

# Obesity & Weight Management & 17<sup>th</sup> World Fitness Expo

## Can psychobiotics intake modulate psychological profile and body composition of women affected by normal weight obese syndrome and obesity? An interventional study

University of Rome Tor Vergata, Italy

### Background & Aim:

Psychobiotics are defined as probiotics that confer a mental health benefit. The aim of this study was to evaluate the effect of a 12-week intervention with a psychobiotic (Lactobacillus reuteri) on the psychological profile and body composition of women affected by normal weight obese syndrome (NWOS) and obesity. The study was conducted in a randomized, controlled, parallel, interventional design. The participants were divided into two groups: the intervention group (IG) and the control group (CG). The IG received a daily dose of 10<sup>10</sup> CFU of L. reuteri, while the CG received a placebo. The primary outcome was the change in the psychological profile, assessed by the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI). The secondary outcome was the change in body composition, assessed by the Dual Energy X-ray Absorptiometry (DXA). The results showed that the IG had a significant improvement in the BDI and BAI scores compared to the CG. Additionally, the IG had a significant increase in lean mass and a decrease in fat mass compared to the CG.

### Methods:

60 women affected by NWOS and obesity were recruited from a fitness center. The participants were divided into two groups: the intervention group (IG) and the control group (CG). The IG received a daily dose of 10<sup>10</sup> CFU of L. reuteri, while the CG received a placebo. The study was conducted in a randomized, controlled, parallel, interventional design. The primary outcome was the change in the psychological profile, assessed by the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI). The secondary outcome was the change in body composition, assessed by the Dual Energy X-ray Absorptiometry (DXA). The results showed that the IG had a significant improvement in the BDI and BAI scores compared to the CG. Additionally, the IG had a significant increase in lean mass and a decrease in fat mass compared to the CG.

### Results:

The IG had a significant improvement in the BDI scores (p < 0.05) and BAI scores (p < 0.001) compared to the CG. Additionally, the IG had a significant increase in lean mass (p < 0.05) and a decrease in fat mass (p < 0.05) compared to the CG. The results suggest that the intake of psychobiotics can modulate the psychological profile and body composition of women affected by NWOS and obesity.

### Notes: