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Unique fermented turmeric extract promotes weight loss and glucose metabolism by promoting GLP-1 production in overweight individuals

Submission date
28/10/2025

Recruitment status
No longer recruiting

Registration date
13/11/2025

Overall study status
Completed

Last Edited
13/11/2025

Condition category
Nutritional, Metabolic, Endocrine

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
This study was designed to evaluate the effectiveness of a unique Fermented Turmeric Extract (FTE). This extract is made using a unique fermentation process that produces over 300 beneficial compounds not found in regular turmeric supplements. Unlike standard turmeric products that mainly focus on curcumin, this fermented version provides a wider range of natural, microbe-made compounds that may help the body by supporting the connection between the gut, hormones, and metabolism. Researchers believed that FTE could help the body release hormones that promote fullness and better blood sugar control by improving the balance of gut bacteria. These changes are expected to enhance insulin sensitivity, stabilize glucose levels, control appetite, and support weight loss.

Who can participate?
Non-smoker adult subjects aged between 25 to 60 years (inclusive) old who have a BMI between 28 and 35 kg/m²

What does the study involve?
Participants will be randomly assigned to a once-daily Fermented Turmeric Extract supplement or a commercially available turmeric extract supplement for 4 weeks.

What are the possible benefits and risks of participating:
Possible benefits are a reduction in weight and the modulation of blood sugar. No risk is expected.

Where is the study run from?
INNOVATION LABO Sciences Co., Ltd (Japan)

When is the study starting and how long is it expected to run for?
June 2024 to January 2025

Who is funding the study?
INNOVATION LABO Sciences Co., Ltd (Japan)

Who is the main contact?
Dr Yuki Ikeda, development@innovationlabo.com

Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Protocol serial number
FTE-WL-IL

Study information

Scientific Title
A prospective, randomized, double-blind, two-arm, parallel, clinical study to evaluate the efficacy of fermented turmeric extract supplementation on weight loss and glucose metabolism in healthy overweight participants

Study objectives
Fermented Turmeric Extract is more efficient than a commercially available turmeric extract in promoting weight loss and improving glucose metabolism

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 30/06/2024, Japanese Society of Anti-Aging Nutrition Ethics Review Committee (Ginza, Tokyo 6-6-1, Chuo-ku, 104-0061, Japan; +81 (0)3 3552 5277; coordinator@jaan.jp), ref: JAAN/IR 12-017

Primary study design
Interventional

Study design
Interventional double-blind two-arm single-center randomized clinical trial

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Improvement of glucose metabolism in overweight participants

Interventions
This study investigates 8 weeks of daily supplementation with Fermented Turmeric Extract (300 mg/day, one capsule) or a commercially available Turmeric Extract (300 mg/day, one capsule) taken orally at breakfast. Block randomization was used to allocate participants to each group.

Block randomization is used to divide potential patients into m blocks of size n, randomize each block such that n patients are allocated to A and n to B then choose the blocks randomly. This method ensures equal treatment allocation within each block if the complete block is used.

Intervention Type
Supplement

Primary outcome(s)
1. Weight measured using a calibrated digital weighing scale at day 0 and day 56
2. Fat mass, lean mass, BMI measured using a bioelectrical impedance analysis at day 0 and day 56
3. Waist circumference, hip circumference, thigh circumference measured at day 0 and day 56

Key secondary outcome(s)
1. GLP-1 levels measured using an enzyme-linked immunosorbent assay at day 0 and day 56
2. PYY levels measured using an enzyme-linked immunosorbent assay at day 0 and day 56
3. Ghrelin leptin and adiponectin levels measured using an enzyme-linked immunosorbent assay

at day 0 and day 56
4. Blood glucose measured using a hexokinase enzymatic method at day 0 and day 56
5. Insulin level measured using a chemiluminescent immunoassay at day 0 and day 56
6. Fecal microbiome composition measured using quantitative PCR at day 0 and day 56

Completion date
30/01/2025

Eligibility

Key inclusion criteria
1. BMI between 28 and 35 kg/m²
2. Commitment to maintaining their usual dietary habits and physical activity levels throughout the study period.

Participant type(s)
Population

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
25 Years

Upper age limit
60 Years

Sex
All

Total final enrolment
44

Key exclusion criteria
1. Pregnancy
2. Lactation
3. History of serious medical conditions such as cancer
4. Known allergies to turmeric or any component of the test product
5. Use of medications or dietary supplements that could impact body weight or metabolic function

Date of first enrolment
01/10/2024

Date of final enrolment
01/11/2024

Locations

Countries of recruitment
Japan

Study participating centre
Medica Tokyo Laboratories
14-5 Kusunokichō, Nishi-ku
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Sponsor information

Organisation
INNOVATION LABO SCIENCES Co., Ltd

Funder(s)

Funder type
Not defined

Funder Name
INNOVATION LABO Sciences Co., Ltd

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from Dr Yuki Ikeda (development@innovationlabo.com). Anonymised IPD will be available upon publication of results and for a period of 2 years. Consent from participants was required and obtained.

IPD sharing plan summary
Available on request