure of the information described above for this research study. The purpose for the uses and disclosures you are authorizing is to ensure that the information relating to this study is available to all parties who may need it for research purposes.

Why must I sign this document?
By signing this form, you will allow researchers to use and disclose your information as described above for this research study. This is to ensure that the information related to this study is available to all parties who may need it for research purposes. You always have the right to review and copy your health information in your medical record. However, this is a double blinded treatment study and if you sign this permission form, you will not be allowed to look at or copy your study-related information until after the research is completed

What if I change my mind?
The authorization to use and disclose your health information collected during your participation in this study will never expire. However, you may withdraw or take away your permission at any

time. You may withdraw your permission by telling the study staff or by writing to ***Dr. Dana M Small, Ph.D., the Modern Diet and Physiology Research Center at Yale, 1 Church Street, New Haven, CT 06510.***

If you withdraw your permission, you will not be able to stay in this study but the care you get from your doctor outside this study will not change. No new health information identifying you will be gathered after the date you withdraw. Information that has already been collected may still be used and given to others until the end of the research study to insure the integrity of the study and/or study oversight.

Who will pay for treatment if I am injured or become ill due to participation in the study?
If you are injured while on study, seek treatment and contact the research team as soon as you are able. Yale School of Medicine does not provide funds for the treatment of research-related injury. If you are injured as a result of your participation in this study, treatment will be provided. You or your insurance carrier will be expected to pay the costs of this treatment. No additional financial compensation for injury or lost wages is available. You do not give up any of your legal rights by signing this form.

What if I want to refuse or end participation before the study is over?
Taking part in this study is your choice. You can choose to take part, or you can choose not to take part in this study. You also can change your mind at any time. Whatever choice you make, you will not lose access to your medical care or give up any legal rights or benefits. Not participating or withdrawing later will not harm your relationship with your own doctors, the MDPRC, Yale University or Yale-New Haven Hospital.

To withdraw from the study, you can call the principal investigator or a member of the research team at any time and tell them that you no longer want to take part. The researchers may also withdraw you from participating in the research if necessary. This will cancel any future appointments (if applicable).

What will happen with my data if I stop participating?
When you withdraw from the study, no new health information will be gathered after that date. Information that has already been gathered may still be used and given to others until the end of the research study, as necessary, to ensure the integrity of the study and/or study oversight. You may withdraw or take away your permission to use and disclose your health information at any time. You may withdraw your permission by telling the study staff or by writing to the principal investigator, Dr. Dana Small, the Modern Diet and Physiology Research Center at Yale, 1 Church Street, New Haven, CT 06510.

Who should I contact if I have questions?

We have used some complicated terms in this form. Please feel free to ask about anything you don't understand. Think about this research and this consent form carefully – as long as you need to – before you make a decision.

If you have questions later or if you have a research-related problem, you can call the Principal Investigator, Dr. Dana M. Small, at **(203) 390-7707, or oea@yale.edu.**

If you have questions about your rights as a research participant, or you have complaints about this research, you call the Yale Institutional Review Boards at (203) 785-4688 or email hrpp@yale.edu.

Authorization and Permission

Your signature below indicates that you have read this consent document and that you agree to be in this study.

We will give you a copy of this form.

Participant Printed Name	Participant Signature	Date

Signature of Person Obtaining Consent	Date