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Nutrition and Fasting as Metabolic Tools – Mechanisms and Cautions

02 October 2026, 14:00- 14:15

British Association for Nutrition and Lifestyle Medicine (BANT)
27 Old Gloucester Street, London WC1N 3XX
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A QUICK INTRODUCTION

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Affiliations

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Declarations

No relevant declaration of interest to declare.

IMAGINE YOURSELF 15 YEARS FROM NOW...

How do you want to look, feel, move?

Do you aspire to be healthy, agile, flexible, energised, cognitively lucid....

What questions might you ask your future self?

Did I invest enough time in my health and wellbeing?

What will bring you joy?

Being physically healthy & happy

Ageing with grace / looking & feeling good

How does fasting feed into this vision →

INTRO TO FASTING - WHAT, WHY & HOW

What is fasting?

Fasting is the act of choosing to go without food, drink, or both for a specific period of time

Why fast?

Health reasons include cellular repair (autophagy), blood sugar & insulin sensitivity, hormones, weight loss

How to fast?

Multiple frameworks from 5hr fasts between meals, 12hrs overnight, 5:2, 16:6, 24hrs, 36hrs, 72+ hrs

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FASTING AS PART OF A FEMALE HEALTH TOOLKIT

Quiet
Food Noise
& Hunger

Sleep
Recovery
Energy

Metabolic
Health
Inflammation

Fat Mass
Body
Composition

Hormonal
Health &
Balance

Mental &
Emotional
Health

Stress
Resilience
Biorhythms

Skin
Hair

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WHAT HAPPENS AT A METABOLIC LEVEL DURING FASTING?

Know your goal

Choose the type and duration of fast based on what you wish to achieve

Be mindful of individual factors

Gender, menstrual cycle, physical activity levels, health status, personal risk factors...

Consider external factors

Life load, commitments, performance demands, weather (excessively hot /cold)...

COMMON EXAMPLES OF INTERMITTENT FASTING

12 hour over night fast

For ‘general’ metabolic support - maintain a 12 hour fasting window between dinner and breakfast

Time-restricted eating - 16:8 method

For ‘fat-burn’ and initiate cellular cleansing - fast for 16 hours and eat within an 8-hour timeframe.

Extended fasts

For ‘therapeutic gain’ - fast between 24 and 72 hours to achieve a deeper level of metabolic reset

INTERMITTENT FASTING FOR WEIGHT LOSS & INSULIN RESISTANCE

The effects of intermittent or continuous energy restriction on weight loss and metabolic disease risk markers: a randomized trial in young overweight women.

M N Harvie, M Pegington, M P Mattson, J Frystyk, B Dillon, G Evans, J Cuzick, S A Jebb, B Martin, R G Cutler, T G Son, S Maudsley, O D Carlson, J M Egan, A Flyvbjerg, A Howell

Journal: International journal of obesity (2005) 2011;35(5):714-27

PMID: 20921964

Free Full Text on PubMed Central | View on PubMed

Abstract

BACKGROUND

The problems of adherence to energy restriction in humans are well known.

OBJECTIVE

To compare the feasibility and effectiveness of intermittent continuous energy (IER) with continuous energy restriction (CER) for weight loss, insulin sensitivity and other metabolic disease risk markers.

DESIGN

Randomized comparison of a 25% energy restriction as IER (~ 2710 kJ/day for 2 days/week) or CER (~ 6276 kJ/day for 7 days/week) in 107 overweight or obese (mean (± s.d.) body mass index 30.6 (± 5.1) kg m(-2)) premenopausal women observed over a period of 6 months. Weight, anthropometry, biomarkers for breast cancer, diabetes, cardiovascular disease and dementia risk; insulin resistance (HOMA), oxidative stress markers, leptin, adiponectin, insulin-like growth factor (IGF)-1 and IGF binding proteins 1 and 2, androgens, prolactin, inflammatory markers (high sensitivity C-reactive protein and sialic acid), lipids, blood pressure and brain-derived neurotrophic factor were assessed at baseline and after 1, 3 and 6 months.

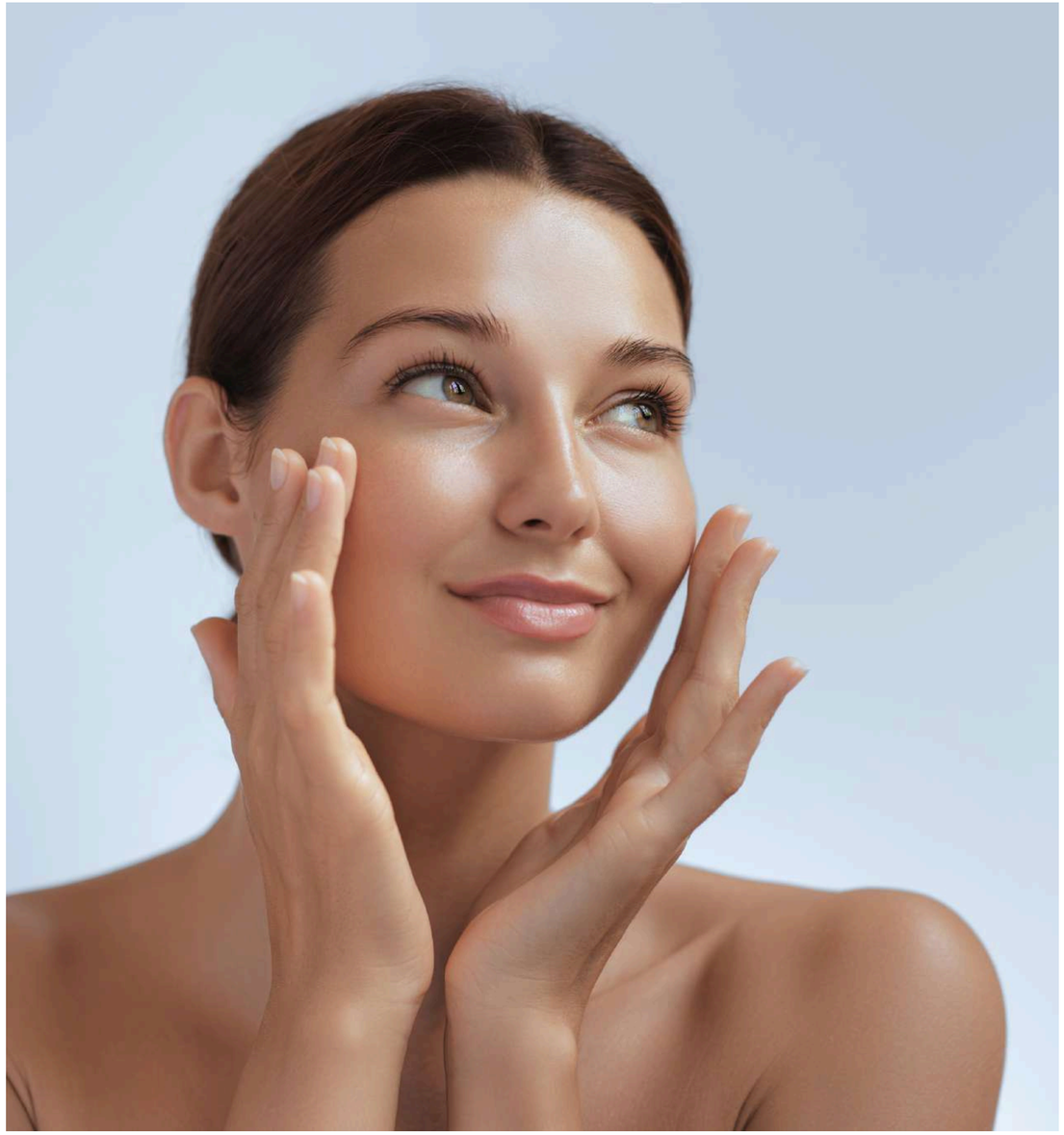
RESULTS

Last observation carried forward analysis showed that IER and CER are equally effective for weight loss: mean (95% confidence interval) weight change for IER was -6.4 (-7.9 to -4.8) kg vs -5.6 (-6.9 to -4.4) kg for CER (P-value for difference between groups = 0.4). Both groups experienced comparable reductions in leptin, free androgen index, high-sensitivity C-reactive protein, total and LDL cholesterol, triglycerides, blood pressure and increases in sex hormone binding globulin, IGF binding proteins 1 and 2. Reductions in fasting insulin and insulin resistance were modest in both groups, but greater with IER than with CER; difference between groups for fasting insulin was -1.2 (-1.4 to -1.0) μU ml(-1) and for insulin resistance was -1.2 (-1.5 to -1.0) μU mmol(-1) l(-1) (both P = 0.04).

CONCLUSION

IER is as effective as CER with regard to weight loss, insulin sensitivity and other health biomarkers, and may be offered as an alternative equivalent to CER for weight loss and reducing disease risk.

INTERMITTENT FASTING FOR IMPROVED SKIN TEXTURE & HYDRATION



The Effects of a Fasting Mimicking Diet on Skin Hydration, Skin Texture, and Skin Assessment: A Randomized Controlled Trial.

Jessica Maloh, Min Wei, William C Hsu, Sara Caputo, Najiba Afzal, Raja K Sivamani

Journal: Journal of clinical medicine 2023;12(5):1710

PMID: 36902498

Free Full Text on MDPI | View on PubMed

Abstract

Diet and nutrition have been shown to impact dermatological conditions. This has increased attention toward integrative and lifestyle medicine in the management of skin health. Emerging research around fasting diets, specifically the fasting-mimicking diet (FMD), has provided clinical evidence for chronic inflammatory, cardiometabolic, and autoimmune diseases. In this randomized controlled trial, we evaluated the effects of a five-day FMD protocol, administrated once a month for three months, on facial skin parameters, including skin hydration and skin roughness, in a group of 45 healthy women between the ages of 35 to 60 years old over the course of 71 days. The results of the study revealed that the three consecutive monthly cycles of FMD resulted in a significant percentage increase in skin hydration at day 11 (= 0.00013) and at day 71 (= 0.02) relative to baseline. The results also demonstrated maintenance of skin texture in the FMD group compared to an increase in skin roughness in the control group (= 0.032). In addition to skin biophysical properties, self-reported data also demonstrated significant improvement in components of mental states such as happiness (= 0.003) and confidence (0.039). Overall, these findings provide evidence for the potential use of FMD in improving skin health and related components of psychological well-being.

Address: Integrative Skin Science and Research, Sacramento, CA 95815, USA.; L-Nutra, Inc., Plano, TX 75024, USA.; School of Medicine, University of California-Davis, Sacramento, CA 95817, USA.; Department of Dermatology, University of California-Davis, Sacramento, CA 95816, USA.; College of Medicine, California Northstate University, Elk Grove, CA 95757, USA.; Pacific Skin Institute, Sacramento, CA 95815, USA.

DOI: 10.3390/jcm12051710

INTERMITTENT FASTING FOR EATING BEHAVIOUR & DIET SATISFACTION

Classic vs. High-Fat Intermittent Fasting: Impacts on Body Composition, Eating Behaviour, and Diet Satisfaction.

Emre Batuhan Kenger, Beyza Izgi

Journal: Nutrition bulletin 2025;50(3):486-496

PMID: 40665688

Full Text on Ovid Technologies, Inc. | View on PubMed

Abstract

This study aimed to examine the effects of two different intermittent fasting protocols, distinguished by macronutrient distribution (classical intermittent fasting versus high-fat, low-carbohydrate intermittent fasting), on body composition, eating behaviour, and diet satisfaction. The study was conducted at a single centre and included 44 adult women who consulted a dietitian. Participants were randomly assigned, in a single blind manner, to one of two groups. The diet interventions were applied for six weeks; all participants completed this period. Body composition, eating behaviour, and diet satisfaction were evaluated. Data were analysed using SPSS version 21.0. The dietary interventions resulted in significant improvements in body composition in both groups ($p < 0.05$); however, no significant differences were observed between the groups compared to baseline ($p > 0.05$). Participants' eating behaviour improved across all subscales in both groups ($p < 0.05$). Importantly, the classical diet group showed significantly greater improvements compared to baseline in cognitive restraint (adjusted post-intervention mean: 19.66 vs. 17.38; $p = 0.006$) and emotional eating (adjusted post-intervention mean: 9.66 vs. 12.97; $p < 0.001$) compared to the high-fat group. Satisfaction with the diet did not differ significantly between groups (classical: 41.0; high-fat: 34.0) ($p = 0.063$). This study demonstrated that classical and high-fat intermittent fasting models led to improvements in body composition and eating behaviour compared to baseline measurements. Further research with longer durations and diverse populations, including men, is needed to fully understand the impact of macronutrient distribution within intermittent fasting.

Address: Faculty of Health Sciences, Department of Nutrition and Dietetics, Bahcesehir University, Istanbul, Turkey.; Faculty of Health Sciences, Department of Nutrition and Dietetics, Istanbul Bilgi University, Istanbul, Turkey.

DOI: 10.1111/nbu.70021

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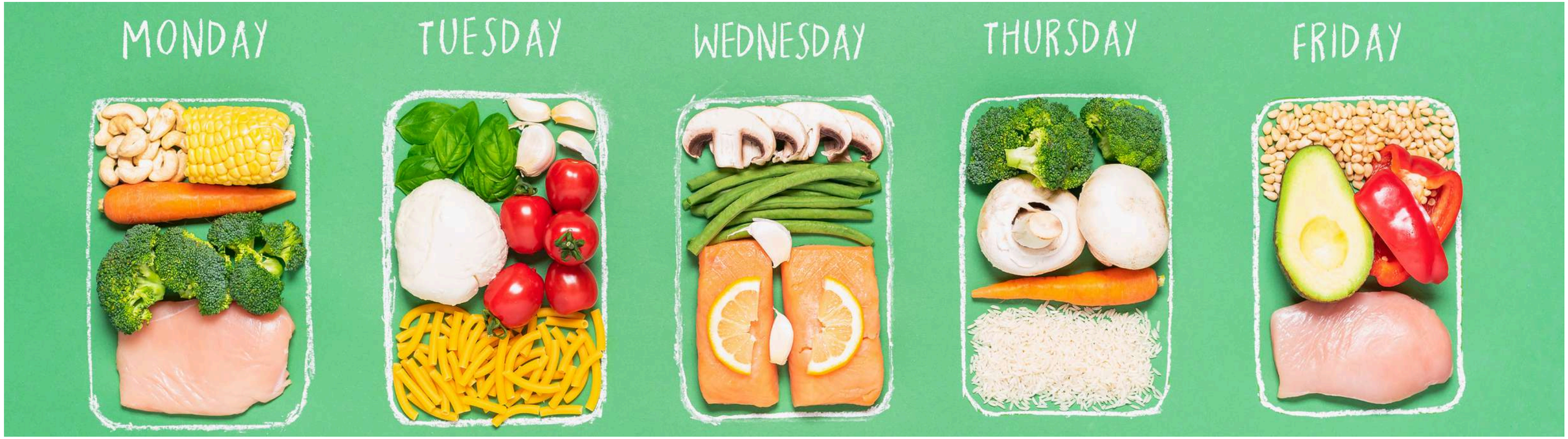
GUIDED FASTING WITH A NUTRITIONAL THERAPY PRACTITIONER



Identify the fasting model that is best suited to you

Provide education and personalised support for safe fasting

Help you eat well pre / post fasting to support health goals

Provide personalised recommendations and ensure adequate nutrient intakes

FASTING CONTRAINDICATIONS & SIDE EFFECTS TO WATCH OUT FOR

Fasting is safe for most people however there are some cautions:

Health conditions, such as Diabetes (T1)

Fasting & medications

(GLP-1/blood sugar/blood pressure)

Eating disorders

In pregnancy

In children / young adults

Stop if adverse effects

Acute dehydration, nausea, dizziness, lethargy, constipation, anxiety, insomnia, ++

THANK YOU!

Alexandra Cortina
Registered Nutritional Therapy Practitioner

FOOD FOR YOUR HEALTH

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