# Just-in-time Adaptive Intervention Messaging in a Digital Weight Loss Intervention for Young Adults (Nudge)

ClinicalTrials.gov ID NCT05625061

Informed Consent version date 12/12/23

# **Informed Consent**

Before reading the consent form, watch this short video about what it means to participate in a research study.

Please read the following information carefully. Please do not skip any sections. If you agree to participate in the research study, you will be asked to indicate this at the end of the document.

University of North Carolina at Chapel Hill Consent to Participate in a Research Study Adult Participants

Consent Form Version Date: 12/12/23

IRB Study # 22-0170

Title of Study: A micro-randomized trial of JITAI messaging to improve adherence to multiple weight loss behaviors in

young adults

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#### **CONCISE SUMMARY**

This is a research study to test a behavioral weight loss program to help young adults adopt healthier eating and activity habits and learn effective ways to manage their weight. The 6-month program is delivered using a smartphone app and digital health tools including a physical activity tracker and a smart scale.

Participants will be asked to complete online questionnaires at the beginning of the study, after 3 months, and again at the end of the study after 6 months. These questionnaires will take approximately 45-60 minutes. They will also be asked to take their weight measurement 3 times in a row at home on the provided scale at each of these time points. After the first weight measurement and set of questionnaires (baseline assessment), all participants will have an individual video chat session with a health coach to learn about getting started. All participants will receive a standard weight loss program through the study smartphone app, which will have weekly lessons, feedback on progress, and a combination of tools to help them meet goals for eating, physical activity, and weight. Participants will also receive up to 3 personalized messages per day in the smartphone app to help support their behavior changes.

Participants may benefit from this program by losing some weight now and learning effective ways to manage their weight in the future. The greatest risk of this study is the possibility of injury when increasing physical activity as part of the weight loss program.

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary.

You may choose not to participate, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies. Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher, your health care provider, or the University of North Carolina-Chapel Hill. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed on the following screens. It is important that you understand this information so that you can make an informed choice about being in this research study.

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You will be given the opportunity to download an electronic copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this study is to examine the effect of different types of messages sent as part of a smartphone-delivered weight loss program that encourages healthy eating, increased physical activity, and self-weighing. There have been very few effective weight loss programs (also called interventions) that meet the unique needs of young adults. Improvements in these interventions are needed to help more young adults successfully achieve healthy weight loss. One way to improve interventions may be to incorporate easy-to-follow recommendations for making eating and activity changes, using digital tools that collect information such as food intake, activity, and weight, and using information from the digital tools to provide daily messaging that promotes continued changes in healthy behaviors.

You are being asked to be in the study because you have indicated that you: 1) are a young adult, age 18-39, 2) have a BMI/body mass index between 25-45 kg/m2, 3) speak and read English, and 4) have a smartphone with a data and text messaging plan. Your participation will help researchers answer questions that will support the development of interventions to help young adults lose weight.

Are there any reasons you should not be in this study?

You should not be in this study if you:

- Have Type 1 diabetes or currently receiving medical treatment for Type 2 diabetes
- Have reported a heart condition, chest pain during periods of activity or rest, or loss of consciousness on the screening questionnaire
- Have other health problems which may influence the ability to walk for physical activity or be associated with unintentional weight change, including cancer treatment within the past 5 years or tuberculosis
- Have lost 10 lbs or more (and kept it off) in the last 6 months
- Have past diagnosis of or have been receiving treatment for a clinically diagnosed eating disorder (anorexia nervosa or bulimia nervosa)
- Have current symptoms of alcohol or substance dependence
- Are currently pregnant, pregnant within the past 6 months, or planning to become pregnant within the next 6 months
- Have untreated thyroid disease or had any changes (type or dose) in thyroid medication in last 6 months
- Have been hospitalized for depression or other psychiatric disorder within the past 12 months
- Have history of psychotic disorder or bipolar disorder
- Are currently participating in a weight loss, nutrition, or physical activity study or program or other study that would interfere with this study
- Are currently using prescription medications with known effects on appetite or weight (e.g., oral steroids, weight loss medications), with the exception of individuals on a stable dose of SSRIs for 3 months)
- Have had previous surgical procedure for weight loss or planned weight loss surgery in the next year
- Reside outside of the United States
- Have another member of your household who is a participant or staff member on this trial
- Have participated in another study conducted by the UNC Weight Research Program within the past 12 months

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 201 participants in this research study.

How long will your part in the study last?

This study involves a 6-month weight loss program. Your total time in the study will last approximately 7-8 months, which includes two to three weeks to complete study assessments and other activities before the weight loss program starts and one to two weeks after the program ends to complete assessments.

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What will happen if you take part in the study?

If you decide to take part in the study, you will be sent a Withings Wi-Fi/Bluetooth-enabled digital smart scale and a Fitbit activity tracker. When you receive your devices, we will ask you to download the Fitbit and Withings apps and set up Fitbit and Withings accounts if you do not already have them. You will also download the study smartphone app using the login information we provide, and you will link the two accounts. Our staff will check that the study is able to receive your data.

Before starting the program, you will complete assessment measures. For your first assessment, you will be asked to weigh yourself 3 times in a row on the scale that we send you. You will be asked to complete a set of online questionnaires that will take you approximately 30-45 minutes. These questionnaires will include questions about you and questions related to your diet and physical activity. You will also complete an online food questionnaire about your food intake on one weekday and one weekend day during the week that you do your online questionnaires. Each food questionnaire will take approximately 20 minutes. We will ask you to use your Fitbit and scale for one to 2 weeks before starting the weight loss program so that we may collect information about your usual behavior.

After this assessment period, you will start the program. You will have an individual Kickoff Session with a health coach, using video chat, to learn how to use the study app and review guidelines on dietary tracking, exercise safety, and daily self-weighing. In the Kickoff session, you will get details about the program features, which include the study app, the technology tools, the weekly lessons, the resource materials, and the daily feedback messages that are meant to help you reach your goals. This session may be video recorded for training and evaluation purposes. It will only be viewed by study staff. You will be asked to give permission to video record at the beginning of the Kickoff session. If you decline, your session will not be recorded.

After your Kickoff Session and for the entire 6-month program, you will be asked to track your foods and beverages, wear your Fitbit, and weigh yourself on the provided smart scale each day. For the purpose of the research study, it is important that you are the only person in your household who uses the Fitbit and scale during the study. The data from your app, Fitbit, and scale will be transmitted to the study. It is anticipated that you will spend approximately 15 minutes per day tracking your foods and using the study app. You will receive notifications in the app up to 3 times per day, which will alert you to new messages, new weekly lesson content, and weekly feedback. For this reason, it is important that you keep your notifications ON for the study app on throughout the program.

Follow-up Assessments: After 3 months, you will be asked to repeat online questionnaires that will take you approximately 30 minutes. After 6 months, you will be asked to complete the online questionnaires that will take approximately 30-45 minutes and the food questionnaire about your food intake on one weekday and one weekend day during the week that you do your online questionnaires. Each food questionnaire will take approximately 15 minutes. At each follow up assessment at 3 and 6 months, we will ask you to step on your scale 3 times in a row for a weight measurement.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may also benefit by participating in this study by receiving accurate and important information about weight loss and health. Your participation may help you lose weight, and you could experience improvements in physical health associated with weight loss and making healthier choices. However, there is no guarantee that any or all of these changes will occur as a result of you participating in this study.

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What are the possible risks or discomforts involved from being in this study?

There are no major risks associated this study. All studies may involve some minor risks or discomforts. These include:

#### Risks of Increasing Physical Activity

There may risks associated with increasing physical activity, including, but not limited to, injuries to the muscles or joints of the body. Other risks include abnormal blood pressure, fainting, dizziness, disorders of heart rhythm, exacerbation of exercise-induced asthma symptoms, and very rare instances of heart attack, stroke, or even death. To help ensure your safety, the study will follow guidelines and safety recommendations for physical activity set forth by the American College of Sports Medicine. The study will provide you with information and recommendations for safely starting an exercise program and increasing your physical activity and will make modifications to your program if you experience any of the above problems. The safest way to start becoming more physically active is to begin slowly and build up gradually. During this study, you will receive information on exercise safety. This is not intended to be a substitute for consultation with your personal physician and/or health care provider. You may want to talk with your doctor by phone or in person before you start becoming much more physically active. You should report any problems to the researchers.

#### Risks associated with Questionnaires

As part of the study, you will be asked about personal factors related to your eating, physical activity, and weight. You may feel uncomfortable while completing the surveys because of the personal nature some of the guestions. You can elect not to share this private information. You should contact researchers if you feel that you have experienced any emotional distress as a result of study participation.

#### Risks of Breach of Confidentiality

This would mean that a person or persons outside the study team will find out that you are participating in this study and/or access the information you share with the study. This is a very rare possibility. Though the likelihood is very rare, it is possible that your data could be accessed by others should you lose your mobile device or lend the device to other people. In addition, there is a possibility that others may see your smartphone communications, including notifications or messages when the application is open, or see an open webpage while you are completing online questionnaires. If you would like, you may set up a passcode on your mobile phone to help prevent unauthorized access to your device, text messages, and research data. Additional information on how your study records will be kept private is written below.

Fitbit and Scale: You will also receive a Fitbit activity tracker and a smart scale. These devices require use of the companion Fitbit website and smartphone app. This is protected by a unique user login and password. Though you will need to enter your Fitbit username and password as part of the setup process for the study, we will not store your Fitbit usernames or passwords on our servers. During the setup process, youi will give permission for Fitbit to access your Withings scale weights to be included in the data that the study receives from Fitbit. All website information on your activity and weight data that are accessed by study staff will be kept confidential. The risk of breach of confidentiality over the Fitbit website will be partly subject to your comfort with sharing information on your individual profile. Fitbit and Withings will have access to the data that you choose to track within the app/website and the information you choose to include on your individual profile, but they will not have access to any other information about you that is collected as part of the research study.

Smartphone location: The app will store your home addresses on your phone and will use a geofencing technique to determine when you are out of town. Your addresses and location data will not be stored on study servers.

#### Risk of Wearing Fitbit Activity Tracker

There is also the possibility of minor skin irritation associated with wearable devices. We recommend taking it off occasionally, not wearing it too tightly, and keeping it clean and dry. You should regularly clean your wearable device-especially after working out or sweating. Rinse the wearable device with water or wipe it with a small amount of rubbing alcohol. Do NOT use hand soap, body soap, dish soap, or household cleaners which could get trapped beneath the band and irritate skin. Always dry the wearable device well before putting it back on. If you start to experience skin irritation on your wrist, we suggest you remove the device and contact a member of the study team to discuss the issue and determine whether you would like to continue participating in the study.

There may be uncommon or previously unknown risks. You should report any problems to the researcher.

What if we learn about new findings or information during the study?

You will be given any new information gained during the course of the study that might affect your willingness to continue your participation in the study.

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How will information about you be protected?

The study team will store any personal information you provide, and your weight, dietary, and activity tracker data, in secure databases that comply with the University of North Carolina's policies on sensitive information storing and transmission. This means that there are very strong protections in place to keep your information from being accessed by individuals not authorized to access it. Information you share through online questionnaires uses a secure server that complies with the University security policies. You will be asked to voluntarily allow the study team to access your Fitbit data through the Fitbit website by entering your Fitbit username and password. Your usernames and passwords will not be stored by the study in any manner.

Participants will not be identified in any report or publication about this study. We may use de-identified data from this study in future research without additional consent.

Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

#### What is a Certificate of Confidentiality?

This research is covered by a Certificate of Confidentiality. With this Certificate, the researchers 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 proceedings in the United States, for example, if there is a court subpoena, unless you have consented for this use.

The Certificate cannot be used to refuse a request for information from personnel of a federal or state agency that is sponsoring the study for auditing or evaluation purposes or for information that must be disclosed in order to meet the requirements of the federal Food and Drug Administration (FDA).

The Certificate of Confidentiality will not be used to prevent disclosure as required by federal, state, or local law, such as mandatory reporting requirements for child abuse or neglect, disabled adult abuse or neglect, communicable diseases, injuries caused by suspected criminal violence, cancer diagnosis or benign brain or central nervous system tumors or other mandatory reporting requirement under applicable law. The Certificate of Confidentiality will not be used if disclosure is for other scientific research, as allowed by federal regulations protecting research subjects or for any purpose you have consented to in this informed consent document.

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 an insurer, employer, or other person obtains your written consent to receive research information, then the researchers may not use the Certificate to withhold that information.

## What will happen if you are injured by this research?

All research involves a chance that something bad might happen to you. If you are hurt, become sick, or develop a reaction from something that was done as part of this study, the researcher will help you get medical care, but the University of North Carolina at Chapel Hill has not set aside funds to pay you for any such injuries, illnesses or reactions, or for the related medical care. Any costs for medical expenses will be billed to you or your insurance company. You may be responsible for any co-payments and your insurance may not cover the costs of study related injuries.

If you think you have been injured from taking part in this study, call the Principal Investigator at the phone number provided on this consent form. They will let you know what you should do.

By signing this form, you do not give up your right to seek payment or other rights if you are harmed as a result of being in this study.

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What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

If you withdraw or are withdrawn from this study all data collected up until the point of withdrawal will be retained, however no additional information will be collected unless you provide additional written permission for further data collection at the time of your withdrawal.

Will you receive anything for being in this study?

You will receive \$50 for completing the baseline assessment, \$25 for completing the 3-month assessment, and \$75 for completing the 6-month assessment. This is meant to offset the time associated with completing these assessments. If you complete the 6-month assessment, you will also be able to keep the Fitbit activity tracker and scale (valued at \$150 for both) that you will use during the study. If you decide to withdraw from the study or do not complete all of the study assessments, we will ask you to return the scale and Fitbit activity tracker to the UNC Weight Research Program.

Will it cost you anything to be in this study? It will not cost you anything to be in this study.

Who is sponsoring this study?

This research is funded by the National Institutes of Health. This means that the research team is being paid by the sponsor for doing the study. The researchers do not, however, have a direct financial interest with the sponsor or in the final results of the study.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions about the study (including payments), complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

A description of this clinical trial will be available on 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.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect you and your child's rights and welfare. If you have questions or concerns about your or your child's rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB subjects@unc.edu.

## **Consent Addendum for Unencrypted Communication**

The study team would like to message you by email and text message; however, you may say "no" to receiving these messages and still participate in this study. If you say "yes", messages may contain personal information about you and may be sent or received by the study team's personal electronic devices or in a method that is not able to be encrypted (protected) and there is the risk your information could be shared beyond you and the study team. This information may include information such as reminders and notifications to contact the study team.

If you wish to stop receiving unprotected communication from the study team or have lost access to your device, please notify the study team using the study contact information on the first page of this addendum to the consent. After the study is complete and all research activities finished, or you withdraw from the study or request to stop receiving unprotected communication, you will no longer receive un-encrypted (un-protected) messages specific to this study.

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Email: [email_confirmed] Cell Phone: [mobilephone]
○ Yes, I consent to the study team using the cell phone number and email address listed above to send communication
○ No, I do not consent to receive un-protected communication from the study team
Thank you for reviewing the Informed Consent document. Please choose one of the following:
<ul> <li>I have read the information and voluntarily agree to participate in this research study.</li> <li>I do not wish to participate in this research study.</li> </ul>
You have indicated that you will participate in this research study. Please confirm by entering your initials here:
Type your name here:
Consent Date
Consent Date
Congratulations on enrolling in this research study.
Please download a copy of the consent form below for your records. If you have questions or concerns about the study, please contact the UNC Weight Research Program by phone at 919-966-5852 or email nudgestudy@unc.edu.
[Attachment: "Adult_Consent_Form_Nudge.pdf"]

Thank you for your time. You have chosen not to participate in this research study. If you have any questions, please contact the UNC Weight Research Program by phone at 919-966-5852 or email nudgestudy@unc.edu.

