



# Effects of Dietary Fibre Supplements on Weight Loss, Lipid Profile and Intestinal Permeability during Energy Restriction

Product: Biostile ViaChole Fiber®

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## INSTITUTION

University  
of  
Primorska,  
Faculty of  
Health  
Sciences

## DURATION

8 weeks

## PARTICIPANTS

100  
overweight/obese  
adults

## STUDY TYPE

Comparative,  
randomised,  
placebo-  
controlled

## STUDY OBJECTIVE

To investigate the additive effects of combining energy restriction (ER) with four different dietary fibre supplements on anthropometric and biochemical parameters in overweight or obese adults over 8 weeks. The study compared a fibre supplement containing glucomannan, inulin, psyllium and apple fibre (ViaChole Fiber® formulation) against three other fibre supplements and a placebo.

## METHODOLOGY

Design	Comparative, randomised, placebo-controlled study
Participants	100 overweight or obese adults (BMI 25–30 kg/m <sup>2</sup> ), all following a calorie-restricted diet
Intervention	One of four dietary fibre supplements or placebo for 8 weeks alongside energy restriction
Primary endpoints	Body weight, BMI, fat mass, visceral fat, LDL cholesterol, total cholesterol, serum zonulin
Assessments	Baseline, Week 4, Week 8
Authors	Jenko Pražnikar Z., Mohorko N., Gmajner D., Kenig S., Petelin A.
DOI	<a href="https://doi.org/10.3390/foods12112122">10.3390/foods12112122</a> · PMID: 37297364

## PRODUCT COMPOSITION

- **Konjac Glucomannan**  
Supports normal cholesterol levels and contributes to weight loss\*
- **Apple Fibre & Apple Pectin**  
Natural source of both soluble and insoluble dietary fibre
- **Choline**  
Supports normal liver function and fat and homocysteine metabolism
- **Psyllium (Plantago ovata) Fibre**  
Supports normal bowel function and digestive regularity
- **Inulin from Chicory**  
Prebiotic fibre supporting gut microbiota balance
- **Inositol**  
Supports metabolic processes and cellular membrane function

## KEY RESULTS – BODY COMPOSITION

**-11 kg**

Reduction in body weight (up to 11 kg) after 8 weeks\*

**-1.76 BMI**

Reduction in body mass index (up to 1.76 units) after 8 weeks\*

**-0.9 units**

Reduction in visceral fat (up to 0.9 units) after 8 weeks\*

## KEY RESULTS – LIPID PROFILE

**-10%**

Reduction in total blood cholesterol after 4 weeks\*\*

**-0.54 mmol/L**

Reduction in LDL cholesterol levels after 4 weeks\*\*

### Most effective fibre

Glucosmannan + inulin + psyllium + apple fibre blend was the top-performing supplement for BMI and body weight reduction (p=0.018 vs. placebo)

## INTESTINAL PERMEABILITY

Zonulin is a protein that regulates intestinal permeability – lower zonulin levels indicate a stronger, less permeable gut wall. Leaky gut syndrome allows toxins and bacteria to pass into the bloodstream, triggering immune and inflammatory responses.

**-28%**

Reduction in serum zonulin concentration (gut permeability marker)\*

**25%**

Of participants reported improved wellbeing, digestion and bowel motility

**13%**

Of participants reported reduced food cravings

- ✓ All participants were healthy individuals with BMI between 25 and 30 kg/m<sup>2</sup>. The study was conducted by an independent academic institution (University of Primorska). No serious adverse events were reported. Biostile supplied the fibre supplements but had no involvement in study design, data analysis or writing of the paper.

CONCLUSION

In an 8-week randomised, placebo-controlled trial, Biostile ViaChole Fiber® — a blend of glucomannan, inulin, psyllium and apple fibre — was the most effective supplement for reducing BMI and body weight (p=0.018 vs. placebo). It also significantly reduced LDL cholesterol (up to -0.54 mmol/L), total cholesterol (up to -10%), and improved intestinal permeability (zonulin -28%) in overweight adults following an energy-restricted diet.

<sup>1</sup> Jenko Pražnikar Z., Mohorko N., Gmajner D., Kenig S., Petelin A. *Effects of Four Different Dietary Fibre Supplements on Weight Loss and Lipid and Glucose Serum Profiles during Energy Restriction in Patients with Traits of Metabolic Syndrome*. *Foods*. 2023 May 24;12(11):2122. doi: 10.3390/foods12112122. PMID: 37297364. PMC: 10253086.

\* Results after 8 weeks in combination with an energy-restricted diet.

\*\* Results after 4 weeks in combination with an energy-restricted diet.

The beneficial cholesterol effect of glucomannan is achieved with a daily intake of 4 g glucomannan.

This document is intended for professional audiences and is not directed at the end consumer.