Buddhist Tzu Chi Medical Foundation Hualien Tzu Chi Hospital

Informed Consent Form

Valid only when bearing the official stamp of this

Revised Version Approved at the Research Ethics Committee Meeting on November 28, 2023

Project Title： Comprehensive management strategies for gastroesophageal reflux disease: A study of multidimensional interventions and health impacts		
Executing Institution： Buddhist Tzu Chi Medical Foundation Hualien Tzu Chi Hospital		
Funding Source： Hualien Tzu Chi Hospital		
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24-Hour Study Contact：Lei Wei-Yi	Phone：0970-339629	
Participant's Name：	Date of Birth：	

You are being invited to participate in this clinical trial. This informed consent form provides information about the study. The Principal Investigator or an authorized member of the study team will explain the study to

you and answer any questions you may have. Please do not sign this consent form until all of your questions have been answered to your satisfaction.

You are not required to make an immediate decision regarding your participation. Please take sufficient time to carefully consider whether you wish to participate before signing this consent form. You may participate in this study only after you have signed the informed consent form. If you agree to participate, this document will serve as a record of your informed consent.

Even after providing your consent, you are free to withdraw from the study at any time without giving any reason.

1. Study Purpose：

This is a single-center study conducted in Taiwan to investigate the effects of dietary intervention on gastroesophageal reflux symptoms. We hypothesize that both dietitian-led dietary intervention and dietary education through an educational leaflet can improve esophageal symptoms in patients with gastroesophageal reflux disease (GERD) by promoting healthier dietary and lifestyle habits. We further hypothesize that the dietitian-led dietary intervention will result in greater improvements in reflux symptoms and overall dietary adherence than the educational leaflet intervention.

2. Background of the Study / Introduction to the Study Product：

Dietitian-led intervention offers several advantages in the management of gastroesophageal reflux disease (GERD). First, dietitians provide individualized dietary recommendations based on each patient's dietary habits, medical history, and lifestyle. Such personalized interventions are more effective than general dietary advice because they take individual differences into account and address each patient's specific needs more precisely.

Second, dietitians can modify dietary plans in a timely manner according to treatment response and patient feedback. This flexibility, which is difficult to achieve through non-professional guidance alone, helps ensure that the intervention remains appropriate and effective throughout the study. In addition, educating patients about the relationship between food and reflux symptoms enhances their ability to self-manage their condition and empowers them to make healthier dietary choices in their daily lives.

Overall, professional dietary intervention provided by registered dietitians offers a comprehensive, continuous, and evidence-based approach to the management of GERD. This approach not only helps patients effectively control and alleviate reflux symptoms but also improves their overall nutritional status, thereby contributing to better weight management and potentially reducing the risk of other chronic diseases.

3. Main Inclusion and Exclusion Criteria：

The study investigator or an authorized member of the study team will discuss with you the eligibility requirements for participation in this study. If you do not meet the eligibility criteria, you will not be able to participate in the study.

Inclusion Criteria (Requirements for Participation in This Study)：

(1) Adults aged 18 to 79 years who are mentally competent and willing to provide written informed consent.

(2) Individuals with chronic symptoms of gastroesophageal reflux disease (GERD), including acid reflux, chest pain, or heartburn, who are willing to undergo the dietary intervention.

Exclusion Criteria (Individuals with any of the following conditions will not be eligible to participate in this study)：

Patients with esophageal stricture, current or previous diagnosis of esophageal malignancy, or a history of esophageal, upper gastrointestinal, or pharyngeal surgery.

(1) Patients with esophageal stricture, current or previous diagnosis of esophageal malignancy, or a history of esophageal, upper gastrointestinal, or pharyngeal surgery.

(2) Patients with structural esophageal disorders (such as diverticula or esophageal rings), infectious esophagitis, or eosinophilic esophagitis.

(3) Patients with major esophageal motility disorders.

(4) Patients currently using medications that may affect esophageal motility (such as opioids, nitrates, calcium channel blockers, etc.).

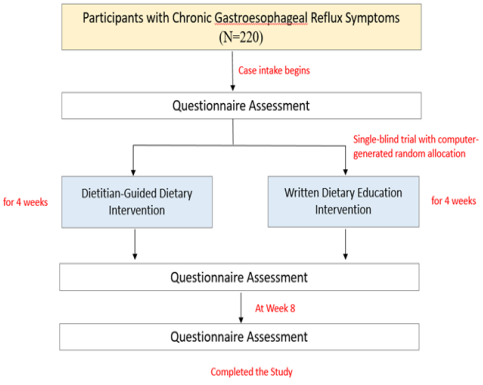
(5) Patients who have continuously used, within the past three months, or are currently taking antidepressants, selective serotonin reuptake inhibitors (SSRIs), or other psychiatric medications.

(6) Pregnant women, or individuals unable to comply with lifestyle modification and dietary intervention for other reasons.

4. Study Procedures：

The study is expected to be conducted over a period of two years and will continue through December 31, 2026. A total of 220 participants with chronic symptoms of gastroesophageal reflux disease (GERD) will be recruited from the Gastroenterology Department of Hualien Tzu Chi Hospital.

Study Flow Chart：



Study Procedures：

If you meet the eligibility criteria, you will first complete a series of questionnaires at the time of enrollment. You will then be randomly assigned by computer to one of two study groups. One group will receive a dietitian-led dietary intervention, while the other group will receive a written dietary education intervention. The intervention period for both groups will last four weeks.

Questionnaire assessments will be conducted again at the end of the 4-week intervention period and 8 weeks after completion of the intervention, after which your participation in the study will be completed.

The study questionnaires include the following:

- Gastroesophageal reflux disease questionnaires (GERDQ and RSI);
- Esophageal Hypervigilance and Anxiety Scale (EHAS);
- Sleep and psychological well-being questionnaires (PSQI, TDQ, STAI, and VSI);
- Functional gastrointestinal disorder questionnaires (FD, IBS, and GSRS); and
- Quality of life questionnaires (GERD-HRQL and SF-12).

5. Potential Risks or Side Effects and Their Management：

If you are unable to comply with the study procedures due to personal reasons, or if you experience any physical or psychological discomfort during the study, you should inform the Principal Investigator or another member of the study team at any time. If you decide to withdraw from the study, your decision will be respected without any penalty or loss of benefits to which you are otherwise entitled.

In addition, completing the study questionnaires may take some time and could cause physical or psychological discomfort. If you experience any discomfort while completing the questionnaires, you should notify the Principal Investigator or another member of the study team immediately. If you choose to withdraw from the study for this reason, your decision will be respected.

6. Alternative Treatment Options

You do not have to participate in this study in order to receive treatment for your disease or symptoms. If you choose not to participate in this study, your physician will evaluate your symptoms through outpatient visits or routine examinations (including upper gastrointestinal endoscopy and 24-hour esophageal pH-impedance monitoring) and provide appropriate medical treatment, including medication therapy, as needed.

7. Potential Benefits of the Study

This study is expected to demonstrate that both dietitian-led dietary intervention and dietary intervention through educational leaflets may improve esophageal symptoms in patients with gastroesophageal reflux disease (GERD) by promoting changes in dietary habits and lifestyle. Furthermore, the dietitian-led dietary intervention is expected to provide greater improvements in reflux symptoms and overall dietary adherence compared with the educational leaflet-based dietary intervention.

8. Restrictions, Limitations, and Responsibilities of Participants During the Study

During your participation in this study, please follow the instructions below for your safety:

- If you have any questions or concerns, please do not hesitate to discuss them directly with the Principal Investigator or other members of the study team.
- If you seek medical care at another healthcare facility during the study period, please inform the healthcare professionals that you are participating in this study and are receiving the study intervention.

9. Confidentiality of the Participant's Personal Information：

Any records or personal information that could identify you will be treated as confidential and will not be disclosed. A unique study identification code will be assigned to you by the research team to represent your identity. This code will not contain any personally identifiable information, such as your name, national identification number, or address. Both electronic and paper records will be protected using appropriate information security measures and stored in a secure, access-controlled research office. If the results of this study are published, your identity will remain confidential.

By signing this informed consent form, you also understand and agree that your personal information and study-related data may be directly reviewed by study monitors, auditors, the Research Ethics Committee (Institutional Review Board), and the competent regulatory authorities to ensure that the conduct of the study and the study data comply with applicable laws and regulatory requirements. These individuals and organizations are obligated to maintain the confidentiality of your identity. Except for those authorized by law to review the study records, we will take every reasonable measure to protect your privacy.

10. Withdrawal, Suspension/Termination of Participation, and Handling of Personal Data and Biological Specimens：

You may freely decide whether or not to participate in this study. If you choose to participate, you may withdraw your consent or discontinue your participation at any time during the study without providing any reason. Your decision will not result in any penalty, unpleasant consequences, or affect your legitimate rights or medical care.

If important new information becomes available during the course of the study that may affect your rights or your willingness to continue participating, you will be informed promptly and provided with a full explanation. You will then have the opportunity to reconsider whether you wish to continue participating in the study. Your decision will be respected and will not result in any penalty, unpleasant consequences, or affect your legitimate rights.

For your safety, the Principal Investigator may withdraw you from the study if it is determined that continued participation is not in your best interest. The Principal Investigator may also suspend or terminate the study at any time if deemed necessary.

11. Compensation for Injury and Insurance：

Participation in any research study involves certain risks. To ensure that you understand the protections available to you in the event that you experience an adverse reaction or suffer harm as a result of participating in this study, please read the following information carefully:

(1) If you experience an adverse reaction or sustain any injury as a result of participating in this study, the Hospital will provide necessary medical assistance.

(2) Other than the assistance described above, no additional financial compensation or other forms of indemnification will be provided under this study. If you are unwilling to accept this level of risk, you should not participate in this study.

(3) By signing this informed consent form, you do not waive any of your legal rights.

(4) This study is **not covered by clinical trial liability insurance**.

12. Storage and Future Use of Personal Data (hereinafter referred to as "Research Materials")

The research materials you provide will be used solely for the purposes of this research project and will be stored in the Gastrointestinal Function Laboratory of Hualien Tzu Chi Hospital until **December 31, 2029**. Upon expiration of the retention period, the research materials will be destroyed in accordance with applicable laws and regulations.

If you have any concerns regarding the use of your research materials or wish to request that they be destroyed, please contact us immediately.

Contact Person: Dr. Wei-Yi Lei
Department: Division of Gastroenterology
Telephone: +886-970-339-629

You may also contact the **Research Ethics Committee of Hualien Tzu Chi Hospital** (Tel: +886-3-856-1825 ext. 12124) for assistance in resolving any concerns or disputes regarding the use of your research materials in this study.

13. Participant Rights：

- **Compensation for Participation**

Upon signing the informed consent form and completing the initial questionnaire assessment, you will receive **gift vouchers with a total value of NT$700** to help cover the cost of nutritional counseling (**NT$350**) and to compensate you for the time spent participating in this study.

- **No Cost to Participate**

You will not be required to pay any fees for participating in this study.

- **Notification of Significant New Findings**

During the course of the study, you will be promptly informed of any significant new findings that may affect your willingness to continue participating in the study.

- **Protection of Participant Rights**

This study has been reviewed and approved by the **Research Ethics Committee (Institutional Review Board) of Hualien Tzu Chi Hospital**. The review included an assessment of the study's potential benefits and risks, the protection of participants' rights and welfare, and the safeguarding of personal information. If you have any questions regarding your rights as a research participant, or if you believe that you have been harmed as a result of participating in this study, you may contact the **Research Ethics Committee of Hualien Tzu Chi Hospital** at **+886-3-856-1825 ext. 12124** for consultation.

- **Contact Information**

If you have any questions or concerns now or at any time during the study, please feel free to contact **Dr. Wei-Yi Lei**, Division of Gastroenterology. **24-hour Contact Telephone:** +886-970-339-629

This informed consent form has been prepared in duplicate. The Principal Investigator or an authorized member of the research team has provided you with one signed copy of the informed consent form and has fully explained the nature and purpose of this study, as well as answered all of your questions regarding the study.

I hereby acknowledge that I have received a copy of this informed consent form.

Signature: _____ **Date:** _____ / _____ / _____ (YYYY / MM / DD)

14. Anticipated Commercial Benefits and Their Use

This study is **not expected to result in any patents, intellectual property rights, or other commercial benefits**.

15. Instructions for Signing the Informed Consent Form：

(1) The consent form should be explained to the research participant by the principal investigator or their authorized personnel, who should also address any questions the participant may have regarding the study. Afterward, the investigator or authorized personnel should sign and date the form. The research participant or their representative should then be given time to consider the information before signing the form.

(2) Timing for the signature of the legal representative/individual with consent authority/guardian/ assistant：

* Article 79 of the Medical Care Act / Article 12 of the Human Research Act / Article 5 of the Good Clinical Practice Guidelines for Drug Trials / Article 6 of the Guidelines for Collection of Human Biological Samples for Research / Articles 13 and 15 of the Civil Code：

1. If the participant is a person with no legal capacity (a minor under seven years of age or a person declared under guardianship), the legal representative shall act on their behalf; for a person declared under guardianship, the guardian shall serve as their legal representative.
2. If the participant is a person with limited legal capacity (a minor over seven years of age or a person with mental disorders or other cognitive impairments, such that their ability to express or recognize the effect

of their expression is significantly impaired, and they have been declared under court-appointed assistance), consent must be obtained from both the individual and their legal representative or assistant.

3. If the participant is neither a person with no legal capacity nor a person with limited legal capacity, but due to confusion of consciousness or mental and intellectual impairments, they are unable to communicate effectively or make judgments, consent may be given by someone with the authority to do so. The individuals with consent authority include their spouse or cohabiting family members.

4. When the research subject is a fetus, consent must be obtained from the mother.

5. The provision of cadaveric specimens should be based on written consent from the participant's closest family member or the individual prior to their death.

(3) **The timing for the witness signature:**

*Good Clinical Practice (GCP) Guidelines, Article 21 / Civil Code, Article 3：

1. If the participant, legal representative, or person with consent authority is unable to read, a witness must be present to participate in all discussions regarding the participant's consent form. The witness should read the consent form and any other written materials provided to the participant, to witness that the study investigator or their designated personnel has thoroughly explained the contents to the participant, legal representative, or person with consent authority, and ensure that they fully understand all the information.

2. The participant, legal representative, or person with consent authority must still sign the consent form personally and include the date. However, a thumbprint may be used in place of a signature.

3. After the oral explanation has been completed and the witness is certain that the participant, legal representative, or person with consent authority has given their consent freely and voluntarily, the witness must sign the consent form and include the date.

4. Research personnel cannot serve as a witness.

5. If a thumbprint, cross, or other symbol is used instead of a signature, the document must be signed by two individuals as witnesses, and this will have the same legal effect as a signature.

(4)Explanation of the signing order for parties with consent rights：

* Article 12 of the Human Research Act: Research subjects are limited to adults with decision-making capacity, excluding fetuses or corpses. However, if the research is clearly beneficial to a specific population group or cannot be replaced by other subjects, this limitation does not apply. When the research subject is an adult under the exceptions mentioned above, consent must be obtained from their relatives in the following order:

1. Spouse.
2. Adult children.
3. Parents.
4. Siblings.
5. Grandparents.

The written consent obtained from the relatives as specified above can be provided by one person. If the relatives' opinions are inconsistent, the order should follow the above sequence. Among individuals in the same sequence, priority is given to the closest relatives by degree of kinship. If the degree of kinship is the same, priority is given to cohabiting relatives, and if there are no cohabiting relatives, priority is given to the eldest.

16.Signature：

(1) The principal investigator, co-investigator(s), or authorized research personnel have thoroughly explained the nature and purpose of the research methods described above in this study, as well as the potential risks and benefits involved.

Person Providing the Explanation of the Consent Form (please check one)：

☐ Principal Investigator ☐ Co-Investigator ☐ Research Personnel

Signature:_____

Date:_____Year_____Month_____Day

(2) The research participant has thoroughly understood the aforementioned research methods and the potential risks and benefits. Any questions regarding this study have been fully explained by the principal investigator, co-investigator, or research personnel. I voluntarily agree to participate as a subject in this research study.

Participant's Signature：_____ Contact Number：_____

Date:_____Year_____Month_____Day

*** When the subject of the study meets the criteria outlined in item 2 of the [Consent Form Signing Explanation], this section must be completed with the appropriate signatures.**

(1) Legal Representative / Authorized Consenter / Guardian / Assistant

Signature：_____ Contact Number：_____

Date:_____Year_____Month_____Day

Relationship to the Participant (please circle one):

Spouse, Father, Mother, Son, Daughter, Other：_____

*** When the subject of the study meets the criteria outlined in item 3 of the [Consent Form Signing xplanation], this section must be completed with the appropriate signatures.**

(2) Witness

Witness 1 Signature: _____

Date: _____ Year_____ Month_____ Day

Contact Number：_____

Witness 2 Signature: _____

Date: _____ Year_____ Month_____ Day

Contact Number：_____