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# EFFECTS OF A LOW- FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: PRELIMINARY DATA

**27 - 29 novembre 2025**

Padova Congress  
Via Carlo Goldoni 8, Cancelli C - Padova





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NextGenerationEU



Ministero  
dell'Università  
e della Ricerca



Italiadomani  
PIANO NAZIONALE  
DI RIPRESA E RESILIENZA

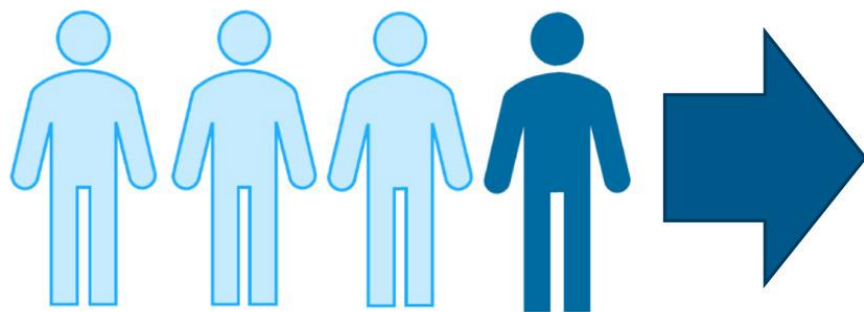


*Le attività di ricerca sono state finanziate dal “Next Generation EU” nell’ambito del PNRR, nel Progetto BREADS4IBS, “Biotechnological strategies to formulate bread with low FODMAP content for consumers with irritable bowel syndrome: technological, nutritional, sensory and clinical aspects” (Missione 4, C2, Investimento 1.1 **Fondo per il programma nazionale e progetti di rilevante interesse nazionale-PRIN**), e nell’ambito del **Progetto SUS-MIRRI** “Strengthening the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy”, code n. IR0000005 (Missione 4, Componente 2, Investimento 3.1 Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione).*

*Si ringrazia il Molino CASILLO, Corato (BA), per la fornitura del campione di farina.*

# Prevalence of Functional Bowel Disorders

More than **1 in every 4 adults** in the U.S., Canada and the U.K. has one of the six functional bowel disorders.

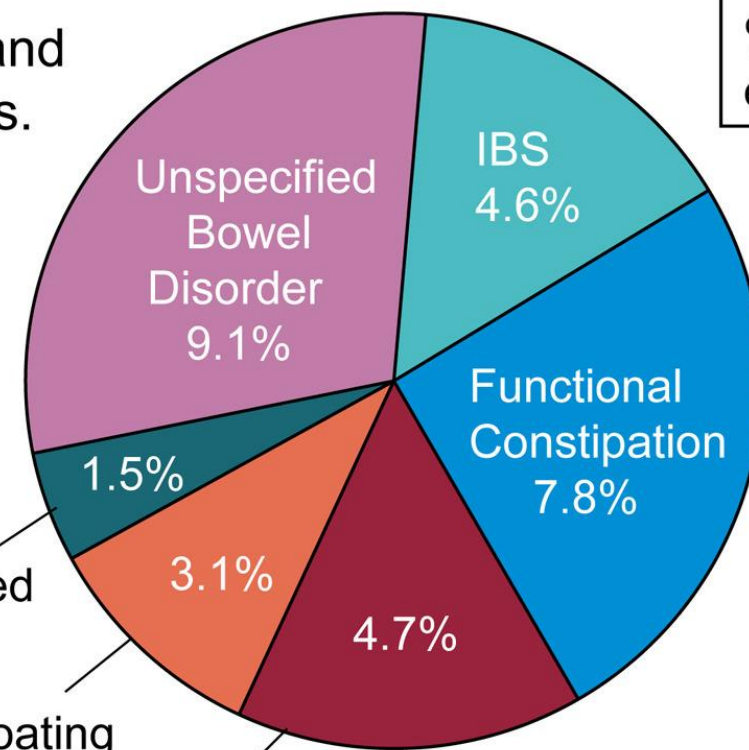


- ✓ Functional bowel disorders are more common in women than men
- ✓ They become less common after mid-life

Opioid-induced constipation

Functional Bloating

Functional Diarrhea



Pie chart:  
% of adults with each disorder

Gastroenterology

Palsson OS, et al. Prevalence of Rome IV Functional Bowel Disorders Among Adults in the United States, Canada, and the United Kingdom. *Gastroenterology*. 2020

**ROME IV Diagnostic Criteria**  
FOR  
**Disorders of Gut-Brain  
Interaction (DGBI)\***



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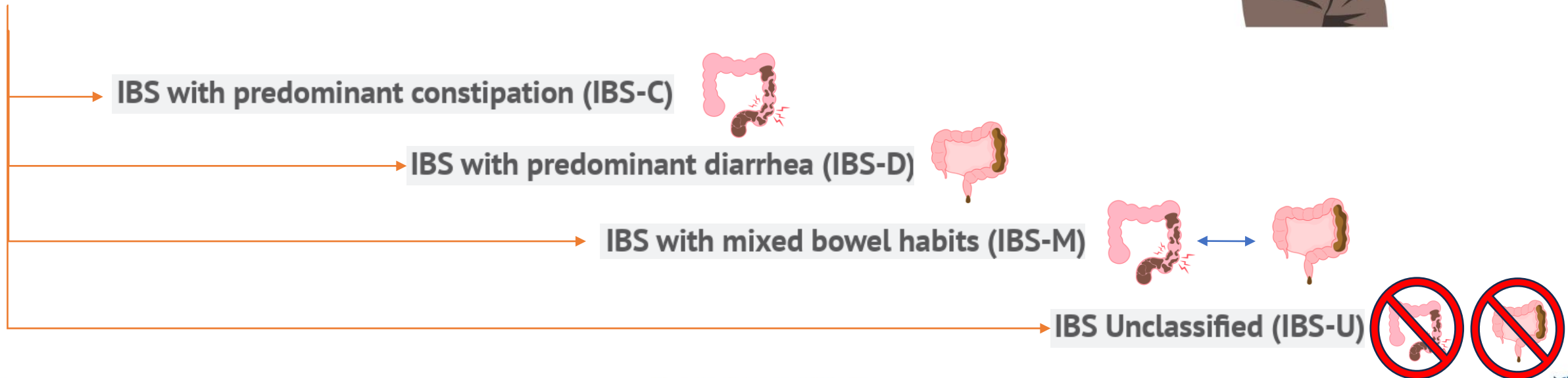
## C1. IRRITABLE BOWEL SYNDROME

### Diagnostic criteria\*

Recurrent abdominal pain on average at least 1 day/week in the last 3 months, associated with two or more of the following criteria:

1. Related to defecation
2. Associated with a change in frequency of stool
3. Associated with a change in form (appearance) of stool

\* Criteria fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

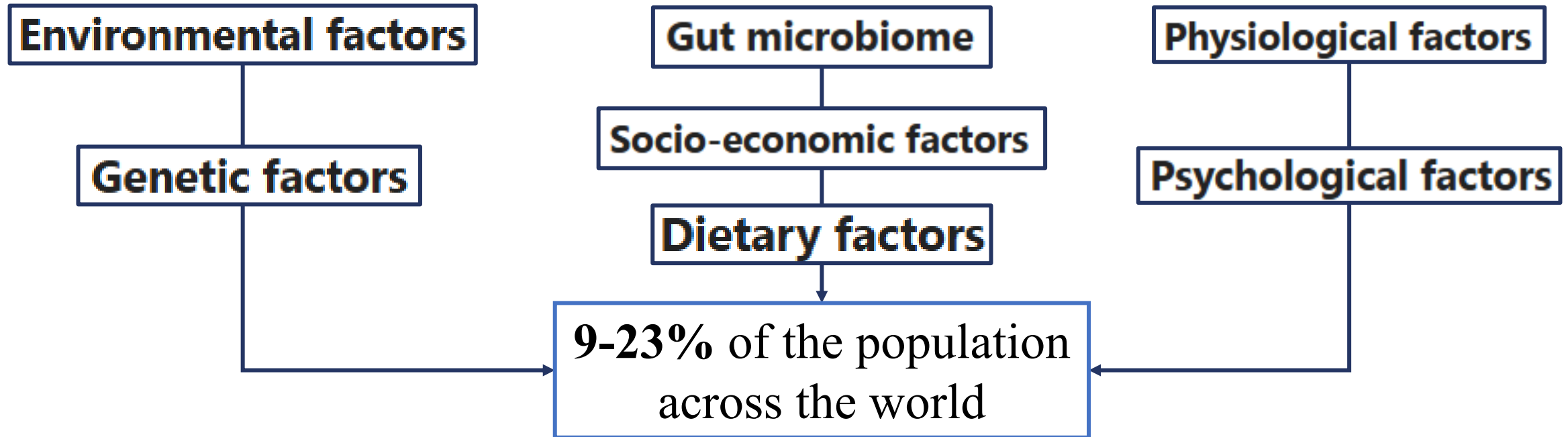


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**BMC Medicine**

Research | [Open access](#) | Published: 21 February 2025

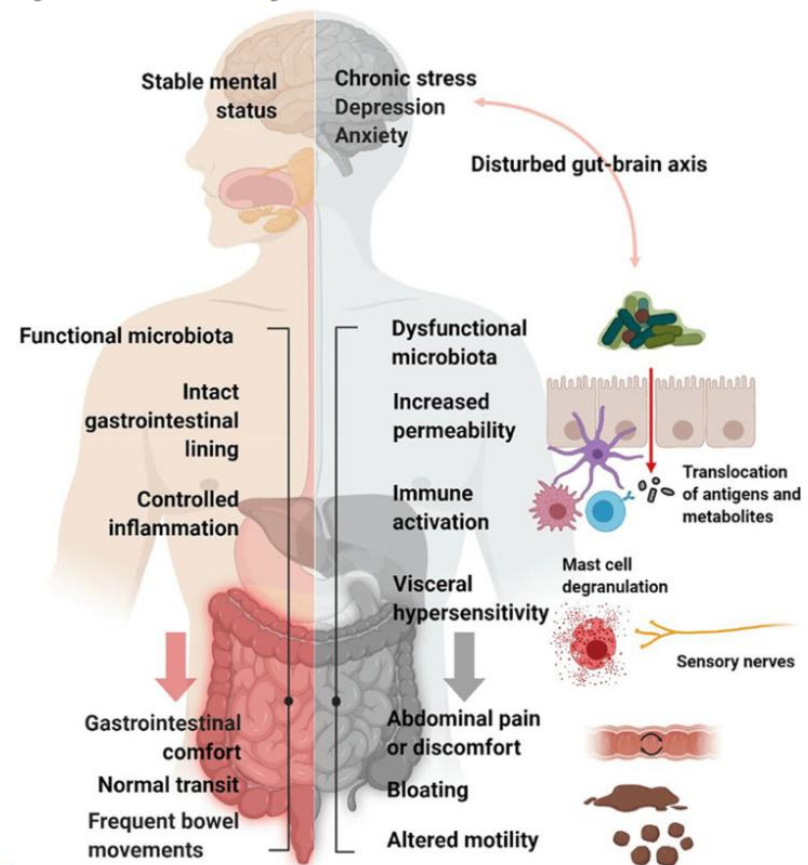
## Risk factors for developing irritable bowel syndrome: systematic umbrella review of reviews



# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: PRELIMINARY DATA

Cureus. 2025 Jan

## The Efficacy of the Low-FODMAP (Fermentable Oligosaccharides, Disaccharides, Monosaccharides, and Polyols) Diet in Irritable Bowel Syndrome: A Systematic Review and Meta-Analysis



L  
O  
W  
F ERMENTABLE  
O LIGOSACCHARIDES  
D ISACCHARIDES  
M ONOSACCHARIDES  
A ND  
P OLYOLS

Global symptom improvement

Quality of life

Bloating

Stool frequency

Stool consistency

Abdominal pain

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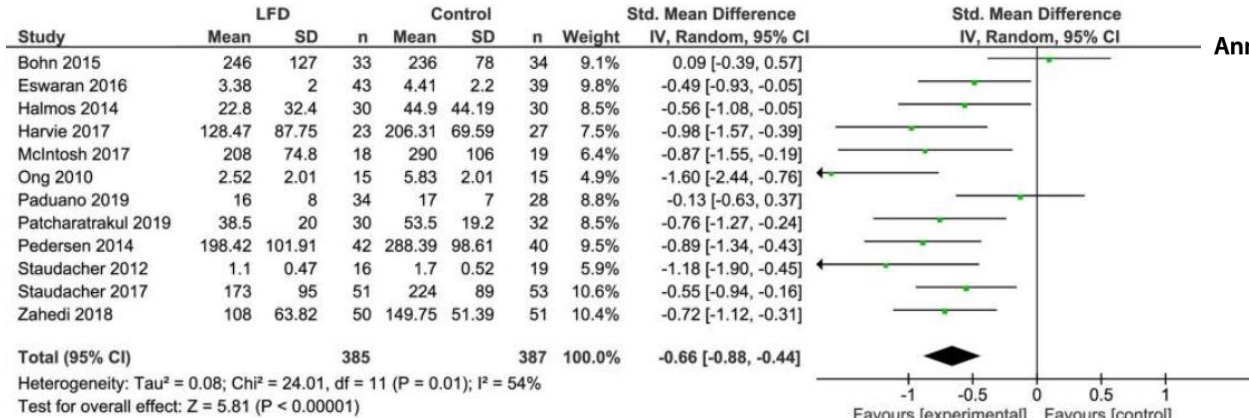
European Journal of Nutrition (2021) 60:3505–3522  
<https://doi.org/10.1007/s00394-020-02473-0>

ORIGINAL CONTRIBUTION

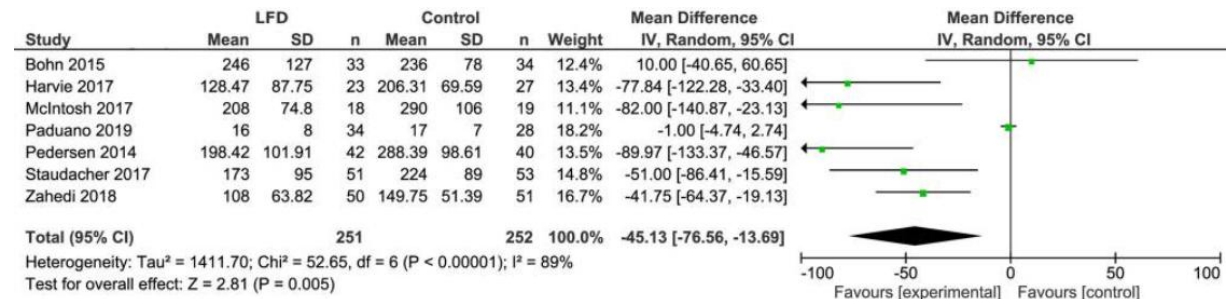


## Efficacy of a low-FODMAP diet in adult irritable bowel syndrome: a systematic review and meta-analysis

Anne-Sophie van Lanen<sup>1,2</sup> · Angelika de Bree<sup>2</sup> · Arno Greyling<sup>2</sup>



Forest plot showing standardized mean differences for IBS severity outcome measures



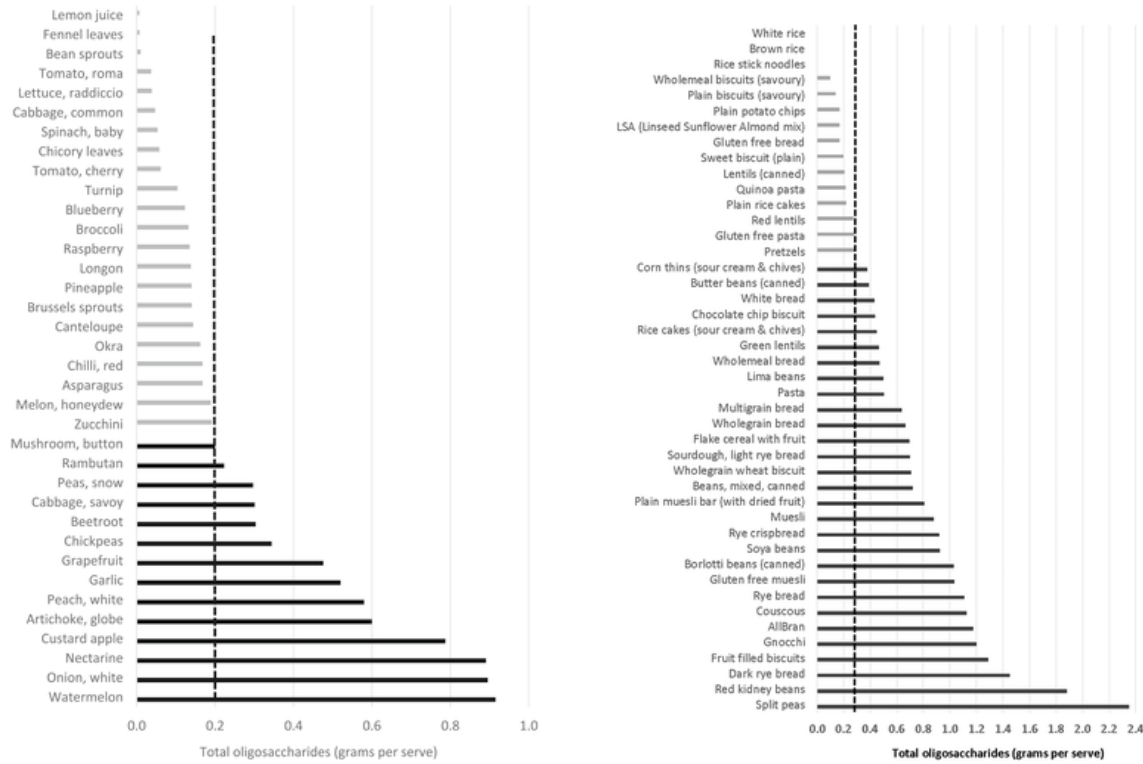
Forest plot showing mean IBS-SSS scores for studies that used IBS-SSS as outcome



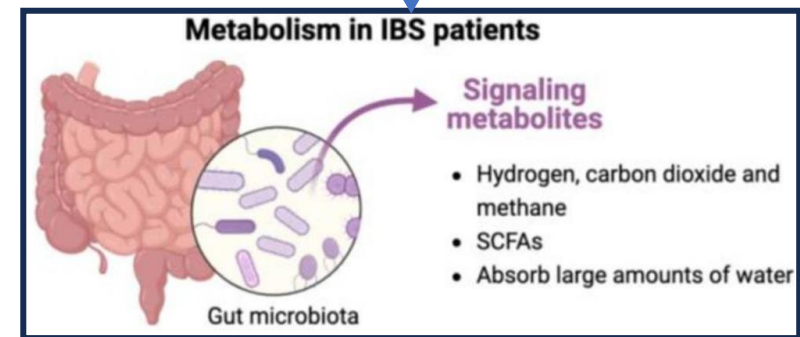
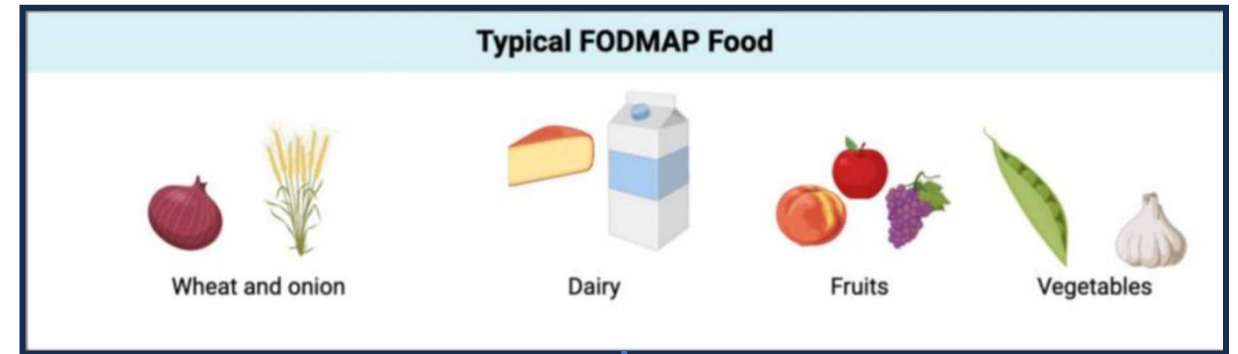
# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: PRELIMINARY DATA



## FODMAPs: food composition, defining cutoff values and international application



## Low-FODMAP Diet for Irritable Bowel Syndrome: Insights from Microbiome



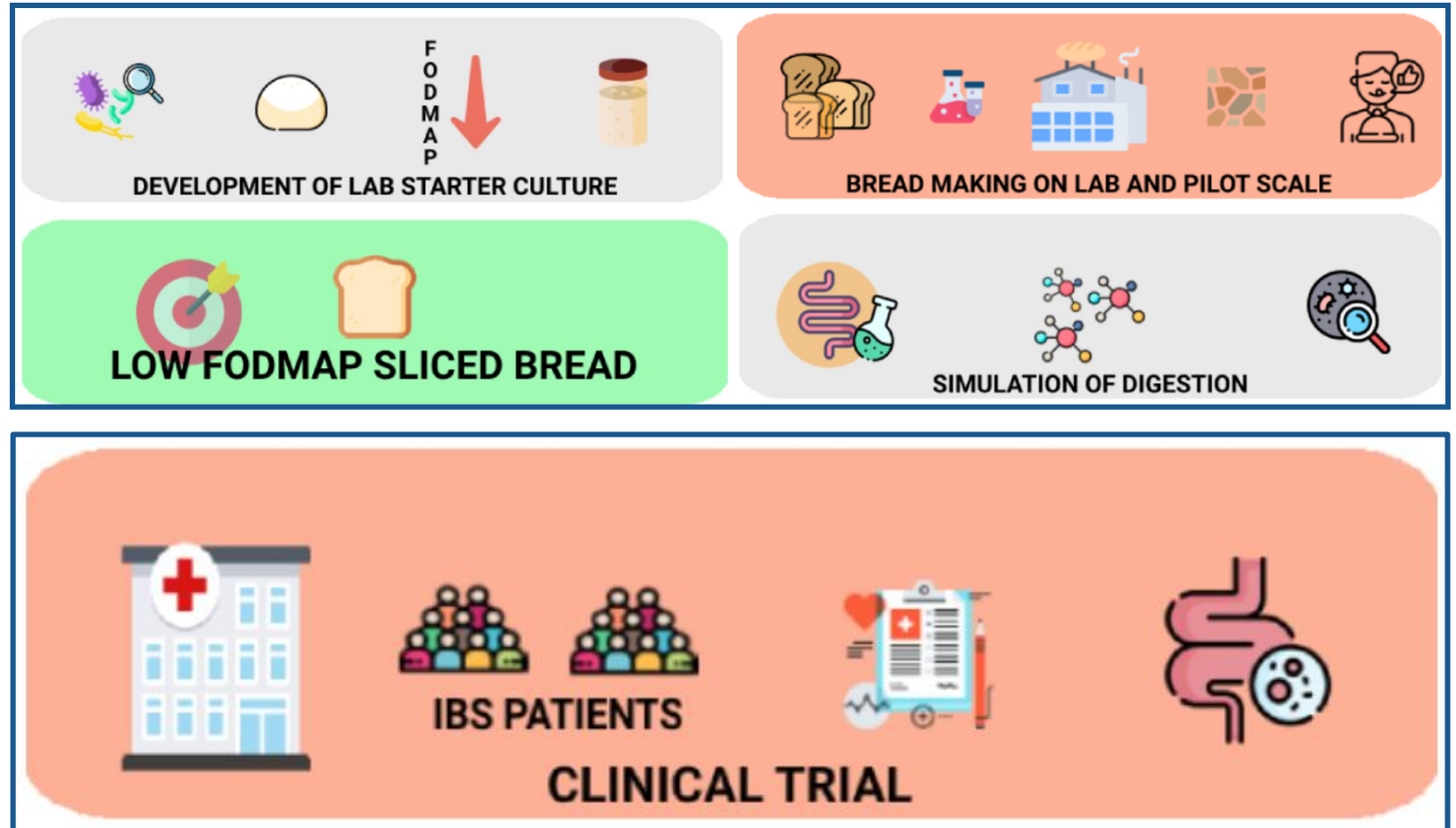
# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: METHODOLOGY

## Bread4IBS

Università degli Studi della  
Basilicata

Consiglio Nazionale delle Ricerche  
(CNR)

Università Cattolica del Sacro Cuore



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CLINICAL NUTRITION: shaping a better future of health care

# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: METHODOLOGY

Screening of different  
wheat flours



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Screening of different  
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Screening of lactic acid  
bacteria and development  
of starter culture



# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: METHODOLOGY

Screening of different wheat flours



Screening of lactic acid bacteria and development of starter culture



Process Optimization



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Screening of lactic acid bacteria and development of starter culture



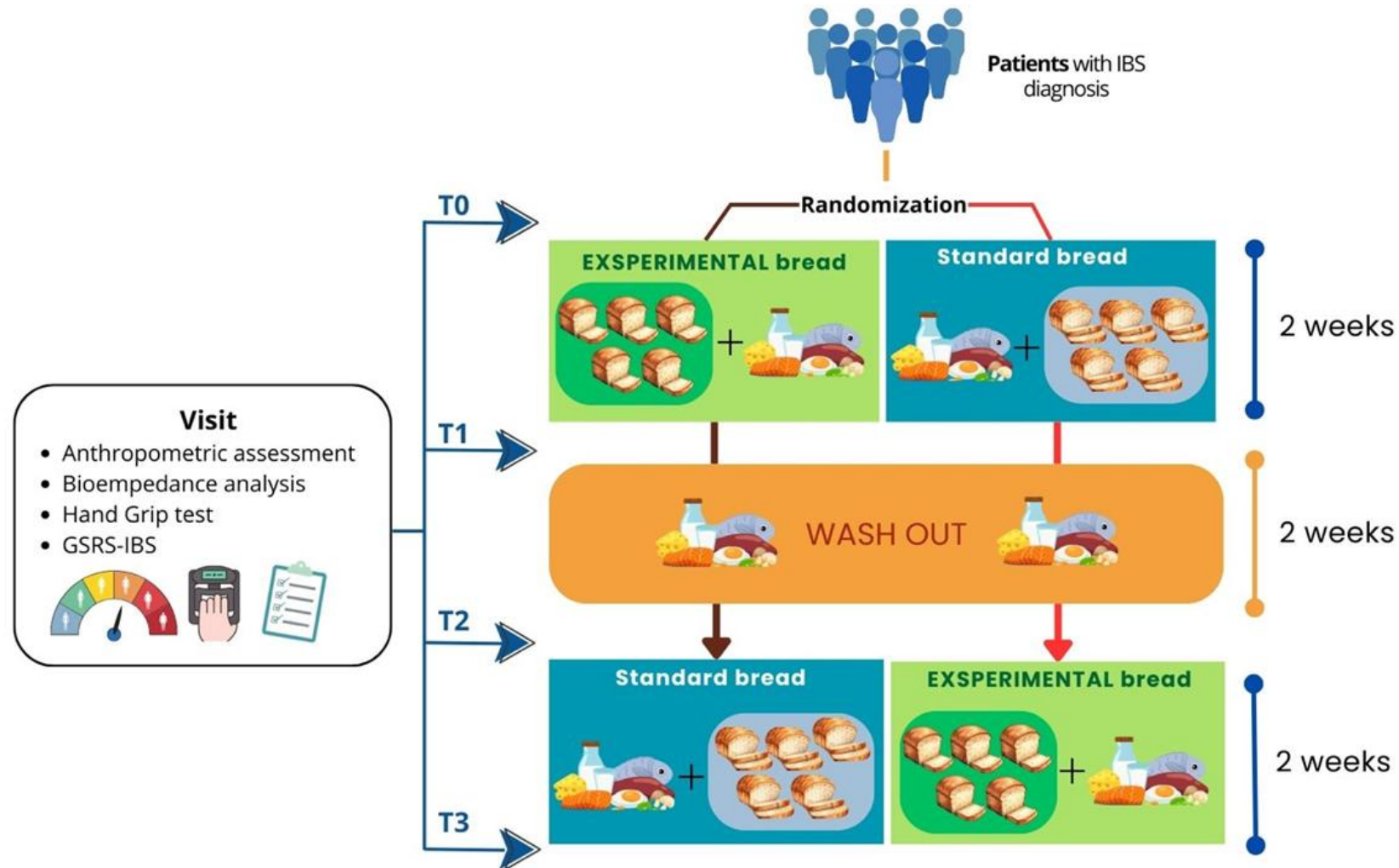
Process Optimization



Baking tests and chemical, physical and sensory characterization of breads



# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: METHODOLOGY

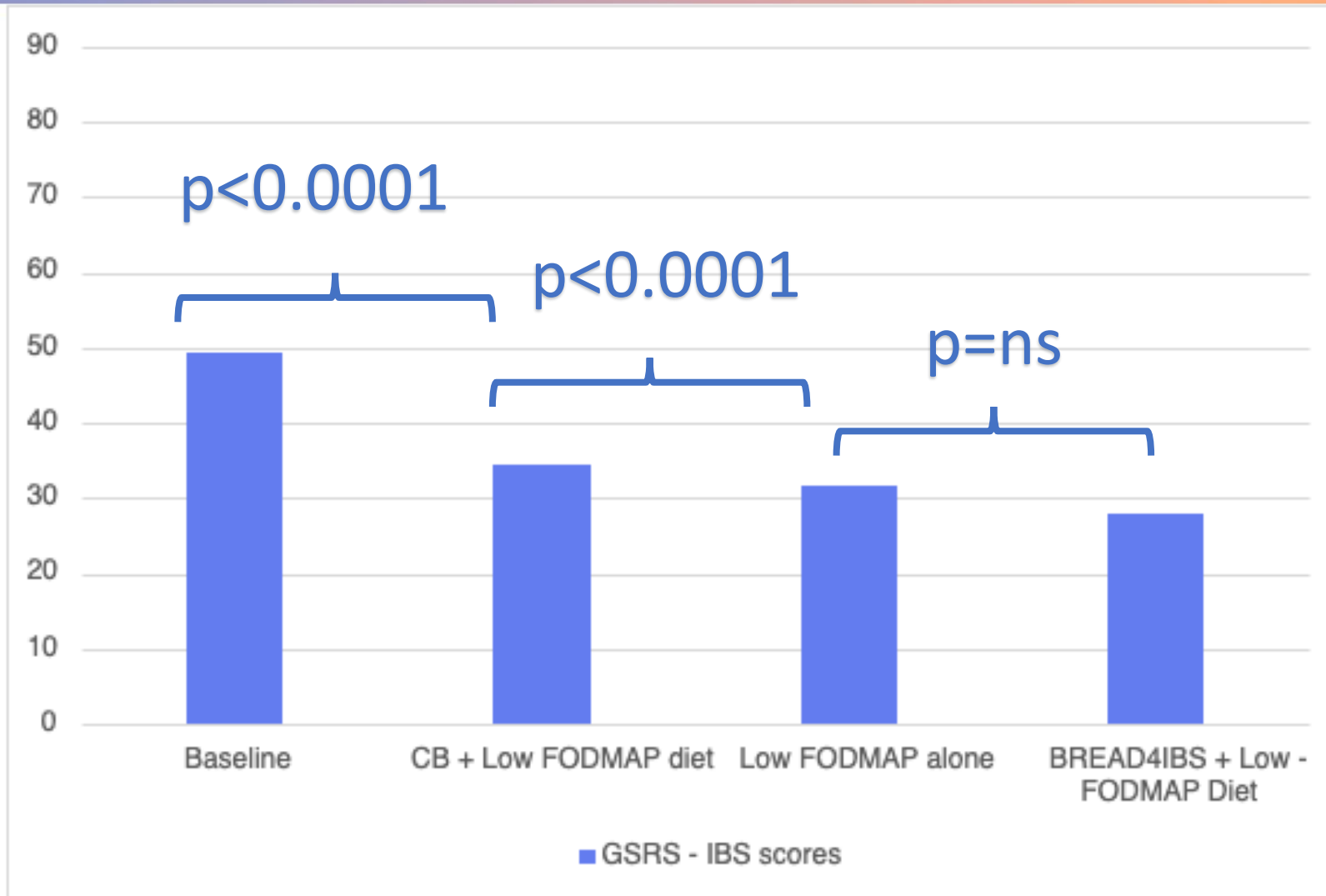


Arruolati 18 pazienti su 40 previsti (45%)

2 drop out (11.1%)



# EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: PRELIMINARY RESULTS



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The same pattern were observed for:

- Diarrhea (P=0.01)
- Indigestion (P=0.0003)
- Reflux (P=0.005)



## EFFECTS OF A LOW-FODMAP EXPERIMENTAL BREAD ON IRRITABLE BOWEL SYNDROME (IBS) SYMPTOMATOLOGY: PRELIMINARY RESULTS

- The study is still ongoing and we need to enroll a total of 40 patients
- The Gut Microbiota analysis will be provided at the end of the study



**Grazie per l'attenzione**

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