

## PROBIOTICS AND OBESITY REDUCTION. NUTRITIONAL AND DIETETIC ADVICE IN THE COMMUNITY PHARMACY

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### INTRODUCTION

Probiotics improve the intestinal microbiota and can cause a decrease in obesity. Community pharmacists with specialized training in nutrition and dietetics address these aspects on a daily basis, with a combination of proper diet and hydration, physical activity and probiotics.

### GOALS

To evaluate the role of community pharmacists in the control of obesity and the acceptance of the population of pharmaceutical interventions with Mediterranean diet and probiotics.

Continuous training for the work team and the care population can produce an improvement in the results.

### METHOD/DESIGN

Obese patients (type I and II) were derived to the nutrition service of a community in 2017. In the area of personalized attention of a pharmacy, 100 patients with type I and II obesity were invited to participate (30 patients participated in the evaluation).

Evaluation by the pharmacist-nutritionist included: anamnesis, height measurement, bioimpedance, analysis of the intake, dietary-nutritional approach.

In addition, the intervention included correct hydration and physical activity and health training and the population in specific matters of probiotics (we hold weekly meetings and we present different cases to address them together).

The Healthy Food Market of the Spanish Nutrition Foundation (FEN) served as a key piece in Nutrition Education that we wanted to instill in our care population. In this way we have been able to report in a very graphic way, giving great importance to feeding in a varied, moderate and balanced manner as well as having a correct physical activity adjusted to each person and their specific characteristics and having a good body hydration.

Diets were prepared respecting the basic norms of human dietetics, and energy distribution adjusted to each age group, and with their personal characteristics (allergies, appetites). We deliver weekly menus, with five meals a day, and sometimes according to the particularities we have put a resopon (5% of the total energy), just at the time of going to bed.

The dietary-nutritional approach consisted on Mediterranean diet, reinforcement in probiotics (fermented vegetables, yogurt, cheeses, kefir, pickles (sauerkraut, kimchi), kombucha, misso, natto, dark chocolate, microalgae, apple cider vinegar) and an increase of prebiotics (artichokes, chicory, garlic, onion, leek and bran).

Participants were recommended to take intestinal probiotics (containing 50000 million CFU, 4 strains of the genera Bifidobacterium and Lactobacillus) / bottle during 24 weeks of nutritional follow-up.

We did satisfaction surveys of the service and the taking of probiotics.

### RESULTS

During the period of study a significant decrease in patients obesity was observed (30% compared 2016).

The decrease in obesity was associated with an increase in probiotics sales in 2017 (by 300%). There was an improvement satisfaction surveys in 2017.

### CONCLUSIONS

The community pharmacy may be an optimal place to fight obesity if it is developed by pharmacists-nutritionists and there are health training (for the team and for the population). The Mediterranean diet and certain foods and probiotic supplements improve the results.