**OBJECTIVES:** To understand the differences in Muscle-Strengthening Exercise habits between vegetarians and omnivores, as well as the barriers both groups feel toward practicing this type of exercise.

**METHODOLOGY:** An online survey was applied, including a novel tool - the Muscle-Strengthening Exercise Questionnaire Short Form (MSEQ) and further questions about perceived barriers to exercise.

**RESULTS:** In this cross-sectional study of 235 people, of which 41,7% were vegetarians, it was observed that vegetarians practice Muscle-Strengthening exercises more often, when compared to omnivores (66,3% *vs*. 49,6%, p = 0,011). However, vegetarians tend to use fewer weight machines or dumbbells and resistance bands, while engaging more in holistic exercises such as Yoga, Pilates, and Tai-Chi. Both groups consider lack of time the main reason for not engaging more in Muscle-Strengthening exercises.

**CONCLUSIONS:** The findings observed in the present analysis suggest that a vegetarian diet seems to be more associated with holistic exercise practices such as Yoga, Pilates, and Tai-Chi, to detriment of weight machines, dumbbells, and resistance bands. Lack of time was considered by the participants, besides dietary pattern, the main reason for not practicing more Muscle-Strengthening exercises.

## PO42. AVALIAÇÃO DOS HÁBITOS ALIMENTARES DE JOVENS ATLETAS – RELAÇÃO COM A PANDEMIA POR COVID-19

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**INTRODUÇÃO:** A pandemia causada pela COVID-19 levou a diversas medidas de contingência, entre elas, o confinamento. Consequentemente, crianças e adolescentes permaneceram em casa por um longo período, provocando alterações nos seus hábitos alimentares e estilos de vida. A interrupção de desportos durante a pandemia tem se revelado um verdadeiro desafio para os jovens atletas, uma vez que a alteração das suas rotinas pode ter tido impacto nos seus hábitos alimentares, saúde física e mental.

**OBJETIVOS:** O presente estudo tem como objetivo avaliar os hábitos alimentares em jovens atletas de futebol e verificar possíveis diferenças causadas com o período pandémico causado pela COVID-19.

**METODOLOGIA:** Aplicou-se um questionário de administração direta aos pais dos jovens atletas. Os dados analisados são referentes a dados sociodemográficos, atividade física, estado nutricional percecionado dos filhos e hábitos alimentares durante o período pandemia e comparação com o período pré-pandemia.

**RESULTADOS:** Obteve-se a resposta de 132 jovens atletas (90,2% rapazes, idade mediana de 11 anos), sendo que 84,8% reportam ser normoponderais e 64,4% pratica 4-8h semanais de atividade física. Quanto às alterações que ocorreram nos hábitos alimentares, face à pandemia por COVID-19, a maioria relata tê-los mantido. Alguns indivíduos reportaram que melhoraram a sua alimentação, aumentando o consumo de fruta (15,9%), legumes (14,4%), iogurte e outros produtos lácteos (7,6%) e peixe (9,1%) e diminuindo o consumo de lanches salgados (13,7%), doces (15,2%), alimentos como biscoitos, bolos, donuts ou tortas (12,1%) e *fast-food* (12,9%).

**CONCLUSÕES:** De uma forma geral, a pandemia por COVID-19 parece não ter afetado de forma prejudicial os hábitos alimentares destes jovens atletas. É importante a realização de mais estudos para verificar possíveis alterações na conduta das crianças, permitindo assim criar estratégias que possibilitem o encorajamento de comportamentos adequados e evitem alterações prejudiciais nas crianças/adolescentes.

## PO44. A RANDOMISED CONTROLLED TRIAL OF A WEIGHT LOSS MAINTENANCE PROGRAM IN ADULTS WITH OBESITY: THE WLM3P STUDY

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**INTRODUCTION:** Obesity is a chronic relapsing disease. This study is a single-blind randomized controlled trial (NCT04192357) targeting weight loss (WL) and its long-term maintenance.

**OBJECTIVES:** Assessment of a Weight Loss Maintenance 3 Phases Program (WLM3P) effectiveness on long-term maintenance of clinically significant WL (≥5% of initial WL at 18 months) compared to a standard low-carbohydrate diet (LCD).

**METHODOLOGY:** The WLM3P is a nutritional intervention with 3 Phases [(Phase1 (1st month:10-15%En carbohydrates (CHO) and Phase 2 (5 months:15-20%En CHO)-WL period; and Phase 3 (12 months:35-45%En CHO)-weight maintenance period)]; comprising regular consultations, behavioural strategies, time-restricted eating, dietary supplements, high-protein-specific foods, and a web app. The LCD is divided into two periods [(WL (6 months:≤26%En CHO) and WM (12 months:≤45%En CHO)]. Changes in body composition [(body weight (BW), body fat mass (BFM) and visceral fat (VF)], metabolic profile [(triglycerides (TG), HDL and TG/HDL ratio)] and blood pressure were assessed.

**RESULTS:** 112 adults with obesity (81 women, 31 men), aged 18–65 years with a BMI of 34±2.4kg/m$^2$, were randomized in WLM3P (n=59) and LCD (n=53). In the completers-only analysis, the percent WL at 18 months was -15.5±8.3% for WLM3P (n=40) compared with -9.6±8.5% for LCD (n=37) (p<0.001). From months 6–18, participants regain 4.3±5.8% in WLM3P and 3.5±4.8% in LCD (p=0.541). 87.5% of participants in WLM3P and 75.7% in LCD had ≥5% reduction of initial BW at 18 months (p=0.179). From baseline to 18-month, WLM3P induced a greater reduction than LCD in BFM (-6.6±6.2% *vs.* -3.6±5.0%;p<0.023), VF(-53.1±38.1cm$^2$ *vs.* -29.8±34.6cm$^2$;p=0.007) and, an increase in HDL (10.4±11.4mg/dL *vs.* 5.3±8.3mg/dL;p=0.031). No significant differences were found for TG, TG/HDL ratio, and blood pressure between the groups. A total of 31% withdrew from the study (32.2%|WLM3P, 30.2%|LCD; p=0.818).

**CONCLUSIONS:** The WLM3P was found to be more effective reducing BW, BFM, and VF and increasing HDL compared to LCD after an 18-month intervention for WL and weight maintenance. Our investigation is still ongoing to understand the metabolic dysfunction obesity-associated.

**CONFLICT OF INTEREST:** This study was funded by Farmodiética. Nevertheless, the sponsor had no role in study design, analysis, interpretation of the data, or decision to submit the results.

## PO45. ASSESSMENT OF FAT MASS AND FAT-FREE MASS IN PORTUGUESE ADULTS: CALIBRATION OF BIOELECTRICAL IMPEDANCE WITH DUAL-ENERGY X-RAY ABSORPTIOMETRY

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